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Sales Policies

CROWER CAMS & EQUIPMENT COMPANY	6180 Business Center Court • San Diego • California • 92154-5604 • USA 619-661-6477 • Fax: 619-661-6466 • www.crower.com • email: info@crower.com 7am to 5pm PST • Monday through Friday • Closed from 12pm to 1pm PST for lunch.
WHERE TO PURCHASE CROWER PRODUCTS	Crower performance products are available at better speed shops and performance warehouses throughout the world. If you are having difficulty locating a Crower dealer in your area and wish to order direct, call 619-661-6477 or go online at www.crower.com.
MINIMUM ORDER	The minimum order is $20.00 (if less than $20.00, a $2.50 service charge will apply).
PAYMENT POLICY	Crower accepts only U.S. postal money orders, certified checks, cashier's checks and bank drafts as deposits or full payments. Personal or non-certified checks will not be accepted. Company checks are acceptable only if you have established credit with Crower prior to your order. Open accounts may be arranged by contacting the Crower Accounting Department. Credit applications are available upon request. ***A minimum 50% deposit is required on all custom parts.***
CREDIT CARD POLICY	We currently accept the following credit cards: Visa card, Master card, Discover card, and American Express. The following types of credit cards are not accepted: Diner's Club Card, and Gift Cards (Even if they have the Visa card, Master card, Discover card, or American Express logos they do not adhere to any safety protocols). To ensure that there is no credit card fraud here at Crower all credit cards must pass security screening. The following information must be provided by all cardholders whose credit cards are from banking/credit unions within the United States: ***Cardholder Name, Credit card number, expiration date, Security code, and Billing Address.*** If any of the above mentioned information is incomplete or invalid the order will be postponed until the correct information is provided.
ONLINE ORDERING	***You can order any Crower product online at www.crower.com.***
FREIGHT & SHIPPING	All shipping is F.O.B., San Diego, California. If no shipping instructions are received with your order, Crower will ship by the most reasonable means in accordance with the size, weight and destination of your order. If you desire special handling such as overnight and two day service (UPS and FedEx) please specify with your order. Drop shipments only if prepaid or open account. A fee will be applied on all dropship orders. ***The cutoff for processing all next day and second day orders is 12pm PST (3pm EST).***
LIMITED WARRANTY	All Crower racing products are 100% inspected for quality and quantity prior to shipment. Certain Crower products are covered by a limited warranty, others are not. For product that are covered, a warranty card will be enclosed in the packaging, describing the specific terms and conditions. All guarantees or warranty claims must be referred to the Crower factory. ***No dealer, jobber or warehouse is authorized to handle these claims directly.***
RETURNS, BACKORDERS & SHORTAGES	All merchandise ordered in error is subject to a 15% handling and restocking charge. Merchandise may not be returned without written authorization from Crower. Special order or custom made parts are not returnable or refundable. Original invoice number and date of purchase must be furnished. All items must be returned freight prepaid along with written authorization from Crower. Out of stock items will be backordered and held until parts are available or order is cancelled by the customer. If you do not wish to have out of stock items backordered, please specify with your order. If parcel is received intact and a shortage or error is discovered, you must report this to Crower immediately and followed up in writing within 3 days after receipt of shipment. Merchandise sent in for refurbishing or specifications will be held for no longer than 60 days. Merchandise in our possession after 60 days will become property of Crower. ***No returns or refunds will be accepted after one year.***
VACATION NOTICE	Crower will be closed during the Christmas holiday season. A notice will be mailed out notifying our dealers of the exact dates.

Warranty

STATEMENT OF POLICY

- The warranties set forth below are made possible by Crower's state-of-the-art production facilities. All Crower products are tested in the laboratory and proven on the race track.
- Crower does not warrant performance of the products due to Crower's lack of control during product installation and usage. Warranty is void on any race application.
- Crower neither delegates nor authorizes any person(s) to assume obligations or liabilities on behalf of Crower in connection with any Crower products or sales of Crower products.
- Nothing in this statement shall alter or enlarge the terms of the warranties, obligations or liabilities issued with these products.

WARRANTY PROVISIONS

Applies to all camshafts, valve train components, including hydraulic, solid, and roller lifters, valve springs, stainless steel rocker arms and pushrods, connecting rods, crankshafts, clutches.

ONE YEAR WARRANTY

Crower warrants all of the above listed products against manufacturer's defects for one year from date of purchase by purchase user. Crower camshafts are designed to be used in conjunction with Crower kits to insure optimum performance. This warranty is valid only where complete Crower kit or one with comparable design characteristics and materials is used and proof of its purchase is returned to Crower with warranty card within thirty (30) days of purchase. If excessive lobe wear occurs during said one year period, purchaser must return the cam to Crower at 6180 Business Center Court, San Diego CA 92154-5604 USA, freight prepaid, where, at Crower's option, repair or replacement will be accomplished at no cost to purchaser and returned to purchaser, freight collect.

THREE YEAR WARRANTY

Crower warrants all Crower camshafts against excessive lobe wear for an additional three year period after expiration of the one year warranty, as herein below provided. This warranty is valid only where complete Crower kit or one with comparable design characteristics and materials is used and proof of its purchase is returned to Crower with warranty card within thirty (30) days of purchase. If excessive lobe wear occurs during said three year period, purchaser must return the cam to Crower at above address, freight prepaid, where, at Crower's option, repair or replacement any above listed camshaft at a cost not to exceed fifty (50%) percent of the current list price and return to purchaser, freight collect.

TERMS & DISCLAIMERS

The following terms apply to any Crower Warranty:
Crower warranties are void when the said Crower product in question has been physically altered, improperly installed or used or otherwise damaged due to no fault of Crower or has not been used for the said purpose it was intended or for which it was designed. Purchaser must fill out and mail to Crower the completed Warranty card within thirty (30) days of purchase to obtain the benefits of the foregoing warranties. Failure to do so voids all of the express written warranties herein above set forth. Implied warranties of merchantability and fitness are limited for a term of one (1) year from date of purchase. Some states do not allow limitation on how long an implied warranty lasts so the above limitation may not apply to you. In no case will Crower be responsible for incidental or consequential damages occurred during operation or as a result of product failure. These warranties are not assignable or transferable. These warranties do not apply to reground camshafts or components used thereon. Each warranty will apply to all repaired or replaced camshafts or components until the expiration of the remaining period of the original warranty. This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state. Under no circumstances is Crower Cams & Equipment Company responsible or liable for any other products that may be damaged or destroyed during operation due to Crower's lack of control during installation and operation.

History

It started as a one-man, part-time operation making engine parts for himself and his hot rod buddies over 50 years ago. Today it has evolved into a multimillion dollar, multifaceted manufacturing operation, producing high performance engine equipment for a wide variety of applications, including cars, trucks, boats, tractors, motorcycles and antiques.

Crower Cams and Equipment Company, Inc., is a leading producer of aftermarket camshafts and valve train components. But over the years Crower has developed a more diverse line of products. Today, Crower is the world's largest manufacturer of aftermarket crankshafts and connecting rods, and the Crower line of clutches has been dominating the drag racing and tractor pulling series for nearly four decades.

A young Bruce Crower, left, in his first shop in 1949 near Phoenix, Arizona.

EARLY THOUGHTS

Bruce Crower, president of Crower Cams, is the thinking man's racer, saying, "People don't think as much as they should. If you think hard enough, the answer will come." Born in 1930 to a church going family in Phoenix, Arizona, he has been thinking about, and implementing ways to improve the internal combustion engine for nearly six decades.

During high school, Bruce found that other hot rodders would buy parts that he made for his own '32 Ford roadster. As new ideas came to mind, instead of making just one part for himself, he would make several at a time and sell them to his fellow hot rodders. It was simple arithmetic to see the profit of making thousands of such parts and selling them nationwide.

Bruce ran 157 mph in this Hemi-powered Hudson.

INTRODUCTION TO FAST MACHINES

In 1949, a fast, 80 cubic inch Harley led to a 120 mph, 300 cubic inch Merc-powered Deuce roadster that Bruce says was, "the first Arizona car to beat the bikes," and his own successful speed shop near Phoenix, Arizona. Uncle Sam, however, had other plans and he was drafted for the Korean war.

After 18 months on a ground crew in the Air National Guard, developing his mechanical skills in a machine shop at Luke Field Air Force Base, he followed his parents to San Diego and landed a job as a machinist at Paul Schiefer Clutches. All over California, especially at Paradise Mesa, people were burning up the quarter mile.

THE CHRYSLER HEMI

And despite the legendary Bean Bandits' quantum leap from 120 to 140 mph with a Bruce Crower built engine, the flathead's reign was over the day Chrysler introduced its OHV Hemi. Bruce was quick to realize the Hemi's potential, and by 1954 he was shakin' em up on the Bonneville salt flats with a 157 mph record breaking run behind the wheel of his Hemi-powered Hudson. Credited with being the first to top-mount a GMC blower, Bruce had fashioned his own intake manifold and a pulley system cast in coffee cans using old pistons as material.

THE "U-FAB" INTAKE MANIFOLD

The intake/blower combo was a success, and not only put Bruce in the record books but also in the manifold business. There followed the phenomenally successful Crower "U-Fab" do-it-yourself manifold. Consisting of two cylindrical runners joined with hoses and clamps, the "U-Fab" was designed to hold four, six or eight Stromberg carburetors.It was simple, inexpensive and extremely popular. "We sold thousands of them," according to Bruce.

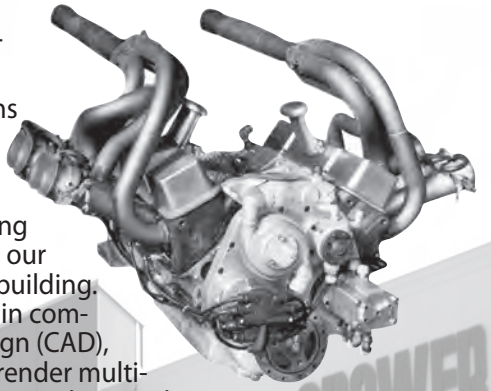
The mega-popular "U-Fab" intake manifold.

1955 - THE BEGINNING OF CROWER EQUIPMENT CO.

With $312 in the bank Bruce booked a sixth page ad in Hot Rod for $300. That one ad generated over $10,000 dollars worth of orders, and suddenly I was, "controlling my own destiny with my own two hands, and the harder I worked, the more money I made." He worked until the wee hours of the morning assembling those kits, and finally hired his brother, Dave and eventual brother in-law, Loren in order to keep the production up with the demand. Thus the formation of Crower.

History

Bruce built this outside port design V8 Chevy to improve breathing efficiency.



THE "GLIDE"

Other speed merchants eventually followed his lead, tapping into Crower's market share. But Bruce and the boys had been thinking ahead, this time about a double disc clutch first seen in a Fiat. Crower combined this technology with a Schiefer clutch and applied it towards drag racing and, once again, enjoyed another overnight success with the "Crowerglide" centrifugal clutch. It quickly became the most popular clutch in drag racing.

An early model "CrowerGlide" centrifugal clutch.

CAMSHAFT TECHNOLOGY

Crower, however, was already moving on, this time in the direction of cam technology where once again they took advantage of an industry in low gear. The industry's shortcomings have always provided the impetus for Crower's ideas. Only the experiences at the Indianapolis 500 Brickyard have caused him to reevaluate his direction.

STATE-OF-THE-ART MANUFACTURING

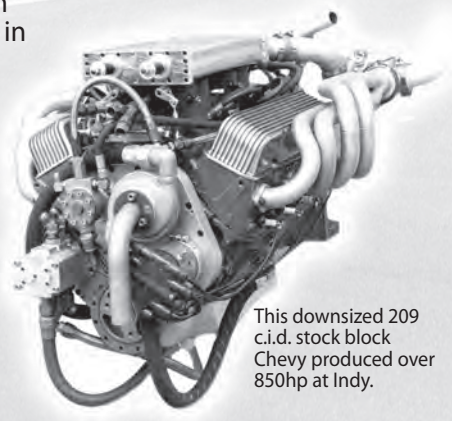
Today, Crower Cams and Equipment Company is still family owned and operated, employing over 200 people in our new 110,000 sq ft building. Utilizing the latest in computer assisted design (CAD), Crower engineers render multi-dimensional blueprints that are then downloaded into one of Crower's state-of-the-art CNC machining centers. This allows more flexibility, with tighter tolerances, and gives the customer more choices. Crower offers over 10 different styles of steel billet connecting rods and five different crank designs for the small block Chevrolet depending on the customer's particular application, rpm range and budget.

THE INDY EXPERIENCE

In 1954, Bruce Crower was invited to work on the Offy-powered Dean Van Lines Indianapolis racing car with Jimmy Bryan. They qualified on the front row and finished second. Six years later, working on Jim Rathmann's team, all of their hard work paid off as they went on to win the 1960 Indy 500. He went on to win again as a member of Graham Hill's team, and again in 1967 as part of the A.J. Foyt team.

Bruce, third from right, was on Jim Rathmann's 1960 Indy winning crew with Smokey Yunick.

Subsequent years saw Crower cars equipped with engines as diverse as a downsized small-block Chevy and a custom designed flat-eight with Cosworth heads, which received the 1977 SAE "Louis Schwitzer Award" for race car design. But over the years, in order to remain competitive, teams started preparing year around for the race, and Bruce decided that his time and money would be better spent investing in his own business in the area of high performance engine parts and engine research.



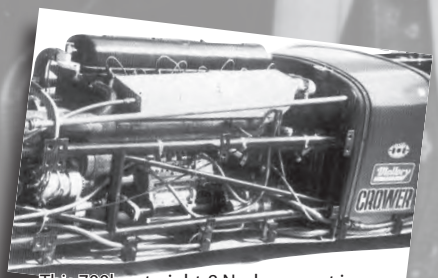
This downsized 209 c.i.d. stock block Chevy produced over 850hp at Indy.

Crower's new, state-of-the-art of the art building features 110,000 sq ft and over 100 CNC machining centers. The goal will be to dramatically reduce leadtimes on all Crower products.

History

RESEARCH & DEVELOPMENT

Although Bruce Crower is no longer involved in the day-to-day manufacturing operation, he spends his time designing and developing new products at the company's research and development facility located at his Jamul ranch. This R&D facility houses a complete machine shop and a fully operational, computer controlled Heenan-Froude engine dynamometer, capable of generating high levels of horsepower and torque on just about any type of engine. Before Crower introduces a new product to the market, you can be sure it has undergone a rigorous cycle of testing under dyno simulated racing conditions. Each Crower product is then evaluated for maximum horsepower and torque figures, as well as rpm specifications to insure product reliability.

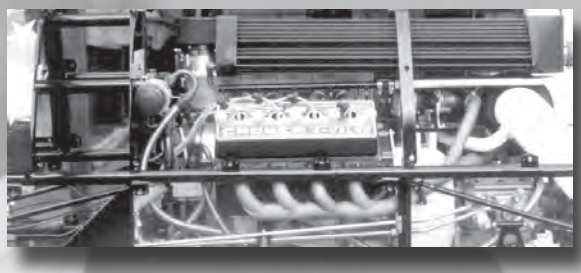


This 700hp straight-8 Nash was put in a Model-T roadster.

THE BONNEVILLE SALT FLATS

In addition to product testing and development, both of Crower's Bonneville race cars were completely designed and constructed at the Jamul facility. A 1927 Model-T roadster equipped with a 700hp 1931 straight-8 Nash engine, and a state-of-the-art streamliner powered by a turbocharged small block Chevy and a pair of prototype Crower 4-valve cylinder heads. He first touted the idea of a four-valve production head for the small-block Chevy back in 1965 after inventing a head with an inlet port on the same plane as the exhaust port. Chevy engineers were so impressed they had prototypes drawn and cast within 30 days. Unfortunately, the various race sanctioning bodies indicated that they would have to ban it because it would have given certain racers an unfair advantage. The streamliner, however, is in the Unlimited Class and with the help of the heads and some other radical design solutions, it is projected to run over 440 mph at 1150 horsepower on the Bonneville salt flats.

Crower's custom built streamliner is powered by a turbocharged SB Chevy with 4-valve heads.


The streamliner's pair of 4-valve cylinder heads were handcrafted by Bruce.

RECOGNIZING HIS DEDICATION

In recognition of Crower's innovative products for drag racing, Bruce Crower was inducted into the Drag Racing Hall of Fame located in Florida. An honor and privilege that is the direct result of his hard work and dedication to the industry that he loves so much.

USING QUALITY, AMERICAN MADE MATERIALS

The secret to Crower's lasting success, according to Dave Crower, vice president and general manager of Crower, is that basically "we make what people ask for. We do it with better quality than anyone else, plus we do it lighter, which is the key to quicker elapsed times." Not one to compromise the strength and integrity of Crower's products, Crower uses USA milled materials in its manufacturing. Although cheaper products can be imported from other countries, the Crower philosophy has always been that "If a product is made right the first time, using the highest quality materials and the latest production methods, it will perform flawlessly to it's intended ability."


Bruce Crower being inducted into the Drag Racing Hall of Fame.

Camshaft Recommendation Form

NAME: _____ **DATE:** _____

ADDRESS: _____

CITY: _____ **STATE/ZIP:** _____

PHONE: _____ **FAX:** _____

WHICH TYPE OF CAMSHAFT ARE YOU INTERESTED IN:

☐ Hydraulic ☐ Roller ☐ Mushroom ☐ Other: _____

☐ Solid ☐ Hydraulic Roller ☐ Regrind _____

DESIRED ENGINE PERFORMANCE:

☐ More Low Speed Torque

☐ More Mid-Range Power

☐ Mid-Range and Top End Power

TYPE OF SERVICE REQUIRED:

☐ Recommend Cam and Kit

☐ Regrind Enclosed Cam

ENGINE APPLICATION:

☐ Street Only ☐ Drag Race: _____ (Class) ☐ Off-Road Only ☐ Marine: _____ (Hull Specs/Prop or Jet Drive)

☐ Street/Strip ☐ Oval Track: _____ (Track Length) ☐ Truck/Tractor Pull ☐ Other: _____

ENGINE SPECIFICATIONS:

Engine Make: _____ Year: _____

Cubic Inches: _____ Bore and Stroke: _____

Number of Cylinders: _____ Fuel: _____

Rocker Arm Ratio: _____ Carburetor cfm: _____

Piston Make: _____ Total Venturi Area: _____

Compression Ratio: _____ Intake Manifold: _____

Supercharger/Turbo: _____ Valve Head Diameter: _____

Drive Ratio: _____ Valve Size: Intake: _____ Exhaust: _____

Tappet Diameter: _____ Ported/Amount: _____

CYLINDER HEAD FLOW DATA:

Circle 25" or 28" of water

.200" Int _____ Exh _____

.300" Int _____ Exh _____

.400" Int _____ Exh _____

.500" Int _____ Exh _____

.600" Int _____ Exh _____

.700" Int _____ Exh _____

.800" Int _____ Exh _____

.900" Int _____ Exh _____

CHASSIS/RPM INFORMATION:

Weight: _____ Year and Make: _____

Rear Axle Ratio: _____ Transmission Type: _____

Minimum and Maximum RPM: _____ to _____ Overdrive%: _____

Stall Speed: _____ Tire Size and Diameter: _____

CURRENT CAMSHAFT INFORMATION:

Type Of Tappet Design (Hydraulic, Solid, Roller, etc): _____

Advertised Duration: Intake: _____ Exhaust: _____

Duration at .050": Intake: _____ Exhaust: _____

Lobe Lift (w/o ratio): Intake: _____ Exhaust: _____

Lobe Separation: _____

Performance Remarks: _____

Complete all of the above information and send to:
Attn: Camshaft Technical Support
CROWER CAMS & EQUIPMENT COMPANY, Inc.
6180 Business Center Court
San Diego, CA 92154-5604
For faster service fax this form to 619-661-6466 or complete the form online at ***www.crower.com***

Camshaft Selection

VEHICLE PACKAGE

It is the complete vehicle package that will determine how well your vehicle satisfies your performance preference.

By complete vehicle package we mean the interaction of all a vehicle's components and subsystems, including the engine and its related parts (such as the carburetor, intake manifold, exhaust system, camshaft and ignition), the transmission, rear end gears, wheel and tire combinations and diameters and suspension pieces. All of these components must work in unison to produce the desired performance results.

RPM POWER RANGE

Before thumbing through the collection of profiles listed on the following pages you will need to formulate a definite idea of your motoring requirements. Doing so will dictate what rpm power range you will be operating in most often (see Fig. 1). Because camshaft selection as well as carburetion, manifold choice and gearing are based on it, knowing your rpm power range is the key to building a successful vehicle package.

Be realistic when examining your driving style, the vehicle's present engine/drive train components and your pocket book. Be sure you can afford to purchase all of the components necessary to complete the desired vehicle package at your performance level. Remember, the further from stock you deviate in the engine department, the more modifications will be required elsewhere in the vehicle.

Refer to the five performance levels listed below for an idea of the components required to produce a successful vehicle package at the performance level you desire.

Approximate RPM Power Range:
Hydraulic camshafts - Idle to 3500 / Redline: 4500.
Solid camshafts - 1000 to 4000 / Redline: 5000.

LEVEL 1 CAMS MILEAGE & TORQUE

Level 1 indicates a good stock replacement camshaft. These profiles are designed to enhance throttle response and low end torque in vans, trucks, passenger cars and mild marine applications while delivering fuel efficient motoring. High vacuum, smooth idle and maximum efficiency are characteristics of these cams. Stock or small cfm carburetor, small diameter tube headers and dual exhaust are recommended for maximum benefit. Intended for stock or near-stock engines and drive trains, 8.5:1 compression, 2.70 to 3.25 ring and pinion, automatic transmission with stock converter or four-speed manual transmission.

Approximate RPM Power Range:
Hydraulic camshafts - 1500 to 4000 / Redline: 5500.
Solid camshafts - 2000 to 5000 / Redline: 6000.

LEVEL 2 CAMS MILEAGE & POWER

Level 2 profiles are for individuals that require more power and an extended rpm range. Works well with stock or near-stock engines and drive trains. These camshafts provide excellent low end and mid-range power for spirited street and off road driving and mild marine applications. Modifications that should accompany installation of these cams include small diameter tube headers, low restriction dual exhaust, aftermarket manifold, increased cfm carburetor and reworked or performance ignition. Increased compression (9.5:1) is recommended for maximum output. Aftermarket torque converter with slightly higher stall speed is recommended because stock factory converters do not allow the engine to provide adequate idle speed and off idle performance. Works well with four-speed manual transmission. Designed for lightly modified street engines.

Camshaft Selection

LEVEL 3 CAMS HIGH PERFORMANCE

Approximate RPM Power Range:
Hydraulic camshafts - 1800 to 4500 / Redline: 6000.
Solid camshafts - 2200 to 6000 / Redline: 7000.
Hydraulic roller camshafts - 2000 to 4700 / Redline: 6250.

Level 3 camshafts are designed for moderately modified engines. Intended for performance hot street/strip and performance marine applications, these profiles have a moderate lope at idle and offer an extended rpm range with emphasis on upper bottom to top end power and a strong mid-range. These higher lift, longer duration camshafts demand close attention to rear end gearing and tire diameter combinations. The secret here is to pick a ring and pinion gear set and tire diameter that keeps the engine in its optimum rpm power range (see Fig. 1). These profiles perform well with four-speed manual transmissions or automatic transmissions if a high stall torque converter is employed. Headers, dual exhaust, larger than stock carburetor, performance manifold and increased compression (9.5:1 to 10.5:1) are required. Mild porting and larger valves will improve performance.

LEVEL 4 CAMS ULTRA PERFORMANCE

Approximate RPM Power Range:
Hydraulic camshafts - 2000 to 6000 / Redline: 6500.
Solid camshafts - 2500 to 6500 / Redline: 7500.
Hydraulic roller camshafts - 2200 to 5000 / Redline: 6500.

Level 4 camshafts are designed for heavily modified engines. They have a definite lope at idle and are best suited for dual purpose hot street/drag strip, hot marine and oval track applications. These grinds exhibit strong mid-range to top end torque and horsepower. Headers, dual exhaust, large cfm carburetor, performance ignition and increased compression of 10.25:1 and above are required. Cylinder head modifications would be beneficial. Use with standard manual transmission or automatic with high stall torque converter. Again, close attention to proper ring and pinion and tire diameter selection is imperative.

LEVEL 5 CAMS COMPETITION/ RACE ONLY

Level 5 camshafts are designed for fully prepared, high compression, all-out racing engines and chassis. Extensive cylinder head modification, bigger valves, lightweight valve train, titanium valves, maximum flow carburetion or fuel injection, racing gas, alky or nitro, magneto or electronic ignition, performance rod and crank assembly and increased engine clearances are required for maximum benefit.

The wide selection of level 5 profiles enable the experienced engine builder to choose the proper camshaft for his particular application, whether it be drag racing, oval track competition, tractor pulling or performance marine. If you are uncertain as to which cam profile best suits your needs, please contact our technical support staff at 619-422-1191.

RPM RANGE AT 60 MPH

RPM CHART Fig.1

Tire Diameter	Rear End Gear Ratio										
	2.18	2.50	2.74	3.08	3.23	3.50	3.73	3.90	4.10	4.56	4.88
24	1831	2100	2301	2587	2713	2940	3133	3276	3444	3830	4099
26	1690	1938	2124	2388	2504	2714	2892	3024	3179	3536	3784
28	1570	1800	1973	2218	2326	2520	2686	2808	2952	3283	3513
30	1465	1680	1841	2070	2170	2352	2507	2621	2755	3064	3279
32	1373	1575	1726	1940	2035	2205	2349	2457	2583	2873	3074
34	1293	1482	1625	1826	1915	2075	2212	2312	2431	2704	2894
36	1221	1400	1534	1725	1809	1960	2089	2184	2296	2554	2733
38	1157	1326	1454	1634	1714	1857	1979	2069	2175	2419	2589
40	1099	1260	1381	1552	1628	1764	1880	1966	2066	2298	2460
42	1046	1200	1315	1478	1550	1680	1790	1872	1968	2189	2342

FORMULA:

$$\frac{\text{MPH x Axle Ratio}}{\text{x 336}}$$
Tire Diameter

CUSTOM CAMS - FLAT TAPPET / ROLLER

FLAT TAPPETCAMS

- SPECIAL MATERIAL STEEL BILLET FLAT TAPPET CAMS FOR HIGH SPRING PRESSURE & HIGH RPM USE.

ROLLER CAMS

- CAM BEARING SIZE
- STD, 50mm, 55mm, 60mm
- SPECIAL FIRING ORDERS
- 4-7 SWITCH, 4-7-3-2 SWITCH

CUSTOM DESIGN CAMS

- SUPPLY AIR FLOW #'S, ENGINE SPECS, ROCKER RATIOS, & MAX ENGINE RPM WHEN ORDERING.

619.661.6477 • Fax: 619.661.6466 • crower.com

HYDRAULIC CAMSHAFTS

Note: These cams use .000" intake and exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust	Suitable Component Kit
MILEAGE COMPU-PRO / PERFORMANCE LEVEL 1 - Enhances mileage and torque in stock engines. RPM Power Range: Idle to 3500 / Redline: 4000 plus.	All cid	**44242**	242HDP 110°	242°	250°	184°	192°	.411"	.413"	**84044**
POWER COMPU-PRO / PERFORMANCE LEVEL 2 - Perfect combination power/mileage with extended rpm's. RPM Power Range: 1500 to 4000 / Redline: 4250 plus	All cid	**44243**	256HDP 112°	256°	264°	194°	204°	.437"	.445"	**84044**
BAJA BEAST / PERFORMANCE LEVEL 2 - Strong upper bottom/top end power. RPM Power Range: 1800 to 4250 / Redline: 5000 plus.	All cid	**44915**	280HDP 112°	280°	280°	208°	208°	.448"	.448"	**84044**
ULTRA PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 4 - Street/strip cam. Super top end power. RPM Power Range: 2000 to 5000 / Redline: 5500 plus.	All cid	**44245**	278HDP 112°	278°	284°	212°	218°	.462"	.475"	**84044**
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**	*Refer to page 7 for camshaft recommendation form*							**84044 or 84046**

SOLID CAMSHAFTS

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
PRO-STREET / PERFORMANCE LEVEL 2 -Delivers versatile height torque, low end and mid-range power. RPM Power Range: 1500 to 400 / Redline: 5500 plus.	All cid	**44310**	260FDP 112°	260°	266°	210°	218°	.448"	.453"
PRO-STREET / PERFORMANCE LEVEL 3 - Strong upper bottom to mid-range power. RPM Power Range: 1800 to 4500 / Redline: 6000 plus.	All cid	**44311**	282FDP 112°	282°	287°	238°	242°	.480"	.486"
PRO-STREET / PERFORMANCELEVEL 4 - Exhibits strong mid-range to top end performance. RPM Power Range: 2000 to 6000 / Redline: 7000 plus.	All cid	**44312**	292FDP 110°	292°	298°	248°	250°	.499"	.512"
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call with all engine data incl. head flow data, valve sizes, operating power range, etc when ordering.	All cid	**00000**	*Refer to page 7 for camshaft recommendation form*						
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call with all engine data incl. head flow data, valve sizes, operating power range, etc when ordering.	All cid	**00006**	*Refer to page 7 for camshaft recommendation form*						

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Remarks
84044	66031-12	68315-12	87049D- 12	**Hydraulic** Lifter. For rpm Up to 6000.
84046	66031-12	68390X3-12	87049D- 12	**Hydraulic** Lifter. For rpm Up to 6500 plus
84244	66945-12	68315-12	87049D- 12	**Solid Lifter.** For rpm Up to 6750.
84246	66945-12	68390X3-12	87049D- 12	**Solid Lifter.** For rpm over to 7000.

Kits shown fit 3/8 valves

Spring pressure:
68315-12 Seat: 1.850" @ 105 lbs / Nose: 1.400" @ 267 lbs / Coil bind: 1.150"
(Stock O.D., no machine work).
68390X3-12 Seat: 1.800" @ 115 lbs / Nose: 1.300" @ 340 lbs / Coil bind: 1.100"
(Machine work, use cutter 68985*).
* Machine work required, specify 3⁄8 pilot shaft when ordering.
Valve timing events are available online at: **www.crower.com/valvtime.html**

Engineered Component Kit for custom ground solid, & roller: 84244,84246.

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter with 3/8 pilot
Pg's. 146-149	Pushrods

Note: Longer pushrods may be required to achieve proper hydraulic lifter preload (.050" off snap-ring). Use checking pushrod.

AMC

HYDRAULIC CAMSHAFTS

Non Roller 1966-1991

290 304 343 360 (5.9L) 390 401 V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!
CONTACT CROWER TECHNICIANS FOR MORE INFO.

See the following page for specs on accessories

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
BAJA BEAST / PERFORMANCE LEVEL 2 - Excellent low end and mid-range power. RPM Power Range: 1500 to 4500 / Redline: 5500 plus.	343 up	**45915**	258H 112°	258°	264°	204°	210°	.445"	.448"
POWER BEAST / PERFORMANCE LEVEL 2 - Excellent low end and mid-range power.RPM Power Range: 1750 to 4750 / Redline: 5750 plus.	343 up	**45916**	280HDP 110°	280°	289°	204°	214°	.450"	.474"
MILEAGE COMPU-PRO / PERFORMANCE LEVEL 1 - These cams are designed to enhance throttle response and low end torque while delivering fuel efficient motoring. High vacuum, smooth idle and maximum fuel efficiency are characteristic to these profiles. Stock or small cfm carburetor, small diameter tube headers, dual exhaust, and ignition rework are recommended for maximum benefit. Intended for low compression engines operating in the "economy zone." RPM Power Range: Idle to 3500 / Redline: 4500 plus.	290 304	**45236**	236HDP 112°	236°	246°	182°	184°	.395"	.400"
	343 360	**45237**	246HDP 112°	246°	253°	184°	190°	.402"	.422"
	390 401	**45238**	250HDP 112°	250°	258°	192°	196°	.427"	.432"
POWER COMPU-PRO / PERFORMANCE LEVEL 2 - These cams provide excellent low end and mid-range power and extended rpm range for spirited street and off-road driving. A perfect combination of mileage and power. Modifications should include small diameter tube headers, low restriction dual exhaust, aftermarket manifold, increased cfm carburetor and reworked or performance ignition. Increase in compression ratio to 9.5:1 is recommended for maximum output. Works well with automatic transmission or 4-speed. RPM Power Range: 1500 to 4000 / Redline: 5500 plus.	290 304	**45239**	260HDP 112°	260°	266°	204°	210°	.446"	.450"
	343 360	**45240**	270HDP 112°	270°	276°	210°	220°	.450"	.475"
	390 401	**45241**	276HDP 112°	276°	281°	212°	220°	.464"	.488"
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 3 - Intended for the performance oriented hot-street application, these cams offer an extended rpm range with emphasis on upper bottom to top end power. Performance gears, headers, dual exhaust, larger than stock cfm carburetor, performance manifold and increased compression (9.5:1 to 10.5:1) are required. Works well with automatic transmission if matched with proper ring and pinion gears and/or high stall converter. RPM Power Range: 1800 to 4500 / Redline: 6000 plus.	290 304	**45241**	276HDP 112°	276°	281°	212°	220°	.464"	.488"
	343 360	**45246**	293HDP 114°	293°	293°	223°	223°	.477"	.477"
	390 401	**45243**	284HDP 112°	284°	290°	228°	234°	.512"	.525"
ULTRA PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 4 - The following grinds are best suited for dual purpose hot street/drag strip situations. These cams exhibit strong mid-range and top end torque and horsepower. Headers, dual exhaust, larger cfm carburetor, performance ignition and 11:1 compression are a must. Use with manual or automatic transmission. Low gearing a must.RPM Power Range: 2000 to 6000 / Redline: 6500 plus.	343 360	**45247**	305HDP 112°	305°	315°	234°	244°	.520"	.542"
	390 401	**45245**	311HDP 112°	311°	316°	246°	250°	.547"	.557"
HI-DRAULIC HAULER / PERFORMANCE LEVEL 4 - Strong mid to top end torque. RPM Power Range: 2500 to 6000 / Redline: 6500	290 343	**45210**	290HDP 108°	290°	298°	226°	236°	.498"	.496"
HI-DRAULIC HAULER / PERFORMANCE LEVEL 4 - Emphasis on upper mid to top end power. RPM Power Range: 2500 to 6000 / Redline: 6500	360 401	**45211**	296HDP 108°	296°	302°	230°	242°	.504"	.501"
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Explosive mid to top end torque and horsepower. RPM Power Range: 3000 to 6500 / Redline: 6500	360 401	**45212**	304HDP 108°	304°	312°	242°	246°	.533"	.562"
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call with all engine data incl. head flow data, valve sizes, operating power range, etc when ordering.	All cid	**00001**	***Refer to page 7 for camshaft recommendation form***						

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Remarks
84045	66031-16	68315-16	87049- 16[A]	**Hydraulic Lifter.**

Spring pressure:
68315-16 Seat: 1.850" @ 105 lbs / Nose: 1.350" @ 275 lbs / Coil bind: 1.150" (Stock O.D., no machine work).

A. Some 1973-74 engines were equipped with 11⁄32 exhaust valves and rotators. Order 87049-8 and 87050-8 steel retainers, and 86071-8 and 86072-8 valve stem seals.
* Machine work required, specify 3⁄8 pilot shaft when ordering.
Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required. See spring and retainer specs or contact Crower for proper recommendations. Valve timing events are available online at: **www.crower.com/valvtime.html**

SOLID CAMSHAFTS
Non Roller 1966-1991
290 304 343 360 (5.9L) 390 401 V8

Note: These cams use .022" intake, .024" exhaust valve lash.

AMC

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
COMPU-PRO / PERFORMANCE LEVEL 4 - High torque, all purpose camshaft with emphasis on mid-range power. RPM Power Range: 2500 to 6000 / Redline: 7000 plus.	290 343	**45315**	282FDP 108°	282°	287°	240°	242°	.478"	.486"
COMPU-PRO / PERFORMANCE LEVEL 4 - High torque, all purpose camshaft with emphasis on mid to top end power. RPM Power Range: 3000 to 6500 / Redline: 7500 plus.	360 401	**45316**	292FDP 108°	292°	298°	246°	250°	.499"	.509"
COMPU-PRO / PERFORMANCE LEVEL 5 - Does it all. Brutal power throughout the power range. RPM Power Range: 3500 to 7500 / Redline: 8000 plus.	290 343	**45317**	304FDP 108°	304°	310°	258°	262°	.534"	.549"
COMPU-PRO / PERFORMANCE LEVEL 5 - Explosive power through the power range. RPM Power Range: 3750 to 7750 / Redline: 8250 plus.	360 401	**45318**	310FDP 108°	310°	318°	262°	270°	.547"	.563"
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	*Refer to page 7 for camshaft recomendation form*						
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00006**	*Refer to page 7 for camshaft recomendation form*						

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84245	66945-16	68315-16	87049- 16[A]		**Solid Lifter.** For rpm Up to 7000.
84345	66945-16	68390X3-16	87049- 16[A]	86071- 16	**Solid Lifter**. For high rpm. Limited street

Spring pressure:
68315-16 Seat: 1.850" @ 105 lbs / Nose: 1.350" @ 275 lbs / Coil bind: 1.150"
(Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 115 lbs / Nose: 1.300" @ 331 lbs / Coil bind: 1.110"
(Machine work, use cutter 68985*).

A. Some 1973-74 engines were equipped with 11/32 exhaust valves and rotators. Order 87049-8 and 87050-8 steel retainers, and 86071-8 and 86072-8 valve stem seals.
* Machine work required, specify 3/8 pilot shaft when ordering.
Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required. See spring and retainer specs or contact Crower for proper recommendations.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
See pg. 138	Timing gear set
Pg's. 150-165	SS Rocker arms
Pg's. 150-165	Alum. Rocker arms

Note: If using guide plates, heat-treated pushrods (RC 60 series) are required. See pushrods or contact Crower.
Note: When installing solid or roller lifter camshafts, screw-in rocker studs are required. See stud specs or contact Crower.

Buick

HYDRAULIC & SOLID CAMSHAFTS

Non Roller 1978-1986

196 (3.2L) 231 (3.8L) 252 (4.1L) V6 Evenfire

HYDRAULIC CAMSHAFTS

Note: These cams use .000" intake and exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
MILEAGE COMPU-PRO / PERFORMANCE LEVEL 1 - Enhances mileage and torque in stock engines. RPM Power Range: Idle to 3500 / Redline: 4500 plus	All cid	**54242**	242HDP 110°	242°	250°	180°	190°	.413"	.413"
MILEAGE BEAST / PERFORMANCE LEVEL 2 - Perfect combination mileage/ power with extended rpm range. RPM Power Range: 1500 to 4000 / Redline: 5500 plus	All cid	**54902**	272HDP 114°	272°	280°	194°	204°	.424"	.450"
BAJA BEAST / PERFORMANCE LEVEL 3 - Good hot street cam with emphasis on upper bottom to top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 plus	All cid	**54915**	280HDP 112°	280°	290°	204°	214°	.450"	.474"
ULTRA PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 4 - Street/strip cam with strong mid to top end torque and horsepower. RPM Power Range: 2000 to 6000 / Redline: 6500	All cid	**54245**	278HDP 112°	278°	284°	212°	218°	.462"	.478"
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call with all engine data incl. head flow data, valve sizes, operating power range, etc when ordering.	All cid	**00001**	*Refer to page 7 for camshaft recommendation form*						

Note: Early 198-225 cid 1962-1967 cam cores are available from Crower. Specify when ordering.

SOLID CAMSHAFTS

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
COMPU-PRO / PERFORMANCE LEVEL 3 - Extended rpm range with emphasis on upper bottom to top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 plus.	All cid	**54310**	282FDP 107°	282°	287°	238°	242°	.483"	.486"
COMPU-PRO / PERFORMANCE LEVEL 4 - Hot street/strip profile. Strong mid to top end torque and horsepower. RPM Power Range: 2200 to 6000 / Redline: 7000 plus.	All cid	**54311**	292FDP 108°	292°	298°	244°	248°	.501"	.514"
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call with all engine data including head flow data, valve sizes, operating power range, etc when ordering.	All cid	**00000**	*Refer to page 7 for camshaft recommendation form*						

Note: Custom ground turbocharged/supercharged camshafts are available from Crower on a special order basis.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Remarks
84053	66050-12	68301X1-12	86032-12	**Hydraulic Lifter.**
84253	66900-12	68301X1-12	86032-12	**Solid Lifter.**

Spring pressure:
68301X1-12 Seat: 1.700" @ 101 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).

Note: If exceeding 6500 rpm, high pressure springs and titanium retainers may be required. See spring and retainer specs or contact Crower for proper recommendations.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods

Note: Crower has an extensive inventory of Buick V6 cam profiles and roller lifters that were designed for the Buick V6 Indy turbo engines.

HYDRAULIC CAMSHAFTS

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!
CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
MILEAGE COMPU-PRO / PERFORMANCE **LEVEL 1** - Enhances throttle response and low end torque while delivering fuel efficient drivability. RPM Power Range: Idle to 3500 / Redline: 4500 plus	300 cid	**50227**	246HDP 112°	246°	253°	184°	190°	.402"	.421"
	340 cid	**50228**	250HDP 112°	250°	258°	192°	196°	.424"	.430"
POWER COMPU-PRO / PERFORMANCE **LEVEL 2** - Perfect combination of power and mileage with extended rpm range. Strong low end and mid-range power for spirited driving on or off the road. RPM Power Range: 1500 to 4000 / Redline: 5500 plus	300 cid	**50229**	258HDP 112°	258°	260°	196°	202°	.430"	.446"
	340 cid	**50230**	260HDP 112°	260°	266°	202°	210°	.446"	.451"
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE **LEVEL 3** - These cams offer extended rpm range with emphasis on upper bottom and top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 plus	300 cid	**50231**	270HDP 112°	270°	276°	210°	218°	.451"	.477"
	340 cid	**50232**	276HDP 112°	276°	281°	214°	218°	.488"	.490"
ULTRA PERFORMANCE COMPU-PRO / PERFORMANCE **LEVEL 4 -** These cams exhibit strong mid-range and top end torque and horsepower. RPM Power Range: 2000 to 6000 / Redline: 6500	300 cid	**50233**	280HDP 112°	280°	286°	220°	226°	.488"	.501"
	340 cid	**50234**	284HDP 112°	284°	290°	228°	234°	.512"	.526"
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**		*Refer to page 7 for camshaft recommendation form*					

SOLID CAMSHAFTS

Note: These cams use .022" intake, .024" exhaust valve lash.

Engineered Component Kit for the above part #'s: 84150

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
COMPU-PRO / Performance Level 3 - Strong mid to top end torque and horsepower. RPM Power Range: 2000 to 5500 / Redline: 7000 plus.	300 cid	**50303**	282FDP 108°	282°	287°	238°	242°	.482"	.488"
COMPU-PRO / Performance Level 3 - Strong mid-range and top end power. RPM Power Range: 2500 to 6000 / Redline: 7500 plus.	340 cid	**50304**	292FDP 108°	292°	298°	246°	250°	.502"	.514"
COMPU-PRO / Performance Level 4 - Tremendous upper mid to top end torque and horsepower. RPM Power Range: 3000 to 6500 / Redline: 7500 plus.	340 cid	**50305**	304FDP 108°	304°	310°	256°	262°	.536"	.549"
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	*Refer to page 7 for camshaft recommendation form*						
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00006**	*Refer to page 7 for camshaft recommendation form*						

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84150	66050-16	68405 -16	87021-16	86072-16	**Hydraulic Lifter.**
84350	66900-16	68405-16	87021-16	86072-16	**Solid Lifter.**

Engineered Component Kit for the above part #'s: 84350

Spring pressure:
68405-16 Seat: 1.700" @ 104 lbs / Nose: 1.200" @ 297 lbs / Coil bind: 0.980"
(Machine work, use cutter 68983*).
* Machine work required, specify 3/8 pilot shaft when ordering.
Valve timing events are available online at:
www.crower.com/valvtime.html

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods

Note: If exceeding 6500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

Buick

HYDRAULIC & SOLID CAMSHAFTS

Non Roller 1968-1980
BUICK 350 V8

HYDRAULIC CAMSHAFTS

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!
CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.55 / 1.55 Intake	Gross Lift 1.55 / 1.55 Exhaust
MILEAGE COMPU-PRO / Performance Level 1 - Enhances throttle response. Low end torque and fuel efficiency. RPM Power Range: Idle to 3500 / Redline: 4500 plus	350 cid	**50256**	250HDP 112°	250°	258°	192°	196°	.411"	.419"
POWER COMPU-PRO / Performance Level 2 - Power and mileage cam with extended rpm for spirited motoring. RPM Power Range: 1500 to 4000 / Redline: 5500 plus	350 cid	**50257**	260HDP 112°	260°	266°	202°	210°	.434"	.436"
HIGH PERFORMANCE COMPU-PRO / Performance Level 3 - Strong upper bottom to top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 plus	350 cid	**50258**	276HDP 112°	276°	281°	210°	220°	.446"	.468"
ULTRA PERFORMANCE COMPU-PRO / Performance Level 4 - Street/strip profile with superior upper bottom to top end torque. RPM Power Range: 2000 to 6000 / Redline: 6500	350 cid	**50259**	284HDP 112°	284°	290°	226°	234°	.499"	.508"
HI-DRAULIC HAULER / Performance Level 4 - Rough idle. Strong mid to top end torque and horsepower. RPM Power Range: 2500 to 6000 / Redline: 6500	350 cid	**50260**	296HDP 108°	296°	302°	228°	242°	.485"	.512"
HI-DRAULIC HAULER / Performance Level 5 - Rough idle. Explosive mid-range torque and horsepower. RPM Power Range: 3000 to 6500 / Redline: 6500	350 cid	**50261**	304HDP 108°	304°	312°	240°	246°	.516"	.544"
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**	***Refer to page 7 for camshaft recommendation form***						

SOLID CAMSHAFTS

Engineered Componet Kit for the above part #'s: 84150

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.55 / 1.55 Intake	Gross Lift 1.55 / 1.55 Exhaust
COMPU-PRO / Performance Level 4 - High torque, all purpose cam profile. RPM Power Range: 2500 to 6500 / Redline: 7000 plus.	350 cid	**50353**	282FDP 108°	282°	287°	238°	242°	.467"	.471"
COMPU-PRO / Performance Level 5 - Explosive power throughout the power band. RPM Power Range: 3000 to 7000 / Redline: 7250 plus.	350 cid	**50354**	292FDP 108°	292°	298°	246°	250°	.485"	.498"
COMPU-PRO / Performance Level 5 - Superior mid-range and top end torque. RPM Power Range: 3500 to 7500 / Redline: 7750 plus.	350 cid	**50355**	304FDP 108°	304°	310°	256°	262°	.519"	.532"
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	***Refer to page 7 for camshaft recommendation form***						
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00006**	***Refer to page 7 for camshaft recommendation form***						

ENGINEERED COMPONENT KITS

Engineered Component Kit for the above part #'s: 84350. For

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84150	66050-16	68405 -16	87021-16	86072-16	**Hydraulic Lifter.**
84350	66900-16	68405-16	87021-16	86072-16	**Solid Lifter.**

Spring pressure:
68405-16 Seat: 1.700" @ 104 lbs / Nose: 1.200" @ 297 lbs / Coil bind: 0.980" (Machine work, use cutter 68983*).
* Machine work required, specify 3⁄8 pilot shaft when ordering.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods

Note: If exceeding 6500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

HYDRAULIC CAMSHAFTS

Non Roller 1967-1976

400 430 455 V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Buick

1957-66 Bucik V8 364 401 425 (Nail Head) hydraulic & solid cams available. Call Crower

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
MILEAGE COMPU-PRO / Performance Level 1 - Enhances throttle response and low end torque while delivering fuel efficient drivability. RPM Power Range: Idle to 3500 /Redline: 4500 plus	400 430	**52236**	258HDP 112°	258°	260°	196°	202°	.430"	.446"
	455 cid	**52237**	260HDP 112°	260°	266°	204°	210°	.448"	.446"
POWER COMPU-PRO / Performance Level 2 - Perfect combination of power and mileage with extended rpm range. Strong low end and mid-range power for spirited driving on or off the road. RPM Power Range: 1500 to 4000 / Redline: 5500 plus	400 430	**52238**	270HDP 112°	270°	276°	210°	214°	.464"	.488"
	455 cid	**52239**	276HDP 112°	276°	281°	212°	216°	.475"	.487"
HIGH PERFORMANCE COMPU-PRO / Performance Level 3 - Intended for the hot street application, these cams offer extended rpm range with emphasis on upper bottom and top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 plus	400 430	**52240**	280HDP 112°	280°	286°	222°	228°	.488"	.499"
	455 cid	**52241**	284HDP 112°	284°	290°	230°	236°	.514"	.525"
ULTRA PERFORMANCE COMPU-PRO / Performance Level 4 - Dual purpose hot street/drag strip profile. These cams exhibit strong mid-range and top end torque and horsepower. RPM Power Range: 2000 to 5000 / Redline: 6500	400 430	**52242**	297HDP 112°	297°	308°	238°	242°	.538"	.536"
	455 cid	**52243**	311HDP 112°	311°	316°	248°	252°	.546"	.559"
HI-DRAULIC HAULER / Performance Level 4 - Strong mid-range to top end torque. RPM Power Range: 2500 to 6000 / Redline: 6250 plus	400 430	**52210**	296HDP 108°	296°	302°	232°	244°	.507"	.526"
HI-DRAULIC HAULER / Performance Level 4 - Strong mid-range to top end power. RPM Power Range: 2750 to 6250 / Redline: 6500	455 cid	**52211**	304HDP 108°	304°	312°	242°	248°	.531"	.560"
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**	***Refer to page 7 for camshaft recommendation form***						

ENGINEERED COMPONENT KITS

Engineered Componet Kit for the above part #'s: 84052

Part No.	Lifters	Springs	Retainers	Remarks
84054	66050-16	68143-16	87019-16	For rpm up to

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods

Spring pressure:
Seat: 1.850" @ 92 lbs / Nose: 1.350" @ 300 lbs / Coil bind: 1.260" (Stock O.D., no machine work).
Note: When using high lift cams (over .480") or modified valve stem lengths, a longer pushrod is required to achieve proper lifter preload (.050" off snap-ring). Use checking pushrod to determine length and call with specs.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at: **www.crower.com/valvtime.html**

Buick

SOLID CAMSHAFTS

Non Roller 1967-1976

400 430 455 V8

Note: These cams use .022" intake, .024" exhaust valve lash.

1957-66 Bucik V8 364 401 425 (Nail Head) hydraulic & solid cams available. Call Crower

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
COMPU-PRO / Performance Level 4 - High torque, all purpose profile. RPM Power Range: 2500 to 6000 / Redline: 6500 plus.	All cid	**52310**	282FDP 108°	282°	287°	238°	242°	.482"	.488"
COMPU-PRO / Performance Level 5 - Explosive horsepower throughout the power band. RPM Power Range: 3000 to 6500 / Redline: 7000 plus.	All cid	**52311**	292FDP 108°	292°	298°	246°	250°	.499"	.509"
COMPU-PRO / Performance Level 5 - Superior mid-range and top end torque. RPM Power Range: 3500 to 7000 / Redline: 7000 plus.	All cid	**52312**	304FDP 108°	304°	310°	258°	262°	.533"	.549"
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	*Refer to page 7 for camshaft recommendation form*						

Engineered Componet Kit for the above part #'s: 84252

ENGINEERED COMPONENT KITS

Part No.	*Lifters*	*Springs*	*Retainers*	*Remarks*
84254	66900-16	68143-16	87019-16	For rpm up to

Spring pressure:
Seat: 1.850" @ 92 lbs / Nose: 1.350" @ 300 lbs / Coil bind: 1.260"
(Stock O.D., no machine work).

Note: If exceeding 7000 rpm, high pressure springs and titanium retainers may be required. See spring and retainer specs or contact Crower for proper recommendations.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	*Description*
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods

Note: Solid lifter camshafts require adjustable pushrods. See pushrods or contact Crower.

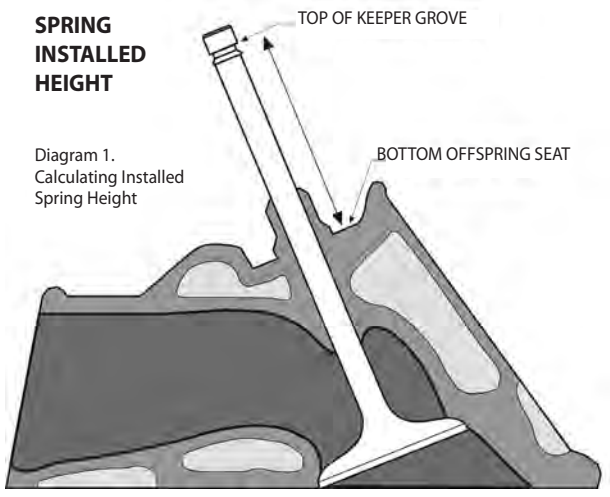


Diagram 1. Calculating Installed Spring Height

Measure the height from top of keeper grove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement.

HYDRAULIC & SOLID CAMSHAFTS

Non Roller 1963-1984
194 230 250 inline 6 cylinder

Chevrolet

HYDRAULIC CAMSHAFTS

Note: These cams use .000" intake and exhaust valve lash.

Note: 292 cid cam cores are available from Crower on a special order basis.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.75 / 1.75 Intake	Gross Lift 1.75 / 1.75 Exhaust
MILEAGE COMPU-PRO / Performance Level 1 - Enhances mileage and torque in stock engines. RPM Power Range: Idle to 3500 / Redline: 4500 plus.	All cid	**03240**	240HDP 114°	240°	248°	182°	192°	.436"	.452"
POWER COMPU-PRO / Performance Level 2 - Perfect combination power/mileage with extended rpm's. RPM Power Range: 1500 to 4000 / Redline: 5500 plus.	All cid	**03241**	248HDP 112°	248°	258°	192°	200°	.448"	.460"
HIGH PERFORMANCE COMPU-PRO / Performance Level 3 - Hot street profile with strong upper bottom and top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 plus.	All cid	**03242**	262HDP 112°	262°	272°	204°	212°	.478"	.490"
ULTRA PERFORMANCE COMPU-PRO / Performance Level 4 - Street/strip cam. Super top end torque and horsepower. RPM Power Range: 2000 to 6000 / Redline: 6500	All cid	**03243**	272HDP 112°	272°	276°	210°	212°	.490"	.508"
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**	*Refer to page 7 for camshaft recommendation form*						

Engineered Componet Kit for the above part #'s: 84008

SOLID CAMSHAFTS

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.75 / 1.75 Intake	Gross Lift 1.75 / 1.75 Exhaust
COMPU-PRO / Performance Level 4 - High torque, all purpose camshaft. RPM Power Range: 2250 to 6000 / Redline: 6500 plus.	All cid	**03311**	282FDP 107°	282°	287°	238°	242°	.525"	.532"
COMPU-PRO / Performance Level 5 - Does it all. Brutal power throughout the power range. RPM Power Range: 3000 to 6500 / Redline: 7000 plus.	All cid	**03312**	292FDP 107°	292°	298°	248°	252°	.548"	.564"
COMPU-PRO / Performance Level 5 - Explosive power. Superior mid-range and top end torque. RPM Power Range: 3500 to 7000 / Redline: 7500 plus.	All cid	**03313**	304FDP 107°	304°	310°	258°	264°	.585"	.600"
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	*Refer to page 7 for camshaft recommendation form*						
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00060**	*Refer to page 7 for camshaft recommendation form*						

Note: 292 cid cam cores are available from Crower on a special order basis.

Engineered Component Kit for the above part #'s: 84303

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84008	66000-12	68301X1-12	86032-12	86072-12	**Hydraulic Lifter.**
84303	66900-12	68390X3-12	87048-12	86072-12	**Solid Lifter.**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
Pg's. 150-165	SS Rocker arms
Pg's. 150-165	Alum. Rocker arms

Chevy V6 230 250 292 Billet Roller Cams available. Call Crower

Spring pressure:
68301X1-12 Seat: 1.700" @ 101 lbs / Nose: 1.200" @ 297 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68390X3-12 Seat: 1.800" @ 115 lbs / Nose: 1.300" @ 331 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).
* Machine work required, specify 11⁄32 pilot shaft when ordering.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050"). Valve timing events are available online at: **www.crower.com/valvtime.html**

Chevrolet

HYDRAULIC & SOLID CAMSHAFTS

Non Roller

173 60° (2.8L) 189 (3.1L) V6

HYDRAULIC CAMSHAFTS

Note: These cams use .000" intake and exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust
MILEAGE COMPU-PRO / Performance Level 1 - Enhances mileage and torque in stock engines.RPM Power Range: Idle to 3500 / Redline: 4500 plus	All cid	**03040**	240HDP 114°	240°	248°	182°	192°	.386"	.387"
MILEAGE BEAST / Performance Level 2 - Perfect combination power/mileage with extended rpm's. RPM Power Range: 1500 to 4000 / Redline: 5500 plus	All cid	**03002**	258HDP 109°	258°	265°	194°	202°	.390"	.410"
BAJA BEAST / Performance Level 3 - Strong upper bottom and top end power. RPM Power Range: 1800 to 4500 / Redline: 5750 plus	All cid	**03015**	278HDP 112°	283°	286°	204°	214°	.422"	.444"
ULTRA PERFORMANCE COMPU-PRO / Performance Level 4 - Street/strip cam. Super top end torque. RPM Power Range: 2000 to 5000 / Redline: 6000 plus	All cid	**03043**	278HDP 112°	278°	284°	212°	218°	.435"	.449"
HI-DRAULIC HAULER / Performance Level 4 - Strong mid-range and top end torque and horsepower. RPM Power Range: 2200 to 6200 / Redline: 6500	All cid	**03050**	290HDP 108°	290°	298°	226°	234°	.470"	.492"
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**	*Refer to page 7 for camshaft recommendation form*						

Engineered Component Kit for the above part #'s: 84008

SOLID CAMSHAFTS

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust
COMPU-PRO / PERFORMANCE LEVEL 3 - Extended rpm range with emphasis on upper bottom to top end power, strong mid-range. RPM Power Range: 2200 to 6000 / Redline: 7000 plus.	All cid	**03065**	260FDP 112°	260°	266°	212°	216°	.420"	.423"
COMPU-PRO / PERFORMANCE LEVEL 4 - Hot street/strip profile. Strong mid to top end torque and horsepower. RPM Power Range: 2500 to 6500 / Redline: 7500 plus.	All cid	**03066**	282FDP 110°	282°	287°	236°	242°	.449"	.458"
COMPU-PRO / PERFORMANCE LEVEL 5 - Fantastic top end profile with plenty of horsepower. RPM Power Range: 3000 to 7000 / Redline: 8000 plus.	All cid	**03067**	292FDP 108°	292°	298°	248°	250°	.470"	.479"
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	*Refer to page 7 for camshaft recommendation form*						

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84008	66000-12	68301X1 -12	86032-12	86072-12	**Hydraulic Lifter.**
84303	66900-12	68390X3 -12	87048-12	86072-12	**Solid Lifter.**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods

Note: If exceeding 6500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

Engineered Component Kit for the above part #'s: 84303

Spring pressure:
68301X1-12 Seat: 1.700" @ 101 lbs / Nose: 1.200" @ 297 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68390X3-12 Seat: 1.800" @ 115 lbs / Nose: 1.300" @ 331 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).
* Machine work required, specify 11⁄32 pilot shaft when ordering.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at:
www.crower.com/valvtime.html

HYDRAULIC & SOLID CAMSHAFTS

Non Roller

200 229 90° V6 (3.8L)

HYDRAULIC CAMSHAFTS

Note: These cams use .000" intake and exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust
MILEAGE COMPU-PRO / Performance Level 1 - Enhances mileage and torque in stock engines. RPM Power Range: Idle to 3500 / Redline: 4500 plus	All cid	**03140**	240HDP 114°	240°	248°	182°	190°	.386"	.387"
MILEAGE BEAST / Performance Level 2 - Perfect combination power/mileage with extended rpm's. RPM Power Range: 1500 to 4000 / Redline: 5500 plus	All cid	**03102**	270HDP 112°	270°	278°	194°	204°	.398"	.422"
BAJA BEAST / Performance Level 3 - Strong upper bottom and top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 plus	All cid	**03115**	278HDP 114°	278°	288°	204°	214°	.422"	.444"
POWER BEAST / Performance Level 4 - Street/strip cam. Super top end torque.RPM Power Range: 2000 to 5500 / Redline: 6250 plus	All cid	**03103**	288HDP 112°	288°	298°	214°	224°	.444"	.467"
HI-DRAULIC HAULER / Performance Level 4 - Strong mid-range and top end torque and horsepower. RPM Power Range: 2200 to 6200 / Redline: 6500	All cid	**03150**	280HDP 108°	280°	288°	226°	232°	.474"	.484"
HI-DRAULIC HAULER / Performance Level 5 - Explosive mid to top end power with emphasis on the upper end. RPM Power Range: 2500 to 6500 / Redline: 6500	All cid	**03151**	296HDP 108°	296°	308°	228°	244°	.509"	.498"
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**	***Refer to page 7 for camshaft recomendation form***						

Engineered Component Kit for the above part #'s: 84008

SOLID CAMSHAFTS

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust
COMPU-PRO / Performance Level 4 - High torque, all purpose grind for most applications. RPM Power Range: 2200 to 6200 / Redline: 6750 plus.	All cid	**03165**	282FDP 110°	282°	287°	238°	244°	.451"	.460"
COMPU-PRO / Performance Level 5 - Vicious horsepower throughout the power band. RPM Power Range: 3000 to 7000 / Redline: 7500 plus.	All cid	**03166**	292FDP 108°	292°	298°	246°	250°	.468"	.479"
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	***Refer to page 7 for camshaft recommendation form***						

Engineered Component Kit for the above part #'s: 84303

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84008	66000-12	68301X1 -12	86032-12	86072-12	**Hydraulic Lifter.**
84303	66900-12	68390X3 -12	87048-12	86072-12	**Solid Lifter.**

Spring pressure:
68301X1-12 Seat: 1.700" @ 101 lbs / Nose: 1.200" @ 297 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68390X3-12 Seat: 1.800" @ 115 lbs / Nose: 1.300" @ 331 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).
* Machine work required, specify 11⁄32 pilot shaft when ordering.

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods

Note: If exceeding 6500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at: **www.crower.com/valvtime.html**

Chevrolet

ROLLER CAMSHAFTS

Mechanical

200 229 90° V6 (3.8L)

Note: These cams use .026" intake, .028" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust
ULTRA ACTION / Performance Level 5 - High torque, all purpose grind. RPM Power Range: 2200 to 6200 / Redline: 6500 plus.	All cid	**03401**	284R 105°	284°	294°	254°	260°	.621"	.624"
ULTRA ACTION / Performance Level 5 - Brutal mid-range. Perfect oval track profile. RPM Power Range: 4000 to 7500 / Redline: 7000 plus.	All cid	**03402**	294R 105°	294°	302°	260°	268°	.624"	.621"
ULTRA ACTION / Performance Level 5 - Impressive mid-range and top end profile for the drags. RPM Power Range: 4500 to 8000 / Redline: 8500 plus.	All cid	**03403**	297R 105°	297°	304°	264°	268°	.624"	.623"
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call with all engine data incl. head flow data, valve sizes, operating power range, etc when ordering.	All cid	**00060**	*Refer to page 7 for camshaft recommendation form*						

Engineered Component Kit for the above part #'s: 84508

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84508	66289-12	68380X2 -12	87048-12	86072-12	For rpm up to 7500

Spring pressure:
68380X2-12 Seat: 1.800" @ 197 lbs / Nose: 1.200" @ 452 lbs / Coil bind: 1.110" (Machine work, use cutter 68999*).
Optional springs:
68363-12 (Longer valve stems are required).

* Machine work required, specify 11⁄32 pilot shaft when ordering.

CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
See pg. 138	Timing gear set
Pg's. 150-165	SS Rocker arms
Pg's. 150-165	Alum. Rocker arms

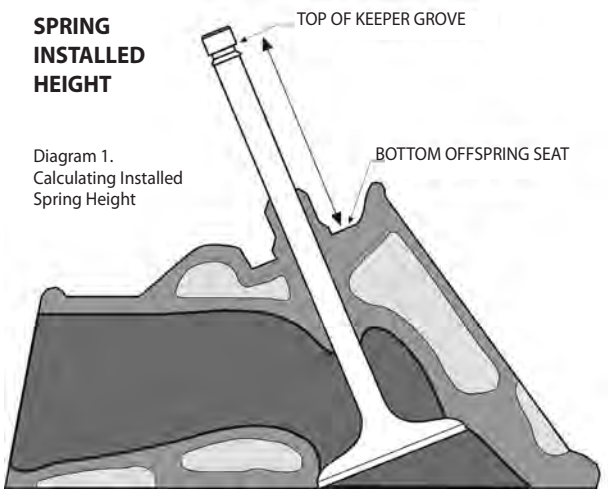


Diagram 1. Calculating Installed Spring Height

Measure the height from top of keeper grove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement.

HYDRAULIC & SOLID CAMSHAFTS

Non Roller
262 90° V6 (4.3L)

HYDRAULIC CAMSHAFTS

Note: These cams use .000" intake and exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust
MILEAGE COMPU-PRO / Performance Level 1 - Enhances mileage and torque in stock engines. RPM Power Range: Idle to 3500 / Redline: 4500 plus	All cid	**03340**	240HDP 114°	240°	248°	182°	190°	.386"	.387"
MILEAGE BEAST / Performance Level 2 - Perfect combination power/mileage with extended rpm's. RPM Power Range: 1500 to 4000 / Redline: 5500 plus	All cid	**03302**	260HDP 108°	260°	272°	194°	204°	.398"	.420"
HIGH PERFORMANCE COMPU-PRO / Performance Level 3 - Strong upper bottom/top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 plus	All cid	**03342**	264HDP 112°	264°	270°	202°	206°	.419"	.420"
ULTRA PERFORMANCE COMPU-PRO / Performance Level 4 - Street/strip cam. Super top end torque. RPM Power Range: 2000 to 5500 / Redline: 6000 plus	All cid	**03343**	278HDP 112°	278°	284°	212°	218°	.435"	.449"
HI-DRAULIC HAULER / Performance Level 4 - Strong mid-range and top end torque and horsepower. RPM Power Range: 2200 to 6200 / Redline: 6500	All cid	**03350**	280HDP 108°	280°	288°	226°	232°	.474"	.484"
HI-DRAULIC HAULER / Performance Level 5 - Explosive mid to top end power with emphasis on the upper end. RPM Power Range: 2500 to 6500 / Redline: 6700 plus	All cid	**03351**	296HDP 108°	296°	308°	228°	244°	.509"	.498"
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**	*Refer to page 7 for camshaft recommendation form*						

Engineered Component Kit for the above part #'s: 84008

SOLID CAMSHAFTS

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust
COMPU-PRO / Performance Level 4 - High torque, all purpose grind for most applications. RPM Power Range: 2200 to 6200 / Redline: 6750 plus.	All cid	**03365**	282FDP 110°	282°	287°	238°	244°	.451"	.460"
COMPU-PRO / Performance Level 5 - Vicious horsepower throughout the power band. RPM Power Range: 3000 to 7000 / Redline: 7500 plus.	All cid	**03366**	292FDP 108°	292°	298°	246°	250°	.468"	.474"
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	*Refer to page 7 for camshaft recommendation form*						

Engineered Component Kit for the above part #'s: 84303

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84008	66000-12	68301X1 -12	86032-12	86072-12	**Hydraulic Lifter.**
84303	66900-12	68390X3 -12	87048-12	86072-12	**Solid Lifter.**

Spring pressure:
68301X1-12 Seat: 1.700" @ 101 lbs / Nose: 1.200" @ 297 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68390X3-12 Seat: 1.800" @ 115 lbs / Nose: 1.300" @ 331 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).

* Machine work required, specify 11/32 pilot shaft when ordering.

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods

Note: If exceeding 6500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050"). Valve timing events are available online at: **www.crower.com/valvtime.html**

Chevrolet

ROLLER CAMSHAFTS

Mechanical

262 90° V6 (4.3L)

Note: These cams use .026" intake, .028" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust
ULTRA ACTION / Performance Level 5 - High torque, all purpose grind. RPM Power Range: 3500 to 7000 / Redline: 7500 plus.	All cid	**03450**	284R 105°	284°	294°	254°	260°	.621"	.624"
ULTRA ACTION / Performance Level 5 - Brutal mid-range. Perfect oval track profile. RPM Power Range: 4000 to 7500 / Redline: 7500 plus.	All cid	**03451**	294R 105°	294°	302°	260°	268°	.624"	.621"
ULTRA ACTION / Performance Level 5 - Impressive mid-range and top end profile for the drags. RPM Power Range: 4500 to 8000 / Redline: 8000 plus.	All cid	**03452**	297R 105°	297°	304°	264°	268°	.624"	.623"
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call with all engine data incl. head flow data, valve sizes, operating power range, etc when ordering.	All cid	**60000**	***Refer to page 7 for camshaft recommendation form***						

Engineered Component Kit for the above part #'s: 84508

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84508	66289-12	68380X2 -12	87048-12	86072-12	For rpm up to 7500 plus

Spring pressure:
68380X2-12 Seat: 1.800" @ 197 lbs / Nose: 1.200" @ 452 lbs / Coil bind: 1.110" (Machine work, use cutter 68999*).
Optional springs:
68363-12 (Longer valve stems are required).

* Machine work required, specify 11/32 pilot shaft when ordering.

CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
See pg. 138	Timing gear set
Pg's. 150-165	SS Rocker arms
Pg's. 150-165	Alum. Rocker arms

Note: If exceeding 6500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

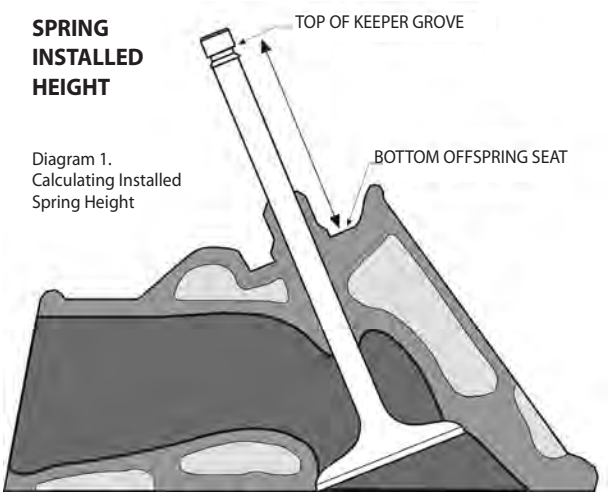


Diagram 1. Calculating Installed Spring Height

Measure the height from top of keeper grove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement.

BEAST HYDRAULIC CAMSHAFTS

1957-1998 Non Roller

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .000" intake and exhaust valve lash.

Chevrolet

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust
MILEAGE BEAST / Performance Level 1 - Smooth idle, fuel efficient design. Exceeds factory replacement cam. Economical price. **RPM Power Range: Idle to 3500 / Redline: 4500 plus**	283 350 400	**00902**	246H 112°	246°	252°	192°	198°	.393"	.402"
BAJA BEAST / Performance Level 2 - Strong bottom end power. Excellent for trucks and heavy cars. Economical price. **RPM Power Range: 1200 to 3800 / Redline: 5200 plus**	283 350 400	**00915**	258H 112°	258°	264°	204°	208°	.414"	.417"
TORQUE BEAST / Performance Level 3 - Low to mid-range torque for daily drivability. Economical price. **RPM Power Range: 1800 to 5500 / Redline: 6000 plus**	283 350 400	**00904**	288H 112°	288°	298°	214°	224°	.444"	.467"
HOT STREET BEAST / Performance Level 3 - Delivers impressive mid-range and top-end power. Healthy sound. Economical price. **RPM Power Range: 2000 to 5700 / Redline 6200 plus**	283 350 400	**00903**	278H 112°	278°	284°	218°	226°	.462"	.470"
ULTRA BEAST / Performance Level 4 - Upper mid-range to top end power. High stall convertor or 4-speed. Economical price. **RPM Power Range: 2800 to 6200 / Redline: 6500**	283 350 400	**00917**	304H 112°	304°	316°	234°	244°	.488"	.509"

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Remarks
84002	66000-16	68301X3 -16	86032-16	**Hydraulic Lifter.**
84000	66000-16	68301X1 -16	86032-16	For rpm over 5500

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68301X3-16 Seat: 1.700" @ 104 lbs / Nose: 1.200" @ 269 lbs / Coil bind: 1.125" (Stock O.D., no machine work).
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.200" @ 297 lbs / Coil bind: 1.130" (Stock O.D., no machine work).

BE SMART! Crower performance camshafts feature high lift, fast action features that can cause stock or other aftermarket valve train components to fail. Be sure to use a Crower engineered kit to avoid possible damage.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
See pg. 138	Timing gear set
Pg's. 150-165	SS Rocker arms
Pg's. 150-165	Alum. Rocker arms

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

CROWER CAM BREAK-IN PROCEDURE

This applies to all hydraulic and solid lifter camshafts using higher than stock spring pressure:

- Do not use block restrictors in the oil galleys. This severely limits oil flow to the cam, lifters and overhead.
- Break-in cam and lifters with low pressure springs only. Do not exceed 225 to 250 lbs open pressure.
- During break-in run engine for 35 to 45 minutes and vary rpm from 2000 to 3000.
- For break-in procedure Crower recommends 10W/30 motor oil. Heavier weight oils do not cold flow.
- Do not use synthetic oils during break-in period.
- For further information, please refer to the Crower Installation booklet that accompanies the camshaft.

Chevrolet

HYDRAULIC CAMSHAFTS

Non Roller 1957-1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Suitable Component Kit
MILEAGE COMPU-PRO / PERFORMANCE LEVEL 1 - These cams are designed to enhance throttle response and low-end torque in vans, trucks and passenger cars while delivering fuel efficient motoring. High vacuum, smooth idle and maximum fuel efficiency are characteristic to these profiles. Stock or small cfm carburetor, small diameter tube headers, dual exhaust, and ignition rework are recommended for maximum benefit. Intended for low compression engines operating in the "economy zone." RPM Power Range: Idle to 3500-3700 / Redline: 4500 plus.	262 283	**00236**	236HDP 112°	236°	246°	180°	184°	.371"	.384"	**84002**
	302 327	**00237**	246HDP 112°	246°	253°	184°	192°	.371"	.395"	**84002**
	350 cid	**00238**	250HDP 112°	250°	258°	192°	196°	.392"	.399"	**84002**
	400 cid	**00239**	254HDP 112°	254°	265°	204°	210°	.431"	.431"	**84002 or 84000**
POWER COMPU-PRO / PERFORMANCE LEVEL 2 - These cams provide excellent low end and mid-range power and extended rpm range for spirited street and off-road driving. A perfect combination of mileage and power. Modifications should include small diameter tube headers, low restriction dual exhaust, aftermarket manifold, increased cfm carburetor and reworked or performance ignition. Increase in compression ratio to 9.5:1 is recommended for maximum output. Works well with automatic transmission or 4-speed. RPM Power Range: 1300-1500 to 4000-4200 / Redline: 5500 plus.	262 283	**00238**	250HDP 112°	250°	258°	192°	196°	.392"	.399"	**84002 or 84000**
	302 327	**00239**	254HDP 112°	254°	265°	204°	210°	.431"	.431"	**84002 or 84000**
	350 cid	**00240**	267HDP 112°	267°	272°	210°	216°	.445"	.445"	**84000**
	400 cid	**00241**	270HDP	270°	276°	214°	218°	.456"	.458"	**84000**

Note: Late model Chevrolet 305 and 350 V8 engines (1988-up) use a different cam core configuration than 1957-87 Chevrolet V8 engines and cannot be interchanged. Specify engine year when ordering.

CONTINUED ON PAGE 27

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84002	66000-16	68301X3-16	86032-16		For rpm up to 6000 max. Daily street use.
84000	66000-16	68301X1-16	86032-16		For rpm up to 6200 max. Limited street use.
84006	66000-16	68311X1-16	86032-16		Race only applications.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68301X3-16 Seat: 1.700" @ 104 lbs / Nose: 1.250" @ 247 lbs / Coil bind: 1.125" (Stock O.D., no machine work).
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68311X1-16 Seat: 1.750" @ 120 lbs / Nose: 1.250" @ 389 lbs / Coil bind: 1.070" (Stock O.D., no machine work).

* Machine work required, specify 11⁄32 pilot shaft when ordering.
Note: If using 3.750" stroke or above cranks, specify "S" after cam p/n for small base circle consideration.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
Pg.146-149	Pushrods
See pg. 138	Timing gear set
Pg's.150-165	SS Rocker arms
Pg's.150-165	Alum. Rocker arms

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

REMEMBER! Increasing rocker ratio on intake (1.6) will make the cam approximately 3° duration and .030" more lift.

HYDRAULIC CAMSHAFTS

Non Roller 1957-1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .000" intake and exhaust valve lash.

Chevrolet

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Suitable Component Kit
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 3 - Intended for the performance oriented hot street application. These cams offer an extended rpm range with emphasis on upper bottom to top end power (strong mid-range). Performance gears, headers, dual exhaust, larger than stock cfm carburetor, performance manifold and increased compression (9.5:1 to 10.5:1) are required. Works well with automatic transmission if matched with proper ring and pinion gears and/or high stall converter. RPM Power Range: 1600-1800 to 4500-4800 / Redline: 6000 max.	262 283	**00240**	267HDP 112°	267°	272°	210°	216°	.445"	.445"	**84000**
	302 327	**00241**	270HDP 112°	270°	276°	214°	218°	.456"	.458"	**84000**
	350 cid	**00242**	280HDP 112°	280°	286°	220°	226°	.462"	.470"	**84000 or 84102**
	400 cid	**00243**	284HDP 112°	286°	289°	225°	230°	.454"	.463"	**84000 or 84102**
ULTRA-PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 4 - The following grinds are best suited for dual purpose hot street/drag strip situations. These cams exhibit strong mid-range and top end torque and horsepower. Headers, dual exhaust, larger cfm carburetor, performance ignition and 11:1 compression are a must. Cylinder head modifications would be beneficial. Use with standard transmission or automatic with high stall converter. Low gearing a must. RPM Power Range: 2000-2200 to 6000-6200 / Redline: 6500 max.	262 283	**00242**	280HDP 112°	280°	286°	220°	226°	.462"	.470"	**84000 or 84102**
	302 327	**00243**	284HDP 112°	286°	289°	225°	230°	.454"	.463"	**84000 or 84102**
	350 cid	**00244**	288HDP 112°	288°	296°	234°	246°	.497"	.504"	**84000 or 84102**
	400 cid	**00245**	311HDP 112°	311°	316°	244°	252°	.507"	.524"	**84000 or 84102**

Note: Late model Chevrolet 305 and 350 V8 engines (1988-up) use a different cam core configuration than 1957-87 Chevrolet V8 engines and cannot be interchanged. Specify engine year when ordering.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84000	66000-16	68301X1-16	86032-16		For rpm up to 6200 max. Limited street use.
84006	66000-16	68311X1-16	86032-16		Race only applications.
84102	66000-16	68390X3-16	87048-16	86072-16	For rpm 6500 max. Limited street use.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68311X1-16 Seat: 1.750" @ 120 lbs / Nose: 1.250" @ 389 lbs / Coil bind: 1.070" (Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 116 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).

* Machine work required, specify 11/32 pilot shaft when ordering.
Note: If using 3.750" stroke or above cranks, specify "S" after cam p/n for small base circle consideration.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
Pg.146-149	Pushrods
See pg. 138	Timing gear set
Pg's.150-165	SS Rocker arms
Pg's.150-165	Alum. Rocker arms

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

REMEMBER! Increasing rocker ratio on intake (1.6) will make the cam approximately 3° duration and .030" more lift.

Chevrolet

HYDRAULIC CAMSHAFTS (continued)

Non Roller 1957-1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Suitable Component Kit
HI-DRAULIC HAULER / Performance Level 4 - Lope at idle. Hot street/drag cam with strong mid-range power. RPM Power Range: 2000-2400 to 6000-6200	327 350 cid	**00210**	278HDP 108°	286°	289°	225°	229°	.454"	.463"	**84000 or 84102**
HI-DRAULIC HAULER / Performance Level 4 - Rough idle. Explosive mid-range torque. RPM Power Range: 2500 to 6400 max.	384 400 cid	**00211**	296HDP 108°	296°	308°	232°	242°	.500"	.518"	**84000 or 84102**
HI-DRAULIC HAULER / Performance Level 5 - Rough idle and mid-range acceleration. RPM Power Range: 2750 to 6500 max	327 350 cid	**00212**	304HDP 108°	300°	308°	240°	248°	.492"	.510"	**84000 or 84102**
HI-DRAULIC HAULER / Performance Level 5 - Rough idle. Brutal mid to top end torque and horsepower. RPM Power Range: 3000 to 6500 max.	384 400 cid	**00213**	308HDP 106°	303°	311°	248°	256°	.507"	.527"	**84102**
HI-DRAULIC HAULER / Performance Level 5 - Extremely rough idle. Top-end power only. RPM Power Range: 3500 to 6500 max.	350 400 cid	**00214**	302HDP 105°	302°	312°	250°	256°	.537"	.537"	**84102**

Note: Late model Chevrolet 305 and 350 V8 engines (1988-up) use a different cam core configuration than 1957-87 Chevrolet V8 engines and cannot be interchanged. Specify engine year when ordering.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84000	66000-16	68301X1-16	86032-16		For rpm up to 6200 plus. Limited street use.
84006	66000-16	68311X1-16	86032-16		Race only applications.
84102	66000-16	68390X3-16	87048-16	86072-16	For rpm 6500 max. Limited street use.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68311X1-16 Seat: 1.750" @ 120 lbs / Nose: 1.250" @ 389 lbs / Coil bind: 1.070" (Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 116 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).

* Machine work required, specify 11⁄32 pilot shaft when ordering.
Note: If using 3.750" stroke or above cranks, specify "S" after cam p/n for small base circle consideration.Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
Pg.146-149	Pushrods
See pg. 138	Timing gear set
Pg's.150-165	SS Rocker arms
Pg's.150-165	Alum. Rocker arms

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

REMEMBER! Increasing rocker ratio on intake (1.6) will make the cam approximately 3° duration and .030" more lift.

SPRING INSTALLED HEIGHT

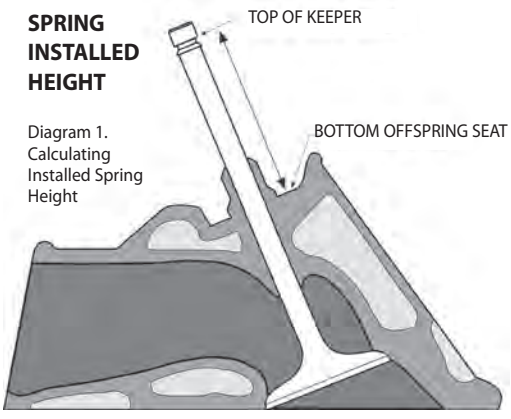


Diagram 1. Calculating Installed Spring Height

Measure the height from top of keeper grove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement.

HYDRAULIC CAMSHAFTS (continued)

Non Roller 1957-1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .000" intake and exhaust valve lash.

Chevrolet

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Suitable Component Kit
TURBOMASTER 1 - This cam provides excellent low end and mid-range power with mild boost (6 to 12 lbs). Rpm Power Range: 1800 to 5000 / Redline: 6000 plus.	350 400	**00978**	278HT 114°	278°	260°	212°	200°	.432"	.401"	**84000 or 84102**
TURBOMASTER 2 - For more boost (12 lbs plus) and higher rpm, this cam will extend your mid-range and top end power. RPM Power Range: 2200 to 6000 / Redline: 6500 max.	350 400	**00979**	290HT 114°	290°	272°	226°	208°	.465"	.420"	**84000 or 84102**
SUPERCHARGER 1 - Excellent low and mid-range torque with moderate boost levels (5 to 10 lbs), this cam romps. RPM Power Range: 2400 to 6500 / Redline: 6500 max.	350 400	**00980**	288HC 114°	288°	288°	232°	232°	.459"	.459"	**84000 or 84102**
SUPERCHARGER 2 - A very healthy blower cam for increased boost (10 lbs plus) and higher rpm. RPM Power Range: 2800 to 6500 / Redline: 6500 max.	350 400	**00981**	304HC 114°	304°	304°	236°	236°	.506"	.506"	**84000 or 84102**
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call with all engine data including head flow data, valve sizes, operating power range, etc.	All cid	**00001**	*Refer to page 7 for camshaft recommendation form*							
CUSTOM CAM- Special order **4-7 switch firing order.** Call with all engine data including head flow data, valve sizes, operating power range, etc.	All cid	**00047**	*Refer to page 7 for camshaft recommendation form*							
CUSTOM CAM- Special order **Pro 55**, call with all engine data including head flow data, valve sizes, operating power range, etc.	All cid	**00055**	*Refer to page 7 for camshaft recommendation form*							

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84000	66000-16	68301X1-16	86032-16		For rpm up to 6200 plus. Limited street use.
84006	66000-16	68311X1-16	86032-16		Race only applications.
84102	66000-16	68390X3-16	87048-16	86072-16	For rpm 6500 max. Limited street use.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68311X1-16 Seat: 1.750" @ 120 lbs / Nose: 1.250" @ 389 lbs / Coil bind: 1.070" (Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 116 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).

* Machine work required, specify 11⁄32 pilot shaft when ordering.
Note: If using 3.750" stroke or above cranks, specify "S" after cam p/n for small base circle consideration.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
Pg.146-149	Pushrods
See pg. 138	Timing gear set
Pg's.150-165	SS Rocker arms
Pg's.150-165	Alum. Rocker arms

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

REMEMBER! Increasing rocker ratio on intake (1.6) will make the cam approximately 3° duration and .030" more lift.

Chevrolet

420 SERIES HYDRAULIC LIFTER

Non Roller 1957-1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .000" intake and exhaust valve lash.

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Duration @ .200" Intake	Duration @ .200" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Recommended Component Kit
262-307-327 cid	1800	3800	5200	5700	**00220 00220S Small Base Circle**	112°	242°	250°	194°	202°	101°	111°	.401"	.420"	**84000**
305-350 cid	1200	3200	4600	5100											
383 cid	1000	3000	4300	4700											
406 cid	Idle	2900	4100	4500											
262-307-327 cid	1900	3900	5600	6100	**00221 00221S Small Base Circle**	112°	246°	254°	198°	206°	105°	116°	.408"	.429"	**84000**
305-350 cid	1300	3300	4800	5200											
383 cid	1200	3200	4500	4900											
406 cid	1100	3100	4300	4700											
262-307-327 cid	2100	4100	5800	6200	**00222 00222S Small Base Circle**	111°	254°	262°	206°	214°	116°	125°	.429"	.450"	**84000 or 84006**
305-350 cid	1500	3500	5000	5450											
383 cid	1300	3300	4600	5100											
406 cid	1200	3200	4400	4900											
262-307-327 cid	2400	4400	6000	6500	**00223 00223S Small Base Circle**	110°	262°	270°	214°	222°	125°	134°	.450"	.470"	**84000 or 84006**
305-350 cid	1800	3800	5200	5700											
383 cid	1600	3600	4900	5400											
406 cid	1500	3500	4700	5200											
262-307-327 cid	2700	4700	6100	6500	**00224 00224S Small Base Circle**	110°	270°	278°	222°	230°	134°	142°	.470"	.488"	**84000 or 84006**
305-350 cid	2100	4100	5500	5900											
383 cid	1800	3800	5000	5500											
406 cid	1700	3700	4800	5400											
262-307-327 cid	3000	5000	6200	6500	**00225* 00225S* Small Base Circle**	108°	278°	286°	230°	238°	142°	150°	.488"	.501"	**84006 or 84102**
305-350 cid	2400	4400	5700	6200											
383 cid	2000	4000	5200	5700											
406 cid	1900	3900	5000	5600											
262-307-327 cid	3300	5300	6400	6500	**00226* 00226S* Small Base Circle**	108°	290°	298°	242°	250°	154°	162°	.507"	.522"	**84006 or 84102**
305-350 cid	2700	4700	6000	6500											
383 cid	2400	4400	5500	6000											
406 cid	2300	4300	5300	5800											
262-307-327 cid	3600	5600	6700	6500	**00227* 00227S* Small Base Circle**	108°	298°	305°	250°	260°	162°	168°	.522"	.549"	**84006 or 84102**
305-350 cid	3000	5000	6200	6500											
383 cid	2600	4600	5800	6200											
406 cid	2500	4500	5500	6000											
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications.					**00001**										

Refer to page 31 for more Custom Cams

*Indicates premium Pro55 cam core, others are Proferal core. Crower recommends using the factory cast iron distributor gear. If running 3.750" or higher stroke, use the part number with "S" for added rod clearance.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84000	66000-16	68301X1-16	86032-16		Up to 6000 rpm. Daily street use.
84006	66000-16	68311X1-16	86032-16		Up to 6500 rpm. Race use only
84102	66000-16	68390X3-16	87048-16	86072-16	Up to 6500 rpm. Limited street use.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68311X1-16 Seat: 1.750" @ 120 lbs / Nose: 1.250" @ 389 lbs / Coil bind: 1.070" (Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 116 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).

ACCESSORIES

Part No.	Description
Pg.146-149	Pushrods
See pg. 138	Timing gear set
Pg's.150-165	SS Rocker arms
Pg's.150-165	Alum. Rocker arms

REMEMBER! Increasing rocker ratio on intake (1.6) will make the cam approximately 3° duration and .030" more lift.

HYDRAULIC CAMSHAFTS FOR EFI, FORCED INDUCTION & NOS

Non Roller 1957-1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .000" intake and exhaust valve lash.

Chevrolet

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Duration @ .200" Intake	Duration @ .200" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Recommended Component Kit
262-307-327 cid	2200	4200	5800	6300	**00230 00230S Small Base Circle**	114°	262°	270°	214°	222°	125°	134°	.450"	.470"	**84000**
305-350 cid	1600	3600	5000	5500											
383 cid	1400	3400	4700	5200											
406 cid	1300	3300	4500	5000+											
262-307-327 cid	2500	4500	5900	6400	**00231 00231S Small Base Circle**	114°	270°	278°	222°	230°	134°	142°	.470"	.488"	**84000**
305-350 cid	1900	3900	5300	5900											
383 cid	1600	3600	4800	5300											
406 cid	1500	3500	4600	5200+											
262-307-327 cid	3000	4800	6000	6500	**00232* 00232S* Small Base Circle**	114°	278°	286°	230°	238°	142°	150°	.488"	.501"	**84000 84102**
305-350 cid	2200	4200	5500	6000											
383 cid	1800	3800	5000	5500											
406 cid	1700	3700	4800	5300+											
262-307-327 cid	3100	5100	6200	6500	**00233* 00233S* Small Base Circle**	114°	290°	298°	242°	250°	154°	162°	.507"	.522"	**84000 84102**
305-350 cid	2500	4500	5800	6300											
383 cid	2200	4200	5300	5800											
406 cid	2100	4100	5100	5500+											
262-307-327 cid	3400	5400	6500	6500	**00234* 00234S* Small Base Circle**	114°	298°	308°	250°	260°	162°	168°	.522"	.549"	**84000 84102**
305-350 cid	2800	4800	6000	6500											
383 cid	2400	4400	5600	6000											
406 cid	2300	4300	5300	5800+											
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications.					**00001**	***Refer to page 7 for camshaft recommendation form***									
CUSTOM CAM- Special order **4-7 switch firing order.** Call with all engine data including head flow data, valve sizes, operating power range, etc.					**00047**	***Refer to page 7 for camshaft recommendation form***									
CUSTOM CAM- Special order **Pro 55**, call with all engine data including head flow data, valve sizes, operating power range, etc.					**00055**	***Refer to page 7 for camshaft recommendation form***									

*Indicates premium Pro55 cam core, others are Proferal core. Crower recommends using the factory cast iron distributor gear. If running 3.750" or higher stroke, use the part number with "S" for added rod clearance.

Note: Late model Chevrolet 305 and 350 V8 engines (1988-up) use a different cam core configuration than 1957-87 Chevrolet V8 engines and cannot be interchanged. Specify engine year when ordering.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84000	66000-16	68301X1-16	86032-16		Up to 6000 rpm. Daily street use.
84102	66000-16	68390X3-16	87048-16	86072-16	Up to 6500 rpm. Limited street use.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 116 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
Pg.146-149	Pushrods
See pg. 138	Timing gear set
Pg's.150-165	SS Rocker arms
Pg's.150-165	Alum. Rocker arms

REMEMBER! Increasing rocker ratio on intake (1.6) will make the cam approximately 3° duration and .030" more lift.

Chevrolet

MARINE HYDRAULIC CAMSHAFTS

Non Roller 1957-1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe lift Intake	Lobe lift Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Recommended Component Kit
262-307-327 cid	2300	3800	5100	5600	**00215 00215S Small Base Circle**	112°	246°	258°	202°	210°	.283"	.294"	.425"	.441"	**84000**
305-350 cid	2100	3600	4800	5300											
383 cid	1800	3300	4400	4900											
406 cid	1700	3200	4300	4800											
262-307-327 cid	2500	4000	5600	5800	**00216 00216S Small Base Circle**	112°	258°	270°	214°	222°	.303"	.313"	.456"	.470"	**84000**
305-350 cid	2300	3800	4800	5500											
383 cid	2000	3500	4500	5100											
406 cid	1900	3400	4300	5000											
262-307-327 cid	2600	4100	5800	6000	**00217 00217S Small Base Circle**	113°	274°	282°	226°	234°	.320"	.330"	.480"	.495"	**84000 or 84006**
305-350 cid	2600	4100	5000	5800											
383 cid	2400	3900	4600	5400											
406 cid	2300	3800	4400	5300											
262-307-327 cid	2700	4200	6000	6050	**00218* 00218S* Small Base Circle**	113°	278°	286°	230°	238°	.325"	.334"	.488"	.501"	**84006 or 84102**
305-350 cid	2600	4300	5200	5900											
383 cid	2500	4000	4900	5500											
406 cid	2400	3900	4700	5400											

CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications.	**00001**	*Refer to page 7 for camshaft recommendation form*
CUSTOM CAM- Special order **4-7 switch firing order.** Call with all engine data including head flow data, valve sizes, operating power range, etc.	**00047**	*Refer to page 7 for camshaft recommendation form*
CUSTOM CAM- Special order **Pro 55**, call with all engine data including head flow data, valve sizes, operating power range, etc.	**00055**	*Refer to page 7 for camshaft recommendation form*

*Indicates premium Pro55 cam core, others are Proferal core. Crower recommends using the factory cast iron distributor gear. If running 3.750" or higher stroke, use the part number with "S" for added rod clearance.
NOTE: These cam grinds are available for 1955-1956, please specify when ordering.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Remarks
84000	66000-16	68301X1-16	86032-16	Up to 6000 rpm. Daily street use.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 138	Pushrods
Pg.146-149	Timing gear set
Pg's.150-165	SS Rocker arms
Pg's.150-165	Alum. Rocker arms

REMEMBER! Increasing rocker ratio on intake (1.6) will make the cam approximately 3° duration and .030" more lift.

STOCK LIFT RULE HYDRAULIC CAMSHAFTS

Non Roller 1957-1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .000" intake and exhaust valve lash.

Chevrolet

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)		C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust
Performance Level 5 Heavy car, 1/4 mile track, low end Redline: 6000 rpm maximum	283 - 327 cid / 3250 - 6000 rpm 350 - 372 cid / 3000 - 5750 rpm 383 - 400 cid / 2750 - 5500 rpm	See Descrip	**00250**	218H224 108°	266°	274°	218°	224°	.390"	.408"
Performance Level 5 Lighter car, 3/8 mile track, low end Redline: 6000 rpm maximum	283 - 327 cid / 3500 - 6000 rpm 350 - 372 cid / 3250 - 6000 rpm 383 - 400 cid / 3000 - 5750 rpm	See Descrip	**00251**	228H236 106°	294°	294°	228°	236°	.390"	.410"
Performance Level 5 3/8 mile, high bank track, mid to top Redline: 6000 rpm maximum	283 - 327 cid / 3750 - 6000 rpm 350 - 372 cid / 3500 - 6000 rpm 383 - 400 cid / 3250 - 6000 rpm	See Descrip	**00252**	238H242 106°	300°	300°	238°	242°	.390"	.410"
Performance Level 5 Heavy car, 1/4 mile track, low end Redline: 6000 rpm maximum	283 - 327 cid / 3250 - 6000 rpm 350 - 372 cid / 3000 - 5750 rpm 383 - 400 cid / 2750 - 5500 rpm	See Descrip	**00253**	218H226 108°	266°	276°	218°	226°	.419"	.420"
Performance Level 5 Lighter car, 3/8 mile track, low end Redline: 6000 rpm plus	283 - 327 cid / 3500 - 6000 rpm 350 - 372 cid / 3250 - 6000 rpm 383 - 400 cid / 3000 - 5750 rpm	See Descrip	**00254**	228H234 106°	294°	296°	228°	234°	.419"	.417"
Performance Level 5 3/8 mile, high bank track, mid to top Redline: 6000 rpm plus	283 - 327 cid / 3750 - 6000 rpm 350 - 372 cid / 3500 - 6000 rpm 383 - 400 cid / 3250 - 6000 rpm	See Descrip	**00255**	234H242 106°	296°	296°	234°	242°	.417"	.416"

Engineered Component Kit for the above part #'s: 84006

Note: Small base circle cams are available if using 3.750" stroke and 350 style rods. Specify "S" after part number. If using 400 style or stroker rods the above base circle will work.

Note: Late model Chevrolet 305 and 350 V8 engines (1988-up) use a different cam core configuration than 1957-87 Chevrolet V8 engines and cannot be interchanged. Specify engine year when ordering.

ACCESSORIES

Part No.	*Description*
Pg's.140-141	Cheater hydraulic lifters (solid lifters)
Pg.146-149	Pushrods (special length for # 66000X5-16

ENGINEERED COMPONENT KITS

Part No.	*Lifters*	*Springs*	*Retainers*	*Pushrods*	*Remarks*
84006	66000-16	68311X1-16	86032-16		For rpm up to 6000 max.
84007	66000X5-16	68311X1-16	86032-16	69795-16	For rpm up to 6500 plus.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68311X1-16 Seat: 1.750" @ 120 lbs / Nose: 1.300" @ 320/340 lbs / Coil bind: 1.070" (Stock O.D., no machine work).
Valve timing events are available online at: **www.crower.com/valvtime.html**

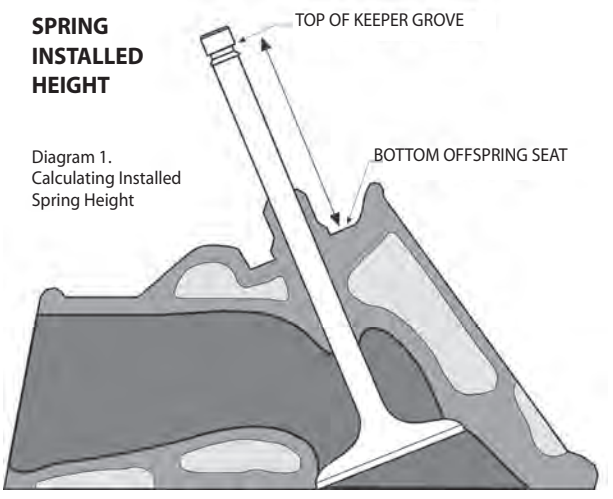


Diagram 1. Calculating Installed Spring Height

Measure the height from top of keeper grove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement.

Chevrolet

STOCK LIFT RULE HYDRAULIC CAMSHAFTS

Non Roller 1957-1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)		C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust
Performance Level 5 Heavy car, 1/4 mile track, low end Redline: 6500 rpm plus	283 - 327 cid / 2750 - 5750 rpm 350 - 372 cid / 2500 - 5500 rpm 383 - 400 cid / 2250 - 5250 rpm	See Descrip	**00256**	220H226 108°	264°	278°	220°	226°	.451"	.453"
Performance Level 5 Lighter car, 3/8 mile track, low end Redline: 6500 rpm plus	283 - 327 cid / 3000 - 6000 rpm 350 - 372 cid / 2750 - 5750 rpm 383 - 400 cid / 2500 - 5500 rpm	See Descrip	**00257**	228H236 106°	282°	288°	228°	236°	.449"	.449"
Performance Level 5 3/8 mile, high bank track, mid to top Redline: 6500 rpm plus	283 - 327 cid / 3250 - 6250 rpm 350 - 372 cid / 3000 - 6000 rpm 383 - 400 cid / 2750 - 5750 rpm	See Descrip	**00258**	236H242 106°	288°	292°	236°	242°	.449"	.446"
Performance Level 5 1/2 mile, high bank track, mid to top Redline: 6500 rpm plus	283 - 327 cid / 3500 - 6500 rpm 350 - 372 cid / 3250 - 6250 rpm 383 - 400 cid / 3000 - 6000 rpm	See Descrip	**00259**	242H248 106°	292°	296°	242°	248°	.446"	.447"
VACUUM RULE - Perf Level 5 Lighter car, 3/8 mile track, low end Redline: 6500 rpm plus	283 - 327 cid / 3750 - 6500 rpm 350 - 372 cid / 3500 - 6250 rpm 383 - 400 cid / 3250 - 6000 rpm	See Descrip	**00252V**	238H242 116°	300°	300°	238°	242°	.390"	.410"
VACUUM RULE - Perf Level 5 3/8 mile, high bank track, mid to top Redline: 6500 rpm plus	283 - 327 cid / 3750 - 6500 rpm 350 - 372 cid / 3500 - 6500 rpm 383 - 400 cid / 3250 - 6500 rpm	See Descrip	**00255V**	234H242 114°	296°	296°	234°	242°	.417"	.416"
VACUUM RULE - Perf Level 5 1/2 mile, high bank track, mid to top Redline: 6500 rpm plus	283 - 327 cid / 3500 - 6500 rpm 350 - 372 cid / 3250 - 6500 rpm 383 - 400 cid / 3000 - 6500 rpm	See Descrip	**00259V**	242H248 114°	292°	296°	242°	248°	.446"	.447"

Note: Small base circle cams are available if using 3.750" stroke and 350 style rods. Specify "S" after part number. If using 400 style or stroker rods the above base circle will work.

Note: Late model Chevrolet 305 and 350 V8 engines (1988-up) use a different cam core configuration than 1957-87 Chevrolet V8 engines and cannot be interchanged. Specify engine year when ordering.

Engineered Component Kit for the above part #'s: 84006

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Pushrods	Remarks
84006	66000-16	68311X1-16	86032-16		Race Only
84007	66000X5-16	68311X1-16	86032-16	69795-16	Cheater Hydraulic

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68311X1-16 Seat: 1.750" @ 120 lbs / Nose: 1.300" @ 340 lbs / Coil bind: 1.070"
(Stock O.D., no machine work).

NOTE: These cam grinds are available for 1955-1956, please specify when ordering.

ACCESSORIES

Part No.	Description
Pg's.140-141	Cheater hydraulic lifters (solid lifters)
Pg.146-149	Pushrods (special length for # 66000X5-16

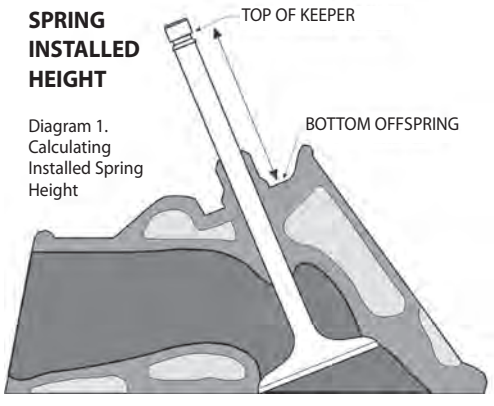


Diagram 1. Calculating Installed Spring Height

Measure the height from top of keeper grove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement.

SHORT TRACK HYDRAULIC CAMSHAFTS

Non Roller 1957-1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .000" intake and exhaust valve lash.

Chevrolet

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Duration @ .200" Intake	Duration @ .200" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Gross Lift 1.6 / 1.5 Intake	Gross Lift 1.6 / 1.5 Exhaust
302-327 cid	2800	4000	5500	6000	**00270**	226HDP 108°	277°	288°	224°	230°	137°	140°	.471"	.497"	.502"	.497"
305-350 cid	2600	3800	5300	5800												
383-406* cid	2400	3600	5100	5600												
302-327 cid	2950	4150	5650	6150	**00271**	228HDP 108°	288°	290°	230°	238°	140°	149°	.497"	.497"	.530"	.497"
305-350 cid	2750	3950	5450	5450												
383-406* cid	2550	3750	5250	5750												
302-327 cid	3050	4250	5750	6250	**00272**	234HDP 107°	290°	300°	235°	245°	147°	153°	.507"	.516"	.541"	.516"
305-350 cid	2850	4050	5550	6050												
383-406* cid	2650	3850	5350	5850												
302-327 cid	3200	4400	5900	6400	**00273**	236HDP 107°	292°	294°	239°	248°	151°	159°	.506"	.513"	.539"	.513"
305-350 cid	3000	4200	5700	6200												
383-406* cid	2800	4000	5500	6000												
302-327 cid	3350	4550	6050	6500	**00274**	244HDP 107°	298°	302°	245°	252°	156°	165°	.504"	.534"	.538"	.534"
305-350 cid	3150	4350	5850	6350												
383-406* cid	2950	4150	5650	6150												
302-327 cid	3500	4700	6200	6500	**00275**	246HDP 107°	303°	311°	248°	257°	163°	169°	.507"	.526"	.568"	.537"
305-350 cid	3300	4500	6000	6500												
383-406* cid	3100	4300	5800	6300												

CUSTOM GROUND HYDRAULIC - Call with all engine data including head flow data, valve sizes, operating power reange, etc. when ordering.	**00001**	*Refer to page 7 for camshaft recommendation form*
CUSTOM CAM- Special order **Pro 55**, call with all engine data including head flow data, valve sizes, operating power range, etc.	**00055**	*Refer to page 7 for camshaft recommendation form*

* These cid engines (383, 406) require a smaller base circle for 3.750" or larger stroke cranks. Add an "S" at the end of desired cam part number (example: 00275S) if smaller base circle is desired.

Note: Small base circle cams are available if using 3.750" stroke and 350 style rods. Specify "S" after part number. If using 400 style or stroker rods the above base circle will work.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84000	66000-16	68301X1-16	86032-16		For rpm up to 6500 max. Race only.
84006	66000-16	68311X1-16	86032-16		For rpm up to 6500 max. Race only.
84102	66000-16	68390X3-16	87048-16	86072-16	For rpm up to 6500 max. Race only.
84102x3	66000X3-16	68390X3-16	87048-16	86072-16	For rpm up to 6500 max. "Cam Saver" Lifters

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68311X1-16 Seat: 1.750" @ 120 lbs / Nose: 1.250" @ 389 lbs / Coil bind: 1.070" (Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 116 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).
* Machine work required, specify 11⁄32 pilot shaft when ordering.
Note: If using 3.750" stroke or above cranks, contact Crower for smaller base circle camshafts for more rod clearance.
BE SMART! Crower performance camshafts feature high lift, fast action features that can cause stock or other aftermarket valve train components to fail. Be sure to use a Crower engineered kit to avoid possible damage.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
LIFT RULE CAMSHAFTS: Crower has a complete line of camshafts that will satisfy any max lift requirement. clearance. Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg.146-149	Pushrods
Pg's.150-165	Rocker arms (1.5) 3⁄8
Pg's.150-165	Rocker arms (1.6) 3⁄8
See pg. 136	Timing gear kit

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

REMEMBER! Increasing rocker ratio on intake (1.6) will make the cam approximately 3° duration and .030" more lift.
HIGH RPM! Crower highly recommends the use of rollerized rockers. See rocker section for ratios and stud diameters.

These camshafts will work with the following carburetor sizes: 350 (210 cfm), 390 (410 cfm), 500 (350 cfm).

If you can supply cylinder head flow data, engine specs, operating power ranges and exhaust manifold configurations we will be able to grind you a camshaft that is far superior than any other brand currently available.

Chevrolet

HYDRAULIC ROLLER CAMSHAFTS (ORIGINAL SERIES)

1957-1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust	Recommended Component Kit
262-302 cid	2200	3400	4700	5200	**00408**	198HR210	273°	288°	200°	212°	.435"	.462"	.464"	.493"	**84542**
327 cid	2000	3200	4500	5000	**Early model**	112°									
350 cid	1700	3000	4300	4800	**00408LM**										**84542LM**
383 cid	1600	2900	4200	4700	**LM is step nose**										
406 cid	1500	2800	4100	4600											
262-302 cid	2400	3600	4900	5400	**00400**	200HR208	260°	269°	204°	212°	.451"	.474"	.482"	.506"	**84542**
327 cid	2200	3400	4700	5200	**Early model**	114°									
350 cid	1900	3200	4500	5000	**00400LM**										**84542LM**
383 cid	1800	3100	4400	4900	**LM is step nose**										
406 cid	1700	3000	4300	4800											
262-302 cid	2400	3600	4900	5400	**00409**	210HR215	284°	288°	212°	218°	.462"	.470"	.493"	.501"	**84544**
327 cid	2200	3400	4700	5200	**Early model**	110°									
350 cid	1900	3200	4500	5000	**00409LM**										**84544LM**
383 cid	1800	3100	4400	4900	**LM is step nose**										
406 cid	1700	3000	4300	4800											
262-302 cid	2700	3900	5400	5900	**00401**	208HR216	269°	278°	214°	220°	.474"	.498"	.507"	.531"	**84544**
327 cid	2500	3700	5200	5700	**Early model**	114°									
350 cid	2300	3500	5000	5500	**00401LM**										**84544LM**
383 cid	2200	3400	4900	5400	**LM is step nose**										
406 cid	2100	3300	4800	5300											

"LM" cores fit 305-350 cid 1987-up only (w/step nose). Small base circle cams available for 383 and 406. Specify "S" after part number when ordering. **Note:** The above cams are ground on cast steel cores. If 8620 steel billet core with integral cast iron gear is desired, specify part number 00050. Crower recommends using the factory stock cast iron distributor gear. **Note:** Late model Chevrolet 305 and 350 V8 engines (1988-up) use a different cam core configuration than 1957-87 Chevrolet V8 engines and cannot be interchanged. Specify engine year when ordering.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Plug	Pushrods	Keepers	Remarks
84542	66310-16	68301X1-16	86032-16	86085	69730-16	86107-16	Up to 6000 rpm. Daily street use.
84542LM	66330-16	68301X1-16	86032-16	86099	69715-16	86107-16	Up to 6000 rpm. Daily street use.
84544	66310-16	68390X3-16	87048-16	86085	69730-16	86107-16	Up to 6500 max. Limited street use.
84544LM	66330-16	68390X3-16	87048-16	86099	69715-16	86107-16	Up to 6500 max. Limited street use.

Spring pressure:
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 116 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).
* Machine work required, specify 11⁄32 pilot shaft when ordering. Note: If using stock GM hydraulic roller lifters, use Crower pushrod 69720 (7.200").
NOTE: These cam grinds are available for 1955-1956, please specify when ordering.

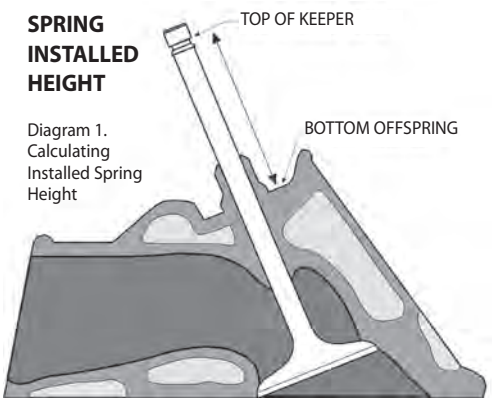


Diagram 1. Calculating Installed Spring Height

Measure the height from top of keeper grove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement.

ACCESSORIES

Part No.	Description
Pg's.150-165	Self aligning rocker arms (1.5) 3⁄8 - Late Model
Pg's.150-165	Self aligning rocker arms (1.6) 3⁄8 - Late Model
Pg's.150-165	Rocker arms (1.5) 7⁄16
Pg's.150-165	Rocker arms (1.6) 7⁄16
See pg. 136	Timing gear set
See pg. 136	Timing gear set (87-up)

Note: Rocker arms available in Aluminum & Stainless steel.

HYDRAULIC ROLLER CAMSHAFTS (ORIGINAL SERIES) (continued)

1957-1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Chevrolet

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust	Recommended Component Kit
262-302 cid	3000	4200	5700	6200	**00402** **Early model** **00402LM** **LM is step nose**	216HR224 114°	278°	286°	220°	228°	.498"	.519"	.531"	.553"	**84542 or 84542LM**
327 cid	2800	4000	5500	6000											
350 cid	2600	3800	5300	5800											
383 cid	2500	3700	5200	5700											
406 cid	2400	3600	5100	5600											
262-302 cid	3300	4500	6000	6500	**00403** **Early model** **00403LM** **LM is step nose**	224HR232 114°	286°	294°	226°	236°	.519"	.540"	.552"	.576"	**84542 or 84542LM**
327 cid	3100	4300	5800	6300											
350 cid	2900	4100	5600	6100											
383 cid	2800	4000	5500	6000											
406 cid	2700	3900	5400	5900											
262-302 cid	3400	4600	6100	6600	**00418** **Early model** **00418LM** **LM is step nose**	230HR230 108°	306°	306°	230°	230°	.480"	.480"	.512"	.512"	**84544 or 84544LM**
327 cid	3100	4400	5900	6400											
350 cid	3000	4200	5700	6200											
383 cid	2900	4100	5600	6100											
406 cid	2800	4000	5500	6000											
262-302 cid	3500	4700	6200	6500	**00404** **Early model** **00404LM** **LM is step nose**	232HR240 114°	294°	310°	236°	244°	.540"	.565"	.579"	.602"	**84544 or 84544LM**
327 cid	3200	4500	6000	6500											
350 cid	3100	4300	5800	6300											
383 cid	3000	4200	5700	6200											
406 cid	2900	4100	5600	6100											

"LM" cores fit 305-350 cid 1987-up only (w/step nose). Small base circle cams available for 383 and 406. Specify "S" after part number when ordering. **Note:** The above cams are ground on cast steel cores. If 8620 steel billet core with integral cast iron gear is desired, specify part number 00050. Crower recommends using the factory stock cast iron distributor gear. **Note:** Late model Chevrolet 305 and 350 V8 engines (1988-up) use a different cam core configuration than 1957-87 Chevrolet V8 engines and cannot be interchanged. Specify engine year when ordering.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Plug	Pushrods	Keepers	Remarks
84542	66310-16	68301X1-16	86032-16	86085	69730-16	86107-16	Up to 6000 rpm. Daily street use.
84542LM	66330-16	68301X1-16	86032-16	86099	69715-16	86107-16	Up to 6000 rpm. Daily street use. .
84544	66310-16	68390X3-16	87048-16	86085	69730-16	86107-16	Up to 6500 max. Limited street use.
84544LM	66330-16	68390X3-16	87048-16	86099	69715-16	86107-16	Up to 6500 max. Limited street use.

Spring pressure:
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 116 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).
* Machine work required, specify 11⁄32 pilot shaft when ordering. Note: If using stock GM hydraulic roller lifters, use Crower pushrod 69720 (7.200").
NOTE: These cam grinds are available for 1955-1956, please specify when ordering.

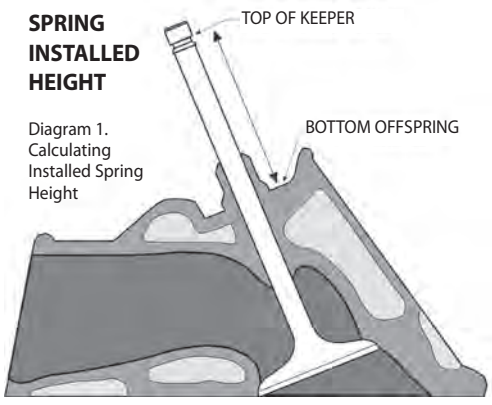


Diagram 1. Calculating Installed Spring Height

Measure the height from top of keeper grove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement.

ACCESSORIES

Part No.	Description
Pg's.150-165	Self aligning rocker arms (1.5) 3⁄8 - Late Model
Pg's.150-165	Self aligning rocker arms (1.6) 3⁄8 - Late Model
Pg's.150-165	Rocker arms (1.5) 7⁄16
Pg's.150-165	Rocker arms (1.6) 7⁄16
See pg. 136	Timing gear set
See pg. 136	Timing gear set (87-up)

Note: Rocker arms available in Aluminum & Stainless steel.

Chevrolet

HYDRAULIC ROLLER CAMSHAFTS FOR EFI, FORCED INDUCTION & NOS

1957 - 1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe lift Intake	Lobe lift Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Recommended Component Kit
262-302 cid	2200	3600	5300	6100	**00480** **Early model** **00480LM** **LM is step nose**	196HR204 114°	245°	254°	196°	204°	.310"	.323"	.465"	.484"	**84542 or 84543LM**
327-327 cid	2000	3500	5200	5700											
350-350 cid	1700	3200	4900	5400											
383 cid	1600	3100	4550	5050											
406 cid	1500	3000	4500	5000											
262-302 cid	2400	3800	5700	6300	**00481** **Early model** **00481LM** **LM is step nose**	204HR213 114°	255°	264°	204°	213°	.323"	.337"	.484"	.505"	**84542 or 84542LM**
327-327 cid	2200	3700	5600	6100											
350-350 cid	1900	3400	5200	5700											
383 cid	1700	3200	4800	5300											
406 cid	1600	3100	4700	5200											
262-302 cid	2600	4000	5900	6400	**00482** **Early model** **00482LM** **LM is step nose**	213HR221 114°	264°	273°	213°	221°	.337"	.350"	.505"	.525"	**84542 or 84542LM**
327-327 cid	2400	3900	5750	6250											
350-350 cid	2200	3700	5550	6050											
383 cid	2000	3500	5200	5700											
406 cid	1900	3400	5100	5600											
262-302 cid	2800	4100	6000	6500	**00483** **Early model** **00483LM** **LM is step nose**	221HR230 114°	273	284°	221°	230°	.350"	.363"	.525"	.545"	**84544 or 84544LM**
327-327 cid	2500	4000	5800	6300											
350-350 cid	2400	3900	5750	6250											
383 cid	2100	3600	5400	5900											
406 cid	2000	3500	5300	5800											
262-302 cid	3000	4300	6200	6500	**00484** **Early model** **00484LM** **LM is step nose**	228HR236 108°	284°	286°	230°	236°	.363"	.370"	.545"	.555"	**84544 or 84544LM**
327-327 cid	2700	4200	5900	6400											
350-350 cid	2600	4100	5850	6300											
383 cid	2300	3800	5700	6200											
406 cid	2200	3700	5600	6100											
CUSTOM GROUND HYDRAULIC ROLLER - Early or late model (step nose) hyd roller cam ground to your specs on cast steel cam core w/stock cast iron gear.					**00009**										

"LM" cores fit 305-350 cid 1987-up only (w/step nose). Small base circle cams available for 383 and 406. Specify "S" after part number when ordering. Note: The above cams are ground on cast steel cores. If 8620 steel billet core with integral cast iron gear is desired, specify part number 00050. Crower recommends using the factory stock cast iron distributor gear.

Note: Late model Chevrolet 305 and 350 V8 engines (1988-up) use a different cam core configuration than 1957-87 Chevrolet V8 engines and cannot be interchanged. Specify engine year when ordering.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Plug	Pushrods	Keepers	Remarks
84542	66310-16	68301X1-16	86032-16	86085	69730-16	86107-16	Up to 6000 rpm. Daily street use.
84542LM	66330-16	68301X1-16	86032-16	86099	69715-16	86107-16	Up to 6000 rpm. Daily street use. .
84544	66310-16	68390X3-16	87048-16	86085	69730-16	86107-16	Up to 6500 max. Limited street use.
84544LM	66330-16	68390X3-16	87048-16	86099	69715-16	86107-16	Up to 6500 max. Limited street use.

ACCESSORIES

Part No.	Description
Pg's.150-165	Self aligning rocker arms (1.5) 3⁄8 - Late Model
Pg's.150-165	Self aligning rocker arms (1.6) 3⁄8 - Late Model
Pg's.150-165	Rocker arms (1.5) 7⁄16
Pg's.150-165	Rocker arms (1.6) 7⁄16
See pg. 136	Timing gear set
See pg. 136	Timing gear set (87-up)

Note: Rocker arms available in Aluminum & Stainless steel.

Spring pressure:
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 116 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).
* Machine work required, specify 11⁄32 pilot shaft when ordering. Note: If using stock GM hydraulic roller lifters, use Crower pushrod 69720 (7.200").

NOTE: These cam grinds are available for 1955-1956, please specify when ordering.

HIGH LIFT HYDRAULIC ROLLER CAMSHAFTS

350 SERIES

1957 - 1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .000" intake and exhaust valve lash.

Chevrolet

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

C.I.D. Group & RPM Range		Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Duration @ .200" Intake	Duration @ .200" Exhaust	Lobe lift Intake	Lobe lift Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust
Performance Level 1 Good stock replacement for mileage/performance.	283 - 327 cid / 1900 - 5100 rpm 350 - 372 cid / 1600 - 4800 rpm 383 - 400 cid / 1400 - 4400 rpm	**00460** **00460LM**	110°	242°	250°	192°	200°	112°	121°	.303"	.316"	.455"	.474"
Performance Level 1 Strong torque, excellent mileage and smooth idle.	283 - 327 cid / 2000 - 5200 rpm 350 - 372 cid / 1700 - 4900 rpm 383 - 400 cid / 1600 - 4550 rpm	**00461** **00461LM**	110°	245°	254°	196°	204°	116°	125°	.310"	.323"	.465"	.484"
Performance Level 1 Smooth idle, great for towing, very fuel efficient.	283 - 327 cid / 2200 - 5500 rpm 350 - 372 cid / 1800 - 5000 rpm 383 - 400 cid / 1600 - 4650 rpm	**00462** **00462LM**	110°	250°	260°	200°	209°	121°	130°	.316"	.330"	.474"	.495"
Performance Level 1 Smooth idle, daily usage for near stock engines.	283 - 327 cid / 2200 - 5600 rpm 350 - 372 cid / 1950 - 5200 rpm 383 - 400 cid / 1700 - 4800 rpm	**00463** **00463LM**	110°	255°	264°	204°	213°	125°	134°	.323"	.337"	.484"	.505"
Performance Level 2 Strong torque, good mid-range power.	283 - 327 cid / 2300 - 5700 rpm 350 - 372 cid / 2100 - 5400 rpm 383 - 400 cid / 1800 - 5000 rpm	**00464** **00464LM**	110°	260°	270°	209°	217°	130°	139°	.330"	.343"	.495"	.514"
Performance Level 2 Mild street performance, slight lope at idle. Headers & intake rec.	283 - 327 cid / 2400 - 5750 rpm 350 - 372 cid / 2200 - 5550 rpm 383 - 400 cid / 2000 - 5200 rpm	**00465** **00465LM**	110°	264°	273°	213°	221°	134°	142°	.337"	.350"	.505"	.525"

"LM" indicates Late Model 305-350 cid w/step nose core (1987-up). Small base circle cams available for 383 and 406. Specify "S" after part number when ordering.

Note: The above cams are ground on cast steel cores. If 8620 steel billet core with integral cast iron gear is desired, specify part number 00050. Crower recommends using the factory stock cast iron distributor gear.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Plug	Pushrods	Keepers	Remarks
84542	66310-16	68301X1-16	86032-16	86085	69730-16	86107-16	Up to 6000 rpm. Daily street use.
84542LM	66330-16	68301X1-16	86032-16	86099	69715-16	86107-16	Up to 6000 rpm. Daily street use.
84544	66310-16	68390X3-16	87048-16	86085	69730-16	86107-16	Up to 6500 max. Limited street use.
84544LM	66330-16	68390X3-16	87048-16	86099	69715-16	86107-16	Up to 6500 max. Limited street use.

Spring pressure:
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68304-16 Seat: 1.800" @ 106 lbs / Nose: 1.250" @ 317 lbs / Coil bind: 1.090" (Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 116 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).
* Machine work required, specify 11/32 pilot shaft when ordering. Note: If using stock GM hydraulic roller lifters, use Crower pushrod 69720 (7.200").
NOTE: These cam grinds are available for 1955-1956, please specify when ordering.

SPRING INSTALLED HEIGHT

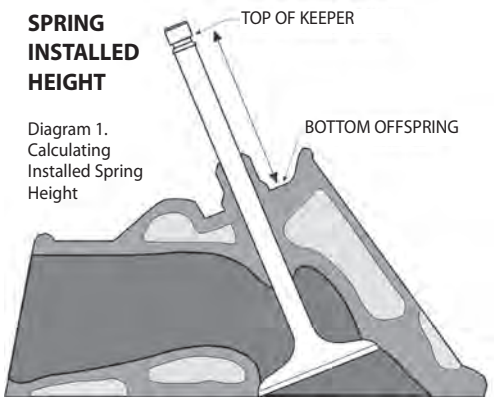


Diagram 1. Calculating Installed Spring Height

Measure the height from top of keeper grove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement.

ACCESSORIES

Part No.	Description
See pg. 151	Self aligning rocker arms (1.5) 3/8 - Late Model
See pg. 151	Self aligning rocker arms (1.6) 3/8 - Late Model
See pg. 151	Rocker arms (1.5) 7/16
See pg. 151	Rocker arms (1.6) 7/16
See pg. 136	Timing gear set
See pg. 136	Timing gear set (87-up)

Note: Rocker arms available in Aluminum & Stainless steel.

Chevrolet

HIGH LIFT HYDRAULIC ROLLER CAMSHAFTS
350 SERIES (continued)

1957 - 1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

C.I.D. Group & RPM Range		Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Duration @ .200" Intake	Duration @ .200" Exhaust	Lobe lift Intake	Lobe lift Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust
Performance Level 2 Strong mid-range, good throttle response, 2000 stall recommended.	283 - 327 cid / 2400 - 5750 rpm 350 - 372 cid / 2300 - 5700 rpm 383 - 400 cid / 2000 - 5300 rpm	**00466** **00466LM**	110°	270°	277°	217°	225°	139°	147°	.343"	.357"	.514"	.535"
Performance Level 2 Fair idle, moderate performance, good mid-range HP (2000 stall).	283 - 327 cid / 2500 - 5800 rpm 350 - 372 cid / 2400 - 5750 rpm 383 - 400 cid / 2100 - 5400 rpm	**00467** **00467LM**	110°	273°	284°	221°	230°	142°	151°	.350"	.363"	.525"	.544"
Performance Level 3 Noticeable idle, good mid-range, requires headers.	283 - 327 cid / 2600 - 5850 rpm 350 - 372 cid / 2500 - 5800 rpm 383 - 400 cid / 2200 - 5600 rpm	**00468** **00468LM**	110°	277°	286°	225°	232°	147°	155°	.357"	.367"	.535"	.550"
Performance Level 3 Slight lope at idle, needs headers, 2500 stall recommended.	283 - 327 cid / 2700 - 5900 rpm 350 - 372 cid / 2600 - 5850 rpm 383 - 400 cid / 2300 - 5700 rpm	**00469** **00469LM**	110°	284°	286°	230°	236°	151°	159°	.363"	.370"	.544"	.555"
Performance Level 3 Rough idle, aftermarket intake and headers a must.	283 - 327 cid / 2800 - 5950 rpm 350 - 372 cid / 2750 - 5900 rpm 383 - 400 cid / 2400 - 5850 rpm	**00470** **00470LM**	110°	286°	292°	232°	240°	155°	163°	.366"	.373"	.549"	.559"
Performance Level 4 Street/strip applications, rough idle, 2500 stall required.	283 - 327 cid / 2900 - 6000 rpm 350 - 372 cid / 2800 - 5950 rpm 383 - 400 cid / 2400 - 5900 rpm	**00471** **00471LM**	110°	286°	292°	236°	240°	159°	163°	.370"	.373"	.555"	.559"
CUSTOM CAM- Special order **4-7 switch firing order.** Call with all engine data including head flow data, valve sizes, operating power range, etc.		**00047**	***Refer to page 7 for camshaft recommendation form***										

"LM" indicates Late Model 305-350 cid w/step nose core (1987-up). Small base circle cams available for 383 and 406. Specify "S" after part number when ordering.

Note: The above cams are ground on cast steel cores. If 8620 steel billet core with integral cast iron gear is desired, specify part number 00050. Crower recommends using the factory stock cast iron distributor gear.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Plug	Pushrods	Keepers	Remarks
84544	66310-16	68390X3-16	87048-16	86085	69730-16	86107-16	Up to 6500 max. Limited street use.
84544LM	66330-16	68390X3-16	87048-16	86099	69715-16	86107-16	Up to 6500 max. Limited street use.
84557	66310-16	68311x1-16	86032-16	86085	69730-16	86107-16	
84557LM	66330-16	68311x1-16	86032-16	86099	69715-16	86107-16	

Spring pressure:
68390X3-16 Seat: 1.800" @ 116 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).
68311X1-16 Seat: 1.750" @ 120 lbs / Nose: 1.300" @ 340 lbs / Coil bind: 1.070" (Stock O.D., no machine work).

* Machine work required, specify 11/32 pilot shaft when ordering. Note: If using stock GM hydraulic roller lifters, use Crower pushrod 69720 (7.200").

NOTE: These cam grinds are available for 1955-1956, please specify when ordering.

ACCESSORIES

Part No.	Description
Pg's.150-165	Self aligning rocker arms (1.5) 3/8 - Late Model
Pg's.150-165	Self aligning rocker arms (1.6) 3/8 - Late Model
Pg's.150-165	Rocker arms (1.5) 7/16
Pg's.150-165	Rocker arms (1.6) 7/16
See pg. 136	Timing gear set
See pg. 136	Timing gear set (87-up)

Note: Rocker arms available in Aluminum & Stainless steel.

HYDRAULIC ROLLER CAMSHAFTS
GM 350 LT1 - LT4 1993-1997

Note: These cams use .000" intake and exhaust valve lash.

Chevrolet

X-TREME MILEAGE CAMS AVAILABLE!
CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Suitable Component Kit
STOCK REPLACEMENT Increased performance in stock LT1 engines. RPM Power Range: Idle to 5000, redline: 5500 max	350 cid	**00560**	254HR262 114°	254°	262°	204°	212°	.485"	.505"	**84552**
STAGE 1 Works well in stock or slightly modified engines. RPM Power Range: 1000 to 5500, redline: 6000 max	350 cid	**00561**	262HR266 114°	262°	266°	208°	216°	.495"	.515"	**84576 or 84554**
STAGE 2 Modified computer, exhaust and high flow intake recommended.RPM Power Range: 1500 to 5800, redline: 6300 max	350 cid	**00562**	274HR284 114°	274°	284°	221°	230°	.525"	.545"	**84576 or 84554**
STAGE 3 Mid to top end power in highly modified engines. RPM Power Range: 2000 to 6000, redline: 6500 max	350 cid	**00563**	277HR286 114°	277°	286°	225°	232°	.535"	.550"	**84576 or 84554**
CUSTOM GROUND HYD ROLLER - Special order hydraulic roller lifter camshaft ground to your specifications. Call with all engine data including head flow data, valve sizes, operating power range, etc.	All cid	**00052**								

Note: The above cams are ground on cast steel cores. If 8620 steel billet core with integral cast iron gear is desired, specify part number 00050. Crower recommends using the factory stock cast iron distributor gear.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Pushrods	Keepers	Remarks
84552	66330-16	68301X1-16	86032-16	69715-16	86107-16	For rpm up to 6000 max. Daily street use.
84554	66330-16	68311X1-16	86032-16	69715-16	Stock	Race only applications.
84576	66330-16	68155-16	87029T-16	Stock*	Stock*	Conical spring, titanium retainer for LT1 (11⁄32).

Spring pressure:
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68304 -16 Seat: 1.800" @ 106 lbs / Nose: 1.250" @ 317 lbs / Coil bind: 1.090" (Stock O.D., no machine work).
68311X1-16 Seat: 1.750" @ 120 lbs / Nose: 1.250" @ 389 lbs / Coil bind: 1.070" (Stock O.D., no machine work).
68155-16 Seat: 1.750" @ 115 lbs / Nose: 1.250" @ 295 lbs / Coil bind: 1.150" (Stock O.D., conical design).
Optional spring:
68390X3-16 Seat: 1.800" @ 116 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*). LT1 only.
Recommendations:
*Optimum Performance Pushrods, specify part # **69715-16** when ordering.
*Optimum Performance Keepers, specify part # **86107-16** when ordering.

ACCESSORIES

Part No.	Description
Pg's.150-165	Rocker arms (1.5) 3⁄8 self aligning tip - LT1
Pg's.150-165	Rocker arms (1.6) 3⁄8 self aligning tip - LT1
Pg's.150-165	Rocker arms (1.5) 3⁄8 use w/guide plates - LT1
Pg's.150-165	Rocker arms (1.6) 3⁄8 use w/guide plates - LT1
See pg. 136	Cloyes Timing Gear Set

*Use with guide plate #70517-8.
Note: Rocker arms available in Aluminum & Stainless steel.

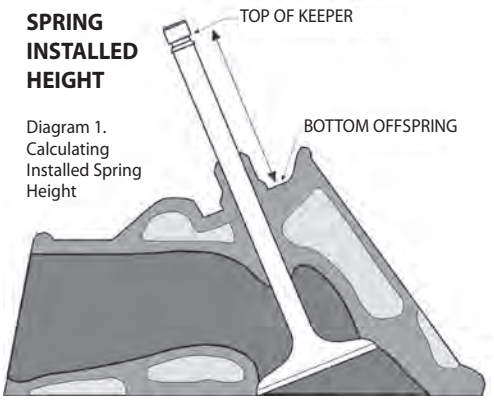


Diagram 1. Calculating Installed Spring Height

Measure the height from top of keeper grove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement.

Chevrolet

HYDRAULIC ROLLER CAMSHAFTS

GM LS1/LS2/LS6 4.8L, 5.3L, 5.7L, 6.0L, V8 1997 - Present

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust
STAGE 1 Works well in stock or slightly modified engines. RPM Power Range: 1000 to 5500, redline: 6000 max	350 cid	**00571**	258HR262 114°	258°	262°	208°	216°	.514"	.514"
STAGE 2 Modified computer, exhaust and high flow intake recommended. RPM Power Range: 1500 to 5800, redline: 6300 max	350 cid	**00572**	272HR280 114°	272°	280°	217°	226°	.553"	.575"
STAGE 3 Mid to top end power in highly modified engines. RPM Power Range: 2000 to 6000, redline: 6500 max	350 cid	**00573**	285HR289 114°	285°	289°	226°	232°	.566"	.566"
CUSTOM GROUND HYD ROLLER - Special order hydraulic roller lifter camshaft ground to your specifications. Call with all engine data including head flow data, valve sizes, operating power range, etc.	All cid	**00053**							
CUSTOM GROUND MECHANICAL ROLLER - Special order roller lifter camshaft ground to your specifications. Call with all engine data including head flow data, valve sizes, operating power range, etc.		**00060**							

Engineered Component Kit for the above part #'s: 84575 or 84556

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seat Cups	Remarks
84556	66330-16	68311X1-16	86037T-16		For rpm over 6500. Race only.
84575	66330-16	68155-16	87028T-16		Conical spring, steel retainer for LS1 (8mm).
84558	66330-16	68156-16	86037-16	68928-16	
84558T	66330-16	68156-16	86037T-16	68928-16	

Spring pressure:
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68311X1-16 Seat: 1.750" @ 120 lbs / Nose: 1.250" @ 389 lbs / Coil bind: 1.070" (Stock O.D., no machine work).
68155-16 Seat: 1.750" @ 115 lbs / Nose: 1.250" @ 295 lbs / Coil bind: 1.150" (Stock O.D., conical design).
Optional spring:
68156-16

ACCESSORIES

Part No.	Description
Pg.146-149	Pushrods - Stock LS1 length
Pg's.150-165	Aluminum shaft mount rocker assembly - LS1
Pg's.150-165	Billet aluminum spacer for shaft rocker assy - LS1
Pg's.150-165	Mechanical roller lifters - LS1
Pg's.142-143	Severe-Duty mechanical roller lifters w/Hippo - LS1
See pg. 136	Cloyes Timing Gear Set - LS1

Chevrolet

SOLID CAMSHAFTS (ORIGINAL SERIES)

Non Roller 1957 - 1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Suitable Component Kit
PRO-STREET / Performance Level 3 - High torque at low revs. Lopey idle. RPM Power Range: 2000 to 6000 / Redline: 6500 plus.	302 327	**00320**	264SF 112°	264°	270°	230°	236°	.458"	.468"	**84295**
PRO-STREET / Performance Level 3 - High torque with more mid-range. Crisp rpm. Really nice camshaft. RPM Power Range: 2400 to 6400 / Redline: 6800 plus.	350 400	**00321**	274SF 114°	274°	282°	242°	248°	.482"	.504"	**84295**
PRO-STREET / Performance Level 4 - High revving, super mid to top end power in small c.i.d. engines. Radical grind. RPM Power Range: 2800 to 6600 / Redline: 7000 plus.	302 327	**00322**	282SF 112°	282°	292°	248°	254°	.504"	.528"	**84295 or 84299**
PRO-STREET / Performance Level 4 - High revving, super mid to top end power. RPM Power Range: 3000 to 6900 / Redline: 7200 plus.	350 400	**00323**	294SF 114°	294°	300°	256°	262°	.528"	.545"	**84299**
COMPU-PRO / Performance Level 4 - Broad power band. Short oval profile. Heavy car. RPM Power Range: 2000 to 6000 / Redline: 7000 plus.	350 400	**00350**	268FDP 107°	268°	274°	238°	244°	497"	.503"	**84299**
COMPU-PRO / Performance Level 5 - High torque, short oval track cam. Strong off corner. RPM Power Range: 2500 to 6500 / Redline: 7500 plus.	350 400	**00355**	276FDP 105°	276°	282°	244°	250°	.503"	.518"	**84299 or 84292X980**
CUSTOM CAM- Special order **4-7 switch firing order.** Call with all engine data including head flow data, valve sizes, operating power range, etc.		**00047**	*Refer to page 7 for camshaft recommendation form*							

"LM" indicates Late Model 305-350 cid w/step nose core (1987-up). Small base circle cams available for 383 and 406. Specify "S" after part number when ordering.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Oil Seals	Remarks
84295	66900-16	68301X1-16	86032-16		7000 plus rpm. Street applications.
84292X980	66900X980-16	68311X1-16	86032-16	86072-16	Race only. Stock O.D. spring.
84299	66900-16	68390X3-16	87048-16	86072-16	Race only. Limited street.
84293X980	66900X980-16	68398-16	87054-16	86072-16	Race only w/1.5 to 1.8 ratio

Spring pressure:
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68311X1-16 Seat: 1.750" @ 120 lbs / Nose: 1.250" @ 389 lbs / Coil Bind: 1.070" (Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 116 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).
68398-16 Seat: 1.825" @ 151 lbs / Nose: 1.325" @ 351 lbs / Coil bind: 1.080" (Machine work, use cutter 68987*).
* Machine work required, specify 11/32 pilot shaft when ordering.
NOTE: These cam grinds are available for 1955-1956, please specify when ordering.

ACCESSORIES

Part No.	Description
Pg.146-149	Pushrods
Pg's.150-165	Rocker arms (1.5) 3/8
Pg's.150-165	Rocker arms (1.6) 3/8
Pg's.150-165	Rocker arms (1.5) 7/16
Pg's.150-165	Rocker arms (1.6) 7/16. Higher ratios available.
See pg. 136	Timing gear set
See pg. 136	Hex-A-Just timing gear set (early model block)

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

REMEMBER! Increasing rocker ratio on intake (1.6) will make the cam approximately 3° duration and .030" more lift.
Note: Rocker arms available in Aluminum & Stainless steel.
1955-1956 - These grinds are available, please specify when ordering.

Chevrolet

SOLID CAMSHAFTS (ORIGINAL SERIES)(continued)

Non Roller 1957 - 1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Suitable Component Kit
COMPU-PRO / Performance Level 5 - Most popular NASCAR and Sportsman grind. Great high torque and mid-range power. RPM Power Range: 3000 to 7000 / Redline: 7500 plus.	350 400	**00351**	288FDP 105°	288°	292°	254°	262°	.525"	.546"	**84299 or 84292X980**
COMPU-PRO / Performance Level 5 - Super torque at higher revs. Fast track cam. RPM Power Range: 3500 to 7500 / Redline: 7500 plus.	350 400	**00356**	294FDP 105°	294°	302°	260°	266°	.540"	.557"	**84299 84292X980 84293X980**
COMPU-PRO / Performance Level 5 - Super drag or big, 1/2 mile oval track grind. Low gear, heavy car. RPM Power Range: 3750 to 7500 / Redline: 7500 plus.	350 400	**00352**	298FDP 105°	298°	302°	262°	266°	.543"	.557"	**84292X980 or 84293X980**
COMPU-PRO / Performance Level 5 - Superb extended power range. Top end drag and oval track grind. RPM Power Range: 4000 to 7500 / Redline: 7500 plus.	350 400	**00357**	302FDP 107°	302°	310°	268°	278°	.557"	.587"	**84292X980 or 84293X980**
COMPU-PRO / Performance Level 5 - Top end profile for added punch above 7000 rpm. Top end drag and super speedway oval grind.RPM Power Range: 4500 to 7500 / Redline: 7500 plus.	350 400	**00353**	310FDP 107°	310°	316°	272°	278°	.575"	.588"	**84292X980 or 84293X980**
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call with all engine data including head flow data, valve sizes, operating power range, etc when ordering.	All cid	**00000**								**See Below**
CUSTOM CAM- Special order **4-7 switch firing order.** Call with all engine data including head flow data, valve sizes, operating power range, etc.		**00047**	*Refer to page 7 for camshaft recommendation form*							

"LM" indicates Late Model 305-350 cid w/step nose core (1987-up). Small base circle cams available for 383 and 406. Specify "S" after part number when ordering.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Keepers	Remarks
84295	66900-16	68301X1-16	86032-16		7000 plus rpm. Street applications.
84292X980	66900X980-16	68311X1-16	86032-16	86072-16	Race only. Stock O.D. spring.
84299	66900-16	68390X3-16	87048-16	86072-16	Race only. Limited street.
84293X980	66900X980-16	68398-16	87054-16	86072-16	Race only w/1.5 to 1.8 ratio

Spring pressure:
68301X1-16 Seat: 1.700" @ 105 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130" (Stock O.D., no machine work).
68311X1-16 Seat: 1.750" @ 120 lbs / Nose: 1.250" @ 389 lbs / Coil Bind: 1.070" (Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 116 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work, use cutter 68985*).
68398-16 Seat: 1.825" @ 151 lbs / Nose: 1.325" @ 351 lbs / Coil bind: 1.080" (Machine work, use cutter 68987*).
* Machine work required, specify 11/32 pilot shaft when ordering.
NOTE: These cam grinds are available for 1955-1956, please specify when ordering.

ACCESSORIES

Part No.	Description
Pg.146-149	Pushrods
Pg's.150-165	Rocker arms (1.5) 3/8
Pg's.150-165	Rocker arms (1.6) 3/8
Pg's.150-165	Rocker arms (1.5) 7/16
Pg's.150-165	Rocker arms (1.6) 7/16. Higher ratios available.
See pg. 136	Timing gear set
See pg. 136	Hex-A-Just timing gear set (early model block)

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

REMEMBER! Increasing rocker ratio on intake (1.6) will make the cam approximately 3° duration and .030" more lift.

Note: Rocker arms available in Aluminum & Stainless steel.
1955-1956 - These grinds are available, please specify when ordering.

290 SERIES HIGH ROCKER RATIO SOLID CAMSHAFTS

1957 - 1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .022" intake, .024" exhaust valve lash.

Chevrolet

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration @ .020" Intake	Exhaust	Duration @ .050" Intake	Exhaust	Duration @ .200" Intake	Exhaust	Lobe lift Intake	Exhaust	Gross Lift 1.6 / 1.5 Intake	Exhaust	Gross Lift 1.7 / 1.6 Intake	Exhaust
262-307-327	3200	4700	6500	7000	**00304**	110°	266°	274°	236°	244°	144°	152°	.326"	.340"	.522"	.510"	.554"	.544"
305-350 cid	2800	4300	6100	6600														
383-406 cid	2600	4100	5600	6100														
262-307-327	3400	4900	6700	7200	**00305**	108°	270°	278°	240°	248°	148°	156°	.333"	.346"	.533"	.519"	.566"	.554"
305-350 cid	3000	4500	6200	6700														
383-406 cid	2700	4200	5700	6200														
262-307-327	3500	5000	6800	7300	**00306**	108°	274°	278°	244°	248°	152°	156°	.340"	.346"	.544"	.519"	.578"	.554"
305-350 cid	3100	4600	6300	6800														
383-406 cid	2800	4300	5800	6300														
262-307-327	3700	5200	7000	7500	**00307**	106°	278°	286°	248°	256°	156°	165°	.346"	.360"	.554"	.540"	.588"	.576"
305-350 cid	3400	4900	6500	7000														
383-406 cid	3000	4500	6000	6500														
262-307-327	3800	5300	7100	7600	**00308**	105°	282°	290°	252°	260°	161°	167°	.353"	.366"	.565"	.549"	.600"	.586"
305-350 cid	3500	5000	6600	7100														
383-406 cid	3100	4600	6100	6600														

CUSTOM CAM- Special order **4-7 switch firing order.** Call with all engine data including head flow data, valve sizes, operating power range, etc.

00047

Refer to page 7 for camshaft recommendation form

"LM" indicates Late Model 305-350 cid w/step nose core (1987-up). Small base circle cams available for 383 and 406. Specify "S" after part number when ordering. These latest solid lifter profiles are multipurpose and are working extremely well in NASCAR late model, drag racing and street/strip applications. Available in any lobe center. Cam cores are ground from Pro 55 cores.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84292X980	66900X980-16	68311X1-16	86032-16	86072-16	Stock O.D. spring, coolface lifter option
84293X980	66900X980-16	68398-16	87054-16	86072-16	1.5 to 1.8 ratio, coolface lifter option
84265	66900-16	68385X2-16	86767-16		For .100" long valves
84293 X980	66900X980-16	68385X2-16	86767-16		For .100" long valves, coolface lifter option

Spring pressure:
68311X1-16 Seat: 1.750" @ 120 lbs / Nose: 1.250" @ 389 lbs / Coil bind: 1.070" (Stock O.D., no machine work).
68398-16 Seat: 1.825" @ 155 lbs / Nose: 1.325" @ 351 lbs / Coil bind: 1.080" (Machine work required, use cutter #68987).
68385X2-16 Seat: 1.900" @ 166 lbs / Nose: 1.350" @ 398 lbs / Coil bind: 1.100" (Machine work required, use cutter #68979).
Super 7° titanium retainers available for kit #84293-980. Specify #86754 retainer when ordering.
Super 7° keepers required for #86767-16 retainers (kit #84265 and #84265X980).
Valve timing events are available online at: **www.crower.com/valvtime.html**
NOTE: These cam grinds are available for 1955-1956, please specify when ordering.

ACCESSORIES

Part No.	Description
Pg.146-149	Pushrods
See pg. 136	Hex-A-Just timing gear set (early model block)
Pg's.150-165	Rocker arms (1.5) 7/16
Pg's.150-165	Rocker arms (1.6) 7/16
Pg's.150-165	Rocker arms (1.65) 7/16
Pg's.150-165	Rocker arms (1.7) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.6) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.65) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.7) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.75) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.8) 7/16

Long Arm rockers come in 8 only pcs for intake. For exhaust use conventional Crower stainless, stud mount rocker arm.
WARNING! If running over 7500 rpm with higher rocker ratio you must contact factory for custom lobe and valve train consideration.
Note: Rocker arms available in Aluminum & Stainless steel.
1955-1956 - These grinds are available, please specify when ordering.

Chevrolet

290 SERIES HIGH ROCKER RATIO SOLID CAMSHAFTS

1957 - 1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .022" intake, .024" exhaust valve lash.

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration @ .020" Intake	Exhaust	Duration @ .050" Intake	Exhaust	Duration @ .200" Intake	Exhaust	Lobe lift Intake	Exhaust	Gross Lift 1.6 / 1.5 Intake	Exhaust	Gross Lift 1.7 / 1.6 Intake	Exhaust
262-307-327	3900	5400	7200	7800	**00309**	105°	286°	294°	256°	264°	165°	173°	360"	.373"	.576"	.559"	.612"	.597"
305-350 cid	3600	5100	6700	7200														
383-406 cid	3200	4700	6200	6700														
262-307-327	4200	5700	7400	7900	**00312**	106°	290°	294°	260°	264°	161°	173°	.366"	.373"	.584"	.559"	.622"	.597"
305-350 cid	3700	5200	6800	7300														
383-406 cid	3300	4800	6300	6800														
262-307-327	4200	5700	7450	7950	**00313**	106°	294°	298°	264°	268°	173°	177°	.373"	.380"	.597"	.570"	.634"	.608"
305-350 cid	3900	5400	6950	7450														
383-406 cid	3450	4950	6400	6900														
262-307-327	4500	6000	7600	8100	**00316**	108°	298°	302°	268°	272°	177°	181°	.380"	.386"	.608"	.579"	.646"	.618"
305-350 cid	4000	5500	7050	7550														
383-406 cid	3600	5100	6500	7000														
262-307-327	4600	6100	7650	8150	**00317**	108°	302°	306°	272°	276°	181°	185°	.386"	.393"	.618"	.589"	.656"	.629"
305-350 cid	4200	5700	7150	7650														
383-406 cid	3750	5250	6600	7100														
262-307-327	4700	6200	7700	8200	**00318**	108°	306°	310°	276°	280°	185°	188°	.393"	.400"	.629"	.600"	.668"	.640"
305-350 cid	4350	5850	7200	7700														
383-406 cid	3900	5400	6650	7150														

CUSTOM CAM- Special order **4-7 switch firing order.** Call with all engine data including head flow data, valve sizes, operating power range, etc. — **00047**

Refer to page 7 for camshaft recommendation form

These latest solid lifter profiles are multipurpose and are working extremely well in NASCAR late model, drag racing and street/strip applications. Available in any lobe center. Cam cores are ground from Pro 55 cores.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84292X980	66900X980-16	68311X1-16	86032-16	86072-16	Stock O.D. spring, coolface lifter option
84293X980	66900X980-16	68398-16	87054-16	86072-16	1.5 to 1.8 ratio, coolface lifter option
84265	66900-16	68385X2-16	86767-16		For .100" long valves
84265X980	66900X980-16	68385X2-16	86767-16		For .100" long valves, coolface lifter option

Spring pressure:
68311X1-16 Seat: 1.750" @ 120 lbs / Nose: 1.250" @ 389 lbs / Coil bind: 1.070" (Stock O.D., no machine work).
68398-16 Seat: 1.825" @ 155 lbs / Nose: 1.325" @ 351 lbs / Coil bind: 1.080" (Machine work required, use cutter #68987).
68385X2-16 Seat: 1.900" @ 166 lbs / Nose: 1.350" @ 398 lbs / Coil bind: 1.100" (Machine work required, use cutter #68979).
Super 7° titanium retainers available for kit #84293-980. Specify #86754 retainer when ordering.
Super 7° keepers required for #86767-16 retainers (kit #84265 and #84265X980).
Valve timing events are available online at: **www.crower.com/valvtime.html**
NOTE: These cam grinds are available for 1955-1956, please specify when ordering.

ACCESSORIES

Part No.	Description
Pg.146-149	Pushrods
See pg. 136	Hex-A-Just timing gear set (early model block)
Pg's.150-165	Rocker arms (1.5) 7/16
Pg's.150-165	Rocker arms (1.6) 7/16
Pg's.150-165	Rocker arms (1.65) 7/16
Pg's.150-165	Rocker arms (1.7) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.6) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.65) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.7) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.75) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.8) 7/16

Long Arm rockers come in 8 only pcs for intake. For exhaust use conventional Crower stainless, stud mount rocker arm.
WARNING! If running over 7500 rpm with higher rocker ratio you must contact factory for custom lobe and valve train consideration.
Note: Rocker arms available in Aluminum & Stainless steel.

220 SERIES SOLID CAMSHAFTS (HIGH RPM)

1957 - 1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .018" intake, .020" exhaust valve lash.

Chevrolet

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration @ .020" Intake	Exhaust	Duration @ .050" Intake	Exhaust	Duration @ .200" Intake	Exhaust	Lobe lift Intake	Exhaust	Gross Lift 1.7 / 1.6 Intake	Exhaust	Gross Lift 1.8 / 1.7 Intake	Exhaust
262-307-327 cid	3500	5000	7600	8100	**00330**	106°	276°	285°	242°	251°	147°	156°	.335"	.345"	.570"	.552"	.603"	.586"
305-350 cid	3200	4700	7000	7500														
383-406 cid *	2800	4300	6500	7000														
262-307-327 cid	3600	5100	7700	8200	**00331**	106°	280°	290°	246°	255°	151°	159°	.340"	.349"	.578"	.558"	.612"	.593"
305-350 cid	3300	4800	7300	7800														
383-406 cid *	2900	4400	6600	7100														
262-307-327 cid	3600	5100	7800	8300	**00332**	107°	285°	296°	251°	261°	156°	165°	.345"	.356"	.587"	.570"	.621"	.605"
305-350 cid	3400	4900	7400	7900														
383-406 cid *	3100	4600	6900	7400														
262-307-327 cid	3700	5200	7900	8400	**00333**	107°	290°	300°	255°	265°	159°	170°	.349"	.362"	.593"	.579"	.628"	.615"
305-350 cid	3600	5100	6600	8100														
383-406 cid *	3200	4700	7000	7500														
262-307-327 cid	3800	5300	8000	8400	**00334**	108°	293°	303°	259°	269°	165°	173°	.356"	.365"	.605"	.584"	.640"	.620"
305-350 cid	3700	5200	7700	8200														
383-406 cid *	3300	4800	7100	7600														
CUSTOM CAM- Special order **4-7 switch firing order.** Call with all engine data including head flow data, valve sizes, operating power range, etc.					**00047**													

Refer to page 7 for camshaft recommendation form

The above cores are Pro 55. * requires a smaller base circle for 3.750" or larger stroke cranks. Add an "S" at the end of desired cam part number (example: 00275S) if smaller base circle is desired.
Note: These cams require #66971-16 No Chamfer lifters or, if running .874" lifter bores, use #66915-16.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Remarks
84266X980	66973X980SP -16	68385X2-16	86767 -16	Super polished coolface lifter option.

Spring pressure:
68385X2-16 Seat: 1.900" @ 166 lbs / Nose: 1.300" @ 422 lbs / Coil bind: 1.100"
(Machine work required, use cutter #68979).
Super 7° keepers required for #86767-16 retainers.
*.842" diameter No Chamfer Lifters

NOTE: These cam grinds are available for 1955-1956, please specify when ordering.

AVAILABLE SPECIALTY CORES

Description	Size
Stock Block with Roller Bearings (Pro 55 cast material)	1.875"
Stock Rocket Block or Stock Big Block Chevrolet (Pro 55 cast material)	1.948"
Stock Rocket Block with Roller Bearings (50mm) (Pro 55 cast material)	1.968"
55mm (Hard Face 8620 steel billet)	2.165"
Hard Face (8620 steel billet only) All bearing configuration available	Specify

To order the above cores specify #00003. For hard face cores specify #00033.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
Pg.146-149	Pushrods
See pg. 136	Hex-A-Just timing gear set (early model block)
Pg's.150-165	Rocker arms (1.5) 7/16
Pg's.150-165	Rocker arms (1.6) 7/16
Pg's.150-165	Rocker arms (1.65) 7/16
Pg's.150-165	Rocker arms (1.7) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.6) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.65) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.7) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.75) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.8) 7/16

Note: Rocker arms available in Aluminum & Stainless steel. Long Arm rockers come in 8 only pcs for intake. For exhaust use conventional Crower stainless, stud mount rocker arm.

Chevrolet

220 SERIES SOLID CAMSHAFTS (HIGH RPM) (Continued)

1957 - 1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .018" intake, .020" exhaust valve lash.

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration @ .020" Intake	Advertised Duration @ .020" Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Duration @ .200" Intake	Duration @ .200" Exhaust	Lobe lift Intake	Lobe lift Exhaust	Gross Lift 1.7 / 1.6 Intake	Gross Lift 1.7 / 1.6 Exhaust	Gross Lift 1.8 / 1.7 Intake	Gross Lift 1.8 / 1.7 Exhaust
262-307-327 cid	3900	5400	8100	8400	**00335**	108°	298°	307°	263°	273°	167°	178°	.359"	.370"	.610"	.592"	.646"	.629"
305-350 cid	3850	5350	7750	8250														
383-406 cid	3400	4900	7150	7650														
262-307-327 cid	4300	5800	8400	8400	**00336**	109°	301°	308°	267°	276°	171°	179°	.360"	.372"	.612"	.595"	.648"	.632"
305-350 cid	4100	5600	7900	8400														
383-406 cid	3500	5000	7200	7700														
262-307-327 cid	4600	6100	8400	8400	**00337**	109°	307°	314°	273°	281°	178°	186°	.370"	.381"	.629"	.610"	.666"	.647"
305-350 cid	4300	5800	8000	8400														
383-406 cid	3800	5300	7350	7850														
262-307-327 cid	4700	6200	8500	8500	**00338**	110°	310°	316°	276°	283°	182°	187°	.376"	.384"	.639"	.614"	.677"	.652"
305-350 cid	4350	5850	8050	8400														
383-406 cid	3900	5400	7400	7900														
262-307-327 cid	4800	6300	8500	8500	**00339**	110°	312°	319°	279°	285°	184°	189°	.379"	.385"	.644"	.616"	.682"	.654"
305-350 cid	4400	5900	8100	8400														
383-406 cid	4000	5500	7500	8000														

CUSTOM CAM- Special order **4-7 switch firing order.** Call with all engine data including head flow data, valve sizes, operating power range, etc.	**00047**	*Refer to page 7 for camshaft recommendation form*

The above cores are Pro 55. * requires a smaller base circle for 3.750" or larger stroke cranks. Add an "S" at the end of desired cam part number (example: 00275S) if smaller base circle is desired.
Note: These cams require #66971-16 No Chamfer lifters or, if running .874" lifter bores, use #66915-16.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Remarks
84266X980	66973X980SP -16	68385X2-16	86767 -16	Super polished coolface lifter option.

Spring pressure:
68385X2-16 Seat: 1.900" @ 166 lbs / Nose: 1.300" @ 422 lbs / Coil bind: 1.100"
(Machine work required, use cutter #68979).
Super 7° keepers required for #86767-16 retainers.
*.842" diameter No Chamfer Lifters

NOTE: These cam grinds are available for 1955-1956, please specify when ordering.

AVAILABLE SPECIALTY CORES

Description	Size
Stock Block with Roller Bearings (Pro 55 cast material)	1.875"
Stock Rocket Block or Stock Big Block Chevrolet (Pro 55 cast material)	1.948"
Stock Rocket Block with Roller Bearings (50mm) (Pro 55 cast material)	1.968"

To order the above cores specify #00003. For hard face cores specify #00033.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
Pg.146-149	Pushrods
See pg. 136	Hex-A-Just timing gear set (early model block)
Pg's.150-165	Rocker arms (1.5) 7/16
Pg's.150-165	Rocker arms (1.6) 7/16
Pg's.150-165	Rocker arms (1.65) 7/16
Pg's.150-165	Rocker arms (1.7) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.6) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.65) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.7) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.75) 7/16
Pg's.150-165	Long arm/Backset rocker arms (1.8) 7/16

Long Arm rockers come in 8 only pcs for intake. For exhaust use conventional Crower stainless, stud mount rocker arm.
Note: Rocker arms available in Aluminum & Stainless steel.

ROLLER CAMSHAFTS (ORIGINAL SERIES)

Mechanical 1957 - 1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .026" intake, .028" exhaust valve lash.

Chevrolet

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust
TORQUE BEAST ROLLER / Performance Level 4 - Torque and mid-range power for drag and oval track racing. Cast steel core. RPM Power Range: 2500 to 6500 / Redline: 7000 maximum	350 400	**00422**	268R 112°	268°	277°	240°	248°	.546"	.564"
POWER BEAST ROLLER / Performance Level 4 - Mid-range torque with emphasis on top end horsepower. Cast steel core. RPM Power Range: 2750 to 6750 / Redline: 7000 plus.	350 400	**00423**	277R 110°	277°	285°	244°	253°	.564"	.582"
ULTRA BEAST ROLLER / Performance Level 5 - Intended for performance applications with emphasis on top end. Cast steel core. RPM Power Range: 3000 to 7000 / Redline: 7250 maximum	350 400	**00424**	285R 108°	285°	293°	253°	261°	.582"	.603
STREET ROLLER / Performance Level 4 - Intended for performance oriented hot-street applications. 8620 steel billet. RPM Power Range: 2500 to 6500 / Redline: 7000 maximum.	350 400	**00425**	280R 112°	280°	288°	246°	248°	.554"	.567"
STREET ROLLER / Performance Level 4 - Intended for performance oriented hot-street applications. 8620 steel billet. RPM Power Range: 3000 to 7000 / Redline: 7500 maximum.	350 400	**00426**	288R 112°	288°	290°	250°	252°	.570"	.584"
STREET ROLLER / Performance Level 4 - Intended for performance oriented hot-street applications. 8620 steel billet. RPM Power Range: 3250 to 7250 / Redline: 7750 maximum.	350 400	**00427**	290R 112°	290°	296°	260°	266°	.585"	.597"
ULTRA-ACTION / Performance Level 5 - High torque 1/4 and 3/8 mile oval track profile. RPM Power Range: 2800 to 6800 / Redline: 7200 plus.	350 400	**00429**	276R 104°	276°	286°	248°	250°	.614"	.620"
ULTRA-ACTION / Performance Level 5 - High torque oval track grind. RPM Power Range: 3000 to 7000 / Redline: 7500 plus.	350 400	**00430**	284R 105°	284°	294°	256°	260°	.626"	.627"

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84420	66200-16	68385X2-16	87055-16	86072-16	Stock length valves (.650" max lift), 10° retainers
84425	66200-16	68705-16	86767-16*	86072-16	.100"+ long valve (.750" max lift), Super 7° retainers
84430	66200-16	68804-16	86781-16*	86072-16	.100"+ long valve. Limited street. Super 7° retainers

Spring pressure:
68385X2-16 Seat: 1.850" @ 187 lbs / Nose: 1.250" @ 445 lbs / Coil bind: 1.100" (1.525" O.D.)
68705-16 Seat: 1.950" @ 160 lbs / Nose: 1.250" @ 511 lbs / Coil bind: 1.125" (1.530" O.D.)
68804-16 Seat: 1.950" @ 235 lbs / Nose: 1.250" @ 582 lbs / Coil bind: 1.100" (1.550" O.D.)
*86781-16 and 86767-16 retainers require Super 7° keepers. Titanium valves required to achieve high rpm.
Due to the wide variety of valve train combinations (i.e. lifter bore diameters, offsets, valve lengths, installed heights, etc...), we highly recommend that you contact Crower for your specific valve train needs.

HIPPO Note: For severe duty roller lifter applications, we highly recommend using our roller lifters with Hippo **"High Pressure Pin Oiling"**. Specify "H" in the part number.

Ex. 66290X874H-16

Note: When ordering a .930" - .950" base circle cams for 3.750" or larger stroker cranks, add an "S" at the end of the part number. Example: 00432S. For strokes of 3.900" or larger contact Crower for .850" base circle camshafts.

HIGH RPM! With today's high engine rpm and increased rocker ratios, valve train life is extremely critical. Increased spring pressures are mandatory for insuring reliable valve train life. Contact Crower's technical assistance department for proper high rpm recommendations.

INTEGRAL CAST IRON GEAR OPTION: Premium 8620 steel billet, copper plated cam cores with integral cast iron cam gear are available from Crower on a special order basis (specify part number 00050). Valve timing events are available online at: **www.crower.com/valvtime.html**

Chevrolet

ROLLER CAMSHAFTS (ORIGINAL SERIES) (Continued)

Mechaninca 1957 - 1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .026" intake, .028" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust
ULTRA-ACTION / Performance Level 5 - Mid-range torque and top end oval track profile. RPM Power Range: 3500 to 7500 / Redline: 8000 plus.	350 400	**00431**	290R 105°	290°	296°	258°	262°	.626"	.626"
ULTRA-ACTION / Performance Level 5 - Fast 3⁄8 and 1⁄2 mile oval track grind. RPM Power Range: 4000 to 8000 / Redline: 8000 plus.	350 400	**00432**	294R 105°	294°	302°	260°	268°	.626"	.624"
ULTRA-ACTION / Performance Level 5 - Excellent big cid engine profile. Perfect for 3⁄8 to 1⁄2 mile oval. RPM Power Range: 4500 to 8000 / Redline: 8000 plus.	350 400	**00433**	297R 105°	297°	304°	264°	268°	.626"	.626"
ULTRA-ACTION / Performance Level 5 - 1⁄2 mile or longer in big cid engine. Torque and mid-range for drag. RPM Power Range: 5000 to 8000 / Redline: 8000 plus.	350 400	**00434**	299R 105°	299°	308°	262°	272°	.639"	.629"
ULTRA-ACTION / Performance Level 5 - Mid-range and top end drag profile for small motor. Excellent for big oval track motor. RPM Power Range: 5200 to 8000 / Redline: 8000 plus.	350 400	**00435**	305R 105°	305°	310°	268°	272°	.626"	.627"
ULTRA-ACTION / Performance Level 5 - Torque and mid-range power for drag and oval track racing. RPM Power Range: Varies on valve train, heads, manifold, etc...	350 400	**00436**	303R 103°	303°	312°	270°	278°	.633"	.644"
ULTRA-ACTION / Performance Level 5 - Mid-range and top end drag race profile for 350 cid with automatic transmission. RPM Power Range: Varies on valve train, heads, manifold, etc...	350 cid	**00439**	316R 108°	316°	319°	282°	286°	.672"	.687"
ULTRA-ACTION / Performance Level 5 - This cam is drag race only or modifieds with 4 or 5 speed transmission. RPM Power Range: Varies on valve train, heads, manifold, etc...	350 400	**00440**	319R 108°	319°	326°	286°	288°	.686"	.636"
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.		**00002**	Refer to page 7 for camshaft recommendation form						

ACCESSORIES

Part No.	Description
66200-16	Standard .842" dia roller lifters. Others available.
66292-16	Offset .842" dia roller lifters
Pg.146-149	Pushrods
See pg. 136	Hex-A-Just timing gear set (early model block)
Pg's.150-165	Rocker arms (1.5) 7⁄16
Pg's.150-165	Rocker arms (1.6) 7⁄16
Pg's.150-165	Rocker arms (1.65) 7⁄16
Pg's.150-165	Rocker arms (1.7) 7⁄16
Pg's.150-165	Long arm/Backset rocker arms (1.6) 7⁄16
Pg's.150-165	Long arm/Backset rocker arms (1.65) 7⁄16
Pg's.150-165	Long arm/Backset rocker arms (1.7) 7⁄16
Pg's.150-165	Long arm/Backset rocker arms (1.75) 7⁄16
Pg's.150-165	Long arm/Backset rocker arms (1.8) 7⁄16

Long Arm rockers come in 8 only pcs for intake. For exhaust use conventional Crower stainless, stud mount rocker arm.

WARNING! If running over 7500 rpm with higher rocker ratio you must contact factory for custom lobe and valve train consideration.

Specify "H" after part number for Hippo Oiling feature on roller lifters.
Ex. 66290X874**H**-16

Shaft Rockers are available. Refer to the new section under Valve Train.

Note: Rocker arms available in Aluminum & Stainless steel.

Engineered Component Kits for the above part #'s are specified on the previous page, or contact CROWER for more Info.

ROLLER CAMSHAFTS FOR EFI, FORCED INDUCTION & NOS

Mechanical 1957 - 1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .018" intake, .020" exhaust valve lash.

Chevrolet

Description / Perfomance Level RPM Power Range	Part Number	Lobe Center	Advertised Duration @ .020"		Duration @ .050"		Duration @ .200"		Lobe lift		Gross Lift 1.5 / 1.5		Gross Lift 1.6 / 1.5	
			Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust
PERFORMANCE LEVEL 4 Great 9:1, 355 cid, mid-range. RPM: 3000 to 7000 max	**00550***	114°	280°	288°	247°	255°	159°	167°	.365"	.382"	.548"	.573"	.584"	.573"
PERFORMANCE LEVEL 4 High stall, heavy car, low gears. RPM: 3500 to 7500 max	**00551***	114°	282°	290°	248°	254°	163°	171°	.373"	.391"	.560"	.587"	.597"	.587"
PERFORMANCE LEVEL 4 Strip Special - Easy on train. Excellent with 1.6 rockers (int).	**00552***	114°	290°	296°	254°	262°	171°	177°	.391"	.408"	.587"	.612"	.626"	.612"
PERFORMANCE LEVEL 5 Super Stock & Bracket classes. High rocker ratio recommended.	**00553***	114°	296°	306°	262°	270°	177°	186°	.408"	.425"	.612"	.638"	.653"	.638"
PERFORMANCE LEVEL 5 2 carbs, high stall or 4-speed. Awesome top end cam!	**00554***	114°	306°	314°	270°	278°	186°	194°	.425"	.442"	.638"	.663"	.680"	.663"
PERFORMANCE LEVEL 5 Big engine, injected/carb, comp. RPM: 5500 to 8500 max	**00555***	114°	314°	322°	278°	284°	194°	201°	.442"	.459"	.663"	.689"	.707"	.689"
PERFORMANCE LEVEL 5 Major top end power. RPM: 5600 to 8500 rpm max	**00556***	114°	325°	332°	284°	292°	201°	210°	.459"	.475"	.689"	.713"	.734"	.713"

*Indicates spec change from previous listings. The above cores are 8620 steel billet. Small base circle cams available for 383 and 406. Specify "S" after part number when ordering.

Accessories for the above part #'s are specified in the previous page, or contact CROWER for more Info.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84420	66200-16	68385X2-16	87055-16	86072-16	Stock length valves (.650" max lift), 10° retainers
84425	66200-16	68705-16	86767-16*	86072-16	.100"+ long valve (.750" max lift), Super 7° retainers
84430	66200-16	68804-16	86781-16*	86072-16	.100"+ long valve. Limited street. Super 7° retainers

Spring pressure:
68385X2-16 Seat: 1.850" @ 187 lbs / Nose: 1.250" @ 445 lbs / Coil bind: 1.100" (1.525" O.D.)
68705-16 Seat: 1.950" @ 160 lbs / Nose: 1.250" @ 511 lbs / Coil bind: 1.125" (1.530" O.D.)
68804-16 Seat: 1.950" @ 235 lbs / Nose: 1.250" @ 582 lbs / Coil bind: 1.100" (1.550" O.D.)
*86781-16 and 86767-16 retainers require Super 7° keepers. Titanium valves required to achieve high rpm.
Due to the wide variety of valve train combinations (i.e. lifter bore diameters, offsets, valve lengths, installed heights, etc...), we highly recommend that you contact Crower for your specific valve train needs.
Note: When ordering a .930" - .950" base circle cams for 3.750" or larger stroker cranks, add an "S" at the end of the part number. Example: 00432S. For strokes of 3.900" or larger contact Crower for .850" base circle camshafts.
HIGH RPM! With today's high engine rpm and increased rocker ratios, valve train life is extremely critical. Increased spring pressures are mandatory for insuring reliable valve train life. Contact Crower's technical assistance department for proper high rpm recommendations.
INTEGRAL CAST IRON GEAR OPTION: Premium 8620 steel billet, copper plated cam cores with integral cast iron cam gear are available from Crower on a special order basis (specify part number 00050). Valve timing events are available online at: **www.crower.com/valvtime.html**
HIPPO Note: For severe duty roller lifter applications, we highly recommend using our roller lifters with Hippo **"High Pressure Pin Oiling"**. Specify "H" in the part number.
Ex. 66290X874H-16

Chevrolet

390 SERIES LOW ROCKER RATIO ROLLER CAMSHAFTS (LIMITED RPM)

Mechanical 1957 - 1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .016" intake, .018" exhaust valve lash.

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration @ .020" Intake	Exhaust	Duration @ .050" Intake	Exhaust	Duration @ .200" Intake	Exhaust	Lobe lift Intake	Exhaust	Gross Lift 1.5 / 1.5 Intake	Exhaust	Gross Lift 1.6 / 1.5 Intake	Exhaust
262-307-327	3300	4800	7500	8000	**00501**	110°	280°	291°	250°	257°	174°	169°	.410"	.391"	.615"	.587"	.656"	.606"
305-350 cid	3200	4700	7000	7500														
383-406 cid	2900	4400	6600	7100														
262-307-327	3400	4900	7600	8100	**00502**	108°	284°	295°	255°	262°	179°	173°	.421"	.400"	.631"	.601"	.674"	.622"
305-350 cid	3300	4800	7300	7800														
383-406 cid	3000	4500	6800	7300														
262-307-327	3700	5200	7800	8300	**00503**	108°	289°	299°	260°	264°	183°	178°	.429"	.408"	.643"	.612"	.686"	.632"
305-350 cid	3500	5000	7600	8100														
383-406 cid	3100	4600	7000	7500														
262-307-327	3800	5300	7900	8400	**00504**	106°	294°	302°	265°	269°	187°	181°	.438"	.417"	.657"	.626"	.701"	.646"
305-350 cid	3600	5100	7700	8200														
383-406 cid	3200	4700	7100	7600														
262-307-327	3900	5400	8000	8500	**00505**	105°	299°	306°	268°	273°	191°	185°	.446"	.424"	.669"	.636"	.714"	.657"
305-350 cid	3800	5300	7800	8300														
383-406 cid	3400	4900	7200	7700														
262-307-327	4000	5500	8100	8600	**00506**	105°	302°	312°	271°	278°	194°	190°	.454"	.434"	.681"	.652"	.726"	.672"
305-350 cid	3900	5400	7900	8400														
383-406 cid	3400	4900	7300	7800														
262-307-327	4200	5700	8200	8700	**00507**	106°	306°	317°	276°	282°	198°	194°	.460"	.442"	.690"	.663"	.736"	.685"
305-350 cid	4000	5500	8000	8500														
383-406 cid	3500	5000	7400	7900														

The above cores are 8620 steel billet. Small base circle cams available for 383 and 406. Specify "S" after part number when ordering.

Accessories for the above part #'s are specified on page 50, or contact CROWER for more Info.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84430	66200-16	68804-16	86781-16*	86072-16	.100"+ long valve. Up to .700" lift
84431	66200-16	68805-16	86780-16*	86072-16	.100"+ long valve. High rpm.
84432	66200-16	68806-16	86780-16*	86072-16	.100"+ long valve. High pressure.

Spring pressure:

68804-16 Seat: 1.950" @ 235 lbs / Nose: 1.250" @ 582 lbs / Coil bind: 1.100" (1.550" O.D.)

68805-16 Seat: 2.000" @ 280 lbs / Nose: 1.300" @ 663 lbs / Coil bind: 1.180" (1.600" O.D.)

68806-16 Seat: 2.050" @ 255 lbs / Nose: 1.300" @ 696 lbs / Coil bind: 1.160" (1.600" O.D.)

*86780 and 86781 retainers require Super 7° keepers. Titanium valves required to achieve high rpm.

Due to the wide variety of valve train combinations (i.e. lifter bore diameters, offsets, valve lengths, installed heights, etc...), we highly recommend that you contact Crower for your specific valve train needs.

Note: When ordering a .930" - .950" base circle cams for 3.750" or larger stroker cranks, add an "S" at the end of the part number. Example: 00432S. For strokes of 3.900" or larger contact Crower for .850" base circle camshafts.

HIGH RPM! With today's high engine rpm and increased rocker ratios, valve train life is extremely critical. Increased spring pressures are mandatory for insuring reliable valve train life. Contact Crower's technical assistance department for proper high rpm recommendations.

INTEGRAL CAST IRON GEAR OPTION: Premium 8620 steel billet, copper plated cam cores with integral cast iron cam gear are available from Crower on a special order basis (specify part number 00050).

HIPPO Note: For severe duty roller lifter applications, we highly recommend using our roller lifters with Hippo **"High Pressure Pin Oiling"**. Specify "H" in the part number.

Ex. 66290X874H-16

AVAILABLE CAM JOURNAL SIZES

Description	Size
Stock Small Block Chevrolet	1.868"
Stock Block with Roller Bearings	1.875"
Stock Rocket Block or Stock Big Block Chevrolet	1.948"
Stock Rocket Block with Roller Bearings (50mm)	1.968"
55mm	2.165"

To order the above cores specify #00003. 55mm is available on special order basis only (#00060). Go from 50mm to 55mm without any block machining by using babbitt bearing #85522. This bearing is coated.

Special Firing Orders:

1-8-7-3-6-5-4-2 (4/7 Switch - A). Specify #00003 when ordering. • 1-8-7-2-6-5-4-3 (LS1/Tri Y Header - C). Specify #00060 when ordering.

310 SERIES OVAL TRACK ROLLER CAMSHAFTS
(8500 MAX RPM / TIGHT LASH)

Mechanical 1957 - 1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .012" intake, .018" exhaust valve lash.

Chevrolet

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration @ .020" Intake	Exhaust	Duration @ .050" Intake	Exhaust	Duration @ .200" Intake	Exhaust	Lobe lift Intake	Exhaust	Gross Lift 1.7 / 1.6 Intake	Exhaust	Gross Lift 1.8 / 1.7 Intake	Exhaust
307-327 cid	3600	5100	7500	8000	**00510***	106°	277°	292°	248°	258°	164°	163°	.377"	.368"	.641"	.589"	.678"	.625"
305-350 cid	3400	4900	7300	7800														
383-406 cid	3000	4500	6900	7400														
307-327 cid	3800	5300	7600	8100	**00511***	106°	283°	297°	254°	264°	173°	175°	.393"	.406"	.668"	.650"	.707"	.690"
305-350 cid	3700	5200	7700	8200														
383-406 cid	3200	4700	7100	7600														
307-327 cid	3900	5400	7900	8400	**00512***	107°	289°	301°	260°	268°	180°	179°	.408"	.415"	.694"	.664"	.734"	.705"
305-350 cid	3800	5300	7800	8300														
383-406 cid	3400	4900	7300	7800														
307-327 cid	4000	5500	8000	8500	**00513***	107°	293°	307°	264°	274°	184°	185°	.418"	.430"	.711"	.688"	.752"	.731"
305-350 cid	3900	5400	7900	8400														
383-406 cid	3600	5100	7400	7900														
307-327 cid	4100	5600	8450	8550	**00514***	108°	297°	311°	268°	278°	187°	190°	.430"	.437"	.731"	.699"	.774"	.742"
305-350 cid	4000	5500	7950	8450														
383-406 cid	3700	5200	7500	8000														
307-327 cid	4300	5800	8100	8600	**00515***	108°	303°	315°	274°	282°	193°	194°	.445"	.445"	.757"	.712"	.801"	.756"
305-350 cid	4200	5700	8000	8500														
383-406 cid	3800	5300	7600	8100														

*Indicates the above cams come in Standard 18° head and block. Specify bearing size also (i.e. 50mm). Note: Cam specs will vary depending on bearing size.

The above cores are 8620 steel billet. Small base circle cams available for 383 and 406. Specify "S" after part number when ordering.

ACCESSORIES

Part No.	Description
66290-16	.842" dia roller lifters. No offset.
66290X874-16	.874" dia roller lifters. No offset.
66290X903-16	.903" dia roller lifters. No offset.
66292-16	.842" dia roller lifters. Intake Offset (.180").
66292X874-16	.874" dia roller lifters. Intake Offset (.180").
66292X903-16	.903" dia roller lifters. Intake Offset (.180").
66296-16	.842" dia roller lifters. Specify Offset.
66296X874-16	.874" dia roller lifters. Specify Offset.
66296X903-16	.903" dia roller lifters. Specify Offset.
66282-16	SB2/Std .842" dia roller lifters. Int/Exh Offset.
66282X874-16	SB2/Std .874" dia roller lifters. Int/Exh Offset.
66282X903-16	SB2/Std .903" dia roller lifters. Int/Exh Offset.
66283-16	SB2/SB2 .842" dia roller lifters. All Center.
66283X874-16	SB2/SB2 .874" dia roller lifters. All Center.
66283X903-16	SB2/SB2 .903" dia roller lifters. All Center.

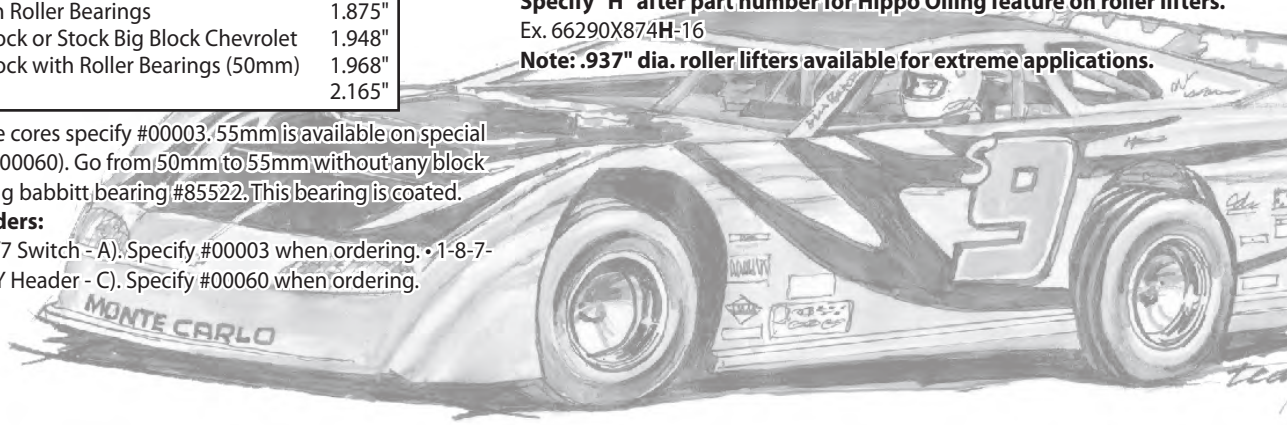
Specify "H" after part number for Hippo Oiling feature on roller lifters.
Ex. 66290X874**H**-16
Note: .937" dia. roller lifters available for extreme applications.

AVAILABLE CAM JOURNAL SIZES

Description	Size
Stock Small Block Chevrolet	1.868"
Stock Block with Roller Bearings	1.875"
Stock Rocket Block or Stock Big Block Chevrolet	1.948"
Stock Rocket Block with Roller Bearings (50mm)	1.968"
55mm	2.165"

To order the above cores specify #00003. 55mm is available on special order basis only (#00060). Go from 50mm to 55mm without any block machining by using babbitt bearing #85522. This bearing is coated.

Special Firing Orders:
1-8-7-3-6-5-4-2 (4/7 Switch - A). Specify #00003 when ordering. • 1-8-7-2-6-5-4-3 (LS1/Tri Y Header - C). Specify #00060 when ordering.



Chevrolet

230 SERIES ROLLER CAMSHAFTS (HIGH RPM FOR BUSCH / TRUCK / ARCA)

Mechanical 1957 - 1998

262 267 283 302 305 307 327 350 400 V8 Small Block

Note: These cams use .018" intake, .020" exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Part Number	Lobe Center	Advertised Duration @ .020" Intake	Exhaust	Duration @ .050" Intake	Exhaust	Duration @ .200" Intake	Exhaust	Lobe lift Intake	Exhaust	Gross Lift 1.8 / 1.7 Intake	Exhaust	Gross Lift 1.9 / 1.8 Intake	Exhaust
307-327 cid	3800	5300	8000	**00520***	108°	285°	294°	252°	260°	162°	167°	.380"	.374"	.684"	.635"	.722"	.673"
305-350 cid	3500	5000	7800														
383-406 cid	3200	4700	7600														
307-327 cid	4000	5500	8200	**00521***	108°	289°	299°	256°	265°	166°	172°	.388"	.383"	.698"	.651"	.737"	.689"
305-350 cid	3600	5100	8000														
383-406 cid	3200	4700	7800														
307-327 cid	4100	5600	8300	**00522***	108°	293°	304°	260°	270°	170°	177°	.397"	.393"	.714"	.668"	.754"	.707"
305-350 cid	3800	5300	8100														
383-406 cid	3400	4900	7900														
307-327 cid	4200	5700	8400	**00523***	108°	295°	307°	262°	273°	173°	181°	.402"	.402"	.724"	.683"	.764"	.723"
305-350 cid	3900	5400	8200														
383-406 cid	3400	4900	8000														
307-327 cid	4300	5800	8500	**00524***	108°	297°	310°	264°	276°	175°	183°	.406"	.406"	.731"	.690"	.771"	.730"
305-350 cid	4000	5500	8300														
383-406 cid	3500	5000	8100														
307-327 cid	4500	6000	8700	**00525***	108°	301°	313°	268°	279°	179°	188°	.415"	.412"	.747"	.700"	.788"	.741"
305-350 cid	4100	5600	8500														
383-406 cid	3600	5100	8100														
307-327 cid	4500	6000	8800	**00526***	108°	305°	313°	272°	279°	183°	188°	.424"	.412"	.763"	.721"	–	–
305-350 cid	4200	5700	8600														
383-406 cid	3800	5300	8400														
307-327 cid	4800	6300	8900	**00527***	108°	311°	321°	278°	287°	190°	195°	.437"	.428"	.786"	.727"	–	–
305-350 cid	4400	5900	8700														
383-406 cid	4000	5500	8500														
307-327 cid	4900	6400	9000	**00528***	108°	315°	323°	282°	291°	194°	199°	.445"	.428"	.801"	.727"	–	–
305-350 cid	4500	6000	8800														
383-406 cid	4100	5600	8600														

* indicates the above cams come in Standard 18° head and block. Specify bearing size also (i.e. 50mm). Note: Cam specs will vary depending on bearing size. The above cores are 8620 steel billet. Small base circle cams available for 383 and 406. Specify "S" after part number when ordering.

Accessories for the above part #'s, refer to page 53 for specs or contact CROWER for more Info.

ENGINEERED COMPONENT KITS

Description
Due to the wide variety of valve train combinations (i.e. lifter bore diameters, offsets, valve lengths, installed heights, etc...), we highly recommend that you contact Crower

Spring pressure:

68804-16 Seat: 1.950" @ 235 lbs / Nose: 1.250" @ 582 lbs / Coil bind: 1.100" (1.550" O.D.)

68805-16 Seat: 2.000" @ 280 lbs / Nose: 1.300" @ 663 lbs / Coil bind: 1.180" (1.600" O.D.)

68806-16 Seat: 2.050" @ 255 lbs / Nose: 1.300" @ 696 lbs / Coil bind: 1.160" (1.600" O.D.)

AVAILABLE CAM JOURNAL SIZES

Description	Size
Stock Small Block Chevrolet	1.868"
Stock Block with Roller Bearings	1.875"
Stock Rocket Block or Stock Big Block Chevrolet	1.948"
Stock Rocket Block with Roller Bearings (50mm)	1.968"
55mm	2.165"

To order the above cores specify #00003. 55mm is available on special order basis only (#00060). Go from 50mm to 55mm without any block machining by using babbitt bearing #85522. This bearing is coated.

Special Firing Orders:

1-8-7-3-6-5-4-2 (4/7 Switch - A). Specify #00003 when ordering. • 1-8-7-2-6-5-4-3 (LS1/Tri Y Header - C). Specify #00060 when ordering.

BEAST HYDRAULIC CAMSHAFTS

Non Roller 1965-1996

366 396 402 427 454 502 & Rodeck V8 Big Block

Note: These cams use .000" intake and exhaust valve lash.

Chevrolet

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust	Suitable Component Kit
MILEAGE BEAST / Performance Level 1 - Smooth idle, fuel efficient design. Exceeds factory replacement cam. Economical price. RPM Power Range: Idle to 3500 / Redline: 4500 plus.	396 454	**01902**	248H 112°	248°	252°	192°	198°	.447"	.454"	**84003**
TORQUE BEAST / Performance Level 2 - Strong bottom end power. Excellent for trucks and heavy cars. Economical price. RPM Power Range: 1200 to 3800 / Redline: 5200 plus.	396 454	**01903**	282H 112°	282°	292°	204°	214°	.478"	.503"	**84003**
BAJA BEAST / Performance Level 3 - Low to mid-range torque for daily drivability. Economical price. RPM Power Range: 1500 to 4500 / Redline: 5500 plus.	396 454	**01915**	268H 112°	268°	274°	210°	216°	.478"	.481"	**84001S**
POWER BEAST / Performance Level 3 - Delivers impressive mid-range and top-end power. Healthy sound. Economical price. RPM Power Range: 2000 to 4800 / Redline: 6200 plus.	396 454	**01904**	292H 112°	292°	302°	214°	224°	.503"	.529"	**84001S or 84103**
HOT STREET BEAST / Performance Level 4 - Upper mid-range to top end power. High stall convertor or 4-speed. Economical price. RPM Power Range: 2500 to 5800 / Redline: 6500 plus.	396 454	**01101**	278H 112°	278°	284°	220°	228°	.515"	.530"	**84103**

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84003	66000-16	68140-16	87063-16		For rpm up to 5000 max. Daily street use.
84001	66000-16	68302X1-16	87063-16		For rpm over 5500 max. Daily street use.
84001S	66000-16	68302X2-16	87063-16		For rpm up to 6000 max. Daily street use
84103	66000-16	68340-16	87063-16	86071-16	For rpm over 6500 max. Limited street use.

ACCESSORIES

Part No.	Description
66000X3-16	CamSaver lifter option
Pg's.146-149	Pushrods
Pg's.150-165	Rocker arms (1.7) 7/16
Pg's.150-165	Rocker arms (1.8) 7/16
See pg.138	Timing gear set
See pg.138	Timing gear kit

Note: Rocker arms available in Aluminum & Stainless steel.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68140-16 Seat: 1.875" @ 96 lbs / Nose: 1.300" @ 242 lbs / Coil bind: 1.100"
(Stock O.D., no machine work).
68302X1-16 Seat: 1.875" @ 84 lbs / Nose: 1.300" @ 270 lbs / Coil bind: 1.150"
(Stock O.D., no machine work).
68340-16 Seat: 1.900" @ 118 lbs / Nose: 1.350" @ 359 lbs / Coil bind: 1.080"
(Machine work, use cutter 68986).
Valve timing events are available online at: **www.crower.com/valvtime.html**

CROWER CAM BREAK-IN PROCEDURE

This applies to all hydraulic and solid lifter camshafts using higher than stock spring pressure:

- Do not use block restrictors in the oil galleys. This severely limits oil flow to the cam, lifters and overhead.
- Break-in cam and lifters with low pressure springs only. Do not exceed 225 to 250 lbs open pressure.
- During break-in run engine for 35 to 45 minutes and vary rpm from 2000 to 3000.
- Recommend adding Engine Oil Supplement (EOS) or equivalent to fortify oil. Use Crower #86084.
- For break-in procedure only, Crower recommends 10W/30 motor oil. Heavier weight oils do not cold flow.
- Do not use synthetic oils during break-in period.
- For further information, please refer to the Crower Installation booklet.

Chevrolet

HYDRAULIC CAMSHAFTS

Non Roller 1965-1996

366 396 402 427 454 502 & Rodeck V8 Big Block

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Hydraulic roller cams & kit available, call CROWER for details.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust	Suitable Component Kit
MILEAGE COMPU-PRO / Performance Level 1 - These cams are designed to enhance throttle response and low-end torque in vans, trucks and passenger cars while delivering fuel efficient motoring. High vacuum, smooth idle and maximum fuel efficiency are characteristic to these profiles. Stock or small cfm carburetor, small diameter tube headers, dual exhaust, and ignition rework are recommended for maximum benefit. Intended for low compression engines operating in the "economy zone." RPM Power Range: Idle to 3500-3700 / Redline: 4500 plus.	396 cid	**01237**	246HDP 112°	246°	253°	184°	192°	.425"	.445"	**84003 84001S**
	402 427	**01238**	250HDP 112°	250°	258°	192°	194°	.445"	.452"	**84003 84001S**
	454 cid	**01239**	260HDP 112°	260°	266°	202°	210°	.471"	.476"	**84003 84001S**
POWER COMPU-PRO / Performance Level 2 - These cams provide excellent low end and mid-range power and extended rpm range for spirited street and off-road driving. A perfect combination of mileage and power. Modifications should include small diameter tube headers, low restriction dual exhaust, aftermarket manifold, increased cfm carburetor and reworked or performance ignition. Increase in compression ratio to 9.5:1 is recommended for maximum output. Works well with automatic transmission or 4-speed. RPM Power Range: 1300-1500 to 4000-4200 / Redline: 5500 plus.	396 cid	**01239**	260HDP 112°	260°	266°	202°	210°	.471"	.476"	**84003 84001S**
	402 427	**01240**	270HDP 112°	270°	272°	210°	216°	.493"	.508"	**84003 84001S**
	454 cid	**01241**	276HDP 112°	276°	278°	214°	218°	.518"	.520"	**84003 84001S**
HIGH PERFORMANCE COMPU-PRO / Performance Level 3 - Intended for the performance oriented hot street application. These cams offer an extended rpm range with emphasis on upper bottom to top end power (strong mid-range). Performance gears, headers, dual exhaust, larger than stock cfm carburetor, performance manifold and increased compression (9.5:1 to 10.5:1) are required. Works well with automatic transmission if matched with proper ring and pinion gears and/or high stall converter. RPM Power Range: 1600-1800 to 4500-4800 / Redline: 6000 plus.	396 cid	**01241**	276HDP 112°	276°	278°	214°	218°	.518"	.520"	**84003 84001S**
	402 427	**01242**	280HDP 112°	280°	286°	218°	226°	.522"	.527"	**84001**
	454 cid	**01243**	284HDP 112°	284°	290°	224°	232°	.542"	.517"	**84001S 84103**
ULTRA-PERFORMANCE COMPU-PRO / Performance Level 4 - The following grinds are best suited for dual purpose hot street/drag strip situations. These cams exhibit strong mid-range and top end torque and horsepower. Headers, dual exhaust, larger cfm carburetor, performance ignition and 11:1 compression are a must. Cylinder head modifications would be beneficial. Use with standard transmission or automatic with high stall converter. Low gearing a must. RPM Power Range: 2000-2200 to 6000-6200 / Redline: 6500 plus.	396 cid	**01243**	284HDP 112°	284°	290°	224°	232°	.542"	.517"	**84103**
	402 427	**01244**	290HDP 112°	290°	298°	232°	244°	.562"	.571"	**84103**
	454 cid	**01245**	311HDP 112°	311°	316°	246°	250°	.578"	.593"	**84103**

ACCESSORIES

Part No.	*Description*
Pg's.150-165	Rocker arms (1.7) 7/16
Pg's.150-165	Rocker arms (1.8) 7/16
See pg.138	Timing gear set
See pg.138	Timing gear kit

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Note: Rocker arms available in Aluminum & Stainless steel.

IMPORTANT! Stock big block Chevrolet single springs are designed for cams with approximately .400" lift. When stock valve springs are used with performance cams over .470" lift, coil bind and retainer to valve guide interference will occur.

Engineered Component Kit for the above part #'s, refer to the following page 57 for specs, or contact CROWER for more Info.

Valve timing events are available online at: www.crower.com/valvtime.html

HYDRAULIC CAMSHAFTS (continued)

Non Roller 1965-1996

366 396 402 427 454 502 & Rodeck V8 Big Block

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Chevrolet

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust	Suitable Component Kit
HI-DRAULIC HAULER / Performance Level 4 - Lope at idle. Hot street/ drag cam with strong mid-range power. RPM Power Range: 2000-2400 to 6000-6200 / Redline: 6500 plus.	396 427	**01205**	280HDP 108°	280°	288°	220°	232°	.529"	.527"	**84103**
HI-DRAULIC HAULER / Performance Level 4 - Lope at idle. Hot street/ drag cam with strong mid-range power. RPM Power Range: 2000-2400 to 6000-6200 / Redline: 6500 plus.	454 cid	**01206**	290HDP 108°	290°	302°	232°	242°	.525"	.537"	**84103**
HI-DRAULIC HAULER / Performance Level 4 - Explosive mid-range torque. RPM Power Range: 3000-3400 to 6500 / Redline: 6700 plus.	396 427	**01207**	296HDP 108°	296°	306°	238°	244°	.532"	.530"	**84103**
HI-DRAULIC HAULER / Performance Level 4 - Explosive mid-range torque. RPM Power Range: 3000-3400 to 6600 / Redline: 6800 plus.	454 cid	**01208**	306HDP 108°	306°	314°	246°	252°	.535"	.535"	**84103**
TURBOMASTER 1 - This cam provides excellent low end and mid-range power with mild boost (6 to 12 lbs). RPM Power Range: 1800 to 5000 / Redline: 6000 plus.	396 427	**01978**	278HT 114°	278°	260°	214°	200°	.493"	.456"	**84001**
TURBOMASTER 2 - For more boost (12 lbs plus) and higher rpm, this cam will extend your mid-range and top end power. RPM Power Range: 2200 to 6000 / Redline: 6250 plus.	454 cid	**01979**	290HT 114°	290°	280°	226°	212°	.510″	.490″	**84001**
SUPERCHARGER 1 - Excellent low and mid-range torque with moderate boost levels (5 to 10 lbs), this cam romps. RPM Power Range: 2400 to 6000 / Redline: 6000 plus.	396 427	**01980**	288HC 114°	288°	288°	228°	228°	.496″	.496″	**84001 or 84103**
SUPERCHARGER 2 - A very healthy blower cam for increased boost (10 lbs plus) and higher rpm's. RPM Power Range: 2800 to 6500 / Redline: 6500 plus.	454 cid	**01981**	304HC 114°	304°	304°	246°	246°	.536″	.536″	**84001 or 84103**
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**	***Refer to page 7 for camshaft recommendation form***							**See Below**
CUSTOM CAM- Special order **4-7 switch firing order.** Call with all engine data including head flow data, valve sizes, operating power range, etc.		**00047**	***Refer to page 7 for camshaft recommendation form***							

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84003	66000-16	68140-16	87063-16		For rpm up to 5000 max. Daily street use.
84001S	66000-16	68302X2-16	87063-16		For rpm up to 6000 max. Limited street use
84103	66000-16	68340-16	87063-16	86071-16	For rpm over 6500 max. Limited street use.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68140-16 Seat: 1.875" @ 96 lbs / Nose: 1.300" @ 242 lbs / Coil bind: 1.100" (Stock O.D., no machine work).
68302X1-16 Seat: 1.875" @ 84 lbs / Nose: 1.300" @ 270 lbs / Coil bind: 1.150" (Stock O.D., no machine work).
68340-16 Seat: 1.900" @ 118 lbs / Nose: 1.350" @ 359 lbs / Coil bind: 1.080" (Machine work, use cutter 68986).
Note: If engine is equipped with exhaust valve rotators see rotation eliminator cups **(part # 68958-8)**.
Note: For proper oiling on 1965 and 1966 engines, rear cam bearing must be grooved. Specify when ordering cam.
Note: Two-gear drives and reverse engine rotation camshafts are available on a special order basis.
BE SMART! Crower performance camshafts feature high lift, fast action features that can cause stock or other aftermarket valve train components to fail. Be sure to use a Crower engineered kit to avoid possible damage. **CAUTION!** When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050"). Do not exceed .550" gross lift using stock rocker arms.
Note: Early 348-409 cid 1958-1965 cam cores are available from Crower on a special order basis.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
Pg's.150-165	Rocker arms (1.7) 7/16
Pg's.150-165	Rocker arms (1.8) 7/16
See pg.138	Timing gear set
See pg.138	Timing gear kit

IMPORTANT! Stock big block Chevrolet single springs are designed for cams with approximately .400" lift. When stock valve springs are used with performance cams over .400" lift, coil bind and retainer to valve guide interference will occur.
Note: Rocker arms available in Aluminum & Stainless steel.

Chevrolet

390 SERIES HYDRAULIC CAMSHAFTS (BALL NOSE)

Non Roller 1965-1996

366 396 402 427 454 502 & Rodeck V8 Big Block

Note: These cams use .000" intake, .000" exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description	RPM Power Range Low - Peak HP - Top RPM	Part Number	Lobe Center	Advertised Duration @ .006" Intake	Advertised Duration @ .006" Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Duration @ .200" Intake	Duration @ .200" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust
Performance Level 1 Good stock replacement for mileage/performance. Idle similar to factory.	396 cid / 1900 - 5000 - 5500 rpm 427 cid / 1800 - 4900 - 5400 rpm 454 cid / 1550 - 4600 - 5100 rpm 502 cid / 1550 - 4350 - 4850 rpm	**01290**	114°	262°	272°	204°	214°	109°	119°	.273"	.285"	.464"	.485"
Performance Level 1 Strong torque throughout power band, excellent mileage and smooth idle.	396 cid / 2000 - 5200 - 5700 rpm 427 cid / 1900 - 5100 - 5600 rpm 454 cid / 1700 - 4800 - 5200 rpm 502 cid / 1700 - 4500 - 5000 rpm	**01291**	114°	266°	278°	209°	221°	114°	129°	.279"	.297"	.474"	.505"
Performance Level 2 Good performance street camshaft with bottom end power.	396 cid / 2200 - 5400 - 5900 rpm 427 cid / 2100 - 5300 - 5800 rpm 454 cid / 1900 - 5000 - 5500 rpm 502 cid / 1850 - 4650 - 5150 rpm	**01292**	112°	272°	286°	214°	225°	119°	133°	.285"	.303"	.485"	.515"
Performance Level 2 Works well in big cubic inch engines. Mild performance and towing.	396 cid / 2300 - 5500 - 6000 rpm 427 cid / 2200 - 5400 - 5900 rpm 454 cid / 2000 - 5100 - 5600 rpm 502 cid / 1900 - 4700 - 5200 rpm	**01293**	112°	278°	294°	221°	233°	129°	142°	.297"	.315"	.505"	.536"
Performance Level 3 Fair idle, excellent mid-range horsepower. Moderate performance.	396 cid / 2400 - 5600 - 6100 rpm 427 cid / 2300 - 5500 - 6000 rpm 454 cid / 2100 - 5200 - 5700 rpm 502 cid / 2000 - 4900 - 5400 rpm	**01294**	112°	286°	294°	225°	233°	133°	142°	.303"	.315"	.515"	.536"
Performance Level 3 Good for street machine. Likes headers and aftermarket intake.	396 cid / 2500 - 5700 - 6200 rpm 427 cid / 2400 - 5600 - 6100 rpm 454 cid / 2200 - 5300 - 5800 rpm 502 cid / 2100 - 5000 - 5500 rpm	**01295**	110°	289°	301°	229°	237°	138°	146°	.309"	.320"	.525"	.545"
Performance Level 3 performance usage with good mid-range and upper rpm torque and power.	396 cid / 2600 - 5800 - 6300 rpm 427 cid / 2600 - 5700 - 6200 rpm 454 cid / 2400 - 5500 - 6000 rpm 502 cid / 2400 - 5100 - 5600 rpm	**01296**	110°	294°	304°	233°	240°	142°	150°	.315"	.327"	.535"	.557"
Performance Level 4 Rough idle, brutal mid-range torque and horsepower. Modifications required.	396 cid / 2700 - 5900 - 6400 rpm 427 cid / 2650 - 5850 - 6350 rpm 454 cid / 2500 - 5600 - 6100 rpm 502 cid / 2500 - 5200 - 5700 rpm	**01297**	108°	304°	311°	240°	248°	150°	158°	.327"	.340"	.557"	.578"
Performance Level 4 Rough idle, explosive mid-range to top end horsepower. Modifications required.	396 cid / 3000 - 6000 - 6500 rpm 427 cid / 2900 - 5900 - 6400 rpm 454 cid / 2800 - 5800 - 6300 rpm 502 cid / 2800 - 5500 - 6000 rpm	**01298**	108°	311°	312°	248°	256°	158°	163°	.340"	.360"	.578"	.612"

Engineered Component Kit & Accessories for the above part #'s, refer to the previous page 57 for specs or contact CROWER for more Info.

HYDRAULIC ROLLER CAMSHAFTS

1965-1996

366 396 402 427 454 502 & Rodeck V8 Big Block

Note: These cams use .000" intake and exhaust valve lash.

Chevrolet

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Duration @ .200" Intake	Duration @ .200" Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust	Suitable Component Kit
396 cid	2050	3250	4500	5000	**01400** **Early model** **01400LM** **LM is step nose**	205HR213 112°	264°	272°	205°	213°	110°	120°	.488"	.512"	**84579 or 84551LM**
402 cid	2050	3250	4500	5000											
427 cid	1900	3150	4400	4900											
454 cid	1750	2875	4125	4500											
502 cid	1700	2750	3950	4250											
396 cid	2250	3450	5000	5500	**01401** **Early model** **01401LM** **LM is step nose**	213HR222 112°	276°	282°	213°	222°	120°	128°	.512"	.540"	**84579 or 84551LM**
402 cid	2250	3450	5000	5500											
427 cid	2150	3345	4900	5400											
454 cid	1950	3145	4700	5200											
502 cid	1850	3045	4600	5100											
396 cid	2500	3700	5300	5800	**01402** **Early model** **01402LM** **LM is step nose**	222HR229 110°	278°	286°	222°	229°	128°	137°	.540"	.563"	**84579 or 84551LM**
402 cid	2500	3700	5300	5800											
427 cid	2400	3600	5200	5700											
454 cid	2300	3400	5000	5500											
502 cid	2200	3300	4900	5400											
396 cid	2750	3950	5550	6050	**01403** **Early model** **01403LM** **LM is step nose**	229HR237 110°	287°	296°	229°	237°	137°	145°	.563"	.586"	**84579 or 84551LM**
402 cid	2750	3950	5550	6050											
427 cid	2650	3850	5450	5950											
454 cid	2450	3650	5250	5750											
502 cid	2330	3520	5100	5650											

Note: The above cams are ground on cast steel cores. Crower recommends using the factory stock cast iron distributor gear. If 8620 steel billet core with integral cast iron gear is desired, specify part number 00050.
Note: The RPM power ranges listed above are approximations, your RPM ranges may vary depending on engine setup (cylinder head flow, etc.). "LM" cores fit 454-502 cid 1994-up only (w/step nose).
Gen VI camshafts are different and require 8620 steel billet core with cast iron gear (#00050).

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Plug	Pushrods	Remarks
84551	66321-16	68340-16	87063M-16	86086	71755-8 & 71855-8	For 9.800" deck.
84551LM	66331-16	68340-16	87063M-16		71760-8 & 71860-8	For Late Model block.

Spring pressure:
68340-16 Seat: 1.900" @ 119 lbs / Nose: 1.350" @ 359 lbs / Coil bind: 1.080" (Machine work, use cutter 68986).
Note: If running a tall deck block use .400" longer pushrods. Other lengths available on a special order basis.
Note: If engine is equipped with exhaust valve rotators see rotation eliminator cups (part # **68958-8**).
Note: For proper oiling on 1965 and 1966 engines, rear cam bearing must be grooved. Specify when ordering cam.
Note: Two-gear drives and reverse engine rotation camshafts are available on a special order basis.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
CAUTION! For sustained running at high rpm use valve spring (**68385X2-16**).
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's.150-165	Rocker arms (1.7) 7/16
Pg's.150-165	Rocker arms (1.8) 7/16
See pg.138	Timing gear kit

IMPORTANT! Stock big block Chevrolet single springs are designed for cams with approximately .400" lift. When stock valve springs are used with performance cams over .400" lift, coil bind and retainer to valve guide interference may occur.
Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.
Note: Rocker arms available in Aluminum & Stainless steel.

Chevrolet

HYDRAULIC ROLLER CAMSHAFTS (continued)

1965-1996

366 396 402 427 454 502 & Rodeck V8 Big Block

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Duration @ .200" Intake	Duration @ .200" Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust	Suitable Component Kit
396 cid	3050	4200	5750	6300	***01404**	236HR245	292°	303°	236°	245°	145°	154°	.586"	.612"	**84579**
402 cid	3050	4200	5750	6300	**Early model**	110°									**or**
427 cid	3000	4100	5700	6200	**01404LM**										**84551LM**
454 cid	2750	3900	5500	5950	**LM is step**										
502 cid	2700	3700	5400	5800	**nose**										
396 cid	3300	4450	6050	6500	***01405**	245HR253	303°	311°	245°	253°	154°	162°	.612"	.636"	**84579**
402 cid	3300	4450	6050	6500	**Early model**	110°									**or**
427 cid	3200	4350	5900	6450	**01405LM**										**84551LM**
454 cid	3000	4150	5650	6200	**LM is step**										
502 cid	2900	4000	5525	6100	**nose**										
396 cid	3570	4700	6100	6500	***01406**	253HR260	309°	318°	253°	260°	162°	171°	.636"	.659"	**84579**
402 cid	3570	4700	6100	6000	**Early model**	110°									**or**
427 cid	3450	4570	6000	6500	**01406LM**										**84551LM**
454 cid	3240	4390	5780	6300	**LM is step**										
502 cid	3120	4270	5675	6170	**nose**										
CUSTOM GROUND HYDRAULIC ROLLER - Special order hydraulic roller lifter cam ground to your specs on cast steel cam core using stock cast iron dist gear.					**00010**	*Refer to page 7 for camshaft recommendation form*									

*** Drive in Idle (rough idle).**

Note: The above cams are ground on cast steel cores. Crower recommends using the factory stock cast iron distributor gear. If 8620 steel billet core with integral cast iron gear is desired, specify part number 00050.

Note: The RPM power ranges listed above are approximations, your RPM ranges may vary depending on engine setup (cylinder head flow, etc.). "LM" cores fit 454-502 cid 1994-up only (w/step nose).

Gen VI camshafts are different and require 8620 steel billet core with cast iron gear (#00050).

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Plug	Pushrods	Remarks
84551	66321-16	68340-16	87063M-16	86086	71755-8 & 71855-8	For 9.800" deck.
84551LM	66331-16	68340-16	87063M-16		71760-8 & 71860-8	For Late Model block.

Spring pressure:

68340-16 Seat: 1.900" @ 119 lbs / Nose: 1.350" @ 359 lbs / Coil bind: 1.080" (Machine work, use cutter 68986).

Note: If running a LM beehive spring, contact crower.

Note: If running a tall deck block use .400" longer pushrods. Other lengths available on a special order basis.

Note: If engine is equipped with exhaust valve rotators see rotation eliminator cups (part # 68958-8) .

Note: For proper oiling on 1965 and 1966 engines, rear cam bearing must be grooved. Specify when ordering cam.

Note: Two-gear drives and reverse engine rotation camshafts are available on a special order basis.

CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").

CAUTION! For sustained running at high rpm use valve spring (68385X2-16).

Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's.150-165	Rocker arms (1.7) 7/16
Pg's.150-165	Rocker arms (1.8) 7/16
See pg.138	Timing gear kit

IMPORTANT!

Stock big block Chevrolet single springs are designed for cams with approximately .400" lift. When stock valve springs are used with performance cams over .400" lift, coil bind and retainer to valve guide interference may occur.

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

Note: Rocker arms available in Aluminum & Stainless steel.

Chevrolet

SOLID CAMSHAFTS (ORIGINAL SERIES)

Non Roller 1965-1996

366 396 402 427 454 502 & Rodeck V8 Big Block

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust	Suitable Component Kit
PRO-STREET / Performance Level 3 - High torque mid-range and top end grind. RPM Power Range: 2000 to 6000 / Redline: 6400 plus.	396 427	**01320**	282F 114°	282°	292°	238°	242°	.510"	.515"	**84302**
PRO-STREET / Performance Level 3 - High torque mid-range and top end grind. RPM Power Range: 2000 to 6500 / Redline: 7000 plus.	454 cid	**01321**	294F 114°	294°	300°	244°	246°	.517"	.532"	**84302**
PRO-STREET / Performance Level 4 - High revving, super mid to top end power. RPM Power Range: 3000 to 7000 / Redline: 7500 plus.	396 427	**01322**	300F 114°	300°	310°	246°	254°	.530"	.558"	**84302**
PRO-STREET / Performance Level 4 - High revving, super mid to top end power. RPM Power Range: 3000 to 7500 / Redline: 7750 plus.	454 cid	**01323**	310F 114°	310°	318°	252°	258°	.554"	.571"	**84302**
COMPU-PRO / Performance Level 4 - Broad power band. Short oval profile. RPM Power Range: 2000 to 6000 / Redline: 7000 plus.	396 427	**01349**	274FDP 105°	274°	288°	242°	252°	.564"	.587"	**84302 or 84301X980**
COMPU-PRO / Performance Level 5 - High torque, short oval track cam. RPM Power Range: 2500 to 6500 / Redline: 7500 plus.	454 cid	**01351**	288FDP 107°	288°	292°	252°	262°	.601"	.620"	**84302 or 84301X980**
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call with all engine data incl. head flow data, valve sizes, operating power range, etc when ordering.	All cid	**00000**	*Refer to page 7 for camshaft recommendation form*							
CUSTOM CAM- Special order **4-7 switch firing order.** Call with all engine data including head flow data, valve sizes, operating power range, etc.	All cid	**00047B**	*Refer to page 7 for camshaft recommendation form*							

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84302	66900-16	68340-16	87063M-16	86071-16	7000 plus rpm. Street applications.
84301X980	66900X980-16	68385X2-16	87053-16	86071-16	Race only.

Spring pressure:
68340-16 Seat: 1.900" @ 119 lbs / Nose: 1.350" @ 359 lbs / Coil bind: 1.080"
(Machine work, use cutter 68986).
Optional spring (race only):
68385X2-16 Seat: 1.950" @ 144 lbs / Nose: 1.300" @ 422 lbs / Coil bind: 1.100"
(Machine work, use cutter 68979).
Note: If engine is equipped with exhaust valve rotators see rotation eliminator cups.
Note: For proper oiling on 1965 and 1966 engines, rear cam bearing must be grooved. Specify when ordering cam.
Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required.
Note: Steel billet hardface cams are available from Crower on a special order basis. Contact Crower for information.

ACCESSORIES

Part No.	Description
Pg's.146-149	Longer pushrods required for high lift cams
Pg's.150-165	Rocker arms (1.7) 7/16
Pg's.150-165	Rocker arms (1.8) 7/16
See pg.138	Timing gear set
See pg.138	Timing gear kit

Note: Rocker arms available in Aluminum & Stainless steel.

IMPORTANT! Stock big block Chevrolet single springs are designed for cams with approximately .400" lift. When stock valve springs are used with performance cams over .400" lift, coil bind and retainer to valve guide interference may occur. If using 11/32 valve stem dia., must specify for different retainers/keepers.

AVAILABLE CAM JOURNAL SIZES

Description	Size
Stock Small Block Chevrolet	1.868
Stock Block with Roller Bearings	1.875
Stock Rocket Block or Stock Big Block Chevrolet	1.948
Stock Rocket Block with Roller Bearings (50mm)	1.968
55mm	2.165

To order the above cores specify #00003. 55mm is available on special order basis only (#00060). Go from 50mm to 55mm without any block machining by using babbitt bearing #85522. This bearing is coated.

Special Firing Orders:
1-8-7-3-6-5-4-2 (4/7 Switch - A). Specify #00003 when ordering. • 1-8-7-2-6-5-4-3 (LS1/Tri Y Header - C). Specify #00060 when ordering.

Chevrolet

SOLID CAMSHAFTS (ORIGINAL SERIES) (continued)

Non Roller 1965-1996

366 396 402 427 454 502 & Rodeck V8 Big Block

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust	Suitable Component Kit
COMPU-PRO / Performance Level 5 - Great high torque, good mid-range oval track grind. RPM Power Range: 3000 to 7000 / Redline: 8000 plus.	396 427	**01355**	292FDP 107°	292°	300°	254°	260°	.595"	.622"	**84301X980**
COMPU-PRO / Performance Level 5 - Short oval grind with super torque RPM Power Range: 3500 to 7500 / Redline: 8500 plus.	454 cid	**01352**	298FDP 107°	298°	302°	258°	264°	.619"	.627"	**84301X980**
COMPU-PRO / Performance Level 5 - Superior upper bottom, mid-range and top end power. RPM Power Range: 3750 to 7750 / Redline: 8500 plus.	396 427	**01356**	304FDP 107°	304°	310°	262°	266°	.626"	.634"	**84301X980**
COMPU-PRO / Performance Level 5 - Superb extended power band for fast 3/8 and 1/2 mile ovals. RPM Power Range: 4000 to 8000 / Redline: 8500 plus.	454 cid	**01353**	310FDP 107°	310°	316°	276°	282°	.653"	.661"	**84301X980**
COMPU-PRO / Performance Level 5 - Upper mid-range and top end profile for added punch above 7000 rpm. RPM Power Range: 4500 to 8000 / Redline: 8500 plus.	454 cid	**01354**	320FDP 110°	320°	326°	284°	292°	.682"	.689"	**84301X980**
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**	*Refer to page 7 for camshaft recommendation form*							
CUSTOM CAM- Special order **4-7 switch firing order.** Call with all engine data including head flow data, valve sizes, operating power range, etc.	All cid	**00047B**	*Refer to page 7 for camshaft recommendation form*							

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84302	66900-16	68340-16	87063M-16	86071-16	7000 plus rpm. Street applications.
84301X980	66900X980-16	68385X2-16	87053-16	86071-16	Race only.

Spring pressure:
68340-16 Seat: 1.900" @ 119 lbs / Nose: 1.350" @ 359 lbs / Coil bind: 1.080" (Machine work, use cutter 68986).
Optional spring (race only):
68385X2-16 Seat: 1.950" @ 144 lbs / Nose: 1.300" @ 422 lbs / Coil bind: 1.100" (Machine work, use cutter 68979).
Note: If engine is equipped with exhaust valve rotators see rotation eliminator cups.
Note: For proper oiling on 1965 and 1966 engines, rear cam bearing must be grooved. Specify when ordering cam.
Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required.
Note: Steel billet hardface cams are available from Crower on a special order basis. Contact Crower for information.

ACCESSORIES

Part No.	Description
Pg's.146-149	Longer pushrods required for high lift cams
Pg's.150-165	Rocker arms (1.7) 7/16
Pg's.150-165	Rocker arms (1.8) 7/16
See pg.138	Timing gear set
See pg.138	Timing gear kit

IMPORTANT! Stock big block Chevrolet single springs are designed for cams with approximately .400" lift. When stock valve springs are used with performance cams over .400" lift, coil bind and retainer to valve guide interference may occur. If using 11/32 valve stem dia., must specify for different retainers/keepers.
Note: Rocker arms available in Aluminum & Stainless steel.

AVAILABLE CAM JOURNAL SIZES

Description	Size
Stock Small Block Chevrolet	1.868"
Stock Block with Roller Bearings	1.875"
Stock Rocket Block or Stock Big Block Chevrolet	1.948"
Stock Rocket Block with Roller Bearings (50mm)	1.968"
55mm	2.165"

To order the above cores specify #00003. 55mm is available on special order basis only (#00060). Go from 50mm to 55mm without any block machining by using babbitt bearing #85522. This bearing is coated.

Special Firing Orders:
1-8-7-3-6-5-4-2 (4/7 Switch - A). Specify #00003 when ordering. • 1-8-7-2-6-5-4-3 (LS1/Tri Y Header - C). Specify #00060 when ordering.

220 SERIES SOLID CAMSHAFTS (HIGH RPM)

Non Roller 1965-1996

366 396 402 427 454 502 & Rodeck V8 Big Block

Note: These cams use .018" intake, .020" exhaust valve lash.

Chevrolet

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration @ .020" Intake	Exhaust	Duration @ .050" Intake	Exhaust	Duration @ .200" Intake	Exhaust	Lobe Lift Intake	Exhaust	Gross Lift 1.7 / 1.7 Intake	Exhaust	Gross Lift 1.8 / 1.7 Intake	Exhaust
396 cid	2700	4200	6300	6800	**01330**	108°	276°	285°	242°	251°	147°	156°	.335"	.345"	.570"	.587"	.603"	.587"
427 cid	2700	4200	6100	6600														
454 cid	2500	4000	5700	6200														
502 cid	2400	3900	5300	5800														
396 cid	3000	4500	6700	7200	**01332**	108°	285°	296°	251°	261°	156°	165°	.345"	.356"	.587"	.605"	.621"	.605"
427 cid	3000	4500	6350	6850														
454 cid	2700	4200	5900	6400														
502 cid	2800	4100	5600	6100														
396 cid	3300	4700	6900	7400	**01334**	108°	293°	303°	259°	269°	165°	173°	.356"	.365"	.605"	.621"	.640"	.621"
427 cid	3250	4750	6600	7100														
454 cid	3100	4600	6100	6600														
502 cid	3000	4500	5800	6300														
396 cid	3500	5000	7200	7700	**01336**	110°	301°	308°	267°	276°	171°	179°	.360"	.372"	.612"	.632"	.648"	.632"
427 cid	3500	5000	6800	7300														
454 cid	3200	4800	6400	6900														
502 cid	3200	4700	6000	6500														
396 cid	3700	5300	7500	8000	**01338**	110°	310°	316°	276°	283°	182°	187°	.376"	.384"	.639"	.653"	.676"	.653"
427 cid	3600	5200	7150	7650														
454 cid	3550	5050	6700	7200														
502 cid	3500	5000	6200	6700														
396 cid	4000	5600	7700	8200	**01339**	110°	312°	319°	279°	285°	184°	189°	.379"	.385"	.644"	.655"	.682"	.655"
427 cid	4100	5500	7300	7800														
454 cid	3700	5200	7000	7500														
502 cid	3700	5100	6400	6900														

The above cams are ground on Pro55 cores.
Note: If running .874" lifter bores, use # **66915-16** or **66951X980-16**.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84302X980	66900X980-16	68340-16	87063M-16	86071-16	7000 plus rpm. Street applications.
84301X980	66900X980-16	68385X2-16	87053-16	86071-16	Race only.

Spring pressure:
68340-16 Seat: 1.900" @ 119 lbs / Nose: 1.350" @ 359 lbs / Coil bind: 1.080" (Machine work, use cutter 68986).
68385X2-16 Seat: 1.950" @ 144 lbs / Nose: 1.300" @ 422 lbs / Coil bind: 1.100" (Machine work, use cutter 68979).
Note: If engine is equipped with exhaust valve rotators see rotation eliminator cups.
Note: For proper oiling on 1965 and 1966 engines, rear cam bearing must be grooved. Specify when ordering cam.
Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required.
Note: Steel billet hardface cams are available from Crower on a special order basis. Contact Crower for information.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
Pg's.146-149	Longer pushrods required for high lift cams
Pg's.150-165	Rocker arms (1.7) 7/16
Pg's.150-165	Rocker arms (1.8) 7/16
See pg.138	Timing gear set
See pg.138	Timing gear kit

IMPORTANT! Stock big block Chevrolet single springs are designed for cams with approximately .400" lift. When stock valve springs are used with performance cams over .400" lift, coil bind and retainer to valve guide interference may occur. If using 11⁄32 valve stem dia., must specify for different retainers/keepers.
Note: Rocker arms available in Aluminum & Stainless steel.

Chevrolet

ROLLER CAMSHAFTS (ORIGINAL SERIES)

Mechanical 1965-1996

366 396 402 427 454 502 & Rodeck V8 Big Block

Note: These cams use .026" intake, .028" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust	Suitable Component Kit
STREET ROLLER / Performance Level 4 - Intended for performance oriented hot-street applications. RPM Power Range: 2500 to 6000 / Redline: 6750 plus.	427 454	**01475**	286R 112°	286°	290°	242°	250°	.581"	.573"	**84511**
STREET ROLLER / Performance Level 4 - Intended for performance oriented hot-street applications. RPM Power Range: 3000 to 7000 / Redline: 7000 plus.	427 454	**01476**	290R 112°	290°	296°	252°	254°	.585"	.578"	**84511**
STREET ROLLER / Performance Level 4 - Intended for performance oriented hot-street applications. RPM Power Range: 3200 to 7000 / Redline: 7250 plus.	427 454	**01477**	296R 112°	296°	300°	254°	260°	.580"	.587"	**84511**
ULTRA-ACTION / Performance Level 5 - High torque and mid-range profile for bracket and marine applications. RPM Power Range: 2800 to 6800 / Redline: 7200 plus.	427 454	**01485**	296R 107°	296°	302°	256°	266°	.641"	.636"	**84511**
ULTRA-ACTION / Performance Level 5 - Strong mid-range design for bracket and marine use. RPM Power Range: 3000 to 7000 / Redline: 7500 plus.	427 454	**01486**	290R 107°	290°	306°	260°	270°	.651"	.677"	**84511**
ULTRA-ACTION / Performance Level 5 - Strong mid-range design for bracket and marine use. RPM Power Range: 4500 to 8000 / Redline: 8400 plus.	427 454	**01487**	306R 107°	306°	314°	270°	276°	.678"	.661"	**84511**
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call with all engine data incl. head flow data, valve sizes, operating power range, etc when ordering.		**00002**	Refer to page 7 for camshaft recommendation form							
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.		**00060**	Refer to page 7 for camshaft recommendation form							

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Keepers	Rev Kit	Plug	Remarks
84511	66201-16	68363-16	87064-16	86071-16	86111-16	82001	86086	For rpm up to 7500 max.
84512	66201-16	68365-16	87056-16	86071T-16	86111-16	82001	86086	For rpm up to 8000 plus.

Spring pressure:
68363-16 Seat: 1.900" @ 212 lbs / Nose: 1.200" @ 560 lbs / Coil bind: 1.100"
(Machine work, use cutter 68977).
68365-16 Seat: 1.925" @ 259 lbs / Nose: 1.300" @ 654 lbs / Coil bind: 1.230"
(Machine work, use cutter 68989).
Optional springs:
68803-16, 68804-16, 68806-16, 68547-16, 68548-16
If using late model block with high lifter bore use roller lifter part # 66291-16 or 66291H-16
Valve timing events are available online at: **www.crower.com/valvtime.HTML**

ACCESSORIES

Part No.	Description
Pg's.146-149	Pushrods
Pg's.150-165	Rocker arms (1.7) 7/16
Pg's.150-165	Rocker arms (1.8) 7/16
See pg.138	Timing gear set
See pg.138	Timing gear kit

Note: If exceeding 8000 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

Note: Special cam cores available for Torrington bearing applications.

Note: Rocker arms available in Aluminum & Stainless steel.

ROLLER CAMSHAFTS (ORIGINAL SERIES) (continued)

Mechanical 1965-1996

366 396 402 427 454 502 & Rodeck V8 Big Block

Note: These cams use .026" intake, .028" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust	Suitable Component Kit
ULTRA-ACTION / Performance Level 5 - Fast 3/8 and 1/2 mile oval track grind. RPM Power Range: 4800 to 8300 / Redline: 8700 plus.	427 454	**01488**	309R 108°	309°	316°	276°	280°	.728"	.716"	**84512**
ULTRA-ACTION / Performance Level 5 - Big cid profile for 3/8 and 1/2 mile oval. RPM Power Range: 5300 to 8800 / Redline: 9000 plus.	427 454	**01489**	318R 108°	318°	326°	284°	288°	.758"	.745"	**84512**
ULTRA-ACTION / Performance Level 5 - Super competition profile. RPM Power Range: Varies on valve train, heads, manifold, etc...	427 454	**01490**	321R 110°	321°	330°	288°	290°	.777"	.731"	**84512**
ULTRA-ACTION / Performance Level 5 - Super competition profile. RPM Power Range: Varies on valve train, heads, manifold, etc...	427 454	**01491**	328R 110°	328°	336°	286°	292°	.801"	.780"	**Call Crower**
ULTRA-ACTION / Performance Level 5 - A very radical profile for competition use only. RPM Power Range: Varies on valve train, heads, manifold, etc...	427 454	**01492**	336R 112°	336°	340°	294°	300°	.779"	.717"	**Call Crower**
ULTRA-ACTION / Performance Level 5 - Extremely radical competition profile. RPM Power Range: Varies on valve train, heads, manifold, etc...	427 454	**01493**	340R 112°	340°	347°	298°	300°	.802"	.784"	**Call Crower**
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call with all engine data incl. head flow data, valve sizes, operating power range, etc when ordering.	All cid	**00002**	*Refer to page 7 for camshaft recommendation form*							
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.		**00060**	*Refer to page 7 for camshaft recommendation form*							

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Keepers	Rev Kit	Plug	Remarks
84511	66201-16	68363-16	87064-16	86071-16	86111-16	82001	86086	For rpm up to 7500 max.
84512	66201-16	68365-16	87056-16	86071T-16	86111-16	82001	86086	For rpm up to 8000 plus.

Spring pressure:
68363-16 Seat: 1.900" @ 212 lbs / Nose: 1.200" @ 560 lbs / Coil bind: 1.100"
(Machine work, use cutter 68977).
68365-16 Seat: 1.925" @ 259 lbs / Nose: 1.300" @ 654 lbs / Coil bind: 1.230"
(Machine work, use cutter 68989).
Optional springs:
Optional springs:
68803-16, 68804-16, 68806-16, 68547-16, 68548-16
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
Pg's.146-149	Pushrods
Pg's.150-165	Rocker arms (1.7) 7/16
Pg's.150-165	Rocker arms (1.8) 7/16
See pg.138	Timing gear set
See pg.138	Timing gear kit

Note: If exceeding 8000 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.
Note: Special cam cores available for Torrington bearing applications.
Note: Rocker arms available in Aluminum & Stainless steel.

Chevrolet

230 SERIES ROLLER CAMSHAFTS (HIGH RPM)

Mechanical 1965-1996

366 396 402 427 454 502 & Rodeck V8 Big Block

Note: These cams use .018" intake, .020" exhaust valve lash.

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Duration @ .200" Intake	Duration @ .200" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust	Gross Lift 1.8 / 1.7 Intake	Gross Lift 1.8 / 1.7 Exhaust
396 cid	3200	4700	6800	7300	**01520**	108°	289°	299°	256°	265°	166°	172°	.388"	.383"	.660"	.651"	.698"	.651"
427 cid	3000	4500	6600	7100														
454 cid	2700	4200	6300	6800														
502 cid	2300	3800	5800	6300														
396 cid	3300	4800	7000	7500	**01521**	110°	295°	307°	262°	273°	173°	181°	.402"	.402"	.683"	.683"	.723"	.683"
427 cid	3100	4600	6800	7300														
454 cid	2800	4300	6500	7000														
502 cid	2550	4050	6000	6500														
396 cid	3600	5100	7200	7700	**01522**	110°	301°	313°	268°	279°	179°	188°	.415"	.412"	.706"	.700"	.747"	.700"
427 cid	3400	4900	7000	7500														
454 cid	3100	4600	6700	7200														
502 cid	2800	4300	6200	6700														
396 cid	3800	5300	7400	7900	**01523**	110°	311°	321°	278°	287°	190°	195°	.437"	.428"	.743"	.728"	.786"	.728"
427 cid	3600	5100	7200	7700														
454 cid	3300	4800	6900	7400														
502 cid	3100	4600	6400	6900														
396 cid	3950	5450	7600	8100	**01524**	112°	315°	323°	280°	289°	194°	199°	.445"	.421"	.757"	.716"	.801"	.716"
427 cid	3750	5250	7400	7900														
454 cid	3450	4950	7100	7600														
502 cid	3400	4900	6600	7100														
396 cid	4000	5500	7700	8200	**01525**	112°	319°	348°	285°	309°	203°	221°	.526"	.496"	.894"	.843"	–	–
427 cid	3800	5300	7500	8000														
454 cid	3500	5000	7200	7700														
502 cid	3550	5050	6700	7200														

The above cores are 8620 steel billet.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Plug	Remarks
84517	66293-16	68806-16	86780-16	86086	Limited street use. Requires Super 7° keepers.
84516	66293-16	68860-16	86780-16	86086	For rpm up to 8000 max. Requires Super 7° keepers.
84515	66293-16	68548-16	86069-16	86086	Triple spring. Requires 10° keepers.

Spring pressure:
68806-16 Seat: 2.000" @ 279 lbs / Nose: 1.250" @ 733 lbs / Coil bind: 1.160"
68860-16 Seat: 1.950" @ 287 lbs / Nose: 1.100" @ 864 lbs / Coil bind: 1.010"
Valve timing events are available online at: **www.crower.com/valvtime.html**

AVAILABLE CAM JOURNAL SIZES

Description	Size
Stock Small Block Chevrolet	1.948"
Stock Block with Roller Bearings	1.968"
Pro Stock Roller Bearings / Babbit Bearing	2.124"
Large Roller Bearing	2.166"
Pro Stock Oversize	66mm

To order the above cores specify #00003. 60mm is available on special order basis only (#00060).

Special Firing Orders:
1-8-7-3-6-5-4-2 (4/7 Switch - A). Specify #00003 when ordering.
1-8-7-2-6-5-4-3 (LS1/Tri Y Header - C). Specify #00060 when ordering.

ACCESSORIES

Part No.	Description
66201-16	.842" dia roller lifters. No offset.
66375-16	.874" dia roller lifters. No offset.
66291-16	.842" dia roller lifters. No offset, Severe-Duty
66293-16	.842" dia roller lifters. Intake Offset, Severe-Duty
66297-16	.842" dia roller lifters. Specify Offset, Severe-Duty
66291X874-16	.874" dia roller lifters. No offset, Severe-Duty
66293X874-16	.874" dia roller lifters. Intake Offset, Severe-Duty
66297X874-16	.874" dia roller lifters. Specify Offset, Severe-Duty

Shaft Rockers are available. Refer to the new section in Valve Train area.
Titanium valves are mandatory on all ratios over 1.7:1.

HIPPO Note: For severe duty roller lifter applications, we highly recommend using our roller lifters with Hippo **"High Pressure Pin Oiling"**. Specify "H" in the part number.
Ex. 66290X874H-16

4.6L/5.4L SOHC MODULAR (2 Valve) - Low Lift Design

1994-1998 (Early Model Cylinder Head)

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Ford

Description	Part Number	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift (1.8) Intake	Gross Lift (1.8) Exhaust	Rec Kit
FACTORY OEM SPECS (1994-98)	**Stock**	233° Lobe 242° / 242° Valve 254°		186° Lobe 191° / 202° Valve 207°		.256"	.259"	.461"	.466"	**Stock**
STAGE 1 Excellent for stock replacement. No other modifications required. RPM Range: 1250 to 5750+ on 4.6L, 5.4L will be lower.	**62810-2**	234° Lobe 248° / 248° Valve 262°		186° Lobe 197° / 202° Valve 213°		.278"	.294"	.500"	.529"	**Stock**
STAGE 2 Hot street profile. Emphasis on mid range. Spring recommended. RPM Range: 1500 to 6000+ on 4.6L, 5.4L will be lower.	**62811-2**	252° Lobe 256° / 266° Valve 270°		204° Lobe 208° / 220° Valve 224°		.296"	.296"	.532"	.532"	**84706 or 84707**
STAGE 2 Designed specifically for supercharger applications for street use. RPM Range: 1750 to 6500+ on 4.6L, 5.4L will be lower.	**62812-2**	258° Lobe 258° / 272° Valve 272°		212° Lobe 212° / 230° Valve 230°		.296"	.296"	.532"	.532"	**84706 or 84707**
STAGE 3 Street/strip profile. Emphasis on top end power. Spring required. RPM Range: 2000 to 6750+ on 4.6L, 5.4L will be lower.	**62813-2**	262° Lobe 262° / 276° Valve 276°		216° Lobe 216° / 234° Valve 234°		.293"	.293"	.527"	.527"	**84706 or 84707**
CUSTOM GROUND 4.6L/5.4L CAMS - Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles also available.	**00080-2**	***Refer to page 7 for camshaft recommendation form***								

The above cams are ground on factory 114 lobe center. Valve timing events are available online at: **www.crower.com/valvtime.html**

ENGINEERED COMPONENT KITS

Part No.	*Springs*	*Retainers*	*Remarks*
84706	68193-16	87025-16	High pressure spring, steel retainer for street and high mileage use.
84707	68193-16	87025T-16	High open pressure spring, titanium retainer for limited street & race.

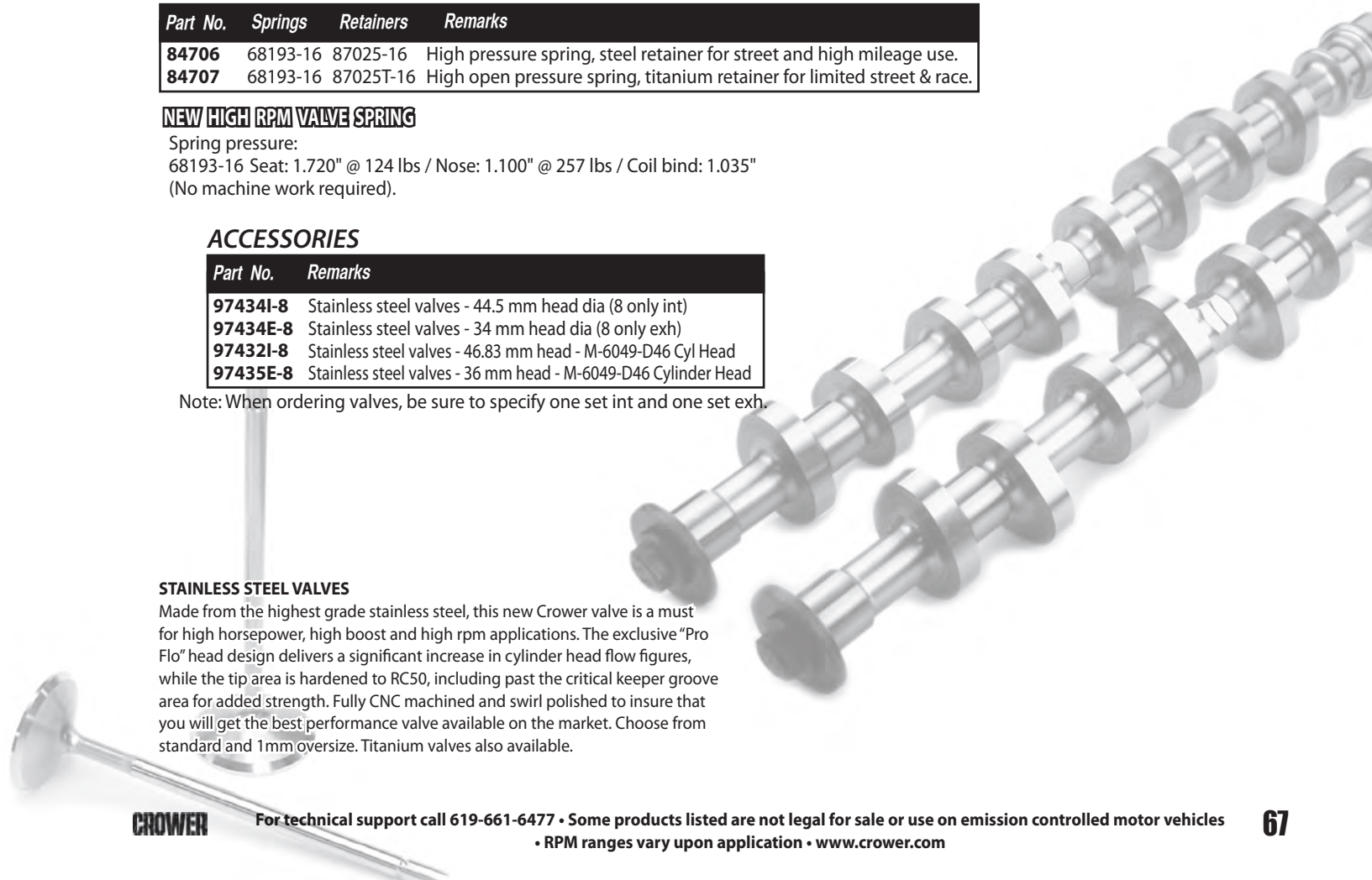
NEW HIGH RPM VALVE SPRING

Spring pressure:
68193-16 Seat: 1.720" @ 124 lbs / Nose: 1.100" @ 257 lbs / Coil bind: 1.035"
(No machine work required).

ACCESSORIES

Part No.	*Remarks*
97434I-8	Stainless steel valves - 44.5 mm head dia (8 only int)
97434E-8	Stainless steel valves - 34 mm head dia (8 only exh)
97432I-8	Stainless steel valves - 46.83 mm head - M-6049-D46 Cyl Head
97435E-8	Stainless steel valves - 36 mm head - M-6049-D46 Cylinder Head

Note: When ordering valves, be sure to specify one set int and one set exh.



STAINLESS STEEL VALVES

Made from the highest grade stainless steel, this new Crower valve is a must for high horsepower, high boost and high rpm applications. The exclusive "Pro Flo" head design delivers a significant increase in cylinder head flow figures, while the tip area is hardened to RC50, including past the critical keeper groove area for added strength. Fully CNC machined and swirl polished to insure that you will get the best performance valve available on the market. Choose from standard and 1mm oversize. Titanium valves also available.

Ford

4.6L/5.4L SOHC MODULAR (2 Valve) - High Lift Design

1999-up (Late Model Cylinder Head)

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description	Part Number	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift (1.8) Intake	Gross Lift (1.8) Exhaust	Rec Kit
FACTORY OEM SPECS (1999-up)	**Stock**	233° Lobe 239° / 242° Valve 252°		184° Lobe 191° / 200° Valve 209°		.280"	.295"	.504"	.531"	**Stock**
STAGE 1 - BAJA BEAST Tow package. Specifically designed for heavy trucks/SUV applications. RPM Range: Idle to 5500+ on 4.6L, 5.4L will be lower.	**62905-2**	243° Lobe 250° / 257° Valve 264°		193° Lobe 196° / 209° Valve 212°		.294"	.303"	.529"	.545"	**Stock**
STAGE 1 Excellent for stock replacement. No other modifications required. RPM Range: Idle to 5500+ on 4.6L, 5.4L will be lower.	**62800-2**	246° Lobe 250° / 260° Valve 264°		200° Lobe 204° / 216° Valve 220°		.300"	.305"	.540"	.549"	**Stock**
STAGE 2 Hot street profile. Emphasis on mid range. Spring recommended. RPM Range: 1250 to 6000+ on 4.6L, 5.4L will be lower.	**62801-2**	254° Lobe 258° / 268° Valve 272°		208° Lobe 212° / 224° Valve 228°		.311"	.317"	.559"	.570"	**84706**
STAGE 2 Designed specifically for supercharger applications for street use. RPM Range: 1500 to 6500+ on 4.6L, 5.4L will be lower.	**62802-2**	262° Lobe 262° / 276° Valve 276°		216° Lobe 216° / 234° Valve 234°		.322"	.322"	.581"	.581"	**84706 or 84707**
STAGE 3 Street/strip profile. Emphasis on top end power. Spring required. RPM Range: 1750 to 6750+ on 4.6L, 5.4L will be lower.	**62803-2**	266° Lobe 270° / 280° Valve 284°		220° Lobe 224° / 238° Valve 242°		.328"	.334"	.590"	.601"	**84706 or 84707**
STAGE 3 Designed specifically for supercharger applications for street/strip. RPM Range: 2000 to 6900+ on 4.6L, 5.4L will be lower.	**62804-2**	274° Lobe 274° / 288° Valve 288°		228° Lobe 228° / 246° Valve 246°		.340"	.340"	.612"	.612"	**84706 or 84707**
STAGE 4 Race grind. ECU mods and tuning required. Rough idle is common. RPM Range: 2250 to 7000+ on 4.6L, 5.4L will be lower.	**62805-2**	274° Lobe 278° / 288° Valve 292°		228° Lobe 232° / 246° Valve 250°		.340"	.345"	.612"	.621"	**84706 or 84707**
CUSTOM GROUND 4.6L/5.4L CAMS - Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles also available.	**00080-2**	***Refer to page 7 for camshaft recommendation form***								

The above cams are ground on factory 114 lobe center. 1999 and up SOHC engines require cam gears to replace pressed on units. Valve timing events are available online at: **www.crower.com/valvtime.html**

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84706	68193-16	87025-16	High pressure spring, steel retainer for street and high mileage use.
84707	68193-16	87025T-16	High open pressure spring, titanium retainer for limited street & race.

Spring pressure:
68193-16 Seat: 1.720" @ 124 lbs / Nose: 1.100" @ 257 lbs / Coil bind: 1.035"
(No machine work required).

ACCESSORIES

Part No.	Remarks
97434I-8	Stainless steel valves - 44.5 mm head dia (8 only int)
97434E-8	Stainless steel valves - 34 mm head dia (8 only exh)
97432I-8	Stainless steel valves - 46.83 mm head - M-6049-D46 Cyl Head
97435E-8	Stainless steel valves - 36 mm head - M-6049-D46 Cylinder Head

Note: When ordering valves, be sure to specify one set int and one set exh.

Ford Timing Gears Part Numbers:
F8AE-6256-BA (Left Hand Gear)
F8AE-6256-AA (Right Hand Gear)
F1AZ-6278-A (Washer)
F1AZ-6A340-A (Bolt)
F3AZ-6265-A (Spacer)

STAINLESS STEEL VALVES
Made from the highest grade stainless steel, this new Crower valve is a must for high horsepower, high boost and high rpm applications. The exclusive "Pro Flo" head design delivers a significant increase in cylinder head flow figures, while the tip area is hardened to RC50, including past the critical keeper groove area for added strength. Fully CNC machined and swirl polished to insure that you will get the best performance valve available on the market. Choose from standard and 1mm oversize. Titanium valves also available.

4.6L/5.4L SOHC MODULAR (3 Valve)
2005-up

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!
CONTACT CROWER TECHNICIANS FOR MORE INFO.

Ford

Description	Part Number	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift (1.8) Intake	Gross Lift (1.8) Exhaust	Rec Kit
FACTORY OEM SPECS (1999-up)	**Stock**	232° Lobe 260° / 246° Valve 274°		175° Lobe 198° / 193° Valve 216°		.216"	.216"	.432"	.432"	**Stock**
STAGE 1 Excellent for stock replacement. Programming recommended. RPM Range: 1000 to 5900+ RPM	**62830-2 114**	245° Lobe 262° / 261° Valve 278°		188° Lobe 200° / 208° Valve 222°		.240"	.234"	.480"	.468"	**84708**
STAGE 2 Hot Street Profile with explosive mid-range torque. Supercharged/Nitrous. RPM Range: 1200 to 6200+ RPM	**62831-2 114**	258° Lobe 268° / 274° Valve 284°		200° Lobe 216° / 220° Valve 236°		.246"	.246"	.492"	.492"	**84708**
STAGE 3 Street/Strip profile. Mid/Top end cam. 2500 stall rec. RPM Range: 1200 to 6400+ RPM	**62832-2 115**	268° Lobe 278° / 284° Valve 294°		212° Lobe 228° / 222° Valve 248°		.246"	.251"	.490"	.502"	**84708**
CUSTOM GROUND 4.6L/5.4L CAMS - Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles also available.	**00082-2**	***Refer to page 7 for camshaft recommendation form***								

Part No.	*Springs*	*Retainers*	*Remarks*
84709	68193-24	87023-24	Steel Retainer, for daily street use.
84708	68193-24	87023T-24	High pressure spring, titanium retainer.

Spring pressure:
68193-24 Seat: 1.660" @ 130 lbs / Nose: 1.100" @ 257 lbs / Coil bind: 1.035"
(No machine work required).

Ford

4.6L/5.4L DOHC MODULAR (4 Valve)

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!
CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description	Part Number	Advertised Duration (.006") Intake	Advertised Duration (.006") Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift (1.8) Intake	Gross Lift (1.8) Exhaust	Rec Kit
FACTORY OEM SPECS	**Stock**	220° Lobe 228° / 232° Valve 240°		172° Lobe 178° / 186° Valve 194°		.218"	.217"	.392"	.390"	**Stock**
STAGE 1 - BAJA BEAST Tow package. Specifically designed for heavy trucks/SUV applications. Stock Idle.	**62925-4**	222° Lobe 228° / 234° Valve 240°		176° Lobe 182° / 192° Valve 198°		.234"	.237"	.421"	.427"	**Stock**
STAGE 1 Excellent for stock replacement. No other modifications required. Stock Idle to 6800 rpm.	**62820-4**	222° Lobe 232° / 234° Valve 244°		176° Lobe 188° / 192° Valve 204°		.234"	.239"	.421"	.430"	**Stock**
STAGE 2 Hot street profile. Emphasis on mid range. Spring recommended. Slight Lope at Idle to 7000 rpm.	**62821-4**	238° Lobe 246° / 250° Valve 258°		194° Lobe 200° / 210° Valve 216°		.262"	.263"	.472"	.473"	**84710 or 84711**
STAGE 2 Designed specifically for supercharger applications for street use. Slight Lope at Idle to 7250 rpm.	**62822-4**	252° Lobe 252° / 264° Valve 264°		206° Lobe 206° / 222° Valve 222°		.264"	.264"	.475"	.475"	**84710 or 84711**
STAGE 3 Street/strip profile. Emphasis on top end power. Spring required. Rough Idle to 7500 rpm.	**62823-4**	258° Lobe 262° / 270° Valve 274°		212° Lobe 216° / 228° Valve 232°		.269"	.269"	.484"	.484"	**84710 or 84711**
STAGE 3 Designed specifically for supercharger applications for 3/4 race. Rough Idle 7750+ rpm.	**62824-4**	258° Lobe 258° / 270° Valve 270°		212° Lobe 212° / 228° Valve 228°		.269"	.269"	.484"	.484"	**84710 or 84711**
STAGE 4 Race grind. ECU mods and tuning required. Rough idle is expected. Rough Idle to 7800+ rpm.	**62825-4**	266° Lobe 274° / 278° Valve 286°		220° Lobe 228° / 236° Valve 244°		.270"	.275"	.486"	.495"	**84710 or 84711**
CUSTOM GROUND 4.6L/5.4L CAMS - Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles also available.	**00084-4**	***Refer to page 7 for camshaft recommendation form***								

The above cams are ground on factory 114 lobe center. Valve timing events are available online at: **www.crower.com/valvtime.html**

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84711	68194-32	87026-32	High pressure spring and steel retainer kit. Daily street use.
84711X2	68194X2-32	87020-32	High pressure spring and titanium retainer kit. Limited street.
84710	68194-32	87026-32	High pressure spring and steel retainer kit. Daily street use.
84710X2	68194X2-32	87020T-32	High pressure spring and titanium retainer kit. Limited street.

Spring pressure:
68194-32 Seat: 1.420" @100 lbs / Nose: 0.910" @ 244 lbs / Coil bind: 0.850" (No machine work required).
68194X2-32 Seat: 1.470" @ 108 lbs / Nose: 0.970" @ 240 lbs / Coil bind: 0.855" (No machine work required).

STAINLESS STEEL VALVES
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ACCESSORIES

Part No.	Remarks
97437I-16	Stainless steel valves - 37 mm head dia (16 only int)
97437E-16	Stainless steel valves - 30 mm head dia (16 only exh)
97438I-16	Stainless steel valves - 38 mm head dia (16 only int)
97438E-16	Stainless steel valves - 31 mm head dia (16 only exh)

FOCUS ZX3 - Twin Cam (1998-up)

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

Description	Part Number	Lobe Center	Advertised Duration (.010") Intake	Advertised Duration (.010") Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Rec Kit
FACTORY OEM SPECS (1998-up)	**Stock**	112°	276° Lobe 252° Valve	273° 249°	206° Lobe 200° Valve	205° 199°	.346"	.341"	**Stock**
STOCK REPLACEMENT Mild profile for automatic transmission. Stock idle. RPM Range: Idle to 6500+	**62500-2**	114°	262° Lobe 238° Valve	262° 238°	214° Lobe 208° Valve	214° 208°	.352"	.352"	**Stock**
STAGE 1 Automatic or mild turbo/supercharger. No head work required. RPM Range: Idle to 6500+	**62501-2**	114°	268° Lobe 244° Valve	268° 244°	220° Lobe 214° Valve	220° 214°	.374"	.374"	**Stock**
STAGE 2 Street/Strip package. Perfect for all-motor use. Spring #68195 rec. RPM Range: 1000 to 7000+.	**62502-2**	114°	280° Lobe 256° Valve	276° 252°	232° Lobe 226° Valve	228° 222°	.413"	.393"	**84169**
STAGE 2 Forced induction special. Designed specifically for turbo or super charged applications. Requires spring kit. RPM Range: 1500-up.	**62502T-2**	114°	276° Lobe 252° Valve	276° 252°	228° Lobe 222° Valve	228° 222°	.393"	.393"	**84169**
STAGE 3 - 3/4 Race Recommended for mostly strip use. Must clearance cylinder head. RPM Range: 1200 to 8000+	**62503-2**	114°	292° Lobe 268° Valve	284° 260°	244° Lobe 238° Valve	236° 230°	.433"	.413"	**84169**
STAGE 4 - Full Race All out, all motor drag profile. Not for the inexperienced tuner. RPM Range: 1300 to 8500+	**62504-2**	114°	300° Lobe 276° Valve	292° 268°	252° Lobe 246° Valve	244° 238°	.454"	.433"	**84169**
CUSTOM GROUND ZX3 CAMS - Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles also available.	**00071-2**		***Refer to page 7 for camshaft recommendation form***						

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84169	68195-16	*87082-16	Fits ZX3 and ZX2 heads

Spring pressure:
68195-16 Seat: 1.400" @ 66 lbs / Nose: 0.950" @ 174 lbs / Coil bind: 0.860"
(No machine work required on most heads).
* Due to casting inconsistencies, some cylinder heads may require machine work for valve spring, use cutter #68974.

ACCESSORIES

Part No.	Remarks
86054FB	Adjustable Cam Sprocket (1 only). All black. 2 required
86054FC	Adjustable Cam Sprocket (1 only). Black & Silver. 2 required
97430I-8	Stainless steel valves - 32 mm head dia (8 only int)
97430E-8	Stainless steel valves - 28 mm head dia (8 only exh)
97431I-8	Stainless steel valves - 33 mm head dia (8 only int)
97431E-8	Stainless steel valves - 29 mm head dia (8 only exh)

Note: When ordering valves, be sure to specify one set int and one set exh.
Note: When ordering sprockets, be sure to specify two.

ADJUSTABLE SPROCKETS
Crower's new cam sprockets are made from premium 6061-T6 billet aluminum and incorporate a four bolt ARP® fastening system to prevent the slippage found in other brands. For the ultimate tuner, Crower sprockets feature 5/16" diameter, 12 point ARP® fasteners with a hardened washer to prevent galling and stripping. The lightweight design reduces unwanted harmonics which could cause valve train failure.

Ford / Mazda

2.0 & 2.3L DURATEC - Twin Cam

FOCUS PZEV & ST, 4 CYL RANGER

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

Description	Part Number	Lobe Center	Advertised Duration (.010")		Duration @ .050"		Lobe Lift		Rec Kit
			Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
Ford Focus ST (2004)	**Stock**	112°	256°	252°	202°	189°	.358"	.317"	**Stock**
STOCK REPLACEMENT Similar specifications to stock cam profile. No modifications req. Works with stock springs and other components. RPM Range: Idle to 6500+	**62550-2**	114°	255°	255°	210°	210°	.363"	.363"	**Stock**
STAGE 1 Street use with emphasis on bottom end and mid range power. Works with stock springs up to factory rev limiter. RPM Range: Idle to 7000+	**62551-2**	114°	260°	257°	211°	205°	.397"	.347"	**84170**
STAGE 2 - Forced Induction Designed specifically for turbo or supercharger applications. Low duration, high lift profile. Requires Crower spring kit #84170. RPM Range: Idle to 8000+	**62551T-2**	112°	270°	270°	220°	220°	.400"	.400"	**84170**
STAGE 2 - 3/4 Race Designed for street/strip applications in normally aspirated engines. Requires spring/retainer kit #84170. RPM Range: 1000 to 7800+	**62552-2**	112°	268°	258°	220°	214°	.374"	.363"	**84170**
STAGE 3 - Full Race Drag Race and radical Street/Strip. Requires #84170 spring kit and compatible ECU upgrade for optimum results. Rough idle. RPM Range: 1100 to 8000+	**62553-2**	112°	276°	268°	228°	220°	.393"	.374"	**84170**
CUSTOM GRIND - Crower can custom grind cams to your desired specs, also proprietary profiles available upon request.	**00079-2**	***Refer to page 7 for camshaft recommendation form***							

Duration figures are taken at the lobe.

ENGINEERED COMPONENT KIT

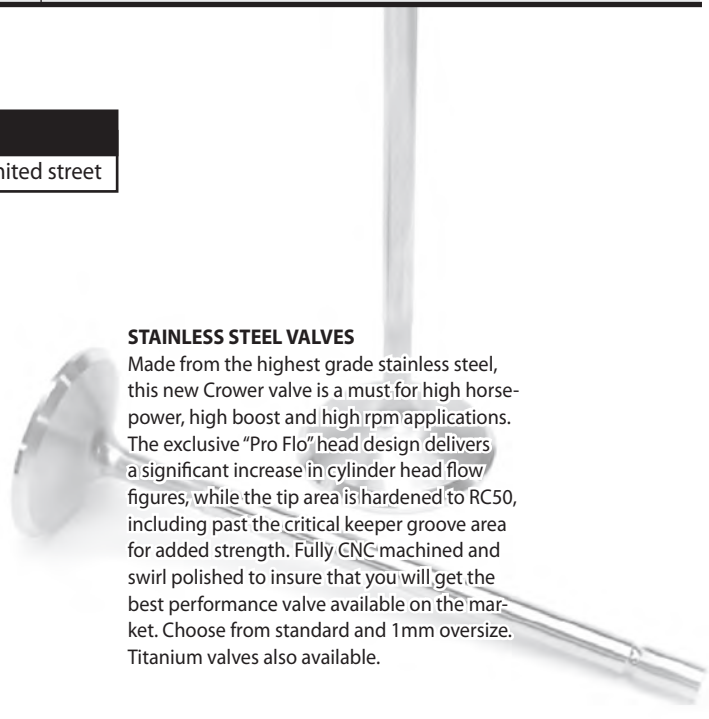
Part No.	Springs	Retainers	Remarks
84170	68195-16	87083-16	Titanium retainer intended for race and limited street

Spring pressure:
68195-16 Seat: 1.400" @ 66 lbs / Nose: 1.000" @ 161 lbs / Coil bind: 0.860"
(No machine work required).

ACCESSORIES

Part No.	Remarks
97427I-8	Stainless steel valves - 35 mm head dia (8 only int)
97427E-8	Stainless steel valves - 30 mm head dia (8 only exh)
97428I-8	Stainless steel valves - 35.5 mm head dia (8 only int)
97428E-8	Stainless steel valves - 30.5 mm head dia (8 only exh)
97429I-8	Stainless steel valves - 36 mm head dia (8 only int)
97429E-8	Stainless steel valves - 31 mm head dia (8 only exh)

Note: When ordering valves, be sure to specify one set int and one set exh.



STAINLESS STEEL VALVES
Made from the highest grade stainless steel, this new Crower valve is a must for high horsepower, high boost and high rpm applications. The exclusive "Pro Flo" head design delivers a significant increase in cylinder head flow figures, while the tip area is hardened to RC50, including past the critical keeper groove area for added strength. Fully CNC machined and swirl polished to insure that you will get the best performance valve available on the market. Choose from standard and 1mm oversize. Titanium valves also available.

SOLID CAMSHAFTS
2000cc 4 Cylinder (3 Bearing)

Note: These cams use .008" intake, .010" exhaust valve lash.

Description	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Intake	Advertised Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
ULTRA BEAST / PERFORMANCE LEVEL 4 - Race only performance. Emphasis on upper mid-range and top end power. RPM Power Range: 2750 to 6750 / Redline: 7000 max.	All cid	**25360**	296FDP 107°	292°	296°	231°	242°	.448"	.450"
MILEAGE COMPU-PRO / PERFORMANCE LEVEL 1 - Enhances mileage and torque in stock engines. RPM Power Range: Idle to 3500 / Redline: 4500 plus.	All cid	**25304**	240FDP 112°	240°	264°	202°	216°	.445"	.469"
POWER COMPU-PRO / PERFORMANCE LEVEL 2 - Perfect combination of power/mileage with extended rpm's. RPM Power Range: 1500 to 4000 / Redline: 5500 plus.	All cid	**25305**	250FDP 110°	250°	276°	216°	226°	.469"	.491"
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 3 - Hot street. Strong upper bottom and top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 plus.	All cid	**25306**	264FDP 108°	264°	288°	230°	240°	.490"	.513"
ULTRA-PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 4 - Hot street/drag. Strong mid to top end power. RPM Power Range: 2000 to 6000 / Redline: 7000 plus.	All cid	**25307**	276FDP 108°	276°	302°	234°	250°	.514"	.534"
COMPU-PRO / PERFORMANCE LEVEL 5 - Super torque, short oval/radical street grind. RPM Power Range: 2500 to 6000 plus.	All cid	**25308**	288FDP 106°	288°	302°	254°	268°	.528"	.561"
COMPU-PRO / PERFORMANCE LEVEL 5 - Super mid-range to top end profile. RPM Power Range: 3000 to 6500 plus.	All cid	**25309**	302FDP 106°	302°	308°	264°	268°	.563"	.573"
COMPU-PRO / PERFORMANCE LEVEL 5 - Upper mid-range with exceptional top end torque. RPM Power Range: 4000 to 7500 plus.	All cid	**25310**	308FDP 106°	308°	312°	272°	280°	.570"	.571"
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	*Refer to page 7 for camshaft recommendation form*						

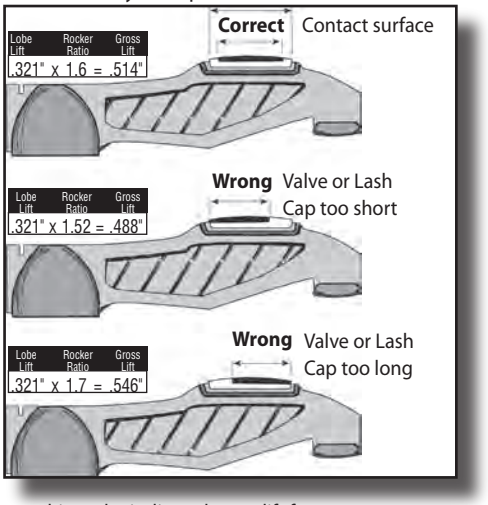
Note: The above solid profiles are ground with a smaller base circle than stock. If using stock length valves, you must use .055" thick lash caps (86126-8) in kit below. Check follower geometry with Dykem hi-spot blue or any other non-drying compound and adjust valve length accordingly (see diagram 1). Duration numbers @ .050" have been refigured to reflect valve lift.

ENGINEERED COMPONENTS

Springs	Retainers	Lash Caps	Remarks
68324-8	87044-8	86126-8	For rpm up to 7000 max.

Spring pressure:
68324-8 Seat: 1.600" @ 118 lbs / Nose: 1.000" @ 283 lbs / Coil bind: 0.910"
(Machine work, use cutter 68983*).
* Machine work required, specify 5/16 pilot shaft when ordering.
Note: Ford overhead camshafts are susceptible to lobe wear. We highly recommend breaking in new cam and followers with a light pressure break-in spring for a minimum of 30 minutes.
Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at: **www.crower.com/valvtime.html**

Diagram 1. Follower Geometry (Sample based on intake of 25307)



Note: When you achieve the indicated gross lift for your cam, the geometry and wear pattern are correct. Failure to achieve proper follower geometry will result in severe lobe wear.

Ford

HYDRAULIC CAMSHAFTS

2300cc 1974-up 2000cc 1982-up (4 Bearing)

Note: These cams use .000" intake and exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.66 / 1.66 Intake	Gross Lift 1.66 / 1.66 Exhaust
BAJA BEAST / PERFORMANCE LEVEL 3 - Excellent low end and mid-range power. RPM Power Range: 1800 to 4500 / Redline: 5500 plus.	All cid	**24915**	280H 108°	280°	280°	222°	222°	.410"	.410"
POWER COMPU-PRO / PERFORMANCE LEVEL 2 - Perfect combination of power/mileage with extended rpm's. RPM Power Range: 1500 to 4000 / Redline: 5500 plus.	All cid	**24273**	270HDP 110°	270°	286°	228°	238°	.476"	.493"
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 3 - Hot street. Strong upper bottom/top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 plus.	All cid	**24274**	286HDP 110°	286°	297°	244°	253°	.488"	.511"

Note: Lift rule camshafts are available from Crower on a special order basis.

SOLID CAMSHAFTS

Note: These cams use .012" intake, .014" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.66 / 1.66 Intake	Gross Lift 1.66 / 1.66 Exhaust
POWER BEAST / PERFORMANCE LEVEL 4 - High torque racing profile with bottom end power. RPM Power Range: 2800 to 6400 / Redline: 6800 plus.	All cid	**24360**	302F 109°	302°	307°	252°	262°	.459"	.461"
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 5 - Torque with excellent mid-range power. RPM Power Range: 3000 to 6500 / Redline: 7000 plus.	All cid	**24372**	288FDP 106°	288°	292°	257°	264°	.554"	.554"
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 5 - Strong mid-range and top end power profile. RPM Power Range: 4000 to 7000 / Redline: 7500 plus.	All cid	**24374**	311FDP 103°	311°	315°	274°	278°	.582"	.582"
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 5 -Upper mid-range and top end power. RPM Power Range: 4500 to 7500 / Redline: 8000 plus.	All cid	**24376**	314FDP 103°	314°	318°	278°	282°	.596"	.596"
CUSTOM GROUND HYDRAULIC, SOLID, or ROLLER - Special order hydraulic or solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid		***Refer to page 7 for camshaft recommendation form***						

Note: The above solid profiles are ground with a smaller base circle than stock. If using stock length valves, you must use .100" thick lash caps (86127-8) in kit below. Check follower geometry with Dykem hi-spot blue or any other non-drying compound and adjust valve length accordingly (see diagram 1). Duration numbers @ .050" have been refigured to reflect valve lift. Note: Lift rule camshafts are available from Crower on a special order basis.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Lash Caps	Remarks
84105	66993-8	68324-8	87049-8		**Hydraulic Lifter.**
84206	66993-8	68324-8	87049-8	86127-8	**Solid Lifter.**

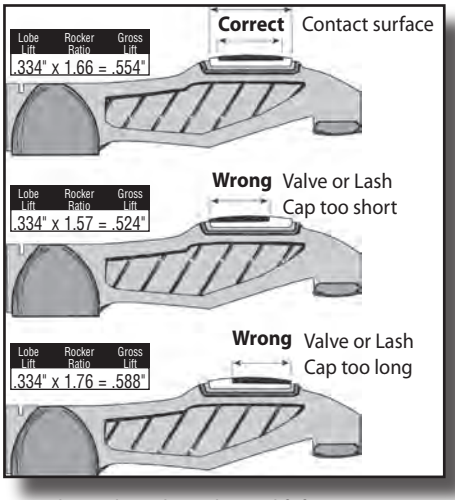
Spring pressure:
68324-8 Seat: 1.600" @ 118 lbs / Nose: 1.000" @ 283 lbs / Coil bind: 0.910" (Machine work, use cutter 68983*).
Optional spring (stock diameter):
68147-8 Seat: 1.550" @ 78 lbs / Nose: 1.100" @ 177 lbs / Coil bind: 1.000" (Stock O.D. 1.369", no machine work).
* Machine work required, specify 11⁄32 pilot shaft when ordering.

Note: Ford overhead camshafts are susceptible to lobe wear. We highly recommend breaking in new cam and followers with a light pressure break-in spring for a minimum of 30 minutes.

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").

Diagram 1. Follower Geometry
(Sample based on intake of 24372)



Note: When you achieve the indicated gross lift for your cam, the geometry and wear pattern are correct. Failure to achieve proper follower geometry will result in severe lobe wear.

HYDRAULIC TO SOLID CONVERSION KITS

Part No.	Remarks
76450-8	Comes with heavy duty adjusters, nuts, sleeves and stabilizer spring.

HYDRAULIC CAMSHAFTS
240 300 Inline 6 Cylinder

Note: These cams use .000" intake and exhaust valve lash.

Description	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Intake	Advertised Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
MILEAGE COMPU-PRO / PERFORMANCE LEVEL 1 - Enhances mileage and torque in stock engines. RPM Power Range: Idle to 3500 / Redline: 4500 plus.	All cid	**19210**	248HDP 112°	248°	254°	184°	192°	.405"	.411"
POWER COMPU-PRO / PERFORMANCE LEVEL 2 - Perfect combination of power and mileage with extended rpm's. RPM Power Range: 1500 to 4000 / Redline: 5500 plus.	All cid	**19211**	252HDP 112°	252°	258°	192°	196°	.426"	.440"
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 3 - Hot street profile. Strong upper bottom and top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 plus.	All cid	**19212**	260HDP 112°	260°	268°	202°	210°	.443"	.448"
ULTRA PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 4 - Hot street/drag. Strong mid-to-top end power. RPM Power Range: 2000 to 6000 / Redline: 6500	All cid	**19213**	266HDP 112°	266°	274°	210°	213°	.456"	.461"
HYDRAULIC HAULER / PERFORMANCE LEVEL 4 - Hot street/drag profile with strong mid-range power. RPM Power Range: 2500 to 6500 / Redline: 6500	All cid	**19205**	284HDP 110°	284°	290°	220°	222°	.509"	.517"
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**	*Refer to page 7 for camshaft recommendation form*						

Note: Cam cores for 144, 170, 200 and 250 cid Ford engines are available from Crower on a special order basis.

Engineered Component Kit for the above part #'s: 84010

SOLID CAMSHAFTS

Note: These cams use .022" intake, .024" exhaust valve lash.

Description	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Intake	Advertised Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
COMPU-PRO / PERFORMANCE LEVEL 5 - Fantastic high torque mid-range grind. RPM Power Range: 3000 to 6500 plus.	All cid	**19311**	274FDP 105°	274°	280°	238°	242°	.528"	.539"
COMPU-PRO / PERFORMANCE LEVEL 5 - Explosive power throughout the power band. RPM Power Range: 3500 to 7000 plus.	All cid	**19312**	284FDP 105°	284°	290°	248°	252°	.558"	.563"
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**							
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00006**	*Refer to page 7 for camshaft recommendation form*						

Note: Cam cores for 144, 170, 200 and 250 cid Ford engines are available from Crower on a special order basis.

Engineered Component Kit for the above part #'s: 84310

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84010	66015-12	68305X1-12	87048-12	86072-12	Hydraulic Lifter. For rpm up to 6500 plus.
84310	66915-12	68390X3-12	87048D-12	86072-12	Solid Lifter. For rpm up to 7000 plus.

Spring pressure:
68305X1-12 Seat: 1.700" @ 68 lbs / Nose: 1.200" @ 250 lbs / Coil bind: 1.050" (Stock OD, no machine work).
68390X3-12 Seat: 1.800" @ 115 lbs / Nose: 1.300" @ 331 lbs / Coil bind: 1.110" (Machine work required, use 68985 cutter & 68971 pilot).
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods

Note: If exceeding 6500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

Ford

HYDRAULIC CAMSHAFTS
Non Roller 1963-1995

221 255 (4.2L) 260 289 302 V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

For engines that were originally equiped with a hydraulic flat tappet cam, retro fit hydraulic roller cams & kit are available, call CROWER for details.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
BAJA BEAST / PERFORMANCE LEVEL 2 - Exhibits broad stump pulling power and torque. RPM Power Range: 1200 to 3800 / Redline: 5200 plus.	289 302	**15915**	258H 112°	258°	264°	204°	210°	.443"	.452"
TORQUE BEAST / PERFORMANCE LEVEL 3 - Delivers impressive mid-range and top end power. RPM Power Range: 2000 to 4800 / Redline: 6200 plus.	289 302	**15916**	272H 112°	272°	279°	210°	220°	.448"	.474"
POWER BEAST / PERFORMANCE LEVEL 3 - Emphasis on upper mid-range and top end power. RPM Power Range: 2000 to 4800 / Redline: 6200 plus.	289 302	**15917**	288H 112°	288°	300°	214°	224°	.474"	.498"
MILEAGE COMPU-PRO / PERFORMANCE LEVEL 1 - These cams enhance throttle response and low end torque while delivering fuel efficient motoring. RPM Power Range: Idle to 3500 / Redline: 4500 plus.	289 302	**15206**	236HDP 112°	236°	246°	180°	184°	.395"	.400"
	302 cid	**15207**	246HDP 112°	246°	253°	184°	194°	.402"	.421"
POWER COMPU-PRO / PERFORMANCE LEVEL 2 - Perfect combination of power and mileage. Provides excellent low end and mid-range power with extended rpm's for spirited offroad use. RPM Power Range: 1500 to 4000 / Redline: 5500 plus.	221 289	**15208**	250HDP 112°	250°	258°	194°	198°	.422"	.437"
	302 cid	**15209**	260HDP 112°	260°	266°	204°	210°	.459"	.464"
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 3 - Intended for the hot marine/strip application, these cams offer extended rpm range with emphasis on upper bottom to top end power with strong mid-range. RPM Power Range: 1800 to 4500 / Redline: 6000 plus.	221 289	**15210**	270HDP 112°	270°	276°	210°	214°	.464"	.488"
	302 cid	**15211**	276HDP 112°	276°	281°	212°	216°	.491"	.500"
ULTRA PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 4 - Dual purpose hot street/strip camshaft. Delivers strong mid-range and top end torque and horsepower. RPM Power Range: 2000 to 6000 / Redline: 6500	221 289	**15212**	280HDP 112°	280°	286°	220°	226°	.491"	.502"
	302 cid	**15213**	284HDP 112°	284°	290°	228°	234°	.513"	.530"
HI-DRAULIC HAULER / PERFORMANCE LEVEL 4 - Lope at idle. Hot street/strip cam with strong mid-range power. RPM Power Range: 2200 to 6200 plus.	302 cid	**15922**	274HDP 108°	274°	284°	220°	228°	.491"	.512"
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Rough idle with explosive upper bottom and mid-range torque. RPM Power Range: 2500 to 6500	302 cid	**15923**	290HDP 108°	290°	298°	226°	238°	.502"	.499"

Engineered Component Kit & Accessories listed on next page.

For engines that were originally equiped with a hydraulic flat tappet cam, retro fit hydraulic roller cams & kit are available, call CROWER for details.

HYDRAULIC CAMSHAFTS (continued)

Non Roller 1963-1995

221 255 (4.2L) 260 289 302 V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Ford

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Rough idle with explosive mid-range torque and acceleration. RPM Power Range: 2700 to 6000	302 cid	**15924**	296HDP 108°	296°	302°	230°	244°	.507"	.506"
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Rough idle with explosive mid-range and top end horsepower. RPM Power Range: 3000 to 6500	302 cid	**15925**	304HDP 108°	304°	312°	240°	248°	.536"	.563"
TURBOMASTER - Intended for turbocharged hot street/strip and marine use. This cam offers extended rpm on mid-range and top end. RPM Power Range: 2000 to 6500	289 302	**15929**	290HT 114°	290°	272°	226°	210°	.486"	.462"
SUPERCHARGER - Designed for B&M/Roots type supercharged street/ strip and marine. Emphasis on upper bottom to top end power. RPM Power Range: 2400 to 6500	289 302	**15930**	288HC 114°	288°	288°	228°	228°	.464"	.464"
SUPERCHARGER - Dual purpose hot street/strip drag cam designed specifically to enhance B&M type blower. Good mid to top end power. RPM Power Range: 2600 to 6500	289 302	**15931**	304HC 114°	304°	304°	246°	246°	.507"	.507"
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**	***Refer to page 7 for camshaft recommendation form***						

ENGINEERED COMPONENT KITS (see dia. 2)

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84013	66015-16	68305X1-16	87048-16		For rpm up to 6000 max. Daily street use.
84117	66015-16	68405-16	87048-16	86072-16	For rpm up to 6500 plus. Limited street use.
84118	66015-16	68100X200-16	87048-16	86072-16	For rpm up to 6000 max. Daily street use.
84119	66015-16	68390X3-16	87048-16	86072-16	For rpm up to 6500 plus. Limited street use.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68305X1-16 Seat: 1.700" @ 68 lbs / Nose: 1.200" @ 250 lbs / Coil bind: 1.050" (Stock O.D., no machine work).
68405-16 Seat: 1.700" @ 110 lbs / Nose: 1.200" @ 297 lbs / Coil bind: 0.980" (Machine work, use cutter 68983*).
68100X200-16 Seat: 1.800" @ 107 lbs / Nose: 1.300" @ 254 lbs / Coil bind: 1.030" (Machine work, use cutter 68990*).
68390X3-16 Seat: 1.800" @ 115 lbs / Nose: 1.300" @ 331 lbs / Coil bind: 1.100" (Machine work, use cutter 68985*).

Note: If your installed height does not fall withtin these dimensions, contact Crower for a recommendation.

* Machine work required, specify 11⁄32 pilot shaft when ordering.

Note: If using Boss heads contact the Crower for special spring and retainer recommendations. Boss 302 engines employ a 1.73 rocker ratio, so the gross lifts will change for the Boss 302. To figure the correct gross lift for Boss 302 heads divide the gross lift listed by 1.6 (lobe lift) then multiply the lobe lift by 1.73 (Boss 302 rocker ratio).

Note: Camshafts for 289/302 cid engines can be used in 351W engines by changing the firing order to 1-5-4-2-6-3-7-8.

Some early Ford heads use 5⁄16 valve stems. Please specify when ordering as the above kits are designed for 11⁄32 stems.

CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050"). Valve timing events are available online at: **www.crower.com/valvtime.html**

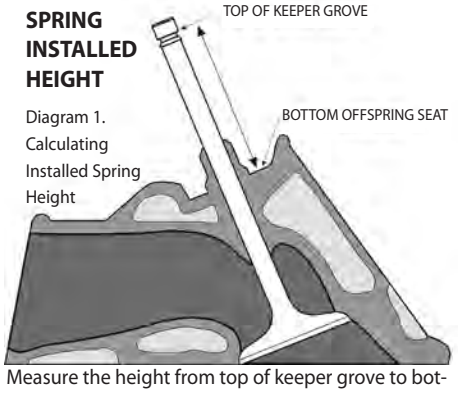
ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
Pg's.150-165	Rocker arms (1.6) 3⁄8
Pg's.150-165	Rocker arms (1.7) 3⁄8
See pg. 138	Timing gear set
76523	Guide plates for 5⁄16 pushrod
See pg. 139	Distributor gear (.500" shaft dia)

Note: If using guide plates, heat-treated pushrods (RC 60 series) are required. See pushrod section or contact Crower.

SPRING INSTALLED HEIGHT

Diagram 1. Calculating Installed Spring Height



Measure the height from top of keeper grove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement.

Note: If heads have been extensively modified (machined spring pockets, longer valves, etc.) contact Crower for proper spring, keeper, cup and retainer recommendations. Have your keeper/seat measurement available.

Ford

HYDRAULIC ROLLER CAMSHAFTS

Non Roller 1963-1995

221 255 (4.2L) 260 289 302 (5.0L) & Boss 302 V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
PERFORMANCE LEVEL 1 - Launches hard with A.O.D. transmission. Torque all over the tach! Brutal bottom end. 302 cid / 2100 - 5300 rpm / Redline: 5800 rpm maximum	See Descrip	**15510**	212HR212 114°	275°	275°	212°	212°	.531"	.531"
PERFORMANCE LEVEL 2 - Big sound. Excellent 5-speed cam for heavy car. Strong low and mid-range torque. 302 cid / 2200 - 5500 rpm / Redline: 6000 rpm maximum	See Descrip	**15511**	218HR224 114°	278°	282°	218°	224°	.468"	486"
PERFORMANCE LEVEL 2 - Most popular Ford hyd roller grind, blows away Chevrolets. Heavy mid-range. 302 cid / 2400 - 5700 rpm / Redline: 6200 rpm maximum	See Descrip	**15512**	222HR228 112°	282°	286°	222°	228°	.496"	512"
PERFORMANCE LEVEL 3 - Big cid camshaft (320-347 cid) with higher compression, good cylinder heads and valve train components. 302 cid / 2600 - 6000 rpm / Redline: 6500 rpm maximum	See Descrip	**15513**	228HR234 112°	288°	298°	228°	234°	512"	531"
PERFORMANCE LEVEL 4 - Aggressive rpm camshaft, high stall A.O.D. or a 5-speed with low gears. For well prepared engines. 302 cid / 2700 - 6200 rpm / Redline: 6500 rpm maximum	See Descrip	**15514**	234HR240 110°	298°	304°	234°	240°	534"	545"
PERFORMANCE LEVEL 5 - Top end insanity for serious, professionally built engines only. 1/4 mile drag special. 302 cid / 3000 - 6300 rpm / Redline: 6500 rpm maximum	See Descrip	**15515**	236HR242 110°	300°	310°	236°	242°	524"	529"
CUSTOM GROUND HYDRAULIC ROLLER - Special order hydraulic roller lifter cam ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	***Refer to page 7 for camshaft recommendation form***							
O.E.M. FACTORY STOCK SPECIFICATIONS 1989-1992 Ford Mustang 302 H.O. Engine equipped with Hydraulic Roller camshaft.		**Stock**	115°	272°	272°	211°	211°	.437"	.437"
SVO FACTORY STOCK SPECIFICATIONS #E-303 302 H.O. Engine equipped with Hydraulic Roller camshaft.		**E-303**	110°	-	-	220°	220°	.480"	.480"
SVO FACTORY STOCK SPECIFICATIONS #B-303 302 H.O. Engine equipped with Hydraulic Roller camshaft.		**B-303**	110°	-	-	224°	224°	.498"	.498"

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Keepers	Remarks
84563	66335-16	68315-16	87048D-16	86107X2-8 & 86107-8	6000 max rpm. Daily street use.
84564	66335-16	68390X3-16	87048-16	86107X2-8 & 86107-8	6500 plus rpm. Limited street use.

Spring pressure:
68315-16 Seat: 1.800" @ 120 lbs / Nose: 1.300" @ 303 lbs / Coil bind: 1.175" (Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 115 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work required, use 68985 cutter & 68972 pilot).
Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower. **CAUTION**! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050"). Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	PushrodsPushrods (5/16 diameter, 6.255" length)
Pg's.150-165	Rocker arms (1.6) 3/8
Pg's.150-165	Rocker arms (1.7) 3/8
See pg. 138	Timing gear set
76523	Guide plates for 5/16 pushrod
See pg. 139	Distributor gear (.500" shaft dia)

Note: If exceeding 6500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

HYDRAULIC RETRO FIT ROLLER CAMSHAFTS

1963-1995

221 255 (4.2L) 260 289 302 & Boss 302 V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Ford

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
PERFORMANCE LEVEL 1 - Launches hard with A.O.D. transmission. Torque all over the tach! Brutal bottom end. 2100 - 5300 rpm / Redline: 5800 rpm maximum	See Descrip	**15520**	210HR214 112°	274°	278°	210°	214°	.480"	.480"
PERFORMANCE LEVEL 2 - Big sound. Excellent 5-speed cam for heavy car. Strong low and mid-range torque. 2200 - 5500 rpm / Redline: 6000 rpm maximum	See Descrip	**15521**	218HR224 114°	278°	282°	218°	224°	.468"	486"
PERFORMANCE LEVEL 2 - Most popular Ford hyd roller grind, blows away Chevrolets. Heavy mid-range. 2400 - 5700 rpm / Redline: 6200 rpm maximum	See Descrip	**15522**	222HR228 112°	282°	286°	222°	228°	.496"	512"
PERFORMANCE LEVEL 3 - Big cid camshaft (320-347 cid) with higher compression, good cylinder heads and valve train components. 2600 - 6000 rpm / Redline: 6500 rpm maximum	See Descrip	**15523**	228HR234 112°	288°	298°	228°	234°	512"	531"
PERFORMANCE LEVEL 4 - Aggressive rpm camshaft, high stall A.O.D. or a 5-speed with low gears. For well prepared engines. 2700 - 6200 rpm / Redline: 6500 rpm maximum	See Descrip	**15524**	234HR240 110°	298°	304°	234°	240°	534"	545"
PERFORMANCE LEVEL 5 - Top end insanity for serious, professionally built engines only. 1⁄4 mile drag special. 3000 - 6300 rpm / Redline: 6500 rpm maximum	See Descrip	**15525**	236HR242 110°	300°	310°	236°	242°	524"	529"
CUSTOM GROUND HYDRAULIC ROLLER - Special order hydraulic roller lifter cam ground to your specifications. Call our technical support staff for personalized camshaft assistance. Cams also available in windsor firing order.	All cid	**00009**	***Refer to page 7 for camshaft recommendation form***						

For engines which were manufactured with non-roller lifters, must be used with 66337-16 roller lifter.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Keepers	Remarks
84561	66337-16	68315-16	87048D-16	86107X2-8 & 86107-8	6000 max rpm. Daily street use.
84562	66337-16	68390X3-16	87048-16	86107X2-8 & 86107-8	6500 max rpm. Limited street use.

Spring pressure:
68315-16 Seat: 1.800" @ 120 lbs / Nose: 1.300" @ 303 lbs / Coil bind: 1.175"
(Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 115 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110"
(Machine work required, use 68985 cutter & 68972 pilot).
Note: Requires screw with studs & guide plates.
Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower. **CAUTION**! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050"). Valve timing events are available online at:
www.crower.com/valvtime.html

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
Pg's.150-165	Rocker arms(1.6) 3⁄8
See pg. 139	Bronze distributor gear

Ford

SOLID CAMSHAFTS

Non Roller 1963-1995

221 255 (4.2L) 260 289 302 (5.0L) & Boss 302 V8

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
PRO-STREET / PERFORMANCE LEVEL 2 - High torque grind with mid-range and top end power. Delivers mileage and horsepower. RPM Power Range: 2000 to 5500 / Redline: 6000 plus.	289 302	**15320**	260FDP 114°	260°	266°	212°	216°	.450"	.453"
PRO-STREET / PERFORMANCE LEVEL 3 - High torque grind with mid-range and top end power. RPM Power Range: 2200 to 6000 / Redline: 7000 plus.	289 302	**15321**	282FDP 112°	282°	288°	238°	242°	.478"	.488"
PRO-STREET / PERFORMANCE LEVEL 4 - High revving with superior mid-range and top end power. RPM Power Range: 2500 to 7500 / Redline: 7500 plus.	289 302	**15322**	292FDP 110°	292°	298°	248°	252°	.499"	.512"
COMPU-PRO / PERFORMANCE LEVEL 4 - High torque, short oval camshaft. RPM Power Range: 2500 to 6000 / Redline: 7000 plus.	289 302	**15313**	274FDP 105°	274°	288°	242°	254°	.542"	.528"
COMPU-PRO / PERFORMANCE LEVEL 5 - Excellent high torque and mid-range power oval track grind. RPM Power Range: 3000 to 7000 / Redline: 8000 plus.	289 302	**15314**	288FDP 105°	288°	299°	252°	258°	.563"	.579"
COMPU-PRO / PERFORMANCE LEVEL 5 - Upper mid-range and top end power for extra pop above 7000 rpm. RPM Power Range: 4500 to 7500 / Redline: 8000 plus.	289 302	**15315**	302FDP 107°	302°	311°	266°	276°	.605"	.619"
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	*Refer to page 7 for camshaft recommendation form*						

ENGINEERED COMPONENT KITS (see dia. 2)

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84213	66915-16	68305X1-16	87048-16		For rpm up to 6000 max. Daily street use.
84217	66915-16	68405-16	87048-16	86072-16	For rpm up to 7000 plus. Limited street use.
84218	66915-16	68100X200-16	87048-16	86072-16	For rpm up to 6500 max. Daily street use.
84219	66915-16	68390X3-16	87048-16	86072-16	For rpm up to 7500 plus. Limited street use.

Spring pressure:
68305X1-16 Seat: 1.700" @ 68 lbs / Nose: 1.200" @ 250 lbs / Coil bind: 1.050" (Stock O.D., no machine work).
68405-16 Seat: 1.700" @ 110 lbs / Nose: 1.200" @ 297 lbs / Coil bind: 0.980" (Machine work required, use 68985 cutter & 68972 pilot).
68100X200-16 Seat: 1.800" @ 107 lbs / Nose: 1.300" @ 254 lbs / Coil bind: 1.030" (Machine work required, use 68985 cutter & 68972 pilot).
68390X3-16 Seat: 1.800" @ 115 lbs / Nose: 1.300" @ 331 lbs / Coil bind: 1.110" (Machine work required, use 68985 cutter & 68972 pilot).

Note: If keeper height is longer or shorter than correct height (± .050" tolerance), contact Crower for a recommendation.

Note: If using Boss heads contact the factory for special spring and retainer recommendations. Boss 302 engines employ a 1.73 rocker ratio, so the gross lifts will change for the Boss 302. To figure the correct gross lift for Boss 302 heads divide the gross lift listed by 1.6 (lobe lift) then multiply the lobe lift by 1.73 (Boss 302 rocker ratio).

Note: Camshafts for 289/302 cid engines can be used in 351W engines by changing the firing order to 1-5-4-2-6-3-7-8.

Some early Ford heads use 5/16 valve stems. Please specify when ordering as the above kits are designed for 11/32 stems.

CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050"). Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
Pg's.150-165	Rocker arms (1.6) 3/8
Pg's.150-165	Rocker arms (1.7) 3/8
See pg. 138	Timing gear set
76523	Guide plates for 5/16 pushrod
See pg. 139	Distributor gear (.500" shaft dia)

Note: If using guide plates, heat-treated pushrods (RC 60 series) are required. See pushrod section or contact Crower.

Measure the height from top of keeper grove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement.

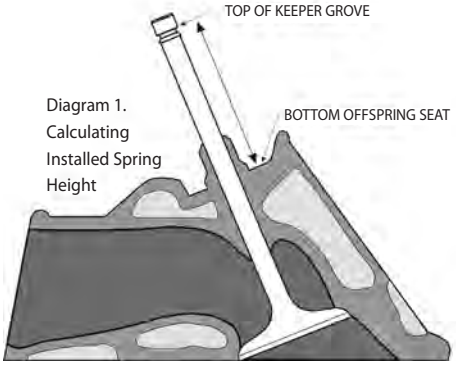


Diagram 1. Calculating Installed Spring Height

Note: If heads have been extensively modified (machined spring pockets, longer valves, etc.) contact Crower for proper spring, keeper, cup and retainer recommendations. Have your keeper/seat measurement available.

ROLLER CAMSHAFTS

Mechanical 1963-1995

221 255 (4.2L) 260 289 302 (5.0L) & Boss 302 V8

Note: These cams use .026" intake, .028" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
STREET ROLLER / PERFORMANCE LEVEL 4 - Excellent street/strip profile. RPM Power Range: 2500 to 6000 / Redline: 7500 plus.	289 302	**15415**	280R 112°	280°	288°	232°	242°	.528"	.530"
ULTRA-ACTION / PERFORMANCE LEVEL 5 - High torque oval track and drag race profile. RPM Power Range: 3000 to 7000 / Redline: 7500 plus.	289 302	**15416**	285R 106°	285°	292°	254°	260°	.597"	.578"
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Fast 3/8 to 1/2 mile super oval track profile. RPM Power Range: 4000 to 7500 / Redline: 8000 plus.	289 302	**15417**	292R 106°	292°	302°	256°	266°	.606"	.600"
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Mid-range and top end drag profile. RPM Power Range: 5200 to 8000 / Redline: 8250 plus.	289 302	**15418**	300R 108°	300°	310°	268°	274°	.680"	.669"
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Mid-range and top end drag profile. RPM Power Range: 5500 to 8000 / Redline: 8250 plus.	289 302	**15419**	316R 110°	316°	324°	282°	284°	.702"	.682"
CUSTOM ORDER ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00002**	*Refer to page 7 for camshaft recommendation form*						

A. These high lift cams require longer stem valves and higher spring pressure. Please contact Crower for properly engineered valvetrain.

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84510	66215-16	68390X3-16	87048-16	86072-16	For rpm up to 7500 max. Limited street use.
84513	66215-16	68380X2-16	87048-16	86072-16	For rpm up to 8000 plus. Race only.

Spring pressure:
68390X3-16 Seat: 1.800" @ 115 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110"
(Machine work required, use 68985 cutter & 68972 pilot).
68380X2-16 Seat: 1.800" @ 197 lbs / Nose: 1.200" @ 470 lbs / Coil bind: 1.110"
(Machine work required, use 68985 cutter & 68972 pilot).
Optional springs (race only):
68363-16 Seat: 1.900" @ 212 lbs / Nose: 1.200" @ 560 lbs / Coil bind: 1.100"
(Machine work required, use 68985 cutter & 68972 pilot).
68670S-16 Seat: 1.900" @ 180 lbs / Nose: 1.200" @ 654 lbs / Coil bind: 1.010"
(Machine work required, use 68985 cutter & 68972 pilot).

Note: If using Boss heads contact the factory for special spring and retainer recommendations. Boss 302 engines employ a 1.73 rocker ratio, so the gross lifts will change for the Boss 302. To figure the correct gross lift for Boss 302 heads divide the gross lift listed by 1.6 (lobe lift) then multiply the lobe lift by 1.73 (Boss 302 rocker ratio).

Note: Camshafts for 289/302 cid engines can be used in 351W engines by changing the firing order to 1-5-4-2-6-3-7-8.

Some early Ford heads use 5⁄16 valve stems. Please specify when ordering as the above kits are designed for 11⁄32 stems.

CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").

Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
Pg's.150-165	Rocker arms(1.6) 3⁄8
See pg. 139	Bronze distributor gear

HIPPO Note: For severe duty roller lifter applications, we highly recommend using our roller lifters with Hippo **"High Pressure Pin Oiling"**. Specify "H" in the part number. **Ex. 66290X874H-16**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
Pg's.150-165	Rocker arms (1.6) 3⁄8
Pg's.150-165	Rocker arms (1.7) 3⁄8
See pg. 138	Timing gear set
76523	Guide plates for 5⁄16 pushrod
See pg. 139	Distributor gear (.500" shaft dia)

Note: If exceeding 8000 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

Ford

ROLLER CAMSHAFTS (continued)

Mechanical 1963-1995

221 255 (4.2L) 260 289 302 (5.0L) & Boss 302 V8

Note: These cams use .026" intake, .028" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust
STREET ROLLER / PERFORMANCE LEVEL 4 - Excellent street/strip profile. RPM Power Range: 2500 to 6000 / Redline: 7500 plus.	289 302	**15415**	280R 112°	280°	288°	232°	242°	.528"	.530"
ULTRA-ACTION / PERFORMANCE LEVEL 5 - High torque oval track and drag race profile. RPM Power Range: 3000 to 7000 / Redline: 7500 plus.	289 302	**15416**	285R 106°	285°	292°	254°	260°	.597"	.578"
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Fast 3/8 to 1/2 mile super oval track profile. RPM Power Range: 4000 to 7500 / Redline: 8000 plus.	289 302	**15417**	292R 106°	292°	302°	256°	266°	.606"	.600"
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Mid-range and top end drag profile. RPM Power Range: 5200 to 8000 / Redline: 8250 plus.	289 302	**15418**[A]	300R 108°	300°	310°	268°	274°	.680"	.669"
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Mid-range and top end drag profile. RPM Power Range: 5500 to 8000 / Redline: 8250 plus.	289 302	**15419**[A]	316R 110°	316°	324°	282°	284°	.702"	.682"
CUSTOM ORDER ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00002**	*Refer to page 7 for camshaft recommendation form*						

A. These high lift cams require longer stem valves and higher spring pressure. Please contact Crower for properly engineered valvetrain.

Part No.	*Lifters*	*Springs*	*Retainers*	*Seals*	*Remarks*
84510	66215-16	68390X3-16	87048-16	86072-16	For rpm up to 7500 max. Limited street use.
84513	66215-16	68380X2-16	87048-16	86072-16	For rpm up to 8000 plus. Race only.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68390X3-16 Seat: 1.800" @ 115 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110"
(Machine work required, use 68985 cutter & 68972 pilot).
68380X2-16 Seat: 1.800" @ 197 lbs / Nose: 1.200" @ 470 lbs / Coil bind: 1.110"
(Machine work required, use 68985 cutter & 68972 pilot).
Optional springs (race only):
68363-16 Seat: 1.900" @ 212 lbs / Nose: 1.200" @ 560 lbs / Coil bind: 1.100"
(Machine work required, use 68985 cutter & 68972 pilot).
68670S-16 Seat: 1.900" @ 180 lbs / Nose: 1.200" @ 654 lbs / Coil bind: 1.010"
(Machine work required, use 68985 cutter & 68972 pilot).

Note: If using Boss heads contact the factory for special spring and retainer recommendations. Boss 302 engines employ a 1.73 rocker ratio, so the gross lifts will change for the Boss 302. To figure the correct gross lift for Boss 302 heads divide the gross lift listed by 1.6 (lobe lift) then multiply the lobe lift by 1.73 (Boss 302 rocker ratio).

Note: Camshafts for 289/302 cid engines can be used in 351W engines by changing the firing order to 1-5-4-2-6-3-7-8.

Some early Ford heads use 5⁄16 valve stems. Please specify when ordering as the above kits are designed for 11⁄32 stems.

CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").

Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	*Description*
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
Pg's.150-165	Rocker arms (1.6) 3⁄8
Pg's.150-165	Rocker arms (1.7) 3⁄8
See pg. 138	Timing gear set
76523	Guide plates for 5⁄16 pushrod
See pg. 139	Distributor gear (.500" shaft dia)

Note: If exceeding 8000 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

HYDRAULIC CAMSHAFTS
Non Roller
1969-1993 351W (5.8 L), 1982-1984 302 (5.0L), 302 SVO & 351 SVO

Ford

Note: These cams use .000" intake and exhaust valve lash.

For engines that were originally equiped with a hydraulic flat tappet cam, retro fit hydraulic roller cams & kit are available, call CROWER for details.

X-TREME MILEAGE CAMS AVAILABLE!
CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust	Rec Kit
BAJA BEAST / PERFORMANCE LEVEL 2 - Exhibits broad stump pulling power and torque. RPM Power Range: 1200 - 3800 / Redline: 5200 plus.	351	**15935**	258H 112°	258°	264°	202°	210°	.438"	.446"	**84125**
POWER BEAST / PERFORMANCE LEVEL 4 - Delivers impressive mid-range and top end power. Healthy sound. Economical price. RPM Power Range: 1750 - 6000 / Redline: 6500	351	**15903**	298H 112°	298°	304°	224°	234°	.498"	.520"	**84125**
MILEAGE COMPU-PRO / PERFORMANCE LEVEL 1 - Enhances mileage and torque in stock engines. RPM Power Range: Idle to 3500 / Redline: 4500 plus.	351	**15224**	250HDP 112°	250°	258°	192°	198°	.426"	.430"	**84125**
POWER COMPU-PRO / PERFORMANCE LEVEL 2 - Perfect combination of power and mileage with extended rpm's. RPM Power Range: 1500 to 4000 / Redline: 5500 plus.	351	**15233**	270HDP 112°	270°	276°	212°	218°	.475"	.489"	**84125**
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 3 - Hot street/strip grind with emphasis on upper bottom to top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 plus.	351	**15236**	280HDP 112°	280°	286°	220°	226°	.488"	.501"	**84125**
ULTRA PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 4 - Street/strip grind with strong mid to top end power. RPM Power Range: 2200 to 6000 / Redline: 6500 plus.	351	**15237**	297HDP 112°	297°	308°	236°	242°	.538"	.534"	**84125**

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals		Remarks
84125	66015-16	68100X200-16	87048-16	86072-16	68951-16	6000 rpm max. Daily street use.
84126	66015-16	68390X3-16	87048-16	86072-16	68951-16	6500 rpm max. Limited street use.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68100X200-16 Seat: 1.800" @ 107 lbs / Nose: 1.300" @ 254 lbs / Coil bind: 1.030"
(Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 115 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110"
(Stock O.D., no machine work).
Note: To eliminate using seat cups, you can machine heads with cutter 68990 (84125) or 68985 (84126).
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 178	Spring seat cutter
See pg. 146	Pushrods
Pg's. 150-165	Rocker arms (1.6) 3⁄8

Note: If using guide plates, heat-treated pushrods (RC 60 series) are required. See pushrods or contact Crower.

Ford

HYDRAULIC CAMSHAFTS (continued)

Non Roller

1969-1993 351W (5.8 L), 1982-1984 302 (5.0L), 302 SVO & 351 SVO

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

For engines that were originally equiped with a hydraulic flat tappet cam, retro fit hydraulic roller cams & kit are available, call CROWER for details.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust	Rec Kit
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Rough idle. Explosive mid-range torque. RPM Power Range: 2500 to 6500	351	**15254**	84HDP 108°	284°	294°	224°	232°	.498"	.501"	**84125**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Violent mid-range acceleration and torque. RPM Power Range: 2700 to 6500.	351	**15255**	296HDP 108°	296°	304°	230°	246°	.506"	.506"	**84125 or 84126**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Rough idle. Explosive mid-range acceleration and torque. RPM Power Range: 3000 to 6500	351	**15256**	304HDP 108°	304°	312°	242°	250°	.536"	.506"	**84125 or 84126**
TURBOMASTER - This cam provides excellent low end and mid-range power with extended rpm range plus mileage for spirited offroad use. RPM Power Range: 1800 to 5500 plus.	351	**15938**	278HT 114°	278°	260°	212°	200°	.466"	.430"	**84125 or 84126**
TURBOMASTER - Intended for turbocharged hot street/strip and marine use. This cam offers extended rpm's on upper bottom and top. RPM Power Range: 2000 to 6500	351	**15939**	290HT 114°	290°	272°	226°	210°	.486"	.462"	**84125 or 84126**
SUPERCHARGER - Designed for B&M/Roots type supercharged street/strip and marine applications. Emphasis on mid to top end. RPM Power Range: 2400 to 6500	351	**15940**	288HC 114°	288°	288°	226°	226°	.467"	.467"	**84125 or 84126**
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.		**00001**	*Refer to page 7 for camshaft recommendation form*							

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals		Remarks
84125	66015-16	68100X200-16	87048-16	86072-16	68951-16	6000 rpm max. Daily street use.
84126	66015-16	68390X3-16	87048-16	86072-16	68951-16	6500 rpm max. Limited street use.

For severe duty applications, Crower recommends using our solid lifter with the added "**coolface oiling option". Specify X980 after corresponding component kit.**

Spring pressure:
68100X200-16 Seat: 1.800" @ 107 lbs / Nose: 1.300" @ 254 lbs / Coil bind: 1.030"
(Stock O.D., no machine work).
68390X3-16 Seat: 1.800" @ 115 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110"
(Stock O.D., no machine work).
Note: To eliminate using seat cups, you can machine heads with cutter 68990 (84125) or 68985 (84126).
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 178	Spring seat cutter
See pg. 146	Pushrods
Pg's. 150-165	Rocker arms (1.6) 3/8

Note: If using guide plates, heat-treated pushrods (RC 60 series) are required. See pushrods or contact Crower.

SOLID CAMSHAFTS

Non Roller

1969-1993 351W (5.8 L), 1982-1984 302 (5.0L), 302 SVO & 351 SVO

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust	Rec Kit
PRO-STREET / PERFORMANCE LEVEL 3 - High torque profile with emphasis on mid-range and top end power. RPM Power Range: 2200 to 6000 / Redline: 6500 plus.	351	**15358**	260FDP 112°	260°	264°	228°	226°	.474"	.485"	**84218**
PRO-STREET / PERFORMANCE LEVEL 4 - High revving profile with superior mid-range and top end power. RPM Power Range: 2500 to 6500 / Redline: 7000 plus.	351	**15359**	282FDP 112°	282°	288°	242°	250°	.538"	.557"	**84219**
COMPU-PRO / PERFORMANCE LEVEL 5 - High torque, high revving profile, perfect for short oval track applications. RPM Power Range: 3500 to 6500 / Redline: 7000 plus.	351	**15345**	288FDP 105°	288°	299°	252°	258°	.562"	.579"	**84219**
COMPU-PRO / PERFORMANCE LEVEL 5 - High torque, high revving profile, perfect for midsize oval track applications. RPM Power Range: 4000 to 7000 / Redline: 7500 plus.	351	**15346**	296FDP 106°	296°	306°	260°	268°	.586"	.605"	**84219**
COMPU-PRO / PERFORMANCE LEVEL 5 - Emphasis on mid-range and top end power for extra pop above 7000 rpm. RPM Power Range: 4500 to 7500 / Redline: 8000 plus.	351	**15347**	310FDP 108°	310°	316°	276°	278°	.622"	.629"	**84219**
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	351	**00000**	*Refer to page 7 for camshaft recommendation form*							**84218 or 84219**

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84218	66915-16	68100X200-16	87048-16	86072-16	6500 max. Daily street use.
84219	66915-16	68390X3-16	87048-16	86072-16	7500 max. Limited street use.

Spring pressure:
68100X200-16 Seat: 1.800" @ 107 lbs / Nose: 1.300" @ 254 lbs / Coil bind: 1.030" (Machine work, use cutter 68990).
68390X3-16 Seat: 1.800" @ 115 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work, use cutter 68985).

ACCESSORIES

Part No.	Description
See pg. 178	Spring seat cutter
See pg. 146	Pushrods

Note: If using guide plates, heat-treated pushrods (RC 60 series) are required. See pushrods or contact Crower.
Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

Ford

ROLLER CAMSHAFTS

Mechanical

1969-1993 351W (5.8 L), 1982-1984 302 (5.0L), 302 SVO & 351 SVO

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust	Rec Kit
PRO-STREET / PERFORMANCE LEVEL 4 - Perfect for street/strip. Emphasis on mid-range power. RPM Power Range: 2500 to 6500 / Redline: 7000 plus.	351	**15458**	280R 112°	280°	288°	232°	242°	.528"	.530"	**84510**
PRO-STREET / PERFORMANCE LEVEL 5 - Perfect for street/strip. Emphasis on mid-range and top end power. RPM Power Range: 3500 to 7000 / Redline: 7000 plus.	351	**15459**	290R 110°	290°	296°	248°	252°	.558"	.547"	**84510**
COMPU-PRO / PERFORMANCE LEVEL 5 - Emphasis on mid-range and top end, excellent drag profile. RPM Power Range: Varies on valve train, heads, manifold, etc...	351	**15445**	285R 106°	285°	292°	254°	260°	.597"	.578"	**84513**
COMPU-PRO / PERFORMANCE LEVEL 5 - Emphasis on mid-range and top end, excellent drag profile. RPM Power Range: Varies on valve train, heads, manifold, etc...	351	**15446**	300R 107°	300°	310°	268°	274°	.680"	669"	**84509**
COMPU-PRO / PERFORMANCE LEVEL 5 - Emphasis on mid-range and top end, excellent drag profile. RPM Power Range: Varies on valve train, heads, manifold, etc...	351	**15447**	309R 108°		314°	276°	282°	.685"	.656"	**84509**
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	351	**00002 00003**	*Refer to page 7 for camshaft recommendation form*							**84513 or 84509**
CUSTOM GROUND MECHANICAL ROLLER - Special order roller lifter camshaft ground to your specifications. Call with all engine data including head flow data, valve sizes, operating power range, etc.	351	**00060**	*Refer to page 7 for camshaft recommendation form*							

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Keepers	Remarks
84510	66215-16	68390X3-16	87048-16	86072-16		7000 rpm. Limited street use.
84513	66215-16	68380X2-16	87048-16	86072-16		8000 rpm. Race only.
84509	66215-16	68670S-16	86067D-16	86072-16	86110-16	8500 rpm. Race only.

Spring pressure:

68390X3-16 Seat: 1.800" @ 115 lbs / Nose: 1.250" @ 355 lbs / Coil bind: 1.110" (Machine work required, use 68985 cutter & 68972 pilot).

68380X2-16 Seat: 1.800" @ 197 lbs / Nose: 1.200" @ 470 lbs / Coil bind: 1.110" (Machine work required, use 68985 cutter & 68972 pilot).

68670S-16 Seat: 1.900" @ 196 lbs / Nose: 1.200" @ 654 lbs / Coil bind: 1.010" (Machine work required, use 68985 cutter & 68972 pilot).

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
Pg's.150-165	Rocker arms(1.6) 3⁄8
See pg. 139	Bronze distributor gear

Note: If using guide plates, heat-treated pushrods (RC 60 series) are required. See pushrods or contact Crower.

Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

HIPPO Note: For severe duty roller lifter applications, we highly recommend using our roller lifters with Hippo **"High Pressure Pin Oiling"**. Specify "H" in the part number.

Ex. 66290X874H-16

HYDRAULIC CAMSHAFTS

Non Roller 1970-1982

351C 351M 400 V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Ford

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.73 / 1.73 Intake	Gross Lift 1.73 / 1.73 Exhaust	Rec Kit
BAJA BEAST / PERFORMANCE LEVEL 2 - Exhibits broad stump pulling power and torque. Good for stock replacement. RPM Power Range: 1200 to 3800 / Redline: 5200 plus.	351 400	**15965**	258H 112°	258°	264°	200°	210°	.477"	.486"	**84125**
TORQUE BEAST / PERFORMANCE LEVEL 2 - Delivers impressive mid-range and top end power. RPM Power Range: 2000 to 4800 / Redline: 6000 plus.	351 400	**15975**	282H 112°	282°	292°	204°	214°	.486"	.512"	**84125**
POWER BEAST / PERFORMANCE LEVEL 3 - Exhibits broad stump pulling power and torque. Good for stock replacement. RPM Power Range: 2200 to 5000 / Redline: 6200 plus.	351 400	**15973**	292H 112°	292°	302°	214°	224°	.512"	.538"	**84125**
ULTRA BEAST / PERFORMANCE LEVEL 3 - Delivers impressive mid-range and top end power. RPM Power Range: 2200 to 5000 / Redline: 6200 plus.	351 400	**15966**	278H 112°	278°	284°	220°	226°	.529"	.540"	**84125**
MILEAGE COMPU-PRO / PERFORMANCE LEVEL 1 - These cams enhance throttle response and low end torque while delivering fuel efficient motoring. RPM Power Range: Idle to 3500 / Redline: 4500 plus.	351 cid	**15229**	250HDP 112°	250°	258°	192°	196°	.460"	.465"	**84125**
	400 cid	**15230**	260HDP 112°	260°	266°	204°	210°	.481"	.488"	**84125**
POWER COMPU-PRO / PERFORMANCE LEVEL 2 - Perfect combination of power and mileage. Provides excellent low end and mid-range power with extended rpm's for spirited offroad use. RPM Power Range: 1500 to 4000 / Redline: 5500 plus.	351 cid	**15240**	270HDP 112°	270°	276°	210°	220°	.486"	.510"	**84125**
	400 cid	**15241**	276HDP 112°	276°	281°	214°	220°	.527"	.534"	**84125 or 84124**
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 3 - Intended for the hot marine/strip application, these cams offer an extended rpm range with upper bottom and top end power with strong emphasis on mid-range. RPM Power Range: 1800 to 4500 / Redline: 6000 plus.	351 cid	**15242**	280HDP 112°	280°	286°	220°	226°	.526"	.540"	**84125 or 84124**
	400 cid	**15243**	284HDP 112°	284°	290°	228°	234°	.557"	.574"	**84125 or 84124**
ULTRA PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 4 - Dual purpose hot street/strip camshaft. Delivers strong mid-range and top end torque and horsepower. RPM Power Range: 2000 to 6000 / Redline: 6500	351 cid	**15244**	297HDP 112°	297°	308°	234°	240°	.578"	.578"	**84125 or 84124**
	400 cid	**15245**	311HDP 112°	311°	316°	246°	252°	.593"	.606"	**84125 or 84124**

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals		Remarks
84125	66015-16	68100X200-16	87048-16	86072-16	68951-16	6000 rpm max. Daily street use.
84124	66015-16	68315-16	87050-16	86072-16		6500 rpm max. Limited street use.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68100X200-16 Seat: 1.800" @ 107 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.030"
68315-16 Seat: 1.850" @ 105 lbs / Nose: 1.250" @ 322 lbs / Coil bind: 1.150" (Stock O.D.)
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
Pg's. 146-149	Pushrods
Pg's.150-165	Rocker arms (1.73) 7/16
Pg's.150-165	Rocker arms (1.8) 7/16
See pg. 139	Timing gear set

Note: If using guide plates, heat-treated pushrods (RC60 series) are required. See pushrod section or contact Crower.

Ford

HYDRAULIC CAMSHAFTS (continued)

Non Roller 1970-1982

351C 351M 400 V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.73 / 1.73 Intake	Gross Lift 1.73 / 1.73 Exhaust	Rec Kit
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Rough idle with explosive upper bottom and mid-range torque. RPM Power Range: 2500 to 6000 plus.	351 cid	**15266**	280HDP 108°	280°	288°	222°	230°	.540"	.540"	**84125 or 84124**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Strong idle with violent mid-range acceleration and torque. RPM Power Range: 2700 to 6500	351 cid	**15267**	290HDP 108°	290°	302°	238°	248°	.536"	.543"	**84125 or 84124**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Very rough idle with violent mid-range and top end acceleration and power. RPM Power Range: 3000 to 6500	351 400 cid	**15268**	302HDP 108°	302°	312°	244°	248°	.548"	.545"	**84125 or 84124**
SUPERCHARGER - Designed for B&M/Roots type supercharged street/strip and marine applications. Emphasis on mid to top end. RPM Power Range: 2400 to 6500	351 400 cid	**15981**	304HC 114°	304°	304°	246°	246°	.548"	.548"	**84125 or 84124**
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid		***Refer to page 7 for camshaft recommendation form***							**84125 or 84124**

390 SERIES HYDRAULIC CAMSHAFTS

Note: These cams use .000" intake and exhaust valve lash.

C.I.D. Group	RPM Range Low RPM	RPM Range Peak Torque	RPM Range Peak HP	RPM Range Top RPM	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Duration @ .200" Intake	Duration @ .200" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift 1.73 / 1.73 Intake	Gross Lift 1.73 / 1.73 Exhaust
351C cid	1800	3300	5000	5500	**15170**	112°	264°	272°	202°	210°	112°	115°	.282"	.280"	.488"	.484"
400 cid	1500	3000	4500	5000												
351C cid	2000	3500	5300	5800	**15171**	112°	269°	278°	207°	216°	116°	125°	.287"	.292"	.497"	.505"
400 cid	1600	3100	4800	5300												
351C cid	2100	3600	5500	6000	**15172**	112°	277°	283°	215°	221°	126°	130°	.300"	.297"	.519"	.514"
400 cid	1800	3300	5000	5500												
351C cid	2300	3800	5700	6300	**15173**	110°	280°	287°	219°	225°	131°	134°	.306"	.303"	.530"	.524"
400 cid	2000	3500	5200	5700												
351C cid	2400	3900	5900	6400	**15174**	110°	289°	295°	227°	233°	140°	142°	.318"	.316"	.550"	.547"
400 cid	2100	3600	5500	6000												
351C cid	2500	4000	6100	6500	**15175**	108°	298°	303°	236°	241°	149°	150°	.332"	.328"	.574"	.567"
400 cid	2300	3800	5800	6300												
351C cid	2600	4100	6300	6500	**15176**	108°	304°	310°	242°	248°	156°	158°	.344"	.340"	.595"	.588"
400 cid	2500	4000	6000	6500												
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications.					**00001**		***Refer to page 7 for camshaft recommendation form***									

Engineered Component Kit & Accessorieslisted on previous page.

SOLID CAMSHAFTS

Non Roller 1970-1982

351C 351M 400 V8

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.73 / 1.73 Intake	Gross Lift 1.73 / 1.73 Exhaust	Rec Kit
PRO-STREET / PERFORMANCE LEVEL 3 - High torque grind with mid-range and top end power. RPM Power Range: 2200 to 5750 / Redline: 6000 plus.	351 400	**15388**	282FDP 112°	282°	288°	238°	242°	.524"	.533"	**84225**
PRO-STREET / PERFORMANCE LEVEL 4 - High revving with superior mid-range and top end power. RPM Power Range: 2500 to 6000 / Redline: 6250 plus.	351 400	**15389**	292FDP 112°	292°	298°	246°	250°	.541"	.548"	**84225**
COMPU-PRO / PERFORMANCE LEVEL 5 - High torque, short oval camshaft. RPM Power Range: 3500 to 6500 / Redline: 7000 plus.	351 400	**15380**	288FDP 105°	288°	294°	254°	258°	.569"	.580"	**84225 or 84226**
COMPU-PRO / PERFORMANCE LEVEL 5 - Great high torque oval track grind with emphasis on mid-range power. RPM Power Range: 4000 to 7000 / Redline: 7500 plus.	351 400	**15381**	298FDP 106°	298°	306°	262°	268°	.592"	.607"	**84226**
COMPU-PRO / PERFORMANCE LEVEL 5 - Upper mid-range and top end power for extra pop above 7000 rpm. RPM Power Range: 4500 to 7500 / Redline: 8000 plus.	351 400	**15382**	311FDP 107°	311°	316°	274°	282°	.618"	.638"	**84226**
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	351 400	**00000**	*Refer to page 7 for camshaft recommendation form*							**See Below**

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals		Remarks
84225	66915-16	68100X200-16	87048-16	86072-16	68951-16	Solid Lifter. 6500 rpm max. Daily street use.
84226	66915-16	68390X3-16	87048-16	86072-16	68951-16	Solid Lifter. 7500 rpm max. Limited street use.

For severe duty applications, Crower recommends using our solid lifter with the added "**coolface oiling option". Specify X980 after corresponding component kit.**

Spring pressure:
68100X200-16 Seat: 1.825" @ 100 lbs / Nose: 1.325" @ 247 lbs / Coil bind: 1.030" (Seat cups eliminate machine work).
68390X3-16 Seat: 1.825" @ 106 lbs / Nose: 1.325" @ 310 lbs / Coil bind: 1.110" (Seat cups eliminate machine work).
Note: Some stock cylinder heads come with multi-groove keepers on the exhaust. If so, you must order retainer 87049-16 which is designed to fit multi-groove keepers. See retainer specs or contact Crower.
Note: If you machine heads to eliminate use of spring cups, see seat cutters or contact Crower.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
Pg's.150-165	Rocker arms (1.73) 7/16
Pg's.150-165	Rocker arms (1.8) 7/16
See pg. 138	Timing gear set

Note: If using guide plates, heat-treated pushrods (RC 60 series) are required. See pushrods or contact Crower.
Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.
Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

Ford

ROLLER CAMSHAFTS

Mechanical 1970-1982

351C 351M 400 V8

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.73 / 1.73 Intake	Gross Lift 1.73 / 1.73 Exhaust
STREET ROLLER / PERFORMANCE LEVEL 4 - Excellent street/strip profile. RPM Power Range: 2500 to 6000 / Redline: 7500 plus.	All cid	**15480**	284R 110°	275°	284°	234°	244°	.570"	.572"
ULTRA-ACTION / PERFORMANCE LEVEL 5 - High torque oval track profile. RPM Power Range: 3000 to 7000 / Redline: 7500 plus.	All cid	**15481**	285R 106°	285°	292°	252°	260°	.645"	.626"
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Fast 3/8 to 1/2 mile super oval track profile. RPM Power Range: 4000 to 7500 / Redline: 8000 plus.	All cid	**15482**	297R 106°	297°	304°	262°	268°	.662"	.636"
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Mid-range and top end drag profile. RPM Power Range: 5200 to 8000 / Redline: 8250 plus.	All cid	**15483**	304R 106°	304°	312°	270°	276°	.690"	.672"
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Mid-range and top end drag profile. RPM Power Range: 5500 to 8000 / Redline 8250 plus.	All cid	**15484**	311R 108°	311°	318°	280°	284°	.759"	.736"
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Top end drag profile with plenty of power. RPM Power Range: 5200 to 8000 / Redline: 8250 plus.	All cid	**15485**	319R 110°	319°	324°	288°	292°	.795"	.736"
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Top end drag profile with plenty of power. RPM Power Range: 5500 to 8000 / Redline: 8250 plus.	All cid	**15486**	334R 112°	334°	338°	294°	302°	.783"	.724"
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance. Custom Ground Mechanical Roller: part # **00060**	All cid	**00002** **00060**	***Refer to page 7 for camshaft recommendation form***						

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals		Remarks
84520	66218-16	68340-16	87062S-16	86072-16	86107X1-16	7500 rpm plus.
84521	66218-16	68363-16	87062-16	86072-16	86107X1-16	8000 rpm. Race only.

HIPPO Note: For severe duty roller lifter applications, we highly recommend using our roller lifters with Hippo **"High Pressure Pin Oiling"**. Specify "H" in the part number. **Ex. 66290X874H-16**

Spring pressure:
68340-16 Seat: 1.875" @ 128 lbs / Nose: 1.350" @ 359 lbs / Coil bind: 1.080" (Machine work, use cutter 68986*).
68363-16 Seat: 1.900" @ 212 lbs / Nose: 1.200" @ 560 lbs / Coil bind: 1.100" (Machine work, use cutter 68992*).
Optional spring (race only):
68555X1-16 Seat: 2.000" @ 239 lbs / Nose: 1.100" @ 870 lbs / Coil bind: 1.020" (Machine work, use cutter 68980*).
* Machine work required, specify 11⁄32 pilot shaft when ordering.
Note: For high performance applications, we recommend using single groove valves and valve stem keepers. The above kits are designed for 11⁄32 single groove valve stems and 7° and 10° single groove keepers. Race applications must use .100" long valves.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
See pg. 138	Timing gear set
Pg's.150-165	Rocker arms (1.73) 7⁄16

Note: If using guide plates, heat-treated pushrods (RC 60 series) are required. See pushrods or contact Crower.
Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.
Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.
HIGH RPM! Crower highly recommends the use of rollerized rockers. See rockers for ratios and stud diameters.

AVAILABLE CAM JOURNAL SIZES

Description
Stock Ford Bearing Size - Journal 1 = 2.080", 2 = 2.065", 3 = 2.050", 4 = 2.035", 5 = 2.020"
Large Roller Bearing - Journal 1, 2, 3, 4 = 2.165", Journal 5 = 1.968"
Roller Bearing (Ford Motorsport / SVO) - All Journals = 2.051"
Babbit Bearing (Standard SVO) - All Journals = 2.081"

To order the above cores specify #00003. 60mm is available on special order basis only (#00060). Special Firing Orders also available.

HYDRAULIC CAMSHAFTS

Non Roller 1963-1976

332 352 360 390 406 410 427 428 V8 FE

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.76 / 1.76 Intake	Gross Lift 1.76 / 1.76 Exhaust	Rec Kit
BAJA BEAST / PERFORMANCE LEVEL 2 - Exhibits broad stump pulling power and torque. RPM Power Range: 1200 to 3800 / Redline: 5200 plus.	332 390	**16915**	268H 112°	268°	274°	204°	210°	.484"	.496"	**84016**
POWER BEAST / PERFORMANCE LEVEL 3 - Delivers impressive mid-range and top end power. Healthy sound. Economical price. RPM Power Range: 1200 to 3800 / Redline: 5200 plus.	390 428	**16903**	292H 112°	292°	302°	214°	224°	.521"	.547"	**84116**
MILEAGE COMPU-PRO / PERFORMANCE LEVEL 1 - These cams enhance throttle response and low end torque while delivering fuel efficient motoring. RPM Power Range: Idle to 3500 / Redline: 4500 plus.	332 352	**16236**	246HDP 112°	246°	253°	186°	192°	.445"	.466"	**84016**
	390 428	**16237**	250HDP 112°	250°	258°	192°	196°	.468"	.473"	**84016**
POWER COMPU-PRO / PERFORMANCE LEVEL 2 - Perfect combination of power and mileage. Provides excellent low end and mid-range power with extended rpm's for spirited offroad use. RPM Power Range: 1500 to 4000 / Redline: 5500 plus.	332 352	**16238**	260HDP 112°	260°	266°	204°	210°	.489"	.500"	**84016**
	390 428	**16239**	270HDP 112°	270°	276°	210°	220°	.494"	.523"	**84016**
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 3 - Intended for the hot marine/strip application, these cams offer extended rpm range with emphasis on upper bottom to top end power with strong mid-range. RPM Power Range: 1800 to 4500 / Redline: 6000 plus.	332 352	**16240**	276HDP 112°	276°	281°	214°	220°	.537"	.543"	**84016**
	390 428	**16241**	280HDP 112°	280°	286°	222°	228°	.538"	.552"	**84016 or 84116**
ULTRA PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 4 - Dual purpose hot street/strip camshaft. Delivers strong mid-range and top end torque and horsepower. RPM Power Range: 2000 to 6000 / Redline: 6500	332 352	**16242**	284HDP 112°	284°	290°	228°	230°	.566"	.587"	**84016 or 84116**
	390 428	**16243**	297HDP 112°	297°	308°	236°	242°	.591"	.588"	**84116**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Rough idle. Explosive mid-range torque and power. RPM Power Range: 2500 to 6000	390 428	**16255**	280HDP 108°	280°	288°	224°	232°	.549"	.550"	**84016 or 84116**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Violent mid- range acceleration and torque. RPM Power Range: 2700 to 6500	390 428	**16256**	290HDP 108°	290°	302°	238°	248°	.550"	.557"	**84016 or 84116**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Rough idle. Explosive mid-range acceleration and torque. RPM Power Range: 3000 to 6500	390 428	**16257**	302HDP 108°	302°	312°	244°	250°	.554"	.556"	**84116**
TURBOMASTER - Intended for turbocharged hot street/strip and marine use. This cam offers extended rpm's on upper bottom and top. RPM Power Range: 2000 to 6500	390 428	**16979**	290HT 114°	290°	280°	224°	212°	.528"	.502"	**84016 or 84116**
SUPERCHARGER - Designed for B&M/Roots type supercharged street/strip and marine applications. Emphasis on mid-range to top. RPM Power Range: 2200 to 6500	390 428	**16980**	288HC 114°	288°	288°	226°	226°	.533"	.533"	**84116**
SUPERCHARGER - Dual purpose hot street/strip cam designed to enhance B&M/Roots type supercharger. Strong mid to top end power. RPM Power Range: 2400 to 6500	390 428	**16981**	304HC 114°	304°	304°	244°	244°	.556"	.556"	**84016**
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**	***Refer to page 7 for camshaft recommendation form***							**See Next Page**

Ford

SOLID CAMSHAFTS

Non Roller 1963-1976

332 352 360 390 406 410 427 428 V8 FE

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.76 / 1.76 Intake	Gross Lift 1.76 / 1.76 Exhaust	Rec Kit
POWER BEAST / PERFORMANCE LEVEL 3 - Delivers impressive mid-range and top end power. Healthy sound. Economical price. RPM Power Range: 1200 to 3800 / Redline: 5200 plus.	390 428	**16360**	284F 114°	284°	284°	245°	245°	.524"	.524"	**84316**
PRO-STREET / PERFORMANCE LEVEL 3 - High torque grind with mid-range and top end power. RPM Power Range: 2250 to 5500 / Redline: 6000 plus.	390 428	**16356**	260FDP 114°	260°	266°	228°	228°	.526"	.537"	**84317**
PRO-STREET / PERFORMANCE LEVEL 4 - High revving with superior mid-range and top end power. RPM Power Range: 2500 to 6000 / Redline: 6500 plus.	390 428	**16357**	278FDP 114°	278°	284°	240°	243°	.530"	.535"	**84317**
COMPU-PRO / PERFORMANCE LEVEL 5 - High torque, short oval camshaft. RPM Power Range: 2500 to 6000 / Redline: 7000 plus.	390 428	**16331**	290FDP 108°	290°	298°	247°	252°	.551"	.565"	**84317 or 84316**
COMPU-PRO / PERFORMANCE LEVEL 5 - Great high torque mid-range oval track grind. RPM Power Range: 3000 to 7000 / Redline: 7500.	390 428	**16332**	300FDP 108°	300°	310°	255°	260°	.579"	.593"	**84317 or 84316**
COMPU-PRO / PERFORMANCE LEVEL 5 - Strong mid-range and top end profile. RPM Power Range: 4000 to 7250 / Redline: 7500 plus.	390 428	**16333**	312FDP 108°	312°	318°	263°	272°	.588"	.602"	**84316**
COMPU-PRO / PERFORMANCE LEVEL 5 - Upper mid-range and top end power for extra pop above 7000 rpm. RPM Power Range: 4500 to 7500 / Redline: 7500 plus.	390 428	**16334**	320FDP 110°	320°	328°	273°	281°	.628"	.648"	**84316**
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	*Refer to page 7 for camshaft recommendation form*							**84317 or 84316**

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84016S	66016-16	68302X1-16	87063M-16		Hydraulic. 6000 plus rpm. Daily street use.
84116	66016-16	68340-16	87063-16	86071-16	Hydraulic. 6500 plus rpm. Limited street use.
84317	66916-16	68302X1-16	87063M-16	86071-16	Solid. 6500 plus rpm. Daily street use.
84316	66916-16	68340-16	87063-16	86071-16	Solid. 7500 plus rpm. Limited street use.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

For severe duty applications, Crower recommends using our solid lifter with the added "**coolface oiling option". Specify X980 after corresponding component kit.**

Spring pressure:
68302X1-16 Seat: 1.850" @ 91 lbs / Nose: 1.350" @ 256 lbs / Coil bind: 1.150" (Stock O.D., no machine work).
68340-16 Seat: 1.900" @ 119 lbs / Nose: 1.350" @ 359 lbs / Coil bind: 1.080" (Machine work, use cutter 68986*).
* Machine work required, specify 3⁄8 pilot shaft when ordering.
Deep Seat Shell design lifter: Crower deep seated, solid lifters (Deep Seat Shell 66925-16) and pushrods (70138-16) insures proper valve train geometry.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
See pg. 138	Timing gear set
See pg. 139	Distributor gear (.500" shaft dia)

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

ROLLER CAMSHAFTS
Mechanical 1963-1976
332 352 360 390 406 410 427 428 V8 FE

Note: These cams use .026" intake, .028" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.76 / 1.76 Intake	Gross Lift 1.76 / 1.76 Exhaust	Rec Kit
STREET ROLLER / PERFORMANCE LEVEL 4 - Excellent street/strip profile. RPM Power Range: 2500 to 6000 / Redline: 7500 plus.	390 428	**16462**	280R 110°	280°	288°	234°	244°	.580"	.582"	**84524**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - High torque oval track profile. RPM Power Range: 3750 to 7000 / Redline: 7500 plus.	390 428	**16463**	290R 108°	290°	296°	248°	254°	.651"	.655"	**84524 or 84525**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Strong mid-range design. RPM Power Range: 4000 to 7250 / Redline: 7750 plus.	390 428	**16464**	296R 108°	296°	301°	254°	260°	.654"	.663"	**84525**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Fast 3/8 to 1/2 mile super oval track profile. RPM Power Range: 4250 to 7500 / Redline: 8000 plus.	390 428	**16465**	301R 108°	301°	306°	258°	264°	.663"	.675"	**84525**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Mid-range and top end drag profile. RPM Power Range: 4500 to 7750 / Redline: 8250 plus.	390 428	**16466**	306R 108°	306°	310°	264°	268°	.675"	.675"	**84525**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Mid-range and top end drag profile. RPM Power Range: 4750 to 8000 / Redline: 8500 plus.	390 428	**16467**	314R 110°	314°	318°	278°	282°	.752"	.771"	**Call Crower**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Fast top end power profile. RPM Power Range: 5000 to 8250 / Redline: 8750 plus.	390 428	**16468**	318R 110°	318°	324°	282°	286°	.770"	.783"	**Call Crower**
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00002**	***Refer to page 7 for camshaft recommendation form***							**See Below**

HIPPO Note: For severe duty roller lifter applications, we highly recommend using our roller lifters with Hippo **"High Pressure Pin Oiling"**. Specify "H" in the part number. **Ex. 66290X874H-16**

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84524	66216-16	68385X2-16	87063-16	86071-16	7000 plus rpm. Street use.
84525	66216-16	68363-16	87063-16	86071-16	7500 plus rpm

Spring pressure:
68385X2-16 Seat: 1.900" @ 166 lbs / Nose: 1.300" @ 422 lbs / Coil bind: 1.100"
(Machine work, use cutter 68979*).
68363-16 Seat: 1.900" @ 212 lbs / Nose: 1.200" @ 560 lbs / Coil bind: 1.100"
(Machine work, use cutter 68992*).
Optional spring (race only):
* Machine work required, specify 3⁄8 pilot shaft when ordering.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Note: If exceeding 8000 rpm, high pressure springs and titanium retainers may be required. See spring and retainer specs or contact Crower for proper recommendations.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
See pg. 138	Timing gear set

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

Ford

HYDRAULIC CAMSHAFTS

Non Roller 1968-1994

370 429 460 V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

For engines that were originally equiped with a hydraulic flat tappet cam, retro fit hydraulic roller cams & kit are available, call CROWER for details.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.73 / 1.73 Intake	Gross Lift 1.73 / 1.73 Exhaust	Rec Kit
BAJA BEAST / PERFORMANCE LEVEL 2 - Exhibits broad stump pulling power and torque. RPM Power Range: 1200 to 3800 / Redline: 5200 plus.	370 460	**22915**	268H 112°	268°	274°	203°	210°	.481"	.488"	**84022**
POWER BEAST / PERFORMANCE LEVEL 3 - Low to mid-range torque for daily drivability. Economical price. RPM Power Range: 1200 to 3800 / Redline: 5200 plus.	429 460	**22903**	293H 112°	268°	286°	210°	226°	.510"	.536"	**84022**
ULTRA BEAST / PERFORMANCE LEVEL 3 - Delivers impressive mid-range and top end power. Economical price. RPM Power Range: 2000 to 4800 / Redline: 6200 plus.	460 cid	**22917**	268H 112°	303°	308°	224°	234°	.538"	.562"	**84122**
POWER COMPU-PRO / PERFORMANCE LEVEL 2 - Perfect combination of power and mileage. Provides excellent low end and mid-range power with extended rpm's for spirited offroad use. RPM Power Range: 1500 to 4000 / Redline: 5500 plus.	370 429	**22239**	270HDP 112°	270°	276°	211°	218°	.484"	.509"	**84022**
	460 cid	**22240**	276HDP 112°	274°	281°	215°	221°	.527"	.535"	**84022**
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 3 - Intended for the hot marine/strip application, these cams offer extended rpm range with emphasis on upper bottom to top end power with strong mid-range. RPM Power Range: 1800 to 4500 / Redline: 6000 plus.	370 429	**22241**	280HDP 112°	280°	286°	220°	226°	.524"	.541"	**84022**
	460 cid	**22242**	284HDP 112°	284°	290°	227°	232°	.552"	.569"	**84022 84122**
ULTRA PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 4 - Dual purpose hot street/strip camshaft. Delivers strong mid-range and top end torque and horsepower. RPM Power Range: 2000 to 6000 / Redline: 7000 plus.	370 429	**22243**	297HDP 112°	297°	308°	237°	240°	.580"	.576"	**84122**
	460 cid	**22244**	311HDP 112°	311°	316°	246°	250°	.588"	.604"	**84122**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Rough idle. Explosive mid-range torque. RPM Power Range: 2500 to 6500 plus.	429 460	**22205**	280HDP 108°	280°	288°	222°	232°	.536"	.540"	**84022 84122**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Violent mid- range acceleration and torque. RPM Power Range: 2700 to 6700 plus.	429 460	**22206**	290HDP 108°	290°	302°	236°	245°	.535"	.545"	**84022 84122**
SUPERCHARGER - Dual purpose hot street/strip cam designed to enhance B&M/Roots type supercharger. Strong mid to top end power. RPM Power Range: 2400 to 6700 plus.	429 460	**22981**	304HC 114°	304°	304°	244°	244°	.541"	.541"	**84022 84122**
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**	***Refer to page 7 for camshaft recommendation form***							**Kits on Next Page**

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84022	66015-16	68302X1-16	87062S-16		Hydraulic. 6500 max rpm. Daily street use.
84122	66015-16	68340-16	87062-16	86072-16	Hydraulic. 6500 max rpm. Limited street use.

HIPPO Note: For severe duty roller lifter applications, we highly recommend using our roller lifters with **Hippo "High Pressure Pin Oiling". Specify "H" in the part number. Ex. 66290X874H-16**

Spring pressure:
68302X1-16 Seat: 1.800" @ 107 lbs / Nose: 1.250" @ 292 lbs / Coil bind: 1.150" (Machine work, use cutter 68976).
68340-16 Seat: 1.900" @ 118 lbs / Nose: 1.300" @ 384 lbs / Coil bind: 1.080" (Machine work, use cutter 68986).
Valve timing events are available online at: **www.crower.com/valvtime.html**

Note: If using guide plates, heat-treated pushrods (RC60 series) are required. See pushrod section or contact Crower.

ACCESSORIES

Part No.	Description
Pg's. 146-149	Pushrods
Pg's. 150-165	Rocker arms (1.73) 7/16
Pg's. 150-165	Rocker arms (1.8) 7/16
See pg. 138	Timing gear set (1972-up)

For engines that were originally equiped with a hydraulic flat tappet cam, retro fit hydraulic roller cams & kit are available, call CROWER for details.

390 SERIES HYDRAULIC CAMSHAFTS

Non Roller 1968-1994

370 429 460 V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Ford

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Duration @ .200" Intake	Duration @ .200" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift 1.73 / 1.73 Intake	Gross Lift 1.73 / 1.73 Exhaust
429 cid	1500	3000	4600	5100	**22170**	112°	264°	272°	202°	210°	112°	115°	.282"	.280"	.488"	.484"
460 cid	1100	2600	4100	4600												
429 cid	1700	3200	4800	5300	**22171**	112°	269°	278°	207°	216°	116°	125°	.287"	.292"	.497"	.505"
460 cid	1300	2800	4300	4800												
429 cid	1900	3400	5000	5500	**22172**	112°	277°	283°	215°	221°	126°	130°	.300"	.297"	.519"	.514"
460 cid	1600	3100	4600	5100												
429 cid	2100	3600	5200	5700	**22173**	111°	280°	287°	219°	225°	131°	134°	.306"	.303"	.530"	.524"
460 cid	1800	3300	4800	5300												
429 cid	2300	3800	5400	5900	**22174**	110°	289°	295°	227°	233°	140°	142°	.318"	.316"	.550"	.547"
460 cid	2000	3500	5000	5500												
429 cid	2500	4000	5600	6100	**22175**	110°	298°	303°	236°	241°	149°	150°	.332"	.328"	.574"	.567"
460 cid	2300	3800	5200	5700												
429 cid	2700	4200	5800	6300	**22176**	108°	304°	310°	242°	248°	156°	158°	.344"	.340"	.595"	.588"
460 cid	2500	4000	5400	5900												
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications.					**00001**											

Refer to page 7 for camshaft recommendation form

MARINE HYDRAULIC CAMSHAFTS

Note: These cams use .000" intake and exhaust valve lash.

C.I.D. Group	RPM Range Low RPM	Peak Torque	Peak HP	Top RPM	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Duration @ .200" Intake	Duration @ .200" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift 1.73 / 1.73 Intake	Gross Lift 1.73 / 1.73 Exhaust
429 cid	1600	3100	4700	5200	**22220**	114°	277°	283°	215°	221°	126°	130°	.300"	.297"	.519"	.484"
460 cid	1300	2800	4300	4800												
429 cid	2000	3500	5100	5600	**22221**	114°	289°	295°	227°	233°	140°	142°	.318"	.316"	.550"	.546"
460 cid	1700	3200	4700	5200												
429 cid	2400	3900	5400	5900	**22222**	114°	304°	310°	242°	248°	156°	158°	.344"	.340"	.595"	.588"
460 cid	2200	3700	5100	5600												
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications.					**00001**											

Refer to page 7 for camshaft recommendation form

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84022	66015-16	68302X1-16	87062S-16		Hydraulic. 6500 max rpm. Daily street use.
84122	66015-16	68340-16	87062-16	86072-16	Hydraulic. 6500 max rpm. Limited street use.

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68302X1-16 Seat: 1.800" @ 107 lbs / Nose: 1.250" @ 292 lbs / Coil bind: 1.150"
(Machine work, use cutter 68976).
68340-16 Seat: 1.900" @ 118 lbs / Nose: 1.300" @ 384 lbs / Coil bind: 1.080"
(Machine work, use cutter 68986).
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 146	Pushrods
73615-16	Rocker arms (1.73) 7/16
73619-16	Rocker arms (1.8) 7/16
76535	Timing gear set (1972-up)

Note: If using guide plates, heat-treated pushrods (RC60 series) are required. See pushrod section or contact Crower.

Ford

390 SERIES SOLID CAMSHAFTS

Non Roller 1968-1994

370 429 460 V8

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.73 / 1.73 Intake	Gross Lift 1.73 / 1.73 Exhaust
ULTRA BEAST / PERFORMANCE LEVEL 4 - Delivers impressive mid-range and top end power. RPM Power Range: 2750 to 6500 / Redline: 7000 plus.	429 460	**22360**	317F 112°	294°	304°	244°	254°	.588"	.614"
PRO-STREET / PERFORMANCE LEVEL 3 - High torque grind with mid-range and top end power. RPM Power Range: 2250 to 5500 / Redline: 6000 plus.	429 460	**22354**	260FDP 112°	260°	266°	228°	228°	.516"	.533"
PRO-STREET / PERFORMANCE LEVEL 4 - High revving with superior mid-range and top end power. RPM Power Range: 2500 to 6000 / Redline: 6500 plus.	429 460	**22355**	278FDP 110°	278°	284°	238°	241°	.519"	.524"
COMPU-PRO / PERFORMANCE LEVEL 5 - High torque, short oval camshaft. RPM Power Range: 2500 to 6000 / Redline: 7000 plus.	429 460	**22356**	290FDP 108°	290°	298°	247°	251°	.538"	.552"
COMPU-PRO / PERFORMANCE LEVEL 5 - Great high torque profile with mid-range power. RPM Power Range: 3000 to 7000 / Redline: 7400 plus.	429 460	**22357**	300FDP 108°	300°	310°	255°	255°	.569"	.578"
COMPU-PRO / PERFORMANCE LEVEL 5 - Strong mid-range/top end profile. RPM Power Range: 4000 to 7250 / Redline: 7500 plus.	429 460	**22358**	312FDP 108°	312°	318°	263°	269°	.590"	.602"
COMPU-PRO / PERFORMANCE LEVEL 5 - Upper mid-range and top end power for extra pop above 7000 rpm. RPM Power Range: 4500 to 7500 / Redline: 7750 plus.	429 460	**22359**	320FDP 108°	320°	328°	273°	279°	.614"	.633"
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	*Refer to page 7 for camshaft recommendation form*						
CUSTOM GROUND MECHANICAL ROLLER - Special order roller lifter camshaft ground to your specifications. Call with all engine data including head flow data, valve sizes, operating power range, etc.	All cid	**00060**	*Refer to page 7 for camshaft recommendation form*						

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84322	66915-16	68340-16	87062-16	86072-16	Solid. 7500 plus rpm.

For severe duty applications, Crower recommends using our solid lifter with the added "**coolface oiling option". Specify X980 after corresponding component kit.**

Spring pressure:
68340-16 Seat: 1.900" @ 119 lbs / Nose: 1.350" @ 359 lbs / Coil bind: 1.080"
(Machine work, use cutter 68986).
Optional spring (race only):
68385X2-16 Seat: 1.900" @ 166 lbs / Nose: 1.300" @ 422 lbs / Coil bind: 1.100"
(Machine work, use cutter 68979).
Note: Screw-in rocker studs should be used when installing solid lifter camshafts to insure proper valve adjustment.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
See pg. 139	Alum/Bronze distributor gear
See pg. 138	Roller timing gear set (1972 - up)
Pg's.150-165	Rocker arms (1.73) 7/16

Note: If using guide plates, heat-treated pushrods (RC 60 series) are required. See pushrods or contact Crower.
Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

ROLLER CAMSHAFTS

Mechanical 1968-1994

370 429 460 V8

Note: These cams use .026" intake, .028" exhaust valve lash.

Ford

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.73 / 1.73 Intake	Gross Lift 1.73 / 1.73 Exhaust	Rec Kit
STREET ROLLER / PERFORMANCE LEVEL 4 - Excellent street/strip profile. RPM Power Range: 2500 to 6000 / Redline: 7500 plus.	429 460	**22401**	286R 110°	275°	284°	234°	244°	.570"	.572"	**84527**
ULTRA-ACTION / PERFORMANCE LEVEL 5 -High torque oval track profile. RPM Power Range: 3750 to 7000 / Redline: 7500 plus.	429 460	**22402**	290R 108°	290°	296°	249°	254°	.642"	.645"	**84527**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Strong mid-range design. RPM Power Range: 4000 to 7250 / Redline: 7750 plus.	429 460	**22403**	300R 108°	300°	310°	258°	268°	.654"	.648"	**84527 84524S**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Fast 3/8 to 1/2 mile super oval track profile. RPM Power Range: 4250 to 7500 / Redline: 8000 plus.	429 460	**22404**	308R 108°	308°	314°	264°	268°	.666"	.668"	**84527 84524S**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Mid-range and top end drag profile. RPM Power Range: 4500 to 7750 / Redline: 8250 plus.	429 460	**22405**	316R 108°	316°	322°	272°	277°	.690"	.698"	**84527 84524S**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Mid-range and top end drag profile. RPM Power Range: 4750 to 8000 / Redline: 8500 plus.	429 460	**22406**	322R 110°	322°	328°	282°	280°	.757"	.721"	**84528 84524S**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Full top end power profile. RPM Power Range: 5000 to 8250 / Redline: 8750 plus.	429 460	**22407**	330R 110°	330°	338°	284°	288°	.769"	.754"	**84528 84524S**
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00002**	*Refer to page 7 for camshaft recommendation form*							**See Below**

8620 Steel Billet Cam Cores.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Keepers	Remarks
84527	66217-16	68363-16	87064-16	86072-16	86110-16	8000 plus rpm. Race only.
84523	66217-16	68804-16	87063M-16			
84524S	66217-16	68385X2-16	86071-16	86072-16		Steel retainer, for daily street use.

Spring pressure:
68363-16 Seat: 1.900" @ 212 lbs / Nose: 1.200" @ 560 lbs / Coil bind: 1.100" (Machine work, use cutter 68992*).
Optional springs:
68804-16 Seat: 1.900" @ 257 lbs / Nose: " @ lbs / Coil bind: " (Machine work, use cutter).
* Machine work required, specify 11⁄32 pilot shaft when ordering.
Note: Screw-in rocker studs should be used when installing roller lifter cams to insure proper valve adjustment.
Note: Roller cams and kits available for Boss 429. Contact Crower for technical assistance.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at: **www.crower.com/valvtime.html**

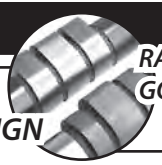
HIPPO Note: For severe duty roller lifter applications, we highly recommend using our roller lifters with Hippo **"High Pressure Pin Oiling"**. Specify "H" in the part number.
Ex. 66290X874H-16

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's. 146-149	Pushrods
See pg. 139	Alum/Bronze distributor gear
See pg. 138	Roller timing gear set (1972 - up)
Pg's.150-165	Rocker arms (1.73) 7⁄16

Note: If using guide plates, heat-treated pushrods (RC 60 series) are required. See pushrods or contact Crower.
Note: If exceeding 8000 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

Honda / Acura



FEATURES NEW STRONGER CORE DESIGN

RACE CORE ALSO AVAILABLE GO ONLINE FOR DETAILS

B SERIES VTEC (B16A / B18C / B17A) - TWIN CAM

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

Description	Part Number	C.I.D. Group	Advertised Duration (.010") Intake	Advertised Duration (.010") Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift Intake	Gross Lift Exhaust	Rec Kit
STOCK CIVIC Si (1999-2000)	**Civic Si**	Mid	284°	282°	224°	220°	.265"	.244"	.412"	.379"	**Stock**
STOCK GSR (94-up)	**GSR**	Mid	290°	292°	236°	224°	.273"	.244"	.423"	.378"	**Stock**
JDM SPEC CIVIC TYPE R (98-up)	**CTR**	Mid	294°	305°	240°	232°	.289"	.269"	.447"	.416"	**Stock**
STAGE 1 Performance oriented street use. CTR+ profile that will work with Type R valve springs. Also works w/mild turbo. RPM Range: 1500 to 8500+.	**63401-2**	Mid Sec Pri	296° 278° 259°	306° 288° 230°	242° 200° 176°	234° 201° 179°	.290" .214" .141"	.270" .204" .131"	.449" .321" .204"	.418" .306" .190"	**84163**
STAGE 2 - Forced Induction Special Designed specifically for turbo/blower. Features short duration, low overlap and high valve lift. Requires kit #84161. RPM Range: 1500 to 9500+. Horsepower varies w/boost.	**63401T-2**	Mid Sec Pri	308° 278° 259°	309° 288° 230°	233° 200° 176°	235° 201° 179°	.301" .214" .141"	.287" .204" .131"	.466" .321" .204"	.445" .306" .190"	**84161**
STAGE 2 Stock idle lobes (sec/pri) with #63402 VTEC (mid) lobes. Recommend #84163 spring unless stock rev limit. RPM Range: 1800 to 9250+. 18+ hp over B18C.	**63402A-2**	Mid Sec Pri	311° 278° 259°	308° 288° 230°	255° 200° 176°	248° 201° 179°	.301" .214" .141"	.301" .204" .131"	.466" .321" .204"	.466" .306" .190"	**84163**
STAGE 2 - 3/4 Race Road/Rally Race and Street/Strip. Requires #84161 kit with rev limiter mod. V-tec & ECU tuning req. RPM Range: 2500 to 9500+. 20+ hp over built B18C.	**63402-2**	Mid Sec Pri	311° 284° 269°	308° 273° 259°	255° 215° 196°	248° 213° 193°	.301" .243" .181"	.301" .234" .174"	.466" .364" .262"	.466" .351" .252"	**84163 or 84161**
STAGE 2 - PLUS PERFORMANCE RPM Range:	**63402P-2**	Mid Sec Pri	312° 284° 269°	310° 273° 259°	256° 215° 196°	251° 213° 193°	.320" .243" .181"	.318" .234" .174"	.496" .364" .262"	.493" .351" .252"	**84163 or 84161**
STAGE 3 - Full Race, All Motor / Turbo Drag Race and rough Street/Strip. Requires #84161 kit with modified revs. RPM Range: 1200 to 9750+. 22+ hp over built B18C.	**63403-2**	Mid Sec Pri	305° 282° 291°	305° 284° 283°	263° 216° 198°	255° 214° 199°	.302" .243" .215"	.302" .234" .203"	.468" .364" .311"	.468" .351" .294"	**84163 or 84161**
STAGE 3 - PLUS PERFORMANCE	**63403P-2**	Mid Sec Pri	318° 282° 291°	314° 284° 283°	268° 216° 198°	256° 214° 199°	.328" .243" .215"	.328" .234" .203"	.508" .364" .311"	.508" .351" .294"	**84163 or 84161**

Duration figures are taken at the valve. Gross lift calculated by using the following rocker ratios: Mid (VTEC) - 1.55, Secondary - 1.50, Primary - 1.45.

CUSTOM GRIND - Crower can custom grind cams to your desired specs, also proprietary applications. Part # **00063-2**

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84163S	68185-16	87093S-16	Steel retainer intended for high mileage B18C applications
84163	68185-16	87093-16	Titanium retainer intended for race and limited street
84163D	68185-16	87093D-16*	Titanium retainer. B16A w/high lift cams (+.060" inst height). Mach work req.
84161	68188-16	87093-16	Titanium retainer. High pressure spring for rpm over 9500
84161D	68188-16	87093D-16*	Titanium retainer. High press. spring, high lift cams (+.060"). Mach work req.

REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

ADJUSTABLE SPROCKETS
Crower's new cam sprockets are made from premium 6061-T6 billet aluminum and incorporate a four bolt ARP® fastening system to prevent the slippage found in other brands. The lightweight design (327g) reduces unwanted harmonics which could cause valve train failure. To have the full potential of your cam performance, cam sprockets are required.

STAINLESS STEEL VALVES
Made from the highest grade stainless steel, this Crower valve is a must for high horsepower, high boost and high rpm applications. The exclusive "Pro Flo" head design delivers a significant increase in cylinder head flow figures, while the tip area is hardened to RC50, including past the critical keeper groove area for added strength. Fully CNC machined and swirl polished to insure that you will get the best performance valve available on the market. Choose from standard, 1/2mm, 1mm oversize. Titanium valves also available.

Note: Valve guides may require honing to size. All Crower VTEC valves are 5.5mm stem diameter. Factory guides may vary depending on specific engine.

Spring pressure:
68185-16 Seat: 1.350" @ 49 lbs / Nose: 0.900" @ 186 lbs / Coil bind: 0.805" (No machine work required).
68188-16 Seat: 1.350" @ 82 lbs / Nose: 0.900" @ 224 lbs / Coil bind: 0.765" (No machine work required).
Optional spring:
Note: Crower titanium retainers weigh 7.5 grams vs. 12 grams stock steel. Crower steel retainers weigh 10.5 grams.
***Note: Some machine work on retainer #87093D may be required on the underside of rocker to allow retainer clearance.**
86115-16 Premium steel billet valve keepers (locks) available in standard or +.050" inst ht (#86115X1-16).
86115T-16 Premium titanium billet valve keepers (locks) available in standard installed height. Half the weight of steel.

ACCESSORIES

Part No.	Description
86054BB	Adjustable Cam Sprocket (1 only). All black. 2 required
86054BC	Adjustable Cam Sprocket (1 only). Black & Silver. 2 required
97400I-8	Stainless steel valves - 33 mm head dia (8 only int)
97400E-8	Stainless steel valves - 28 mm head dia (8 only exh)
97401I-8	Stainless steel valves - 33.5 mm head dia (8 only int)
97401E-8	Stainless steel valves - 28.5 mm head dia (8 only exh)
97402I-8	Stainless steel valves - 34 mm head dia (8 only int)

Note: When ordering valves, be sure to specify one set int and one set exh.
Note: When ordering sprockets, be sure to specify two.
Rec 1/2mm over on exh.

For technical support call 619-661-6477 • Some products listed are not legal for sale or use on emission controlled motor vehicles • RPM ranges vary upon application • www.crower.com

H22 SERIES VTEC - TWIN CAM
FEATURES STRONGER CORE DESIGN

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).
Duration figures are taken at the valve.
Complete dyno figures available online at **www.crower.com**. Gross lift calculated by using the following rocker ratios: Mid Lobe (VTEC) - 1.55, Secondary Lobe - 1.50, Primary Lobe - 1.45.

Description	Part Number	C.I.D. Group	Advertised Duration (.010") Intake	Advertised Duration (.010") Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift Intake	Gross Lift Exhaust	Rec Kit
STOCK Type SH	**SH**	Mid	288°	308°	231°	234°	.289"	.268"	.448"	.415"	**Stock**
STOCK JDM TYPE S	**JDM**	Mid	306°	310°	230°	230°	.303"	.283"	.469"	.438"	**Stock**
STAGE 1 Proven performer in all motor applications on the street. No ECU mods or aftermarket valve springs required. RPM Range: Idle to 7500+	**63421-2**	Mid Sec Pri	307° 214° 210°	318° 285° 276°	238° 183° 175°	238° 191° 183°	.296" .215" .179"	.276" .208" .169"	.459" .323" .260"	.428" .312" .245"	**Stock**
STAGE 2 - Forced Induction Special Excellent for turbo or supercharged applications. Features short duration and high lift. Requires spring #68184-16. RPM Range: Idle to 8000+	**63421T-2**	Mid Sec Pri	308° 214° 210°	309° 285° 276°	233° 183° 175°	235° 191° 183°	.299" .215" .179"	.289" .208" .169"	.463" .323" .260"	.448" .312" .245"	**84167** **84167S**
STAGE 2 Stock idle lobes (sec/pri) with similar #63422 VTEC (mid) lobes. Recommend #84167 kit unless stock revs. RPM Range: Idle to 8000	**63422A-2**	Mid Sec Pri	311° 214° 210°	308° 285° 276°	255° 183° 175°	248° 191° 183°	.302" .215" .179"	.301" .208" .169"	.468" .323" .260"	.467" .312" .245"	**84167** **84167S**
STAGE 2 - 3/4 Race - All Motor / Turbo Road/Rally Race and Street/Strip. Most popular profile. Requires #84167 kit. V-tec & ECU tuning recommended. RPM Range: 1000 to 8000+	**63422-2**	Mid Sec Pri	311° 280° 278°	308° 289° 256°	255° 199° 198°	248° 201° 199°	.302" .216" .196"	.301" .204" .182"	.468" .324" .284"	.467" .306" .263"	**84167** **84167S**
STAGE 2 - 3/4 Race PLUS PERFORMANCE	**63422P-2**	Mid Sec Pri	312° 280° 278°	310° 289° 256°	256° 199° 198°	257° 201° 199°	.320" .216" .196"	.318" .204" .182"	.496" .324" .284"	.493" .306" .263"	**84167** **84167S**
STAGE 3 - Full Race, All Motor / Turbo Drag Race and rough Street/Strip. Requires #84167 kit. Not for inexperienced tuner. Head Mods, V-tec & ECU tuning req. RPM Range: 1100 to 8200+	**63423-2**	Mid Sec Pri	305° 267° 262°	305° 269° 254°	263° 216° 198°	255° 210° 193°	.302" .243" .184"	.302" .236" .176"	.468" .365" .267"	.468" .354" .255"	**84167** **84167S**
STAGE 3 - PLUS PERFORMANCE	**63423P-2**	Mid Sec Pri	318° 267° 262°	314° 269° 254°	268° 216° 198°	256° 210° 193°	.328" .243" .184"	.328" .236" .176"	.508" .365" .267"	.508" .354" .255"	**84167** **84167S**

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84167	68184-16	87093D-16	Titanium retainer is +.060" inst. ht. Rocker machining may be required.
84167S	68184-16	87093DS-16	Steel retainer, for daily street use.

Spring pressure:
68184-16 Seat: 1.460" @ 89 lbs / Nose: 0.950" @ 220 lbs / Coil bind: 0.790" (No machine work required).
Optional spring:
Note: Some machine work may be required on the underside of rocker to allow retainer clearance.
86115-16 Premium steel billet valve keepers (locks) available in standard or +.050" inst ht (#86115X1-16).
86115T-16 Premium titanium billet valve keepers (locks) available in standard installed height. Half the weight of steel.

REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

ADJUSTABLE SPROCKETS
Crower's new cam sprockets are made from premium 6061-T6 billet aluminum and incorporate a four bolt ARP® fastening system to prevent the slippage found in other brands. The lightweight design (327g) reduces unwanted harmonics which could cause valve train failure. To obtain full potential of your cam performance, cam sprockets are required.

STAINLESS STEEL VALVES
Made from the highest grade stainless steel, this new Crower valve is a must for high horsepower, high boost and high rpm applications. The exclusive "Pro Flo" head design delivers a significant increase in cylinder head flow figures, while the tip area is hardened to RC50, including past the critical keeper groove area for added strength. Fully CNC machined and swirl polished to insure that you will get the best performance valve available on the market. Choose from standard, 1/2 mm, 1 mm and 2 mm oversize. Titanium valves also available. Contact Crower for availability. When ordering sprockets, be sure to specify two.

ACCESSORIES

Part No.	Description
86054H	Adjustable Cam Sprocket (1 only). All black. 2 required
97415I-8	Stainless steel valves - 35 mm head dia (8 only int)
97415E-8	Stainless steel valves - 30 mm head dia (8 only exh)
97416I-8	Stainless steel valves - 35.5 mm head dia (8 only int)
97416E-8	Stainless steel valves - 30.5 mm head dia (8 only exh)
97417I-8	Stainless steel valves - 36 mm head dia (8 only int)
97417E-8	Stainless steel valves - 31 mm head dia (8 only int)
97418I-8	Stainless steel valves - 37 mm head dia (8 only int)

Note: When ordering valves, be sure to specify one set int and one set exh.
Note: When ordering sprockets, be sure to specify two.
Note: Valve guides may require honing to size. All Crower VTEC valves are 5.5mm stem diameter. Factory guides may vary depending on specific engine.

CUSTOM GRIND - Crower can custom grind cams to your desired specs, also proprietary applications.
Part # 00065-2

Honda / Acura

RSX-Type S (USDM) & CIVIC-Type R (JDM) - K20A2 VTEC

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

New Improved Cam Core Technology

Description	Part Number	C.I.D. Group	Advertised Duration (.010") Intake	Advertised Duration (.010") Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift 1.75 / 1.75 Intake	Gross Lift 1.75 / 1.75 Exhaust	Rec Kit
ACURA RSX-Type S (2001-up)	**Stock**	Mid	302°	305°	219°	215°	.276"	.246"	.483"	.431"	
ACURA TSX (2004)	**Stock**	Mid	310°	302°	210°	212°	.258"	.259"	.451"	.453"	
STAGE 1 Performance oriented street. Hotter than JDM Type R profile. Works with stock springs if no mods to factory rev limiter. RPM Range: Idle to 9000	**63451-2**	Mid Sec Pri	300° 245° 245°	290° 245° 245°	229° 176° 176°	226° 176° 176°	.274" .173" .173"	.272" .173" .173"	.480" .294" .294"	.476" .294" .294"	**Stock or 84164 84164S**
STAGE 2 - Forced Induction Special Designed for turbo/supercharger. Features short duration, low overlap and high lift. Requires #84164 kit & ECU mods. RPM Range: Idle to 9500+. Horsepower varies w/boost & mods.	**63451T-2**	Mid Sec Pri	296° 245° 245°	296° 245° 245°	220° 176° 176°	220° 176° 176°	.297" .173" .173"	.297" .173" .173"	.519" .294" .294"	.519" .294" .294"	**84164 84164S**
STAGE 2 - 3/4 Race All Motor / Turbo Road/Rally and Street/Strip. Requires #84164 spring kit and compatible ECU upgrade. Slight lope at idle to be expected. RPM Range: 1000 to 9500	**63452-2**	Mid Sec Pri	304° 250° 250°	300° 250° 250°	234° 180° 180°	228° 180° 180°	.294" .190" .190"	.276" .190" .190"	.514" .323" .323"	.483" .323" .323"	**84164 84164S**
STAGE 2 - 3/4 Race All Motor / Turbo - Performance Plus	**63452P-2**	Mid Sec Pri	***Call CROWER for specs.***								
STAGE 3 - Full Race, All Motor / Turbo Drag Race and radical Street/Strip. Requires #84164 spring Not for inexperienced tuner. Head Mods, V-tec & ECU tuning req. RPM Range: 1200 to 10,000	**63453-2**	Mid Sec Pri	310° 256° 256°	304° 256° 256°	247° 185° 185°	244° 185° 185°	.303" .207" .207"	.282" .207" .207"	.530" .352" .352"	.494" .352" .352"	**84164 84164S**
STAGE 3 - Full Race, All Motor / Turbo - Performance Plus	**63453P-2**	Mid Sec Pri	***Call CROWER for specs.***								
CUSTOM GRIND - Crower can custom grind cams to your desired specs, also proprietary profiles available upon request.	**00066-2**		***Refer to page 7 for camshaft recommendation form***								

Note: The above cams will not fit the base RSX or Civic Si (USDM 2001-up) models with the K20A3 engine. Cams for those applications will be available shortly.
Duration figures are taken at the cam. Gross lift calculated by using the following rocker ratios: Mid (VTEC) - 1.75, Secondary - 1.7, Primary - 1.7.

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84164	68189-16	87094-16	Titanium retainer intended for race and limited street
84164S	68189-16	87094S-16	Steel retainer, for daily street use.

Spring pressure:
68189-16 Seat: 1.590" @ 85 lbs / Nose: 1.110" @ 261 lbs / Coil bind: 1.030" (No machine work required).
Note: Crower titanium retainers weigh 7.5 grams vs. 12 grams stock steel. Crower steel retainers weigh 10.5 grams.
86115-16 Premium steel billet valve keepers (locks) available in standard installed height.
86115T-16 Premium titanium billet valve keepers (locks) available in standard installed height. Half the weight of steel.

REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

ACCESSORIES

Part No.	Description
97410I-8	Stainless steel valves - 35 mm head dia (8 only int)
97410E-8	Stainless steel valves - 30 mm head dia (8 only exh)
97411I-8	Stainless steel valves - 35.5 mm head dia (8 only int)
97411E-8	Stainless steel valves - 30.5 mm head dia (8 only exh)
97412I-8	Stainless steel valves - 36 mm head dia (8 only int)
97412E-8	Stainless steel valves - 31 mm head dia (8 only ext)

Note: When ordering valves, be sure to specify one set int and one set exh.

STAINLESS STEEL VALVES
Made from the highest grade stainless steel, this new Crower valve is a must for high horsepower, high boost and high rpm applications. The exclusive "Pro Flo" head design delivers a significant increase in cylinder head flow figures, while the tip area is hardened to RC50, including past the critical keeper groove area for added strength. Fully CNC machined and swirl polished to insure that you will get the best performance valve available on the market. Choose from standard, 1/2 mm, 1 mm and 2 mm oversize. Titanium valves also available. Contact Crower for availability.

Honda / Acura

B18A/B SERIES NON-VTEC - TWIN CAM

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

New Improved Cam Core Technology

Description	Part Number	Advertised Duration @ .010" Intake	Advertised Duration @ .010" Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift 1.75 / 1.75 Intake	Gross Lift 1.75 / 1.75 Exhaust	Rec Kit
FACTORY OEM SPECS (B18B - LS)	**Stock**	220° Lobe / 265° Valve	222° / 267°	185° Lobe / 194° Valve	187° / 196°	.225"	.217"	.394"	.380"	**Stock**
STAGE 1 Street use with emphasis on mid range power. Slight lope at idle. RPM Range: Idle to 7250+	**62402-2**	245° Lobe / 290° Valve	251° / 296°	193° Lobe / 203° Valve	198° / 208°	.238"	.228"	.417"	.399"	**Stock**
STAGE 2 - Forced Induction Special Turbo Special. Short duration and high lift grind. Requires #84162 kit. RPM Range: 900 to 8000+.	**62402T-2**	256° Lobe / 301° Valve	256° / 301°	193° Lobe / 203° Valve	193° / 203°	.268"	.268"	.469"	.469"	**84162** **84162S**
STAGE 2 Street/Strip package. Most popular N/A profile. Requires #84162 kit. RPM Range: 1000 to 8000+.	**62403-2**	250° Lobe / 295° Valve	250° / 295°	211° Lobe / 221° Valve	210° / 220°	.241"	.235"	.422"	.411"	**84162** **84162S**
STAGE 3 - 3/4 Race Recommended for mostly strip use in N/A applications. Rough idle. RPM Range: 1100 to 8200+	**62404-2**	263° Lobe / 308° Valve	258° / 303°	216° Lobe / 226° Valve	214° / 224°	.254"	.248"	.445"	.434"	**84162** **84162S**
STAGE 3 - Full Race All Motor All out, all motor drag profile. RPM Range: 1500 to 8500+	**62405A-2**	308° Lobe / 353° Valve	305° / 350°	230° Lobe / 241° Valve	227° / 238°	.273"	.268"	.478"	.469"	**84162** **84162S**
CUSTOM GROUND B18A/B CAMS - Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles also available.	**00062-2**	*Refer to page 7 for camshaft recommendation form*								

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84162	68181-16	87092-16	Titanium retainer. Fits B18A and B18B. For limited street use.
84162S	68181-16	87092S-16	Steel Retainer, for daily street use.

Spring pressure:
68181-16 Seat: 1.400" @ 48 lbs / Nose: 0.950" @ 148 lbs / Coil bind: 0.710" (No machine work required).
Optional spring:
68182-16 Seat: 1.400" @ 70 lbs / Nose: 0.950" @ 202 lbs / Coil bind: 0.800" (No mach work / High pressure design).
Note: Crower titanium retainers weigh 5.5 grams vs. 12 grams stock.
Factory installed height on intake = 1.320", exhaust = 1.425"
REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

ACCESSORIES

Part No.	Description
86054BB	Adjustable Cam Sprocket (1 only). All black. 2 required
86054BC	Adjustable Cam Sprocket (1 only). Black & Silver. 2 reqired
97407I-8	Stainless steel valves - 31 mm head dia (8 only int)
97407E-8	Stainless steel valves - 28 mm head dia (8 only exh)
97408I-8	Stainless steel valves - 31.5 mm head dia (8 only int)
97408E-8	Stainless steel valves - 28.5 mm head dia (8 only exh)

Note: When ordering valves, be sure to specify one set int and one set exh.
Note: When ordering sprockets, be sure to specify two.

MAXI-LITE BILLET RODS
Crower's new Maxi-Lite billet is approximately 100 grams lighter than Crower's standard billet.

STEEL BILLET RODS
100% made in the USA from premium steel billet material, Crower's premium standard steel billet rod (#B93728B-4) is designed for boosted applications in excess of 12 psi or over 100 HP shot of nitrous. Also available in a Maxi-Lite all motor design (ML93728B-4) for added weight reduction and quicker throttle response.

Honda / Acura

H23 SERIES NON-VTEC - TWIN CAM

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

New Improved Cam Core Technology

Description	Part Number	Advertised Duration (.010") Intake	Advertised Duration (.010") Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift 1.85 / 1.85 Intake	Gross Lift 1.85 / 1.85 Exhaust	Rec Kit
HONDA H23 Prelude Si (1994)	**Stock**	240°	240°	183°	183°	.224"	.224"	.414"	.414"	**Stock**
STAGE 1 Street use with emphasis on bottom end and mid range power. Works with stock springs up to factory rev limiter. RPM Range: Idle to 7000+	**62481-2**	245°	251°	193°	198°	.238"	.228"	.440"	.422"	**84177**
STAGE 2 - Forced Induction Designed specifically for turbo or supercharger applications. Low duration, high lift profile. Requires Crower spring kit #84177. RPM Range: Idle to 8000+	**62481T-2**	245°	245°	193°	193°	.238"	.238"	.440"	.440"	**84177**
STAGE 2 - 3/4 Race Designed for street/strip applications in normally aspirated engines. Requires spring/retainer kit #84177. RPM Range: 1000 to 7800+	**62482-2**	250°	250°	211°	210°	.241"	.235"	.446"	.435"	**84177**
STAGE 3 - Full Race Drag Race and radical Street/Strip. Requires #84177 spring kit and compatible ECU upgrade for optimum results. Rough idle. RPM Range: 1100 to 8000+	**62483-2**	255°	255°	215°	215°	.244"	.244"	.451"	.451"	**84177**
CUSTOM GRIND - Crower can custom grind cams to your desired specs, also proprietary profiles available upon request.	**00061-2**	*Refer to page 7 for camshaft recommendation form*								

Duration figures are taken at the lobe.

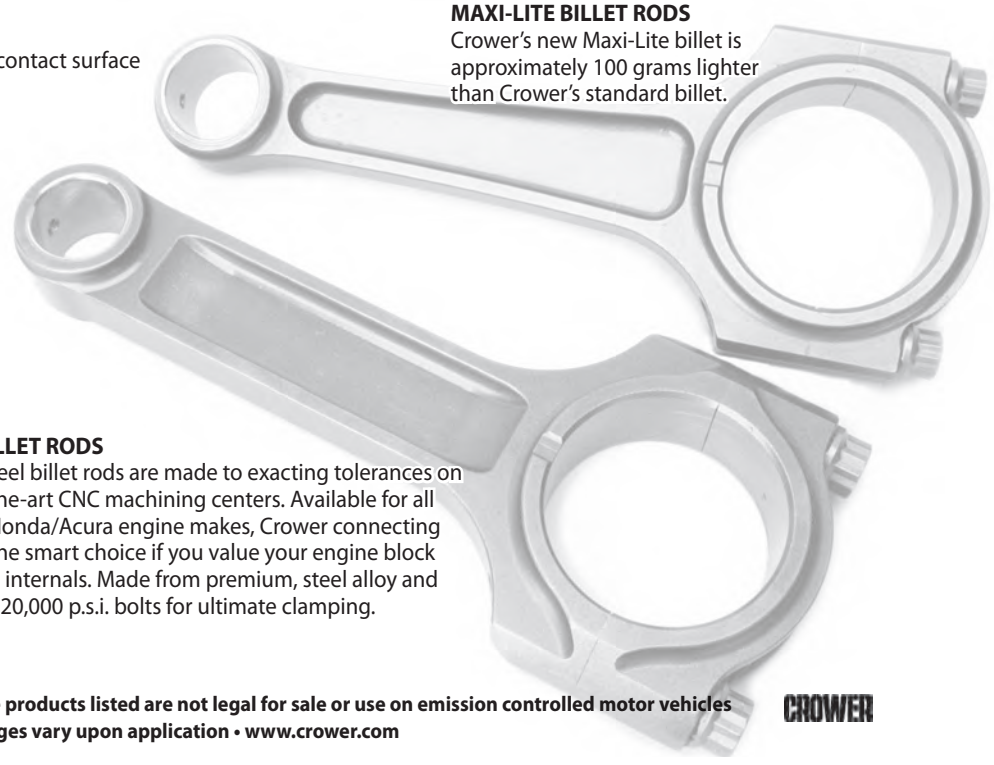
ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84177	68181-16	87092D-16	68929-16 Titanium retainer intended for race and limited street

Spring pressure:
68181-16 Seat: 1.350" @ 56 lbs / Nose: 0.950" @ 148 lbs / Coil bind: 0.710"
(No machine work required).
Note: Crower titanium retainers weigh 7.5 grams vs. 12 grams stock steel.
Crower steel retainers weigh 10.5 grams.

REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

MAXI-LITE BILLET RODS
Crower's new Maxi-Lite billet is approximately 100 grams lighter than Crower's standard billet.



STEEL BILLET RODS
Crower steel billet rods are made to exacting tolerances on state-of-the-art CNC machining centers. Available for all popular Honda/Acura engine makes, Crower connecting rods are the smart choice if you value your engine block and other internals. Made from premium, steel alloy and features 220,000 p.s.i. bolts for ultimate clamping.

CIVIC EX - D17A2 VTEC - SINGLE CAM

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

New Improved Cam Core Technology

Description	Part Number	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift Intake	Gross Lift Exhaust	Rec Kit
FACTORY OEM SPECS (2001-up Civic EX)	**Stock**	235°	229°	183°	171°	.199"	.163"	.338" inches 8.58 mm	.310" 7.87	**Stock**
STAGE 1 - Normally Aspirated - Daily Driver Stock idle, excellent street manners. Works with stock valve train. RPM Range: Idle to 7000+	**63461**	234°	228°	188°	180°	.217"	.190"	.369" inches 9.37 mm	.361" 9.17	**Stock**
STAGE 2 - Boost Special - Street/Strip Turbo or Supercharger Short duration, big lift turns your turbo loose for added HP. Req #84166. RPM Range: Idle to 7500+.	**63461T**	243°	232°	193°	183°	.237"	.218"	.403" inches 10.23 mm	.414" 10.51	**84166** **84166S**
STAGE 2 - Normally Aspirated - 3/4 Race Turbo Hot street/strip profile, slight lope at idle. #84166 spring kit required. RPM Range: 1500 to 8000+	**63462**	253°	236°	200°	188°	.227"	.217"	.386" inches 9.80 mm	.412" 10.46	**84166** **84166S**
STAGE 2 - Performance Plus - 3/4 Race Turbo RPM Range:	**63462P**	*Call CROWER for specs.*								**84166** **84166S**
STAGE 3 - Normally Aspirated - All Motor Drag Profile Not for inexperienced tuner. Head Mods, V-tec & ECU tuning req. Limited street. RPM Range: 1250 to 9000+	**63463**	261°	253°	208°	200°	.250"	.227"	.425" inches 10.80 mm	.431" 10.94	**84166** **84166S**
STAGE 3 - Performance Plus - All Motor Drag Profile RPM Range: 2500 to 9000+	**63463P**	*Call CROWER for specs.*								**84166** **84166S**
CUSTOM GROUND D17A2 CAM - Special order custom ground profile available for an additional charge. Proprietary and confidential profiles also available.	**00060**	*Refer to page 7 for camshaft recommendation form*								

Note: The above cores will not fit the D17A1 non VTEC cylinder head. No cores available at time of publication. Rocker ratio is 1.7:1 intake and 1.9:1 exhaust.

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84166	68180-16	87096-16	High pressure single spring and titanium retainer kit.
84166S	68180-16	87096S-16	Steel Retainer for Daily Street Use.

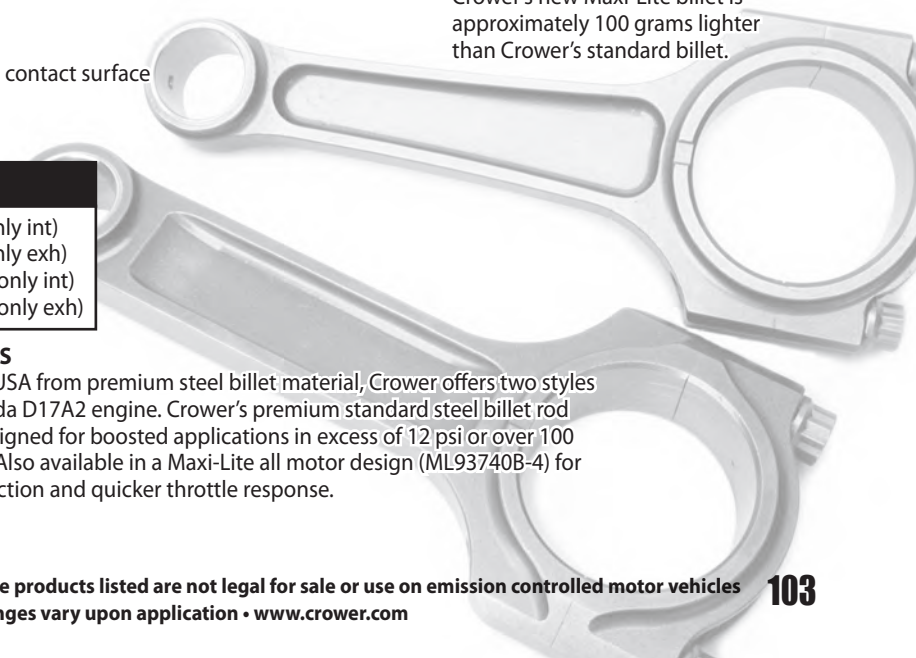
Spring pressure:
68180-16 Seat: 1.975" @ 58 lbs / Nose: 1.500" @ 154 lbs / Coil bind: 1.320" (No machine work required).
86115-16 Premium steel billet valve keepers (locks) available in standard or +.050" inst ht (#86115X1-16).
86115T-16 Premium titanium billet valve keepers (locks) available in standard installed height. Half the weight of steel.

REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

ACCESSORIES

Part No.	Description
97403I-8	Stainless steel valves - 30 mm head dia (8 only int)
97403E-8	Stainless steel valves - 26 mm head dia (8 only exh)
97404I-8	Stainless steel valves - 30.5 mm head dia (8 only int)
97404E-8	Stainless steel valves - 26.5 mm head dia (8 only exh)

MAXI-LITE BILLET RODS
Crower's new Maxi-Lite billet is approximately 100 grams lighter than Crower's standard billet.



STEEL BILLET RODS
100% made in the USA from premium steel billet material, Crower offers two styles of rods for the Honda D17A2 engine. Crower's premium standard steel billet rod (#B93740B-4) is designed for boosted applications in excess of 12 psi or over 100 HP shot of nitrous. Also available in a Maxi-Lite all motor design (ML93740B-4) for added weight reduction and quicker throttle response.

Honda / Acura

D16Z6 & D16Y8 VTEC - SINGLE CAM

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

New Improved Cam Core Technology

Description	Part Number	Lobe	Advertised Duration (.010") Intake	Advertised Duration (.010") Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift Intake	Gross Lift Exhaust	Rec Kit
STOCK D16Z6 SOHC VTEC (92-95)	**Stock**	Int Mid / Exh	304°	303°	212°	204°	.246"	.207"	.394"	.373"	**Stock**
STOCK D16Y8 SOHC VTEC (96-up)	**Stock**	Int Mid / Exh	288°	292°	218°	204°	.248"	.204"	.397"	.367"	**Stock**
STOCK REPLACEMENT Similar to stock profile. Excellent for mild turbo and nitrous on the street with no other mods. RPM Range: Idle to 7000+	**63440Z** **63440Y**	Mid Sec Pri	288° 293° 293°	299° – –	220° 197° 197°	207° – –	.243" .205" .205"	.203" – –	.389" .328" .328"	.365" – –	**Stock**
STAGE 1 Features far more aggressive ramp rates than stock with added duration. Idle lobes remain same as stock. RPM Range: Idle to 7200+	**63441Z** **63441Y**	Mid Sec Pri	292° 293° 293°	302° – –	228° 197° 197°	208° – –	.254" .205" .205"	.214" – –	.406" .328" .328"	.385" – –	**84166** **84166S**
STAGE 2 - Forced Induction Special Designed specifically for turbo or supercharged engines. Short duration reduces overlap, for more cylinder pressure. RPM Range: Idle to 8000+	**63441ZT** **63441YT**	Mid Sec Pri	312° 293° 293°	318° – –	234° 197° 197°	217° – –	.269" .205" .205"	.237" – –	.430" .328" .328"	.427" – –	**84166** **84166S**
STAGE 2 - 3/4 Race Street/Strip. Rough lope at idle due to increased sec/pri lobe specifications. Most popular all-motor profile. RPM Range: 1000 to 7500+	**63442Z** **63442Y**	Mid Sec Pri	319° 295° 295°	310° – –	235° 204° 204°	223° – –	.270" .205" .205"	.242" – –	.432" .332" .332"	.436" – –	**84166** **84166S**
STAGE 2 - 3/4 Race - Performance Plus	**63442ZP** **63442YP**	*Call CROWER for specs.*									**84166** **84166S**
STAGE 3 - Full Race Race cams. Requires extensive cylinder head modifications. Not for inexperienced tuner. V-tec & ECU tuning req. RPM Range: 1200 to 8000+	**63443Z** **63443Y**	Mid Sec Pri	329° 295° 295°	317° – –	239° 204° 204°	226° – –	.276" .210" .210"	.260" – –	.442" .332" .332"	.468" – –	**84166** **84166S**
CUSTOM GRIND - Crower can custom grind cams to your desired specs, also proprietary applications.	**00067**		*Refer to page 7 for camshaft recommendation form*								

Note: Specify "Z" after part number if D16Z6 (92-95) or "Y" after part number if D16Y8 (96-up). All duration figures listed above are specific to the D16Y8.
Gross lift calculated by using the following rocker ratios: Int Mid Lobe (VTEC) - 1.60, Int Sec Lobe - 1.60, Int Pri Lobe - 1.60, Exhaust - 1.80.

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84166	68180-16	87096-16	Fits D16Z6 (92-95) and D16Y8 (96-up) cylinder heads
84166S	68180-16	87096S-16	Steel Retainer for Daily Street Use.

Spring pressure:
68180-16 Seat: 1.975" @ 58 lbs / Nose: 1.500" @ 154 lbs / Coil bind: 1.320" (No machine work required).
86115-16 Premium steel billet valve keepers (locks) available in standard or +.050" inst ht (#86115X1-16).
86115T-16 Premium titanium billet valve keepers (locks) available in standard installed height. Half the weight of steel.

ACCESSORIES

Part No.	Description
86054YC	D16Y8 Adjustable Cam Sprocket (1 only). Black & Silver.
86054YB	D16Y8 Adjustable Cam Sprocket (1 only). All Black.
86054ZC	D16Z6 Adjustable Cam Sprocket (1 only). Black & Silver.
86054ZB	D16Z6 Adjustable Cam Sprocket (1 only). All Black.
97403I-8	Stainless steel valves - 30 mm head dia (8 only int)
97403E-8	Stainless steel valves - 26 mm head dia (8 only exh)
97404I-8	Stainless steel valves - 30.5 mm head dia (8 only int)
97404E-8	Stainless steel valves - 26.5 mm head dia (8 only exh)

ADJUSTABLE SPROCKETS
Crower's new cam sprockets are made from premium 6061-T6 billet aluminum and incorporate a four bolt ARP® fastening system to prevent the slippage found in other brands. For the ultimate tuner, Crower sprockets feature 5/16" diameter, 12 point ARP® fasteners with a hardened washer to prevent galling and stripping. The lightweight design (367g) reduces unwanted harmonics which could cause valve train failure.

REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

Note: When ordering sprockets, Y = D16Y8 (96-up), Z = D16Z6 (92-95).
Note: When ordering valves, be sure to specify one set int and one set exh.

Mitsubishi / Dsm

4G63 TURBO ECLIPSE & TALON - TWIN CAM

Note: These cams use .000" intake (cold), .000" exhaust valve lash (cold).

New Improved Cam Core Technology

Description	Part Number	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .006" Intake	Duration @ .006" Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust	Rec Kit
FACTORY OEM SPECS (Eclipse 4G63 USDM)	**Stock**	256	256	181° Lobe 172° / 198° Valve 189°		174° Lobe 165° / 190° Valve 181°		.366" inches / 9.29 mm	.343" / 8.71	
	264	264	264	240° Lobe 240° / 256° Valve 256°		187° Lobe 186° / 203° Valve 202°		.393" inches / 9.98 mm	.374" / 9.50	
	272	272	272	249° Lobe 249° / 264° Valve 264°		195° Lobe 195° / 211° Valve 211°		.399" inches / 10.13 mm	.379" / 9.62	
STAGE 1 New Street use and more aggressive turbo and nitrous. Slight lope at idle. RPM Range: Idle to 7500+	**64412-2**	264	264	242° Lobe 242° / 258° Valve 258°		188° Lobe 188° / 204° Valve 204°		.391" inches / 9.93 mm	.372" / 9.45	**Stock**
STAGE 2 Specs derived from the popular 264 Intake / 272 Exhaust combination. RPM Range: Idle to 7750.	**64416-2**	264	272	249° Lobe 249° / 265° Valve 265°		188° Lobe 196° / 204° Valve 212°		.398" inches / 10.11 mm	.378" / 9.60	**84175 84175S**
STAGE 2 Most popular profile for street/strip. Excellent all purpose turbo. RPM Range: 1000 to 8000.	**64413-2**	272	272	254° Lobe 249° / 270° Valve 265°		195° Lobe 196° / 211° Valve 212°		.393" inches / 9.98 mm	.379" / 9.63	**84175 84175S**
STAGE 3 - 3/4 Race Recommended for strip and some street. Lope at idle. Requires #84175. RPM Range: 1100 to 8250+	**64414-2**	280	280	258° Lobe 258° / 275° Valve 275°		196° Lobe 198° / 213° Valve 215°		.411" inches / 10.44 mm	.391" / 9.93	**84175 84175S**
STAGE 4 - Full Race Not for the inexperienced tuner. Race only. RPM Range: 1200 to 8500+	**64415-2**	288	288	260° Lobe 256° / 278° Valve 274°		200° Lobe 196° / 218° Valve 216°		.425" inches / 10.80 mm	.416" / 10.57	**84175 84175S**
CUSTOM GROUND 4G63 CAMS - Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles, as well as mechanical profiles also available.	**00064-2**			*Refer to page 7 for camshaft recommendation form*						

If running a non-turbo 4G63 engine, the above cams are compatible for use.

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84175	68190-16	87095-16	15% more pressure than factory spring.
84175S	68190-16	87095S-16	Steel Retainer for Daily Street Use.

Spring pressure:
68190-16 Seat: 1.550" @ 74 lbs / Nose: 1.050" @ 210 lbs / Coil bind: 0.900"
(No machine work required).
Note: Crower titanium retainers weigh 7 grams vs. 14.5 grams stock.

REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

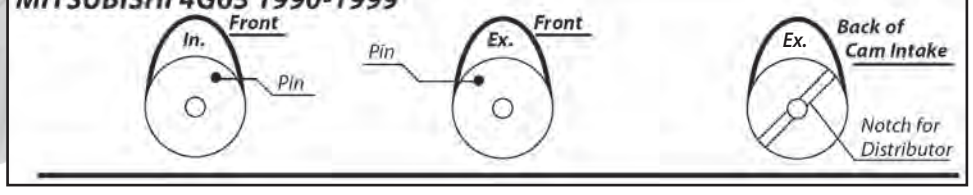
ADJUSTABLE SPROCKETS
Crower's new cam sprockets are made from premium 6061-T6 billet aluminum and incorporate a four bolt ARP® fastening system to prevent the slippage found in other brands. For the ultimate tuner, Crower sprockets feature 5/16" diameter, 12 point ARP® fasteners with a hardened washer to prevent galling and stripping. The lightweight design reduces unwanted harmonics which could cause valve train failure. Specify #86054M (sold separately).

ACCESSORIES

Part No.	Description
86054M	Adjustable Cam Sprocket (1 only). All black. 2 required
97420I-8	Stainless steel valves - 34 mm head dia (8 only int)
97420E-8	Stainless steel valves - 30.5 mm head dia (8 only exh)
97421I-8	Stainless steel valves - 34.5 mm head dia (8 only int)
97421E-8	Stainless steel valves - 31 mm head dia (8 only exh)
97422I-8	Stainless steel valves - 35 mm head dia (8 only int)
97422E-8	Stainless steel valves - 31.5 mm head dia (8 only int)

Note: When ordering valves, be sure to specify one set int and one set exh.
Note: When ordering sprockets, be sure to specify two.

Dowell Pin and Cam Sensor position when #1 cylinder lobes are at 12:00 a clock



Mitsubishi - Evolution

4G63 TURBO EVOLUTION VIII - TWIN CAM

Note: These cams use .000" intake (cold), .000" exhaust valve lash (cold).

New Improved Cam Core Technology

Description	Part Number	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .006" Intake	Duration @ .006" Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust	Rec Kit
FACTORY OEM SPECS (2004 Evolution VIII USDM)	**Stock**	256	256	236° Lobe 232° / 252° Valve 248°		182° Lobe 178° / 198° Valve 194°		.386" inches / 9.80 mm	.367" / 9.32	
	264	264	264	234° Lobe 232° / 250° Valve 248°		184° Lobe 182° / 200° Valve 198°		.416" inches / 10.56 mm	.393" / 9.98	
	272	272	272	241° Lobe 240° / 258° Valve 257°		191° Lobe 190° / 208° Valve 206°		.415" inches / 10.54 mm	.393" / 9.98	
	280	280	280	251° Lobe 250° / 267° Valve 266°		200° Lobe 200° / 216° Valve 216°		.415" inches / 10.54 mm	.393" / 9.98	
STAGE 1 Street use, plug and play, no cylinder head work or spring kit required. RPM Range: Idle to 7500+	**64431-2**	264	264	239° Lobe 236° / 256° Valve 252°		186° Lobe 184° / 203° Valve 202°		.413" inches / 10.50 mm	.391" / 9.93	**84175** **84175S**
STAGE 2 Combination of the popular HKS 264 intake/272 exhaust cam setup. RPM Range: Idle to 7750.	**64432-2**	264	272	239° Lobe 242° / 256° Valve 258°		185° Lobe 192° / 202° Valve 208°		.415" inches / 10.54 mm	.396" / 10.00	**84175** **84175S**
STAGE 3 - 3/4 Race Most popular profile. Slight lope at idle, added valve lift requires #84175. RPM Range: 1000 to 8000.	**64433-2**	272	272	256° Lobe 250° / 272° Valve 266°		200° Lobe 192° / 216° Valve 208°		.425" inches / 10.80 mm	.408" / 10.36	**84175** **84175S**
STAGE 4 - Race Profile Race only. Not for the inexperienced tuner. Requires spring kit #84175. RPM Range: 1100 to 8250+	**64434-2**	280	280	270° Lobe 260° / 286° Valve 266°		214° Lobe 200° / 230° Valve 216°		.450" inches / 11.43 mm	.425" / 10.80	**84175** **84175S**
CUSTOM GROUND EVO VIII CAMS - Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles, as well as mechanical profiles also available.	**00068-2**			*Refer to page 7 for camshaft recommendation form*						

These cams are not compatible for use on 4G63 Turbo Eclipse or Talon applications.

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84175	68190-16	87095-16	15% more pressure than factory spring.
84175S	68190-16	87095S-16	Steel Retainer for Daily Street Use.

Spring pressure:
68190-16 Seat: 1.550" @ 74 lbs / Nose: 1.050" @ 210 lbs / Coil bind: 0.900"
(No machine work required).
Note: Crower titanium retainers weigh 7 grams vs. 14.5 grams stock.

REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

ACCESSORIES

Part No.	Description
97420I-8	Stainless steel valves - 34 mm head dia (8 only int)
97420E-8	Stainless steel valves - 30.5 mm head dia (8 only exh)
97421I-8	Stainless steel valves - 34.5 mm head dia (8 only int)
97421E-8	Stainless steel valves - 31 mm head dia (8 only exh)
97422I-8	Stainless steel valves - 35 mm head dia (8 only int)
97422E-8	Stainless steel valves - 31.5 mm head dia (8 only exh)

Note: When ordering valves, be sure to specify one set int and one set exh.

MAXI-LITE BILLET RODS
Crower's new Maxi-Lite billet is approximately 100 grams lighter than Crower's standard billet.

STEEL BILLET RODS
Premium steel billet connecting rods designed for high boost applications are available for the 4G63 Evo and 2nd Gen Eclipse (#B93762B-4) as well as the 1st Gen Eclipse 4G63 (#B93761B-4). Includes aluminum-bronze bushings and rod bolts rated to 220,000 p.s.i. for ultimate clamping ability. Other Mitsubishi applications include the 3000GT/Stealth VR-4 (#B93763B-6) and the Lancer 4G94 (#B93764B-4).

420A MITSUBISHI ECLIPSE NON-TURBO - Twin Cam (Front Exhaust)

Note: These cams use .000" intake and exhaust valve lash (cold).

Mitsubishi

New Improved Cam Core Technology

Description	Part Number	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift 1.75 / 1.75 Intake	Gross Lift 1.75 / 1.75 Exhaust	Rec Kit
FACTORY OEM SPECS (Eclipse Non-Turbo)	**Stock**	222°	220°	172°	168°	.185"	.157"	.324"	.275"	**Stock**
STAGE 1 Aggressive street use and nitrous. Slight lope at idle. Kit #84176 req. RPM Range: 1500 to 7000+	**64461-2**	234°	238°	184°	184°	.200"	.176"	.350"	.308"	**84176** **84176S**
STAGE 2 - Forced Induction Special Designed specifically for Turbo/Supercharger appl. Springs required. RPM Range: 1500 to 7200+	**64462T-2**	238°	236°	187°	184°	.234"	.230"	.409"	.403"	**84176** **84176S**
STAGE 2 - 3/4 Race Most popular profile for the street/strip. Lope at idle. #84176 required. RPM Range: 2000 to 7200+	**64462-2**	241°	241°	196°	194°	.222"	.204"	.388"	.357"	**84176** **84176S**
STAGE 3 - Full Race Recommended for drag race use. Heavy engine mods required. RPM Range: 2200 to 7500+	**64463-2**	254°	250°	205°	200°	.254"	.250"	.444"	.437"	**84176** **84176S**
CUSTOM GROUND 420A CAMS - Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles, as well as mechanical profiles also available.	**00069-2**	*Refer to page 7 for camshaft recommendation form*								

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84176	68190-16	87084-16	15% more pressure than factory spring
84176S	68190-16	87095S-16	Steel Retainer for Daily Street Use.

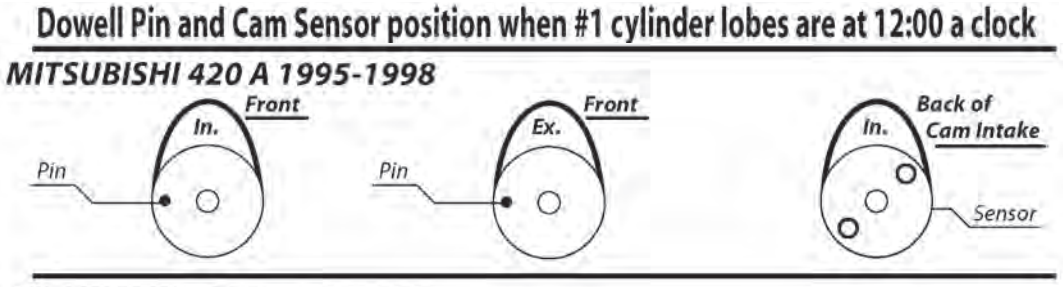
Spring pressure:
68190-16 Seat: 1.500" @ 88 lbs / Nose: 1.100" @ 195 lbs / Coil bind: 0.920" (No machine work required).
Note: Crower titanium retainers weigh 7 grams vs. 12.5 grams stock.

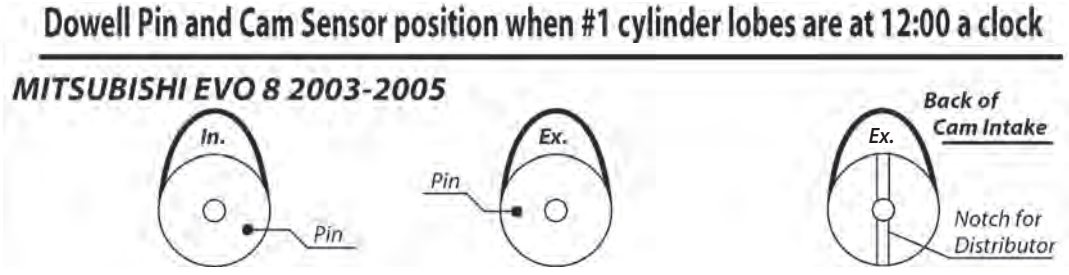
ACCESSORIES

Part No.	Description
86054N	420A Adjustable Cam Sprockets (1 only)

Note: When ordering sprockets, be sure to specify two.

REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/ smooth surface.





Mopar / DSM

DODGE NEON - TWIN CAM (Rear Exhaust)

Note: These cams use .000" intake and exhaust valve lash (cold).

Note: Cam specs are taken at the cam lobe. Specs at the valve will be higher.

New Improved Cam Core Technology

Description	Part Number	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift 1.75 / 1.75 Intake	Gross Lift 1.75 / 1.75 Exhaust	Rec Kit
FACTORY OEM SPECS (Neon 2.0L)	**Stock**	222°	222°	174°	172°	.198"	.180"	.347"	.315"	**Stock**
STAGE 1 Works with stock valve springs and retainers. Daily driver, mild idle. RPM Range: Idle to 6700+	**64450N-2**	234°	234°	184°	184°	.200"	.200"	.350"	.350"	**Stock**
STAGE 2 Aggressive street use and nitrous. Slight lope at idle. Springs req. RPM Range: 1500 to 7000+	**64451N-2**	241°	241°	196°	196°	.230"	.230"	.403"	.403"	**84176**
STAGE 2 - Forced Induction Special Designed specifically for Turbo/Supercharger appl. Springs required. RPM Range: 1500 to 7000+	**64454N-2**	238°	238°	188°	188°	.230"	.220"	.403"	.385"	**84176**
STAGE 3 - 3/4 Race Most popular profile for the street/strip. Springs/retainers mandatory. RPM Range: 2000 to 7200+	**64452N-2**	248°	248°	200°	200°	.234"	.234"	.410"	.410"	**84176**
STAGE 4 - Full Race Recommended for drag race use. Springs, ECU mods required. RPM Range: 2200 to 7500+	**64453N-2**	254°	254°	216°	216°	.265"	.265"	.463"	.463"	**84176**
CUSTOM GROUND NEON CAMS - Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles, as well as mechanical profiles also available.	**00076-2**	*Refer to page 7 for camshaft recommendation form*								

SRT-4 & PT CRUISER - Twin Cam (Rear Exhaust)

STAGE 1 Works with stock valve springs and retainers. Daily driver, mild idle. RPM Range: Idle to 6700+	**64475P-2** PT CRUISER **64475S-2** SRT-4	249°	254°	210°	203°	.410"	.393"	.234"	.226"	**84176**
STAGE 2 Aggressive street use and nitrous. Slight lope at idle. Springs req. RPM Range: 1500 to 7000+	**64476P-2** PT CRUISER **64476S-2** SRT-4	267°	249°	218°	210°	.210"	.245"	.425"	.410"	**84176**
STAGE 3 - 3/4 Race Most popular profile for the street/strip. Springs/retainers mandatory. RPM Range: 2000 to 7200+	**64477P-2** PT CRUISER **64477S-2** SRT-4	279°	271°	230°	222°	.260"	.249"	.449"	.433"	**84176**

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84176S	68190-16	87084S-16	15% more pressure with steel
***84176**	68190-16	87084-16	Titanium retainer made for racing speeds

*Titanium kit

Spring pressure:

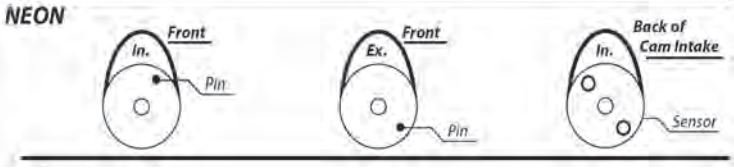
68190-16 Seat: 1.500" @ 88 lbs / Nose: 1.100" @ 195 lbs / Coil bind: 0.920"

(No machine work required).

Note: Crower titanium retainers weigh 7 grams vs. 12.5 grams stock.

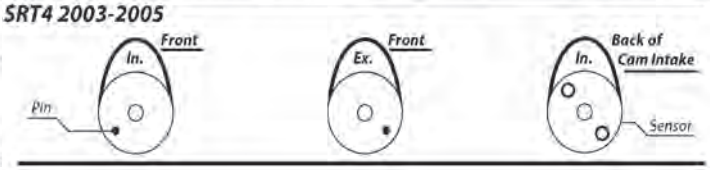
Dowell Pin and Cam Sensor position when #1 cylinder lobes are at 12:00 a clock

NEON



Dowell Pin and Cam Sensor position when #1 cylinder lobes are at 12:00 a clock

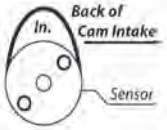
SRT4 2003-2005



REMEMBER!

When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

PT CRUISER 2001-2008



HYDRAULIC ROLLER CAMSHAFTS

03 & UP
DODGE 5.7 & 6.1 L HEMI

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	1.6 VL Intake	1.6 VL Exhaust	Suitable Component Kit
Hydraulic Roller - High torque, slight lope at idle. Operating Power Range : 950 to 5400 rpm		**33490**	- 114°	246°	254°	198°	205°	.485″	.516″	
Hydraulic Roller - Slighty rougher idle. Operating Power Range : 1100 to 5700 rpm		**33491**	- 114°	250°	258°	201°	209°	.496″	.516″	
Hydraulic Roller Operating Power Range : 1400 to 6000 rpm		**33492**	- 114°	254°	263°	206°	213°	.505″	.528″	
Hydraulic Roller Operating Power Range : 1600 to 6250 rpm		**33493**	- 114°	258°	267°	209°	218°	.512″	.538″	
Hydraulic Roller Operating Power Range : 1800 to 6400 rpm		**33494**	- 114°	263°	271°	213°	222°	.528"	.548"	
Hydraulic Roller Operating Power Range : 2000 to 6500 rpm		**33495**	- 114°	267°	275°	218°	225°	.539″	.560″	
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call with all engine data incl. head flow data, valve sizes, operating power range, etc when ordering.		**00003**		***Refer to page 7 for camshaft recommendation form***						

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Description
84713	66325-16	68435-16	87035-16	Steel Retainers
84714	66325-16	68435-16	87035T-16	Titanium Retainers

SPRING DISC: # 68924-1 A (O.D.): 1.400", B (Step): .970", C (I.D.): .527
68925-1 A (O.D.): 1.400", B (Step): .780", C (I.D.): .527

Spring pressure:
68435-16: O.D./I.D. Outer: 1.210/0.805 / O.D. Small End: 1.035 / I.D. Small End: 0.630 Seat: 1.800" @ 135 lbs / Nose: 1.200" @ 350 lbs / Beehive valve spring: / Spring Rate: 358 / Coil bind: 1.150" / Max Lift: 0.600 (Machine work not needed).
See spring and retainer specs or contact Crower for proper recommendations. Valve timing events are available online at: **www.crower.com/valvtime.html**

DODGE V10 VIPER (1992-2002) HYDRAULIC ROLLER CAMSHAFTS

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	Part Number	Lobe Center	Advertised Duration (.006") Intake	Advertised Duration (.006") Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust	Rec Kit
STOCK SPECS		114°	275°	294°	212°	232°	.320"	.320"	.544"	.544"	-
STAGE 1 - Street use with emphasis on idle and mid range power. RPM Range: Idle to 6000	**36431**	114°	284°	292°	222°	230°	.331"	.328"	.563"	.558"	**84548 84549**
STAGE 2 - Street/Strip, lope at idle, emphasis on mid to top end power. RPM Range: 1000 to 6300	**36432**	114°	292°	292°	230°	230°	.328"	.328"	.558"	.558"	**84548 84549**
STAGE 3 - Race/Strip, rough idle, ECU mods recommended. RPM Range: 1250 to 6500+	**36433**	114°	300°	300°	238°	238°	.345"	.345"	.587"	.587"	**84548 84549**
CUSTOM GROUND ROLLER CAMS - Special order custom ground profiles available for an additional charge.	**00060**		***Refer to page 7 for camshaft recommendation form***								

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers		Remarks
84548	68405-20	87044-20	68940-20	Steel retainer
84549	68405-20	87040-20	68940-20	Titanium retainer

Spring pressure:
68405-20 Seat: 1.700" @ 110 lbs / Nose: 1.150" @ 316 lbs / Coil bind: 0.980"
Optional lifter: Part # **66325-20**

Mopar

DODGE V10 VIPER (2003-up) HYDRAULIC ROLLER CAMSHAFTS

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!
CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	Part Number	Lobe Center	Advertised Duration (.006") Intake	Advertised Duration (.006") Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift 1.7 / 1.7 Intake	Gross Lift 1.7 / 1.7 Exhaust	Rec Kit
STOCK SPECS		114°	275°	294°	212°	232°	.320"	.320"	.544"	.544"	-
STAGE 1 - Street use with emphasis on idle and mid range power. RPM Range: Idle to 6000	**36425**	114°	284°	292°	222°	230°	.331"	.328"	.563"	.558"	**84547**
STAGE 2 - Street/Strip, lope at idle, emphasis on mid to top end power. RPM Range: 1000 to 6300	**36426**	114°	292°	292°	230°	230°	.328"	.328"	.558"	.558"	**84547**
STAGE 3 - Race/Strip, rough idle, ECU mods recommended. RPM Range: 1250 to 6500+	**36427**	114°	300°	300°	238°	238°	.345"	.345"	.587"	.587"	**84550**
CUSTOM GROUND ROLLER CAMS - Special order custom ground profiles available for an additional charge.	**00060**		***Refer to page 7 for camshaft recommendation form***								

Note: The above cores are cast steel, 3-bolt design. 8620 steel billet cores also available. Valve timing events are available online at: **www.crower.com/valvtime.html**

DODGE V10 (RT10 / GTS) HYDRAULIC ROLLER CAMSHAFTS

Note: These cams use .000" intake and exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	Part Number	Grind Lobe Center	Advertised Duration (.006") Intake	Advertised Duration (.006") Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift 1.7/ 1.7 Intake	Gross Lift 1.7/ 1.7 Exhaust	Rec Kit
STAGE 1 - Street use with emphasis on idle and mid range power. RPM Range: Idle to 6000	**36421**	114°	278°	285°	214°	223°	.315"	.330"	.504"	.528"	**84548**
STAGE 2 - Street/Strip, lope at idle, emphasis on mid to top end power. RPM Range: 1000 to 6300	**36422**	114°	285°	291°	223°	230°	.330"	.328"	.528"	.525"	**84548**
STAGE 3 - Race/Strip, rough idle, ECU mods recommended. RPM Range: 1250 to 6500+	**36423**	114°	290°	300°	230°	238°	.345"	.345"	.552"	.552"	**84549**
STAGE 4 - Full race, not for the street, ECU mods required. RPM Range: 1500 to 6500+	**36424**	116°	300°	300°	238°	238°	.345"	.345"	.552"	.552"	**84549**
CUSTOM GROUND ROLLER CAMS - Special order custom ground profiles available for an additional charge.	**00059**		***Refer to page 7 for camshaft recommendation form***								

Note: The above cores are cast steel. 8620 steel billet cores also available. Valve timing events are available online at: **www.crower.com/valvtime.html**

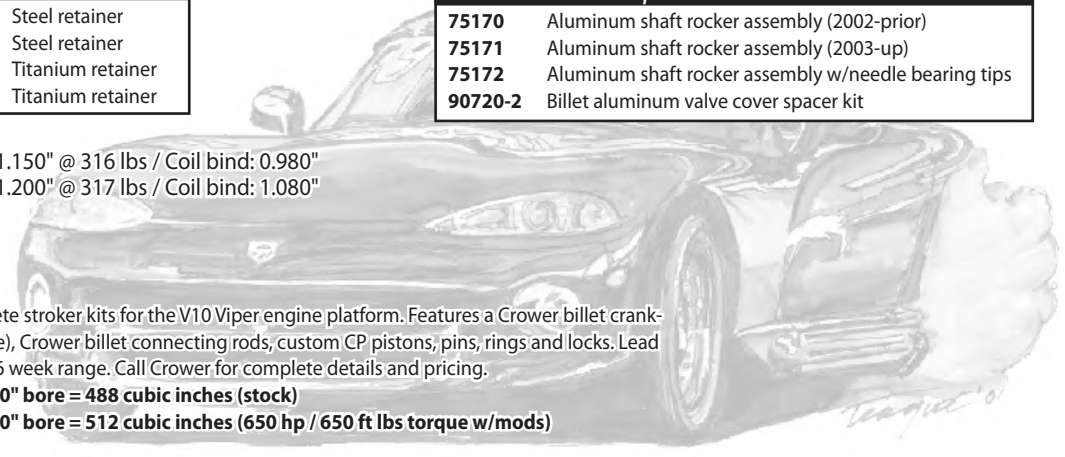
ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers		Remarks
84547	68878-20	87028-20		Steel retainer
84548	68405-20	87044-20	68940-20	Steel retainer
84549	68405-20	87040-20	68940-20	Titanium retainer
84550	68878-20	87028T-20		Titanium retainer

Spring pressure:
68405-20 Seat: 1.700" @ 110 lbs / Nose: 1.150" @ 316 lbs / Coil bind: 0.980"
68878-20 Seat: 1.800" @ 132 lbs / Nose: 1.200" @ 317 lbs / Coil bind: 1.080"
Optional lifter: Part # **66325-20**

ACCESSORIES

Part No.	Description
75170	Aluminum shaft rocker assembly (2002-prior)
75171	Aluminum shaft rocker assembly (2003-up)
75172	Aluminum shaft rocker assembly w/needle bearing tips
90720-2	Billet aluminum valve cover spacer kit



VIPER STROKER KITS: Crower offers complete stroker kits for the V10 Viper engine platform. Features a Crower billet crankshaft (you spec stroke), Crower billet connecting rods, custom CP pistons, pins, rings and locks. Lead times are in the 12-16 week range. Call Crower for complete details and pricing.
3.880" stroke x 4.000" bore = 488 cubic inches (stock)
4.000" stroke x 4.030" bore = 512 cubic inches (650 hp / 650 ft lbs torque w/mods)

For engines that were originally equiped with a hydraulic flat tappet cam, retro fit hydraulic roller cams & kit are available, call CROWER for details.

HYDRAULIC CAMSHAFTS

Non Roller

273 340 360 & 1967-up 318 LA V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

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Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Rec Kit
BAJA BEAST / PERFORMANCE LEVEL 2 - Exhibits broad stump pulling power and torque. Good for stock replacement. RPM Power Range: 1200 to 3800 / Redline: 5200	318 340	**31915**	250H 112°	250°	254°	200°	208°	.423"	.441"	**84031**
TORQUE BEAST / PERFORMANCE LEVEL 2 - Low to mid-range torque for daily drivability. Economical price. RPM Power Range: 1500 to 4250 / Redline: 5500	318 360	**31917**	278H 112°	278°	288°	204°	214°	.422"	.444"	**84031**
POWER BEAST / PERFORMANCE LEVEL 3 - Delivers impressive mid-range and top end power. Healthy sound. Economical price. RPM Power Range: 1750 to 4500 / Redline: 5750	318 360	**31918**	288H 112°	288°	298°	214°	224°	.444"	.467	**84031**
ULTRA BEAST / PERFORMANCE LEVEL 3 - Upper mid-range to top end power. Emphasis on top end. RPM Power Range: 2000 to 4800 / Redline: 6200	318 360	**31916**	269H 112°	269°	282°	223°	234°	.480"	.494"	**84031**
HOT STREET BEAST / PERFORMANCE LEVEL 4 - Explosive performance gains on top end power. Economical price. RPM Power Range: 2200 to 5000 / Redline: 6500	318 360	**31919**	318H 112°	318°	328°	232°	242°	.450"	.476"	**84031**
MILEAGE COMPU-PRO / PERFORMANCE LEVEL 1 - These cams enhance throttle response and low end torque with fuel economy. RPM Power Range: Idle to 3500 / Redline: 4500	318 cid	**31237**	246HDP 112°	246°	253°	186°	192°	.386"	.396"	**84031**
POWER COMPU-PRO / PERFORMANCE LEVEL 2 - Perfect combination of power and mileage. Provides excellent low end and mid-range power with extended rpm's for spirited driving. RPM Power Range: 1500 to 4000 / Redline: 5500	318 cid	**31240**	260HDP 112°	260°	267°	214°	219°	.455"	.474"	**84031**
	340 360	**31241**	267HDP 112°	267°	271°	218°	222°	.474"	.485"	**84031 or 84131**
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 3 - Intended for the hot marine/strip application, these cams offer extended rpm range with emphasis on upper bottom to top end power with strong mid-range. RPM Power Range: 1800 to 4500 / Redline: 6000	273 cid	**31241**	267HDP 112°	267°	271°	218°	222°	.474"	.485"	**84031 or 84131**
	318 cid	**31242**	271HDP 112°	271°	284°	222°	234°	.485"	.495"	**84031 or 84131**
	340 360	**31243**	282HDP 112°	282°	292°	227°	237°	.480"	.503"	**84031 or 84131**
ULTRA PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 4 - Dual purpose hot street/strip camshaft. Delivers strong mid-range and top end torque and horsepower. RPM Power Range: 2000 to 6000 / Redline: 6500	318 cid	**31242**	271HDP 112°	271°	284°	222°	234°	.485"	.495"	**84031 or 84131**
	340 cid	**31243**	282HDP 112°	282°	292°	227°	237°	.480"	.503"	**84031 or 84131**
	360 cid	**31244**	292HDP 112°	292°	310°	236°	249°	.534"	.552"	**84131**

Engineered Component Kit & Accessories for the above part #'s are specified in page 112, or contact CROWER for more Info.

Mopar

HYDRAULIC CAMSHAFTS (Cont...)

Non Roller

273 340 360 & 1967-up 318 LA V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

For engines that were originally equiped with a hydraulic flat tappet cam, retro fit hydraulic roller cams & kit are available, call CROWER for details.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Rec Kit
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Rough idle. Explosive mid-range torque. RPM Power Range: 2500 to 6500	340 360	**31204**	280HDP 108°	280°	292°	218°	227°	.474"	.480"	**84131**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Violent mid-range acceleration and torque. RPM Power Range: 2700 to 6500	340 360	**31205**	290HDP 108°	290°	298°	224°	234°	.507"	.522"	**84131**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Rough idle. Explosive mid-range acceleration and torque. RPM Power Range: 3000 to 6500	340 360	**31206**	302HDP 108°	302°	312°	240°	249°	.554"	.549"	**84131**
TURBOMASTER - This cam provides excellent low end and mid-range power with extended rpm range plus mileage for spirited offroad use. RPM Power Range: 1800 to 5000	340 360	**31978**	278HT 114°	278°	260°	214°	201°	.431"	.402"	**84031**
TURBOMASTER - Intended for turbocharged hot street/strip and marine use. Delivers extended rpm's on upper bottom and top. RPM Power Range: 2000 to 6500	340 360	**31979**	290HT 114°	290°	272°	228°	210°	.467"	.420"	**84031**
SUPERCHARGER - Designed for B&M/Roots type supercharged street/strip and marine applications. Emphasis on mid to top end. RPM Power Range: 2400 to 6500	340 360	**31980**	288HC 114°	288°	288°	227°	227°	.465"	.465"	**84131**
SUPERCHARGER - Dual purpose hot drag and marine camshaft designed to enhance supercharger systems. Strong mid to top end. RPM Power Range: 2400 to 6500	340 360	**31981**	304HC 114°	304°	304°	238°	238°	.501"	.501"	**84131**
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**		*Refer to page 7 for camshaft recommendation form*						

ENGINEERED COMPONENT KITS

Part. No	Lifters	Springs	Retainers	Seals	Remarks
84031	66031-16	68305X1-16	87049-16		For rpm up to 6000
84131	66031-16	68405-16	87049-16	86071-16	For rpm up to 6500

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Spring pressure:
68305X1-16 Seat: 1.700" @ 68 lbs / Nose: 1.200" @ 250 lbs / Coil bind: 1.050" (Stock O.D., no machine work).
68405-16 Seat: 1.700" @ 110 lbs / Nose: 1.200" @ 297 lbs / Coil bind: 0.980" (Machine work, use cutter 68983*).
* Machine work required, specify 3⁄8 pilot shaft when ordering.
Note: When using high lift cams (over .480") or modified valve stem lengths, a longer pushrod is required to achieve proper lifter preload (.050" off snap-ring). Use checking pushrod to determine length and call with specs.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part. No	Description
See pg. 180	Spring seat cutter
Pg. 146-149	Pushrods
See pg. 138	Roller timing gear

Note: Longer pushrods required with Mopar adjustable rockers.
Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

SOLID CAMSHAFTS

Non Roller

273 340 360 & 1967-up 318 LA V8

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Rec Kit
PRO-STREET / PERFORMANCE LEVEL 3 - High torque grind with mid-range and top end power. RPM Power Range: 2200 to 6000 / Redline: 6500 plus.	All cid	**31320**	278FDP 112°	278°	288°	229°	229°	.446"	.456"	**84231**
PRO-STREET / PERFORMANCE LEVEL 4 - High revving with superior mid-range and top end power. RPM Power Range: 2500 to 6500 / Redline: 7000 plus.	All cid	**31321**	294FDP 112°	294°	298°	243°	245°	.521"	.528"	**84231**
COMPU-PRO / PERFORMANCE LEVEL 5 - High torque, short oval camshaft. RPM Power Range: 3500 to 6500 / Redline: 7000 plus.	All cid	**31312**	304FDP 108°	304°	310°	250°	254°	.545"	.558"	**84331**
COMPU-PRO / PERFORMANCE LEVEL 5 - Great high torque mid-range oval track grind. RPM Power Range: 4000 to 7000 / Redline: 7500 plus.	All cid	**31313**	310FDP 105°	310°	318°	263°	265°	.573"	.581"	**84331**
COMPU-PRO / PERFORMANCE LEVEL 5 - Upper mid-range and top end power for extra pop above 7000 rpm. RPM Power Range: 4500 to 7500 / Redline: 8000 plus.	All cid	**31314**	318FDP 106°	318°	324°	270°	276°	.591"	.609"	**Call Crower**
COMPU-PRO / PERFORMANCE LEVEL 5 - Superior power on the top end with added punch above 7000 rpm. RPM Power Range: 5000 to 8000 / Redline: 8250 plus.	All cid	**31315**	324FDP 108°	324°	330°	278°	280°	.609"	.618"	**Call Crower**
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	*Refer to page 7 for camshaft recommendation form*							**Call Crower**
CUSTOM CAM- Special order **Pro 55**, call with all engine data including head flow data, valve sizes, operating power range, etc.		**00058**	*Refer to page 7 for camshaft recommendation form*							**Call Crower**

ENGINEERED COMPONENT KITS

Part. No	Lifters	Springs	Retainers	Seals	Remarks
84231	66931-16	68305X1-16	87049-16		For rpm up to 6500 plus.
84331	66931-16	68405-16	87049-16	86071-16	For rpm up to 7500 plus.

For severe duty applications, Crower recommends using our solid lifter with the added "**coolface oiling option". Specify X980 after corresponding component kit.**

Spring pressure:
68305X1-16 Seat: 1.700" @ 68 lbs / Nose: 1.200" @ 250 lbs / Coil bind: 1.050" (Stock O.D., no machine work).
68405-16 Seat: 1.700" @ 110 lbs / Nose: 1.200" @ 297 lbs / Coil bind: 0.980" (Machine work, use cutter 68983*).
* Machine work required, specify 3/8 pilot shaft when ordering.
#70176-16 or longer pushrods are required with adjustable rocker arms.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part. No	Description
See pg. 180	Spring seat cutter
Pg. 146-149	Pushrods
See pg. 138	Roller timing gear

Note: Longer pushrods required with Mopar adjustable rockers.
Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.
Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

Mopar

ROLLER CAMSHAFTS
Mechanical
273 340 360 & 1967-up 318 LA V8
Note: These cams use .026" intake, .028" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Rec Kit
STREET ROLLER / PERFORMANCE LEVEL 4 - Excellent street/ strip profile. RPM Power Range: 2500 to 6000 / Redline: 6500 plus.	All cid	**31406**	270R 112°	270°	280°	236°	246°	.550"	.548"	**84530**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - High torque oval track and drag profile. RPM Power Range: 3000 to 7000 / Redline: 7500 plus.	All cid	**31407**	294R 108°	294°	298°	258°	262°	.624"	.627"	**84530**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Strong upper mid-range and top end power. RPM Power Range: 4000 to 7500 / Redline: 8000 plus.	All cid	**31408**	300R 105°	300°	306°	258°	268°	.685"	.702"	**84531**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - High torque drag profile with mid-range and top end power. RPM Power Range: 5200 to 8000 / Redline: 8250 plus.	All cid	**31409**	304R 106°	304°	310°	268°	274°	.645"	.623"	**84530 or 84531**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Mid-range and top end drag profile. RPM Power Range: 5200 to 8000 / Redline: 8250 plus.	All cid	**31410**	309R 104°	309°	318°	269°	280°	.716"	.716"	**84531**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Super competition drag profile. Excellent top end power. RPM Power Range: 5500 to 8000 / Redline: 8250 plus.	All cid	**31411**	322R 107°	322°	322°	285°	285°	.691"	.691"	**84531**
CUSTOM ORDER ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00002**		*Refer to page 7 for camshaft recommendation form*						**See Below**

ENGINEERED COMPONENT KITS

Part. No	Springs	Retainers	Seals	Remarks
84530N	68380X2-16	87049D-16	86071-16	For rpm up to 8000.
84531N	68670S-16	87063-16	86071-16	For rpm above 8000.

Spring pressure:
68390X2-16 Seat: 1.800" @ 113 lbs / Nose: 1.300" @ 349 lbs / Coil bind: 1.070" (Machine work, use cutter 68999*).
68380X2-16 Seat: 1.800" @ 197 lbs / Nose: 1.200" @ 470 lbs / Coil bind: 1.110" (Machine work, use cutter 68999*).
A. Requires longer stem valves to achieve installed spring height.
* Machine work required, specify 3/8 pilot shaft when ordering.
#70176-16 or longer pushrods are required with adjustable rocker arms.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part. No	Description
See pg. 180	Spring seat cutter
Pg. 146-149	Pushrods
See pg. 138	Roller timing gear

Note: Longer pushrods required with Mopar adjustable rockers.
Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.
Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

AVAILABLE CAM JOURNAL SIZES

Stock Chrysler Bearing Size - Journal 1 = 1.998", 2 = 1.982", 3 = 1.967", 4 = 1.951", 5 = 1.561"
Roller Bearing (Arrington) - Journal 1, 2, 3, 4 = 1.968", Journal 5 = 1.575"
Roller Bearing (Mopar Performance) - All Journals = 1.968"
Dodge R5 Standard Bearing - All Journals = 60mm

To order the above cores specify #00003. 60mm is available on special order basis only (#00060).

Special Firing Orders also available.

For engines that were originally equiped with a hydraulic flat tappet cam, retro fit hydraulic roller cams & kit are available, call CROWER for details.

HYDRAULIC CAMSHAFTS

Non Roller 1958-1980

350 361 383 400 413 426 440 B V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Mopar

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D Group	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Rec Kit
BAJA BEAST / PERFORMANCE LEVEL 2 - Exhibits broad stump pulling power and torque. Good for stock replacement. RPM Power Range: 1200 to 3800 / Redline: 5200 plus.	383 cid	**32915**	250H 112°	250°	254°	200°	207°	.423"	.444"	**84032**
TORQUE BEAST / PERFORMANCE LEVEL 2 - Low to mid-range torque for daily drivability. Economical price. RPM Power Range: 1500 to 4250 / Redline: 5500 plus.	383 cid	**32917**	278H 112°	278°	288°	204°	214°	.422"	.444"	**84032**
POWER BEAST / PERFORMANCE LEVEL 3 - Delivers impressive mid-range and top end power. Healthy sound. Economical price. RPM Power Range: 1750 to 4500 / Redline: 5750 plus.	350 361	**32918**	288H 112°	288°	298°	214°	224°	.444"	.467"	**84032**
ULTRA BEAST / PERFORMANCE LEVEL 3 - Upper mid-range to top end power. Emphasis on top end. RPM Power Range: 2000 to 4800 / Redline: 6200 plus.	383 413	**32916**	265H 112°	265°	269°	218°	222°	.475"	.484"	**84032**
HOT STREET BEAST / PERFORMANCE LEVEL 4 - Explosive performance gains on top end power. Economical price. RPM Power Range: 2200 to 5000 / Redline: 6500	426 440	**32919**	312H 109°	312°	320°	242°	252°	.521"	.551"	**84032**
MILEAGE COMPU-PRO / PERFORMANCE LEVEL 1 - These cams enhance throttle response and low end torque with fuel economy. RPM Power Range: Idle to 3500 / Redline: 4500 plus.	426 440	**32239**	252HDP 112°	252°	256°	200°	208°	.423"	.444"	**84032**
POWER COMPU-PRO / PERFORMANCE LEVEL 2 - Perfect combination of power and mileage. Provides excellent low end and mid-range power with extended rpm's for spirited driving. RPM Power Range: 1500 to 4000 / Redline: 5500 plus.	350 361	**32239**	252HDP 112°	252°	256°	200°	208°	.423"	.444"	**84032**
	383 413	**32240**	260HDP 112°	260°	267°	212°	218°	.456"	.477"	**84032**
	426 440	**32241**	267HDP 112°	267°	271°	220°	223°	.478"	.486"	**84032**
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 3 - Intended for the hot marine/strip application, these cams offer extended rpm range with emphasis on upper bottom to top end power with strong mid-range. RPM Power Range: 1800 to 4500 / Redline: 6000 plus.	350 361	**32241**	267HDP 112°	267°	271°	220°	223°	.478"	.486"	**84032**
	383 413	**32242**	271HDP 112°	271°	284°	222°	234°	.486"	.496"	**84032 or 84132**
	426 440	**32243**	282HDP 112°	282°	292°	228°	236°	.478"	.502"	**84032 or 84132**

Note: Three-bolt cams are available. Specify when ordering.

ENGINEERED COMPONENT KITS

Part. No	Lifters	Springs	Retainers	Seals	Remarks
84032	66031-16	68302X1-16	87063-16		For rpm up to 6000 max. Daily street use.
84132	66031-16	68340-16	87063-16	86071-16	For rpm up to 6500 plus.

ACCESSORIES

Part. No	Description
See pg. 180	Spring seat cutter
Pg. 146-149	Pushrods
See pg. 138	Timing gear set (1 bolt)

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

Spring pressure:
68302X1-16 Seat: 1.875" @ 80 lbs / Nose: 1.350" @ 256 lbs / Coil bind: 1.150" (Stock O.D., no machine work).
68340 -16 Seat: 1.900" @ 119 lbs / Nose: 1.350" @ 359 lbs / Coil bind: 1.080" (Machine work, use cutter 68986*).
* Machine work required, specify 3/8 pilot shaft when ordering.
Low Block: 350, 361, 383, 400 cid.
High Block: 413, 426, 440 cid.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Note: When using high lift cams (over .480") or modified valve stem lengths, a longer pushrod is required to achieve proper lifter preload (.050" off snap-ring). Use checking pushrod to determine length and call with specs.

Mopar

HYDRAULIC CAMSHAFTS (Cont...)

Non Roller 1958-1980

350 361 383 400 413 426 440 B V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

For engines that were originally equiped with a hydraulic flat tappet cam, retro fit hydraulic roller cams & kit are available, call CROWER for details.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D Group	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Rec Kit
ULTRA PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 4 - Dual purpose hot street/strip camshaft. Delivers strong mid-range and top end torque and horsepower. RPM Power Range: 2000 to 6000 / Redline: 6500	383 413	**32242**	271HDP 112°	271°	284°	222°	234°	.486"	.496"	**84032 or 84132**
	426 440	**32243**	282HDP 112°	282°	292°	228°	236°	.478"	.502"	**84032 or 84132**
	426 440	**32244**	292HDP 112°	292°	310°	238°	249°	.534"	.552"	**84032 or 84132**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Violent mid-range acceleration and torque. RPM Power Range: 2700 to 6500	383 413	**32206**	294HDP 108°	294°	304°	230°	241°	.509"	.530"	**84032 or 84132**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 5 - Rough idle. Explosive mid-range acceleration and torque. RPM Power Range: 3000 to 6500	426 440	**32207**	300HDP 108°	300°	310°	238°	249°	.528"	.552"	**84032 or 84132**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 4 - Extremely violent mid-range and top end horsepower. RPM Power Range: 3200 to 6500 / Redline: 6500	426 440	**32208**	308HDP 108°	308°	316°	249°	253°	.530"	.546"	**84132**
TURBOMASTER - This cam provides excellent low end and mid-range power with extended rpm range plus mileage for spirited offroad use. RPM Power Range: 1800 to 5000	426 440	**32978**	278HT 114°	278°	260°	213°	202°	.435"	.406"	**84032 or 84132**
TURBOMASTER - Intended for turbocharged hot street/strip and marine use. This cam offers extended rpm's on upper bottom and top. RPM Power Range: 2000 to 6500	426 440	**32979**	290HT 114°	290°	272°	228°	210°	.471"	.423"	**84132**
SUPERCHARGER - Designed for B&M/Roots type supercharged street/strip and marine applications. Emphasis on mid to top end. RPM Power Range: 2400 to 6500	426 440	**32980**	288HC 114°	288°	288°	230°	230°	.461"	.461"	**84132**
SUPERCHARGER - Dual purpose hot drag and marine camshaft designed to enhance supercharger systems. Strong mid to top end. RPM Power Range: 2400 to 6500	426 440	**32981**	304HC 114°	304°	304°	236°	236°	.501"	.501"	**84132**
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**		*Refer to page 7 for camshaft recommendation form*						**See Below**

Note: Three-bolt cams are available. Specify when ordering.

ENGINEERED COMPONENT KITS

Part. No	Lifters	Springs	Retainers	Seals	Remarks
84032	66031-16	68302X1-16	87063-16		For rpm up to 6000 max. Daily street use.
84132	66031-16	68340-16	87063-16	86071-16	For rpm up to 6500 plus.

Spring pressure:
68302X1-16 Seat: 1.875" @ 80 lbs / Nose: 1.350" @ 256 lbs / Coil bind: 1.150" (Stock O.D., no machine work).
68340 -16 Seat: 1.900" @ 119 lbs / Nose: 1.350" @ 359 lbs / Coil bind: 1.080" (Machine work, use cutter 68986*).
* Machine work required, specify 3⁄8 pilot shaft when ordering.
Low Block: 350, 361, 383, 400 cid.
High Block: 413, 426, 440 cid.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Note: When using high lift cams (over .480") or modified valve stem lengths, a longer pushrod is required to achieve proper lifter preload (.050" off snap-ring). Use checking pushrod to determine length and call with specs.

ACCESSORIES

Part. No	Description
See pg. 180	Spring seat cutter
Pg. 146-149	Pushrods
See pg. 138	Timing gear set (1 bolt)

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

SOLID CAMSHAFTS
Non Roller 1958-1980
350 361 383 400 413 426 440 B V8
Note: These cams use .022" intake, .024" exhaust valve lash.

All cams are 3 bolt.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Rec Kit
PRO-STREET / PERFORMANCE LEVEL 3 - High torque profile, excellent bottom and mid-range power for near stock motor. RPM Power Range: 2000 to 5000 / Redline: 5500 plus.	383 413	**32307**	260FDP 112°	260°	260°	226°	226°	.511"	.511"	**84330**
PRO-STREET / PERFORMANCE LEVEL 4 - High torque profile with big mid-range power. RPM Power Range: 3000 to 6000 / Redline: 6500 plus	426 440	**32309**	294FDP 112°	294°	298°	240°	244°	.519"	.531"	**84330**
PRO-STREET / PERFORMANCE LEVEL 5 - High revving with superior mid-range and top end power. RPM Power Range: 3500 to 6500 / Redline: 7000 plus.	426 440	**32310**	304FDP 110°	304°	310°	251°	255°	.548"	.557"	**84330 or 84332**
COMPU-PRO / PERFORMANCE LEVEL 5 - High torque, short oval camshaft. RPM Power Range: 3800 to 6800 / Redline: 7200 plus.	383 413	**32313**	310FDP 108°	310°	318°	265°	267°	.574"	.585"	**84332**
COMPU-PRO / PERFORMANCE LEVEL 5 - Great torque, mid-range oval track grind. RPM Power Range: 4200 to 7200 / Redline: 7500 plus.	426 440	**32314**	318FDP 108°	318°	324°	271°	277°	.591"	.609"	**84332**
COMPU-PRO / PERFORMANCE LEVEL 5 - Upper mid-range and top end power for extra pop above 7000 rpm. RPM Power Range: 4500 to 7500 / Redline: 7750 plus.	426 440	**32315**	324FDP 108°	324°	330°	279°	281°	.608"	.617"	**84332**
COMPU-PRO / PERFORMANCE LEVEL 5 - Superior power on the top end with added punch above 7000 rpm. RPM Power Range: 5000 to 8000 / Redline: 8250 plus.	426 440	**32316**	336FDP 110°	336°	342°	289°	292°	.635"	.642"	**84332**
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	*Refer to page 7 for camshaft recommendation form*							**See Below**

Note: Three-bolt cams are available. Specify when ordering.

ENGINEERED COMPONENT KITS

Part. No	Lifters	Springs	Retainers	Seals	Remarks
84330	66931-16	68302X1-16	87063-16		For rpm up to 6000 plus. Daily street use.
84332	66931-16	68340-16	87063-16	86071-16	For rpm up to 7500 plus.

For severe duty applications, Crower recommends using our solid lifter with the added "**coolface oiling option". Specify X980 after corresponding component kit.**
Spring pressure:
68302X1-16 Seat: 1.875" @ 80 lbs / Nose: 1.350" @ 256 lbs / Coil bind: 1.150" (Stock O.D., no machine work).
68340-16 Seat: 1.900" @ 119 lbs / Nose: 1.350" @ 359 lbs / Coil bind: 1.080" (Machine work, use cutter 68986*).
* Machine work required, specify 3⁄8 pilot shaft when ordering.
Low Block: 350, 361, 383, 400 cid.
High Block: 413, 426, 440 cid.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part. No	Description
See pg. 180	Spring seat cutter
Pg. 146-149	Pushrods
See pg. 138	Timing gear set (1 bolt)

Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.
Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.
Note: If using guide plates, heat-treated pushrods (RC 60 series) are required. See pushrods or contact Crower.

Mopar

ROLLER CAMSHAFTS
Mechanical 1959-1980
350 361 383 400 413 426 440 B V8

Note: These cams use .026" intake, .028" exhaust valve lash.

All cams are 3 bolt.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Rec Kit
STREET ROLLER / PERFORMANCE LEVEL 4 - Excellent street/ strip profile. RPM Power Range: 2500 to 6000 / Redline: 6500 plus.	426 440	**32412**	270R 110°	270°	280°	236°	246°	.550"	.548"	**84546**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - High torque profile with strong bottom and mid-range power. RPM Power Range: 3500 to 7250 / Redline: 7500 plus.	426 440	**32413**	294R 108°	294°	298°	256°	265°	.624"	.627"	**84546**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Strong upper mid-range and top end power. RPM Power Range: 3750 to 7500 / Redline: 7750 plus.	426 440	**32414**	304R 106°	304°	310°	262°	268°	.650"	.624"	**84546**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - High torque with mid-range and top end drag profile. RPM Power Range: 4000 to 7750 / Redline: 8000 plus.	426 440	**32415**	300R 105°	300°	306°	261°	263°	.686"	.696"	**84546**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Mid-range and top end drag profile. RPM Power Range: 4250 to 8000 / Redline: 8250 plus.	426 440	**32416**	309R 104°	309°	318°	269°	280°	.714"	.716"	**84546**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Top end drag profile, excellent for competition. RPM Power Range: 4500 to 8250 / Redline: 8500 plus.	426 440	**32417**	332R 107°	322°	322°	284°	284°	.765"	.765"	**See Below**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Super competition drag profile. Excellent top end power. RPM Power Range: 4500 to 8250 / Redline: 8500 plus.	426 440	**32418**	336R 105°	336°	336°	291°	291°	.782"	.782"	**See Below**
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00002**		*Refer to page 7 for camshaft recommendation form*						**See Below**

ENGINEERED COMPONENT KITS

Part. No	Lifters	Springs	Retainers	Seals	Remarks
84546	66232-16	68363-16	87063-16	86071-16	8000 plus rpm. Race only to .700" max lift.

Spring pressure:
68363-16 Seat: 1.900" @ 212 lbs / Nose: 1.200" @ 560 lbs / Coil bind: 1.100" (Machine work, use cutter 68992*).
Optional springs (race only over .725" max lift and/or 8000 rpm)
68848-16 Seat: 2.100" @ 329 lbs / Nose: 1.300" @ 913 lbs / Coil bind: 1.150"
* Machine work required, specify 3/8 pilot shaft when ordering.
Low Block: 350, 361, 383, 400 cid.
High Block: 413, 426, 440 cid.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part. No	Description
See pg. 180	Spring seat cutter
Pg. 146-149	Pushrods
See pg. 138	Timing gear set (3 bolt)

Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.
Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

HYDRAULIC CAMSHAFTS

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!
CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.57 / 1.52 Intake	Gross Lift 1.57 / 1.52 Exhaust	Rec Kit
POWER COMPU-PRO / PERFORMANCE LEVEL 2 - Power and mileage with extended rpm range for spirited motoring. RPM Power Range: 1500 to 4000 / Redline: 5500 plus.	426 cid	**33240**	280HDP 112°	280°	286°	211°	219°	.475"	.483"	**84133**
HIGH PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 3 - Hot street/strip cam. Strong upper bottom and top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 plus.	426 cid	**33241**	294HDP 112°	294°	300°	222°	233°	.505"	.525"	**84133**
ULTRA PERFORMANCE COMPU-PRO / PERFORMANCE LEVEL 4 - Good competition profile with super mid to top end performance. RPM Power Range: 2000 to 6000 / Redline: 6500 plus.	426 cid	**33242**	300H 112°	300°	300°	233°	233°	.543"	.525"	**84133**
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	426 cid	**00001**	*Refer to page 7 for camshaft recommendation form*							**See Below**

ENGINEERED COMPONENT KITS

Part. No	Lifters	Springs	Retainers	Seals	Keepers	Remarks
84133	66031-16	68340-16	87064-16	86070-16	86109-16	Hydraulic Lifter. 6500 rpm.

HIPPO Note: For severe duty roller lifter applications, we highly recommend using our roller lifters with Hippo **"High Pressure Pin Oiling"**. Specify "H" in the part number.
Ex. 66290X874H-16

Spring pressure:
68340-16 Seat: 1.900" @ 119 lbs / Nose: 1.350" @ 359 lbs / Coil bind: 1.080"
(Machine work, use cutter 68986).

SOLID CAMSHAFTS

Note: These cams use .022" intake, .024" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.57 / 1.52 Intake	Gross Lift 1.57 / 1.52 Exhaust	Rec Kit
COMPU-PRO / PERFORMANCE LEVEL 3 - High torque profile with emphasis on bottom end power . RPM Power Range: 2800 to 6000 plus.	426 cid	**33253**	284FDP 112°	284°	294°	238°	249°	.520"	.512"	**84333**
COMPU-PRO / PERFORMANCE LEVEL 4 - Strong mid-range and top end profile that offers excellent torque and horsepower. RPM Power Range: 3200 to 6400 plus.	426 cid	**33254**	304FDP 108°	304°	308°	251°	255°	.571"	.563"	**84333**
COMPU-PRO / PERFORMANCE LEVEL 4 - Explosive mid-range to top end profile for high horsepower applications.. RPM Power Range: 4000 to 7000 plus.	426 cid	**33255**	310FDP 106°	310°	318°	269°	280°	.618"	.617"	**84333**
COMPU-PRO / PERFORMANCE LEVEL 5 - High torque, high horsepower profile with emphasis on the top end. RPM Power Range: 4500 to 7500 plus.	426 cid	**33256**	318FDP 106°	318°	324°	280°	282°	.637"	.626"	**84333**

ENGINEERED COMPONENT KITS

Part. No	Lifters	Springs	Retainers	Seals	Keepers	Remarks
84333	66931-16	68340-16	87064-16	86070-16	86109-16	Solid Lifter. 7500 plus rpm.

Spring pressure:
68340-16 Seat: 1.900" @ 119 lbs / Nose: 1.350" @ 359 lbs / Coil bind: 1.080"
(Machine work, use cutter 68986).

ACCESSORIES

Part. No	Description
See pg. 180	Spring seat cutter
Pg. 146-149	Pushrods
See pg. 138	Timing gear set

Mopar

ROLLER CAMSHAFTS

426 Hemi V8 1966-1971 KB ALUMINUM JP1 TFX MILODON & RODECK

Note: These cams use .026" intake, .028" exhaust valve lash.

Description (Note: See pages 8-9 for a detailed explanation of each Performance Level)	C.I.D Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 7 / 1.52 Intake	Gross Lift 1.5 7 / 1.52 Exhaust	Rec Kit
STREET ROLLER / PERFORMANCE LEVEL 4 - Call for camshaft characteristics, as they depend on engine setup. RPM Power Range: 2500 to 6000 plus.	426 cid	**33470**	284R 110°	272°	280°	238°	246°	.576"	.558"	**84538**
STREET ROLLER / PERFORMANCE LEVEL 5 - Call for camshaft characteristics, as they depend on engine setup. RPM Power Range: 3500 to 7500 plus.	426 cid	**33471**	298R 108°	298°	304°	263°	268°	.626"	.630"	**84538**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Call for camshaft characteristics, as they depend on engine setup. RPM Power Range: Varies on valve train, heads, gearing, etc...	426 cid	**33472**	308R 105°	308°	314°	278°	285°	.689"	.652"	**84535**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Call for camshaft characteristics, as they depend on engine setup. RPM Power Range: Varies on valve train, heads, gearing, etc...	426 cid	**33473**	318R 106°	318°	322°	286°	290°	.720"	.711"	**84535 or 84536**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Call for camshaft characteristics, as they depend on engine setup. RPM Power Range: Varies on valve train, heads, gearing, etc...	426 cid	**33474**	336R 114°	336°	340°	295°	307°	.715"	.711"	**84534 or 84536**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Call for camshaft characteristics, as they depend on engine setup. RPM Power Range: Varies on valve train, heads, gearing, etc...	426 cid	**33475**	340R 114°	340°	348°	299°	303°	.739"	.696"	**84534 or 84536**
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for	426 cid	**00002**	*Refer to page 7 for camshaft recommendation form*							**See Below**

ENGINEERED COMPONENT KITS

Part. No	Lifters	Springs	Retainers	Seals	Keepers	Remarks
84535	66232-16	68804-16	87064-16	86070T-16	86109-16	
84536	66232-16	68548-16	86069-16	86070T-16	86109-16	For rpm up to 6000 plus.
84538	66232-16	68340-16	87064-16	86070-16	86109-16	Application determines rpm.

Spring pressure:
68340-16 Seat: 1.800" @ 165 lbs / Nose: 1.150" @ 477 lbs / Coil bind: 1.080"
(Machine work, use cutter 68986*).
68548-16 Seat: @ lbs / Nose: " @ lbs / Coil bind: "
* Machine work required, specify 5/16 pilot shaft when ordering.
Note: If using 11/32 valve stems, change to keeper 86110-16.
Note: If running blown application, see heavy-duty roller lifters listed under accessories.
Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required. See spring and retainer specs or contact Crower for proper recommendations.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part. No	Description
73680-16	Billet rocker adjusting screw and lock nut
70188-16	Tapered pushrods 3/8
76545	Timing gear set
66284-16	Roller lifters w/.903" body & .812" O.D. bearing
66285-16	Roller lifters w/high seat (+.150")

Crower has an extensive inventory of single and double tapered pushrods available on a special order basis. Customer must furnish accurate pushrod length.

SPECIAL ORDER DRAG RACING CAMSHAFTS

KB Aluminum JP1 TFX Milodon & Rodeck

As of last count we have accumulated over 80 different combinations of proven drag racing cam profiles and lobe center configurations. So rather than list each profile and lobe center, we felt that it would be more beneficial to encourage you to call our experienced technical support staff with your accumulated data and specifications. In a joint effort, that will be kept in the strictest of confidence, we will formulate the right combination of intake and exhaust lobe characteristics designed specifically for your application. We are currently involved with some of the top racers and engine builders and are achieving tremendous success with this style of format.

Nissan

SR20DE(T) S13 - TWIN CAM (89-99)

Note: These cams use .000" intake (cold), .000" exhaust valve lash (cold).

New Improved Cam Core Technology

Description	Part Number	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift 1.57 / 1.57 Intake	Gross Lift 1.57 / 1.57 Exhaust	Rec Kit
Nissan SR20DE (1994)	**Stock**	256	248	202°	194°	.254"	.235"	.398"	.369"	**Stock**
TOMEI	**270 Pro**	270	270	224°	224°	.315"	.315"	.494" inches / 12.5 mm	.494" inches / 12.5 mm	**Stock**
STAGE 1 Street use with emphasis on bottom end and mid range power. Works with stock springs up to factory rev limiter. RPM Range: Idle to 6500+	**61301-2**	264	264	210°	210°	.260"	.260"	.409" inches / 10.39 mm	.409" inches / 10.39 mm	**Stock**
STAGE 2 - Forced Induction Street Designed specifically for turbo or supercharger applications. Low duration, high lift profile. Requires Crower spring kit #84183. RPM Range: 1000 to 7000+	**61301T-2**	272	272	210°	210°	.289"	.289"	.453" inches / 11.5 mm	.453" inches / 11.5 mm	**84183**
STAGE 2 - Hot Street Designed for street/strip applications in normally aspirated engines. Most popular profile. Requires spring/retainer kit #84183. RPM Range: 1250 to 7000+	**61302-2**	272	272	216°	216°	.275"	.275"	.431" inches / 10.9 mm	.431" inches / 10.9 mm	**84183**
STAGE 3 - 3/4 Race Limited street use with rough idle. Normally aspirated design for fairly modified engine. Requires spring/retainer kit #84183. RPM Range: 1500 to 7500+	**61303-2**	280	280	220°	220°	.296"	.296"	.464" inches / 11.8 mm	.464" inches / 11.8 mm	**84183**
STAGE 4 - Forced Induction Race Designed specifically for turbo high performance Drift or full Drag race applications. Requires Crower spring kit #84183. RPM Range: 1000 to 7500+	**61304T-2**	280	280	220°	220°	.317"	.317"	.497" inches / 12.6 mm	.497" inches / 12.6 mm	**84183**
STAGE 4 - Full Race Drag Race and radical Street/Strip. Requires #84183 spring kit and compatible ECU upgrade for optimum results. Rough idle. RPM Range: 1500 to 8000+	**61304-2**	288	288	232°	232°	.308"	.308"	.483" inches / 12.3 mm	.483" inches / 12.3 mm	**84183**
CUSTOM GRIND - Crower can custom grind cams to your desired specs, also proprietary profiles available upon request.	**00078-2**	*Refer to page 7 for camshaft recommendation form*								

The above cams will not fit S14 NVCS/VTC cylinder head. Duration figures are taken at the lobe.

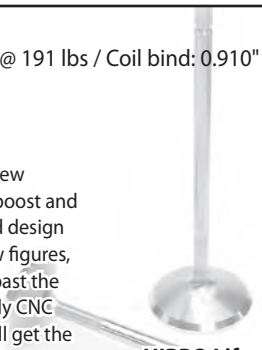
REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/ smooth surface.

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84183	68183-16	87097-16	Titanium retainer intended for race and limited street

Spring pressure:
68183-16 Seat: 1.550" @ 73 lbs / Nose: 1.050" @ 191 lbs / Coil bind: 0.910"
(No machine work required).

STAINLESS STEEL VALVES
Made from the highest grade stainless steel, this new Crower valve is a must for high horsepower, high boost and high rpm applications. The exclusive "Pro Flo" head design delivers a significant increase in cylinder head flow figures, while the tip area is hardened to RC50, including past the critical keeper groove area for added strength. Fully CNC machined and swirl polished to insure that you will get the best performance valve available on the market. Available in standard, 1⁄2 mm and 1mm oversize. Titanium valves also available. Contact Crower for availability.



ACCESSORIES

Part No.	Description
97452I-8	Stainless steel valves - 34.15 mm head dia (8 only int)
97452E-8	Stainless steel valves - 30.15 mm head dia (8 only exh)
97453I-8	Stainless steel valves - 34.65 mm head dia (8 only int)
97453E-8	Stainless steel valves - 30.65 mm head dia (8 only exh)
97454I-8	Stainless steel valves - 35.15 mm head dia (8 only int)
97454E-8	Stainless steel valves - 31.15 mm head dia (8 only int)

Note: When ordering valves, be sure to specify one set int and one set exh.

HIPPO Lifter Option: For severe duty roller lifter applications, we highly recommend using our roller lifters with Hippo **"High Pressure Pin Oiling"**. **66945X980-16** requires .185 shorter pushrod & adjustable rocker. Specify "H" in the part number. **Ex. 66290X874H-16**

Nissan

KA24DE - 16v TWIN CAM (91-02)

Note: These cams use .008" intake (cold), .010" exhaust valve lash (cold).

New Improved Cam Core Technology

Description	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift Intake	Gross Lift Exhaust	Rec Kit
Nissan KA24DE (1996)	**Stock**	114°	248	256	203°	207°	.344"	.357"	**Stock**
STAGE 1 - Hotter Than Stock Street use with emphasis on bottom end and mid range power. Works with stock springs up to factory rev limiter. RPM Range: Idle to 6250+	**61351-2**	114°	256	256	210°	214°	.363"	.363"	**Stock**
STAGE 2 - Forced Induction Street/Strip Designed specifically for turbo or supercharger applications. Low duration, high lift profile. Requires Crower spring kit #84184. RPM Range: 1000 to 6750+	**61351T-2**	114°	264	264	218°	218°	.375"	.375"	**84184**
STAGE 3 - Normally Aspirated 3/4 Race Limited street use with rough idle. Normally aspirated design for fairly modified engine. Requires spring/retainer kit #84184. RPM Range: 1500 to 7000+	**61352-2**	112°	272	272	228°	228°	.406"	.406"	**84184**
STAGE 3 - Forced Induction Race Drag Race and radical Street/Strip. Requires #84184 spring kit and compatible ECU upgrade for optimum results. Lope at idle. RPM Range: 1500 to 7000+	**61353-2**	114°	280	280	222°	222°	.401"	.401"	**84184**
STAGE 3 - Normally Aspirated Race Full race design for heavily modified & tuned engine. Not for the inexperienced tuner. Requires Crower spring/retainer kit #84184. RPM Range: 1500 to 7250+	**61354-2**	112°	288	288	236°	236°	.411"	.411"	**84184**
CUSTOM GRIND - Crower can custom grind cams to your desired specs, also proprietary profiles available upon request.	**00079-2**	*Refer to page 7 for camshaft recommendation form*							

Duration figures are taken at the lobe.

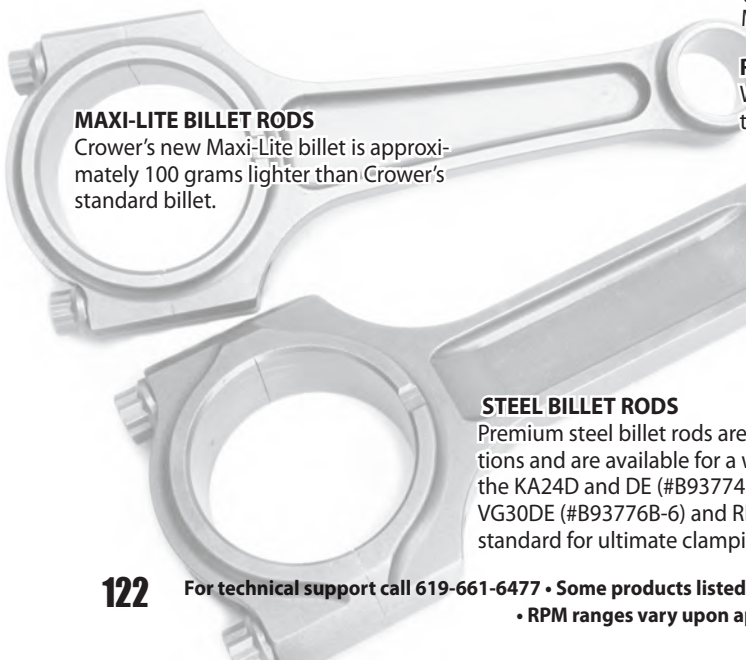
NOTE: If the customer has a 240SX years 91-98 rear wheel drive engine, we machine the distributor drive off of the exhaust cam so it doesn't hit the vavle cover.
NOTE: If the customer has a Nissan Altima 99-02, front wheel drive, the exhaust cam will drop right in, no machine work required.

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Seat	Remarks
84184	68188-16	87098-16	68926-16	Titanium retainer intended for race and limited street

Spring pressure:
68192-16 Seat: 1.400" @ 73 lbs / Nose: 0.950" @ 155 lbs / Coil bind: 0.850"
(No machine work required).
Maximum lift on stock valve springs in .380".

REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.



MAXI-LITE BILLET RODS
Crower's new Maxi-Lite billet is approximately 100 grams lighter than Crower's standard billet.

ACCESSORIES

Part No.	Description
97458I-8	Stainless steel valves - 37.10 mm (+.5mm) dia (8 only int)
97458E-8	Stainless steel valves - 31.80 mm (+.5mm) dia (8 only exh)

Note: When ordering valves, be sure to specify one set int and one set exh.

STEEL BILLET RODS
Premium steel billet rods are designed for high boost and/or nitrous applications and are available for a wide variety of Nissan engine platforms including the KA24D and DE (#B93774B-4), SR20DE (#B93773B-4), VQ35DE (#B93775B-6), VG30DE (#B93776B-6) and RB26DETT (B93777B-6). Features 220,000 p.s.i. rod bolts standard for ultimate clamping ability.

Nissan

PATROL 4.2L & 4.5L - SINGLE CAM

Note: These cams use .014" intake (hot), .016" exhaust valve lash (hot).

New Improved Cam Core Technology

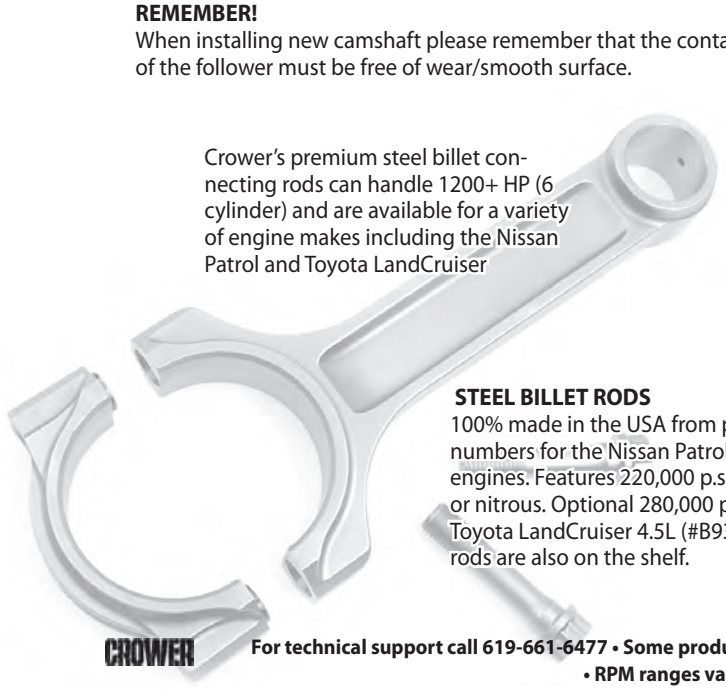
Description	Part Number	Lobe Center	Advertised Duration (.010") Intake	Advertised Duration (.010") Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift Intake	Gross Lift Exhaust	Rec Kit
NISSAN PATROL 4.2L (Stock Specs)	**Stock**	112°	260°	260°	198°	198°	.280"	.280"	.420"	.420"	**Stock**
STAGE 1 Hotter than stock profile. Smooth idle quality and will work with stock valve springs. No ECU upgrade required. RPM Range: Idle to 6000+. 12+ HP over stock setup.	**61390**	112°	280°	280°	220°	220°	.296"	.296"	.445"	.445"	**Stock**
STAGE 2 - Forced Induction Special Performance oriented street, use with turbo, supercharger and/or nitrous. Will work with stock springs and ECU. RPM Range: 1000 to 6500+. HP gains depend on engine mods.	**61391**	112°	299°	299°	228°	228°	.309"	.309"	.464"	.464"	**Stock**
STAGE 2 Recommend for hot street use. Rough idle is expected. Requires spring change (#68147). Lope at idle is common. RPM Range: 1100 to 7000+. HP gains depend on engine mods.	**61392**	112°	303°	303°	235°	235°	.333"	.333"	.500"	.500"	**68147**
STAGE 3 - 3/4 Race Road/Rally and Street/Strip. Requires spring change (#68147) and ECU upgrade to take advantage of higher rpm potential. RPM Range: 1200 to 7250+. HP gains depend on engine mods.	**61393**	110°	309°	309°	248°	248°	.338"	.338"	.507"	.507"	**68147**
STAGE 4 - Full Race Emphasis on top end power with extremely rough idle quality. Not recommended for daily driver. Spring/ECU upgrade req. RPM Range: 1300 to 7500+. HP gains depend on engine mods.	**61394**	108°	316°	316°	256°	256°	.350"	.350"	.526"	.526"	**68147**
CUSTOM GRIND - Crower can custom grind cams to your desired specs, also proprietary profiles available upon request.	**00007**		*Refer to page 7 for camshaft recommendation form*								

Note: The above cams will not fit the 4.8L Nissan Patrol applications. Duration figures are taken at the lobe.
Spring pressure:
68147-12 Seat: 1.590" @ 85 lbs / Nose: 1.150" @ 261 lbs / Coil bind: 1.030" (No machine work required).
Note: Use with stock retainers. Titanium retainers will be available shortly.

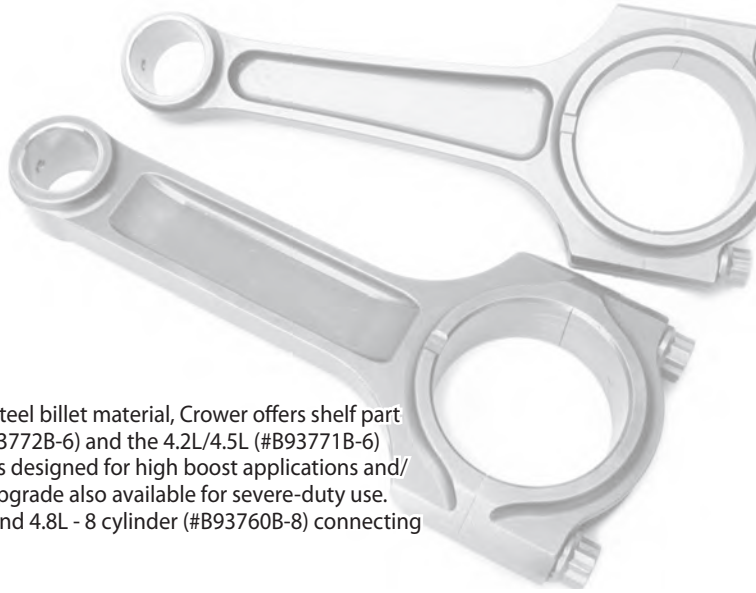
4340 Steel Billet Connecting Rods Available
B93771B-6 - 4.2L/4.5L
B93772B-6 - 4.8L

REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

MAXI-LITE BILLET RODS
Crower's new Maxi-Lite billet is approximately 100 grams lighter than Crower's standard billet.



Crower's premium steel billet connecting rods can handle 1200+ HP (6 cylinder) and are available for a variety of engine makes including the Nissan Patrol and Toyota LandCruiser



STEEL BILLET RODS
100% made in the USA from premium steel billet material, Crower offers shelf part numbers for the Nissan Patrol 4.8L (#B93772B-6) and the 4.2L/4.5L (#B93771B-6) engines. Features 220,000 p.s.i. rod bolts designed for high boost applications and/or nitrous. Optional 280,000 p.s.i. bolt upgrade also available for severe-duty use. Toyota LandCruiser 4.5L (#B93758B-6) and 4.8L - 8 cylinder (#B93760B-8) connecting rods are also on the shelf.

Oldsmobile

HYDRAULIC CAMSHAFTS

Non Roller 1967-up

260 307 (5.0L) 350 (5.7L) 400 403 425 455 (39° bank angle)

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust	Rec Kit
BAJA BEAST / PERFORMANCE LEVEL 2 - Low to mid-range torque for daily drivability. Economical price. RPM Power Range: 1500 to 4250 / Redline: 5500 plus.	260 350	**56915**	280H 112°	280°	289°	204°	214°	.450"	.474"	**84057**
POWER BEAST / PERFORMANCE LEVEL 3 - Delivers impressive mid-range and top end power. Healthy sound. Economical price. RPM Power Range: 1750 to 4500 / Redline: 5750 plus.	350 425	**56903**	289H 112°	289°	300°	214°	224°	.474"	.498"	**84057**
ULTRA BEAST / PERFORMANCE LEVEL 4 - Upper mid-range to top end power. Emphasis on top end. RPM Power Range: 2000 to 4800 / Redline: 6200 plus.	455 cid	**56919**	304H 112°	304°	316°	234°	244°	.520"	.542"	**84057**
MILEAGE COMPU-PRO / Performance Level 1 - These cams are designed to enhance throttle response and low-end torque in vans, trucks and passenger cars while delivering fuel efficient motoring. High vacuum and smooth idle are characteristic of these profiles. Stock or small cfm carburetor, small diameter tube headers, dual exhaust, and ignition rework are recommended for maximum benefit. RPM Power Range: Idle to 3500-3700 / Redline: 4500 plus.	400 403	**56258**	250HDP 112°	250°	258°	192°	196°	.429"	.445"	**84057**
	425 cid	**56260**	260HDP 112°	260°	266°	203°	211°	.448"	.450"	**84057**
POWER COMPU-PRO / Performance Level 2 - These cams provide excellent low end and mid-range power and extended rpm range for spirited street and offroad driving. A perfect combination of mileage and power. Modifications should include small diameter tube headers, low restriction dual exhaust, aftermarket manifold, increased cfm carburetor and reworked or performance ignition. Increase in compression ratio to 9.5:1 is recommended for maximum output. Works well with automatic transmission or 4-speed. RPM Power Range: 1300-1500 to 4000-4200 / Redline: 5500 plus.	260 cid	**56258**	250HDP 112°	250°	258°	192°	196°	.429"	.445"	**84057**
	350 cid	**56260**	260HDP 112°	260°	266°	203°	211°	.448"	.450"	**84057**
	400 425	**56261**	270HDP 112°	270°	276°	210°	219°	.451"	.474"	**84057**
	455 cid	**56262**	276HDP 112°	276°	281°	215°	221°	.488"	.494"	**84057**
HIGH PERFORMANCE COMPU-PRO / Performance Level 3 - Intended for the performance oriented hot street application. These cams offer an extended rpm range with emphasis on upper bottom to top end power (strong mid-range). Performance gears, headers, dual exhaust, larger than stock cfm carburetor, performance manifold and increased compression (9.5:1 to 10.5:1) are required. Works well with automatic transmission if matched with proper ring and pinion gears and/or high stall converter. RPM Power Range: 1600-1800 to 4500-4800 / Redline: 6000 plus.	260 cid	**56261**	270HDP 112°	270°	276°	210°	219°	.451"	.474"	**84057**
	350 cid	**56262**	276HDP 112°	276°	281°	215°	221°	.488"	.494"	**84057**
	400 425	**56263**	280HDP 112°	280°	286°	220°	227°	.485"	.496"	**84057**
	455 cid	**56264**	284HDP 112°	284°	290°	229°	236°	.520"	.528"	**84057**
ULTRA-PERFORMANCE COMPU-PRO / Performance Level 4 - The following grinds are best suited for dual purpose hot street/drag strip situations. These cams exhibit strong mid-range and top end torque and horsepower. Headers, dual exhaust, larger cfm carburetor, performance ignition and 11:1 compression are a must. Cylinder head modifications would be beneficial. Use with standard transmission or automatic with high stall converter. Low gearing a must. RPM Power Range: 2000-2200 to 6000-6200 / Redline: 6500	260 cid	**56263**	280HDP 112°	280°	286°	220°	227°	.485"	.496"	**84157**
	350 cid	**56264**	284HDP 112°	284°	290°	229°	236°	.520"	.528"	**84157**
	400 425	**56265**	297HDP 112°	297°	308°	237°	240°	.538"	.533"	**84157**
	455 cid	**56266**	311HDP 112°	311°	316°	247°	251°	.546"	.557"	**84157**

Engineered Component Kit & Accessories refer to the following page for specs or contact CROWER for more Info.

HYDRAULIC CAMSHAFTS (continued)

Non Roller 1967-up

260 307 (5.0L) 350 (5.7L) 400 403 425 455 (39° bank angle)

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust	Rec Kit
HI-DRAULIC HAULER / PERFORMANCE LEVEL 3 - Lope at idle. Hot street/strip cam with strong mid-range power RPM Power Range: 2500 to 6500	400 cid	**56270**	284HDP 108°	288°	298°	228°	238°	.464"	.482"	**84157**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 4 - Rough idle. Explosive mid-range power and torque. RPM Power Range: 3000 to 6500	400 cid	**56271**	296HDP 108°	296°	304°	229°	241°	.505"	.532"	**84157**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 4 - Rough idle. Violent mid-range acceleration. RPM Power Range: 3500 to 6500	400 cid	**56272**	304HDP 108°	304°	312°	244°	249°	.540"	.568"	**84157**
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**	***Refer to page 7 for camshaft recommendation form***							**See Below**

SOLID CAMSHAFTS

Note: These cams use .022" intake, .024" exhaust valve lash.

Description	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.6 / 1.6 Intake	Gross Lift 1.6 / 1.6 Exhaust	Rec Kit
COMPU-PRO / PERFORMANCE LEVEL 3 - High revving, super mid to top end power. RPM Power Range: 3000 to 7000 plus.	400 455	**56360**	274FDP 110°	274°	278°	238°	242°	.526"	.539"	**84357**
COMPU-PRO / PERFORMANCE LEVEL 4 - Super torque with explosive mid-range power. RPM Power Range: 3500 to 7500 plus.	400 455	**56361**	284FDP 108°	284°	290°	248°	255°	.552"	.568"	**84357**
COMPU-PRO / PERFORMANCE LEVEL 5 - Upper mid-range and top end profile for added power above 7000 rpm. RPM Power Range: 4000 to 8000 plus.	400 455	**56362**	300FDP 108°	300°	308°	260	268°	.584"	.601"	**84357**
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	***Refer to page 7 for camshaft recommendation form***							**84357**
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00003 or 00006**	***Refer to page 7 for camshaft recommendation form***							**Call Crower**

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84057	66056-16	68305X1-16	87048-16		Hydraulic Lifter. 6000 plus rpm.
84157	66056-16	68405-16	87048-16	86072-16	Hydraulic Lifter. 6500 rpm.
84357	66962-16	68405-16	87048-16	86072-16	Solid Lifter. 7500 plus rpm.

Spring pressure:
68305X1-16 Seat: 1.700" @ 68 lbs / Nose: 1.200" @ 250 lbs / Coil bind: 1.050"
(Stock O.D., no machine work).
68405-16 Seat: 1.700" @ 110 lbs / Nose: 1.100" @ 338 lbs / Coil bind: 0.980"
(Machine work, use cutter 68983*).
* Machine work required, specify 11/32 pilot shaft when ordering.

Note: For lifts over .480" pushrods 70049-16 or 70050-16 are required. All solid lifter profiles require adjustable pushrods.

Non-adjustable pushrods can be used if you have proper lifter preload (.050" off snap-ring). Custom length pushrods are available from Crower to achieve proper lifter preload. Customer must furnish accurate pushrod length. In order to assist in proper preload measurement, Crower offers an adjustable checking pushrod.

Note: 1964-66 Oldsmobile blocks require 45° cam cores and cannot be interchanged with late model (39°) cam cores. Early model 45° camshafts are available on a special order basis. Customer must furnish lifter bore diameter when ordering.

Valve timing events are available online at: **www.crower.com/valvtime.html**

For severe duty applications, Crower offers a high-lube "**CamSaver**" lifter that channels more oil to the cam lobe and lifter surface. **Specify X3 after corresponding component kit.**

For severe duty applications, Crower recommends using our solid lifter with the added "**coolface oiling option". Specify X980 after corresponding component kit.**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's.146-149	Pushrods
See pg. 138	Timing gear set
Pg's.150-165	Rocker arms (1.6) 7/16

Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.

Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.

Note: If making valve train adjustable with rockers, screw-in studs and guide plates are required. Call Crower for details.

Pontiac

HYDRAULIC CAMSHAFTS

Non Roller 1955-1981

287 301 316 341 350 370 389 400 421 455 V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Rec Kit
MILEAGE BEAST / PERFORMANCE LEVEL 1 - Exhibits broad stump pulling power and torque. RPM Power Range: 1200 to 3800 / Redline: 5200 plus.	265 287	**60917**	278H 112°	278°	288°	204°	214°	.422"	.444"	**84160**
BAJA BEAST / PERFORMANCE LEVEL 2 - Low to mid-range torque for daily drivability. Economical price. RPM Power Range: 1500 to 4250 / Redline: 5500 plus.	301 350	**60915**	272H 112°	272°	279°	211°	220°	.422"	.443"	**84160**
TORQUE BEAST / PERFORMANCE LEVEL 3 - Delivers impressive mid-range and top end power. Healthy sound. Economical price. RPM Power Range: 1750 to 4500 / Redline: 5750 plus.	370 421	**60918**	288H 112°	288°	298°	214°	224°	.444"	.467"	**84160**
POWER BEAST / PERFORMANCE LEVEL 4 - Upper mid-range to top end power. Emphasis on top end. RPM Power Range: 2000 to 4800 / Redline: 6200 plus.	421 455	**60916**	278H 112°	278°	289°	221°	229°	.455"	.470"	**84160**
ULTRA BEAST / PERFORMANCE LEVEL 4 - Hot street profile that delivers impressive mid-range and top end power. RPM Power Range: 2000 to 4800 / Redline: 6200 plus.	428 455	**60919**	304H 112°	304°	316°	231°	240°	.470"	.470"	**84160**
POWER COMPU-PRO / Performance Level 2 - These cams provide excellent low end and mid-range power and extended rpm range for spirited street and offroad driving. A perfect combination of mileage and power. Modifications should include small diameter tube headers, low restriction dual exhaust, aftermarket manifold, increased cfm carburetor and reworked or performance ignition. Increase in compression ratio to 9.5:1 is recommended for maximum output. Works well with automatic transmission or 4-speed. RPM Power Range: 1300-1500 to 4000-4200 / Redline: 5500 plus.	370 421	**60240**	270HDP 112°	270°	276°	210°	221°	.422"	.446"	**84160**
HIGH PERFORMANCE COMPU-PRO / Performance Level 3 - Intended for the performance oriented hot street application. These cams offer an extended rpm range with emphasis on upper bottom to top end power (strong mid-range). Performance gears, headers, dual exhaust, larger than stock cfm carburetor, performance manifold and increased compression (9.5:1 to 10.5:1) are required. Works well with automatic transmission if matched with proper ring and pinion gears and/or high stall converter. RPM Power Range: 1600-1800 to 4500-4800 / Redline: 6000 plus.	265 287	**60240**	270HDP 112°	270°	276°	210°	221°	.422"	.446"	**84160**
	301 350	**60242**	280HDP 112°	280°	286°	221°	229°	.456"	.468"	**84160**
	428 455	**60243**	284HDP 112°	284°	290°	228°	235°	.479"	.494"	**84160**

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84160	66056-16	68404-16	87048D-16	86072-16	Hydraulic Lifter. Up to 6500 plus rpm.
84360	66962-16[A]	68405-16	87048D-16	86072-16	Solid Lifter. Up to 7000 plus rpm.

Spring pressure:
68404-16 Seat: 1.600" @ 116 lbs / Nose: 1.100" @ 302 lbs / Coil bind: 0.910" (Stock O.D., no machine work).
68405-16 Seat: 1.700" @ 110 lbs / Nose: 1.100" @ 338 lbs / Coil bind: 0.980" (Stock O.D., no machine work).
A. Lifter 66962-16 is a special high oil band tappet with high pushrod seat. It is not a Chevrolet solid lifter.
Note: Non-adjustable pushrods can be used if you have proper lifter preload (.050" off snap-ring). Custom length pushrods are available from Crower to achieve proper lifter preload. Customer must furnish accurate pushrod length.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Note: The above kit will not work if using Pontiac heads with 1.65:1 rocker ratio (springs are too short). Contact Crower for special spring and retainer combination. See diagram 2.
Note: For proper valve adjustment on solid lifter profiles, Crower "Sure-Lock" rocker nuts (86053) must be used.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's.146-149	Pushrods
See pg. 138	Timing gear set
Pg's.150-165	Rocker arms (1.6) 3⁄8
Pg's.150-165	Rocker arms (1.6) 7⁄16

Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.
Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.
Note: If making valve train adjustable with rockers, screw-in studs and guide plates are required. Call Crower for details.

HYDRAULIC CAMSHAFTS (continued)

Non Roller 1955-1981

287 301 316 341 350 370 389 400 421 455 V8

Note: These cams use .000" intake and exhaust valve lash.

X-TREME MILEAGE CAMS AVAILABLE!

CONTACT CROWER TECHNICIANS FOR MORE INFO.

Description	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Rec Kit
ULTRA-PERFORMANCE COMPU-PRO / Performance Level 4 - The following grinds are best suited for dual purpose hot street/drag strip situations. These cams exhibit strong mid-range and top end torque and horsepower. Headers, dual exhaust, larger cfm carburetor, performance ignition and 11:1 compression are a must. Cylinder head modifications would be beneficial. Use with standard transmission or automatic with high stall converter. Low gearing a must. RPM Power Range: 2000-2200 to 6000-6200 / Redline: 6500	265 287	**60242**	280HDP 112°	280°	286°	221°	229°	.456"	.468"	**84160**
	301 350	**60243**	284HDP 112°	284°	290°	228°	235°	.479"	.494"	**84160**
	370 421	**60244**	297HDP 112°	297°	308°	239°	241°	.500"	.500"	**84160**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 3 - Lope at idle. Hot street/strip cam with strong mid-range power. RPM Power Range: 2500 to 6500	389 400	**60210**	278HDP 108°	278°	288°	229°	239°	.480"	.501"	**84160**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 4 - Rough idle. Explosive mid-range power and torque. RPM Power Range: 3000 to 6500 plus.	389 400	**60211**	296HDP 108°	296°	308°	236°	242°	.509"	.516"	**84160**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 4 - Rough idle. Violent mid-range acceleration. RPM Power Range: 3250 to 6500	428 455	**60212**	304HDP 108°	304°	312°	239°	247°	.497"	.522"	**84160**
HI-DRAULIC HAULER / PERFORMANCE LEVEL 4 - Brutal mid to top end torque and horsepower. RPM Power Range: 3500 to 6500	428 455	**60213**	308HDP 108°	308°	314°	248°	256°	.518"	.537"	**84160**
CUSTOM GROUND HYDRAULIC - Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00001**	***Refer to page 7 for camshaft recommendation form***							

SOLID CAMSHAFTS

Note: These cams use .022" intake, .024" exhaust valve lash.

Description	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Rec Kit
PRO-STREET / PERFORMANCE LEVEL 3 - High revving, super mid to top end power grind. RPM Power Range: 2800 to 6000 plus.	389 455	**60310**	284FDP 112°	284°	288°	240°	248°	.477"	.501"	**84360**
PRO-STREET / PERFORMANCE LEVEL 4 - Super upper mid-range and top end power profile. RPM Power Range: 3000 to 6500 plus.	389 455	**60311**	292FDP 112°	292°	302°	247°	252°	.505"	.517"	**84360**
COMPU-PRO / PERFORMANCE LEVEL 4 - High revving, superior upper bottom profile with emphasis on mid to top end power. RPM Power Range: 4500 to 7500 plus.	389 455	**60353**	304FDP 108°	304°	312°	255°	262°	.527"	.546"	**84360**
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00000**	***Refer to page 7 for camshaft recommendation form***							

For Engineered Component Kit & Accessories, refer to page 126 for specs or contact CROWER for more Info.

Pontiac

ROLLER CAMSHAFTS

Mechanical 1955-1981

287 301 316 341 350 370 389 400 421 455 V8

Note: These cams use .026" intake, .028" exhaust valve lash.

Description	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust	Rec Kit
ULTRA-ACTION / PERFORMANCE LEVEL 5 - All range camshaft for heavy car, high stall with compression and headers. RPM Power Range: 3000 to 6500 plus.	389 455	**60450**	275R 112°	275°	284°	233°	242°	.495"	.496"	**84568**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Radical mid-range cam, shifts at 6500 rpm with a redline of 7000. RPM Power Range: 4000 to 7000 max.	389 455	**60451**	284R 108°	284°	294°	247°	254°	.582"	.567"	**Call Crower**
ULTRA-ACTION / PERFORMANCE LEVEL 5 - Large cid camshaft (455 cid or bigger). Smashing mid-range power hit and top end performer. RPM Power Range: 4500 to 7250 plus.	389 455	**60452**	294R 108°	294°	298°	257°	263°	.649"	636"	**Call Crower**
CUSTOM GROUND ROLLER - Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	All cid	**00002**	*Refer to page 7 for camshaft recommendation form*							**Call Crower**

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84160	66056-16	68404-16	87048D-16	86072-16	For rpm up to 6500 plus.
84360	66962-16[A]	68405-16	87048D-16	86072-16	Solid Lifter. For rpm up to 7000 plus.
84568	66260-16	68380X2-16	87048D-16	86072-16	Roller Lifter. For rpm up to 7500 plus.

Spring pressure:
68404-16 Seat: 1.600" @ 116 lbs / Nose: 1.100" @ 302 lbs / Coil bind: 0.910" (Stock O.D., no machine work).
68405-16 Seat: 1.700" @ 110 lbs / Nose: 1.100" @ 338 lbs / Coil bind: 0.980" (Stock O.D., no machine work).
68380X2-16 Seat: 1.800" @ 197 lbs / Nose: 1.250" @ 446 lbs / Coil bind: 1.110"
A. Lifter 66962-16 is a special high oil band tappet with high pushrod seat. It is not a Chevrolet solid lifter.
Note: Non-adjustable pushrods can be used if you have proper lifter preload (.050" off snap-ring). Custom length pushrods are available from Crower to achieve proper lifter preload. Customer must furnish accurate pushrod length.
CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").
Note: The above kit will not work if using Pontiac heads with 1.65:1 rocker ratio (springs are too short). Contact Crower for special spring and retainer combination. See diagram 2.
Note: For proper valve adjustment on solid lifter profiles, Crower "Sure-Lock" rocker nuts (86053) must be used.
Valve timing events are available online at: **www.crower.com/valvtime.html**

ACCESSORIES

Part No.	Description
See pg. 180	Spring seat cutter
Pg's.146-149	Pushrods
See pg. 138	Timing gear set
Pg's.150-165	Rocker arms (1.6) 3/8
Pg's.150-165	Rocker arms (1.6) 7/16

Note: If exceeding 7500 rpm, high pressure springs and titanium retainers may be required. See specs or contact Crower.
Note: If using longer than stock valves you may require spring and retainer modifications. See specs or contact Crower.
Note: If making valve train adjustable with rockers, screw-in studs and guide plates are required. Call Crower for details.

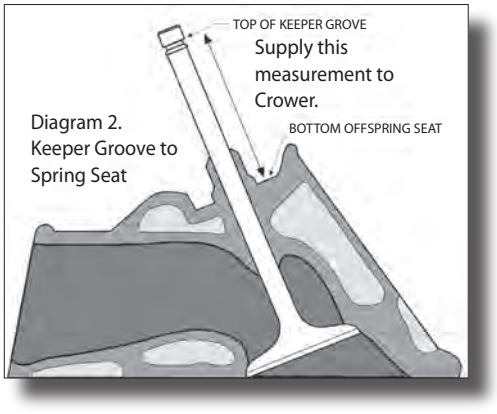


Diagram 2.
Keeper Groove to Spring Seat

Accurately measure the distance from the top of keeper groove to bottom of spring seat (see arrows indicating measurement in diagram 2) .
Note: If heads have been extensively modified (machined spring pockets, longer valves, etc.) contact Crower for proper spring, keeper, cup and retainer recommendations. Have your keeper/seat measurement available.

Subaru

EJ205 WRX USDM - QUAD CAM (2002-up)

WRX Sedan/WRX Wagon (2002-up)

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

New Improved Cam Core Technology

Description	Part Number	Lobe Center	Advertised Duration Seat Intake	Advertised Duration Seat Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift Intake	Gross Lift Exhaust	Rec Kit
Subaru EJ20 (2003)	**Stock**	114°	248°	248°	208°	208°	.366"	.362"	**Stock**
STAGE 1 - Hotter Than Stock Street use with emphasis on bottom end and mid range power. Works with stock springs up to factory rev limiter. RPM Range: Idle to 7000+	**62580-4**	114°	256°	256°	216°	216°	.380" (9.65mm)	.380" (9.65mm)	**Stock**
STAGE 2 - Mild Street/Strip Best cam choice for daily driver. Delivers excellent top end without loosing low end torque. Recommend spring kit #84185. RPM Range: 1000 to 7500+	**62581-4**	114°	264°	264°	220°	220°	.400" (10.16mm)	.400" (10.16mm)	**84185**
STAGE 3 - 3/4 Race Designed for street/strip applications and features a slight lope at idle and great top end power. Requires spring/retainer kit #84185. RPM Range: 1250 to 8000+	**62582-4**	114°	272°	272°	228°	228°	.406" (10.31mm)	.406" (10.31mm)	**84185**
STAGE 4 - Full Race Drag Race and radical Street/Strip. Requires #84185 spring kit and compatible ECU upgrade for optimum results. Rough idle. RPM Range: 1500 to 8500+	**62583-4**	114°	280°	280°	234°	234°	.415" (10.55mm)	.415" (10.55mm)	**84185**
CUSTOM GRIND - Crower can custom grind cams to your desired specs, also proprietary profiles available upon request.			*Refer to page 7 for camshaft recommendation form*						

If running EJ207, modifications are required to the cylinder head (AVCS) in order to run the above camshafts. Duration figures are taken at the lobe.

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84185	68195-16	87085-16	Titanium retainer intended for race and street.
84185S	68195-16	87085S-16	Steel Retainer, for daily street use.

REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

Spring pressure:
68195-16 Seat: 1.420" @ 60 lbs / Nose: 1.000" @ 161 lbs / Coil bind: 0.860"
(No machine work required).

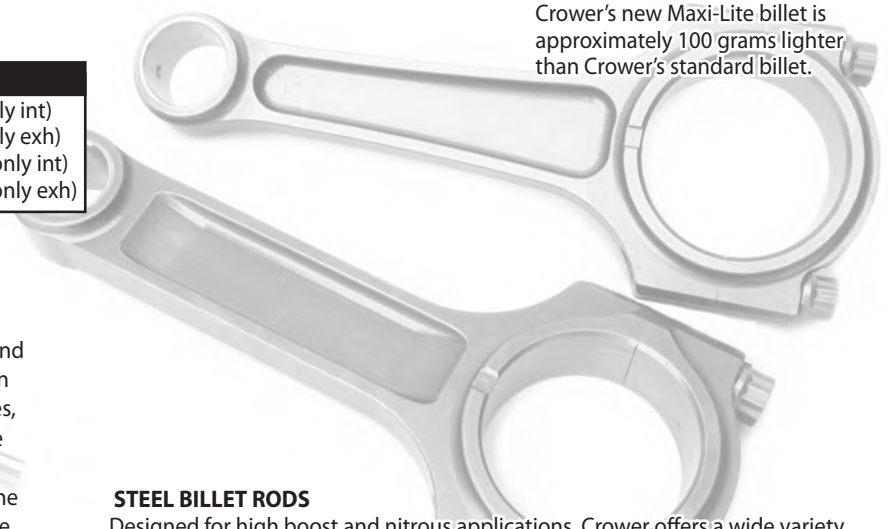
ACCESSORIES

Part No.	Description
97460I-8	Stainless steel valves - 36 mm head dia (8 only int)
97460E-8	Stainless steel valves - 32 mm head dia (8 only exh)
97461I-8	Stainless steel valves - 36.5 mm head dia (8 only int)
97461E-8	Stainless steel valves - 32.5 mm head dia (8 only exh)

Note: When ordering valves, be sure to specify one set int and one set exh.

STAINLESS STEEL VALVES
Made from the highest grade stainless steel, this new Crower valve is a must for high horsepower, high boost and high rpm applications. The exclusive "Pro Flo" head design delivers a significant increase in cylinder head flow figures, while the tip area is hardened to RC50, including past the critical keeper groove area for added strength. Fully CNC machined and swirl polished to insure that you will get the best performance valve available on the market. Available in standard, 1⁄2 mm and 1mm oversize. Titanium valves also available. Contact Crower for availability.

MAXI-LITE BILLET RODS
Crower's new Maxi-Lite billet is approximately 100 grams lighter than Crower's standard billet.



STEEL BILLET RODS
Designed for high boost and nitrous applications, Crower offers a wide variety of connecting rods for the Subaru engine platforms including the WRX-EJ20/STi-EJ257 (#B93766B-4). CNC machined from the highest grade, USA milled steel billet material, Crower connecting rods are the industry standard. Features 220,000 p.s.i. rod bolts standard and aluminum-bronze bushings standard.

Subaru

WRX STI EJ25 2.5L - QUAD CAM (2004-up)

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

New Improved Cam Core Technology

Description	Part Number	Lobe Center	Advertised Duration Seat Intake	Advertised Duration Seat Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift Intake	Gross Lift Exhaust	Rec Kit
Subaru EJ25 (2004 - up)	**Stock**	114°	248°	248°	208°	208°	.366"	.362"	**Stock**
STAGE 1 - Hotter Than Stock Street use with emphasis on bottom end and mid range power. Works with stock springs up to factory rev limiter. RPM Range: Idle to 6700+	**62590-4**	114°	256°	256°	216°	216°	.380" (9.65mm)	.380"	**Stock**
STAGE 2 - Mild Street/Strip Best cam choice for daily driver. Delivers excellent top end without loosing low end torque. Recommend spring kit #84185. RPM Range: 1000 to 7500+	**62591-4**	114°	264°	264°	220°	220°	.400" (10.16mm)	.400"	**84185**
STAGE 3 - 3/4 Race Designed for street/strip applications and features a slight lope at idle and great top end power. Requires spring/retainer kit #84185. RPM Range: 1200 to 8000+	**62592-4**	114°	272°	272°	228°	228°	.406" (10.31mm)	.406"	**84185**
STAGE 4 - Full Race Drag Race and radical Street/Strip. Requires #84185 spring kit and compatible ECU upgrade for optimum results. Rough idle. RPM Range: 1400 to 8500+	**62593-4**	114°	280°	280°	234°	234°	.415" (10.55mm)	.415"	**84185**
CUSTOM GRIND - Crower can custom grind cams to your desired specs, also proprietary profiles available upon request.		***Refer to page 7 for camshaft recommendation form***							

If running EJ207, modifications are required to the cylinder head (AVCS) in order to run the above camshafts. Duration figures are taken at the lobe.

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84185	68195-16	87085-16	Titanium retainer intended for race and street.
84185S	68195-16	87085S-16	Steel Retainer, for daily street use.

Spring pressure:
68195-16 Seat: 1.420" @ 60 lbs / Nose: 1.000" @ 161 lbs / Coil bind: 0.860"
(No machine work required).

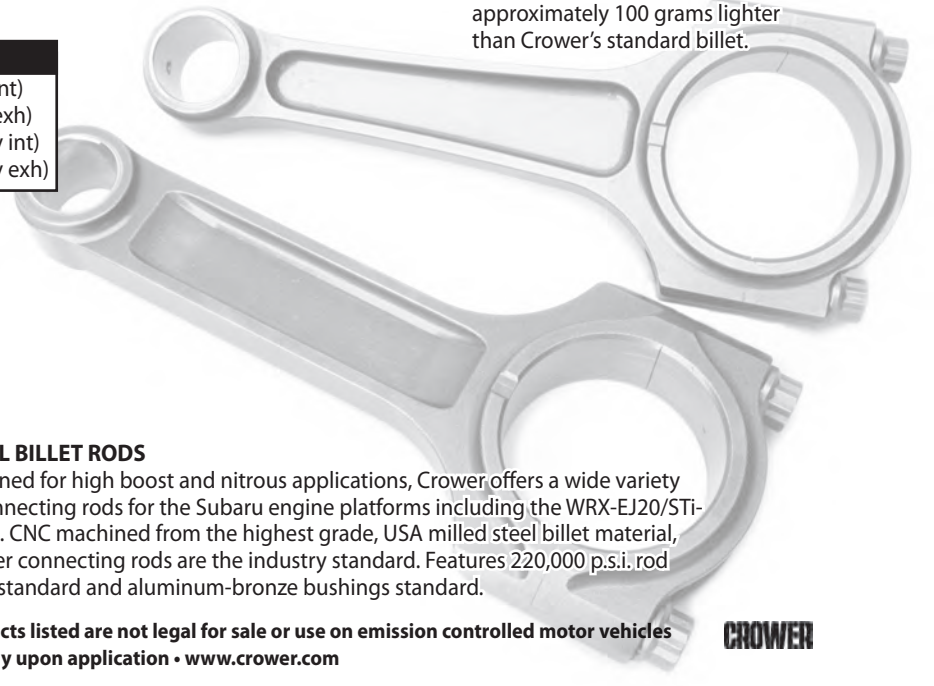
REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

ACCESSORIES

Part No.	Description
97460I-8	Stainless steel valves - 36 mm head dia (8 only int)
97460E-8	Stainless steel valves - 32 mm head dia (8 only exh)
97461I-8	Stainless steel valves - 36.5 mm head dia (8 only int)
97461E-8	Stainless steel valves - 32.5 mm head dia (8 only exh)

Note: When ordering valves, be sure to specify one set int and one set exh.

MAXI-LITE BILLET RODS
Crower's new Maxi-Lite billet is approximately 100 grams lighter than Crower's standard billet.



STEEL BILLET RODS
Designed for high boost and nitrous applications, Crower offers a wide variety of connecting rods for the Subaru engine platforms including the WRX-EJ20/STi-EJ257. CNC machined from the highest grade, USA milled steel billet material, Crower connecting rods are the industry standard. Features 220,000 p.s.i. rod bolts standard and aluminum-bronze bushings standard.

Toyota

SUPRA 2JZ-GTE Factory Turbo 6 Cylinder - TWIN CAM (93-98)

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

New Improved Cam Core Technology

Description	Part Number	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .010" Specs @ Lobe Intake	Duration @ .010" Specs @ Lobe Exhaust	Duration @ .050" Specs @ Lobe Intake	Duration @ .050" Specs @ Lobe Exhaust	Gross Lift Intake	Gross Lift Exhaust	Rec Kit
FACTORY OEM SPECS (2JZGTE)	**Stock**	248°	248°	276°	204°	200°	204°	.338" inches 8.58 mm	.346" 8.79	**Stock**
	264	264°	264°	281°	281°	222°	222°	.364" inches 9.24 mm	.364" 9.24	**Stock**
	272	272°	272°	287°	318°	229°	231°	.374" inches 9.50 mm	.380" 9.65	**84168**
STAGE 1 - Daily Driver Street use and more aggressive turbo and nitrous. Slight lope at idle. RPM Range: Idle to 7500+	**61401-2**	264°	264°	289°	289°	218°	218°	.375" inches 9.52 mm	.375" 9.52	**84168**
STAGE 2 - 3/4 Race Street/Strip package. Lope at idle, extended rpms. Kit #84168 required. RPM Range: 1000 to 8500+.	**61402-2**	272°	272°	276°	278°	230°	232°	.406" inches 10.31 mm	.415" 10.54	**84168**
STAGE 2 - 3/4 Race Hot street, similar to HKS 272 specs. Kit #84168 required. RPM Range: 1000 to 8500+	**61402A-2**	272°	272°	310°	310°	228°	230°	.372" inches 9.45 mm	.372" 9.45	**84168**
STAGE 3 - Full Drag Race Limited street with rough idle. Shim under bucket may be required. RPM Range: 1250 to 9000+	**61403-2**	280°	280°	278°	280°	232°	234°	.415" inches 10.54 mm	.425" 10.80	**84168**
CUSTOM GROUND 2JZGTE CAMS - Special order custom ground profiles available for an additional charge. Proprietary and confidential profiles also available. See specs listed below.	**00072-2**	*Refer to page 7 for camshaft recommendation form*								

Note: The above cores will not fit the non-turbo 2JZ cylinder head. No cores available at time of publication.
Note: 1JZ Cams available, call Crower.

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84168	68195-24	87085-24	Fits 2JZ cylinder heads
84168S	68195-24	87085-24	Fits 2JZ cylinder heads

Spring pressure:
68195-24 Seat: 1.325" @ 82 lbs / Nose: 0.980" @ 166 lbs / Coil bind: 0.860"
(No machine work required).

BILLET STROKER KITS
Crower offers stroker kits for the 2JZGTE that feature a 4340 steel billet crankshaft, 4340 steel billet rods and custom pistons, pins, rings and locks.
94mm stroke x 87mm bore = 3.4L...big horsepower!

REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.

ACCESSORIES

Part No.	Description
86054T	Adjustable Cam Sprocket (1 only). All black. 2 required
97440I-12	Stainless steel valves - 33.6 mm head dia (12 only int)
97440E-12	Stainless steel valves - 29 mm head dia (12 only exh)
97441I-12	Stainless steel valves - 34.6 mm head dia (12 only int)
97441E-12	Stainless steel valves - 30 mm head dia (12 only exh)

Note: When ordering valves, be sure to specify one set int and one set exh.

ADJUSTABLE SPROCKETS
Crower's new cam sprockets are made from premium 6061-T6 billet aluminum and incorporate a four bolt ARP® fastening system to prevent the slippage found in other brands. For the ultimate tuner, Crower sprockets feature 5/16" diameter, 12 point ARP® fasteners with a hardened washer to prevent galling and stripping. The lightweight design reduces unwanted harmonics which could cause valve train failure. Specify #86054T (sold separately).

H-BEAM RODS
Crower also has H-Beam design rods.

Toyota

1ZZ - Twin Cam

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

New Improved Cam Core Technology

Description	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift Intake	Gross Lift Exhaust	Rec. Kit
TOYOTA COROLLA (2000)	**Stock**	114°	256°	256°	204°	195°	.379"	.346"	**Stock**
STAGE 1 Street use with emphasis on bottom end and mid range power. Works with stock springs up to factory rev limiter. RPM Range: Idle to 7000+	**61451-2**	114°	264°	264°	214°	202°	.379"	.367"	**Stock**
STAGE 2 - Forced Induction Designed specifically for turbo or supercharger applications. Low duration, high lift profile. Requires Crower spring kit #84199. RPM Range: Idle to 8000+	**61451T-2**	114°	272°	272°	215°	212°	.396"	.379"	**84199**
STAGE 2 - 3/4 Race Designed for street/strip applications in normally aspirated engines. Requires spring/retainer kit #84199 and ECU mods. RPM Range: 1000 to 7800+	**61452-2**	112°	272°	272°	222°	219°	.396"	.396"	**84199**
STAGE 3 - Full Race Drag Race and radical Street/Strip. Requires #84199 spring kit and compatible ECU upgrade for optimum results. Rough idle. RPM Range: 1100 to 8000+	**61453-2**	112°	280°	280°	228°	219°	.415"	.396"	**84199**
CUSTOM GRIND - Crower can custom grind cams to your desired specs, also proprietary profiles available upon request.	**00085-2**		***Refer to page 7 for camshaft recommendation form***						

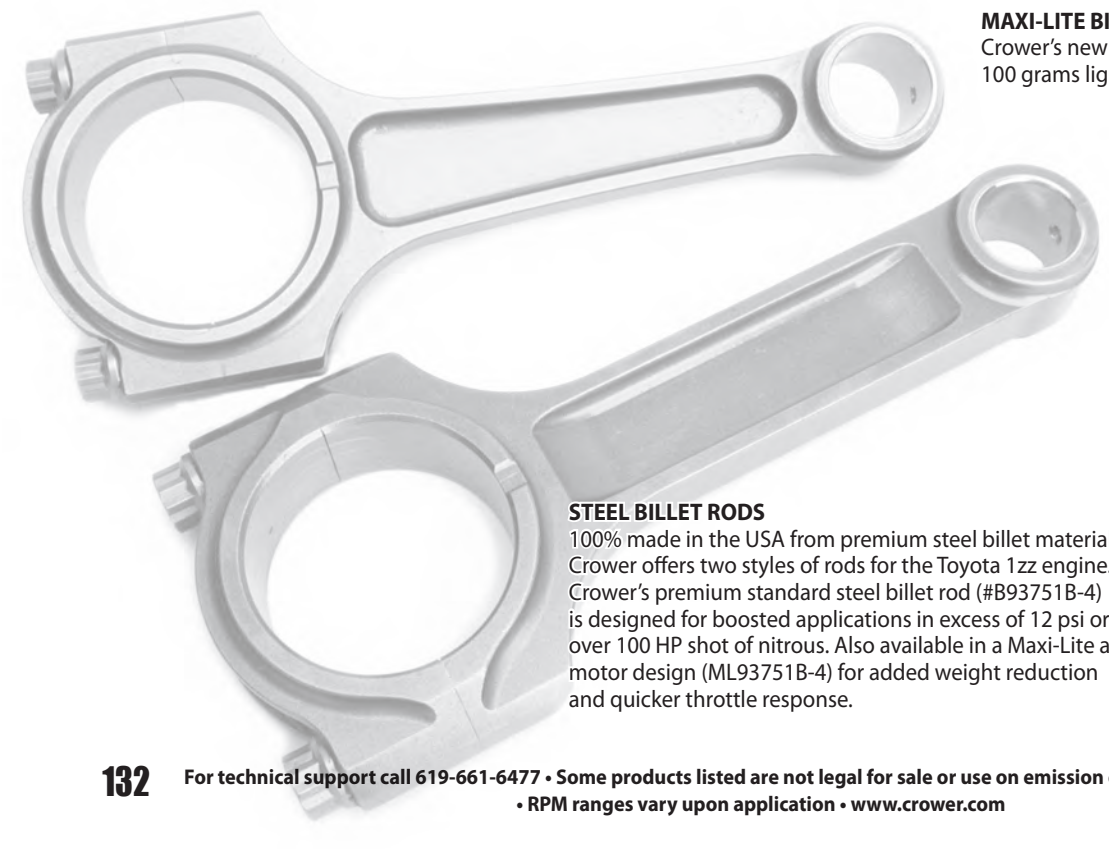
Duration figures are taken at the lobe.

ENGINEERED COMPONENT KITS

Part No.	Springs	Retainers	Remarks
84199	68160-16	87086-16	Titanium retainer intended for race and limited street

Spring pressure:
68160-16 Seat: 1.310" @ 39 lbs / Nose: 0.880" @ 97 lbs / Coil bind: 0.810" (No machine work required).

REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.



MAXI-LITE BILLET RODS
Crower's new Maxi-Lite billet is approximately 100 grams lighter than Crower's standard billet.

STEEL BILLET RODS
100% made in the USA from premium steel billet material, Crower offers two styles of rods for the Toyota 1zz engine. Crower's premium standard steel billet rod (#B93751B-4) is designed for boosted applications in excess of 12 psi or over 100 HP shot of nitrous. Also available in a Maxi-Lite all motor design (ML93751B-4) for added weight reduction and quicker throttle response.

Toyota

2T / 2TC / 3TC 4 Cylinder

Note: These cams use .014" intake (cold), .016" exhaust valve lash (cold).

New Improved Cam Core Technology

Description	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe Lift Intake	Lobe Lift Exhaust	Gross Lift 1.4 / 1.4 Intake	Gross Lift 1.4 / 1.4 Exhaust	Rec. Kit
STAGE 1 Stock replacement. RPM Range: Idle to 5500+	**61850***	110°	256°	256°	194°	194°	.254"	.254"	.355"	.355"	**Stock**
STAGE 1 Mild street, similar to stock idle. Good for bottom end performance. Works well with automatic transmission. RPM Range: Idle to 6000+	**61851***	108°	260°	266°	206°	214°	.250"	.260"	.350"	.364"	**Stock**
STAGE 2 Excellent normally aspirated street. Emphasis on mid-range power. Tight center for torque and lope at idle. RPM Range: 1000 to 7000+	**61852***	108°	274°	280°	220°	230°	.253"	.268"	.354"	.375"	**TRD**
STAGE 2 - 3/4 Race Excellent for turbo and nitrous for street/strip applications. Wide center for top end performance. RPM Range: 2600 to 7200+	**61853***	114°	286°	280°	240°	230°	.263"	.268"	.368"	.375"	**TRD**
STAGE 4 - Full Race Race turbo (30+ lbs boost minimum). Also works well with NOS. RPM Range: 2600 to 7200+	**61854***	112°	290°	296°	258°	268°	.360"	.370"	.504"	.518"	**TRD**
STAGE 5 - Full Race Performance built, race oriented application. Not for the inexperienced tuner. Top end insanity. RPM Range: 3000 to 8000+	**61855***	114°	300°	300°	268°	268°	.370"	.370"	.518"	.518"	**TRD**
CUSTOM GROUND SOLID - Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	**00000**		**Refer to page 7 for camshaft recommendation form**								

* Indicates spec change from previous listings. Contact TRD regarding spring and retainer availability.
Valve timing events are available online at: **www.crower.com/valvtime.html**

4AGE 4 cylinder

Note: These cams use .006" intake (cold), .008" exhaust valve lash (cold).

Description	Part Number	Advertised Duration (.010") Intake	Advertised Duration (.010") Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Lobe lift Intake	Lobe lift Exhaust	Gross Lift Intake	Gross Lift Exhaust	Rec Spring
FACTORY OEM SPECS (4AGE)	**STOCK**	255°	258°	204°	204°	.298"	.298"	-	-	STOCK
STAGE 1 Street use. Slight lope at idle. **RPM Range: 2000 to 7000+**	**61821-2**	268°	268°	212°	212°	.305"	.305"	-	-	**68162-16**
STAGE 2 4AGZE forced induction applications. Big lift, short duration profile. **RPM Range: 2500 to 7500.**	**61822T-2**	270°	270°	218°	218°	.344"	.344"	-	-	**68162-16**
STAGE 2 Use for street/strip applications with no power adders. Lope at idle.. **RPM Range: 2500 to 7500+**	**61822-2**	272°	272°	224°	224°	.321"	321"	-	-	**68162-16**
STAGE 3 - 3/4 Race Recommended for mostly strip use. All motor application, rough idle. **RPM Range: 3000 to 8500+**	**61823-2**	280°	280°	234°	234°	.333"	.333°	-	-	**68162-16**
STAGE 3 - Full Race All out, all motor drag profile. not for the inexperienced tuner.. **RPM Range: 3500 to 9000+**	**61824-2**	288°	298°	234°	240°	.333"	.344"	-	-	**68162-16**

68162-16 Seat: 1.300"@ 54 lbs / Nose: 0.950" @ 128 lbs / Coil bind: 0.885" (No Machine work required).

Toyota

22R (4 Cylinder)

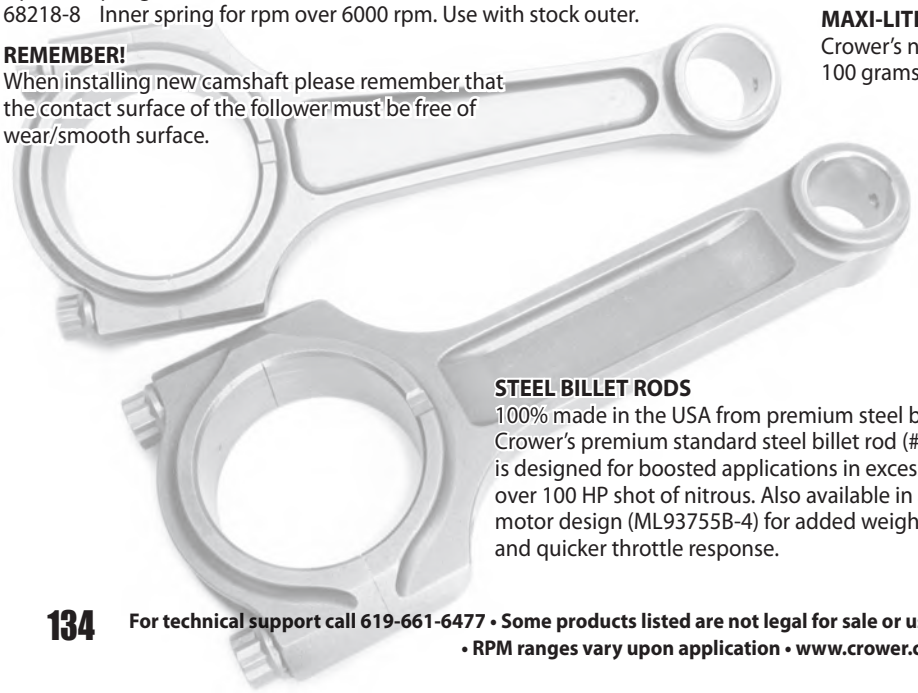
Note: These cams use .006" intake, .008" exhaust valve lash.

New Improved Cam Core Technology

Description	Part Number	Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.5 / 1.5 Intake	Gross Lift 1.5 / 1.5 Exhaust			Rec. Spring
CARBURETOR - STAGE 1 10:1 compression, low to mid-range torque. Heavy vehicle. RPM Range: 2200 to 6200+	**61800**	108°	270°	276°	216°	220°	.430"	.430"	-	-	**Stock**
CARBURETOR - STAGE 1 10:1+ compression, header, intake manifold, carb mods. RPM Range: 3000 to 7000+	**61801**	108°	286°	290°	226°	236°	.429"	.443"	-	-	**Stock**
CARBURETOR - STAGE 2 11:1+ compression, header, big single, or dual carbs. RPM Range: 3400 to 7200+	**61803**	108°	290°	298°	236°	240°	.443"	.417"	-	-	**68218-8**
CARBURETOR - STAGE 3 (3/4 Race) 12:1+ compression, header, big single, or dual carbs, porting, etc... RPM Range: 4200 to 8000+	**61804***	106°	298°	304°	248°	254°	.489"	.504"	-	-	**68218-8**
CARBURETOR - STAGE 4 (Full Race) Professionally prepared, purpose built, race only engine. RPM Range: 5000 to 8500+	**61805**	106°	308°	308°	264°	264°	.566"	.566"	-	-	**68218-8**
EFI - STAGE 1 Excellent stock replacement cam. No other modifications required, straight forward remove and replace. RPM Range: 1500 to 5500+	**61802**	114°	252°	260°	204°	210°	.420"	.438"	-	-	**Stock**
EFI - STAGE 2 Street/Strip profile and all purpose daily driver. Headers, performance exhaust recommended. RPM Range: 2000 to 6000+	**61807**	114°	270°	276°	216°	220°	.430"	.430"	-	-	**Stock**
EFI - STAGE 3 (3/4 Race) Excellent for turbo and nitrous for street/strip applications. Wide center for top end performance. RPM Range: 2500 to 7000+	**61808**	114°	280°	280°	226°	226°	.445"	.445"	-	-	**68218-8**
EFI - STAGE 4 (Full Race) Mostly strip, not for daily driver. Very rough idle, aftermarket valve springs, ECU mods required. RPM Range: 3000 to 7500+	**61809**	114°	290°	298°	236°	240°	.443"	.417"	-	-	**68218-8**

*Indicates design change from previous listings.
Optional spring:
68218-8 Inner spring for rpm over 6000 rpm. Use with stock outer.

REMEMBER!
When installing new camshaft please remember that the contact surface of the follower must be free of wear/smooth surface.



MAXI-LITE BILLET RODS
Crower's new Maxi-Lite billet is approximately 100 grams lighter than Crower's standard billet.

STEEL BILLET RODS
100% made in the USA from premium steel billet material. Crower's premium standard steel billet rod (#B93755B-4) is designed for boosted applications in excess of 12 psi or over 100 HP shot of nitrous. Also available in a Maxi-Lite all motor design (ML93755B-4) for added weight reduction and quicker throttle response.

Volkswagen

SOLID CAMSHAFTS

Type 1 & 3 Air Cooled, & Type 4 Water Cooled

Note: These cams use .006" intake, .008" exhaust valve lash.

Note: Water cooled cam cores also available for Rabbit, Scirocco, Jetta and Dasher (1972-90) 4 cyl.

Description	C.I.D. Group	Part Number	Grind Lobe Center	Advertised Duration Intake	Advertised Duration Exhaust	Duration @ .050" Intake	Duration @ .050" Exhaust	Gross Lift 1.1 / 1.1 Intake	Gross Lift 1.1 / 1.1 Exhaust	Rec Kit
Smooth idle. Great all around stock replacement cam. Super torque profile. RPM Power Range: 1000 to 5000 plus.	All cid	**61002**	B260F 110°	260°	268°	220°	227°	.375"	.381"	**84261**
Fair idle. Good bottom end profile with mid-range power. Emphasis on torque. RPM Power Range: 1800 to 6000 plus.	All cid	**61000**	M268F 110°	268°	268°	227°	227°	.354"	.354"	**84261**
Fair idle. Competition profile. Super torque and mid-range profile for 1600cc engines. RPM Power Range: 2000 to 7000 plus.	All cid	**61003**	VW276F 107°	276°	284°	234°	244°	.398"	.421"	**84261 or 84361**
Fair idle. High torque profile with emphasis on the top end for 1800cc engines and under. RPM Power Range: 2000 to 7000 plus.	All cid	**61004**	VW284F 107°	284°	290°	244°	252°	.424"	.446"	**84261 or 84361**
Fair idle. Broad mid-range and top end power for 2180cc engines and under. RPM Power Range: 2500 to 7500 plus.	All cid	**61005**	VW290F 107°	290°	298°	252°	260°	.447"	.460"	**84361**
Fair idle. Broad mid-range and top end power for engines with increased compression. RPM Power Range: 3000 to 8000 plus.	All cid	**61006**	VW298F 107°	298°	306°	260°	272°	.462"	.482"	**84361**
Rough idle. Strong mid-range and top end power for 2000cc engines or larger with increased compression. RPM Power Range: 3500 to 8500 plus.	All cid	**61007**	VW306F 107°	306°	312°	272°	280°	.481"	.500"	**84361**
CUSTOM GROUND VW CAMS - Special order custom ground profiles available. Proprietary and confidential profiles also available. See specs listed below. Type 1 & 3		**00004**	*Refer to page 7 for camshaft recommendation form*							
CUSTOM GROUND VW CAMS - Special order custom ground profiles available. Proprietary and confidential profiles also available. See specs listed below. VW Type 4		**00004V**	*Refer to page 7 for camshaft recommendation form*							

Note: Increasing rocker ratio and spring pressure in these camshafts may enhance the performance characteristics of these camshafts, depending on engine setup.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Remarks
84261	66961-8	68141-8	87045-8	For rpm up to 6500 plus.
84361	66961-8	68404-8	87044-8	For rpm up to 8000 plus.

Spring pressure:
68141-8 Seat: 1.600" @ 52 lbs / Nose: 1.050" @ 150 lbs / Coil bind: 0.850" (Stock O.D., no machine work).
68404-8 Seat: 1.600" @ 116 lbs / Nose: 1.100" @ 281 lbs / Coil bind: 0.950"
Optional spring (heavy duty):
68146-8 Seat: 1.600" @ 117 lbs / Nose:

SPECIAL ORDER VOLKSWAGEN CAMSHAFTS

COMPETITION PROFILES

Whether you're running the Type 1, 3 or 4 engine, Crower has hundreds of cam profiles that will deliver increased performance. Call with the following information for a proper ***recommendation:***

- Engine specs (bore, stroke, etc...).
- Connecting rod length.
- Intake and exhaust flow figures (intake and exhaust manifold lengths).
- Intended operating power range and type of fuel.
- Data on your best existing camshaft .
- Rocker ratio information (intake and exhaust).
- Installed valve spring height (see diagram 2).
- Conventional flat tappet (cast iron), hardface or roller tappet (Type 1 and 3 only).

ACCESSORIES

Part No.	Description
86061	Replacement cam gear
86059-3	Cam bolts - Air Cooled

SPRING INSTALLED HEIGHT

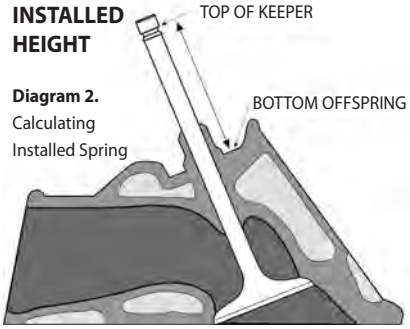


Diagram 2. Calculating Installed Spring

Measure the height from top of keeper grove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement.

Custom camshafts / Regrinds

Lobe separation shows angular displacement of intake to exhaust.

Lobe lift is the maximum lift point on the cam lobe. Not factored with a rocker ratio.

Duration is checked at seven different positions

Opening and closing velocity speeds are checked at three positions over a 30° cam and 60° crank movement to insure accurate lobe comparison data.

Average foot is the contact pattern of the lobe on the lifter surface.

Lobe area is derived from duration and lift. Used for comparison.

		DURATION AT LIFT							VELOCITY/SPEED			
LC:106	LIFT	005	010	020	050	100	200	300	OPEN SPEED	CLOSE SPEED	FOOT	AREA
INT	0.337	339	306	273	234	196	138	71	570/733/721	498/640/666	0.780	26.93
EXH	0.342	344	310	279	240	203	142	85	592/740/728	501/645/670	0.800	28.06

CROWER COMPUTERIZED LOBE ANALYSIS

CUSTOM CAMSHAFTS

Crower has a variety of custom cam cores and cam options available to choose from. Please contact a Crower cam technician for further information on the following:

Part No.	Description
00000	Custom - Solid/Flat Tappet Camshaft
00001	Custom - Hydraulic Tappet Camshaft
00002	Custom - 8620 Steel Billet Roller Tappet Camshaft
00003	Custom - 8620 Steel Billet Roller Tappet Camshaft (low volume)
00004	Custom - Volkswagen Camshaft
00005	Custom - Mushroom Tappet Camshaft
00006	Custom - Harris Runner Billet Roller Tappet Camshaft
00007	Custom - Cast Iron Hydraulic or Solid/Flat Tappet Camshaft
00014	Custom - Gun Drilled Cam Core Option (SB Chevrolet)
00015	Custom - Gun Drilled Cam Core Option (BB Chevrolet)
00033	Custom - 8620 Steel Billet Hardface Solid/Flat Tappet Camshaft
00044	Custom - INRAD (Inverse Radius) Roller Tappet Camshaft (MIR)
00045	Custom - INRAD (Inverse Radius) Roller Tappet Camshaft (SIR)
00050	Custom - 8620 Steel Billet Roller Tappet Camshaft w/Cast Iron Gear

Note: Contact Crower for pricing and availability.

LOW VOLUME SEMI CORES

Crower has cam cores available for these applications:

FOREIGN

Acura/Honda B18A/B DOHC non VTEC
Acura/Honda K20A2 DOHC VTEC
Acura/Honda B series DOHC VTEC
Acura/Honda H22 DOHC VTEC
Acura/Honda H23 DOHC non VTEC
Acura/Honda D16Z6 & D16Y8 SOHC VTEC
Acura/Honda D17A2 SOHC VTEC
BMW 6 cyl. 1972-80
Holden V8 (all appl.)
Mitsubishi/DSM 4G63
Mitsubishi Evolution
Mitsubishi/DSM 420A
Nissan SR20DE (DOHC)
Nissan "L" Series 16, 18, 20 4 cyl. 1969-80 (drilled for oil)
Nissan "Z" Series 240, 260, 280 6 cyl. 1977-80 (drilled for oil)
Subaru EJ205 (DOHC) - Quad Cam
Toyota Supra 2JZ (1994-98)
Toyota 1ZZ (DOHC)
Toyota 3TC 4 cylinder
Volvo B-18, B-20 4 cyl.
VW 4 cyl. Type 2 & 4 Air Cooled 411, 914
VW Rabbit, Scirocco, Jetta, Dasher, 1.5, 1.6, 1.7, 1.8 4 cyl. (gas)

DOMESTICS

Chevrolet/GM Ecotec 2.2L
Chevrolet 164 Corvair Flat 6 cyl.1964-69 (std. rot.)
Chevrolet 164 Corvair Flat 6 cyl. 1964-69 (rev. rot.)
Dodge Neon (DOHC) & SRT-4
Dodge 170, 198, 225 Inline 6 cyl. 1960-75
Dodge 2.2L, 2.5L 4 cyl.
Ford Focus 2.0L Zetec
Ford 2.3L Duratec
Ford & Cortina 1600 cc 4 cyl.
Ford Flathead 239 V8 1948 (no nose)
Ford Flathead 239 V8 1949-53 (long nose)
Pontiac 151 4 cyl. Iron Duke w/3 main journals, 2 gears (flat tappet)
Pontiac 151 4 cyl. Iron Duke w/3 main journals, 2 gears (roller tappet)

CAMSHAFT REGRINDS

If you're lacking performance, send Crower your used or damaged camshaft for complete lobe analysis and regrinding or repair. Cams will be straightened and then checked-out (sample shown above) to establish original specs. A Crower technician will analyze all of the data and, based on your performance parameters, regrind your cam to desired specs.

Description	Duration
#1 TOURING PROFILE (250F) (Solid Lifter) Improves entire rpm range from 1000 to 6000. Smooth idle. Stock applications with no more than 10.5:1 compression.	250°
#2 RALLY SPORT PROFILE (264F) (Solid Lifter) Slight lope at idle. Improves rpm range from 1500 to 6500. Greatly improves high gear acceleration for passing and hills.	264°
#3 SLALOM/AUTOCROSS PROFILE (270F) (Solid Lifter) Slight lope at idle, but smooth into the throttle. Improves rpm range from 2000 to 6700 plus. More power for passing and hills.	270°
#4 CLUB RACER PROFILE (284F) (Solid Lifter) Racy lope at idle. Extends rpm range from 2500 to 6500 with redline at 7100 plus. Increased compression, valve pocketing in combustion chamber and added carburetion will enhance total power.	284°
#5 COMPETITION PROFILE (290F) (Solid Lifter) Race only. Very rough idle, especially with added carburetion. Higher compression pistons or head milling advised as peak horsepower develops in 5500 to 6500 rpm range.	290°
#6 ROAD RACING PROFILE (304F) (Solid Lifter) Race only. Requires extensive modifications like 13:1 compression, grouped exhaust system, individual carburetion, inlet valve pocketing and engine balance. Rpm range from 4500 to 8000.	304°

Note: Lift figures are not provided because of the variety of rocker ratios from engine to engine.

AVAILABLE REGRINDS

Part No.	Description
65000	Regrind - Hydraulic or Solid (any popular engine make)
65001	Regrind - Roller (any popular engine make)
65002	Regrind - Tractor (gas or diesel)
65003	Regrind - VW (single pattern)
65004	Regrind - VW (dual pattern)
65006	Regrind - Special Order Application (low volume)
65007	Regrind - INRAD Roller or Solid (low volume)
65008	Regrind - Hardface with 180° weld (low volume)
65009	Regrind - Hardface with 360° weld (low volume)
65010	Regrind - Custom Order
65014	Regrind - 4 cyl Twin Cam
65016	Regrind - 6 cyl Twin Cam
65020	Regrind - VTEC DOHC (B series, H22, etc...)
65021	Regrind - VTEC SOHC (D series)

Camshaft Accessories

ADVANCE & RETARD CAMSHAFT BUSHINGS

Using Crower camshaft bushings is the easy way to "tune" your camshaft timing. You'll receive five advance or retard bushings that are individually stamped to display amounts advance/retard in cam degrees (0°, 1°, 2°, 3°, 4°). Features a shouldered lip that retains the bushing and eliminates fallout.

Part No.	Description
72000	CHEVROLET 0° (1 only)
72001	CHEVROLET 1° (1 only)
72002	CHEVROLET 2° (1 only)
72003	CHEVROLET 3° (1 only)
72004	CHEVROLET 4° (1 only)
72005	CHEVROLET BUSHING KIT 0°-4°(set/5)
72011	FORD 289-460 V8 (set/4 - 1° not included

Note: Ford kits come with special dowel pin.

LIGHTWEIGHT FUEL PUMP PUSHROD

The Crower fuel pump pushrod is manufactured from lightweight steel tubing that is heat-treated for added strength. The bronze tip insures proper surface mating with the fuel pump eccentric lobe on 8620 steel billet camshafts. This surface compatibility eliminates the wear problems associated with stock designs. For cast iron hydraulic and solid cams we offer a lightweight model with a steel tip at each end to protect against wear.

Part No.	Description
76200	CHEVROLET 262-454 V8 (8620 steel cams)
76201	CHEVROLET 262-454 V8 (cast iron cams)
76202	CHEVROLET 90° V6 (8620 steel billet cams)

CAM THRUST PLUGS

Roller cam lobes are ground flat, without the taper found in hydraulic and solid lobes. The cam thrust plug sits between the front of the timing gear and the back of the front cover and prevents forward cam travel and ignition flutter in roller grinds. Available in choice of two styles: phenolic (non-galling material) or fully rollerized for reduced friction.

Part No.	Description	Style
86085	CHEVROLET 262-400 V8	Solid
86086	CHEVROLET 396-454 V8	Solid
86087	MOPAR 426 Hemi V8	Solid
86089	CHEVROLET 262-400 V8	Rollerized
86090	CHEVROLET 396-454 V8	Rollerized
86091	MOPAR "B"	Rollerized
86099	CHEVROLET 262-400 (Late Model)	

ULTRA-LOCK CAMSHAFT BOLTS

Crower ultra-lock cam bolts are special "grade 8" tempered steel aircraft bolts that feature nylock inserts for positive holding. Their unique design eliminates the possibility of loose bolts in both the sprockets and the gears.

Part No.	Description
86060-3	CHEVROLET V8 5⁄16 (set/3)
86059-3	VW - Air Cooled (set/3)

CAM GEAR & BLOCK PROTECTOR KIT

Friction reducing needle bearing design eliminates the cam gear from scuffing or galling your block face. Back of cam timing gear must be machined. Machining specs included. See Timing Gear Kits for pre-machined, race-ready applications.

Part No.	Description
76400	CHEVROLET 90° V6 & 262-400 V8
76401	CHEVROLET 396-454 V8
76410	CHEVROLET V8 Captive Assembly (Oversize)

Camshaft Accessories

CLOYES TIMING GEAR SETS

Crower offers Cloyes Timing Chains. The high performance Cloyes True roller chain is intended for high performance racing applications. Comes with three position bottom crank sprocket keyway and extra tough billet steel gears.

CLOYES TRUE ROLLER

Part No.	Description
76555	AMC 4 cyl (2.5L), 6 cyl (4.0L)
76551	AMC 290-401 V8
76569	BUICK 181, 196, 252 V6 w/integral D-gear
76567	BUICK 198, 225, 231 V6 w/o gear and V8
76501	CHEVROLET 262-400 V8 and 90° V6
76504	CHEVROLET LT1 V8 '94-'97
76505	CHEVROLET LT4 V8 1996
76513	CHEVROLET 262-400 V8 1985-up
76511	CHEVROLET 396-454 V8 1965-up
76523	FORD 221-289, 302, 351W V8 '62-'84
76531	FORD 351C, 351M, 400 V8 '70-'82
76525	FORD 332-428 V8 '64-'74
76533	FORD 429-460 V8 '68-'71
76535	FORD 429-460 V8 '72-up
76541	MOPAR 273 318 392 V8 Magnum
76543	MOPAR 361, 440, 426 "B" V8 (1bolt)
76545	MOPAR 350,361,383,400,413,426-H,440
76561	OLDSMOBILE 260-455 V8 '64-'83
76565	PONTIAC 287-455 V8
76567	ROVER 215 (3.5L) V8
86061	VW Cam Gear - Air Cooled

CLOYES HEX-A-JUST® TIMING GEAR SETS

Crower offers Cloyes patented timing adjustment system for precise installation without machining or fumbling with a variety of offset bushings. Simply dial in the timing and lock the gear in place.

Part No.	Description
76801	CHEVROLET 262-400 V8 and 90° V6
76813	CHEVROLET 262-400 V8 '85-up
76806	CHEVROLET 262-400 "Rocket"
76813	CHEVROLET 262-400 (LT1) V8 & V6
76802	CHEVROLET LS1 V8 1998-UP
76811	CHEVROLET 396-454 V8 '65-up
76827	FORD 221-289, 351W V8 '62-'84 and 302 5.0L
76831	FORD 351C, 351M, 400 V8 '70-'82
76825	FORD 352-428 "FE" '64-'74
76833	FORD 429-460 V8 '68-up
76845	MOPAR 350-426W, Hemi V8 (w/3 bolt cam)
76847	DODGE Viper V10 '95-up
76861	OLDSMOBILE 260F-455 V8 '65-'83

® True and Hex-A-Just are Registered Trademarks of Cloyes Gear & Products, Inc.

CLOYES TIMING GEAR KITS

Includes rollerized cam thrust plug, rollerized cam gear and block protector kit, advance and retard camshaft bushings and specially machined Cloyes True timing chain set. The ultimate setup for precision cam timing and block protection.

Part No.	Description
76501K	CHEVROLET 200-229 90° V6
76501K	CHEVROLET 262-400 V8
76511K	CHEVROLET 396-454 V8

PRECISION CAMSHAFT GEAR DRIVES

Made from lightweight aluminum alloy, the Shaver-Wesmar gear drive is designed to provide accurate, consistent cam timing under the toughest racing conditions. Features gears precision cut from 8620 steel with 20° pressure angle, a crack resistant steel idler gear support, Torrington bearings and a tough black oxide finish. Quick and easy installation without any machine work required. The absolute highest quality available. Fully adjustable.

Part No.	Description
76600	CHEVROLET 262-400 V8

Note: Fits most small block Chevrolet applications. Call for details.

Camshaft Accessories

DEGREE WHEEL

This easy to use tool is a must for determining proper valve timing when installing your camshaft. The 7" black faced wheel is made from lightweight aluminum with bright numerals and graduation lines for maximum accuracy and readability. 7/16 mounting hole in center. Includes degreeing instructions.

Part No.	Description
87600	Degree Wheel and Instructions

PROFESSIONAL DEGREE WHEEL

Crower's new professional degree wheel features a large 11" diameter surface made from rugged .040" gauge aluminum. The unique, easy to read surface was designed by engine builders for engine builders.

Part No.	Description
87602	Degree Wheel and Instructions

DEGREE KIT

Crower's degreeing kit contains all the components necessary for achieving optimum valve timing when installing your cam. Our kit includes a 7" degree wheel with 7/16 mounting hole, pointer, 1" travel dial indicator, indicator stand, magnetic base, TDC bolt stop and checking springs.

Part No.	Description
87601	Degree Wheel Kit and Instructions

ASSEMBLY PRELUBE

Crower's assembly prelube is formulated especially for prelubrication of cam lobes and lifter surfaces (hydraulic and solid) prior to engine oil circulation. The petroleum based compound increases the load carrying capacity of the engine oil during break-in to prevent scuffing and galling. Includes special additives that withstand the extreme pressures exerted on cams and lifters. Also recommended for use on valve stems, rocker arms and pushrod tips.

Part No.	Description
86093	Cam & Lifter Prelube (1 oz.)
86094	Cam & Lifter Prelube (8 oz.)
86095	Cam & Lifter Prelube (16 oz.)

DISTRIBUTOR GEARS

Made from premium aluminum bronze alloy, these precision machined gears are highly recommended for performance cam applications and are mandatory when running 8620 steel billet roller camshafts.

Part No.	Description	Shaft Dia.
76000	CHEVROLET V8 & 90° V6 (Accel BE1)	.491"
76001	CHEVROLET V8 & 90° V6	.500"
76003	CHEVROLET V8 & 90° V6 (Accel)	.500"
76002	CHEVROLET V8 & 90° V6	.427"
76005	CHEVROLET V6 & 60°	.427"
76006	CHEVY II & CHEVY 4 & 6 cyl.	.491"
76010	DONOVAN V8	.484"
76013	FORD 351C-400, Boss 351, 429 - 460	.530"
76014	FORD 289-302 & Boss 302 V8	.500"
76015	FORD SVO 302-351W V8	.530"
76016	FORD 351C-400, Boss 351,429 - 460	.500"
76017	FORD 352-428 V8	.500"
76018	FORD 289-302 & Boss 302 V8	.467"
76019	FORD 240-300 6 cyl.	.530"
76020	FORD 352-428 V8	.467"
76030	OLDSMOBILE V8	.491"
76040	MOPAR "B", 426 Hemi V8	.484"
76010	MOPAR "LA" V8	.484"
76060	PONTIAC V8	.489"
76006	PONTIAC 4CYL. 151 (77-78)	.491"
76062	PONTIAC 4CYL. 151 (79-85)	.491"
76063	PONTIAC 4CYL. 151 (86-89)	.500"
76100	CHEVRLOLET V8 REVERSE ROTATIOM	.491"

Warning: If 8620 steel billet cam core, bronze gear is mandatory. If cast iron cam or cast iron gear, Crower recommends factory gear.

Crower does not recommend high volume oil pumps when running aluminum/bronze distributor gears.

Lifters – Flat face

HYDRAULIC LIFTERS

Crower hydraulic lifters will compliment any hydraulic cam. Features ball-check oil control valving, precision radius faces and quick break-in. New lifters must be used when installing a new camshaft to avoid premature lobe and lifter wear.

Part No.	Description
66031-12	AMC 6 cyl. 1964-up (set/12)
66031-16	AMC V8 1966-up (set/16)
66050-12	BUICK V6 Evenfire 1978-up (set/12)
66050-16	BUICK V8 1964-1980 (set/16)
66000-12	CHEVROLET 6 cyl. (set/12)
66000-16	CHEVROLET V8 (set/16)
66000R-16	CHEVROLET V8 Race Series (set/16)
66016-12	FORD 144 250 6 cyl. (set/12)
66015-12	FORD 240 300 6 cyl. (set/12)
66015-16	FORD 221-460 V8 (set/16)
66016-16	FORD 332-429 Hemi V8 (set/16)
66031-16	MOPAR 273-360 LA V8 (set/16)
66031-16	MOPAR 350-440 B V8 (set/16)
66031-16	MOPAR 426 Hemi V8 (set/16)
66056-16	OLDSMOBILE V8 1968-up (set/16)
66056-16	PONTIAC V8 1955-up (set/16)

CHEATER HYDRAULIC LIFTERS

Crower cheater hydraulic lifters are really solid lifters, they just look like hydraulics. Call Crower for more information.

Part No.	Description
66000X5-16	CHEVROLET V8 .842" body dia (set/16)
66015X5-16	CHEVROLET/FORD V8 .874" body dia

Note: Requires .150" or longer pushrods.

CAMSAVER HYDRAULIC LIFTERS

The maximum in cam lobe and lifter life. If high spring pressures or extreme and unusual operating conditions have you worried about lobe scuff and lifter wear, insist on Crower "high-lube" CamSaver lifters. These lifters deliver 20% to 30% more oil to your lobe and lifter faces for the best possible insurance against premature lobe and lifter failure. Specially machined flats put 12 to 16 ounces of additional oil per minute at each lobe without adversely affecting engine oil pressure (nominal drop of just 1 or 2 pounds). Crower CamSaver lifters incorporate the same precision ground radius face and finish as our standard lifters to insure quick break-in and trouble free operation.

Part No.	Description
66031X3-12	AMC 6 cyl. 1964-up (set/12)
66031X3-16	AMC V8 1966-up (set/16)
66050X3-12	BUICK V6 Evenfire 1978-up(set/12)
66050X3-16	BUICK V8 1964-1980 (set/16)
66000X3-12	CHEVROLET 6 cyl. (set/12)
66000X3-16	CHEVROLET V8 (set/16)
66000RX3-16	*CHEVROLET V8 R-Series (set/16)
66016X3-12	FORD 144 250 6 cyl. (set/12)
66015X3-12	FORD 240 300 6 cyl. (set/12)
66015X3-16	FORD 221-460 V8 (set/16)
66016X3-16	FORD 332-429 Hemi V8 (set/16)
66031X3-16	MOPAR LA Block (set/16)
66031X3-16	MOPAR B Block (set/16)
66056X3-16	OLDSMOBILE V8 1968-up (set/16)
66056X3-16	PONTIAC V8 1955-up (set/16)

*Indicates Crower's all new Race Series lifter that features super hard wear surface (65RC) and heavy-duty snap ring.

FORD CAM FOLLOWERS & CONVERSION KITS

Fully compatible with Crower's 2300 Ford camshafts. Allows for the maximum horsepower, torque and rpm performance. The perfect compliment to any 2300cc cam. Ford conversion kits make it possible to change existing hydraulic setups to a solid (mechanical) for more power. Includes heavy-duty adjusters, nuts, sleeves and stabilizer spring.

Part No.	Description	Ratio
66993-8	FORD 2300cc w/insert, groove (set/8)	Stock
76450-8	FORD Conversion Kit (Hyd to Solid)	

Note: For 2000cc and 2300cc cam profiles and detailed follower and conversion kit information see cam section.

SOLID LIFTERS

To avoid premature lobe wear and insure long cam and lifter life be sure to specify Crower solid lifters. Features precision ground radius faces and finish for fast break-in and trouble free operation.

Part No.	Description
66945-12	AMC 6 cyl. 1964-up (set/12)
66945-16	AMC V8 1966-up (set/16)
66900-12	BUICK V6 Evenfire 1978-up (set/12)
66900-16	BUICK V8 1964-1980 (set/16)
66900-12	CHEVROLET 6 cyl. (set/12)
66900-16	CHEVROLET V8 (set/16)
66971-16	CHEVROLET V8 .842"(set/16)-No Chamfer
66973-16	CHEVROLET V8 .842" (set/16) - Billet
66915-12	FORD 240 300 6 cyl. (set/12)
66915-16	FORD 221-351, 429-460 V8 (set/16)
66916-16	FORD 332-428 Hemi V8 (set/16)
66925-16	FORD 332-428 V8 (set/16) - Deep Seat
66972-16	FORD V8 .874" dia (set/16) - No Chamfer
66931-16	MOPAR 273-360 LA V8 (set/16)
66931-16	MOPAR 361-440 B V8 (set/16)
66931-16	MOPAR 426 Hemi V8 (set/16)
66962-16	PONTIAC V8 1955-up (set/16)
66909-16	CHEVROLET .842 Edge Orifice Oiling

SOLID LIFTERS CAM SAVER OPTION

Part No.	Description
66945X3-12	AMC 6 cyl. 1964-up (set/12)
66945X3-16	AMC V8 1966-up (set/16)
66900X3-12	BUICK V6 Evenfire 1978-up (set/12)
66900X3-16	BUICK V8 1964-1980 (set/16)
66900X3-12	CHEVROLET 6 cyl. (set/12)
66900X3-16	CHEVROLET V8 (set/16)
66971X3-16	CHEVROLET V8 .842"(set/16)-No Chamfer
66973X3-16	CHEVROLET V8 .842" (set/16) - Billet
66915X3-12	FORD 240 300 6 cyl. (set/12)
66915X3-16	FORD 221-351, 429-460 V8 (set/16)
66916X3-16	FORD 332-428 Hemi V8 (set/16)
66925X3-16	FORD 332-428 V8 (set/16) - Deep Seat
66972X3-16	FORD V8 .874" dia (set/16) - No Chamfer
66931X3-16	MOPAR 273-360 LA V8 (set/16)
66931X3-16	MOPAR 361-440 B V8 (set/16)
66931X3-16	MOPAR 426 Hemi V8 (set/16)
66962X3-16	PONTIAC V8 1955-up (set/16)
66909X3-16	CHEVROLET .842 Edge Orifice Oiling

Lifters - Flat face

66915X980
.874" diameter, small chamfer, Piddle valve control
Weight: 110g

66900X980
.842" diameter, small chamfer, Piddle valve oil control.
Weight: 97g

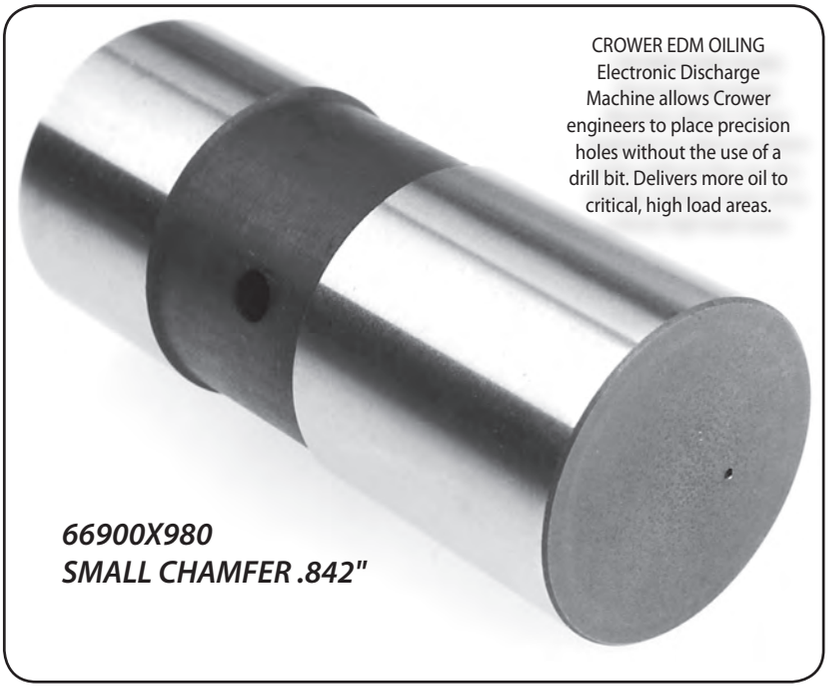
The .024" diameter oil mertering hole provides added lubrication to the cam and lifter surface.

COOLFACE SOLID LIFTERS

Engine builders know that cam lobe and lifter wear is caused by inadequate oil lubrication at the cam and lifter surface.

With today's high rpm, high rocker ratio and high spring pressures, cam and lifter failure is at an all time high. Crower's all new "CoolFace" lifter option is a must for these applications. Features a small diameter oil metering port (.024") that is precision machined in the face of the lifter. No significant oil pressure loss, but significantly improved cam and lifter longevity.

Crower has a complete inventory of .842", .874", and .903" diameter lifters to choose from, including piddle valve, edge orifice, small chamfer, no chamfer and lightweight designs. Call Crower for pricing and availability. Crower also offers the "CoolFace" option on competitor's solid lifters as well. Send your competing brand lifters in to Crower for precision EDM machining.



CROWER EDM OILING Electronic Discharge Machine allows Crower engineers to place precision holes without the use of a drill bit. Delivers more oil to critical, high load areas.

66900X980
SMALL CHAMFER .842"

BILLET SUPER POLISHED COOLFACE SOLID LIFTER

Part No.	Description
66973X980SP-16	.842" (71g) billet lifter, mirror finish, 64-65 RC, 1.570" pr ht
66974X980SP-16	.874" (71g) billet lifter, mirror finish, 64-65 RC, 1.640" pr ht
66970X980SP-16	.903" (81g) billet lifter, mirror finish, 64-65 RC, 1.640" pr ht

Crower's premium billet lifters feature a mirror like, Super Polish finish for extreme lubricity. These are the best solid lifters available on the market.

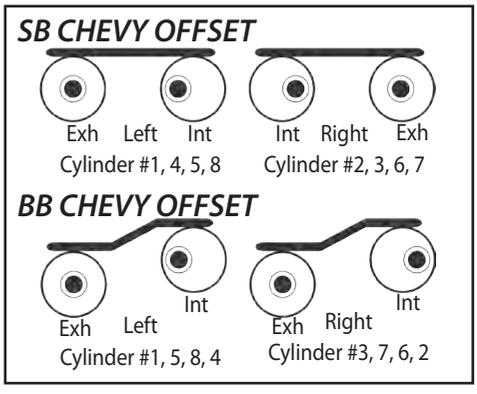
COOLFACE SOLID LIFTER OPTION

Part No.	Description
66900X980S-16	.842" with herdened insert
66909X980-16	.842" edge orifice oiling
66915X980-16	.874" (110g) small chamfer, 55-59 RC, 1.640" pushrod ht
66945X980-16	.903" (115g) small chamfer, 55-59 RC, 1.485" pushrod ht

Warning: Block restrictors are not recommended.

Lifters - Roller

Hi-Pressure Pin Oiler allows Crower engineers to place a precision .024" hole directly from the oil band to the needle bearings. Delivers more oil to critical, high load areas for greatly improved cycle life. Specify "H" after lifter part number to order (ex. 66200H-16).



When ordering only pairs of roller lifters:
SB Chevy 1, 4, 5, 8 cylinders, specify "L" for left offset
ex. #66292X937L-2 and be sure to specify cylinder number.
SB Chevy 2, 3, 6, 7 cylinders, specify "R" for right offset
ex. #66292X937R-2 and be sure to specify cylinder number.

KEYED ROLLER LIFTERS

For the builder who knows the importance of running the lightest possible valve train. Crower keyed roller lifters eliminate blades for big weight savings (.937" under 100g). Dog-Bone style roller lifters also available, call Crower for details.

Part No.	Description
66220X937H-16	SEVERE-DUTY KEYED (.937" body dia)
66226X937H-16	SEVERE-DUTY DOG-BONE (.937" body dia)

Features High Pressure Pin Oiling (HIPPO).

FULL BODY ROLLER LIFTERS

The best roller tappets on the market. Delivers 200% more life expectancy than competing brands. Features crowned bearings and crowned outer race that greatly reduces lobe tracking. No offsets.

Part No.	Description
66206-8	CHEVY II 4 cyl. (set/8)
66207-12	CHEVROLET 194-250 6 cyl. '62-up (set/12)
66208-12	CHEVROLET 173 60° 2.8L V6 (set/12)
66200-16	CHEVROLET 262-400 V8 '57-up (set/16)
66200X874-16	CHEVROLET 262-400 V8 (.874" body dia.)
66201-16	CHEVROLET 396-454 V8 '64-up (set/16)
66201X874-16	CHEVROLET 396-454 V8 (.874" body dia.)
66260-16	PONTIAC 289-455 V8 '64-'81 (16)

For High Pressure Pin Oiling (HIPPO), specify "H" after p/n.
Ex: 66200H-16
Also available in pairs by replacing -16 with -2.

Lifters - Roller

CROWER RECOMMENDS HIPPO (HIGH-PRESSURE PIN OILER) OPTION FOR SEVERE DUTY APPLICATIONS!

Photo Shown Part # 66290H-16

SEVERE-DUTY CUTAWAY ROLLER LIFTERS

A must for high cylinder pressure, high rpm applications. Crower's Severe-Duty Cut-Away style rollers feature a superior, billet alloy body, lightweight design and a heavy-duty blade, raised to fit late model blocks. Standard or .175" offset.

Part No.	Description
66289-12	CHEVY 220-262 (4.3L) 90° V6
66298-12	CHEVY 220-262 (4.3L) 90° V6 Int Offset
66290-16	CHEVY 262-400 V8 .842"
66290X874-16	CHEVY 262-400 V8 .874"
66292-16	CHEVY 262-400 V8 .842" Int Offset
66292X874-16	CHEVY 262-400 V8 .874" Int Offset
66282-16	CHEVY 262-400 SB2/Std .842" Int&Exh Offset
66282X874-16	CHEVY 262-400 SB2/Std .874" Int&Exh Offset
66283-16	CHEVY 262-400 SB2/SB2 .842" All Centers
66283X874-16	CHEVY 262-400 SB2/SB2 .874" All Centers
66291-16	CHEVY 396-454 V8 .842"
66291X874-16	CHEVY 396-454 V8 .874"
66293-16	CHEVY 396-454 V8 V8 .842" Int Offset
66293X874-16	CHEVY 396-454 V8 V8 .874" Int Offset
66252-16	CHEVY 262-400 V8 w/BUICK/DART (.180" offset)
66278-16	CHEVY LS1 V8 .842"
66384-16	AMC (.903" / pushrod oiling)
66266-12	BUICK V6 (shielded bearing)
66265-16	BUICK/DART V8 (.200" offset)
66267-16	BUICK V8 All Centers
66214-12	FORD 204-300 6 cyl. '65-up
66215-16	FORD 221-302 351W V8 '62-up
66216-16	FORD 390-427 FE V8 '63-up
66217-16	FORD 370-460 V8 '68-up
66218-16	FORD 351C-351M 400 V8 '63-up
66219-16	FORD 429 Boss "Z Bar"
66378-16	FORD 289-351W V8 .874" Int Offset
66379-16	FORD 429-460 V8 .874" Int Offset
66255-16	MOPAR 383-440 (.903"/shielded bearing/pr oiling)
66232-16	MOPAR 426 Hemi / 440B V8
66234-16	MOPAR 340 (.903" no pushrod oiling, inboard tie-bar)
66294-16	PONTIAC 455 V8 All Centers
66295-16	PONTIAC 455 V8 Intake Offset

Warning: Never submerse roller lifters in parts washers due to possible contamination from suspended metal fines in the solvent.

Crower recommends .0015" - .0025" tappet bore clearance.

For High Pressure Pin Oiling (HIPPO), specify "H" after p/n. Ex: 66292H-16

Photo Shown Part # 66291X903H-16

Photo Shown Part # 66284

SEVERE-DUTY / OVERSIZE BEARING ROLLER LIFTERS

Crower offers a series of Severe-Duty roller lifters designed for full race use. Features an integral one piece body, CNC machined from special alloy and heat treated for the best possible wear. Utilizes larger diameter bearings with thicker wall than standard designs to withstand today's high performance race applications.

Part No.	Description
66290X903-16	CHEVY 262-400 V8 .903" body /.812" B
66290X937H-16	CHEVY 262-400 V8 .937" body /.850" B
66292X903-16	CHEVY 262-400 V8 .903"/.812" Int Off
66292X937H-16	CHEVY 262-400 V8 .937"/.850" Int Off
66282X903-16	CHEVY 262-400 SB2/Std .903" Intake &Exh Off
66282X937H-16	CHEVY 262-400 SB2/Std .937" Intake &Exh Off
66283X903-16	CHEVY 262-400 SB2/SB2 .903" All Centers
66283X937H-16	CHEVY 262-400 SB2/SB2 .937" All Centers
66291X903-16	CHEVY 396-454 V8 .903" body /.812" B
66291X937H-16	CHEVY 396-454 V8 .937" body /.850" B
66293X903-16	CHEVY 396-454 V8 V8 .903"/.812" Int Off
66293X937H-16	CHEVY 396-454 V8 V8 .937"/.850" Int Off
66284-16	MOPAR 426 Hemi (.903" body/.812" Bearing OD)
66285-16	MOPAR 426 Hemi (.150" Hi seat)
66272-16	MOPAR 426 Hemi (1" body/.895" Bearing OD)
66284A-16	ARIAS 8.3L (Stnd Seat - 1.300"/.812" B)
66285A-16	ARIAS 8.3L (HiSeat - 1.450"/.812" Bearing OD)
66284AT-16	ARIAS 10.0L (Stnd Seat - 1.300"/.812" B)
66285AT-16	ARIAS 10.0L (Hi Seat - 1.450"/.812" Bearing OD)
66284BA-16	BAE Spread Bore (.903" body/.812" Bearing OD)

For High Pressure Pin Oiling (HIPPO), specify "H" after p/n. Ex: 66285H-16

Photo Shown Part # 66275

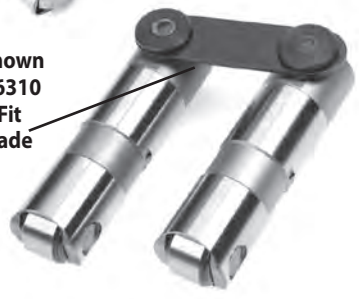
HI-SEAT OFFSET ROLLERS

Crower's "Hi-Seat" rollers feature a .180" offset, integral rev-kit button and Crower's "Hi-Seat" pushrod design. Allows for shorter pushrods, reducing flex and weight for more valve control.

Part No.	Description
66275-16	CHEVROLET 265-400 V8 .842"
66276-16	CHEVROLET 265-400 V8 .903"
66277-16	CHEVROLET 265-400 V8 .874"

Photo Shown Part # 66330 Stock Late Model

Photo Shown Part # 66310 Retro Fit Lock Blade



HYDRAULIC ROLLER LIFTERS

Crower hydraulic roller lifters combine the performance level characteristics of a roller with the reliability of a hydraulic. Completely redesigned body and bearing. Can be retro-fitted for earlier style blocks.

LATE MODEL			
Part No.	**Description**	**Checking Pushrods**	**Length**
66325-16	DODGE Magnum V8 (set/16) - Late Model	70478-2	6.900"
66325-20	DODGE Magnum V10 and Viper V10 (set/20) - Late Model	70470-2	7.500"
66330-16	CHEVROLET 262-400 V8 - Late Model	70461-2	7.150"
66331-16	CHEVROLET 396-454 V8 - Late Model	70466	7.600"/8.600"
66331-16	CHEVROLET 396-454 V8 - Late Model (Truck/Tall Deck)	70466T	8.000"/9.000"
66335-16	FORD 302 V8 For Late Model 289-302	70477-2	6.250"
RETRO - FIT			
66310-16*	Chevrolet 262-400 - Retro-fit	70479-2	7.300"
66310LM-16*	Small block 265-400 .300" - Taller retro-fit	70479-2	7.300"
66321-16*	CHEVROLET 396-454 V8 - Retro-fit	70465	7.750"/8.750"
66321LM-16*	CHEVROLET 396-454 V8 .300 - Taller retro-fit	70465	7.750"/8.750"
66321LM-16*	CHEVROLET 396-454 V8 .300 - Taller retro-fit (Truck/Tall Deck)	70465T	8.150"/9.150"
66333-16	Oldsmobile & Pontiac retro-fit hydraulic roller lifters	70462-2	8.700"
66337-16	Small block FORD 289-302-351W - Retro-fit lifter	70477-2	6.250"
66338-16	Big block FORD 429, 460 - Retro-fit lifter	70463-2	7.975"
66339-16	Small block Mopar 273-360 - Retro-fit lifter	70499-2	Custom
66341-16	Big block Mopar 383-440 - Retro-fit lifter	70499-2	Custom

***Requires a different pushrod length than previous hyd rollers.**

Pushrod Accessories & Rev Kits

PUSHROD GUIDE PLATES

Crower's pushrod guide plates are specially hardened for added strength and durability. They are positioned on the rocker arm studs to guarantee proper pushrod alignment. Crower's unique guide plate design reduces the flex and rocker arm slop found in other brands, providing more pushrod stability and added strength. Adjustable guide plates are also available. Please specify when ordering.

Part No.	Description	Pushrod Dia.
70502-8	CHEVROLET 262-400 V8	5/16
70500-8	CHEVROLET 262-400 V8	3/8
70509-8	CHEVROLET 262-400 V8 (.150")	3/8
70505-8	CHEVROLET 262-400 V8 (.225")	3/8
70517-8	CHEVROLET 262-400 V8 Adj.	5/16
70516-8	CHEVROLET 262-400 V8 Adj.	3/8
70506-8	CHEVROLET 396-454 V8	3/8
70503-8	CHEVROLET 396-454 V8	7/16
70504-8	FORD 289-302 V8	5/16
70501-8	FORD 351C-400 V8	3/8
70512-8	FORD 351C	5/16
70508-8	FORD 429-460 V8	5/16
70507-8	FORD 429-460 V8	3/8
70518-8	DODGE 318-360 Magnum V8	5/16
70518-6	DODGE Magnum V6	5/16

ADJUSTABLE CHECKING PUSHRODS

Crower adjustable checking pushrods have ±.250" adjustment travel in order to obtain accurate measurements for determining the optimum pushrod length. Overall lengths are listed with the adjustable end in the middle of the adjustment range. Made from 5/16 tubing with two pushrods per package.

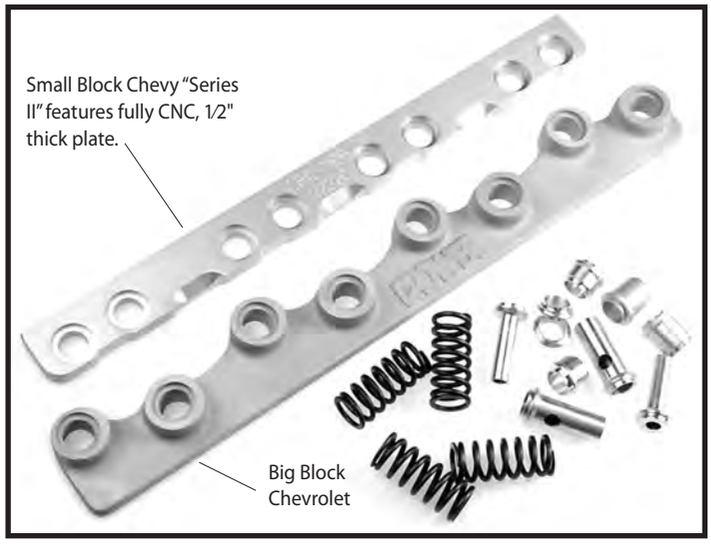
Part No.	Description	Overall Length
70477-2	Adjustable Checking Pushrods	6.300"
70478-2	Adjustable Checking Pushrods	6.800"
70461-2	Adjustable Checking Pushrods	7.150"
70479-2	Adjustable Checking Pushrods	7.250"
70470-2	Adjustable Checking Pushrods	7.500"
70471-2	Adjustable Checking Pushrods	7.750"
70465-2	Adjustable Checking Pushrods	7.750"/8.750"
70466-2	Adjustable Checking Pushrods	7.600"/8.600"
70463-2	Adjustable Checking Pushrods	7.975"
70466T-2	Checking Pushrods (Tall Deck)	8.000"/9.000"
70465T-2	Checking Pushrods (Tall Deck)	8.150"/9.150"
70472-2	Adjustable Checking Pushrods	8.250"
70473-2	Adjustable Checking Pushrods	8.400"
70462-2	Adjustable Checking Pushrods	8.700"
70474-2	Adjustable Checking Pushrods	9.550"
70475-2	Adj. Checking Pushrods (Low Blk)	8.250"/9.250"
70476-2	Adj. Checking Pushrods (High Blk)	8.650"/9.650"
70499-2	Adjustable Checking Pushrods	Custom

Note: Also available with a cup end and adjustable bottom.

PRECISION ADJUSTABLE CHECKING PUSHRODS

Correct pushrod length is critical in achieving proper valve train geometry. Crower precision checking pushrods guarantee accurate measurements for determining the optimum pushrod length. Precision crafted from steel alloy with a black oxide finish for added durability, Crower checking pushrods are extremely easy to use. Each complete revolution is equal to .050".

Part No.	Description	Length
70480	Precision Checking Pushrod	5.500" / 6.500"
70481	Precision Checking Pushrod	6.500" / 7.500"
70482	Precision Checking Pushrod	7.500" / 8.500"
70483	Precision Checking Pushrod	8.500" / 9.500"
70485	Checking Kit (1 ea of above)	5.500" / 9.500"



HI-REV KITS

Crower highly recommends installing a Hi-Rev kit in any roller cam or extreme rpm application to provide added stability to the valve train. Each Crower Hi-Rev Kit includes two lightweight aluminum alloy bars, spacers, and springs required for quick and easy installation. Available for both standard and cutaway design Crower roller lifter tappets. Cutaway designs must specify intake and exhaust rocker offsets.

Part No.	Description	Head
82001	CHEVY 396-454 (66201)	Stock
82004	CHEVY 396-454 (66201 truck block)	Stock
82006	CHEVY 396-454 (street appl.)	Stock
82020	CHEVY 262-400 Series II (66200)	Stock
82020-X1	CHEVY 262-400 Series II (66200) Hi-Pressure	Stock
82027	CHEVY 262-400 Series II (66275)	18°,11x,-12
82027- H	CHEVY 262-400 Series II (66275) Hi-Pressure	18°,11x,-12
82029	CHEVY 262-400 Series II (66200)	18°,11x,-12
82030	CHEVY 262-400 Series II (w/.050" Offset Plates)	Stock
83000	CHEVY 262-400 Cutaway Lifters (Offset)	Stock
83003	CHEVY 262-400 Cutaway Lifters (Center)	Stock
83007	CHEVY 262-400 Cutaway (Offset/Center)	18°,11x,-12
83008	BUICK HEAD Cutaway Lifters (Offset)	Stock

Pushrods

ONE PIECE PERFORMANCE PUSHRODS

- Available in 5/16 and 3/8 diameters, .080" wall thickness.
- Die formed radius tip of .156" (± .0005").
- 4130 seamless chromoly steel tubing made in USA.
- Deep drawn to insure uniform, compatible tip radius.
- Controlled length variation to within .005" tolerances.
- Straightness controlled to within .002" run out.
- Overall length measured from end to end.
- Heat treated to a surface hardness of 60RC.
- Black oxide finish provides rigidity and toughness.

3/8 DIAMETER PUSHRODS

6.550" - 11.300" • .080" WALL — 210˚ radius on one end.

Part No.	Overall Length	Part No.	Overall Length	Part No.	Overall Length	Part No.	Overall Length
71655R-8	6.550"	**71775R-8**	7.750"	**71895R-8**	8.950"	**71015R-8**	10.150"
71660R-8	6.600"	**71780R-8**	7.800"	**71900R-8**	9.000"	**71020R-8**	10.200"
71665R-8	6.650"	**71785R-8**	7.850"	**71905R-8**	9.050"	**71025R-8**	10.250"
71670R-8	6.700"	**71790R-8**	7.900"	**71910R-8**	9.100"	**71030R-8**	10.300"
71675R-8	6.750"	**71795R-8**	7.950"	**71915R-8**	9.150"	**71035R-8**	10.350"
71680R-8	6.800"	**71800R-8**	8.000"	**71920R-8**	9.200"	**71040R-8**	10.400"
71685R-8	6.850"	**71805R-8**	8.050"	**71925R-8**	9.250"	**71045R-8**	10.450"
71690R-8	6.900"	**71810R-8**	8.100"	**71930R-8**	9.300"	**71050R-8**	10.500"
71695R-8	6.950"	**71815R-8**	8.150"	**71935R-8**	9.350"	**71055R-8**	10.550"
71700R-8	7.000"	**71820R-8**	8.200"	**71940R-8**	9.400"	**71060R-8**	10.600"
71705R-8	7.050"	**71825R-8**	8.250"	**71945R-8**	9.450"	**71065R-8**	10.650"
71710R-8	7.100"	**71830R-8**	8.300"	**71950R-8**	9.500"	**71070R-8**	10.700"
71715R-8	7.150"	**71835R-8**	8.350"	**71955R-8**	9.550"	**71075R-8**	10.750"
71720R-8	7.200"	**71840R-8**	8.400"	**71960R-8**	9.600"	**71080R-8**	10.800"
71725R-8	7.250"	**71845R-8**	8.450"	**71965R-8**	9.650"	**71085R-8**	10.850"
71730R-8	7.300"	**71850R-8**	8.500"	**71970R-8**	9.700"	**71090R-8**	10.900"
71735R-8	7.350"	**71855R-8**	8.550"	**71975R-8**	9.750"	**71095R-8**	10.950"
71740R-8	7.400"	**71860R-8**	8.600"	**71980R-8**	9.800"	**71100R-8**	11.000"
71745R-8	7.450"	**71865R-8**	8.650"	**71985R-8**	9.850"	**71105R-8**	11.050"
71750R-8	7.500"	**71870R-8**	8.700"	**71990R-8**	9.900"	**71110R-8**	11.100"
71755R-8	7.550"	**71875R-8**	8.750"	**71995R-8**	9.950"	**71115R-8**	11.150"
71760R-8	7.600"	**71880R-8**	8.800"	**71000R-8**	10.000"	**71120R-8**	11.200"
71765R-8	7.650"	**71885R-8**	8.850"	**71005R-8**	10.050"	**71125R-8**	11.250"
71770R-8	7.700"	**71890R-8**	8.900"	**71010R-8**	10.100"	**71130R-8**	11.300"

Stock length big block Chevy is 8.250" (int) & 9.250" (exh).

CLEARANCE TIP RADIUS PUSHRODS

Crower has 5/16 and 3/8 diameter, clearance tip radius pushrods for high lift applications where added clearance is necessary.

This 5/16 dia. radius cut away shows radius tip with consistent .080" wall throughout.

5/16 RADIUS PUSHRODS

6.000" - 9.950" • .080" WALL — 210˚ radius on one end.

Part No.	Overall Length	Part No.	Overall Length	Part No.	Overall Length	Part No.	Overall Length
69600R-16	6.000"	**69700R-16**	7.000"	**69800R-16**	8.000"	**69900R-16**	9.000"
69605R-16	6.050"	**69705R-16**	7.050"	**69805R-16**	8.050"	**69905R-16**	9.050"
69610R-16	6.100"	**69710R-16**	7.100"	**69810R-16**	8.100"	**69910R-16**	9.100"
69615R-16	6.150"	**69715R-16**	7.150"	**69815R-16**	8.150"	**69915R-16**	9.150"
69620R-16	6.200"	**69720R-16**	7.200"	**69820R-16**	8.200"	**69920R-16**	9.200"
69625R-16	6.250"	**69725R-16**	7.250"	**69825R-16**	8.250"	**69925R-16**	9.250"
69630R-16	6.300"	**69730R-16**	7.300"	**69830R-16**	8.300"	**69930R-16**	9.300"
69635R-16	6.350"	**69735R-16**	7.350"	**69835R-16**	8.350"	**69935R-16**	9.350"
69640R-16	6.400"	**69740R-16**	7.400"	**69840R-16**	8.400"	**69940R-16**	9.400"
69645R-16	6.450"	**69745R-16**	7.450"	**69845R-16**	8.450"	**69945R-16**	9.450"
69650R-16	6.500"	**69750R-16**	7.500"	**69850R-16**	8.500"	**69950R-16**	9.500"
69655R-16	6.550"	**69755R-16**	7.550"	**69855R-16**	8.550"	**69955R-16**	9.550"
69660R-16	6.600"	**69760R-16**	7.600"	**69860R-16**	8.600"	**69960R-16**	9.600"
69665R-16	6.650"	**69765R-16**	7.650"	**69865R-16**	8.650"	**69965R-16**	9.650"
69670R-16	6.700"	**69770R-16**	7.700"	**69870R-16**	8.700"	**69970R-16**	9.700"
69675R-16	6.750"	**69775R-16**	7.750"	**69875R-16**	8.750"	**69975R-16**	9.750"
69680R-16	6.800"	**69780R-16**	7.800"	**69880R-16**	8.800"	**69980R-16**	9.800"
69685R-16	6.850"	**69785R-16**	7.850"	**69885R-16**	8.850"	**69985R-16**	9.850"
69690R-16	6.900"	**69790R-16**	7.900"	**69890R-16**	8.900"	**69990R-16**	9.900"
69695R-16	6.950"	**69795R-16**	7.950"	**69895R-16**	8.950"	**69995R-16**	9.950"

7/16 DIAMETER PUSHRODS

8.100" - 11.500" • .125" WALL — 210˚ radius on one end.

Part No.	Overall Length	Part No.	Overall Length	Part No.	Overall Length
77810-8	8.100"	**77930-8**	9.250"	**77045-8**	10.400"
77815-8	8.150"	**77935-8**	9.300"	**77050-8**	10.450"
77820-8	8.200"	**77940-8**	9.350"	**77055-8**	10.500"
77825-8	8.250"	**77945-8**	9.400"	**77060-8**	10.550"
77830-8	8.300"	**77950-8**	9.450"	**77065-8**	10.600"
77835-8	8.350"	**77955-8**	9.500"	**77070-8**	10.650"
77840-8	8.400"	**77960-8**	9.550"	**77075-8**	10.700"
77845-8	8.450"	**77965-8**	9.600"	**77080-8**	10.750"
77850-8	8.500"	**77970-8**	9.650"	**77085-8**	10.800"
77855-8	8.550"	**77975-8**	9.700"	**77090-8**	10.850"
77860-8	8.600"	**77980-8**	9.750"	**77095-8**	10.900"
77865-8	8.650"	**77985-8**	9.800"	**77100-8**	10.950"
77870-8	8.700"	**77990-8**	9.850"	**77105-8**	11.000"
77875-8	8.750"	**77995-8**	9.900"	**77110-8**	11.050"
77880-8	8.800"	**77000-8**	9.950"	**77115-8**	11.100"
77885-8	8.850"	**77005-8**	10.000"	**77120-8**	11.150"
77890-8	8.900"	**77010-8**	10.050"	**77125-8**	11.200"
77895-8	8.950"	**77015-8**	10.100"	**77130-8**	11.250"
77900-8	9.000"	**77020-8**	10.150"	**77135-8**	11.300"
77910-8	9.050"	**77025-8**	10.200"	**77140-8**	11.350"
77915-8	9.100"	**77030-8**	10.250"	**77145-8**	11.400"
77920-8	9.150"	**77035-8**	10.300"	**77150-8**	11.450"
77925-8	9.200"	**77040-8**	10.350"	**77155-8**	11.500"

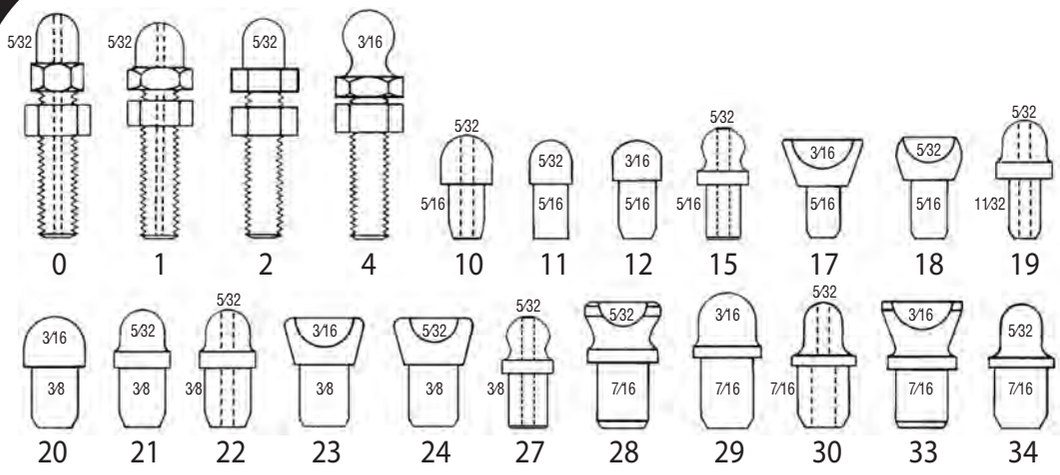
DOUBLE TAPERED

8.100" - 11.500" • .125" WALL — 210˚ radius on both ends.

Part No.	Overall Length	Part No.	Overall Length	Part No.	Overall Length
79810-8	8.100"	**79930-8**	9.250"	**79045-8**	10.400"
79815-8	8.150"	**79935-8**	9.300"	**79050-8**	10.450"
79820-8	8.200"	**79940-8**	9.350"	**79055-8**	10.500"
79825-8	8.250"	**79945-8**	9.400"	**79060-8**	10.550"
79830-8	8.300"	**79950-8**	9.450"	**79065-8**	10.600"
79835-8	8.350"	**79955-8**	9.500"	**79070-8**	10.650"
79840-8	8.400"	**79960-8**	9.550"	**79075-8**	10.700"
79845-8	8.450"	**79965-8**	9.600"	**79080-8**	10.750"
79850-8	8.500"	**79970-8**	9.650"	**79085-8**	10.800"
79855-8	8.550"	**79975-8**	9.700"	**79090-8**	10.850"
79860-8	8.600"	**79980-8**	9.750"	**79095-8**	10.900"
79865-8	8.650"	**79985-8**	9.800"	**79100-8**	10.950"
79870-8	8.700"	**79990-8**	9.850"	**79105-8**	11.000"
79875-8	8.750"	**79995-8**	9.900"	**79110-8**	11.050"
79880-8	8.800"	**79000-8**	9.950"	**79115-8**	11.100"
79885-8	8.850"	**79005-8**	10.000"	**79120-8**	11.150"
79890-8	8.900"	**79010-8**	10.050"	**79125-8**	11.200"
79895-8	8.950"	**79015-8**	10.100"	**79130-8**	11.250"
79900-8	9.000"	**79020-8**	10.150"	**79135-8**	11.300"
79910-8	9.050"	**79025-8**	10.200"	**79140-8**	11.350"
79915-8	9.100"	**79030-8**	10.250"	**79145-8**	11.400"
79920-8	9.150"	**79035-8**	10.300"	**79150-8**	11.450"
79925-8	9.200"	**79040-8**	10.350"	**79155-8**	11.500"

Pushrods

MOST POPULAR PUSHROD ENDS



CROWER PUSHRODS
Only the finest 4130 seamless chromoly tubing is used to manufacture Crower pushrods. All ends are heat-treated to a surface hardness of RC60 for maximum durability and wear resistance. Crower's standard pushrod design features an end-to-tube spot weld fastener for extended use. For severe duty or guide plate applications see our vast assortment of RC60 Series pushrods.

ADJUSTABLE PUSHRODS
When going from hydraulic to solid lifters, adjustable pushrods are often required if there is no adjustment provision at the rocker arm. The overall length of Crower adjustable pushrods is listed with adjustable end in the middle of the adjustment range.

NON-ADJUSTABLE PUSHROD KITS
Non-adjustable pushrod kits include the following:
- 16 non-adjustable pushrods (1/4" longer than stock) with one end out.
- 16 pushrod ends.
- One adjustable pushrod (two if intake & exhaust are different lengths).

CUSTOM LENGTH PUSHRODS
Crower is one of the world's largest producers of custom pushrods and can fabricate a pushrod set for any engine make. Specify overall length, tube diameter, tube strength and type of ends you require. Three piece pushrods are available on a special order basis.

CORRECT VALVE TRAIN GEOMETRY
Correct pushrod length is critical in achieving proper valve train geometry. When measuring pushrod lengths, be sure to consider any head or block milling. We recommend using a checking pushrod for the most accurate measurement (refer to pushrod accessories located later in this section).

ORDERING
When ordering Crower pushrods, please include the part number, cubic inch, model, make and year of engine, type of rocker arm and lifter used, as well as the overall pushrod length, tube diameter, tube strength and type of ends desired. This information is critical in order to manufacture the correct pushrods required.

AMC
NON-ADJUSTABLE PUSHROD SETS

Part No.	Engine Make	Application	Length	Overall Length	Tube O.D.	Ends Top	Ends Bot
70158-12	232-258 6 cyl.	Hyd Lifter & Non-Adj Rocker	Stock	9.625"	5/16	15	15
70158X1-12	232-258 6 cyl.	Hyd Lifter & Non-Adj Rocker	+.050"	9.675"	5/16	15	15
70158X2-12	232-258 6 cyl.	Hyd Lifter & Non-Adj Rocker	+.100"	9.725"	5/16	15	15
70156-16	290-401 V8	Hyd Lifter & Non-Adj Rocker	Stock	7.813"	5/16	15	15
70156X1-16	290-401 V8	Hyd Lifter & Non-Adj Rocker	+.050"	7.854"	5/16	15	15
70156X2-16	290-401 V8	Hyd Lifter & Non-Adj Rocker Hyd	+.100"	7.922"	5/16	15	15
70157-16	290-401 V8	Lifter & Non-Adj Rocker	Stock	8.031"	5/16	15	15
70157X1-16	290-401 V8	Hyd Lifter & Non-Adj Rocker	+.050"	8.078"	5/16	15	15
70157X2-16	290-401 V8	Hyd Lifter & Non-Adj Rocker	+.100"	8.125"	5/16	15	15

BUICK
NON-ADJUSTABLE PUSHROD SETS

Part No.	Engine Make	Application	Length	Overall Length	Tube O.D.	Ends Top	Ends Bot
70190-12	196-252 V6	Hyd Lifter & Non-Adj Rocker	Stock	8.578"	5/16	15	15
70190X1-12	196-252 V6	Hyd Lifter & Non-Adj Rocker	+.050"	8.625"	5/16	15	15
70190X2-12	196-252 V6	Hyd Lifter & Non-Adj Rocker	+.100"	8.672"	5/16	15	15
70191-12	196-252 V6	Hyd Lifter & Non-Adj Rocker	Stock	8.688"	5/16	15	15
70191X1-12	196-252 V6	Hyd Lifter & Non-Adj Rocker	+.050"	8.734"	5/16	15	15
70191X2-12	196-252 V6	Hyd Lifter & Non-Adj Rocker	+.100"	8.797"	5/16	15	15

ADJUSTABLE PUSHROD SETS

Part No.	Engine Make	Application	Length	Overall Length	Tube O.D.	Ends Top	Ends Bot
70019-12	196-252 V6	Hyd or Solid & Non-Adj Rocker	Stock	8.687"	5/16	1	10
70029-16	300 V8	Hyd or Solid & Non-Adj Rocker	Stock	8.750"	5/16	2	11
70033-16	340 V8	Hyd or Solid & Non-Adj Rocker	Stock	9.343"	5/16	2	11
70036-16	350 V8	Hyd or Solid & Non-Adj Rocker	Stock	9.687"	5/16	2	11
70038-16	350 V8	Hyd or Solid & Non-Adj Rocker	Stock	9.687"	5/16	1	10
70034-16	400-455 V8	Hyd or Solid & Non-Adj Rocker	Stock	9.375"	3/8	1	22

CHEVROLET
NON-ADJUSTABLE PUSHROD SETS

Part No.	Engine Make	Application	Length	Overall Length	Tube O.D.	Ends Top	Ends Bot
70115-12	194-250 6 cyl.	Hyd Lifter & Non-Adj Rocker	Stock	9.625"	5/16	15	15
70115X1-12	194-250 6 cyl.	Hyd Lifter & Non-Adj Rocker	+.050"	9.675"	5/16	15	15
70115X2-12	194-250 6 cyl.	Hyd Lifter & Non-Adj Rocker	+.100"	9.725"	5/16	15	15
70116-12	200 229 90° V6	Hyd Lifter & Non-Adj Rocker	Stock	7.813"	5/16	15	15
70116X1-12	200 229 90° V6	Hyd Lifter & Non-Adj Rocker	+.050"	7.854"	5/16	15	15
70116X2-12	200 229 90° V6	Hyd Lifter & Non-Adj Rocker	+.100"	7.922"	5/16	15	15
70100-16	265-400 V8	Solid Lifter & Non-Adj Rocker	Stock	7.790"	5/16	15	15
70100X1-16	265-400 V8	Solid Lifter & Non-Adj Rocker	+.050"	7.840"	5/16	15	15
70100X2-16	265-400 V8	Solid Lifter & Non-Adj Rocker	+.100"	7.890"	5/16	15	15

* Indicates limited supply. Refer to Crower's one piece pushrods if out of stock.

CHEVROLET
NON-ADJUSTABLE RC60 HEAT-TREATED PUSHROD SETS

Part No.	Engine Make	Application	Length	Overall Length	Tube O.D.	Ends Top	Ends Bot
70312-12*	220-229 90°V6	Guide Plate Heads	Stock	7.765"	5/16	15	15
70312X1-12*	220-229 90°V6	Guide Plate Heads	+.050"	7.815"	5/16	15	15
70312X2-12*	220-229 90°V6	Guide Plate Heads	+.100"	7.865"	5/16	15	15
70313-12*	173 60° V6	Guide Plate Heads	Stock	6.163"	5/16	15	15
70313X1-12*	173 60° V6	Guide Plate Heads	+.050"	6.219"	5/16	15	15
70313X2-12*	173 60° V6	Guide Plate Heads	+.100"	6.266"	5/16	15	15
~~**70311-16***~~	~~265-400 V8~~	Discontinued (use 1 pc)	Stock	7.790"	5/16	15	15
~~**70311X1-16***~~	~~265-400 V8~~	Discontinued (use 1 pc)	+.050"	7.840"	5/16	15	15
~~**70311X2-16***~~	~~265-400 V8~~	Discontinued (use 1 pc)	+.100"	7.890"	5/16	15	15
~~**70311X3-16***~~	~~265-400 V8~~	Discontinued (use 1 pc)	+.150"	7.940"	5/16	15	15
~~**70311X4-16***~~	~~265-400 V8~~	Discontinued (use 1 pc)	+.200"	7.990"	5/16	15	15
~~**70311X5-16***~~	~~265-400 V8~~	Discontinued (use 1 pc)	+.250"	8.040"	5/16	15	15
70310-16*	265-400 V8	Guide Plate Heads	Stock	7.790"	3/8	22	22
70310X1-16*	265-400 V8	Guide Plate Heads	+.050"	7.840"	3/8	22	22
70310X2-16*	265-400 V8	Guide Plate Heads	+.100"	7.890"	3/8	22	22
70310X3-16*	265-400 V8	Guide Plate Heads	+.150"	7.940"	3/8	22	22
70310X4-16*	265-400 V8	Guide Plate Heads	+.200"	7.990"	3/8	22	22
70310X5-16*	265-400 V8	Guide Plate Heads	+.250"	8.040"	3/8	22	22
70310X6-16*	265-400 V8	Guide Plate Heads	+.300"	8.090"	3/8	22	22
70310X7-16*	265-400 V8	Guide Plate Heads	+.350"	8.140"	3/8	22	22
~~**70309-16***~~	~~265-400 V8~~	Discontinued (use 1 pc)	Stock	7.290"	5/16	15	15
~~**70302-16***~~	~~396-454 V8~~	Discontinued (use 1 pc)	Stock	7.620" 8.620"	3/8	22	22
~~**70301-16***~~	~~396-454 V8 High Block~~	Discontinued (use 1 pc)	+.400"	8.020" 9.020"	3/8	22	22
~~**70307-16***~~	~~396-454 V8~~	Discontinued (use 1 pc)	Stock	8.250" 9.250"	3/8	22	22
~~**70307X1-16***~~	~~396-454 V8~~	Discontinued (use 1 pc)	+.050"	8.300" 9.300"	3/8	22	22
~~**70307X2-16***~~	~~396-454 V8~~	Discontinued (use 1 pc)	+.100"	8.350" 9.350"	3/8	22	22
~~**70307X3-16***~~	~~396-454 V8~~	Discontinued (use 1 pc)	+.150"	8.400" 9.400"	3/8	22	22
~~**70307X4-16***~~	~~396-454 V8~~	Discontinued (use 1 pc)	+.200"	8.450" 9.450"	3/8	22	22
70307X5-16*	396-454 V8	Guide Plate Heads	+.250"	8.500" 9.500"	3/8	22	22
70303-16*	396-454 V8 High Block	Guide Plate Heads	Stock	8.650" 9.650"	3/8	22	22
70303X1-16*	396-454 V8 High Block	Guide Plate Heads	+.050"	8.700" 9.700"	3/8	22	22
70303X2-16*	396-454 V8 High Block	Guide Plate Heads	+.100"	8.750" 9.750"	3/8	22	22
70303X3-16*	396-454 V8 High Block	Guide Plate Heads	+.150"	8.800" 9.800"	3/8	22	22
70303X4-16*	396-454 V8 High Block	Guide Plate Heads	+.200"	8.850" 9.850"	3/8	22	22
70303X5-16*	396-454 V8 High Block	Guide Plate Heads	+.250"	8.900" 9.900"	3/8	22	22
70308-16	396-454 V8	Guide Plate Heads	Stock	8.250" 9.250"	7/16	30	30
70308X1-16	396-454 V8	Guide Plate Heads	+.050"	8.300" 9.300"	7/16	30	30
70308X2-16	396-454 V8	Guide Plate Heads	+.100"	8.350" 9.350"	7/16	30	30
70308X3-16	396-454 V8	Guide Plate Heads	+.150"	8.400" 9.400"	7/16	30	30
70308X4-16	396-454 V8	Guide Plate Heads	+.200"	8.450" 9.450"	7/16	30	30
70308X5-16	396-454 V8	Guide Plate Heads	+.250"	8.500" 9.500"	7/16	30	30
70304-16	396-454 V8 High Block	Guide Plate Heads	Stock	8.650" 9.650"	7/16	30	30

CHEVROLET
NON-ADJUSTABLE RC60 HEAT-TREATED PUSHROD SETS

Part No.	Engine Make	Application	Length	Overall Length	Tube O.D.	Ends Top	Ends Bot
70304X1-16	396-454 V8 High Block	Guide Plate Heads	+.050"	8.700" 9.700"	7/16	30	30
70304X2-16	396-454 V8 High Block	Guide Plate Heads	+.100"	8.750" 9.750"	7/16	30	30
70304X3-16	396-454 V8 High Block	Guide Plate Heads	+.150"	8.800" 9.800"	7/16	30	30
70304X4-16	396-454 V8 High Block	Guide Plate Heads	+.200"	8.850" 9.850"	7/16	30	30
70304X5-16	396-454 V8 High Block	Guide Plate Heads	+.250"	8.900" 9.900"	7/16	30	30

CHEVROLET
NON-ADJUSTABLE PUSHROD KITS

Part No.	Engine Make	Application	Length	Tube O.D.	Ends Top	Ends Bot
70401	265-400 V8	+.250" Over Stock	Cut to length	5/16	15	10
70412	265-400 V8	+.250" Over Stock	Cut to length	3/8	22	22
70403	396-454 V8	+.250" Over Stock	Cut to length	3/8	22	22
70404	396-454 V8	+.250" Over Stock	Cut to length	7/16	30	30
70417	366-427 V8 High Block	+.250" Over Stock	Cut to length	3/8	22	22
70418	366-427 V8 High Block	+.250" Over Stock	Cut to length	7/16	30	30

TAPERED PUSHROD SETS

Part No.	Engine Make	Application	Length	Tube O.D.	Ends Top	Ends Bot
70103-16	265-400 V8	Custom Application	Specify	3/8 to 7/16	22	30
70109-16	396-454 V8	Custom Application	Specify	3/8 to 7/16	22	30
70112-16	366-427 V8 High Block	Custom Application	Specify	3/8 to 7/16	22	30

FORD
ADJUSTABLE PUSHROD SETS

Part No.	Engine Make	Application	Length	Overall Length	Tube O.D.	Ends Top	Ends Bot
70003-16	351C V8		Stock	8.360"	5/16	0	10
70004-16	400M V8		Stock	9.500"	5/16	0	10
70000-16	332-428 V8	Hyd Lifter & Non-Adj Rocker	Stock	9.500"	3/8	4	20
70001-16	332-428 V8	Bot Seat Shell Design Lifter	Stock	10.500"	3/8	4	20

NON-ADJUSTABLE PUSHROD SETS

Part No.	Engine Make	Application	Length	Overall Length	Tube O.D.	Ends Top	Ends Bot
70146-12	240-300 6 cyl.		Stock	10.140"	5/16	15	15
70130-16	221-302 V8	Non-Guide Plate Heads	Stock	6.820"	5/16	15	15
70134-16	351W V8	Non-Guide Plate Heads	Stock	8.170"	5/16	15	15
70125-16	351M-400V8	Non-Guide Plate Heads	Stock	9.500"	5/16	15	15
70136-16	332-428 V8	Hyd or Solid & Adj Rocker	Stock	9.325"	3/8	23	20
70138-16	332-428 V8	Deep Seat Sol&Adj Rocker	Stock	10.668"	3/8	23	20
~~**70152-16**~~	~~370-460 V8~~	Discontinued (use 1 pc)	Stock	8.563"	3/8	22	22
~~**70152X-16**~~	~~370-460 V8~~	Discontinued (use 1 pc)	+.050"	8.613"	3/8	22	22

Pushrods

NON-ADJUSTABLE RC60 HEAT-TREATED PUSHROD SETS

Part No.	Engine Make	Application	Length	Overall Length	Tube O.D.	Ends Top	Ends Bot
~~70126-16*~~	~~221-302 V8~~	Disc. (use 1 pc)	Stock	6.820"	5/16	15	15
70126X1-16*	221-302 V8	Guide Plate Heads	+.050"	6.870"	5/16	15	15
70126X2-16*	221-302 V8	Guide Plate Heads	+.100"	6.920"	5/16	15	15
70314-16*	289-302 V8	351W Heads (69-up)	Stock	6.900"	5/16	15	15
~~70314X1-16*~~	~~289-302 V8~~	Disc. (use 1 pc)	+.050"	6.950"	5/16	15	15
70314X2-16*	289-302 V8	351W Heads (69-up)	+.100"	7.000"	5/16	15	15
70315-16*	Boss 302 V8	Guide Plate Heads	Stock	7.650"	5/16	15	15
70315X1-16*	Boss 302 V8	Guide Plate Heads	+.050"	7.700"	5/16	15	15
70315X2-16*	Boss 302 V8	Guide Plate Heads	+.100"	7.750"	5/16	15	15
70325-16*	302 V8	Hydraulic Roller Lifter	Stock	6.255"	5/16	15	15
70325X1-16*	302 V8	Hydraulic Roller Lifter	+.050"	6.305"	5/16	15	15
70325X2-16*	302 V8	Hydraulic Roller Lifter	+.100"	6.355"	5/16	15	15
70325X3-16*	302 V8	Hydraulic Roller Lifter	+.150"	6.405"	5/16	15	15
70325X4-16*	302 V8	Hydraulic Roller Lifter	+.200"	6.455"	5/16	15	15
70326-16*	351W V8	Guide Plate Heads	Stock	8.170"	5/16	15	15
70326X1-16*	351W V8	Guide Plate Heads	+.050"	8.220"	5/16	15	15
70326X2-16*	351W V8	Guide Plate Heads	+.100"	8.270"	5/16	15	15
70326X3-16*	351W V8	Guide Plate Heads	+.150"	8.320"	5/16	15	15
70326X4-16*	351W V8	Guide Plate Heads	+.200"	8.370"	5/16	15	15
~~70316-16*~~	~~351C V8~~	Disc. (use 1 pc)	Stock	8.405"	5/16	15	15
~~70316X1-16*~~	~~351C V8~~	Disc. (use 1 pc)	+.050"	8.455"	5/16	15	15
~~70316X2-16*~~	~~351C V8~~	Disc. (use 1 pc)	+.100"	8.505"	5/16	15	22
70317-16*	351C & Bs V8	3/8 Guide Plates	Stock	8.435"	3/8	22	22
70317X1-16*	351C & Bs V8	3/8 Guide Plates	+.050"	8.485"	3/8	22	22
70317X2-16*	351C & Bs V8	3/8 Guide Plates	+.100"	8.535"	3/8	22	22
~~70318-16*~~	~~429-460 V8~~	Disc. (use 1 pc)	Stock	8.550"	3/8	22	22
~~70318X1-16*~~	~~429-460 V8~~	Disc. (use 1 pc)	+.050"	8.600"	3/8	22	22
~~70318X2-16*~~	~~429-460 V8~~	Disc. (use 1 pc)	+.100"	8.650"	3/8	22	22
70319-16*	429-460 V8	Guide Plate Heads		8.550"	5/16	15	15
70322-16*	429 Cobra Jet V8			8.650"	5/16	15	15

FORD NON-ADJUSTABLE PUSHROD KITS

Part No.	Engine Make	Application	Length	Tube O.D.	Ends Top	Ends Bot
70405	221-302 V8		Cut to length	5/16	15	15
70405L	221-302 V8	Guide Plate Heads	Cut to length	5/16	15	15
70406	302 Boss		Cut to length	5/16	15	15
70407	351W V8		Cut to length	5/16	15	15
70407L	351W V8	Guide Plate Heads	Cut to length	5/16	15	10
70408	351C	Guide Plate Heads	Cut to length	5/16	10	10
70409	351C	Guide Plate Heads	Cut to length	3/8	22	22
70419	332-428		Cut to length	3/8	23	20
70420L	429-460	Guide Plate Heads	Cut to length	5/16	15	15

MOPAR ADJUSTABLE PUSHROD SETS

Part No.	Engine Make	Application	Length	Overall Length	Tube O.D.	Ends Top	Ends Bot
70005-16	273-360 V8	Hyd Lifter & Non-Adj Rocker	Stock	7.325"	5/16	2	11
70006-16	273-360 V8	Solid Lifter & Non-Adj Rocker	Stock	7.50 0"	5/16	2	12
70007-16	361-383 V8 Low Block	Hyd Lifter & Non-Adj Rocker	Stock	8.440"	3/8	2	20
70008-16	361-383 V8 Low Block	Solid Lifter & Non-Adj Rocker	Stock	8.600"	3/8	2	20
70009-16	413-440 V8 High Block	Hyd Lifter & Non-Adj Rocker	Stock	9.296"	3/8	2	20
70010-16	413-440 V8 High Block	Solid Lifter & Non-Adj Rocker	Stock	9.500"	3/8	2	20

NON-ADJUSTABLE PUSHROD SETS

Part No.	Engine Make	Application	Length	Overall Length	Tube O.D.	Ends Top	Ends Bot
70170-16	273-360 LA	Hyd Lifter & Non-Adj Rocker	Stock	7.500"	5/16	11	11
70170X1-16	273-360 LA	Hyd Lifter & Non-Adj Rocker	+.050"	7.550"	5/16	11	11
70170X2-16	273-360 LA	Hyd Lifter & Non-Adj Rocker	+.100"	7.600"	5/16	11	11
70171-16	273-360 LA	Hyd Lifter & Non-Adj Rocker	Stock	7.500"	3/8	21	21
70171X1-16	273-360 LA	Hyd Lifter & Non-Adj Rocker	+.050"	7.550"	3/8	21	21
70171X2-16	273-360 LA	Hyd Lifter & Non-Adj Rocker	+.100"	7.600"	3/8	21	21
70174-16	273-360 LA	Hyd Lifter & Adj Rocker	Stock	7.325"	5/16	18	11
70173-16	273-360 LA	Hyd Lifter & Adj Rocker	Stock	7.325"	3/8	24	21
70175-16	273-360 LA	Solid Lifter & Adj Rocker	Stock	7.500"	5/16	18	12
70176-16	273-360 LA	Solid Lifter & Adj Rocker	Stock	7.500"	3/8	24	20
70178-16	350-400 B Low Block	Hyd Lifter & Non-Adj Rocker	Stock	8.550"	3/8	21	20
70178X1-16	350-400 B Low Block	Hyd Lifter & Non-Adj Rocker	+.050"	8.600"	3/8	21	20
70178X2-16	350-400 B Low Block	Hyd Lifter & Non-Adj Rocker	+.100"	8.650"	3/8	21	20
70179-16	350-400 B Low Block	Hyd Lifter & Adj Rocker	Stock	8.250"	3/8	24	20
70180-16	350-400 B Low Block	Solid Lifter & Adj Rocker	Stock	8.600"	3/8	24	20
70181-16	413-440 B High Block	Hyd Lifter & Non-Adj Rocker	Stock	9.300"	3/8	21	20
70181X1-16	413-440 B High Block	Hyd Lifter & Non-Adj Rocker	+.050"	9.350"	3/8	21	20
70181X2-16	413-440 B High Block	Hyd Lifter & Non-Adj Rocker	+.100"	9.400"	3/8	21	20
70183-16	413-440 B High Block	Hyd Lifter & Adj Rocker	Stock	9.160"	3/8	24	20
70184-16	413-440 B High Block	Solid Lifter & Adj Rocker	Stock	9.300"	3/8	24	20
70185-16	426 HemiV8	Hyd Lifter & Adj Rocker	Stock	10.625" 11.582"	3/8	24	20
70186-16	426 HemiV8	Solid Lifter & Adj Rocker	Stock	10.812" 11.735"	3/8	24	20
70187-16	426 HemiV8	Solid Lifter & Adj Rocker	Stock	10.812" 11.735"	7/16	28	20

MOPAR NON-ADJUSTABLE RC60 HEAT-TREATED PUSHROD SETS

Part No.	Engine Make	Application	Length	Overall Length	Tube O.D.	Ends Top	Ends Bot
70305-16	426 Hemi V8	Solid or Roller Lifter	Stock	10.812" 11.735"	3/8	24	20
70306-16	426 Hemi V8	Solid or Roller Lifter	Stock	10.812" 11.735"	7/16	28	29

TAPERED PUSHROD SETS

Part No.	Engine Make	Application	Length	Tube O.D.	Ends Top	Ends Bot
70188-16	426 Hemi V8	Custom Application	Specify	3/8 to 7/16	24	29
70189-16	Donovan Block	Custom Application	Specify	3/8 to 7/16	24	29

DOUBLE TAPERED PUSHROD SETS

Part No.	Engine Make	Application	Length	Tube O.D.	Ends Top	Ends Bot
70195-16	426 Hemi V8	Custom Application	Specify	3/8, 7/16, 3/8	24	20

Pushrods

OLDSMOBILE ADJUSTABLE PUSHROD SETS

Part No.	Engine Make	Application	Length	Overall Length	Tube O.D.	Ends Top	Ends Bot
70049-16	260-403 V8	Hyd or Solid Lifter	Stock	8.375"	5/16	1	10
70050-16	400-455 V8	Hyd or Solid Lifter	Stock	9.596"	5/16	1	10

NON-ADJUSTABLE PUSHROD SETS

Part No.	Engine Make	Application	Length	Overall Length	Tube O.D.	Ends Top	Ends Bot
70229-16*	260-403 V8	Hyd or Solid Lifter	Stock	8.235"	5/16	15	15
70229X1-16*	260-403 V8	Hyd or Solid Lifter	Stock	8.285"	5/16	15	15
70229X2-16*	260-403 V8	Hyd or Solid Lifter	Stock	8.335"	5/16	15	15
70230-16*	400-455 V8	Hyd or Solid Lifter	Stock	9.546"	5/16	15	15
70230X1-16*	400-455 V8	Hyd or Solid Lifter	Stock	9.596"	5/16	15	15
70230X2-16*	400-455 V8	Hyd or Solid Lifter	Stock	9.646"	5/16	15	15

Note: If using guide plates please specify heat treated pushrods.

PONTIAC NON-ADJUSTABLE RC60 HEAT-TREATED PUSHROD SETS

Part No.	Engine Make	Application	Length	Overall Length	Tube O.D.	Ends Top	Ends Bot
70337-16*	326-421 V8	Hyd or Solid Lifter	Stock	8.685"	5/16	15	15
70338-16*	287-455 V8	Hyd or Solid Lifter	Stock	9.150"	5/16	15	15
70338X1-16*	287-455 V8	Hyd or Solid Lifter	+.050"	9.200"	5/16	15	15
70338X2-16*	287-455 V8	Hyd or Solid Lifter	+.100"	9.250"	5/16	15	15
70338X3-16*	287-455 V8	Hyd or Solid Lifter	+.150"	9.300"	5/16	15	15
70338X4-16*	287-455 V8	Hyd or Solid Lifter	+.200"	9.350"	5/16	15	15
70338X5-16*	287-455 V8	Hyd or Solid Lifter	+.250"	9.400"	5/16	15	15

Note: If using guide plates please specify heat treated pushrods.

CUSTOM PREMIUM PUSHRODS AND PUSHROD KITS

Part No.	Application
70099	Custom Adjustable Pushrods (includes setup charge)
70199	Custom Non-Heat Treated Pushrods (includes setup charge)
70399	Custom Heat Treated Pushrods (includes setup charge)
70499	Custom Pushrod Kit (includes setup charge)

Note: When ordering custom pushrods you must specify:
- Pushrod length
- Tube diameter
- Wall thickness
- Type of ends
- Cubic inches of engine
- Make and model
- Year of engine
- Type of rockers and lifters

* Indicates limited supply. Refer to Crower's one piece pushrod section or customs if out of stock.

SEVERE-DUTY CHRYSLER HEMI PUSHRODS

Unblown and Blown Alcohol applications:
- Double tapered (3/8 to 7/16 to 3/8)
- .083" wall thickness
- Heat treated
- Includes special alloy cup & ball
- For pricing refer to #70195
- Custom lengths also available

Top Fuel and Pro Stock applications:
- Double tapered (7/16 to 1/2 to 7/16)
- .120" wall thickness
- Heat treated
- T/F features special alloy cup & ball
- Pro Stock features ball & ball w/oiling
- For pricing refer to #70196
- Custom lengths also available
- Must be ordered through Crower

POPULAR OVERALL LENGTHS

Intake Length	Exhaust Length
10.325"	11.280"
10.725"	11.625"
10.910"	11.820"
11.625"	12.187"
11.700"	12.475"
11.781"	12.312"
12.025"	12.825"
12.187"	12.675"
12.217"	12.732"
12.300"	12.800"
12.315"	13.065"
12.662"	13.187"
Custom	Custom

TAPERED PUSHROD SETS

Part No.	Engine Make	Application	Length	Tube O.D.	Ends Top	Ends Bot
70133-16	351C	Custom Application	Specify	3/8 to 7/16	22	30
70153-16	332-428	Custom Application	Specify	3/8 to 7/16	23	29
70154-16	429-460	Custom Application	Specify	3/8 to 7/16	22	30

SEVERE-DUTY SB CHEVROLET & FORD PUSHRODS

High rocker ratio, high spring pressure applications:
- Double tapered (5/16 to 3/8 to 5/16)
- .120" wall thickness
- Heat treated
- Includes full ball (#15 end)
- For pricing refer to #70197
- Custom lengths also available
- Must be ordered through Crower

Note: To insure adequate intake port clearance, the taper (3/8) can be adjusted the length of the pushrod. For more information on this procedure, please contact Crower.

CUSTOM PUSHRODS

Crower custom pushrods are made from the finest alloy steel tubing available and are heat treated for wear resistance and durability. Since 1960, Crower has been supplying top teams in drag racing, stock car and open wheel classes with the finest pushrods available on the market. Crower pushrods are also available for vintage and antique restoration, as well as marine applications. For more information and details about a pushrod for you particular application, give the Crower technical support team a call. We'll fix you up with the correct length, wall thickness, tube diameter, taper and pushrod ends that you require.

#73680
Heavy-duty Chrysler adjuster with 3/8 shank and 5/16 ball radius. Replacement for stock.

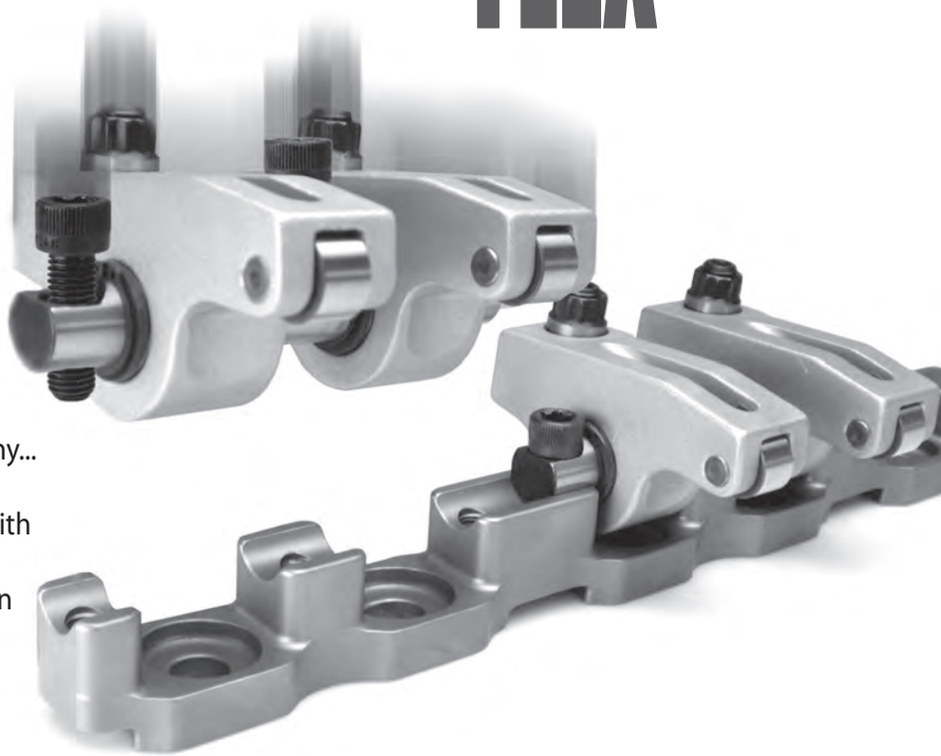
#73681
Heavy-duty Chrysler adjuster with 7/16 shank and 3/8 ball radius. Both feature special steel alloy, double heat-treat, H-11 nut.

Rocker Arms

9000+ RPM

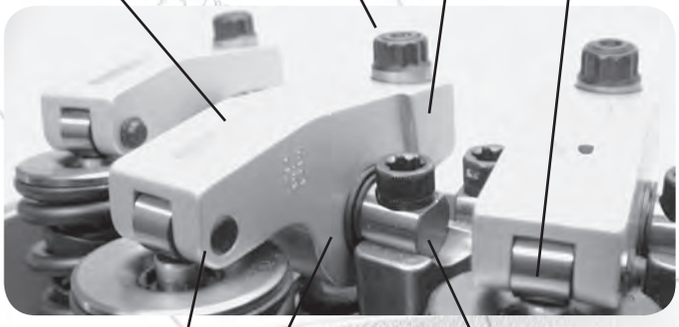
Back in 1957, Crower pioneered the very first shaft rocker arm assembly mounted on a stock small block Chevy cast iron cylinder head. The race was the Indy 500 and Crower has been making high quality rocker arms ever since. The weak link in any pushrod engine is the rocker arm and rocker arm flex. Eliminating flex is an important factor toward developing maximum horsepower. Crower has made significant improvements toward perfecting shaft rockers for use in high performance engines. Over the decades of working with you, the racers and engine builders, we've learned to study the problems you encounter. We've made note of your wish lists. We've scrutinized failed components...done our home work! Consequently, we've been able to offer solid, viable, cost effective solutions that do not compromise strength. You'll find that all our stud and shaft mount rocker arm systems achieve the critical balance of weight considerations without compromising enduring strength. Crower valve train components are characteristically strong, able to maintain dimensional integrity under load and at high rpm so valve actuation is extremely accurate. Our rocker systems are well thought-out with regard to proper geometry, minimizing friction and heat build-up so the parts live and rpm freely. The shaft setups are user friendly so they are easy to work on at the track and provide accurate, repeatable valve adjustment. Crower rocker systems (stud or shaft mount) are available for most popular cylinder heads, often in your choice of material, stainless steel or aluminum. Crower Cams & Equipment Company... aero space materials, state-of-the-art production facilities and savvy engineers solving problems with creativity, technology and common sense. The result? The finest valve train componentry you can equip yourself with! You'll find no better rocker systems available at any price!

STOP FLEX



Engineering the Science of Geometry.

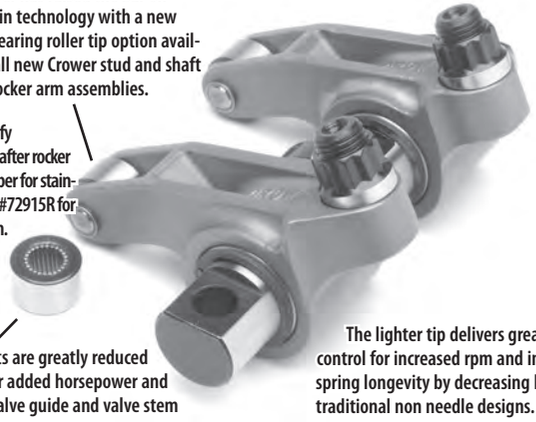
Anatomy of a CROWER ROCKER



Needle Bearing Tip Option

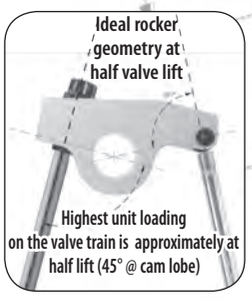
Crower has raised the bar on valve train technology with a new needle bearing roller tip option available on all new Crower stud and shaft mount rocker arm assemblies.

Specify #73715R after rocker part number for stainless steel, #72915R for aluminum.



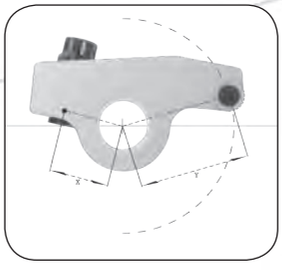
Results are greatly reduced friction for added horsepower and reduced valve guide and valve stem

The lighter tip delivers greater valve control for increased rpm and improves valve spring longevity by decreasing heat over traditional non needle designs.



This configuration minimizes tip travel across the valve stem and keeps contact centered on top of the valve, reducing frictional losses due to valve guide side loading and tip scrubbing. Pushrod deflection is also minimized for more accurate valve action.

Rocker Ratio

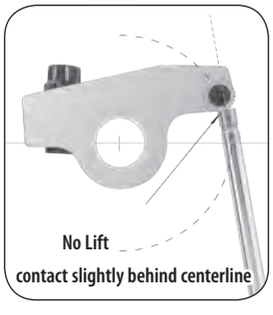


Rocker arm ratio is determined by dividing the distance from the fulcrum to the tip centerpoints (Y) by the distance from the fulcrum to the pushrod seat centerpoints (X). This theoretical ratio may vary from our net/advertised ratio due to measured valve train deflection under load.

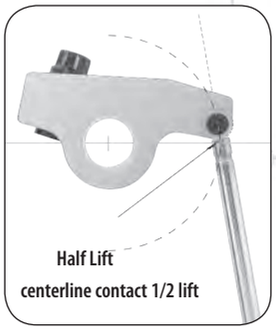
Long Arm

Higher rocker ratios require extending the arm of the rocker. Long arm rockers allow proper pushrod seat positioning in relation to the fulcrum point. An additional long arm benefit is reduced back and forth tip travel across the valve stem. Less scrubbing and valve stem side loading occur and associated frictional losses are minimized.

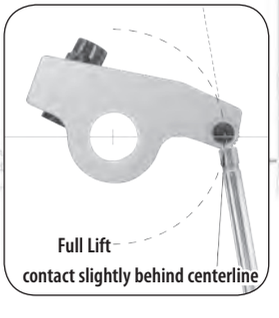
Tip Travel



When the valve is closed tip contact is slightly behind the centerline of the valve.

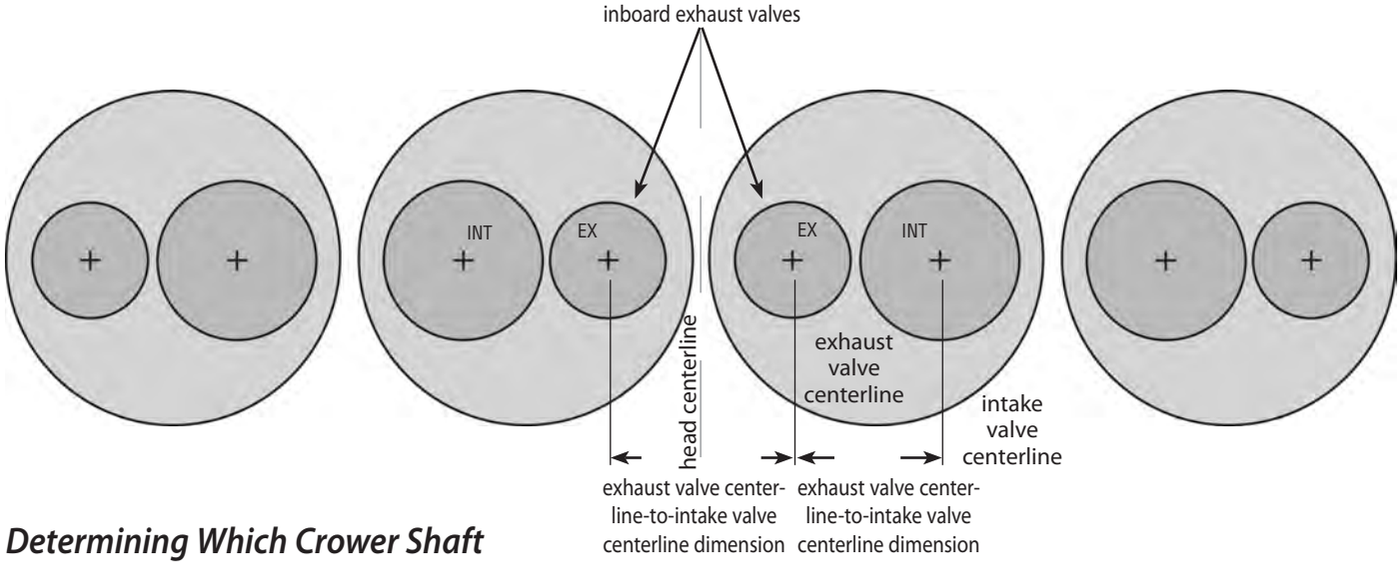


At highest unit loading (approx. 1/2 lift) tip contact ideally is on the centerline of the valve. The valve train is overcoming spring pressure and, more importantly, rapidly accelerating its mass. To minimize deflection, side loading and frictional loss, we want the valve train geometry in its strongest and straightest configuration at this point.



When the valve is open, tip contact is slightly behind the centerline of the valve. The valve train in this position (at high RPM) feels the least amount of unit loading as float approaches...everything gets momentarily weightless.

Useful Ordering Information



Determining Which Crower Shaft Rocker System Fits Your Needs

If you're not sure or don't know which Crower Shaft Rocker System will fit your cylinder head, or the type/model of head you have and need help, follow these simple procedures:

1. You'll need to provide us with some critical information and dimensions.
   a. Cylinder head manufacturer
   b. Engine type
   c. Intake and exhaust valve distances from cylinder head centerline.
   d. Rocker stud spacing from cylinder head centerline.

Here's how you do it.

Measure the distance between the centerlines of the two inboard exhaust valves and record the value. If you divide this measurement in two you'll know the distance each valve is from the cylinder head centerline.

Now measure the distance between the centerline of the exhaust valve and the centerline of the intake valve.

2. Follow the same procedure for the studs.
3. Supply us the dimensions and we'll take it from there!

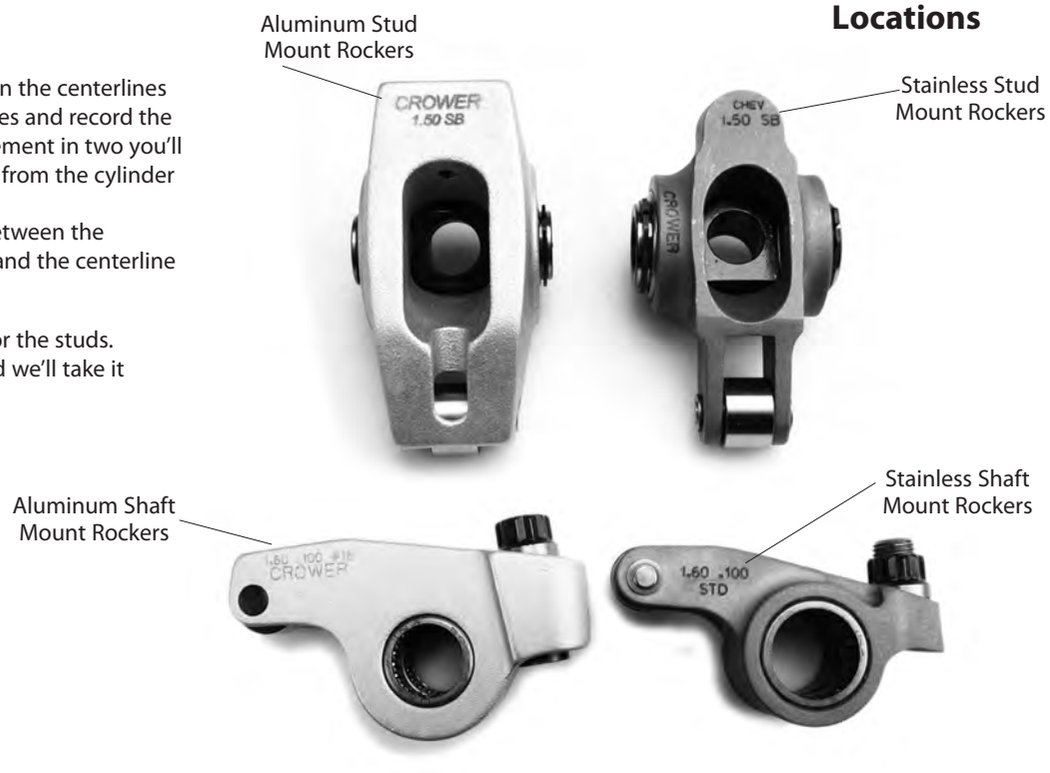
Rocker Body Identification

To order replacement rockers and insure correct fit you'll need to provide your Crower technician with the following info.

Rocker Bodies without I.D. numbers:
- Rocker arm Ratio
- Rocker arm Offset
- Which valve the rocker actuates (intake or exhaust)
- Which cylinder the rocker is mounted on (2,4,6,8–1,3,5,7, etc.)
- Name/brand of cylinder head

Rocker Bodies with I.D. numbers:
- Rocker arm Body I.D. number
- Rocker arm Ratio
- Rocker arm Offset

Ratio and Offset Locations



Stud-Mount Rocker Arms

Stainless Steel

ENDURO STAINLESS STEEL ROLLERIZED ROCKERS

Made from 17-4PH stainless steel with 1025 heat-treating, these proven rollerized rockers feature premium, oversized needle bearings, sure-lock rocker nuts and alloy steel tip rollers. Superior lightweight body design provides plenty of clearance for large diameter springs (1.560"). Includes sure-locks.

Part No.	Description	Ratio	Stud
73645-16*	AMC 290-401 V8	1.6	3/8
73646-16*	AMC 290-401 V8	1.6	7/16
73648-12*	AMC 6 cyl.	1.6	3/8
73647-12*	AMC 6 cyl.	1.6	7/16
73625-8	Chevy II 4 cyl.	1.75	3/8
73628-12	Chevrolet 230 250 292 6cyl.	1.6	3/8
73629-12	Chevrolet 230 250 292 6 cyl.	1.75	3/8
73630-12	Chevrolet 230 250 292 6 cyl.	1.6	7/16
73631-12	Chevrolet 230 250 292 6 cyl.	1.75	7/16
73649-12	Chevrolet 200 229 90° V6	1.6	3/8
73650-12	Chevrolet 200 229 90° V6	1.5	7/16
73651-12	Chevrolet 200 229 90° V6	1.65	7/16
73652-12	Chevrolet 200 229 90° V6	1.6	7/16
73635-16	Chevrolet 265-400 V8	1.35	7/16
73600-16	Chevrolet 265-400 V8	1.5	3/8
73660-16	Chevrolet 265-400 V8 LT1	1.5	3/8
73640-16	Chevrolet 265-400 V8	1.6	3/8
73661-16	Chevrolet 265-400 V8 LT1	1.6	3/8
73670-16	Chevrolet 265-400 V8	1.65	3/8
73601-16	Chevrolet 265-400 V8	1.5	7/16
73641-16	Chevrolet 265-400 V8	1.6	7/16
73671-16	Chevrolet 265-400 V8	1.65	7/16
73643-16	Chevrolet 265-400 V8	1.7	7/16
73604-16	Chevrolet 396-454 V8	1.55	7/16
73606-16	Chevrolet 396-454 V8	1.6	7/16
73605-16	Chevrolet 396-454 V8	1.7	7/16
73607-16	Chevrolet 396-454 V8	1.75	7/16
73608-16	Chevrolet 396-454 V8	1.8	7/16
73609-16	Ford 289 302 351W V8	1.6	3/8
73610-16	Ford 289 302 351W V8	1.65	3/8
73611-16	Ford 289 302 351W V8	1.7	3/8
73612-16	Ford 289 302 351W V8	1.6	7/16
73613-16	Ford 289 302 351W V8	1.65	7/16
73614-16	Ford 289 302 351W V8	1.7	7/16
73637-16	Ford 289 302 351W V8	1.75	7/16
73638-16	Ford 289 302 351W V8	1.8	7/16
73618-16	Ford Boss 351C 400 429 460	1.6	7/16
73616-16	Ford Boss 351C 400 429 460	1.65	7/16
73615-16	Ford Boss 351C 400 429 460	1.73	7/16
73617-16	Ford Boss 351C 400 429 460	1.75	7/16
73619-16	Ford Boss 351C 400 429 460	1.8	7/16
73626-16	Pontiac V8	1.5	3/8
73622-16	Pontiac V8	1.6	3/8
73627-16	Pontiac V8	1.5	7/16
73623-16	Pontiac V8	1.6	7/16
73624-16	Pontiac V8	1.65	7/16
73644-16*	Oldsmobile 67-91 V8 V8	1.6	7/16

* Requires machine work Note: Rocker arms can be purchased in 1/2 sets (8 intake and 8 exhaust for split ratio applications) or individually Note: Specify stud 88400 (3/8) or 88401 (7/16) when ordering.

Needle Bearing Tip Option available for all stainless, aluminum stud & shaft mounted rocker arms!

Crower's self-aligning rocker arms are available for late model small and big block Chevrolet, Dodge Magnum truck and the V10 Viper. Features include:

- Self aligning roller tip holds rocker in place
- 25 hp, 4 mph on 1/4 mile with 1.7's on V10
- Emissions Legal certified ARB #D-410

ENDURO LONG ARM/ BACKSET ROLLERIZED ROCKERS

Crower's Long Arm/Backset trunnion rollerized rockers are made to the same high tolerances as our standard stainless steel rocker arms with a .090" backset trunnion and these added features:

- Increased area under the lift curve
- Additional spring clearance (1.650")
- Smoother valve action
- Less side loading on stems/guides
- Drop on installation
- Set of 8 for intake (use standard Crower stainless steel rockers on exhaust)

Part No.	Description	Ratio	Stud
73677-8	Chevrolet 265-400 V8	1.5	7/16
73674-8	Chevrolet 265-400 V8	1.6	7/16
73672-8	Chevrolet 265-400 V8	1.65	7/16
73673-8	Chevrolet 265-400 V8	1.7	7/16
73676-8	Chevrolet 265-400 V8	1.75	7/16
73675-8	Chevrolet 265-400 V8	1.8	7/16
73678-8	Chevrolet 265-400 V8	1.85	7/16
73679-8	Chevrolet 265-400 V8	1.9	7/16

Note: May be purchased as mixed ratios intake and exhaust.

STAMPED STEEL ROCKER ARMS

Crower's stamped steel rockers utilize a longer slot for high lift, aftermarket cams. Made from high strength steel alloy and stamped to resist the rocker flex for the longest possible operating life.

Part No.	Description	Ratio
73050-16	Chevrolet 265-400 (set 16)	1.5
73051-16	Chevrolet 265-400 (set 16)	1.6
73053	Chevrolet 265-400 (8 ea/8 ea) Kit	1.5/1.6
73052-16	Chevrolet 396-454 (set 16)	1.7

Note: For small block Chevrolet, a 1.6 ratio will raise gross valve lift for a nominal horsepower increase. All rockers listed are 3/8 stud.

LATE MODEL ROCKERS

Part No.	Description	Ratio	Stud
73602-12	V6 Chevy 85-96, 97-98 Vortec	1.5	3/8
73603-12	V6 Chevy 85-96, 97-98 Vortec	1.6	3/8
73602-16	SB Chevy 85-96, 97-98 Vortec, LT1	1.5	3/8
73603-16	SB Chevy 85-96, 97-98 Vortec, LT1	1.6	3/8
73660-16	SB Chevy Narrow, Non Align	1.5	3/8
73661-16	SB Chevy Narrow, Non Align	1.6	3/8
73608-16	BB Chevy 85-96, 97-98 Vortec	1.8	7/16
73653K*	V6 Dodge Magnum	1.6	3/8
73654K*	V6 Dodge Magnum	1.7	3/8
73655K*	V8 Dodge Magnum	1.6	3/8
73656K*	V8 Dodge Magnum	1.7	3/8
73657K*	V10 Dodge Magnum	1.6	3/8
73659K*	V10 Dodge Magnum	1.7	3/8
73662K*	V10 Dodge Viper	1.6	7/16
73663K*	V10 Dodge Viper	1.7	7/16

**** "K" incl. rocker studs. 5500 RPM limit on "K" kits (6300 on Viper)***

DODGE MAGNUM ROLLER ROCKER KITS

Our "PK" kits are a must in order to maintain valve train integrity when RPM's over 5500 are reached. If sustained high RPM is expected, you must upgrade to 68305X1 spring. "PK" kits include rocker studs, guide plates (#70518) & 1 pc. pushrods (#69695).

Part No.	Description	Ratio	Stud
73653PK*	V6 Dodge Magnum	1.6	3/8
73654PK*	V6 Dodge Magnum	1.7	3/8
73655PK*	V8 Dodge Magnum	1.6	3/8
73656PK*	V8 Dodge Magnum	1.7	3/8

ENDURO CENTERLINE ROLLERIZED ROCKERS

When installing a .100" long valve, the rocker arm tip must be backed up .050" to insure centerline contact at half lift. Crower offsets the rocker stud hole in the trunnion, pulling the rocker tip back into correct alignment with the valve stem. Re-establishing correct geometry reduces valve guide wear and promotes more accurate valve timing.

Part No.	Description	Ratio
73690-16	Chevrolet 265-400 (set 16).050 backset	1.5
73691-16	Chevrolet 265-400 (set 16).050 backset	1.55
73692-16	Chevrolet 265-400 (set 16).050 backset	1.6
73693-16	Chevrolet 265-400 (set 16).050 backset	1.65
73694-16	Chevrolet 265-400 (set 16).050 backset	1.7
73696-16	Chevrolet 265-400 (set 16).050 backset	1.75
73695-16	Chevrolet 265-400 (set 16).050 backset	1.8
73682-16	Chevrolet 396-454 (set 16).050 backset	1.65
73683-16	Chevrolet 396-454 (set 16).050 backset	1.7
73684-16	Chevrolet 396-454 (set 16).050 backset	1.75
73685-16	Chevrolet 396-454 (set 16).050 backset	1.8
73686-16	Chevrolet 396-454 (set 16).090 backset	1.65
73687-16	Chevrolet 396-454 (set 16).090 backset	1.7
73688-16	Chevrolet 396-454 (set 16).090 backset	1.75
73689-16	Chevrolet 396-454 (set 16).090 backset	1.8

The above rockers may be purchased in sets of 8 to mix ratios. Note: 7/16 stud diameter.

NEEDLE BEARING TIP OPTION

All Crower stud and shaft mount rocker arms are available with Crower's new needle bearing roller tip option. Results are greatly reduced friction for added horsepower and reduced valve guide and valve stem wear. The lighter tip delivers greater valve control for increased rpm and improves valve spring longevity by decreasing heat over traditional non needle designs. Specify #73715R option for stainless steel (stud or shaft) or #72915R option for aluminum (stud or shaft) when ordering rocker arms. Not available on self-alinging tip designs.

Stud-Mounted Rocker Arms *Aluminum*

ALUMINUM STUD ROLLERIZED ROCKERS

Crower's Enduro aluminum stud mount rocker arms are fully CNC machined from USA made, premium aluminum extrusion. Crower's unique "full arch" design reduces the rocker flex found in other brands. Results are increased rpm, greater area under the lift curve and added spring clearance (1.625"). Double-step, serrated pins feature our rotor clip design that eliminates pin loosening. USA made needle bearings. When vertical valve cover clearance is an issue, specify "LP" when ordering.

Part No.	Description	Ratio	Stud
72845-16*	AMC 290-401 V8	1.6	3/8
72846-16*	AMC 290-401 V8	1.6	7/16
72848-12*	AMC 6 cyl.	1.6	3/8
72847-12*	AMC 6 cyl.	1.6	7/16
72825-8	Chevy II 4 cyl.	1.75	3/8
72828-12	Chevrolet 230 250 292 6cyl.	1.6	3/8
72829-12	Chevrolet 230 250 292 6 cyl.	1.75	3/8
72830-12	Chevrolet 230 250 292 6 cyl.	1.6	7/16
72831-12	Chevrolet 230 250 292 6 cyl.	1.75	7/16
72850-12	Chevrolet 200 229 90° V6	1.5	7/16
72852-12	Chevrolet 200 229 90° V6	1.6	7/16
72854-12	Chevrolet 200 229 90° V6	1.65	7/16
72835-16	Chevrolet 265-400 V8	1.35	7/16
72800-16	Chevrolet 265-400 V8	1.5	3/8
72840-16	Chevrolet 265-400 V8	1.6	3/8
72870-16	Chevrolet 265-400 V8	1.65	3/8
72801-16	Chevrolet 265-400 V8	1.5	7/16
72841-16	Chevrolet 265-400 V8	1.6	7/16
72871-16	Chevrolet 265-400 V8	1.65	7/16
72843-16	Chevrolet 265-400 V8	1.7	7/16
72804-16	Chevrolet 396-454 V8	1.55	7/16
72806-16	Chevrolet 396-454 V8	1.6	7/16
72805-16	Chevrolet 396-454 V8	1.7	7/16
72807-16	Chevrolet 396-454 V8	1.75	7/16
72808-16	Chevrolet 396-454 V8	1.8	7/16
72809-16	Ford 289 302 351 W V8	1.6	3/8
72810-16	Ford 289 302 351W V8	1.65	3/8
72811-16	Ford 289 302 351W V8	1.7	3/8
72832-16	Ford 289 302 351W-351-N V8	1.5	7/16
72833-16	Ford 289 302 351W 351-N V8	1.55	7/16
72812-16	Ford 289 302 351W 351-N V8	1.6	7/16
72813-16	Ford 289 302 351W 351-N V8	1.65	7/16
72814-16	Ford 289 302 351W 351-N V8	1.7	7/16
72837-16	Ford 289 302 351W 351-N V8	1.75	7/16
72838-16	Ford 289 302 351W 351-N V8	1.8	7/16
72818-16	Ford Boss 351C 400 429 460	1.6	7/16
72816-16	Ford Boss 351C 400 429 460	1.65	7/16
72815-16	Ford Boss 351C 400 429 460	1.73	7/16
72817-16	Ford Boss 351C 400 429 460	1.75	7/16
72819-16	Ford Boss 351C 400 429 460	1.8	7/16
72826-16	Pontiac V8	1.5	3/8
72822-16	Pontiac V8	1.6	3/8
72827-16	Pontiac V8	1.5	7/16
72823-16	Pontiac V8	1.6	7/16
72824-16	Pontiac V8	1.65	7/16
72844-16	Oldsmobile 67-91 V8	1.6	7/16

* Requires machine work

ALUMINUM CENTERLINE ROLLERIZED ROCKERS

When installing a .100" long valve, the rocker arm tip must be backed up .050" to ensure centerline contact at half lift. Crower offsets the rocker stud hole in the trunnion, pulling the rocker tip back into correct alignment with the valve stem. Re-establishing correct geometry reduces valve guide wear and promotes more accurate valve timing.

Part No.	Description	Ratio	Stud
72890-8	Chevrolet 265-400 V8 (set 8)	1.5	7/16
72891-8	Chevrolet 265-400 V8 (set 8)	1.55	7/16
72892-8	Chevrolet 265-400 V8 (set 8)	1.6	7/16
72893-8	Chevrolet 265-400 V8 (set 8)	1.65	7/16
72894-8	Chevrolet 265-400 V8 (set 8)	1.7	7/16
72896-8	Chevrolet 265-400 V8 (set 8)	1.75	7/16
72895-8	Chevrolet 265-400 V8 (set 8)	1.8	7/16
72897-8	Chevrolet 396-454 V8 (set 8)	1.7	7/16
72898-8	Chevrolet 396-454 V8 (set 8)	1.8	7/16

The above rockers come in sets of 8 to mix ratios.

OFFSET ALUMINUM INTAKE ROCKERS

Crower has a .150" offset aluminum rocker available in 7/16" stud diameter only. These rockers include the same features as our Enduro Aluminum rockers, but in an offset design. Order only for the intake and then 8 only standard stud mount rockers on the exhaust (see p/n at left).

Part No.	Description	Ratio	Stud
72801X1-8	Chevrolet 265-400 V8	1.5	7/16
72841X1-8	Chevrolet 265-400 V8	1.6	7/16
72871X1-8	Chevrolet 265-400 V8	1.65	7/16
72812X1-8	Ford 351-N V8	1.6	7/16
72813X1-8	Ford 351-N V8	1.65	7/16
72814X1-8	Ford 351-N V8	1.7	7/16
72837X1-8	Ford 351-N V8	1.75	7/16
72838X1-8	Ford 351-N V8	1.8	7/16

Note: These rockers come 8 only for the intake side. You must order 8 only standard design rockers for the exhaust side.

BREAK-IN ALUMINUM ROLLERIZED ROCKERS

Reduce cam and lifter break-in failures by running Crower's new break-in rocker arms first. Features a reverse offset trunnion (.050") that repositions the pushrod closer to the stock position. In other words, Crower moves the rocker arm and pushrod forward .050" for easier installation. Current break-in rockers on the market only offer center trunnion stud hole positions that require extensive cylinder head modifications to the pushrod hole in order to achieve proper pushrod and head clearance. Crower's break-in rockers drop on with no machine work required. Spring pockets machined for 1.560" O.D. spring

Part No.	Description	Ratio	Stud
72881-16	Chevrolet 265-400 V8	1.2	7/16
72886-16	Chevrolet 265-400 V8	1.35	7/16
72882-16	Chevrolet 396-454 V8	1.4	7/16
72884-16	Ford 289 302 351W V8	1.3	7/16
72885-16	Ford 351C V8	1.33	7/16

Example A

.350 Lobe Lift
x 1.7 Rocker Ratio
.595 Gross Lift
-.020 Lash
.575 Net Valve Lift

Example B

As you can see in example (A), net valve lift is .575" and example (B) is .400" net. Depending on spring rate, this could be as much as 100 lbs. or more reduced open pressure.

As you can see in example (A), net valve lift is .575" and example (B) is .400" net. Depending on spring rate, this could be as much as 100 lbs. or more reduced open pressure.

NEEDLE BEARING TIP OPTION

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Stud-Mounted Rocker Arms

SURE LOCK ROCKER NUTS

Made from high quality, heat treated chromoly steel, Crower sure lock nuts allow for precise adjustments. Includes nuts, Allen head set screws.

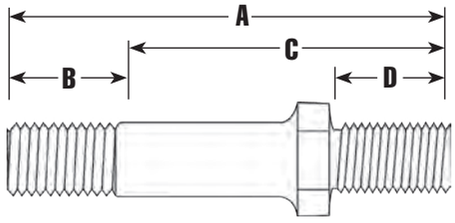
Part No.	Stud Dia.	Shank Dia.	Engine
86050-16	7/16	.600"	V8
86050S-16	7/16	.600"	V8
86051-16	3/8	.530"	V8
86051S-16	3/8	.530"	V8
86052-12	3/8	.530"	6 cyl
86053-16	3/8	-	Pontiac

"S" indicates short (.865") design for valve cover clearance. Std = 1.060"

CROWBAR STUD GIRDLES

Eliminate high rev stud flex and increase your overall horsepower with the Crower "CrowBar" stud girdle. "Crowbar" stud girdles utilize a unique clamping design engineered for quick and easy adjustments or removal with just one wrench. Precision CNC machined from premium 6061T6 aluminum provides true bolt-on installation. Comes complete with the highest quality adjusting nuts that feature a 9/16 hex with premium locking set screw for positive rocker arm adjustment.

Part No.	Description	Stud Dia.
73911	Chevrolet 265-400 (stock, Cast Iron Bowtie, Brodix)	3/8
73901	Chevrolet 265-400 (Stock, Bowtie, Brodix Trk1, AFR 180-210, Edelbrock)	7/16
73905	AFR 220	7/16
73904	Brodix, 40/60 w/relocated studs	7/16
73951	Chevrolet 396-454 (Stock)	7/16
73952	Chevrolet 396-454 (.250" long valves)	7/16
73955	Dart BBC "D" series w/relocated studs	7/16
73960	Ford 351C	7/16
73965	Ford 351N	7/16
73961	Ford 460 (Cast iron, Cobra Jet)	7/16
73962	Ford 460 (TFS/SVO)	7/16



ALLOY ROCKER STUDS

Crower screw-in rocker studs are rated to 190,000 p.s.i. tensile strength and insure reliability in your valve train. Machined and finished from 8740 aircraft quality steel and heat-treated for maximum strength. All threads are cold rolled for concentricity and extreme durability.

Part No.	Description	Stud Dia.
88419-12	Chevrolet 60° V6 2.8-3.1 (80-94)	3/8 top, 10mm bottom
88400-16	Chevrolet 265-400 A=2.430" B=0.680" C=1.750" D=0.800"	3/8 top, 7/16 bottom
88402L	Chevrolet 396-454 (Alum Heads)	7/16
Int:	A=2.825" B=0.815" C=1.900" D=1.000"	
Exh:	A=3.310" B=1.300" C=2.010" D=1.030"	
88401-16	Chev 265-400 & 396-454 A=2.650" B=0.750" C=1.900" D=0.650"	7/16
88405-8	Chevrolet 396-454 (Alum Hds Ex. only) A=3.310" B=1.300" C=2.010" D=1.030"	7/16
88425-16	Chevrolet (Special appl. +.250") A=2.825" B=.815" C=1.900" D=1.000"	7/16
88418-16	Chev Late Mod/Mark V A=2.650" B=0.750" C=1.900" D=1.000"	7/16 top, 3/8 bot*
88401-16	Ford 302, 351C A=2.650" B=0.750" C=1.900" D=0.650"	7/16
88416-16	Dodge Magnum V8 A=2.430" B=0.700" C=1.760" D=0.800"	3/8 top, 5/16 bot
88416-20	Dodge V10 Truck A=2.430" B=0.700" C=1.760" D=0.800"	3/8 top, 5/16 bot
88417-20	Dodge Viper V10 A=2.450" B=0.750" C=1.700" D=0.800"	7/16 top, 3/8 bot

*Must reuse factory guide plates with 3/8 mounting hole.

STUD GIRDLE LOCK -NUT ADJUSTERS

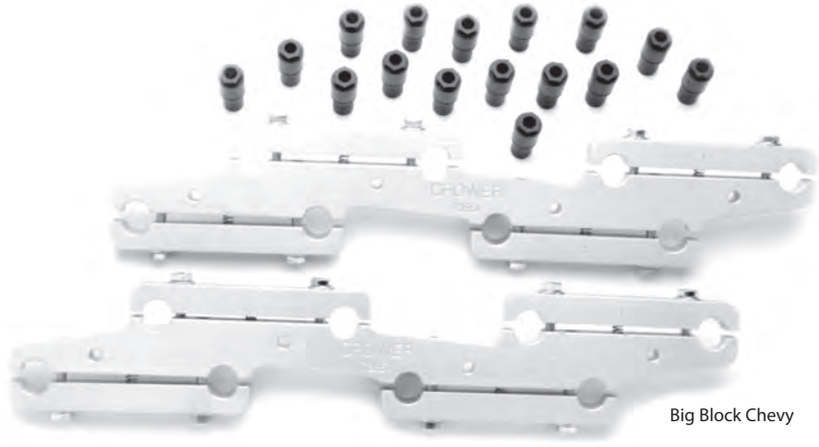
Designed for use with Crower's "CrowBar" stud girdles. Made from high strength steel alloy and heat treated for added durability. These aircraft quality adjusting nuts feature a premium hex with locking set screw to provide positive rocker arm adjustment. Our 3/8 screw-in rocker stud adjuster and the 7/16 screw-in rocker stud adjuster has a 9/16 hex. Specify quantity.

Part No.	Description	Fits Stud Dia.
73934-16	SBC (all) & BBC exhaust (short)	7/16
73935-8	BBC Intake only (long)	7/16
73936-16	All 3/8 stud applications	3/8

CROWBAR REPLACEMENT PARTS

Part No.	Description
73932	Clamp bolt, SBC stud girdles
73933	Washer, SBC stud girdles
73937-1	Clamp bolt, BBC stud girdles
73938-1	Washer, BBC stud girdles
73939-1	Spring, BBC stud girdles
73921	Stud girdle bar, 1 only* for 73901 & 73911
73924	Stud girdle bar, 1 only* for 73904
73929	Stud girdle bar, 1 only* for 73909
73941	Stud girdle bar, 1 only* for 73951
73942	Stud girdle bar, 1 only* for 73952
73945	Stud girdle bar, 1 only* for 73955
73970	Stud girdle bar, 1 only* for 73960
73971	Stud girdle bar, 1 only* for 73961
73972	Stud girdle bar, 1 only* for 73962
73975	Stud girdle bar, 1 only* for 73965

*Replacement bar is for one side (one head) only. No adjusters, all other hardware included.



Big Block Chevy

Shaft-Mounted Rocker Arms *Stainless Steel*

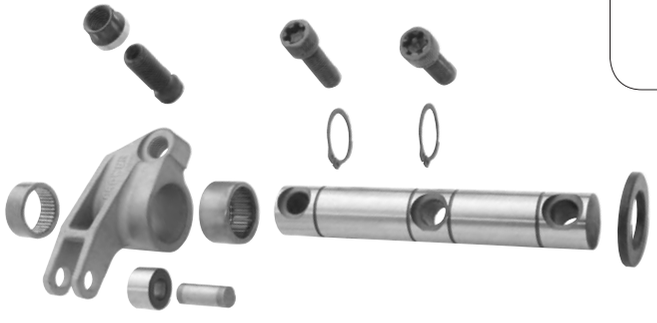
For those of you that feel most confident running a steel based valve train, we offer you the Crower collection of shaft mounted stainless steel rocker arms. Each and every configuration has been religiously scrutinized to offer extreme rigidity and accuracy while optimizing moment of inertia phenomena condition. Crower engineers made ease of installation and maintenance a top priority so you'll never waste a moment when time is critical at the track. Our stainless steel shaft rocker systems are a perennial favorite of dirt late models and marine endurance competitors. Sustained high temperature has little affect on the strength properties of stainless steel so components made from this material should have a longer life expectancy than similar components made from aluminum.

Offset Guide

Straight

.200"-.250" Offset Right

.350"-.550" Offset Right



NEEDLE BEARING TIP OPTION

All Crower stud and shaft mount rocker arms are available with Crower's new needle bearing roller tip option. Results are greatly reduced friction for added horsepower and reduced valve guide and valve stem wear. The lighter tip delivers greater valve control for increased rpm and improves valve spring longevity by decreasing heat over traditional non needle designs. Specify #73715R option for stainless steel (stud or shaft) or #72915R option for aluminum (stud or shaft) when ordering rocker arms.

Stainless Steel Rockers

World Products LS-7X

BB-3 xtra

Dart Pro1

Stainless Steel Shaft Mounted Rocker Systems

AFR

Part#	Description	Arm Lgth	Intake Offset	Exh Offset
74131	S.B. Chev.180/210	1.480	.250	.100
74139	S.B. Chev. 180/210 w/ L-98 bolt pattern	1.480	.250	.100
74132	215 RR	1.480	.450	.100
74132	220	1.480	.450	.100
74130	227	1.480	.450	.100
***74707**	BBC AFR 345/357	1.650	.100	.000

All Pro

Part#	Description	Arm Lgth	Intake Offset	Exh Offset
74134	23° 40/60	1.480	.450	.100
74135	17°	1.650	.450	.175
74143	13°	1.650	.550	.150

Brodix

Part#	Description	Arm Lgth	Intake Offset	Exh Offset
74115	Track I series & KCT 1227	.000	.250	.100
74116	Track I	1.480	.150	.100
74116	SBC Irwindale Spec	1.480	.150	.100
74112	–8 through –11	1.480	.250	.100
74126	10x 11x 40/60 & ASCS	1.480	.250	.100
74127**	10x 11x 40/60 & ASCS	1.480	.450	.100
74114	10x 11x 40/60 LA*	1.650	.250	.100
74129	Track 1x 40/60	1.480	.250	.100
74122	–12 LA*	1.650	.500	.100
74136	12X12	1.650	.550	.100
74124	12X12 RP LA*	1.650	.550	.100
74125	18° Clone LA*	1.650	.550	.250
74126	18x 40/60	1.480	.250	.100
***74702**	BBC, BB-2X, BB-2xtra, BB-3	1.650	.100	.000
***74703**	BBC BB-3 XTRA	1.650	.100	.000
***74704**	BBC BB-1, BB-2, BB-2 plus / Race Rite	1.650	.100	.000

Canfield

Part#	Description	Arm Lgth	Intake Offset	Exh Offset
74111	23° 400	1.480	.100	.100
74131	Small Runner	1.480	.250	.100
74132	Large Runner	1.480	.450	.100
74144	23° 220	1.480	.450	.100

Dart

Part#	Description	Arm Lgth	Intake Offset	Exh Offset
74103	S.B. Chev. Pro 1 227, 23°	1.480	.300	.200
74112	SBC Pro 1	1.480	.250	.100
74111	Dart II Sportsman	1.480	.100	.100
74112**	Dart II Sportsman	1.480	.250	.100
74111	230 Iron Eagle	1.480	.100	.100
74112**	230 Iron Eagle	1.480	.250	.100
74127	23° RR 40/60	1.480	.450	.100
74117	18° Clone LA*	1.650	.550	.250
74128	18° Clone	1.480	.550	.250
***74701**	B.B. Chev. Pro 1	1.650	.100	.075
***74708**	B.B. Chev. Race series 320-360	1.650	.000	.075
***74709**	B.B. Chev. Big M	1.650	.000	.000

*** One peice intake stand, no machine work required.**

Edelbrock

Part#	Description	Arm Lgth	Intake Offset	Exh Offset
74111	SBC Performer	1.480	.100	.100
74131	SBC Victor Jr.	1.480	.250	.100
74128	SBC Victor 18°	1.480	.550	.250
74117	SBC Victor 18° LA	1.650	.550	.250
74161	SBC Victor 23° High Port	1.480	.450	.100
74163	Pontiac BB 326-455	1.480	.100	.100
74165	Pontiac BB 326-455	1.480	specify	specify

GM Castings

Part#	Description	Arm Lgth	Intake Offset	Exh Offset
74107	LS7	1.550	.350	.050
74223	V6 23° Aluminum/Bowtie	1.480	.175/.250	.150/.200
74218	V6 18° LA	1.650	.550/.650	.250
74111	SBC Iron & Bowtie	1.480	.100	.100
74119	SBC Phase 6 Alum. Bowtie	1.480	.450	.100
74128	SBC 18°	1.480	.550	.250
74117	SBC 18° LA*	1.650	.550	.250
***74700**	BB Iron casting	1.650	.000	.000
74151	GM LA* (1.8:1 to 2:1)	1.650	.100	.100
74122	Pontiac/SBC 15° LA*	1.650	.475	.100
74126	Pontiac/SBC 23° 867 40/60	1.480	.250	.100
74127**	Pontiac/SBC 23° 867 40/60	1.480	.450	.100
74163	Pontiac BBC 326/455	1.480	.100	.100
74166	Pontiac 18° #10093391	1.480	.550	.100

BMF

Part#	Description	Arm Lgth	Intake Offset	Exh Offset
***74705**	BBC BMF 385	1.650	.100	.000

Pro Action

Part#	Description	Arm Lgth	Intake Offset	Exh Offset
74116	Iron Lightening	1.480	.150	.100
74123	23° Iron RR	1.480	.450	.100
74153	23° Iron RR LA*	1.650	.450	.100
74138	Pro Action 14°	1.650	.550	.250
74118	220 Motown 23°	1.480	.250	.100

TFS

Part#	Description	Arm Lgth	Intake Offset	Exh Offset
74154	–5 18° SBC	1.480	.550	.250
74111	23° SBC	1.480	.100	.100
74275	SBC Ford High Port Race	1.480	.100	.075

World Products

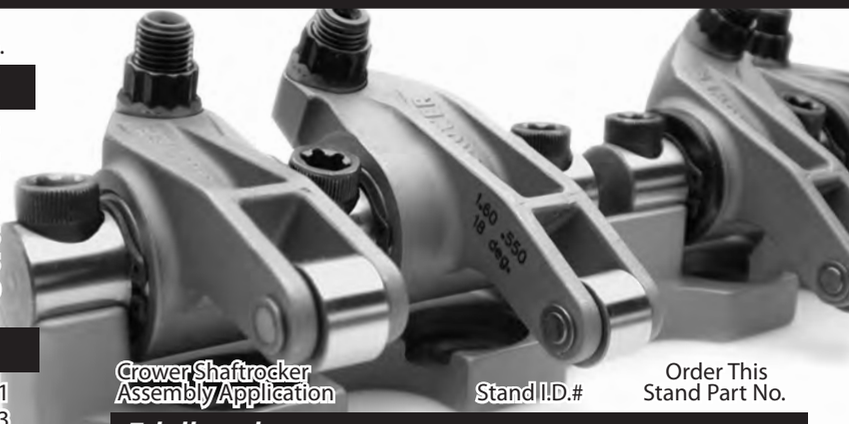
Part#	Description	Arm Lgth	Intake Offset	Exh Offset
74110	LS-7X	1.550	.350	.050
74111	SR Torquer	1.480	.100	.100
74112	Sportsman II	1.480	.250	.100

ETP

Part#	Description	Arm Lgth	Intake Offset	Exh Offset
74108	LS-7	1.550	.350	.000

Most shaft rocker assemblies are available with optional offsets. If you don't find the offset you require, please ask about availability.
* LA = Long Arm **Optional offset
Ratios over 1.8 may require a long arm rocker arm. Arm lengths over 1.650 are available in aluminum only.

Shaft-Mounted Rocker Arms



Crower Shaftrocker Assembly Application		Stand I.D.#	Order This Stand Part No.
AFR			
74131	180/210	010	74400X010
74139	S.B. Chev. 180/210 w/ L-98 bolt pattern	020	74400X020
74132	215 RR	025	74000X025
74132	220	025	74400X025
74130	227	025	74400X025
74707	AFR 354/357	210Int.	74400X210
		211Exh.	74400X211
All Pro			
74134	23° 40/60	021	74400X021
74135	17°	013	74400X013
74143	13°	023	74400X023
Brodix			
74115	Track I series & KCT 1227	017	74400X017
74116	Track I	010	74400X010
74116	Irwindale Spec	010	74400X010
74112	–8 through –11	010	74400X010
74126	10x 11x 40/60 ASCS	021	74400X021
74127	10x 11x 40/60 ASCS	021	74400X021
74114	10x 11x 40/60 LA	013	74400X013
74129	Track 1x 40/60	021	74400X021
74122	–12 & LA	023	74400X023
74136	12X12	023	74400X023
74124	12X12 RP LA	023	74400X023
74125	18° Clone LA	013	74400X013
74126	18x 40/60	021	74400X021
74702	BBC BB-2X, BB-2Xtra, BB-3	202 Int.	74400X202
		205 Exh.	74400X203
74703	BB-3 Xtra	206 Int.	74400X206
		207 Exh.	74400X207
74704	BBC BB-1, BB-2, BB-2 plus / Race Rite	204 Int.	74400X204
		208 Exh.	74400X208
BMF			
74705	BBC BMF 385	202 Int.	74400X202
		203 Exh.	74400X203
Canfield			
74111	23° 400	010	74400X010
74131	Small Runner	010	74400X010
74132	Large Runner	025	74400X025
74144	23° 220	024	74400X024
Dart			
74103	S.B. Chev. Pro 1 227, 23°	026	74400X026
74111	Dart II Sportsman	010	74400X010
74112	Dart II Sportsman	010	74400X010
74111	230 Iron Eagle	010	74400X010
74112	230 Iron Eagle SBC Pro 1	010	74400X010
74127	23° RR 40/60	021	74400X021
74128	18°	020	74400X020
74117	18° Clone	011	74400X011
74701	B.B. Chev. Pro 1	100 Intake	74400X100
		101 Exhaust	74400X101
74708	Dart Race Series BBC	100 Intake	74400X100
		101 Exhaust	74400X101
74709	Dart Big M	100 Intake	74400X100
		212 Exhaust	74400X212

Crower Shaftrocker Assembly Application		Stand I.D.#	Order This Stand Part No.
Edelbrock			
74131	SBC Victor Jr.	010	74400X010
74111	SBC Performer	010	74400X010
74128	SBC Victor 18*	020	74400X020
74117	SBC Victor 18° LA	011	74400X011
74161	SBC Victor 23° High Port	021	74400X021
74003	BBC Victor .250 intake valve,	072 Intake	74400X072
	.100 exhaust valve	073 Exhaust	74400X073
74163	Pontiac BBC 326-455	060	74400X060
74165	Pontiac BBC 326-455	060	74400X060
GM Castings			
74107	LS7	007	74400X007
74223	V6 23° Aluminum/Bowtie		
74218	V6 18° LA	006	74400X006
74111	SBC Cast Iron & Bowtie	010	74400X010
74119	SBC Phase 6 Alum. Bowtie	010	74400X010
74128	SBC 18°	020	74400X020
74117	SBC 18° LA	011	74400X011
74151	GM LA* (1.8:1 - 2:1)	011	74400X011
74122	Pontiac/SBC 15° LA	023	74400X023
74126	Pontiac/SBC 23° 867 40/60	021	74400X021
74127	Pontiac/SBC 23° 867 40/60	021	74400X021
74163	Pontiac/BBC 326/455	060	74400X060
74700	BB Iron	204 Int.	74400X204
		207 Exh.	74400X207
Pro Action			
74116	Iron Lightning	010	74400X010
74123	23° Iron RR	020	74400X020
74153	23° Iron RR LA	011	74400X011
74138	Pro Action 14°	016	74400X016
74118	220 Motown 23°, 49cc	020	74400X020
TFS			
74154	–5 18° SBC	010	74400X010
74111	23° SBC	010	74400X010
74275	SBC Ford High Port Race	085	74400X085
World Products			
74110	LS-7X	007	74400X007
74111	SR Torquer	010	74400X010
74112	Sportsman II	010	74400X010
ETP			
74108	LS-7	007	74400X007

NOTE: I.D. numbers are stamped on all mounting base stands. When you are ordering your replacement base stand please reference this I.D. number to ensure you get the correct part.

Stainless Steel 17-4

SHAFT REPLACEMENTS

Part No.	Description
74501X001	Chevrolet SB Cylinders 1,5,8,4 11/16"
74501X002	Chevrolet SB Cylinders 3,7,6,2 11/16"
74501X003	Chevrolet SB SB2 11/16"
74501X004	Pontiac 11/16"
74501X020	Chevrolet BB 11/16"
74501X001F	Chevrolet SB Cylinders 1,5,8,4 5/8"
74501X002F	Chevrolet SB Cylinders 3,7,6,2 5/8"
74501X020F	Chevrolet BB 5/8"
74501X027F	LS7 5/8" DIA.

TORX HEAD SHAFT BOLTS

Shaft bolt fastens rocker shaft to the mounting base stand.
(5/16-24 X 1 1/4 Torx Plus)
#74524-002 1 Only

SNAP RINGS

Snap ring for Stainless shaft rocker assemblies. 11/16 shaft.
1 Only.
#73714

STAND-TO-CYLINDER HEAD SHIMS

Mounting base stand shimming is often required to achieve optimum rocker arm-to-valve geometry. Available in three thicknesses. Specify head when ordering

Part No.	Description
74527X025	.025 Thick 1 only
74527X050	.050 Thick 1 only
74527X100	.100 Thick 1 only
74530X045	Inv. Sft. Rk. 1 only

DOWEL PIN

Dowel pin for locating individual shaft rocker mounting base stands.
Part No. 74531

STAINLESS STEEL SHAFT ROCKER REPLACEMENT BODIES

Our replacement bodies are built to the same exacting tolerances as our shaft assemblies for true bolt-on accuracy and repeatability. They include the adjusting components, tip assembly and bearings. They are fully assembled, ready for mounting. Specify engine, head, which cylinder, intake or exhaust, ratio and offset when ordering.

#74510 Shaft Rocker Body 1 only

ASSEMBLED STAINLESS STEEL SHAFT ROCKER REPLACEMENTS

Our mounted replacement bodies are fully assembled, ready for mounting. They include the adjusting components, tip assembly, bearings, shaft and shaft spacers. Specify which cylinder, ratio and offset when ordering.

#74503 Shaft Rocker – 1 Assembled Pair for 1 pc. stand
#74505 Shaft Rocker – 1 Assembled Rocker for individual stand

STAND BOLTS

Fasteners for securing mounting base stands to cylinder head. Specify length: 3/4", 1", 1 1/4".

Part No.	Description
74525X001	MOUNTING BOLT 7/16 X .750 LONG
74525X002	MOUNTING BOLT 7/16 X 1.000 LONG
74525X003	MOUNTING BOLT 7/16 X .875 LONG
74525X004	MOUNTING BOLT 7/16 X 1.250 LONG
74525X005	MOUNTING BOLT (TO HEAD) 3/8 X .750 LONG
74525X006	MOUNTING BOLT (TO HEAD) 3/8 X 1.000 LONG
74525X007	PLATE BOLT FLAT HEAD TORX PLUS 3/8-16 X 1.00
74525X007M	PLATE BOLT FLAT HEAD TORX PLUS METRIC
74525X008	MOUNTING BOLT FOR LS1 ETP & LS7 1.000 UHL
74525X008S	MOUNTING BOLT FOR LS1 ETP & LS7 .500 UHL
74525X009	SHAFT ROCKER MOUNTING BOLT (TO HEAD) 7/16 X 7/8
74525X010	MOUNTING BOLT 1/4-20 X 1.000 FOR BBC ONE PIECE PLATE

SHAFT SPACERS

Hardened steel spacers for proper valve stem-to-rocker tip alignment.

#74526X000	11/16" x 1 1/8" x Custom
#74526X015	11/16" x 1 1/8" x .010 thick
#74526X045	11/16" x 1 1/8" x .045 thick
#74526X055	11/16" x 1 1/8" x .055 thick
#74526X065	11/16" x 1 1/8" x .065 thick
#74526X075	11/16" x 1 1/8" x .075 thick
#74526X085	11/16" x 1 1/8" x .085 thick
#74526X100	11/16" x 1 1/8" x .100 thick
#74526X125	11/16" x 1 1/8" x .125 thick
#74526X145	11/16" x 1 1/8" x .145 thick
#74526X190	11/16" x 1 1/8" x .190 thick
#74526X250	11/16" x 1 1/8" x .250 thick
#74526X018	5/8" x 1 1/8" x .018 thick
#74526X020	5/8" x 1 1/8" x .020 thick
#74526X030	5/8" x 1 1/8" x .030 thick
#74526X060	5/8" x 1 1/8" x .060 thick

LASH ADJUSTMENT COMPONENTS

#74522
3/8 lash adjuster screw, 1 only
#74523
Lash adjuster jam nut, 1 only 3/8-24 12pt

AXLE PIN & WHEEL ASSEMBLIES

This replacement kit contains one each of the ***following:***
Axle pin, tip wheel
#73715P 1set
Individual parts:
#73715P Axle pin, 1 only
#73715T Tip wheel, 1 only

NEEDLE BEARINGS

#74528X001	11/16" dia. x 3/8"
#74528X002	11/16" dia. x 1/2"
#74528X010	5/8" dia. x 7/16"
#74528X011	5/8" dia. x 1/2"

Accessories

SHAFT HEIGHT GAUGE KIT

Clever tool makes quick work of setting optimum stand and shaft rocker height.
#74300X004

TORX DRIVE INSERT

Fits our shaft bolts.
#74307

ADJUSTABLE PUSHROD GAUGE

Allows you to quickly determine the precise pushrod length requirement. A must have tool for achieving optimum valve train geometry.

Part No.	Description
70480	5.500" to 6.500"
70481	6.500" to 7.500"
70482	7.500" to 8.500"
70483	8.500" to 9.500"
70485	includes one of each length

E-Z WRENCH

A must have for quick rocker adjustment. 7/16 12 point wrench with 1/8 hex.
#74305

TESTING/CHECKING SPRING

Set Of 2
87601-SPR

SPRING COMPRESSOR ADAPTER SHAFT

#74303

Shaft-Mounted Rocker Arms

Each of our Aluminum Shaft Rocker configurations is impeccably designed and produced to maximize valve train rigidity and accuracy while offering a minimal amount of reciprocating mass.

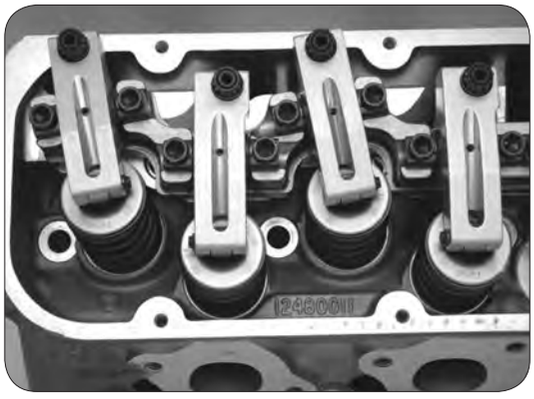
We have utilized the longest arm lengths practical for each application. The results are minimal rocker tip travel and associated frictional losses as well as the capability to accommodate large diameter valve springs with ease.

Speaking of ease, these set-ups allow for the quickest at-the-track valve train modifications around. Any task that requires rocker removal can be performed without concern for absolute accuracy and repeatability upon reassembly.

Offset Guide

Straight	.100" Offset Right	.150"-.175" Offset Right	.250" Offset Right	.350"-.650" Offset Right

Aluminum Rockers



SB2

AFR 227

Olds/BB

BB-3 xtra

Dart Pro1

Aluminum Shaft Mounted Rocker Systems

AFR

Part #	Description	Arm Lgth	Int Offset	Exh Offset
75131	180/210	1.520	.250	.100
75132	215 RR	1.520	.450	.100
75132	220	1.520	.450	.100
75130	227	1.520	.450	.100
75139	S.B. Chev. L-98 Patern 180/210	1.480	.250	.100
75140	S.B. Ford 165cc - 225cc	1.520	.000	.000
75707	BBc AFR 345 / 357	1.650	.100	.000
75101	LS1	1.450	.100	.075

All Pro

Part #	Description	Arm Lgth	Int Offset	Exh Offset
75134	23° 40/60	1.520	.450	.100
75135	17°	1.620	.450	.175
75143	13°	1.650	.550	.150

Brodix

Part #	Description	Arm Lgth	Int Offset	Exh Offset
75116	Track I	1.450	.150	.100
75116	Irwindale Spec	1.450	.150	.100
75126	Track 1x 40/60	1.520	.250	.100
75112	–8 through –11	1.450	.250	.100
75126	10x 11x 40/60 & ASCS	1.520	.250	.100
75127**	10x 11x 40/60 & ASCS	1.520	.450	.100
75121	BD1010	1.650	.700	.000
75122	–12 & LA*	1.650	.500	.100
75136	12X12	1.650	.550	.100
75124	12X12RP LA*	1.650	.550	.100
75137	12X12RP XLA***	1.750	.550	.100
75129	18° Clone	1.520	.550	.250
75125	18° Clone LA*	1.650	.550	.250
75126	18x 40/60	1.520	.250	.100
75000	BBC Special Order	1.650	.000	.000
75702	BBC BB-2X,BB-2xtra,BB3	1.650	.100	.000
* **75703**	BBC BB-3 xtra	1.650	.100	.000
* **75704**	BBC BB-1, BB-2, BB-2plus / Race Rite	1.650	.100	.000
* **75012**	BBC Big Duke PB1802 18˚	Int.1.650 Exh. 1.850	1.300/.600	.000
75015	BBC Big Duke PB1803 18˚	Int.1.650 Exh. 1.850	1.150/.600	.000

Canfield

Part #	Description	Arm Lgth	Int Offset	Exh Offset
75111	23° 400	1.450	.100	.100
75131	Small Runner	1.520	.250	.100
75132	Large Runner	1.520	.450	.100
75144	23° 220	1.480	.450	.100

Dart

Part #	Description	Arm Lgth	Int Offset	Exh Offset
75103	S.B. Chev. Pro 1 227 23˚	1.480	.300	.200
75112**	SBC Pro 1	1.450	.250	.100
75111	Dart II Sportsman	1.450	.100	.100
75112**	Dart II Sportsman	1.450	.250	.100
75111	230 Iron Eagle	1.450	.100	.100
75112**	230 Iron Eagle	1.450	.250	.100
75127	23° RR 40/60	1.520	.450	.100
75128	18° Clone	1.520	.550	.250
75117	18° Clone LA*	1.650	.550	.250
75007	Big Chief/14° Olds	1.650	1.300/.600	.000
* **75701**	B.B. Chev. Pro 1	1.650	.100	.075
* **75708**	B.B. Chev. Race Series 320-360	1.650	.000	.075
* **75709**	B.B. Chev. Big "M"	1.650	.000	.000
* **75710**	B.B. Chev. Race Series 18˚ oval	1.850	.200/.100	.000

TFS

Part #	Description	Arm Lgth	Int Offset	Exh Offset
75154	–5 18° SBC	1.520	.550	.250
75112	23° SBC	1.450	.250	.100

Dodge

Part #	Description	Arm Lgth	Int Offset	Exh Offset
75170	Viper (2002-prior)	1.450	.150	.150
75171	Viper (2003-up)	1.450	.100	.000
75172	Viper (2003-up)	1.450	.350	.000
90720-2	Billet aluminum spacer kit			

Edelbrock

Part #	Description	Arm Lgth	Int Offset	Exh Offset
75131	SBC Victor Jr.	1.520	.250	.100
75111	SBC Performer	1.450	.100	.100
75128	SBC Victor 18°	1.520	.550	.250
75117	SBC Victor 18° LA*	1.650	.550	.250
75283	302/351 Ford Victor Jr.	1.475	.000	.000
75282	Ford V-351 Edelbrock	1.520	.500	.000
75163	Pontiac BB 326-455	1.520	.100	.100
75165**	Pontiac BB 326-455	1.520	specify	specify

Ford & SVO

Part #	Description	Arm Lgth	Int Offset	Exh Offset
75283	302/351 Stock Production	1.475	.000	.000
75280	Ford 351-N (SVO)	1.475	.150	.150
75286	Yates 1pc. stand	1.650	-	-
75288	Yates NASCAR	1.520	.000	.150
75284	Z-304	1.520	.200	.000
75281	351C	1.650	.475	.050
75085	Ford 351C,429/460 CJ (indv stand)	1.650	.000	.000
75087	C460 1pc. stand	1.750	.100	.000
75287	351 Ford Irwindale Spec	1.475	.000	.000

GM Castings

Part #	Description	Arm Lgth	Int Offset	Exh Offset
75218	V6 18° LA	1.650	.550/.650	.250
75101	LS1/LS6 - Gen III	1.450	.000	.000
75111	SBC Iron & Bowtie	1.450	.100	.100
75116	SBC Iron & Bowtie	1.450	.150	.100
75119	SBC Phase 6 Alum. Bowtie	1.520	.250	.100
75128	SBC 18°	1.520	.550	.250
75117	SBC 18° LA*	1.650	.550	.250
75115	SB 2-2 18° 1pc. stand	1.650	.150	.150
75120	SB 2-2 Head & Block	specify	specify	specify
75122	Pontiac/SBC 15° LA	1.650	.500	.100
75162	Pontiac/SBC 40/60	-	-	-
75126	Pontiac/SBC 23° 867 40/60	1.520	.250	.100
75127**	Pontiac/SBC 23° 867 40/60	1.520	.450	.100
75163	Pontiac BB 326/455	1.520	.100	.100
75700	B.B. Iron Casting #2990	1.650	.000	.000

Pro Action

Part #	Description	Arm Lgth	Int Offset	Exh Offset
75116	Iron Lightning & 23°	1.450	.150	.100
75123	23° Iron RR	1.520	.450	.100
75153	23° Iron RR LA*	1.650	.450	.100
75138	14°	1.650	.550	.250
75113	220 Motown Hard Core	-	-	-

World Products

Part #	Description	Arm Lgth	Int Offset	Exh Offset
75111	SR Torquer	1.450	.100	.100
75112	Sportsman II	1.450	.250	.100

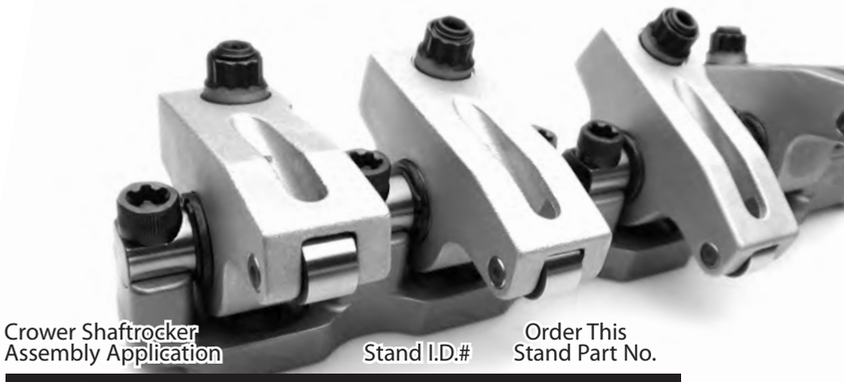
Most shaft rocker assemblies are available with optional offsets. If you don't find the offset you require, please ask about availability.

*** One peice intake stand, no machine work required.**

LA* = Long Arm **Optional offset

Ratios over 1.8 may require a long arm rocker arm. Arm lengths over 1.650 are available in aluminum only.

Shaft-Mounted Rocker Arms



Crower Shaftrocker Assembly Application		Stand I.D.#	Order This Stand Part No.
AFR			
75101	LS1	108	75101X108
75131	180/210	110	75400X110
75132	215 RR	125	75400X125
75132	220	125	75400X125
75130	227	125	75400X125
75139	S.B. Chev. L-98 Patern 180/210	110	75400X110
75140	S.B. Ford 165cc - 225cc	008	75400X008
75707	BBC AFR 345 / 357	310	75400X310
		311	75400X311
All Pro			
75134	23° 40/60	121	75400X121
75135	17°	113	75400X113
75143	13°	123	75400X123
Brodix			
75116	Track I	114	75400X114
75116	Irwindale Spec	114	75400X114
75126	Track 40/60	121	75400X121
75112	–8 through –11	114	75400X114
75126	10x 11x 40/60 ASCS	121	75400X121
75127	10x 11x 40/60 ASCS	121	75400X121
75121	BD1010	157	75400X157
75122	–12 LA	123	75400X123
75136	12X12	123	75400X123
75124	12X12RP LA	123	75400X123
75137	12X12RP XLA	119	75400X119
75129	18° Clone	121	75400X121
75125	18° Clone LA	113	75400X113
75126	18x	121	75400X121
75287	351 Ford Irwindale Spec	151	75400X151
75702	BBC BB-2X,BB-2xtra,BB3	302 Int.	75400X302
		305 Exh.	75400X305
75703	BBC BB-3 xtra	306 Int.	75400X306
		307 Exh.	75400X307
75704	BBC BB-1, BB-2, BB-2plus / Race Rite	304 Int.	75400X304
		308 Exh.	75400X308
75012	BBC Big Duke PB1802 18˚	381 IW Int.,	75400X381IW
		381 I Int.	75400X381I
		381E Exh.	75400X381E
75015	BBC Big Duke PB1803 18˚	381 IW Int.,	75400X381IW
		381 I Int.	75400X381I
		381E Exh. + .100	75400X381E+.100
Canfield			
75111	23° 400	114	75400X114
75131	Small Runner	110	75400X110
75132	Large Runner	125	75400X125
75144	23° 220	124	75400X124
Dart			
75103	S.B. Chev. Pro 1 227 23˚	326	75400X326
75112	SBC Pro I	114	75400X114
75111	Dart II Sportsman	114	75400X114
75112	Dart II Sportsman	114	75400X114
75111	230 Iron Eagle	114	75400X114
75112	230 Iron Eagle	114	75400X114
75127	23° RR 60/40	121	75400X121
75128	18° Clone	120	75400X120
75117	18° Clone LA	111	75400X111
75007	Big Chief/14° Olds	145 Exh.	75400X145
		147 1.330 Int.os	75400X147
		144 .600 Int.os	75400X144
75701	B.B. Chev. Pro 1	300 Int.	75400X300
		301 Exh.	75400X301
75708	B.B. Chev. Race Series 320-360	300 Int.	75400X300
		301 Exh.	75400X301
75709	B.B. Chev. Big "M"	300 Int.	75400X300
		312 Exh.	75400X301
75710	B.B. Chev. Race Series 18˚ oval	196 Int.	75400X196
		197 Exh.	75400X197

Crower Shaftrocker Assembly Application		Stand I.D.#	Order This Stand Part No.
Dodge			
75170	Viper (2002-prior)	190	75400X190
75171	Viper (2003-up)	191	75400X191
75172	Viper (2003-up)	195	75400X195
Edelbrock			
75131	SBC Victor Jr.	110	75400X110
75111	Performer	114	75400X114
75128	SBC Victor 18°	120	75400X120
75118	SBC Victor 18° LA	111	75400X111
75155	SBC Victor 23° High Port	121	75400X121
75283	302/351 Ford Victor Jr.	156	75400X156
75282	Ford V-351 Edelbrock	152	75400X152
75163	Pontiac BB 326-455	160	75400X160
75165	Pontiac BB 326-455	160	75400X160
Ford SVO			
75283	302/351 Stock Production	150	75400X150
75280	Ford 351-N (SVO)	150	75400X150
75284	Ford Z-304	150	75400X158
75281	Ford 351C	150	75400X194
75286	Nascar Yates 1 pc. Stand	127	75400X127
75288	Nascar Yates	192	75400X192
75085	Ford 351C, 429/460 CJ	53 Int.	75400X153
	Individual Stand	154 Exh.	75400X154
75087	Ford C460 1pc. stand	155	75000X155
GM Castings			
75218	V6 18° LA	106	75400X106
75101	LS1/LS6 Gen III	108	75400X108
75111	SBC Iron & Bowtie	114	75400X114
75116	SBC Iron & Bowtie	114	75400X114
75119	SBC Phase 6 Alum. Bowtie	110	75400X110
75128	SBC 18°	120	75400X120
75117	SBC 18° LA	111	75400X111
75115	SBC 2-2 18° 1pc. stand	130	75400X130
75120	SBC 2-2 Head & Block	131	75400X131
75122	Pontiac/SBC 15°	123	75400X123
75162	Pontiac/SBC 40/60	110	75400X110
75126	Pontiac/SBC 23° 867 60/40	120	75400X120
75127	Pontiac/SBC 23° 867 60/40	120	75400X120
75163	Pontiac BB 326/455	160	75400X160
75700	BB Iron	304 Int.	75400X304
		307 Exh.	75400X307
TFS			
75154	–5 18° SBC	110	75400X110
75111	23° SBC	114	75400X114
Pro Action			
75116	Iron Lightning	114	75400X114
75123	23° Iron RR	110	75400X110
75153	23° Iron RR LA	111	75400X111
75138	14°	116	75400X116
75113	220 Motown Hard Core	125	75400X125
World Products			
75111	SR Torquer	114	75400X114
75112	Sportsman II	114	75400X114

*** One peice intake stand, no machine work required.**

Aluminum

SHAFT REPLACEMENTS

Part No.	Description
75501X001	Chevrolet SB Cylinders 1, 5, 8, 4
75501X002	Chevrolet SB Cylinders 3, 7, 6, 2
75501X003	Chevrolet SB SB2 1.6 bolt centers
75501X004	Pontiac
75501X005	Ford 351N
75501X006	Ford 302 & Windsor
75501X007	Ford Victor 351
75501X020	Chevrolet BB, Ford 460, Olds & Big Duke Exh.
75501X021	Olds 14°/ Big Duke .6 intake offset
75501X022	Olds 14°/ Big Duke 1.3 intake offset
75501X003	Ford 351 Yates 1.6 bolt centers

STAINLESS STEEL SHAFT ROCKER REPLACEMENT BODIES

Our replacement bodies are built to the same exacting tolerances as our shaft assemblies for true bolt-on accuracy and repeatability. They include the adjusting components, tip assembly and bearings. They are fully assembled, ready for mounting. Specify engine, head, which cylinder, intake or exhaust, ratio and offset when ordering.

#75510 Shaft Rocker Body 1 only

AXLE PIN & WHEEL ASSEMBLIES

This replacement kit contains one each of the following:
Axle pin, tip wheel & Rotor Clip.

#75520 1set

Individual parts:
#75520C Rotor Clip, 1 only
#75520P Axle pin, 1 only
#75520T Tip wheel, 1 only

LASH ADJUSTMENT COMPONENTS

#75522 Lash adjuster screw, 1 only
#74523 Lash adjuster jam nut, 1 only
#75523W Jam nut washer, 1 only

NEEDLE BEARINGS

#75528X001 9/16" dia. x 3/8"
#75528X002 9/16" dia. x 1/2"

TORX HEAD SHAFT BOLTS

Shaft bolt fastens rocker shaft to the mounting base stand. (5/16-24 X 1 1/4 12 Pt)

#74524-001 1 Only

SNAP RINGS

Snap ring for Stainless shaft rocker assemblies. 11/16 shaft.
1 Only.
#72914

ASSEMBLED ALUMINUM SHAFT ROCKER REPLACEMENTS

Our assembled replacement bodies are fully complete, ready for mounting. They include the adjusting components, tip assembly, bearings, shaft and shaft spacers. Specify which cylinder, ratio and offset when ordering.

#75503 Shaft Rocker – 1 Assembled Pair for 1 pc. stand
#75505 Shaft Rocker – 1 Assembled Rocker for individual stand

Accessories

TORX DRIVE INSERT

Fits our shaft bolts.
3/8" drive

E-Z WRENCH

A must have for quick rocker adjustment.
7/16 12 point wrench with 1/8 hex.
#74305

SHAFT HEIGHT GAUGE KIT

Clever tool makes quick work of setting optimum stand and shaft rocker height.

#75300X004

MOUNTING KIT

Kit for individual mounting base stand shaft rocker systems.
#74308 Incudes:
1-jig
1-3/16" drill
1-Drill stop
1-Hold down bolt
32 #74530 shims
32 #74531 dowel pins

STAND-TO-CYLINDER HEAD SHIMS

Mounting base stand shimming is often required to achieve optimum rocker arm-to-valve geometry. Available in three thicknesses. Specify head when ordering.

Part No.	Description
74527X025	.025 Thick 1 only
74527X050	.050 Thick 1 only
74527X100	.100 Thick 1 only
74530X045	Inv. Sft. Rk. 1 only

DOWEL PIN

Dowel pin for locating individual shaft rocker mounting base stands.
Part No. 74531

SHAFT SPACERS FOR ALUMINUM SHAFT ROCKERS

Hi-temp 6/6 nylon

#75526X000	9/16 x 3/4 x Custom
#75526X030	9/16 x 3/4 x .030 thick
#75526X050	9/16 x 3/4 x .050 thick
#75526X060	9/16 x 3/4 x .060 thick
#75526X085	9/16 x 3/4 x .085 thick
#75526X100	9/16 x 3/4 x .100 thick
#75526X105	9/16 x 3/4 x .105 thick
#75526X290	9/16 x 3/4 x .290 thick
#75526X395	9/16 x 3/4 x .395 thick

STAND BOLTS

Fasteners for securing mounting base stands to cylinder head. Specify length: 3/4", 1", 1 1/4".

Part No.	Dia.	Length
74525X001	7/16"	3/4"
74525X002	7/16"	1"
74525X004	7/16"	1 1/4"
74525X005	3/8"	3/4"
74525X006	3/8"	1"

ADJUSTABLE PUSHROD GAUGE

Allows you to quickly determine the precise pushrod length requirement. A must have tool for achieving optimum valve train geometry.

Part No.	Description
70480	5.500" to 6.500"
70481	6.500" to 7.500"
70482	7.500" to 8.500"
70483	8.500" to 9.500"
70485	includes one of each length

TESTING/CHECKING SPRING

Set 0f 2
87601-SPR

SPRING COMPRESSOR ADAPTER SHAFT

#74303

Valve Springs

VALVE SPRING SPECIFICATIONS
– Listed According to O.D.

NEW HIGH RPM VALVE SPRING

O.D./I.D. Outer	.885/.610	.890/.620	1.080/.720	.940/.580(top)	1.130/.650(top)	1.045/.745	
O.D./I.D. Middle	-	-	-	1.110/.745(bottom)	1.120/.750(bottom)	-	
O.D./I.D. Inner	-	-	-	-	-	-	
Installed Height	1.975	1.350	1.420	1.470	1.650	1.400	
Rate	212	120	330	321	230	251	
Part #	**68180**	**68160**	**68194**	**68194X2**	**68193**	**68195**	
Type	Single	Single	Single	Single	Single	Single	
Color Code	None	None	None	None	None	None	
Damper	No	No	No	No	No	No	
Free Length	2.310	1.825	1.650	1.775	2.330	1.690	
Wire Diameter	.140	.134	.181/.144 (ovate)	.144X.175 (ovate)	.146/ .148 (ovate)	.146	
Material	Silicone	Silicone	Silicone	Silicone	Silicone	Silicone	
2.300	-	-	-	-	-	-	**2.300**
2.250	-	-	-	-	-	-	**2.250**
2.200	-	-	-	-	-	-	**2.200**
2.150	-	-	-	-	-	-	**2.150**
2.100	-	-	-	-	-	-	**2.100**
2.050	-	-	-	-	-	-	**2.050**
2.000	53 lbs	-	-	-	-	-	**2.000**
1.950	63 lbs	-	-	-	-	-	**1.950**
1.900	72 lbs	-	-	-	-	-	**1.900**
1.850	82 lbs	-	-	-	-	-	**1.850**
1.800	92 lbs	-	-	-	103 lbs	-	**1.800**
1.750	104 lbs	-	-	-	114 lbs	-	**1.750**
1.720	-	-	-	-	124 lbs	-	**1.720**
1.700	113 lbs	-	-	-	128 lbs	-	**1.700**
1.650	123 lbs	-	-	-	134 lbs	-	**1.650**
1.600	133 lbs	-	-	-	150 lbs	-	**1.600**
1.550	144 lbs	-	-	-	153 lbs	-	**1.550**
1.500	154 lbs	-	-	77 lbs	171 lbs	42 lbs	**1.500**
1.450	165 lbs	-	-	-	-	54 lbs	**1.450**
1.420	-	-	-	103 lbs	-	-	**1.420**
1.400	175 lbs	34 lbs	82 lbs	108 lbs	195 lbs	66 lbs	**1.400**
1.350	-	39 lbs	98 lbs	122 lbs	197 lbs	79 lbs	**1.350**
1.300	-	46 lbs	114 lbs	137 lbs	217 lbs	90 lbs	**1.300**
1.250	-	51 lbs	131 lbs	154 lbs	220 lbs	104 lbs	**1.250**
1.200	-	56 lbs	148 lbs	169 lbs	240 lbs	115 lbs	**1.200**
1.150	-	62 lbs	165 lbs	187 lbs	244 lbs	126 lbs	**1.150**
1.100	-	68 lbs	181 lbs	202 lbs	257 lbs	139 lbs	**1.100**
1.050	-	74 lbs	198 lbs	220 lbs	276 lbs	149 lbs	**1.050**
1.000	-	81 lbs	214 lbs	238 lbs	-	161 lbs	**1.000**
0.950	-	87 lbs	230 lbs	256 lbs	-	174 lbs	**0.950**
Coil Bind	1.320	0.815	.806	.870	1.035	0.860	
RETAINERS	87096 (5.5mm)	87086 (5.5mm)	87026 (7mm)	87020	87024 (7mm steel)	87085 (6mm)	
	-	-	87026T (7mm)	87020T	87024T	87082 (6mm)	
	-	-	-	-	87025 +.060 tit.	-	
	-	-	-	-	87023 3 valve	-	
	-	-	-	-	87023T 3 valve	-	
	-	-	-	-	-	-	
	-	-	-	-	-	-	
	-	-	-	-	-	-	
	-	-	-	-	-	-	
	-	-	-	-	-	-	
	-	-	-	-	-	-	

Valve Springs

VALVE SPRING SPECIFICATIONS
– Listed According to O.D.

O.D./I.D. Outer	1.050/.635 (top)	1.105/.820	1.105/.820	1.090/.780	1.145/.840	1.160/.870	
O.D./I.D. Middle	1.210/.815 (bottom)	-	-	-	-	-	
O.D./I.D. Inner	-	.800/.627	.811/.608	-	-	.860/.660	
Installed Height	1.800	1.350	1.350	1.550	1.550	1.590	
Rate	348	234	314	289	245	353	
Part #	**68435**	**68181**	**68182**	**68190**	**68183**	**68189**	
Type	Single	Dual	Dual	Single	Single	Dual	
Color Code	None	Orange	Orange	None	Purple	Yellow	
Damper	No	No	No	No	No	No	
Free Length	2.238	1.635	1.635	1.820	1.920	2.015	
Wire Diameter	.171/ .199 (ovate)	.140/.085	.140/.104	.160	.161	.149/.104	
Material	Silicone	Silicone	Silicone	Silicone	Silicone	Silicone	
2.350	-	-	-	-	-	-	**2.350**
2.300	-	-	-	-	-	-	**2.300**
2.250	-	-	-	-	-	-	**2.250**
2.200	-	-	-	-	-	-	**2.200**
2.150	-	-	-	-	-	-	**2.150**
2.100	-	-	-	-	-	-	**2.100**
2.050	-	-	-	-	-	-	**2.050**
2.000	60 lbs	-	-	-	-	-	**2.000**
1.950	78 lbs	-	-	-	-	-	**1.950**
1.900	93 lbs	-	-	-	-	-	**1.900**
1.850	110 lbs	-	-	-	-	-	**1.850**
1.800	125 lbs	-	-	-	-	-	**1.800**
1.750	143 lbs	-	-	-	-	-	**1.750**
1.700	159 lbs	-	-	-	-	-	**1.700**
1.650	175 lbs	-	-	42 lbs	-	65 lbs	**1.650**
1.600	193 lbs	-	-	55 lbs	-	81 lbs	**1.600**
1.550	210 lbs	-	28 lbs	74 lbs	73 lbs	96 lbs	**1.550**
1.500	228 lbs	-	42 lbs	88 lbs	84 lbs	112 lbs	**1.500**
1.450	246 lbs	36 lbs	56 lbs	101 lbs	95 lbs	127 lbs	**1.450**
1.400	265 lbs	48 lbs	70 lbs	111 lbs	107 lbs	144 lbs	**1.400**
1.350	284 lbs	56 lbs	84 lbs	122 lbs	119 lbs	159 lbs	**1.350**
1.300	302 lbs	70 lbs	98 lbs	135 lbs	130 lbs	178 lbs	**1.300**
1.250	322 lbs	83 lbs	113 lbs	149 lbs	141 lbs	198 lbs	**1.250**
1.200	342 lbs	95 lbs	127 lbs	163 lbs	152 lbs	218 lbs	**1.200**
1.150	-	106 lbs	141 lbs	177 lbs	166 lbs	238 lbs	**1.150**
1.100	-	118 lbs	155 lbs	195 lbs	177 lbs	261 lbs	**1.100**
1.050	-	129 lbs	169 lbs	211 lbs	191 lbs	-	**1.050**
1.000	-	139 lbs	185 lbs	231 lbs	205 lbs	-	**1.000**
0.950	-	148 lbs	202 lbs	-	-	-	**0.950**
Coil Bind	1.095	0.710	0.800	0.920	0.910	1.030	
7° Titanium Retainer	-	87092 (6.5mm)	87092 (6.5mm)	87095 (6.5mm)	87097 (6mm)	87094 (5.5mm)	
7° Titanium Retainer	-	-	-	-	-	-	
7° Titanium Ret 3/8	-	-	-	-	-	-	
Titanium Ret 10°	-	-	-	-	-	-	
Titanium Super 7°	-	-	-	-	-	-	
7° Steel Retainer 5/16	-	-	-	-	-	-	
7° Steel Retainer 11/32	-	-	-	-	-	-	
7° Steel Retainer 3/8	-	-	-	-	-	-	
Steel Retainer 10°	-	-	-	-	-	-	
Seat Cup	-	-	-	-	-	-	
Seat Disc	-	Stock .108 step inner	Stock .108 step inner	-	-	-	

Valve Springs

VALVE SPRING SPECIFICATIONS
– Listed According to O.D.

O.D./I.D. Outer	1.160/.870	1.175/.875	1.180/.880	1.220/.915	1.055/.650 (top)	1.250/.940	
O.D./I.D. Middle	-	-	-	-	1.250/.845 (bottom)	-	
O.D./I.D. Inner	.865/.660	.820/.628	.870/.670	.915/.704	-	.910/.680	
Installed Height	1.460	1.350	1.350	1.350	1.750	1.650	
Rate	250	295	309	330	349	285	
Part #	**68184**	**68185**	**68188**	**68411**	**68155**	**68106X208**	
Type	Dual	Dual	Dual	Dual	Single Conical	Dual	
Color Code	Red	None	Red/White	Blue	None	None	
Damper	No	No	No	No	No	No	
Free Length	1.815	1.580	1.580	1.600	2.069	2.225	
Wire Diameter	.148/.098	.146/.096	.154/.099	.154/.110	.167/.202 (ovate)	.155/.112	
Material	Silicone	Silicone	Silicone	Silicone	Silicone	Silicone	
2.350	-	-	-	-	-	-	**2.350**
2.300	-	-	-	-	-	-	**2.300**
2.250	-	-	-	-	-	-	**2.250**
2.200	-	-	-	-	-	-	**2.200**
2.150	-	-	-	-	-	-	**2.150**
2.100	-	-	-	-	-	-	**2.100**
2.050	-	-	-	-	-	-	**2.050**
2.000	-	-	-	-	-	-	**2.000**
1.950	-	-	-	-	-	-	**1.950**
1.900	-	-	-	-	-	-	**1.900**
1.850	-	-	-	-	-	-	**1.850**
1.800	-	-	-	-	-	-	**1.800**
1.750	-	-	-	-	113 lbs	102 lbs	**1.750**
1.700	-	-	-	-	128 lbs	118 lbs	**1.700**
1.650	44 lbs	-	-	-	142 lbs	130 lbs	**1.650**
1.600	55 lbs	-	-	-	159 lbs	145 lbs	**1.600**
1.550	68 lbs	-	-	-	174 lbs	158 lbs	**1.550**
1.500	78 lbs	-	-	-	193 lbs	172 lbs	**1.500**
1.450	91 lbs	28 lbs	-	-	210 lbs	186 lbs	**1.450**
1.400	101 lbs	38 lbs	68 lbs	60 lbs	228 lbs	199 lbs	**1.400**
1.350	113 lbs	49 lbs	82 lbs	76 lbs	247 lbs	213 lbs	**1.350**
1.300	122 lbs	60 lbs	97 lbs	92 lbs	266 lbs	226 lbs	**1.300**
1.250	139 lbs	74 lbs	111 lbs	107 lbs	285 lbs	240 lbs	**1.250**
1.200	153 lbs	89 lbs	125 lbs	123 lbs	302 lbs	253 lbs	**1.200**
1.150	167 lbs	103 lbs	140 lbs	139 lbs	-	269 lbs	**1.150**
1.100	180 lbs	115 lbs	155 lbs	154 lbs	-	286 lbs	**1.100**
1.050	193 lbs	136 lbs	170 lbs	167 lbs	-	302 lbs	**1.050**
1.000	205 lbs	152 lbs	183 lbs	180 lbs	-	317 lbs	**1.000**
0.950	220 lbs	167 lbs	202 lbs	200 lbs	-	-	**0.950**
Coil Bind	0.790	0.805	0.765	0.740	1.100	0.910	
7° Titanium Retainer	87093D (+.060")	87093 (5.5mm)	87093 (5.5mm)	86046	87018T	86046	
7° Titanium Retainer	-	-	-	-	87029T	-	
7° Titanium Ret 3/8	-	-	-	-	-	-	
Titanium Ret 10°	-	-	-	-	-	-	
Titanium Super 7°	-	-	-	-	-	-	
7° Steel Retainer 5/16	-	-	-	87046	87028	87046	
7° Steel Retainer 11/32	-	-	-	87011 (5°)	87029	86032	
7° Steel Retainer 3/8	-	-	-	-	-	-	
Steel Retainer 10°	-	-	-	-	-	-	
Seat Cup	-	-	-	-	-	-	
Seat Disc	Stock .080 step inner	Stock .080 step inner	Stock .080 step inner	-	-	68939 or 68941	

Valve Springs

VALVE SPRING SPECIFICATIONS
– Listed According to O.D.

O.D./I.D. Outer	1.250/.890	1.255/.865	1.255/.890	1.260/.880	1.265/.895	1.270/.890	1.275/.925	
O.D./I.D. Middle	-	-	-	-	-	-	-	
O.D./I.D. Inner	-	-	-	-	-	-	.913/.685	
Installed Height	1.700	1.750	1.700	1.800	1.750	1.750	1.600	
Rate	330	522	378	390	407	477	388	
Part #	**68301X3**	**68311X1**	**68301X1**	**68304**	**68301**	**68311**	**68109X1**	
Type	Single	Single	Single	Single	Single	Single	Dual	
Color Code	None	None	None	None	None	None	Orange/Yellow	
Damper	Yes	Yes	Yes	Yes	Yes	Yes	No	
Free Length	2.050	1.995	1.980	2.100	2.020	2.030	1.830	
Wire Diameter	.182	0.198	0.185	0.190	0.192	.193	.175/.118	
Material	Silicone	Super Clean	Silicone	Silicone	Silicone	Silicone	Silicone	
2.350	-	Silicone	-	-	-	-	-	**2.350**
2.300	-	-	-	-	-	-	-	**2.300**
2.250	-	-	-	-	-	-	-	**2.250**
2.200	-	-	-	-	-	-	-	**2.200**
2.150	-	-	-	-	-	-	-	**2.150**
2.100	-	-	-	-	-	-	-	**2.100**
2.050	-	-	-	-	-	-	-	**2.050**
2.000	-	-	-	-	-	-	-	**2.000**
1.950	-	-	-	-	-	-	-	**1.950**
1.900	-	-	-	-	-	-	-	**1.900**
1.850	-	73 lbs	-	88 lbs	-	-	-	**1.850**
1.800	76 lbs	97 lbs	70 lbs	106 lbs	-	75 lbs	-	**1.800**
1.750	90 lbs	120 lbs	88 lbs	124 lbs	96 lbs	99 lbs	-	**1.750**
1.700	104 lbs	146 lbs	105 lbs	141 lbs	114 lbs	121 lbs	58 lbs	**1.700**
1.650	117 lbs	169 lbs	123 lbs	159 lbs	130 lbs	141 lbs	77 lbs	**1.650**
1.600	131 lbs	194 lbs	140 lbs	176 lbs	149 lbs	163 lbs	95 lbs	**1.600**
1.550	146 lbs	220 lbs	157 lbs	195 lbs	169 lbs	186 lbs	113 lbs	**1.550**
1.500	160 lbs	246 lbs	174 lbs	210 lbs	188 lbs	209 lbs	130 lbs	**1.500**
1.450	174 lbs	274 lbs	192 lbs	231 lbs	207 lbs	235 lbs	148 lbs	**1.450**
1.400	196 lbs	302 lbs	210 lbs	250 lbs	229 lbs	255 lbs	166 lbs	**1.400**
1.350	210 lbs	331 lbs	230 lbs	271 lbs	252 lbs	279 lbs	183 lbs	**1.350**
1.300	230 lbs	359 lbs	252 lbs	295 lbs	274 lbs	302 lbs	202 lbs	**1.300**
1.250	247 lbs	389 lbs	274 lbs	317 lbs	299 lbs	326 lbs	222 lbs	**1.250**
1.200	269 lbs	424 lbs	297 lbs	345 lbs	-	353 lbs	240 lbs	**1.200**
1.150	-	459 lbs	-	-	-	380 lbs	261 lbs	**1.150**
1.100	-	-	-	-	-	407 lbs	281 lbs	**1.100**
1.050	-	-	-	-	-	440 lbs	302 lbs	**1.050**
1.000	-	-	-	-	-	-	323 lbs	**1.000**
0.950	-	-	-	-	-	-	-	**0.950**
Coil Bind	1.125	1.070	1.130	1.090	1.170	0.990	0.955	
7° Titanium Retainer	86037T	86037T	86037T	86037T	86037T	86037T	86046	
7° Titanium Retainer	86031	86031	86031	86031	86031	86031	-	
7° Titanium Ret 3/8	-	-	-	-	-	-	-	
Titanium Ret 10°	-	-	-	-	-	-	-	
Titanium Super 7°	-	-	-	-	-	-	-	
7° Steel Retainer 5/16	86037	86037	86037	86037	86037	86037	87046	
7° Steel Retainer 11/32	86032	86032	86032	86032	86032	86032	-	
7° Steel Retainer 3/8	-	-	-	-	-	-	-	
Steel Retainer 10°	-	-	-	-	-	-	-	
Seat Cup	-	-	-	-	-	-	-	
Seat Disc	-	-	-	-	-	-	68939 or 68941	

Valve Springs

VALVE SPRING SPECIFICATIONS
– Listed According to O.D.

O.D./I.D. Outer	1.290/.950	1.050/.650 (top)	1.300/.900	1.360/1.000	1.354/.940	1.385/1.060	1.400/1.045	
O.D./I.D. Middle	-	1.290/.885 (bottom)	-	-	-	-	-	
O.D./I.D. Inner	.945/.670	-	.885/.650	-	-	1.050/.800	1.040/.770	
Installed Height	1.800	1.750	1.800	1.550	1.850	1.650	1.700	
Rate	371	308	404	228	415	258	382	
Part #	**68157**	**68878**	**68156**	**68147**	**68143**	**68324**	**68405**	
Type	Dual	Single Conical	Dual	Single	Single	Dual	Dual	
Color Code	None	Blue	None	None	None	Orange/Green	Orange/White	
Damper	No	No	No	No	Yes	No	No	
Free Length	2.280	2.290	2.150	1.925	2.075	2.150	1.975	
Wire Diameter	.172/.134	.168/.200	.167/.119	0.177	.208	.160/.127	.176/.133	
Material	Silicone	Silicone	Silicone	Silicone	Silicone	Silicone	Silicone	
2.350	-	-	-	-	-	-	-	**2.350**
2.300	-	-	-	-	-	-	-	**2.300**
2.250	-	-	-	-	-	-	-	**2.250**
2.200	-	-	-	-	-	-	-	**2.200**
2.150	-	-	-	-	-	-	-	**2.150**
2.100	-	-	-	-	-	-	-	**2.100**
2.050	-	-	-	-	-	-	-	**2.050**
2.000	-	-	-	-	-	-	-	**2.000**
1.950	-	-	-	-	-	-	-	**1.950**
1.900	-	-	-	-	72 lbs	-	-	**1.900**
1.850	128 lbs	-	110 lbs	-	92 lbs	-	-	**1.850**
1.800	144 lbs	132 lbs	128 lbs	-	113 lbs	-	76 lbs	**1.800**
1.750	161 lbs	146 lbs	146 lbs	-	134 lbs	86 lbs	92 lbs	**1.750**
1.700	178 lbs	159 lbs	164 lbs	-	155 lbs	96 lbs	110 lbs	**1.700**
1.650	196 lbs	172 lbs	183 lbs	57 lbs	175 lbs	108 lbs	129 lbs	**1.650**
1.600	212 lbs	187 lbs	203 lbs	67 lbs	196 lbs	118 lbs	146 lbs	**1.600**
1.550	229 lbs	199 lbs	219 lbs	78 lbs	217 lbs	129 lbs	165 lbs	**1.550**
1.500	247 lbs	216 lbs	238 lbs	89 lbs	238 lbs	146 lbs	184 lbs	**1.500**
1.450	265 lbs	231 lbs	259 lbs	100 lbs	258 lbs	161 lbs	204 lbs	**1.450**
1.400	284 lbs	249 lbs	280 lbs	110 lbs	279 lbs	172 lbs	221 lbs	**1.400**
1.350	303 lbs	266 lbs	299 lbs	120 lbs	300 lbs	186 lbs	240 lbs	**1.350**
1.300	324 lbs	283 lbs	323 lbs	130 lbs	-	197 lbs	258 lbs	**1.300**
1.250	345 lbs	300 lbs	343 lbs	141 lbs	-	211 lbs	278 lbs	**1.250**
1.200	367 lbs	317 lbs	365 lbs	153 lbs	-	227 lbs	297 lbs	**1.200**
1.150	389 lbs	336 lbs	387 lbs	165 lbs	-	240 lbs	316 lbs	**1.150**
1.100	415 lbs	-	411 lbs	177 lbs	-	254 lbs	338 lbs	**1.100**
1.050	-	-	-	-	-	269 lbs	360 lbs	**1.050**
1.000	-	-	-	-	-	283 lbs	380 lbs	**1.000**
0.950	-	-	-	-	-	-	-	**0.950**
Coil Bind	1.040 w/.050 step	1.080	0.985	1.000	1.280	0.910	0.980	
7° Titanium Retainer	86030 / 86046	87028T (LS1)	86037T	-	-	86033	87040	
7° Titanium Retainer	86031	87029	-	-	-	87041	-	
7° Titanium Ret 3/8	-	-	-	-	-	87042	87042	
Titanium Ret 10°	-	-	-	-	-	86067M	-	
Titanium Super 7°	-	-	-	-	-	-	-	
7° Steel Retainer 5/16	-	87018T	86037	87044	-	87044	87044	
7° Steel Retainer 11/32	87045	87029	-	-	-	87050	87050	
7° Steel Retainer 3/8	-	-	-	-	-	87049	87049	
Steel Retainer 10°	-	-	-	-	-	87060M	-	
Seat Cup	-	-	-	-	-	-	68930	
Seat Disc	-	-	-	-	-	68943	68938 or 68940	

Valve Springs

VALVE SPRING SPECIFICATIONS
– Listed According to O.D.

O.D./I.D. Outer	1.405/1.055	1.430/1.040	1.440/1.050	1.440/1.070	1.440/1.085	1.450/1.065	1.455/1.050	
O.D./I.D. Middle	-	-	-	-	-	-	-	
O.D./I.D. Inner	1.045/.780	-	.975/.700	1.085/.811	1.075/.795	.975/.705	-	
Installed Height	1.600	1.650	1.800	1.800	1.850	1.900	1.850	
Rate	338	367	450	324	340	463	360	
Part #	**68404**	**68305X1**	**68390X3**	**68100X200**	**68100X209**	**68382**	**68315**	
Type	Dual	Single	Dual	Dual	Dual	Dual	Single	
Color Code	Blue/Grey	Grey	Yellow/White	None	None	Purple/Orange	Lavender/Yellow	
Damper	No	Yes	Yes	No	No	Yes	Yes	
Free Length	1.920	1.900	2.100	2.370	2.360	2.220	2.160	
Wire Diameter	.175/.134	0.200	.190/.133	.179/.133	.178/.140	.198/.133	0.205	
Material	Silicone	Silicone	Silicone	Silicone	Silicone	Silicone	Silicone	
2.350	-	-	-	-	-	-	-	**2.350**
2.300	-	-	-	-	-	-	-	**2.300**
2.250	-	-	-	-	-	-	-	**2.250**
2.200	-	-	-	-	-	-	-	**2.200**
2.150	-	-	-	-	-	-	-	**2.150**
2.100	-	-	-	-	-	-	-	**2.100**
2.050	-	-	-	-	-	-	-	**2.050**
2.000	-	-	-	-	-	91 lbs	-	**2.000**
1.950	-	-	-	-	135 lbs	110 lbs	68 lbs	**1.950**
1.900	-	-	76 lbs	83 lbs	150 lbs	137 lbs	87 lbs	**1.900**
1.850	-	-	96 lbs	94 lbs	166 lbs	159 lbs	105 lbs	**1.850**
1.800	-	-	116 lbs	107 lbs	182 lbs	179 lbs	120 lbs	**1.800**
1.750	-	51 lbs	136 lbs	121 lbs	197 lbs	201 lbs	136 lbs	**1.750**
1.700	82 lbs	68 lbs	156 lbs	134 lbs	212 lbs	221 lbs	153 lbs	**1.700**
1.650	96 lbs	84 lbs	175 lbs	147 lbs	229 lbs	246 lbs	169 lbs	**1.650**
1.600	113 lbs	101 lbs	194 lbs	161 lbs	245 lbs	269 lbs	185 lbs	**1.600**
1.550	128 lbs	116 lbs	215 lbs	175 lbs	262 lbs	292 lbs	203 lbs	**1.550**
1.500	143 lbs	138 lbs	238 lbs	190 lbs	279 lbs	315 lbs	221 lbs	**1.500**
1.450	157 lbs	156 lbs	261 lbs	205 lbs	296 lbs	341 lbs	241 lbs	**1.450**
1.400	177 lbs	174 lbs	284 lbs	221 lbs	314 lbs	364 lbs	260 lbs	**1.400**
1.350	192 lbs	191 lbs	307 lbs	238 lbs	331 lbs	391 lbs	282 lbs	**1.350**
1.300	208 lbs	210 lbs	331 lbs	255 lbs	349 lbs	415 lbs	303 lbs	**1.300**
1.250	225 lbs	229 lbs	355 lbs	274 lbs	368 lbs	443 lbs	322 lbs	**1.250**
1.200	244 lbs	250 lbs	389 lbs	291 lbs	388 lbs	477 lbs	-	**1.200**
1.150	263 lbs	268 lbs	-	309 lbs	-	-	-	**1.150**
1.100	282 lbs	-	-	330 lbs	-	-	-	**1.100**
1.050	302 lbs	-	-	-	-	-	-	**1.050**
1.000	319 lbs	-	-	-	-	-	-	**1.000**
0.950	-	-	-	-	-	-	-	**0.950**
Coil Bind	0.950	1.050	1.110	1.030	1.110	1.115	1.150	
7° Titanium Retainer	87040	87040	86033	86033	86033	86033	87040	
7° Titanium Retainer	-	-	87041	87041	87041	87041	-	
7° Titanium Ret 3/8	87042	87042	87042	87042	87042	87042	87042	
Titanium Ret 10°	-	86067C	86067M	87065	87065	86067M	86067C	
Titanium Super 7°	86771	-	86767M	86767M	86767M	86767M	-	
7° Steel Retainer 5/16	87044	87044	87047	87047	87047	87047	87044	
7° Steel Retainer 11/32	87050	87050	87048	87062	87062	87048	87050	
7° Steel Retainer 3/8	87049	87049	87049	87063	87063	87049	87049	
Steel Retainer 10°	87060M	-	87060M	87060	87060	87060M	-	
Seat Cup	68930	68931 or 68951	68931	68931	68931	68957	68931	
Seat Disc	68938 or 68940	-	68939 or 68941	68943	68938 or 68940	68939 or 68941	-	

Valve Springs

VALVE SPRING SPECIFICATIONS
– Listed According to O.D.

					NEXT GENERATION VALVE SPRING	NEXT GENERATION VALVE SPRING	
O.D./I.D. Outer	1.460/1.070	1.460/1.060	1.475/1.075	1.490/1.120	1.500/1.050	1.500/1.050	
O.D./I.D. Middle	-	-	-	-	-	-	
O.D./I.D. Inner	.975/.710	.975/.710	1.070/.750	-	.726	.726	
Installed Height	1.800	1.800	1.800	1.850	2.175	2.100	
Rate	483	456	538	250	780	780	
Part #	**68390X2**	**68380X2**	**68501**	**68140**	**68855**	**68856**	
Type	Dual	Dual	Dual	Single	Dual	Dual	
Color Code	2 Yellow	Blue/Yellow	Lavender/Yellow	Green	-	-	
Damper	Yes	Yes	No	Yes	Yes	Yes	
Free Length	2.100	2.220	2.225	2.300	-	-	
Wire Diameter	.198/.133	.200/.130	.200/.155	0.190	-	-	
Material	Silicone	Silicone	H11 Vasco	Silicone	Super Clean Silicone	Super Clean Silicone	
2.175	-	-	-	-	420 lbs	-	**2.175**
2.150	-	-	-	-	-	-	**2.150**
2.100	-	-	-	-	-	300 lbs	**2.100**
2.050	-	-	-	-	-	-	**2.050**
2.000	-	-	-	-	-	-	**2.000**
1.950	48 lbs	-	-	79 lbs	-	-	**1.950**
1.900	69 lbs	152 lbs	171 lbs	90 lbs	-	-	**1.900**
1.850	90 lbs	173 lbs	204 lbs	102 lbs	-	-	**1.850**
1.800	113 lbs	197 lbs	230 lbs	113 lbs	-	-	**1.800**
1.750	134 lbs	218 lbs	254 lbs	126 lbs	-	-	**1.750**
1.700	156 lbs	241 lbs	280 lbs	139 lbs	-	-	**1.700**
1.675	-	-	-	-	810 lbs	-	**1.675**
1.650	187 lbs	263 lbs	308 lbs	151 lbs	-	650 lbs	**1.650**
1.600	208 lbs	283 lbs	334 lbs	162 lbs	-	-	**1.600**
1.550	231 lbs	308 lbs	362 lbs	175 lbs	-	-	**1.550**
1.500	254 lbs	328 lbs	390 lbs	187 lbs	-	-	**1.500**
1.450	278 lbs	353 lbs	417 lbs	199 lbs	-	-	**1.450**
1.425	-	-	-	-	1005 lbs	-	**1.425**
1.400	302 lbs	377 lbs	443 lbs	212 lbs	-	885 lbs	**1.400**
1.350	325 lbs	399 lbs	472 lbs	227 lbs	-	-	**1.350**
1.300	349 lbs	424 lbs	499 lbs	242 lbs	-	-	**1.300**
1.250	377 lbs	446 lbs	525 lbs	257 lbs	-	-	**1.250**
1.200	408 lbs	470 lbs	-	274 lbs	-	1080 lbs	**1.200**
1.175	-	-	-	-	1200 lbs	-	**1.175**
1.150	439 lbs	-	-	-	-	-	**1.150**
1.100	-	-	-	-	-	-	**1.100**
1.050	-	-	-	-	-	-	**1.050**
1.000	-	-	-	-	-	-	**1.000**
0.950	-	-	-	-	-	-	**0.950**
Coil Bind	1.070	1.110	1.180	1.100	1.130	1.130	
7° Titanium Retainer	86033	86033	86033	-	-	-	
7° Titanium Retainer	87041	87041	87041	-	-	-	
7° Titanium Ret 3/8	87042	87042	-	-	-	-	
Titanium Ret 10°	86067M	86067M	86067M	86067	-	-	
Titanium Super 7°	86767M	86767M	86767M	86754	86784 or 86785	86784 or 86785	
7° Steel Retainer 5/16	87047	87047	87044	-	-	-	
7° Steel Retainer 11/32	87050	87050	87062	87054	-	-	
7° Steel Retainer 3/8	87049	87049	87049	87053	-	-	
Steel Retainer 10°	87060M	87060M	87060M	87055	-	-	
Seat Cup	68931	68931	68957	68933	68941A-16	68941A-16	
Seat Disc	68939 or 68941	68939 or 68941	68938 • 940 • 942	-	-	-	

VALVE SPRING SPECIFICATIONS – Listed According to O.D.

NEXT GENERATION VALVE SPRING

O.D./I.D. Outer	1.500/1.050	1.500/1.120	1.505/1.090	1.505/1.130	1.510/1.115	1.525/1.125	
O.D./I.D. Middle	-	-	-	-	-	-	
O.D./I.D. Inner	.726	1.030/.755	-	1.085/.805	1.115/.830	1.030/.750	
Installed Height	2.150	1.900	1.850	1.900	1.800	1.900	
Rate	780	452	342	353	419	432	
Part #	**68857**	**68340**	**68302X1**	**68101X202**	**68398**	**68385X2**	
Type	Dual	Dual	Single	Dual	Dual	Dual	
Color Code	-	Green	Green/White	None	None	Purple	
Damper	Yes	Yes	Yes	No	No	Yes	
Free Length	-	2.270	2.170	2.390	2.280	2.330	
Wire Diameter	-	.191/.141	0.204	.192/.148	.198/.146	.198/.141	
Material	Super Clean Silicone	Silicone	Silicone	Silicone	Silicone	Silicone	
2.350	-	-	-	-	-	-	**2.350**
2.300	-	-	-	-	-	-	**2.300**
2.250	-	-	-	-	-	-	**2.250**
2.200	-	-	-	-	-	-	**2.200**
2.150	375 lbs	-	-	-	-	-	**2.150**
2.100	-	-	-	-	-	-	**2.100**
2.050	-	-	-	-	-	-	**2.050**
2.000	-	-	-	116 lbs	-	123 lbs	**2.000**
1.950	-	100 lbs	61 lbs	131 lbs	106 lbs	144 lbs	**1.950**
1.900	-	118 lbs	77 lbs	146 lbs	124 lbs	166 lbs	**1.900**
1.850	-	143 lbs	91 lbs	162 lbs	140 lbs	187 lbs	**1.850**
1.800	-	165 lbs	107 lbs	178 lbs	158 lbs	207 lbs	**1.800**
1.750	-	184 lbs	121 lbs	194 lbs	176 lbs	228 lbs	**1.750**
1.700	-	206 lbs	136 lbs	211 lbs	194 lbs	249 lbs	**1.700**
1.650	765 lbs	228 lbs	150 lbs	229 lbs	212 lbs	269 lbs	**1.650**
1.600	-	249 lbs	164 lbs	249 lbs	234 lbs	291 lbs	**1.600**
1.550	-	271 lbs	179 lbs	268 lbs	256 lbs	310 lbs	**1.550**
1.500	-	293 lbs	194 lbs	287 lbs	279 lbs	333 lbs	**1.500**
1.450	-	313 lbs	211 lbs	304 lbs	300 lbs	353 lbs	**1.450**
1.400	960 lbs	336 lbs	229 lbs	323 lbs	323 lbs	375 lbs	**1.400**
1.350	-	359 lbs	250 lbs	342 lbs	347 lbs	398 lbs	**1.350**
1.300	-	384 lbs	270 lbs	363 lbs	370 lbs	422 lbs	**1.300**
1.250	-	407 lbs	292 lbs	383 lbs	393 lbs	445 lbs	**1.250**
1.200	1116 lbs	437 lbs	-	-	417 lbs	469 lbs	**1.200**
1.150	-	477 lbs	-	-	-	-	**1.150**
1.100	-	-	-	-	-	-	**1.100**
1.050	-	-	-	-	-	-	**1.050**
1.000	-	-	-	-	-	-	**1.000**
0.950	-	-	-	-	-	-	**0.950**
Coil Bind	1.130	1.080	1.150	1.140	1.080	1.100	
7° Titanium Retainer	-	87043	86033	-	-	-	
7° Titanium Retainer	-	-	87041	-	-	-	
7° Titanium Ret 3/8	-	-	-	-	-	-	
Titanium Ret 10°	-	86067	86067M	86067B	86067	86067B	
Titanium Super 7°	86784 or 86785	86767	86767M	86781	86767	86781	
7° Steel Retainer 5/16	-	87044	87047	-	-	-	
7° Steel Retainer 11/32	-	87062	87062	-	87054	-	
7° Steel Retainer 3/8	-	87053	87063	87053	87053	87053	
Steel Retainer 10°	-	87055	87060	87055	87055	87055	
Seat Cup	68941A-16	68933	68933	68933	68933	68933	
Seat Disc	-	68938 or 68940	-	68938 or 68940	68943	68938 or 68940	

Valve Springs

VALVE SPRING SPECIFICATIONS
– Listed According to O.D.

NEXT GENERATION VALVE SPRING

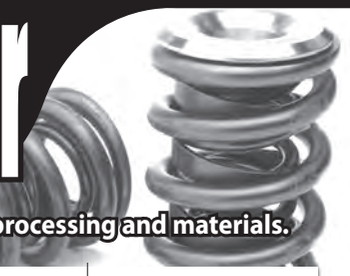
O.D./I.D. Outer	1.540/1.100	1.550/1.140	1.550/1.050	1.555/1.155	1.565/1.140	1.600/1.175	
O.D./I.D. Middle	-	-	-	-	-	-	
O.D./I.D. Inner	.990/.720	1.035/.755	0.726	0.726	1.035/.740	1.160/.850	
Installed Height	1.900	1.950	1.900	2.300	2.000	2.100	
Rate	671	473	459	1015	640	552	
Part #	**68670S**	**68369**	**68363**	**68854**	**68671**	**68844**	
Type	Dual	Dual	Dual	Dual	Dual	Dual	
Color Code	Lt. Purple	Yellow/Purple	Blue/Purple	-	None	Yellow	
Damper	Yes	Yes	Yes	Yes	Yes	No	
Free Length	2.180	2.460	2.430	-	2.440	2.554	
Wire Diameter	.220/.136	.207/.140	.206/.133	-	.219/.148	.221/.155	
Material	H11 Vasco	Silicone	Silicone	Super Clean Silicone	H11 Vasco	Super Clean Silicone	
2.350	-	-	-	-	-	-	**2.350**
2.300	-	-	-	425	-	-	**2.300**
2.250	-	-	-	-	-	-	**2.250**
2.200	-	-	-	-	-	-	**2.200**
2.150	-	-	-	-	-	-	**2.150**
2.100	-	-	-	-	174 lbs	229 lbs	**2.100**
2.050	-	173 lbs	-	-	205 lbs	253 lbs	**2.050**
2.000	129 lbs	192 lbs	172 lbs	-	233 lbs	276 lbs	**2.000**
1.950	164 lbs	215 lbs	194 lbs	-	263 lbs	305 lbs	**1.950**
1.900	196 lbs	236 lbs	212 lbs	-	291 lbs	331 lbs	**1.900**
1.850	227 lbs	260 lbs	233 lbs	-	322 lbs	357 lbs	**1.850**
1.800	262 lbs	281 lbs	254 lbs	932 lbs	351 lbs	384 lbs	**1.800**
1.750	292 lbs	301 lbs	273 lbs	-	379 lbs	409 lbs	**1.750**
1.700	324 lbs	322 lbs	294 lbs	-	411 lbs	435 lbs	**1.700**
1.650	354 lbs	345 lbs	315 lbs	-	441 lbs	462 lbs	**1.650**
1.600	385 lbs	366 lbs	335 lbs	-	475 lbs	489 lbs	**1.600**
1.550	418 lbs	390 lbs	356 lbs	1186 lbs	507 lbs	516 lbs	**1.550**
1.500	451 lbs	413 lbs	380 lbs	-	537 lbs	544 lbs	**1.500**
1.450	482 lbs	437 lbs	403 lbs	-	577 lbs	572 lbs	**1.450**
1.400	517 lbs	462 lbs	429 lbs	-	610 lbs	601 lbs	**1.400**
1.350	549 lbs	489 lbs	457 lbs	-	648 lbs	626 lbs	**1.350**
1.300	582 lbs	515 lbs	484 lbs	1440 lbs	678 lbs	660 lbs	**1.300**
1.250	617 lbs	546 lbs	515 lbs	-	718 lbs	-	**1.250**
1.200	654 lbs	584 lbs	560 lbs	-	752 lbs	-	**1.200**
1.150	694 lbs	-	-	-	-	-	**1.150**
1.100	734 lbs	-	-	-	-	-	**1.100**
1.050	-	-	-	-	-	-	**1.050**
1.000	-	-	-	-	-	-	**1.000**
0.950	-	-	-	-	-	-	**0.950**
Coil Bind	1.010	1.100	1.100	1.230	1.110	1.210	
7° Titanium Retainer	-	-	-	-	-	-	
7° Titanium Retainer	-	-	-	-	-	-	
7° Titanium Ret 3/8	-	-	-	-	-	-	
Titanium Ret 10°	86067	86067B	86067B	-	86067	86068	
Titanium Super 7°	86767	86781	86781	86784 or 86785	86781	86780	
7° Steel Retainer 5/16	-	-	-	-	-	-	
7° Steel Retainer 11/32	-	-	-	-	-	-	
7° Steel Retainer 3/8	-	87053	87053	-	-	-	
Steel Retainer 10°	87055	87055M	87055M	-	87055	-	
Seat Cup	68953X1	68953X1	68953X1	68941A-16	-	68955	
Seat Disc	68939 or 68941	68938 or 68940	68938 or 68940	-	68938 • 940 • 942	68943	

Valve Springs

VALVE SPRING SPECIFICATIONS
– Listed According to O.D.

O.D./I.D. Outer	1.610/1.215	1.630/1.190	1.630/1.180	1.635/1.190	1.255/.865	
O.D./I.D. Middle	1.205/.890	-	-	-	-	
O.D./I.D. Inner	.890/.665	1.050/.760	1.050/.750	1.185/.874	-	
Installed Height	1.850	1.900	2.000	2.050	1.750	
Rate	514	704	666	646	522	
Part #	**68694**	**S68555X2**	**68555X1**	**68860**	**68311X1**	
Type	Triple	Dual	Dual	Dual	Single	
Color Code	None	Pink/Red	Red	Blue	None	
Damper	No	Yes	Yes	No	Yes	
Free Length	2.440	2.240	2.400	2.470	1.995	
Wire Diameter	.199/.155/.112	.227/.147	.226/.149	.223/.162	0.198	
Material	Silicone	H11 Vasco	H11 Vasco	Super Clean Silicone	Super Clean Silicone	
2.350	-	-	-	-	-	**2.350**
2.300	-	-	-	-	-	**2.300**
2.250	-	-	-	-	-	**2.250**
2.200	-	-	-	-	-	**2.200**
2.150	-	-	-	-	-	**2.150**
2.100	-	-	176 lbs	206 lbs	-	**2.100**
2.050	-	-	206 lbs	236 lbs	-	**2.050**
2.000	-	155 lbs	239 lbs	257 lbs	-	**2.000**
1.950	161 lbs	188 lbs	273 lbs	287 lbs	-	**1.950**
1.900	181 lbs	219 lbs	305 lbs	316 lbs	-	**1.900**
1.850	203 lbs	254 lbs	336 lbs	350 lbs	73 lbs	**1.850**
1.800	226 lbs	285 lbs	371 lbs	381 lbs	97 lbs	**1.800**
1.750	250 lbs	318 lbs	409 lbs	411 lbs	120 lbs	**1.750**
1.700	273 lbs	348 lbs	441 lbs	442 lbs	146 lbs	**1.700**
1.650	305 lbs	380 lbs	474 lbs	472 lbs	169 lbs	**1.650**
1.600	329 lbs	410 lbs	510 lbs	504 lbs	194 lbs	**1.600**
1.550	355 lbs	442 lbs	542 lbs	537 lbs	220 lbs	**1.550**
1.500	380 lbs	477 lbs	571 lbs	567 lbs	246 lbs	**1.500**
1.450	404 lbs	513 lbs	605 lbs	599 lbs	274 lbs	**1.450**
1.400	431 lbs	551 lbs	640 lbs	633 lbs	302 lbs	**1.400**
1.350	456 lbs	590 lbs	674 lbs	667 lbs	331 lbs	**1.350**
1.300	494 lbs	630 lbs	705 lbs	702 lbs	359 lbs	**1.300**
1.250	519 lbs	670 lbs	745 lbs	741 lbs	389 lbs	**1.250**
1.200	545 lbs	712 lbs	770 lbs	771 lbs	424 lbs	**1.200**
1.150	572 lbs	765 lbs	817 lbs	818 lbs	459 lbs	**1.150**
1.100	-	807 lbs	870 lbs	864 lbs	-	**1.100**
1.050	-	-	-	-	-	**1.050**
1.000	-	-	-	-	-	**1.000**
0.950	-	-	-	-	-	**0.950**
Coil Bind	1.050	1.020	1.020	1.010	1.070	
7° Titanium Retainer	-	-	-	-	86037T	
7° Titanium Retainer	-	-	-	86044	86031	
7° Titanium Ret 3/8	-	-	-	-	-	
Titanium Ret 10°	86069	86068	-	86068	-	
Titanium Super 7°	-	86780	86780	86780	-	
7° Steel Retainer 5/16	-	-	-	-	86037	
7° Steel Retainer 11/32	-	-	-	-	86032	
7° Steel Retainer 3/8	-	-	-	-	-	
Steel Retainer 10°	87056	87056	87056	87056	-	
Seat Cup	68955	68955	68955	68959	-	
Seat Disc	68939 or 68941	68938 or 68940	68938 or 68940	-	-	

Valve Springs - Premium Crower



Cycle tested and race proven to be the absolute best springs available. Features unparalleled processing and materials.

O.D./I.D. Outer	1.550/1.115	1.550/1.135	1.600/1.170	1.600/1.170	1.590/1.145	1.650/1.205	1.650/1.205	
O.D./I.D. Middle	-	-	-	-	-	1.195/.880	1.200/.880	
O.D./I.D. Inner	1.015/.705	1.026/.740	1.060/.765	1.055/.760	1.025/.735	.880/.640	.875/.640	
Installed Height	2.000	1.950	2.050	2.050	2.050	2.100	2.200	
Rate	660	505	547	604	617	687	692	
Part #	**68803**	**68804**	**68805**	**68806**	**68808**	**68547**	**68548**	
Type	Dual	Dual	Dual	Dual	Dual	Triple	Triple	
Color Code	Green/Yellow	None	Red/Blue	Red/Purple	Red/Purple	Red/Purple	Red/Purple	
Damper	Yes	Yes	Yes	Yes	Yes	No	No	
Free Length	2.352	2.550	2.630	2.552	2.515	2.520	2.620	
Wire Diameter	.225/.142	.205/.141	.218/.148	.225/.147	.219/.148	.215/.162/.119	.215/.162/.119	
Material	Super Clean Silicone	Super Clean Silicone	Super Clean Silicone	Super Clean Silicone	Super Clean Silicone	Super Clean Silicone	Super Clean Silicone	
2.350	-	-	-	-	-	-	-	**2.350**
2.300	-	-	-	-	-	-	-	**2.300**
2.250	-	-	-	-	-	-	-	**2.250**
2.200	-	-	-	-	-	-	279 lbs	**2.200**
2.150	141 lbs	-	-	-	-	255 lbs	312 lbs	**2.150**
2.100	174 lbs	-	233 lbs	227 lbs	228 lbs	287 lbs	343 lbs	**2.100**
2.050	207 lbs	-	258 lbs	255 lbs	261 lbs	321 lbs	375 lbs	**2.050**
2.000	240 lbs	212 lbs	280 lbs	279 lbs	295 lbs	351 lbs	405 lbs	**2.000**
1.950	273 lbs	235 lbs	305 lbs	306 lbs	315 lbs	380 lbs	439 lbs	**1.950**
1.900	306 lbs	257 lbs	329 lbs	331 lbs	347 lbs	416 lbs	470 lbs	**1.900**
1.850	339 lbs	279 lbs	353 lbs	356 lbs	375 lbs	448 lbs	502 lbs	**1.850**
1.800	372 lbs	301 lbs	379 lbs	382 lbs	403 lbs	480 lbs	534 lbs	**1.800**
1.750	405 lbs	327 lbs	406 lbs	410 lbs	433 lbs	512 lbs	570 lbs	**1.750**
1.700	438 lbs	349 lbs	431 lbs	440 lbs	465 lbs	541 lbs	602 lbs	**1.700**
1.650	471 lbs	373 lbs	461 lbs	469 lbs	493 lbs	580 lbs	636 lbs	**1.650**
1.600	504 lbs	398 lbs	489 lbs	498 lbs	525 lbs	610 lbs	667 lbs	**1.600**
1.550	537 lbs	422 lbs	516 lbs	529 lbs	553 lbs	645 lbs	705 lbs	**1.550**
1.500	570 lbs	448 lbs	544 lbs	559 lbs	583 lbs	679 lbs	740 lbs	**1.500**
1.450	603 lbs	473 lbs	574 lbs	593 lbs	615 lbs	715 lbs	772 lbs	**1.450**
1.400	636 lbs	499 lbs	603 lbs	626 lbs	650 lbs	750 lbs	810 lbs	**1.400**
1.350	669 lbs	526 lbs	633 lbs	661 lbs	684 lbs	790 lbs	850 lbs	**1.350**
1.300	702 lbs	555 lbs	663 lbs	696 lbs	720 lbs	825 lbs	890 lbs	**1.300**
1.250	735 lbs	582 lbs	695 lbs	733 lbs	755 lbs	863 lbs	927 lbs	**1.250**
1.200	-	620 lbs	-	-	-	905 lbs	966 lbs	**1.200**
1.150	-	-	-	-	-	947 lbs	1006 lbs	**1.150**
1.100	-	-	-	-	-	-	-	**1.100**
1.050	-	-	-	-	-	-	-	**1.050**
1.000	-	-	-	-	-	-	-	**1.000**
0.950		-						**0.950**
Coil Bind	1.180	1.100	1.180	1.160	1.170	1.085	1.080	
7° Titanium Retainer	-	-	-	-	-	-	-	
7° Titanium Retainer	-	-	-	-	-	-	-	
7° Titanium Ret 3/8	-	87063M	-	-	-	-	-	
Titanium Ret 10°	86067	86067D	86068	86068	86067	86069	86069	
Titanium Super 7°	86767	86781	86780	86780	86781	86769	86769	
7° Steel Retainer 5/16	-	-	-	-	-	-	-	
7° Steel Retainer 11/32	-	-	-	-	-	-	-	
7° Steel Retainer 3/8	-	-	-	-	-	-	-	
Steel Retainer 10°	87055	87064	87056	87056	-	87056	87056	
Seat Cup	68953X1	68953X1	68955	68955	68955	68956	68956	
Seat Disc	68939/68941	68938/68940	68938/68940	68938/68940	68938/68940	-	-	

Valve Springs - P.S.I. Brand

VALVE SPRING SPECIFICATIONS
– Listed According to O.D.

O.D./I.D. Outer	1.525/1.120	1.530/1.125	1.560/1.140	1.560/1.150	1.560/1.145	1.560/1.145	1.560/1.145	1.615/1.175	1.625/1.175	
O.D./I.D. Middle	-	-	-	-	-	-	-	-	-	
O.D./I.D. Inner	1.015/.745	1.000/.745	1.140/.830	1.040/.745	1.040/.745	1.040/.745	1.040/.745	1.060/.775	1.075/.770	
Installed Height	1.950	1.950	2.000	2.000	2.000	2.000	2.000	2.100	2.000	
Rate	500	501	489	516	508	521	546	530	595	
Part #	**68725**	**68705**	**68735**	**68765**	**68775**	**68785**	**68795**	**68755**	**68745**	
Type	Dual	Dual	Dual	Dual	Dual	Dual	Dual	Dual	Dual	
Color Code	Gold/White	Gold/Pink	Gold	Gold/Green	Gold/Orange	Gold/Lt. Blue	Gold/Yellow	Gold	Gold/White	
Damper	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	
Free Length	2.370	2.360	2.540	2.550	2.520	2.620	2.620	2.665	2.520	
Wire Diameter	.205/.133	.205/.134	.205/.162	.206/.148	.206/.147	.206/.147	.210/.147	.225/.147	.225/.147	
Material	Super Clean Silicone	Super Clean Silicone	Super Clean Silicone	Super Clean Silicone	Super Clean Silicone	Super Clean Silicone	Super Clean Silicone	Super Clean Silicone	Super Clean Silicone	
2.350	-	-	-	-	-	-	-	-	-	**2.350**
2.300	-	-	-	-	-	-	-	-	-	**2.300**
2.250	-	-	-	-	-	-	-	-	-	**2.250**
2.200	-	-	-	-	-	-	-	234 lbs	-	**2.200**
2.150	-	-	-	-	-	-	-	261 lbs	-	**2.150**
2.100	129 lbs	95 lbs	178 lbs	182 lbs	196 lbs	203 lbs	237 lbs	287 lbs	203 lbs	**2.100**
2.050	151 lbs	115 lbs	199 lbs	208 lbs	217 lbs	226 lbs	262 lbs	312 lbs	227 lbs	**2.050**
2.000	168 lbs	134 lbs	220 lbs	229 lbs	237 lbs	244 lbs	284 lbs	336 lbs	253 lbs	**2.000**
1.950	194 lbs	160 lbs	244 lbs	253 lbs	262 lbs	274 lbs	310 lbs	361 lbs	282 lbs	**1.950**
1.900	215 lbs	183 lbs	267 lbs	277 lbs	284 lbs	298 lbs	335 lbs	388 lbs	307 lbs	**1.900**
1.850	242 lbs	205 lbs	291 lbs	302 lbs	310 lbs	322 lbs	359 lbs	414 lbs	333 lbs	**1.850**
1.800	264 lbs	227 lbs	314 lbs	326 lbs	333 lbs	352 lbs	381 lbs	442 lbs	361 lbs	**1.800**
1.750	287 lbs	250 lbs	337 lbs	352 lbs	359 lbs	376 lbs	408 lbs	466 lbs	389 lbs	**1.750**
1.700	311 lbs	273 lbs	361 lbs	375 lbs	381 lbs	399 lbs	431 lbs	491 lbs	423 lbs	**1.700**
1.650	334 lbs	297 lbs	384 lbs	400 lbs	406 lbs	423 lbs	457 lbs	521 lbs	452 lbs	**1.650**
1.600	359 lbs	320 lbs	407 lbs	426 lbs	431 lbs	448 lbs	485 lbs	548 lbs	481 lbs	**1.600**
1.550	385 lbs	345 lbs	438 lbs	453 lbs	456 lbs	469 lbs	510 lbs	578 lbs	510 lbs	**1.550**
1.500	408 lbs	370 lbs	464 lbs	481 lbs	481 lbs	494 lbs	538 lbs	610 lbs	542 lbs	**1.500**
1.450	444 lbs	396 lbs	490 lbs	508 lbs	508 lbs	532 lbs	567 lbs	640 lbs	575 lbs	**1.450**
1.400	463 lbs	422 lbs	516 lbs	535 lbs	536 lbs	560 lbs	595 lbs	671 lbs	609 lbs	**1.400**
1.350	498 lbs	451 lbs	543 lbs	568 lbs	565 lbs	589 lbs	627 lbs	706 lbs	643 lbs	**1.350**
1.300	525 lbs	479 lbs	568 lbs	595 lbs	593 lbs	621 lbs	660 lbs	738 lbs	680 lbs	**1.300**
1.250	556 lbs	511 lbs	595 lbs	634 lbs	628 lbs	654 lbs	699 lbs	-	713 lbs	**1.250**
1.200	-	548 lbs	-	-	-	-	-	-	-	**1.200**
1.150	-	-	-	-	-	-	-	-	-	**1.150**
1.100	-	-	-	-	-	-	-	-	-	**1.100**
1.050	-	-	-	-	-	-	-	-	-	**1.050**
1.000	-	-	-	-	-	-	-	-	-	**1.000**
0.950	-	-	-	-	-	-	-	-	-	**0.950**
Coil Bind	1.150	1.125	1.150	1.150	1.160	1.160	1.160	1.190	1.150	
7° Titanium Retainer	-	-	-	-	-	-	-	-	-	
7° Titanium Retainer	-	-	-	-	-	-	-	-	-	
7° Titanium Ret 3/8	-	-	-	-	-	-	-	-	-	
Titanium Ret 10°	86067D	86067D	-	86067D	86067D	86067D	86067D	86068	86068	
Titanium Super 7°	86767	86767	86781	86781	86781	86781	86781	86780	86780	
7° Steel Retainer 5/16	-	-	-	-	-	-	-	-	-	
7° Steel Retainer 11/32	-	-	-	-	-	-	-	-	-	
7° Steel Retainer 3/8	-	-	-	-	-	-	-	-	-	
Steel Retainer 10°	87055M	87055M	-	87064	87064	87064	87064	-	87056	
Seat Cup	68933	68933	68953X1	68953X1	68953X1	68953X1	68953X1	68955	68955	
Seat Disc	68938 or 68940	68938 or 68940	68943	68938 or 68940	68938 or 68940	68938 or 68940	68938 or 68940	68938 or 68940	68938 or 68940	

Valve spring retainers

CALIBRATION SPRINGS

Crower's calibration springs help calibrate your spring tester with accurate seat and nose open spring pressures based on a plotted graph included with the spring. Available in low or high pressure design. A must for any engine shop.

Part No.	Description
68000-1	Low Pressure Calibration Spring (Single)
68001-1	High Pressure Calibration Spring (Dual)

BUICK 11° STEEL RETAINERS

Part No.	Stem	"A"	"B"	"C"	Step	Height
87019	3/8	1.370	0.940	0.670	.185	-
87021	3/8	1.370	1.000	0.670	.185	-
87022	3/8	1.490	1.080	0.730	.115	-

Note: Requires factory keepers.

MISCELLANEOUS RETAINERS

Part No.	Engine	Type	Stem	"A"	"B"	"C"	Step	Height
86036T	LS1 Chevy	T	8mm	1.250	.880	.625	.075	+.050
87011	VW	S	8mm	1.200	.890	.680	.125	Stk
87020	4.6/5.4 Ford	S	7mm	.872	.567	.480	.105	Stk
87020T	4.6/5.4 Ford	T	7mm	.872	.567	.480	.105	Stk
87023	4.6/5.4 Ford	S	6mm	.875	.630	.480	.105	Stk
87023T	4.6/5.4 Ford	T	6mm	.875	.630	.480	.105	Stk
87024	4.6/5.4 Ford	S	7mm	.875	.620	.480	.100	Stk
87024T	4.6/5.4 Ford	T	7mm	.875	.620	.480	.100	Stk
87025	4.6/5.4 Ford	S	7mm	.875	.620	.480	.100	+.060
87025T	4.6/5.4 Ford	T	7mm	.875	.620	.480	.100	+.060
87026	4.6/5.4 32v	S	7mm	1.000	.705	.495	.100	Stk
87026T	4.6/5.4 32v	T	7mm	1.000	.705	.495	.100	Stk
87082	Ford Focus	T	6mm	1.030	.735	-	-	+.050
87028	LS1 Chevy	S	8mm	1.000	.645	-	-	Stk
87028T	LS1 Chevy	T	8mm	1.000	.645	-	-	Stk
87029	LT1 Chevy	S	11/32	1.000	.645	-	-	Stk
87029T	LT1 Chevy	T	11/32	1.000	.645	-	-	Stk
87035	5.7-6.1 Hemi	S	-	1.000	.615	-	-	Stk
87035T	5.7-6.1 Hemi	T	-	1.000	.615	-	-	Stk
87076	Patrol 4.8	T	-	1.055	.770	.450	-	+.050
87083	Duratec 2.3	T	5.5mm	1.000	.745	.610	-	Stk
87084	DSM 420A	T	6mm	1.075	.770	.450	-	Stk
87085	Toyota 2JZ	T	6mm	1.050	.745	.515	.100	Stk
87086	Toyota 1zz	T	5.5mm	.800	.640	.515	-	Stk
87087	H22 Stk	T	5.5mm	1.000	.815	.610	.080	Stk
87091	B-VTEC Stk	T	5.5mm	1.100	.830	.600	.080	Stk
87091S	B-VTEC Stk	S	5.5mm	1.100	.830	.600	.080	Stk
87092	B18A/B	T	6.5mm	1.100	.805	.600	.080	Stk
87092S	B18A/B	S	6.5mm	1.100	.805	.600	.080	Stk
87093	B-VTEC,H22	Ti	5.5mm	1.150	.870	.610	.080	Stk
87093S	B-VTEC,H22	S	5.5mm	1.150	.870	.610	.080	Stk
87093D	B-VTEC,H22	Ti	5.5mm	1.150	.870	.610	.080	+.060
87093DS	B-VTEC,H22	S	5.5mm	1.150	.870	.610	.080	+.060
87094	K20A/K24A	Ti	5.5mm	1.050	.870	.610	.080	Stk
87095	4G63/Evo	T	6.5mm	1.050	.740	-	-	Stk
87096	D16 / D17A	T	5.5mm	.875	.610	.450	-	Stk
87097	SR20DE(T)	T	6mm	1.125	.825	.475	-	Stk
87098	KA24DE(T)	T	6mm	1.115	.850		-	Stk

S = Steel • T = Titanium • Ti = Ti-17 Titanium Alloy

6AL4V Titanium vs Ti-17 Titanium

Crower is the only manufacturer that utilizes Ti-17 titanium alloy in the production of every Honda/Acura B Series, H22 and K Series VTEC application. Ti-17 rates 6-7 points harder on the RC scale than traditional 6AL4V titanium found in all competing brands.

7° STEEL RETAINERS

Part No.	Stem	Grams	"A"	"B"	"C"	Step	Height
86037	5/16	19	1.250	0.855	0.630	.075	+.050
87045	5/16	20.1	1.250	0.930	0.620	.145	+.050
87046	5/16	24.6	1.250	0.910	0.615	.100	+.025
87047	5/16	24.7	1.375	1.020	0.685	.065	-.050
87044	5/16	27.6	1.375	1.010	0.740	.145	+.110
86032	11/32	25.4	1.250	0.795	0.660	.130	-.015
86032D	11/32	21.5	1.250	0.795	0.660	.130	+.050
86032S	11/32	24.1	1.250	0.795	0.660	.130	-.065
87050	11/32	31.1	1.375	1.020	0.685	.115	+.000
87052	11/32	31.1	1.375	1.020	0.685	.115	-.050
87048	11/32	30.8	1.375	1.020	0.685	.115	+.085
87048D	11/32	25.5	1.375	1.020	0.685	.140	+.150
87054*	11/32	29.1	1.375	1.115	0.815	.100	+.080
87062	11/32	32.3	1.500	1.080	0.730	.115	+.125
87062S	11/32	32.2	1.500	1.080	0.730	.115	+.025
87049	3/8	29.6	1.375	1.020	0.685	.115	+.070
87049D	3/8	28.1	1.375	1.020	0.685	.140	+.100
87053*	3/8	25.7	1.375	1.115	0.745	.100	+.080
87063	3/8	31.6	1.500	1.080	0.740	.115	+.100
87063M	3/8	37	1.500	1.080	0.740	.115	+.050
87063S	3/8	37.2	1.500	1.080	0.740	.115	+.000

Note: Requires 7° keepers. *Indicates LightWeight retainer design.

10° STEEL RETAINERS

Part No.	Grams	"A"	"B"	"C"	"D"	Step	Height
86064	34.6	1.500	1.100	-	0.700	.115	-.020
87055	31.2	1.500	1.100	-	0.700	.115	+.085
87064	30.2	1.500	1.080	-	0.740	.115	+.100
87060	28.7	1.500	1.080	-	0.650	.115	+.070
87055M	32.1	1.500	1.100	-	0.700	.115	+.050
87055D	28.5	1.500	1.100	-	0.700	.115	+.110
87060M	27.3	1.440	1.065	-	0.650	.115	+.050
87056	35.8	1.625	1.180	-	0.650	.100	+.100

Note: Requires 10° keepers.

SPRING INSTALLED HEIGHT

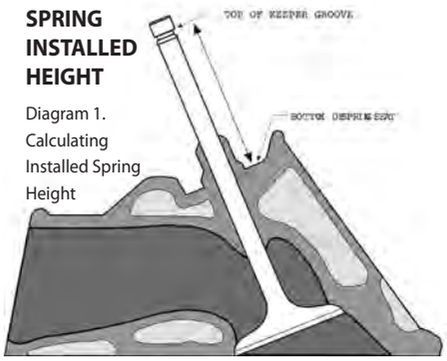


Diagram 1. Calculating Installed Spring Height

Measure the height from top of keeper grove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement.

7° TITANIUM RETAINERS

Part No.	Stem	Grams	"A"	"B"	"C"	Step	Height
86037T	5/16	11	1.250	0.855	0.630	.075	+.050
86046	5/16	10.4	1.250	0.925	0.630	.075	-
86030	5/16	11.6	1.250	0.925	0.630	.075	+.090
87040	5/16	17.2	1.375	1.020	0.685	.105	+.070
86033	5/16	17.2	1.375	1.065	0.700	.100	+.090
86031	11/32	11.9	1.250	0.795	0.660	.130	+.050
87041	11/32	-	1.375	1.065	0.670	.115	+.140
86044	11/32	22.5	1.500	1.185	0.775	.115	+.065
87042	3/8	16.4	1.375	1.020	0.680	.100	+.070

Note: Requires 7° keepers.

SUPER 7° TITANIUM RETAINERS

Part No.	Grams	"A"	"B"	"C"	"D"	Step	Height
86767	15.3	1.500	1.100	–	0.700	.100	+.070
86767L	-	1.350	1.125	–	0.730	.100	+.070
86767B	-	1.500	1.100	–	0.750	.100	+.070
86767M	15.3	1.440	1.065	–	0.700	.095	+.070
86767D	15.3	1.500	1.100	–	0.720	.095	+.100
86754	14.4	1.370	1.115	–	0.815	.100	+.080
86756	-	1.100	.890		0.660	.100	+.030
86759L	14	1.350	1.145	–	0.825	.100	+.070
86769	19.9	1.500	1.185	.850	0.640	.100	+.100
86781	17.3	1.500	1.135	–	0.730	.100	+.150
86780	19.9	1.500	1.165	–	0.765	.100	+.150
86780L	15.1	1.350	1.165	–	0.765	.100	+.150
86783	15	1.400	1.105	–	0.695	.100	+.150
86790	20.1	1.500	1.165	–	0.765	.100	+.075
86770	-	1.350	1.070	–	0.720	.100	+.150
86771	14.6	1.350	1.070	–	0.750	.100	+.150
86784	16	1.500	1.035	–	0.710	.100	+.050
86785	16	1.500	1.035	–	0.710	.100	+.150

10° TITANIUM RETAINERS

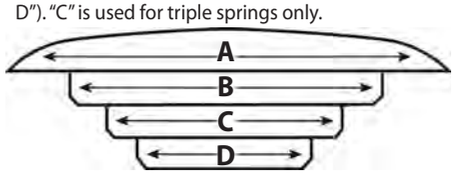
Part No.	Grams	"A"	"B"	"C"	"D"	Step	Height
86068	15.5	1.500	1.175	–	0.765	.100	+.100
86068D	16.5	1.500	1.175	–	0.760	.110	+.160
86068C	14	1.500	1.050	0.760	0.630	.100	+.120
86068CL	16.5	1.500	0.970	0.760	0.655	.100	+.100
86067C	13	1.500	1.020	–	0.740	.040	+.050
86067M	12	1.440	1.065	–	0.700	.095	+.070
86067B	19	1.500	1.100	–	0.750	.100	+.070
86067	13	1.500	1.100	–	0.700	.100	+.070
86067D	18	1.500	1.100	–	0.720	.095	+.100
86067A	17.5	1.500	0.970	–	0.695	.095	+.050
87071	18	1.500	1.100	–	0.675	.115	+.070
87072	17.5	1.500	1.100	–	0.650	.110	+.075
87065	18.5	1.500	1.065	–	0.700	.110	+.070
86065	17.5	1.500	1.100	–	0.700	.110	-.010
86069	19	1.500	1.185	0.850	0.640	.100	+.100
86062*	19	1.500	1.185	0.850	0.640	.100	+.100

Note: Requires 10° keepers. * Indicates LightWeight design.

RETAINER MEASUREMENTS

Diagram 2.

Retainer Dimensions for Retainers (columns "A, B, C, D"). "C" is used for triple springs only.



Valve Spring Accessories

STAMPED STEEL 7° VALVE STEM KEEPERS

Crower valve stem keepers are stamped from the finest grade steel alloy and heat-treated for added strength and wear resistance. Out performs stock keepers.

Part No.	Stem Dia.	Inst. Height
86100-16	11/32	Standard
86102-16	3/8	Standard

Also available in pairs by replacing -16 with -PR.

NEW ITEM

10° LITE WEIGHT TOOL STEEL RETAINERS

Part No.	Grams	"A"	"B"	"C"	"D"	Step	Height
87001-16	19.4	1.375	1.068	.705	-	.098	+.100
87002-16	21.9	1.390	1.100	.800	.650	.090	+.085
87003-16	21.4	1.450	1.100	.710	-	.090	+.085

For keepers, see below.

JUMBO SPLIT-LOCK 10° VALVE STEM KEEPERS

Crower Jumbo valve stem keepers are designed with a 10° taper (twice the strength of the conventional 7° taper). Jumbo keepers are machined from premium chromoly steel and heat-treated for maximum strength. Crower Jumbo keepers are available in standard height, .050" higher or .050" lower positions for added flexibility in achieving the correct installed spring height. Each variation is color coded for easy identification.

Part No.	Stem Dia.	Inst. Height
86109-16	5/16	Standard
86118-16	LS1 8mm Bead lock	Standard
86118X1-16	LS1 8mm Bead lock	+.050"
86118X2-16	LS1 8mm Bead lock	-.050"
86110-16	11/32	Standard
86110X1-16	11/32	+.050"
86110X2-16	11/32	-.050"
86111-16	3/8	Standard
86111X1-16	3/8	+.050"
86111X2-16	3/8	-.050"

Also available in pairs by replacing -16 with -PR.

VALVE STEM SEALS

Crower valve stem seals provide correct oil control at the valve guide. The spring loaded wiper design prevents unwanted oil contamination on the cylinder. Heavy-duty steel and teflon construction.

Part No.	Description	Stem Dia.	I.D.
86070-16	Standard	5/16	.530"
86070T-16	Smaller O.D. (triple spring)	5/16	.500"
86071-16	Standard	3/8	.530"
86071T-16	Smaller O.D. (triple spring)	3/8	.500"
86072-16	Standard	11/32	.530"
86072T-16	Smaller O.D. (triple spring)	11/32	.500"

Also available in singles by replacing -16 with -1.

LASH CAPS

Crower lash caps protect the ends of your valves from excessive wear and help to correct rocker geometry by increasing rocker arm to retainer clearance. Machined from high grade chromoly steel and heat-treated for added strength, Crower lash caps give your valves an added .060" margin of protection. Highly recommended for performance applications, and a must for costly stainless steel or titanium valves.

Part No.	Description	Depth
86120-16	5/16 valve stem (Set/16)	.090"
86120S-16	5/16 valve stem (Set/16)	.060"
86121-16	11/32 valve stem (Set/16)	.090"
86121D-16	11/32 valve stem (Set/16)	.120"
86121S-16	11/32 valve stem (Set/16)	.060"
86122-16	3/8 valve stem (Set/16)	.090"
86122D-16	3/8 valve stem (Set/16)	.120"
86122S-16	3/8 valve stem (Set/16)	.060"
86123-8	5/16 valve stem VW (Set/8)	.090"
86125-24	6mm valve stem Toyota (Set/24)	.050"
86126-8	8mm 2000cc (Set/8)	.055"
86127-8	11/32 2300cc (Set/8)	.100"
86128-16	7mm Ford 4.6/5.4L (Set/16)	.120"

Also available in singles by replacing -16 with -1.

BILLET PERFORMANCE 7° VALVE STEM KEEPERS

Crower billet performance valve stem keepers are precision machined from premium billet bar stock chromoly steel. Heat-treated for maximum strength to insure against shoulder shearing (common with stock and lesser quality keepers). In addition to our standard height, we also offer .050" higher and .050" lower to achieve the correct installed spring height. Each variation is color coded for identification. Serious engine builders should have a complete selection on hand at all times.

Part No.	Stem Dia.	Inst. Height
86106-16	5/16	Standard
86107-16	11/32	Standard
86107X1-16	11/32	+.050"
86107X2-16	11/32	-.050"
86108-16	3/8	Standard
86108X1-16	3/8	+.050"
86108X2-16	3/8	-.050"
86115-16	5.5mm	Standard
86115X1-16	5.5mm	+.050"

SUPER 7° KEEPERS

Part No.	Stem Dia.	Inst. Height
86709-16	5/16	Standard
86709X1-16	5/16	+.050"
86709X2-16	5/16	-.050"
86710-16	11/32	Standard
86710X1-16	11/32	+.050"
86710X2-16	11/32	-.050"

Also available in pairs by replacing -16 with -PR.

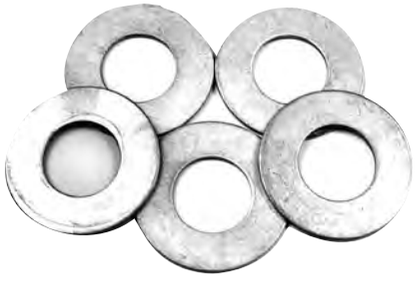
TITANIUM KEEPERS

For the ultimate in lightweight performance, Crower billet titanium keepers are CNC machined to insure the best possible keeper. Available in Super 7°. (4g weight)

Part No.	Stem Dia.	Inst. Height
86115T-16	5.5mm (.216")	Standard
86117T-16	7mm (.274") Bead lock	Standard
86117X1T-16	7mm (.274") Bead lock	+.050"
86117X2T-16	7mm (.274") Bead lock	-.050"
86709T-16	5/16	Standard
86709X1T-16	5/16	+.050"
86709X2T-16	5/16	-.050"
86710T-16	11/32	Standard
86710X1T-16	11/32	+.050"
86710X2T-16	11/32	-.050"

To order bead-lock keeper design, specify "B" after part no.

Valve Spring Accessories



COPPER PLATED SPRING SHIMS

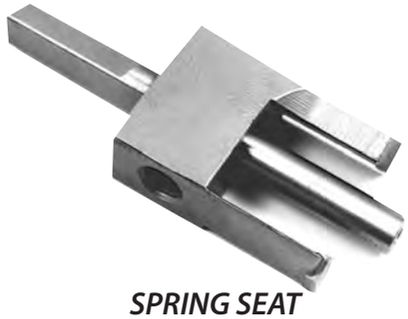
Crower copper plated spring shims are case hardened .005" to .010" deep to a surface hardness of 45RC. Available in single or assorted thickness sets and bulk.

Part No.	Description	O.D. x I.D.	Size
85060-16	Set/16 pcs	1.525 x 0.735	.015
85060B	Bulk/80 pcs (1 size)	1.525 x 0.735	.015
85061-16	Set/16 pcs	1.525 x 0.735	.030
85061B	Bulk/80 pcs (1 size)	1.525 x 0.735	.030
85062-16	Set/16 pcs	1.525 x 0.735	.060
85062B	Bulk/80 pcs (1 size)	1.525 x 0.735	.060
85063A	Asst/16 ea (015,030,060) Set/16 pcs	1.525 x 0.735	Asst
85065-16	Bulk/80 pcs (1 size)	1.625 x 0.635	.015
85065B	Set/16 pcs	1.625 x 0.635	.015
85066-16	Bulk/80 pcs (1 size)	1.625 x 0.635	.030
85066B	Set/16 pcs	1.625 x 0.635	.030
85067-16	Bulk/80 pcs (1 size)	1.625 x 0.635	.060
85067B	Asst/16 ea (015,030,060)	1.625 x 0.635	.060
85068A		1.625 x 0.635	Asst

CUTTER PILOTS

Pilots available for spring seat and valve seal cutters.

Part No.	Stem Dia.
68970	5/16
68971	3/8
68972	11/32



SPRING SEAT CUTTERS

Designed to accurately machine cylinder heads for aftermarket spring applications using a drill press or hand drill. Cutter blades are carbide tipped and valve guide pilots are interchangeable. Special spring seat cutters in custom sizes are available. Call for pricing and availability.

Part No.	O.D. x I.D.	Part No.	O.D. x I.D.
68974	1.050 x 0.740	**68979**	1.555 x 0.630
68978	1.255 x 0.620	**68992**	1.560 x 0.720
68982	1.365 x 0.760	**68977**	1.570 x 0.545
68983	1.410 x 0.765	**68981**	1.575 x 0.610
68997	1.450 x 0.690	**68998**	1.630 x 0.630
68990	1.450 x 0.800	**68984**	1.630 x 0.670
68985	1.460 x 0.685	**68995X1**	1.630 x 0.700
68999	1.485 x 0.675	**68995**	1.630 x 0.770
68975	1.510 x 0.800	**68980**	1.635 x 0.630
68986	1.515 x 0.750	**68989**	1.705 x 0.630
68976	1.520 x 0.690	**68996**	1.750 x 0.630
68987	1.530 x 0.730	**68988**	1.800 x 0.630

Note: Must order pilot separately. See pilots listed on the left.

VALVE SEAL CUTTERS

Crower valve seal/valve guide cutter includes cutting tool. Must order pilot separately when ordering.

Part No.	I.D.
86079	.530"
86079T	.500"

Note: Must order pilot separately. See pilots listed on the left.

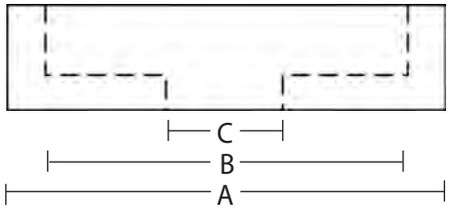
SPRING SEAT CUPS & SEAT DISCS

Crower valve spring seat cups eliminate the need for seat cutting in some instances and shimming in others. Designed to keep springs from wandering, seat cups also protect aluminum heads from "galling." Spring seat discs also available.

SEAT CUPS

Part No.	"A"	"B"	"C"	Cutter
68934-16	1.550	1.450	0.575	68981
68930-16	1.550	1.440	0.635	68979
68951-16	1.550	1.455	1.000	–
68931-16	1.550	1.475	0.635	68979
68957-16	1.590	1.490	0.675	68984
68936-16	1.625	1.515	0.635	68988
68933-16	1.685	1.540	0.635	68989
68953X1-16	1.695	1.565	0.635	68989
68955-16	1.745	1.630	0.635	68996
68959-16	1.740	1.650	0.635	68996
68956-16	1.795	1.700	0.635	68988
68958-16	Rotation Eliminators (396-454 Chevy)			

Diagram 1. Spring Seat Cup



SEAT DISCS

Part No.	"A"	"B"	"C"	"D"	Cutter
68924-16	1.400	0.780	-	0.527	-
68925-16	1.400	0.600	-	0.527	-
68926-16	.842	0.635	-	0.495	-
68928-16	1.250	0.805	-	0.515	-
68929-16	1.100	0.970	0.600	0.482	-
68938-16	1.560	0.740	-	0.505	-
68939-16	1.565	0.660	-	0.505	-
68940-16	1.560	0.740	-	0.562	-
68941-16	1.565	0.660	-	0.562	-
68942-16	1.535	0.730	-	0.635	-
68943-16	1.545	0.805	-	0.565	-

Note: All cups/discs average approximately .060" thick.

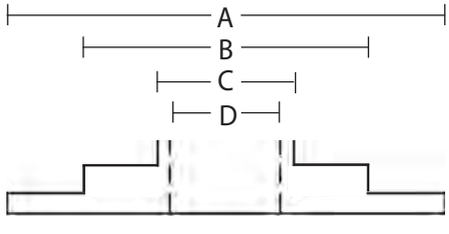


Diagram 2. Spring Seat Disc

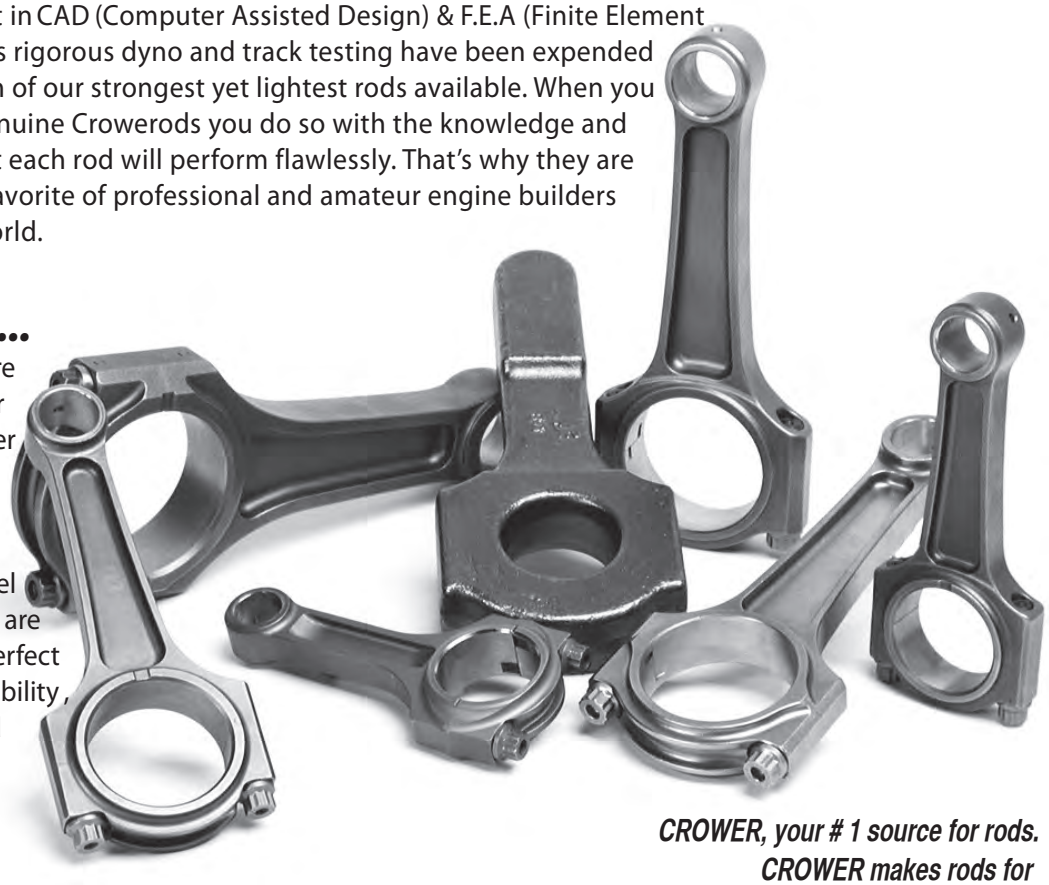
Connecting Rods

THE CROWEROD DIFFERENCE

An extensive effort in CAD (Computer Assisted Design) & F.E.A (Finite Element Analysis), as well as rigorous dyno and track testing have been expended through perfection of our strongest yet lightest rods available. When you employ a set of genuine Crowerods you do so with the knowledge and peace of mind that each rod will perform flawlessly. That's why they are hands down, the favorite of professional and amateur engine builders throughout the world.

IT'S THE MATERIAL...

While other manufacturers are cutting corners, using inferior or low grade materials, Crower has kept costs down without lowering our standards. Crowerods incorporate only the finest aircraft quality steel and titanium materials. They are heat treated to obtain that perfect balance of strength and durability, to insure the best quality and reliability possible.



CROWER, your # 1 source for rods.
CROWER makes rods for almost any application.

AND THE DESIGN

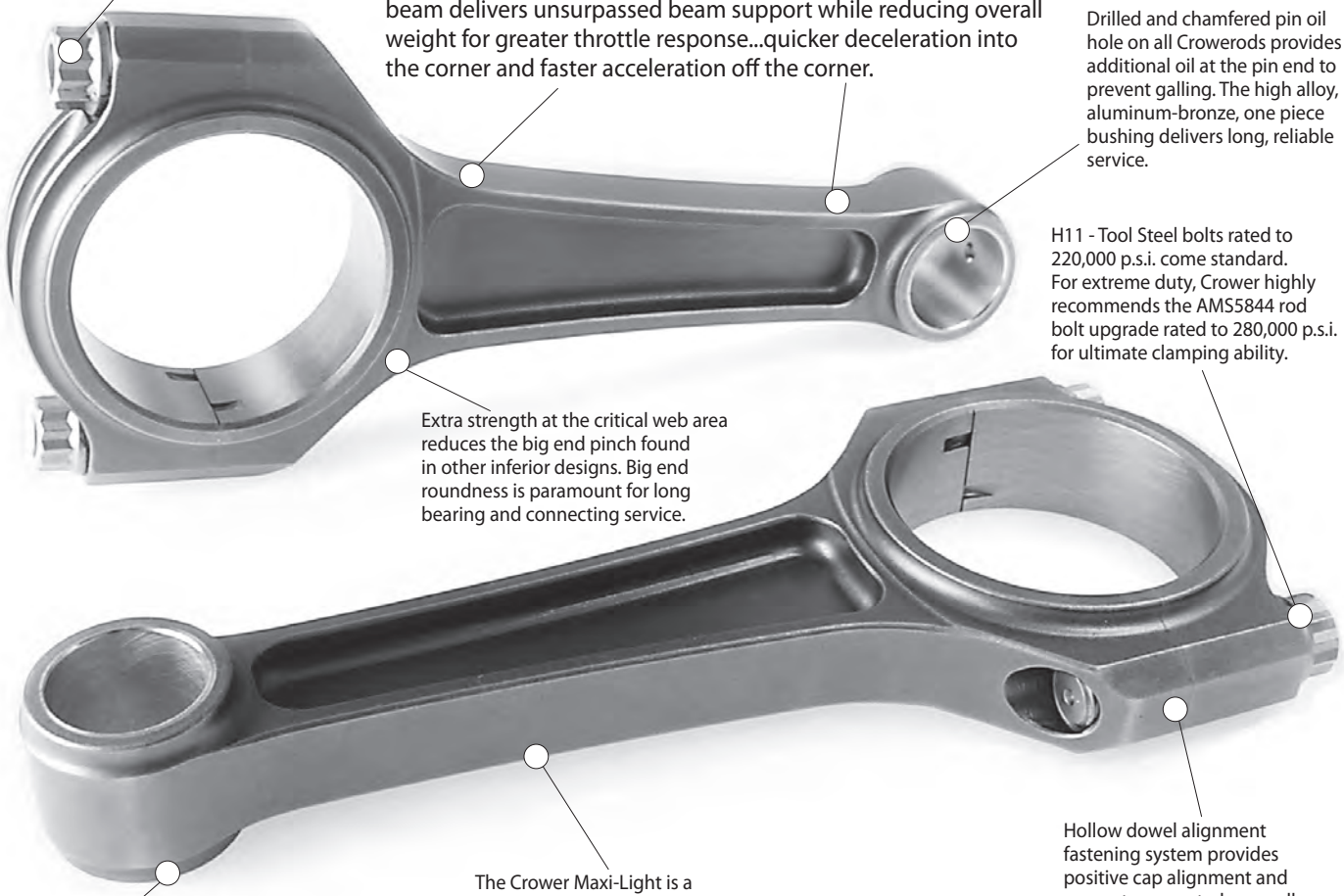
Take a close look at a Crowerod and you'll notice that it is shaped like no other rod in the industry. Every contour is designed to enhance overall strength and reliability at high engine rpm. Crower connecting rods incorporate an "I-beam" design that eliminates pockets of excess material and delivers exceptional longitudinal and horizontal strength. The cap screw design assures true roundness and a positive bearing seat under severe load factors, in which eliminating rod bearing failure. Tolerances are to an exacting ±0.0001" of an inch to insure trouble free installation. For those who prefer an "H-beam" design, Crower also offers this style of rod on a custom order basis.

THE BOTTOM LINE

When you install a set of genuine Crowerods in your high performance engine, the design expertise, material and craftsmanship are working hard to maximize your racing effort. It's the kind of dependability and confidence that can put you in the winner's circle. Crowerods are available for most domestic and foreign applications, as well as motorcycles, industrial, vintage and one of a kind prototypes. Our Crowerod design is often imitated, but never duplicated. For any new enthusiast we have an excellent staff that can help you on any particular design you may want. **Protect your investment by insisting on only genuine Crowerods for your high performance needs.**

"RBT" Steel Billet Connecting Rods

Crower's all new Radial Beam Technology design ("RBT") is the ultimate connecting rod, often copied by competitors, but never replicated to Crower's engineered standards. The radial shape beam delivers unsurpassed beam support while reducing overall weight for greater throttle response...quicker deceleration into the corner and faster acceleration off the corner.



Aircraft quality, 12-point cap screw fastening system provides added security at high rpm.

Drilled and chamfered pin oil hole on all Crowerods provides additional oil at the pin end to prevent galling. The high alloy, aluminum-bronze, one piece bushing delivers long, reliable service.

H11 - Tool Steel bolts rated to 220,000 p.s.i. come standard. For extreme duty, Crower highly recommends the AMS5844 rod bolt upgrade rated to 280,000 p.s.i. for ultimate clamping ability.

Extra strength at the critical web area reduces the big end pinch found in other inferior designs. Big end roundness is paramount for long bearing and connecting service.

Hollow dowel alignment fastening system provides positive cap alignment and prevents unwanted cap walk.

The Crower Maxi-Light is a proven performer on the race track. Tapered beam design delivers the strength you need in a lightweight, yet reliable profile.

Pin boss dynamics are essential when designing a high performance connecting rod. To maintain trouble free operation, Crower beefs up the pin eye area.

RADIAL BEAM TECHNOLOGY ("RBT") MAXI-LIGHT DESIGN

Crower's exclusive "RBT" Maxi-Light design is a revolutionary new beam shape that removes excess material from noncritical stress areas for the lightest, yet strongest connecting rod available on the market. Choose from a wide variety of weight configurations, depending on your individual horsepower and rpm requirements.

AMS5844 ROD BOLT UPGRADE

Crower's AMS5844 rod bolt upgrade is available for all steel billet and titanium rods. Highly recommended for extreme duty rpm and endurance applications. Rated at 280,000 p.s.i., these bolts are corrosion resistant, nonmagnetic and deliver ultimate clamping capabilities for the highest cycle life. Specify desired rod bolt part number when ordering.

Proper bolt torque: Torque rod bolts to 10 ft lbs on both sides, then torque to proper spec with one pull.

Upgrades: 280,000 p.s.i. rod bolts, specify #90842 for 3/8
280,000 p.s.i. rod bolts, specify #90830 for 7/16

"RBT" Steel Billet Connecting Rods

ALSO AVAILABLE IN TITANIUM

RADIAL BEAM TECHNOLOGY MAXI-LIGHT DESIGN

® Maxi-Light is a Registered Trademark of Crower, Inc.

MAXI-LIGHT® 93 SERIES 1

APPROX. WEIGHT: 6.0" @ 495g
HORSEPOWER RANGE: 500+ (oval)
HORSEPOWER RANGE: 550+ (drag)

MAXI-LIGHT® 93 SERIES 2

APPROX. WEIGHT: 6.0" @ 520g
HORSEPOWER RANGE: 600+ (oval)
HORSEPOWER RANGE: 650+ (drag)

MAXI-LIGHT® 93 SERIES 3

APPROX. WEIGHT: 6.0" @ 580g
HORSEPOWER RANGE: 650+ (oval)
HORSEPOWER RANGE: 700+ (drag)

MAXI-LIGHT® 93 SERIES 4

APPROX. WEIIGHT: 6.0" @ 605g
HORSEPOWER RANGE: 750+ (oval)
HORSEPOWER RANGE: 800+ (drag)

MAXI-LIGHT® 93 SERIES 5

APPROX. WEIGHT: 6.0" @ 645g
HORSEPOWER RANGE: 850+ (oval)
HORSEPOWER RANGE: 1000+ (drag)

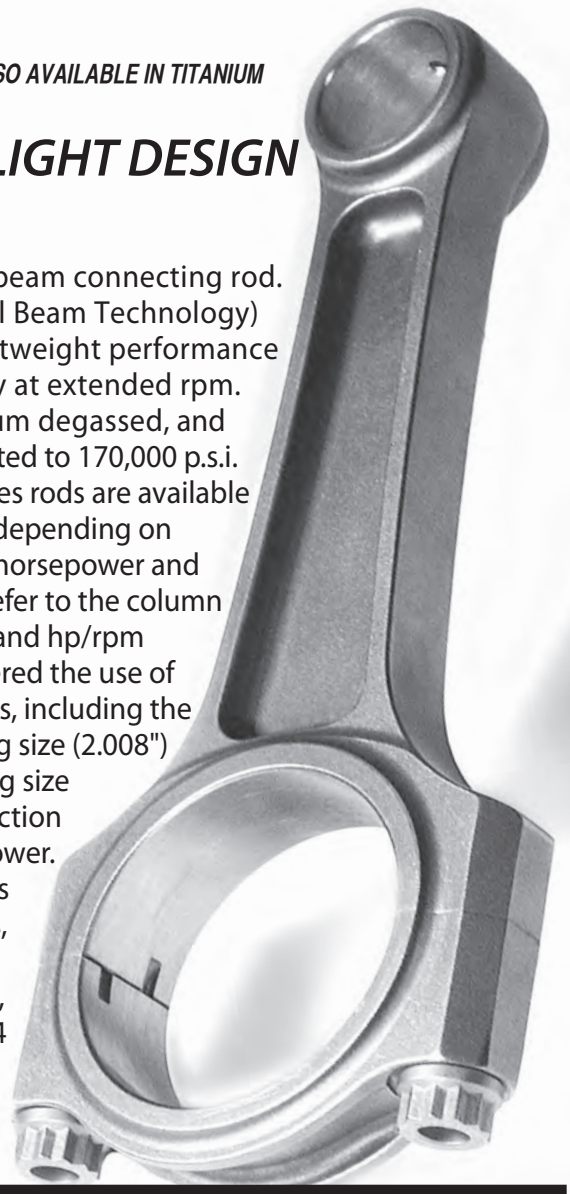
MAXI-LIGHT® 93 SERIES 6

Nitrous \ Turbo blown applications.
Extreme Horsepower.
Call to special order.

** Choose the desired HP Series number (1, 2, 3, 4 , 5, 6).*

For rod bushing specs. see pg. 197

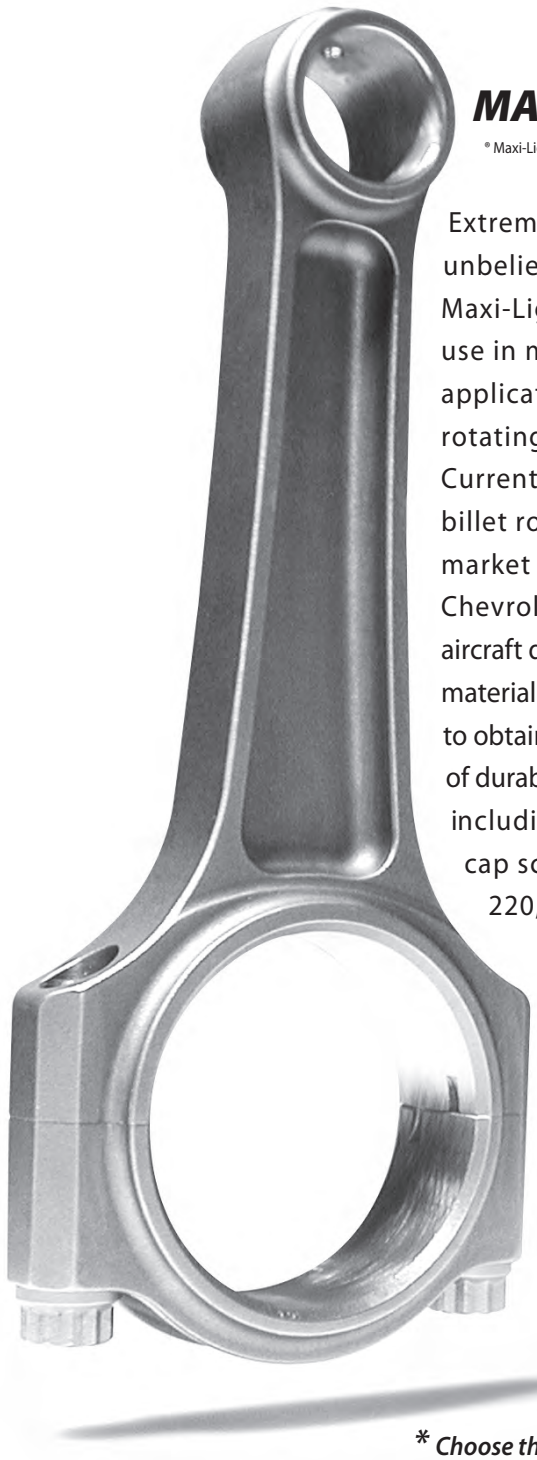
The original tapered beam connecting rod. Crower's "RBT" (Radial Beam Technology) design combines lightweight performance with proven reliability at extended rpm. CNC machined, vacuum degassed, and premium steel alloy rated to 170,000 p.s.i. The Maxi-Light 93 Series rods are available in six unique designs, depending on intended application, horsepower and rpm considerations. Refer to the column at the left for weights and hp/rpm ratings. Crower pioneered the use of small journal diameters, including the popular Honda bearing size (2.008") and the Quad 4 bearing size (2.015") for reduced friction and increased horsepower. H11 tool steel rod bolts come in standard sizes, 3/8 for series 1,2, & 3, and 7/16 for series 4, 5, & 6. Optional AMS5844 bolt upgrade available (280,000 p.s.i.).



Part No.	C-to-C	B.E. Bore	P.E. Bore	B.E. Width
ML93000B*-8	5.700"	2.125"	.927"	.941"
ML93002B*-8	6.000"	2.125"	.927"	.941"
ML93003B*-8	5.850"	2.125"	.927"	.941"
ML93004B*-8	6.125"	2.125"	.927"	.941"
ML93005B*-8	5.700"	2.225"	.927"	.941"
ML93006B*-8	6.000"	2.225"	.927"	.941"
ML93007B*-8	6.250"	2.225"	.927"	.941"
ML93008B*-8	5.850"	2.225"	.927"	.941"
ML93009B*-8	6.125"	2.225"	.927"	.941"
ML93040B*-8	6.200"	2.125"	.927"	.941"
ML93041B*-8	6.200"	2.225"	.927"	.941"
ML93900B*-8	Custom	2.125"	Custom	Custom
ML93901B*-8	Custom	2.008" Honda	Custom	Custom
ML93902B*-8	Custom	2.015" Quad 4	Custom	Custom
ML93903B*-8	Custom	2.008" IRL	Custom	Custom
ML93904B*-8	Custom	1.890"	Custom	Custom
ML93905B*-8	Custom	2.225"	Custom	Custom

Steel Billet Connecting Rods

Big Block V8
- 366 396 402 427 454 502



MAXI-LIGHT® DESIGN

® Maxi-Light is a Registered Trademark of Crower, Inc.

Extremely light, yet unbelievably strong, the Maxi-Light is intended for use in moderate horsepower applications, where light rotating mass is a must. Currently the lightest steel billet rod available on the market is for big block Chevrolet. Made with the finest aircraft quality steel and titanium materials. They are heat treated to obtain that perfect balance of durability and strength, including 7/16 H-11 tool steel cap screw bolts rated at 220,000 p.s.i.

MAXI-LIGHT® SERIES 4

APPROX. WEIGHT: 6.386" @ 735g
HORSEPOWER RANGE: 850+ (oval)
HORSEPOWER RANGE: 1000+ (drag)

MAXI-LIGHT® SERIES 5

APPROX. WEIGHT: 6.386" @ 800g
HORSEPOWER RANGE: 1000+ (oval)
HORSEPOWER RANGE: 1500+ (drag)

MAXI-LIGHT® SERIES 6

Nitrous \ Turbo blown applications.
Extreme Horsepower.
Call to special order.

Part No.	C-to-C	B.E. Bore	P.E. Bore	B.E. Width
ML93010B*-8	6.136"	2.325"	.990"	.991"
ML93011B*-8	6.386"	2.325"	.990"	.991"
ML93014B*-8	6.405"	2.325"	.990"	.991"
ML93012B*-8	6.536"	2.325"	.990"	.991"
ML93015B*-8	6.625"	2.325"	.990"	.991"
ML93016B*-8	6.700"	2.325"	.990"	.991"
ML93017B*-8	6.800"	2.325"	.990"	.991"
ML93911B*-8	Custom under 7.250"	2.325"	Custom	.991"
ML93909B*-8	Custom over 7.250"	2.325"	Custom	.991"

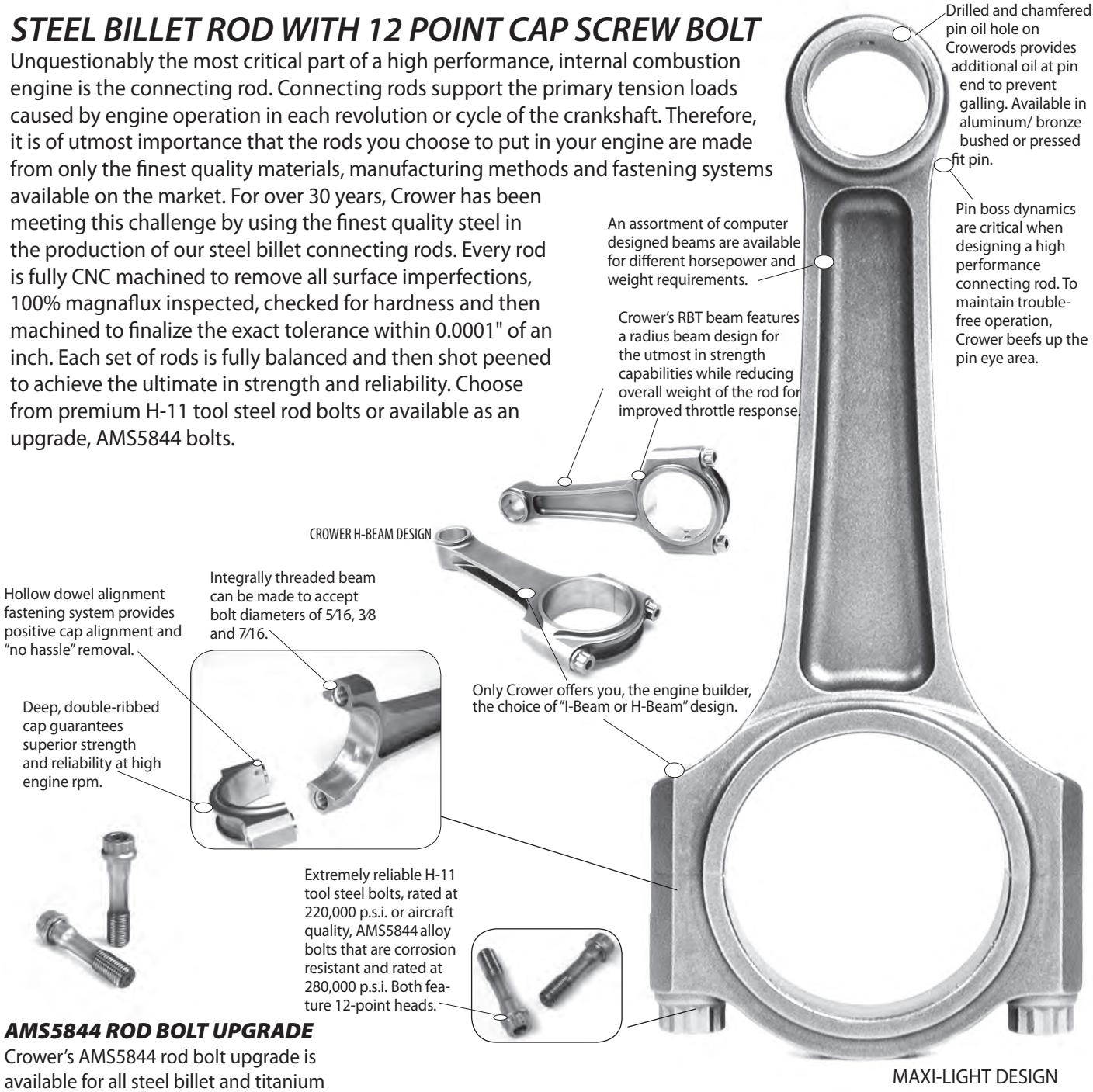
** Choose the desired HP Series number (4, 5, or 6).*
If Pressed Fit Pin desired, replace "B" after Part No. (ex. ML93010PF4-8).
All weights are approximate.

For rod bushing specs. see pg. 197

Steel Billet Connecting Rods

STEEL BILLET ROD WITH 12 POINT CAP SCREW BOLT

Unquestionably the most critical part of a high performance, internal combustion engine is the connecting rod. Connecting rods support the primary tension loads caused by engine operation in each revolution or cycle of the crankshaft. Therefore, it is of utmost importance that the rods you choose to put in your engine are made from only the finest quality materials, manufacturing methods and fastening systems available on the market. For over 30 years, Crower has been meeting this challenge by using the finest quality steel in the production of our steel billet connecting rods. Every rod is fully CNC machined to remove all surface imperfections, 100% magnaflux inspected, checked for hardness and then machined to finalize the exact tolerance within 0.0001" of an inch. Each set of rods is fully balanced and then shot peened to achieve the ultimate in strength and reliability. Choose from premium H-11 tool steel rod bolts or available as an upgrade, AMS5844 bolts.



AMS5844 ROD BOLT UPGRADE

Crower's AMS5844 rod bolt upgrade is available for all steel billet and titanium rods. Highly recommended for extreme duty rpm and endurance applications. Rated at 280,000 p.s.i., these bolts are corrosion resistant, nonmagnetic and deliver ultimate clamping capabilities for the highest cycle life. Specify desired rod bolt when ordering.

Proper bolt torque: Torque rod bolts to 10 ft lbs on both sides, then torque to proper spec with one pull.

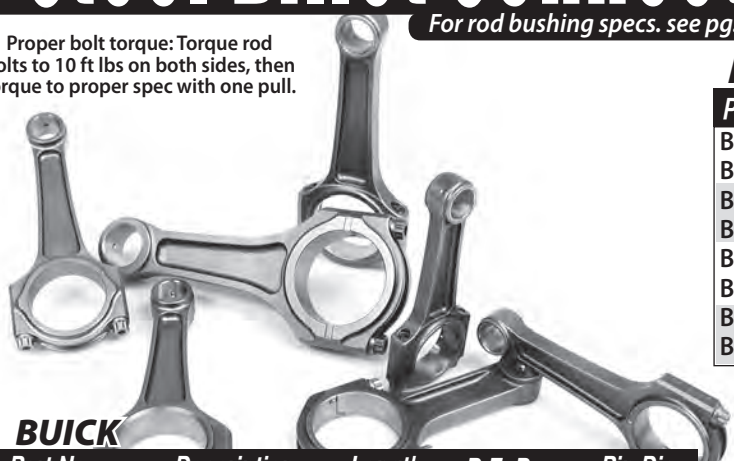
CROWER "H-BEAM" CONNECTING RODS

Although Crower is known mostly for it's "I-Beam" rods, we also build a variety of European influenced "H-Beam" designs as well. The thicker cross sections of the H-Beam are better suited for the EDM oil hole that runs the length of the beam delivering added oil to the pin. Weights are equivalent to Crower's standard "I-Beam" billet rod. Specify H-Beam when ordering. For Pressure Fed Pin option specify #90798 after rod part number.

Steel Billet Connecting Rods

For rod bushing specs. see pg. 17

Proper bolt torque: Torque rod bolts to 10 ft lbs on both sides, then torque to proper spec with one pull.



BUICK

Part No	Description	Length	B.E. Bore	Pin Dia
B93907B-6	Buick 6 cyl	Custom	Specify	Specify
B93908B-8	Buick V8	Custom	Specify	Specify

If press fit pin is desired, specify "PF" after part number.

CHEVROLET/GM

Part No	Description	Length	B.E. Bore	Pin Dia
B93906B-6	Chevy 6 cyl	Custom	Specify	Specify
B93731B-4	GM Ecotec	5.767"	2.052"	.787"
B93732B-8	GM 2.4L	5.715"	2.015"	.866"
B93036B-8	GM Duramax 6600	6.420"	2.637"	1.358"
B93936B-8	GM Duramax 6600	Custom	Custom	Custom
B93051B-8	LS1 V8	6.100"	2.225"	.944"
B93737B-4	Saturn 99 & up	5.846"	1.975"	.787
B93736B-4	Saturn 1.9L	5.712"	1.976"	.768"

If press fit pin is desired, specify "PF" after part number.

DIESEL RODS

Part No	Description	Length	B.E. Bore	Pin Dia
B93037B-6	Cmmings 5.9 L6 Diesel	7.560"	2.874"	1.575"
B93022B-8	Ford 6.0L PowerStroke	6.929"	2.874"	1.340"
B93029B-8	Ford 7.3L PowerStroke	7.130"	2.691"	1.308"
B93036B-8	GM Duramax 6600	6.420"	2.637"	1.358"

FORD

Part No	Description	Length	B.E. Bore	Pin Dia
B93074B-4	2.0L 4 cyl	5.000"	2.165	.944"
B93075B-4	2.3L 4 cyl	5.200"	2.172	.912"
B93974B-4	2.0L-2.3L 4 cyl	Custom	Specify	Specify
B93788B-4	Focus ZX3	5.482"	1.965"	.787"
B93926B-6	Ford 6 cyl	Custom	Specify	Specify
B93024B-8	289-302 V8	5.090"	2.239"	.912"
B93025B-8	289-302 V8	5.155"	2.239"	.912"
B93026B-8	289-302 V8	5.315"	2.239"	.912"
B93925B-8	289-302 V8	Custom	Specify	Specify
B93020B-8	351C V8	5.780"	2.436"	.912"
B93921B-8	351C V8	Custom	Specify	Specify
B93023B-8	351W V8	5.956"	2.426"	.912"
B93923B-8	351W V8	Custom	Specify	Specify
B93018B-8	390-427 V8	6.488"	2.590"	.975"
B93918B-8	390-427 V8	Custom	Specify	Specify
B93027B-8	370-460 V8	6.605"	2.652"	1.040"
B93919B-8	370-460 V8	Custom	Specify	Specify
B93028B-8	5.4L	6.657"	2.239	.866"

If press fit pin is desired, specify "PF" after part number.

MOPAR

Part No	Description	Length	B.E. Bore	Pin Dia
B93938B-10	Viper/RT10	Specify	Specify	Specify
B93031B-8	273-360 "A" V8	6.120"	2.250"	.984"
B93931B-8	273-360 "A" V8	Custom	Specify	Specify
B93935B-8	361-400 "B" V8	Custom	Specify	Specify
B93033B-8	413-440 "RB" V8	6.766"	2.500"	1.094"
B93934B-8	426 Hemi V8	Custom	Specify	Specify
B93785B-4	Neon/Eclipse 2.0L	5.472"	2.007"	.827"
B93786B-4	SRT- 4/PT Crsr 2.4L	5.945"	2.086"	.866"

PONTIAC

Part No	Description	Length	B.E. Bore	Pin Dia
B93060B-8	Pontiac V8	6.625"	2.374"	.980"
B93960B-8	Pontiac V8	Custom	Specify	Specify

If press fit pin is desired, specify "PF" after part number.

OLDSMOBILE

Part No	Description	Length	B.E. Bore	Pin Dia
B93056B-8	Olds V8	6.735"	2.625"	.9806
B93956B-8	Olds V8	Custom	Specify	Specify

If press fit pin is desired, specify "PF" after part number.

STROKER BILLET, & STOKER MID WEIGHT SMALL BLOCK CHEVY

Part No	C-to-C	B.E. Bore	P.E. Bore	B.E. Width
SB93000B-8	5.700"	2.125"	0.927"	0.941"
SB93003B-8	5.850"	2.125"	0.927"	0.941"
SB93002B-8	6.000"	2.125"	0.927"	0.941"
SB93004B-8	6.125"	2.125"	0.927"	0.941"
SB93040B-8	6.200"	2.125"	0.927"	0.941"
SB93900B-8	Custom	2.125"	0.927"	0.941"
SB93005B-8	5.700"	2.225"	0.927"	0.941"
SB93008B-8	5.850"	2.225"	0.927"	0.941"
SB93006B-8	6.000"	2.225"	0.927"	0.941"
SB93009B-8	6.125"	2.225"	0.927"	0.941"
SB93041B-8	6.200"	2.225"	0.927"	0.941"
SB93007B-8	6.250"	2.225"	0.927"	0.941"
SB93905B-8	Custom	2.225"	0.927"	0.941"

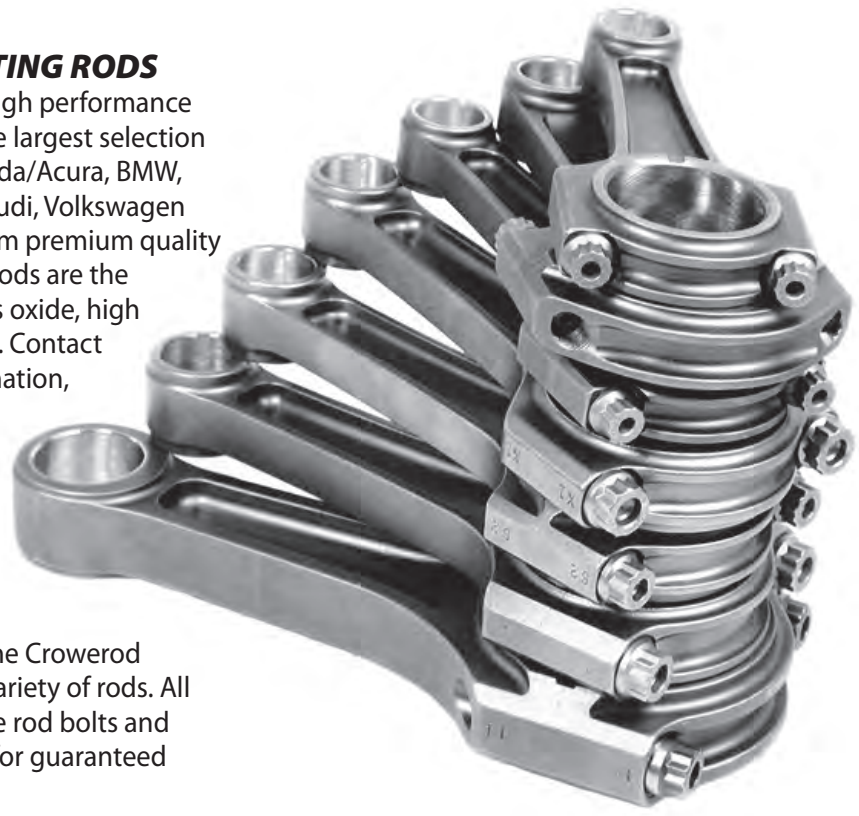
If Pressed Fit Pin desired, replace "B" after p/n (ex. SB93000PF-8).
For stroker mid weight, change SM instead of SB.

BILLET BIG BLOCK CHEVY

Part No	C-to-C	B.E. Bore	P.E. Bore	B.E. Width
B93010B-8	6.136"	2.325"	0.990"	0.991"
B93011B-8	6.386"	2.325"	0.990"	0.991"
B93014B-8	6.405"	2.325"	0.990"	0.991"
B93012B-8	6.536"	2.325"	0.990"	0.991"
B93015B-8	6.625"	2.325"	0.990"	0.991"
B93016B-8	6.700"	2.325"	0.990"	0.991"
B93017B-8	6.800"	2.325"	0.990"	0.991"
B93911B-8	Custom	2.325"	0.990"	0.991"
B93909B-8	Custom	2.325"	0.990"	0.991"

If Pressed Fit Pin desired, replace "B" after p/n (ex. B93010PF-8).

Custom Steel Billet Connecting Rods



CUSTOM BILLET CONNECTING RODS

Crower is the industry leader in high performance connecting rods. Choose from the largest selection of makes available including Honda/Acura, BMW, Porsche, Ferrari, Nissan, Toyota, Audi, Volkswagen and more. CNC manufactured from premium quality steel and titanium, Crower billet rods are the only choice when running nitrous oxide, high boost or high rpm in your vehicle. Contact your Crower Tech for more information, including availability.

MANUFACTURING

Crower has the manufacturing capability to produce connecting rods for any type of performance requirement. As you can see by the Crowerod availability list, we make a wide variety of rods. All are equipped with cap screw style rod bolts and hollow dowel alignment sleeves for guaranteed ultimate clamping.

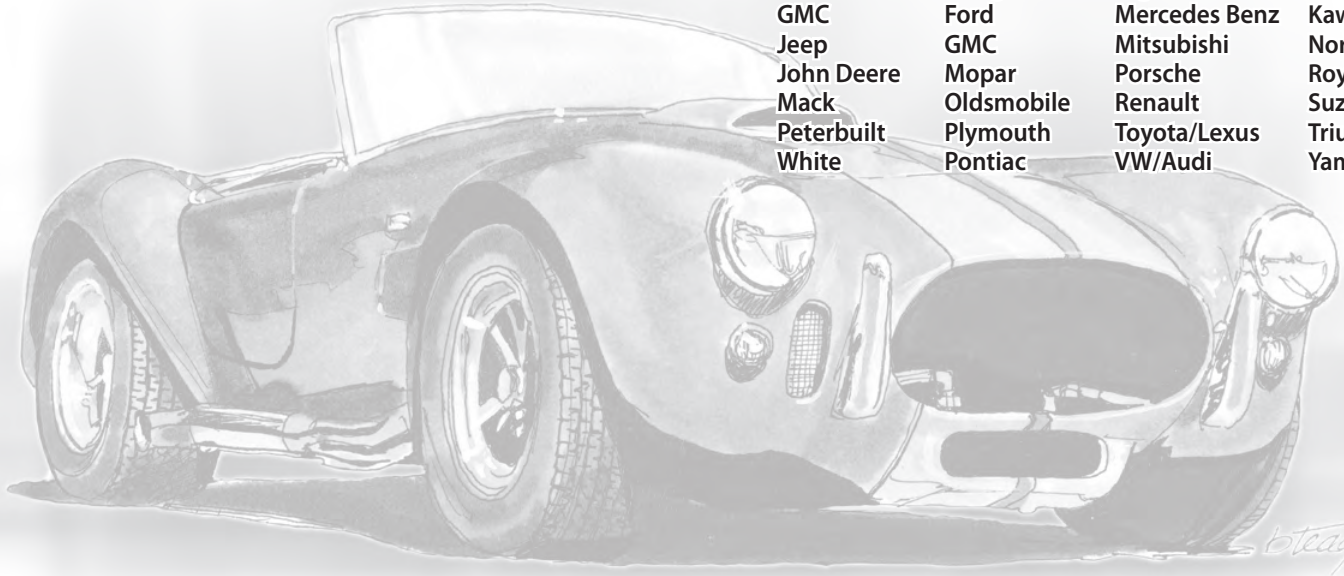
MATERIALS

Crowerods incorporates only the finest aircraft quality materials. They are heat treated to obtain that perfect balance of strength and durability.

- Premium Steel and Titanium.
- Uniform hardness developed by heat treatment.
- High fatigue strength is ideal for stressed parts.
- H-11 (220,000 psi) or AMS5844 (280,000 psi) bolts.

CROWEROD AVAILABILITY

TRUCKS	DOMESTICS	IMPORT	MOTORCYCLES
Chevrolet	Buick	BMW	BSA
Caterpillar	Cadillac	Nissan/Datsun	Ducati
Cummings	Chevrolet	Fiat	Harley Davidson
Dodge	Chrysler	Honda/Acura	Honda
Ford	Dodge	Jaguar	Indian
GMC	Ford	Mercedes Benz	Kawasaki
Jeep	GMC	Mitsubishi	Norton
John Deere	Mopar	Porsche	Royal Infield
Mack	Oldsmobile	Renault	Suzuki
Peterbuilt	Plymouth	Toyota/Lexus	Triumph
White	Pontiac	VW/Audi	Yamaha



Sport Compact Connecting Rods

NISSAN

Part No.	Description	C-to-C	B.E. Bore	B.E. Thick	P.E. Bore	(mm)	P.E. Thick
B93771B-6	Patrol 4.5L	6.552"	2.361"	1.290"	.905"	23	1.025"
B93772B-6	Patrol 4.8L	6.436"	2.361"	1.290"	.905"	23	1.025"
B93773B-4	SR20	5.366"	2.008"	.896"	.866"	22	.896"
B93774B-4	240SX -KA24	6.495"	2.086"	.973"	.827"	21	1.000"
B93775B-6	350Z	5.677"	2.165"	.818"	.866"	22	.820"
B93776B-6	300ZX -VG30	6.069"	2.086"	.816"	.866"	22	.858"
B93777B-6	RB26DETT	4.783"	2.008"	.858"	.827"	21	.858"
B93778B-6	CA16DE / CA18DET 16 valve	5.236"	1.890"	.957"	.787"	20	.820"

Crower Rods, incorporate only the finest aircraft quality materials, heat treated to obtain that perfect balance of strength and durability.

Proper bolt torque: Torque rod bolts to 10 ft lbs on both sides, then torque to proper spec with one pull.

ROD BOLTS

Part No.	Torque	Dimension
90827-1	45 ft lbs	3/8 x 1.600
90824-1	25 ft lbs	5/16 x 1.500

All rods now available in Maxi-Light design. Specify "ML" before p/n

GM/CHEVROLET

Part No.	Make	Engine	C-to-C	B.E. Bore	B.E. Thick	P.E. Bore	(mm)	P.E. Thick
B93731B-4	GM	Ecotec 2.2L/2.0L	5.767"	2.052"	.943"	.787"	20	.945"
B93732B-4	GM	Ecotec 2.4L	5.715"	2.015"	.913"	.866"	22	.940"
B93736B-4	Saturn	1.9L	5.710"	1.976"	.974"	.787"	20	.975"
B93737B-4	Saturn	99 & up	5.846"	1.976"	.974"	.787"	20	.975"

FORD/MAZDA

Part No.	Make	Engine	C-to-C	B.E. Bore	B.E. Thick	P.E. Bore	(mm)	P.E. Thick
B93787B-4	Ford/Mazda	2.0L 93-97	5.322"	2.008"	.860"	.748"	19	.860"
B93788B-4	Ford	2.0L Zetec	5.482"	1.965"	.957"	.787"	20	.800"
B93789B-4	Ford/Mazda	2.3L Duratec	6.093"	2.087"	.859"	.826"	21	.710"
B93791B-4	Mazda	Miata 1.8L	5.234"	1.890"	.860"	.787"	20	.860"

MINI COOPER / BMW

Part No.	Make	Engine	C-to-C	B.E. Bore	B.E. Thick	P.E. Bore	(mm)	P.E. Thick
B93077B-4	Mini	01-up	5.180"	1.929"	.916"	.827"	21	.730"

VOLKSWAGEN / AUDI

Part No.	Make	Engine	C-to-C	B.E. Bore	B.E. Thick	P.E. Bore	(mm)	P.E. Thick
B93780B-4	VW	1.8 - 2.0L	5.669"	1.992"	.980"	.787"	20	.980"
B93781B-4	VW	2.0L	6.258"	1.992"	.980"	.826"	21	.980"
B93782B-6	VW	VR6	6.460"	2.237"	.784"	.787"	20	.784"

CUSTOM APPLICATIONS

Part No.	Description	Engine	Length	B.E. Bore
B93978-3	Stock Spec	3cyl	Stock Spec	Stock Spec
B93970B-4	Custom	4 cyl	Specify	Specify
B93980B-4	Stock Spec	4 cyl	Stock Spec	Stock Spec
B93971B-6	Custom	6 cyl	Specify	Specify
B93981B-6	Stock Spec	6 cyl	Stock Spec	Stock Spec
B93972B-8	Custom	8 cyl	Specify	Specify
B93973B-12	Custom	12 cyl	Specify	Specify
B93979-3	Custom	3cyl	Specify	Specify

All rods come bushed for floating pin. If press fit pin is desired, replace "B" with "PF" after part number.

Crower can rebuild your existing Crower connecting rods for extended use by rebushing the pin end, resizing, magna-flux inspection and new rod bolt installation. Send the rods to Crower with contact and payment information.

ROD BUSHINGS

Part No	Application	Dimension
90926-1	B16A, B Series, 4G63 (1g)	.827"
90947-1	D16, D15	.748"
90966-1	H22, H23, 4G63 (2g), Toyota	.866"
90987-1	VW, Toyota	.787"
90922-1	Custom application	Specify

Specify pin end width of your rods when odering.

For rod bushing specs. see pg. 197

Sport Compact Connecting Rods

Crower can rebuild your existing Crower connecting rods for extended use by rebushing the pin end, resizing, magna-flux inspection and new rod bolt installation. Send the rods to Crower with contact and payment information.

All rods now available in Maxi-Light design. Specify "ML" before p/n

Crower Rods, incorporate only the finest aircraft quality materials, heat treated to obtain that perfect balance of strength and durability.

MITSUBISHI/DSM

Part No.	Make	Engine	C-to-C	B.E. Bore	B.E. Thick	P.E. Bore	(mm)	P.E. Thick
B93761B-4	DSM	4G63 (1Gen)	5.906"	1.890"	1.115"	.827"	21	1.038"
B93762B-4	DSM	4G63 (2G) / Evo	5.906"	1.890"	1.038"	.866"	22	1.038"
B93763B-6	DSM	6G72 / VR-4	5.548"	2.086"	0.821"	.866"	22	0.835"
B93785B-4	DSM	420A / Neon	5.472"	2.007"	1.031"	.827"	21	1.031"

TOYOTA

Part No.	Make	Engine	C-to-C	B.E. Bore	B.E. Thick	P.E. Bore	(mm)	P.E. Thick
B93724B-4	Toyota	7AFES	5.216	2.008"	.858	.787	20	.865"
B93725B-4	Toyota	Scion XB	5.545"	1.693"	.705"	.708"	18	.705"
B93750B-4	Toyota	2RZ	5.315"	2.205"	1.015"	.9447"	23	1.015"
B93752B-4	Toyota	4AGE	4.803"	1.772"	.859"	.787"	20	.860"
B93753B-4	Toyota	3SGTE	5.410"	2.008"	1.055"	.866"	22	1.055"
B93754B-4	Toyota	5SFE	5.433"	2.166"	1.055"	.866"	22	1.055"
B93755B-4	Toyota	3TC	4.844"	2.008"	1.053"	.866"	22	1.053"
B93756B-6	Toyota	2JZ	5.590"	2.166"	1.020"	.866"	22	1.020"
B93757B-6	Toyota	7M/5M	5.980"	2.166"	.977"	.866"	22	.980"
B93751B-4	Toyota	1ZZ	5.772"	1.851"	.779"	.787"	20	.780"
B93759B-4	Toyota	2ZZ	5.433"	1.891"	.780"	.787"	20	.780"
B93758B-6	Toyota	1FZ-FE LndCrsr	6.063"	2.383"	1.095"	1.023"	26	1.095"
B93760B-8	Toyota	2UZ-FE LndCrsr	5.748"	2.166"	.902"	.866"	22	.830"

SUBARU

Part No.	Make	Engine	C-to-C	B.E. Bore	B.E. Thick	P.E. Bore	(mm)	P.E. Thick
B93765B-4	Subaru	EJ25 II - SOHC	5.162"	2.165"	0.842"	.905"	23	0.842"
B93768B-4	Subaru	EJ25 II - DOHC	5.185"	2.166"	0.842"	.905"	23	0.842"
B93767B-4	Subaru	EJ25 Phase I	5.185"	2.008"	0.841"	.905"	23	0.840"
B93766B-4	Subaru	WRX and STi	5.141"	2.166"	0.842"	.905"	23	0.842"

HONDA/ACURA

Part No.	Make	Engine	C-to-C	B.E. Bore	B.E. Thick	P.E. Bore	(mm)	P.E. Thick
B93726B-4	Acura	D16A (ZC)	5.394"	1.890"	.898"	.748"	19	.716"
B93727B-4	Acura	B17A VTEC	5.208"	1.890"	.935"	.827"	21	.900"*
B93728B-4	Acura	B18A-B/B20B	5.394"	1.890"	.935"	.827"	21	.900"*
B93729B-4	Acura	B18C VTEC	5.433"	1.890"	.858"	.827"	21	.900"*
B93733B-4	Honda	K20A3 5	5.453"	1.890"	.780"	.866"	22	.780"
B93735B-4	Honda	F22C (04-up)	5.893"	2.008"	.938"	.905"	23	.938"
B93738B-4	Acura	K20A	5.473"	2.008"	.780"	.866"	22	.780"*
B93739B-4	Honda	F20C	6.025"	2.008"	.938"	.905"	23	.940"
B93740B-4	Honda	D17A Civic	5.394"	1.890"	.780"	.748"	19	.900"*
B93741B-4	Honda	1.5L Civic	5.275"	1.772"	.899"	.748"	19	.710"
B93742B-4	Honda	1342cc	5.436"	1.693"	.898"	.748"	19	.710"
B93743B-4	Honda	1237cc	5.065"	1.693"	.858"	.669"	17	.710"
B93744B-4	Honda	B16A VTEC	5.287"	1.890"	.935"	.827"	21	.900"*
B93745B-4	Honda	D16 Series	5.394"	1.890"	.898"	.748"	19	.716"
B93746B-4	Honda	K24A	5.985"	2.008"	.780"	.866"	22	.900"*
B93747B-4	Honda	H23/F22	5.580"	2.008"	.935"	.866"	22	.940"*
B93748B-4	Honda	H22 VTEC	5.636"	2.008"	.935"	.866"	22	.940"*
B93749B-4	Honda	F23	5.551"	1.890"	.780"	.866"	22	.780"
B93720B-4	Honda	B16 Stroker	5.276"	1.890"	.935"	.787"	20	.900"
B93721B-4	Honda	B16 Stroker	5.356"	1.890"	.935"	.787"	20	.900"
B93722B-4	Honda	B18/20 Stroker	5.512"	1.890"	.935"	.787"	20	.900"
B93723B-4	Honda	B18/20 Stroker	5.564"	1.890"	.935"	.787"	20	.900"

For rod bushing specs. see pg. 197

** Not OEM thickness.*

Motorcycle Connecting Rods

CUSTOM APPLICATIONS

Part No.	Engine	Description
B93976B-4	4 cyl	Steel Alloy - Any Desired Specifications
T93976B-4	4 cyl	Titanium - Any Desired Specifications
B93975B-2	2 cyl	Steel Alloy - Any Desired Specifications
T93975B-4	2 cyl	Titanium - Any Desired Specifications

Note: To order the upgraded rod bolts (rated to 280,000 psi), refer to the rod bolt part numbers above and add the desired bolt to the end of the rod number.
Ex: B93089B-4 / 90845

Note: Titanium rods are available by replacing "B" with "T" before p/n

YAMAHA

Part No.	Engine	C-to-C	B.E. Bore	B.E. Thick	P.E. Bore	P.E. Thick
B93120B-4	R1 (04-up)	4.055"	1.456"	.885"	.669" / 17mm	.630"
B93121B-4	YZF R1	4.350"	1.536"	.819"	.669" / 17mm	.715"
B93122B-4	R6 (01-03)	3.603"	1.299"	.701"	.629" / 16mm	.630"
B93123B-4	YZF R6 (99-00)	3.622"	1.299"	.701"	.629" / 16mm	.700"
B93124B-4	FJ 1100/1200	4.665"	1.614"	.936"	.708" / 18mm	.800"
B93125B-4	FZR 1000	4.310"	1.536"	.819"	.748" / 19mm	.630"
B93126B-2	V-Max	4.882"	1.614"	.784"	.748" / 19mm	.675"
B93127B-1	XTZ 660 Raptor	5.374"	1.772"	.864"	.866" / 22mm	.866"
B93128B-1	TT 500 / XT 500	5.710"	1.645"	.943"	.826" / 20mm	.945"
B93129B-1	XT 600	5.335"	1.693"	.865"	.866" / 22mm	.865"

TRIUMPH

Part No.	Engine	C-to-C	B.E. Bore	B.E. Thick	P.E. Bore	P.E. Thick
B93130B-2	650 Twin T120	6.500"	1.770"	1.041"	.687"	1.000"
B93131B-2	750 Twin T140	6.000"	1.770"	1.041"	.750"	1.000"
B93132B-3	Triple (95-up)	4.587"	1.732"	.875"	.748" / 19mm	.875"
B93930B-3	3Cyl	Custom	Custom	Custom	Custom	Custom

DUCATI

Part No.	Engine	C-to-C	B.E. Bore	B.E. Thick	P.E. Bore	P.E. Thick
B93095B-2	996 Corsa	4.881"	1.772"	.863"	.748" / 19mm	.865"
B93078B-2	900SS / 906 / 907	5.118"	1.772"	.863"	.748" / 19mm	.865"
B93079B-2	851 / 748 / 916	4.882"	1.772"	.863"	.826" / 20mm	.860"

HONDA

Part No.	Engine	C-to-C	B.E. Bore	B.E. Thick	P.E. Bore	P.E. Thick
B93094B-4	CBR600 F3	3.732"	1.338"	.821"	.669" / 17mm	.600"
B93090B-4	CBR1100XX Blackbird	4.301"	1.693"	.852"	.748" / 19mm	.710"
B93098B-4	CBR1000RR (04-up)	4.084"	1.551"	.855"	.669" / 17mm	.630"

KAWASAKI

Part No.	Engine	C-to-C	B.E. Bore	B.E. Thick	P.E. Bore	P.E. Thick
B93072B-4	ZXR750	3.937"	1.456"	.898"	.708" / 18mm	.710"
B93091B-4	ZX9	4.112"	1.496"	.899"	.708" / 18mm	.710"
B93073B-4	ZX10 (04-up)	4.192"	1.477"	.822"	.669" / 17mm	.630"
B93076B-4	ZX11	4.370"	1.536"	.900"	.708" / 18mm	.900"
B93096B-4	ZX12	4.231"	1.575"	.932"	.827" / 21mm	.750"

SUZUKI

Part No.	Engine	C-to-C	B.E. Bore	B.E. Thick	P.E. Bore	P.E. Thick
B93071B-4	GSXR 600 (01-up)	3.750"	1.338"	.786"	.590" / 15mm	.635"
B93084B-4	GSXR 1300 Hayabusa(2008)	Call for Specs.		Call for Specs.		Call for Specs.
B93087B-4	GSXR 750 (00-up)	4.060"	1.417"	.786"	.590" / 15mm	.635"
B93086B-4	GSXR 1000	4.370"	1.496"	.786"	.629" / 16mm	.632"
B93088B-4	GSXR 1100 (Watercool)	4.606"	1.614"	.826"	.787" / 20mm	.826"
B93089B-4	GSXR 1300 Hayabusa	4.704"	1.614"	.826"	.787" / 20mm	.826"

For titanium rods, replace "B" with "T" in front of p/n on all of rods listed on this page.
Ex: T93089B-4

Crower motorcycle connecting rods are available for most popular engines and come in your choice of I-Beam or H-Beam design. H-11 alloy 220,000 p.s.i. rod bolts come standard, 280,000 p.s.i. rod bolts upgrade available upon request.

ROD BOLTS

Part No.	P.S.I.	Torque	Dimension
90824-1	220,000	25 ft lbs	5/16 x 1.500
90845-1	280,000	30 ft lbs	5/16 x 1.500
90827-1	220,000	45 ft lbs	3/8 x 1.600
90842-1	280,000	60 ft lbs	3/8 x 1.600
90847-1	280,000	275 in. lbs	1/4 x 1.375

Proper bolt torque: Torque rod bolts to 10 ft lbs on both sides, then torque to proper spec with one pull.

Note: If using stretch method, Crower recommends .004" to .006".

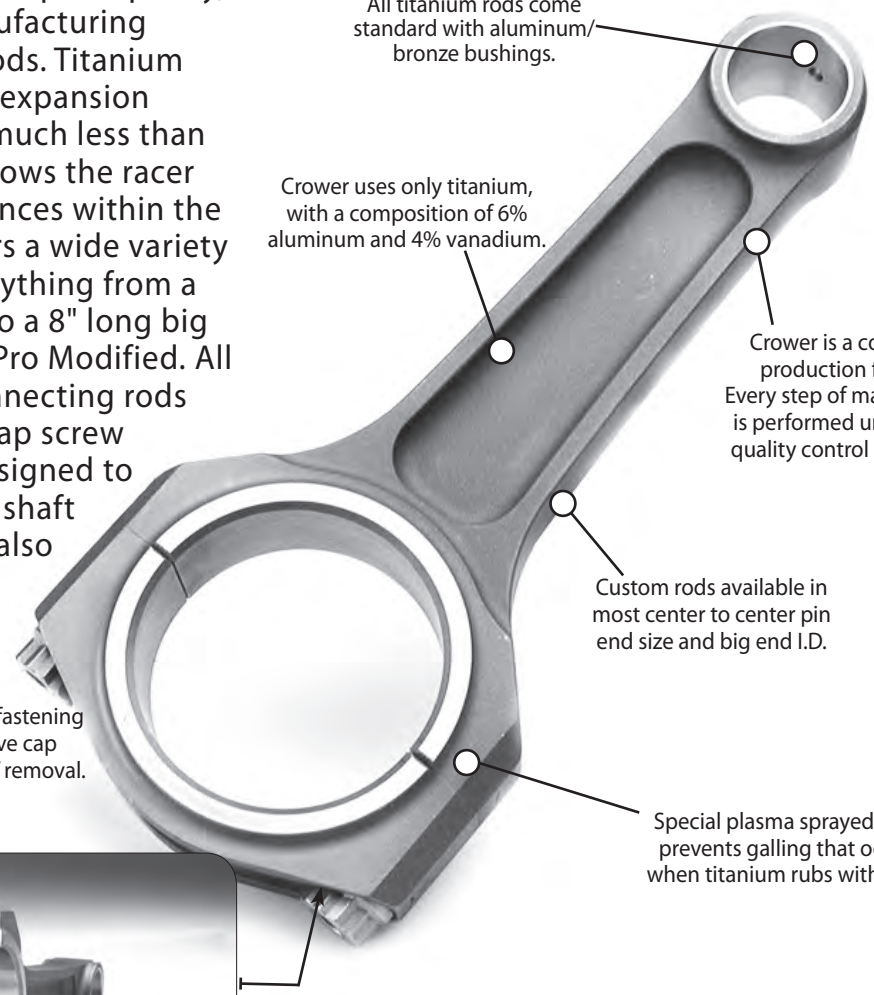
Crower Rods incorporate only the finest aircraft quality premium steel and titanium materials,heat treated to obtain that perfect balance of strength and durability.

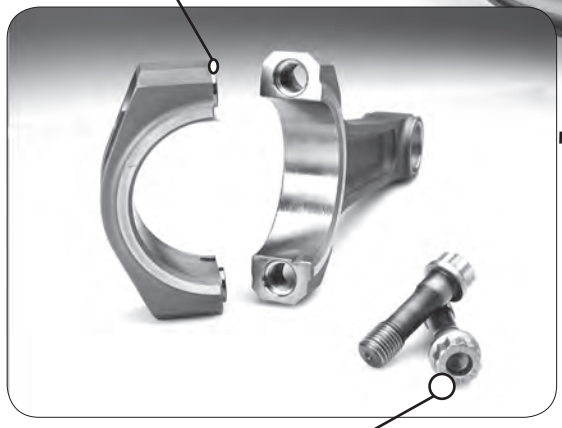
For rod bushing specs. see pg. 197

Titanium Connecting Rods

TITANIUM RODS

Crower uses only aerospace quality, titanium in the manufacturing of our billet Crowerods. Titanium has a lower thermal expansion rate than steel and much less than aluminum, which allows the racer to hold closer tolerances within the engine. Crower offers a wide variety of applications. Everything from a 4 cycle motorcycle to a 8" long big block Chevrolet for Pro Modified. All Crower titanium connecting rods are equipped with cap screw bolts and stroker designed to insure plenty of camshaft and case clearance, also reducing weight in noncritical areas.





AMS5844 ROD BOLT UPGRADE

Crower now offers a new AMS5844 rod bolt upgrade option available for all steel billet and titanium rods. Highly recommended for extreme duty rpm and endurance applications. Rated at 280,000 p.s.i., these bolts are corrosion resistant, nonmagnetic and deliver ultimate clamping capabilities for the highest cycle life. Be sure and specify upgrade option when ordering.

Titanium Connecting Rods

Ford/Buick

Part No.	Description	Length	B.E. Bore	Pin Dia.
T93974B-4	Ford 2.0L / 2.3L 4 cyl	Custom	Specify	Specify
T93907B-6	Buick 6 cyl	Custom	Specify	Specify
T93908B-8	Buick V8	Custom	Specify	Specify

Mopar

Part No.	Description	Length	B.E. Bore	Pin Dia.
T93934B-8	426 Hemi V8	Custom	Specify	Specify

Import Applications

Part No.	Description	Length	B.E. Bore	Pin Dia.
T93970B-4	4 cyl	Custom	Specify	Specify
T93971B-6	6 cyl	Custom	Specify	Specify
T93972B-8	8 cyl	Custom	Specify	Specify
T93973B-12	12 cyl	Custom	Specify	Specify

Mortorcycle (4 Cycle)

Part No.	Description	Length	B.E. Bore	Pin Dia.
T93088B-4	Suzuki GSX	4.606"	1.614"	.787"
T93089B-4	Suzuki Hayabusa	4.702"	1.614"	.787"
T93975B-2	2 cylinder	Custom	Specify	Specify
T93976B-4	4 cylinder	Custom	Specify	Specify

Custom Applications

Part No.	Description	Length	B.E. Bore	Pin Dia.
T93912B-4	Custom 4 cyl	Custom	Specify	Specify
T93913B-6	Custom 6 cyl	Custom	Specify	Specify
T93914B-8	Custom 8 cyl	Custom	Specify	Specify

Crower Moly lube #90897 is supplied with all titanium rods.

Chevrolet

Part No.	Description	Length	B.E. Bore	Pin Dia.
ST93000B-8	262-400 V8	5.700"	2.125"	.927"
ST93003B-8	262-400 V8	5.850"	2.125"	.927"
ST93002B-8	262-400 V8	6.000"	2.125"	.927"
ST93900B-8	262-400 V8	Custom	2.125"	.927"
ST93005B-8	262-400 V8	5.700"	2.225"	.927"
ST93008B-8	262-400 V8	5.850"	2.225"	.927"
ST93006B-8	262-400 V8	6.000"	2.225"	.927"
ST93009B-8	262-400 V8	6.125"	2.225"	.927"
ST93007B-8	262-400 V8	6.250"	2.225"	.927"
ST93905B-8	262-400 V8	Custom	2.225"	.927"
ST93010B-8	396-454 V8	6.136"	2.325"	.990"
ST93011B-8	396-454 V8	6.386"	2.325"	.990"
ST93014B-8	396-454 V8	6.405"	2.325"	.990"
ST93012B-8	396-454 V8	6.536"	2.325"	.990"
ST93015B-8	396-454 V8	6.625"	2.325"	.990"
ST93016B-8	396-454 V8	6.700"	2.325"	.990"
ST93017B-8	396-454 V8	6.800"	2.325"	.990"
ST93909B-8	396-454 V8	Custom	(7.250" & over)	.990"
ST93911B-8	396-454 V8	Custom	(under 7.250")	.990"
ST93906B-6	Chevy 6 cyl	Custom	Specify	Specify

All Crower small & big block titanium rods are stroker designed.
Crower Titanium lube #90897 is supplied with all sets of titanium rods.

Approximate Chevrolet V8 Weights

Small Block: 5.700" @ 480g • 6.000" @ 495g • 6.250" @ 548g
Big Block: 6.136" @ 540g • 6.536" @ 625g • 7.650" @ 724g

Crower has the capability of manufacturing just about any type of titanium connecting rod.

Proper bolt torque: Torque rod bolts to 10 ft lbs on both sides, then torque to proper spec with one pull.

For rod bushing specs. see pg. 197

Note: All non standard orders require a minimum 50% deposit.

Sportsman Connecting Rods

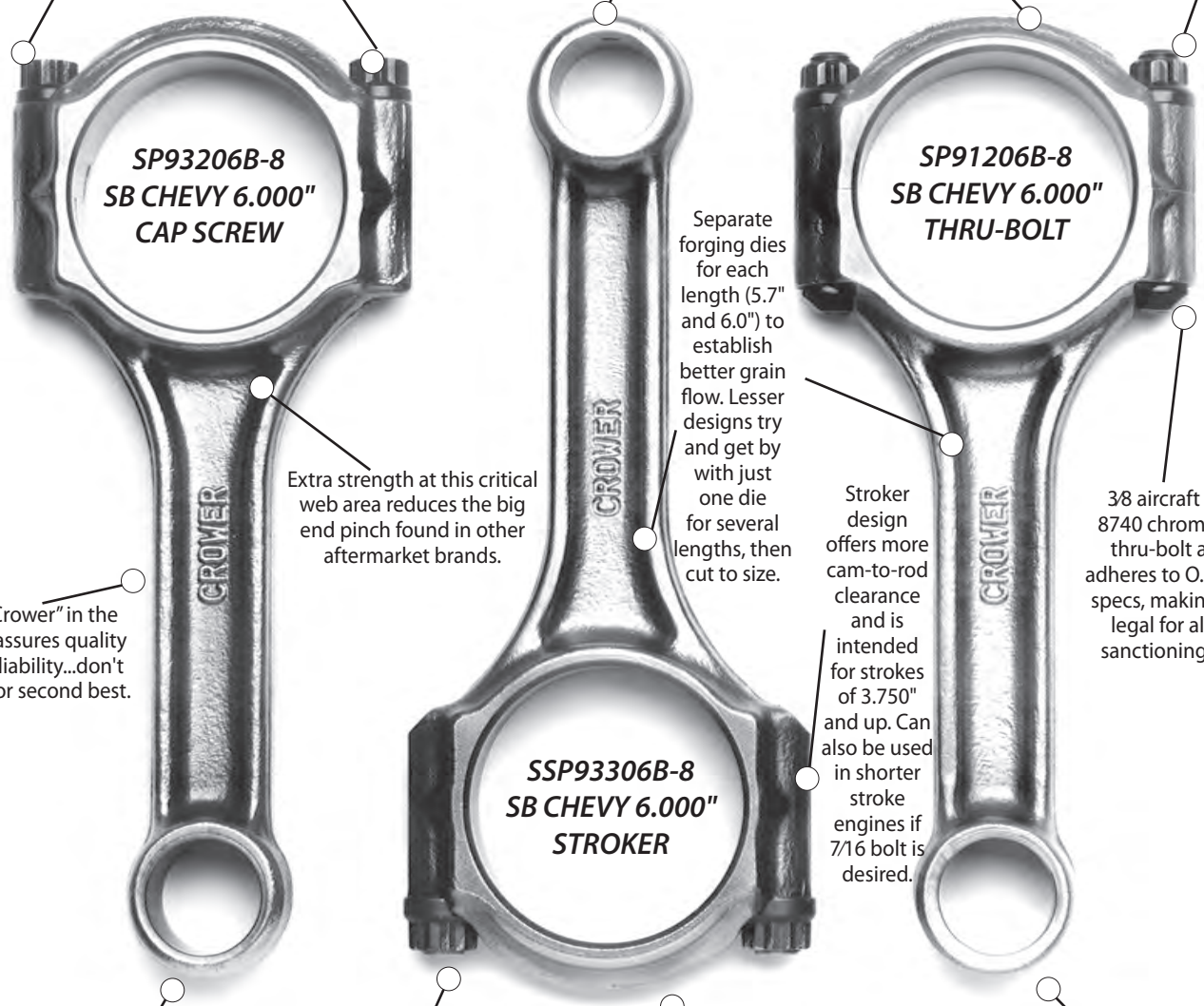
3/8 cap screw bolt delivers a lighter big end rotating weight.

Premium grade 3/8 cap screw bolts are rated at 180,000 p.s.i. (#90828)

Drilled and chamfered pin oil hole puts additional oil at the wrist pin to prevent galling.

Single ribbed cap delivers distortion free performance and removes excess weight at a noncritical area.

3/8 thru-bolt (#90805) and nut (#90814) are rated at 180,000 p.s.i.



Separate forging dies for each length (5.7" and 6.0") to establish better grain flow. Lesser designs try and get by with just one die for several lengths, then cut to size.

Extra strength at this critical web area reduces the big end pinch found in other aftermarket brands.

The "Crower" in the beam assures quality and reliability...don't settle for second best.

Stroker design offers more cam-to-rod clearance and is intended for strokes of 3.750" and up. Can also be used in shorter stroke engines if 7/16 bolt is desired.

3/8 aircraft quality, 8740 chromoly steel thru-bolt and nut adheres to O.E.M. stock specs, making it stock legal for all major sanctioning bodies.

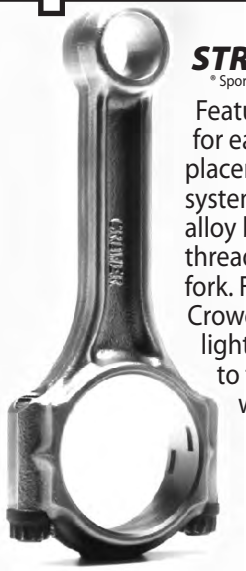
Properly engineered small end guarantees long, reliable pin alignment. Available in bushed aluminum/bronze or pressed fit pin.

Stroker design utilizes a larger 7/16 cap screw bolt for ultimate clamping ability (#90846).

Ribbed cap delivers distortion free performance at high horsepower and rpm.

Experienced engine builders know that heavy rods are notoriously hard on the wrist pin area. Crower reduces unwanted loads by minimizing overall weight.

Sportsman Connecting Rods



STROKER SPORTSMAN®

® Sportsman is a Registered Trademark of Crower, Inc.

Features a 3/8 cap screw design for easier cap removal and placement. The new fastening system features 8740 steel alloy bolts (180,000 p.s.i.) that thread directly into the rod fork. Fully CNC machined steel. Crower Sportsman rods are the lighter, yet stronger alternative to factory "pinks." Installs without the need of an expensive balance job.

APPROX. WEIGHT: 5.7" @ 595g • 6.0" @ 635g
HORSEPOWER RANGE: 500
RPM RANGE: 8200
TORQUE SPECS: 50 foot lbs.

Part No.	Engine	C- to -C	B.E. Bore	P.E. Bore	B.E. Width
SSP93300B-8	SB Chevy	5.700"	2.125"	.927"	.941"
SSP93302B-8	SB Chevy	6.000"	2.125"	.927"	.941"
SSP93303B-8	SB Chevy	6.125"	2.125"	.927"	.941"
SSP93305B-8	SBChevy	5.700"	2.225"	.927"	.941"
SSP93306B-8	SB Chevy	6.000"	2.225"	.927"	.941"
SSP93307B-8	SB Chevy	6.125"	2.225"	.927"	.941"

If Pressed Fit Pin desired, replace "B" after p/n (ex. SSP93300PF-8).

SPORTSMAN® CAP SCREW

® Sportsman is a Registered Trademark of Crower, Inc.

The cap screw designed Stroker Sportsman incorporates all of the strength and value of our inexpensive Sportsman model with the clearance advantages of a stroker design. The stroker design allows additional cam-to-rod clearance for strokes above 3.750". Crower Stroker Sportsman's are forged from high strength alloy and feature extremely reliable 7/16 8740 steel alloy cap screw bolts (180,000 p.s.i.). Proven lightweight design (under 600g).

APPROX. WEIGHT: 5.7" @ 585g • 6.0" @ 625g
HORSEPOWER RANGE: 500
RPM RANGE: 8200
TORQUE SPECS: 50 foot lbs.

Part No.	Engine	C- to -C	B.E. Bore	P.E. Bore	B.E. Width
SP93200B-8	SB Chevy	5.700"	2.125"	.927"	.941"
SP93202B-8	SB Chevy	6.000"	2.125"	.927"	.941"
SP93203B-8	SB Chevy	6.125"	2.125"	.927"	.941"
SP93205B-8	SB Chevy	5.700"	2.225"	.927"	.941"
SP93206B-8	SB Chevy	6.000"	2.225"	.927"	.941"
SP93207B-8	SB Chevy	6.125"	2.225"	.927"	.941"
SP93270B-8	Chevy LS1	6.100"	2.225"	.927"	.944"
SP93271B-8	Chevy LS1	6.100"	2.225"	.944"	.944"
SP93273B-8	Chevy LS1	6.125"	2.225"	.927"	.944"
SP93272B-8	Chevy LS1	6.125"	2.225"	.944"	.944"
SP93208B-4	Chevy II 4 cyl.	5.700"	2.125"	.927"	(set/4)
SP93209B-4	Chevy II 4 cyl.	6.000"	2.125"	.927"	(set/4)
SP93210B-6	Chevy 6 cyl.	5.700"	2.125"	.927"	(set/6)
SP93211B-6	Chevy 6 cyl.	6.000"	2.125"	.927"	(set/6)

If Pressed Fit Pin desired, replace "B" after p/n (ex. SP93200PF-8).
For Cosworth Vega, use #SP93208B-4

SPORTSMAN® THRU-BOLT

® Sportsman is a Registered Trademark of Crower, Inc.

First introduced back in 1987, the Crower Sportsman rod was the original high performance stock replacement rod. Features traditional thru-bolt and nut fasteners for stock legal classes. All Sportsman aircraft quality rods are forged from two separate dies, each dedicated to a specific length (5.7"/6.0"). This forms a more uniform molecular grain flow for a stronger, more reliable rod than other brands using one die for several lengths, then cutting to size. Includes 3/8 8740 bolts and nuts (180,000 p.s.i.).

APPROX. WEIGHT: 5.7" @ 585g • 6.0" @ 625g
HORSEPOWER RANGE: 550
RPM RANGE: 8200
TORQUE SPECS: 70 foot lbs.

Part No.	Engine	C- to -C	B.E. Bore	P.E. Bore	B.E. Width
SP91200B-8	SB Chevy	5.700"	2.125"	.927"	.941"
SP91202B-8	SB Chevy	6.000"	2.125"	.927"	.941"
SP91203B-8	SB Chevy	6.125"	2.125"	.927"	.941"
SP91205B-8	SB Chevy	5.700"	2.225"	.927"	.941"
SP91206B-8	SB Chevy	6.000"	2.225"	.927"	.941"
SP91207B-8	SB Chevy	6.125"	2.225"	.927"	.941"
SP91208B-4	Chevy II 4 cyl.	5.700"	2.125"	.927"	(set/4)
SP91209B-4	Chevy II 4 cyl.	6.000"	2.125"	.927"	(set/4)
SP91210B-6	Chevy 6 cyl.	5.700"	2.125"	.927"	(set/6)
SP91211B-6	Chevy 6 cyl.	6.000"	2.125"	.927"	(set/6)

If Pressed Fit Pin desired, replace "B" after p/n (ex. SP91200PF-8).

For rod bushing specs. see pg. 197

Sportsman Connecting Rods

BIG BLOCK SPORTSMAN®

® Sportsman is a Registered Trademark of Crower, Inc.

APROX. WEIGHT: 6.536" @ 830g • 6.800" @ 860g
HORSEPOWER RANGE: 1000+
RPM RANGE: 8500
TORQUE SPECS: 70 foot lbs.

Part No.	Engine	C- to -C	B.E. Bore	P.E. Bore
SP93410B-8	396-454 Chevy	6.136"	2.325"	.990"
SP93411B-8	396-454 Chevy	6.386"	2.325"	.990"
SP93415B-8	396-454 Chevy	6.536"	2.325"	.990"
SP93416B-8	396-454 Chevy	6.625"	2.325"	.990"
SP93417B-8	396-454 Chevy	6.700"	2.325"	.990"
SP93418B-8	396-454 Chevy	6.800"	2.325"	.990"
SP93419B-8	400-455 Pontiac	6.625"	2.374"	.980"

If Pressed Fit Pin desired, replace "B" after p/n (ex. SP93410PF-8).

The big block version of our popular Sportsman design, at an economical price. Available for both Big Block Chevrolet and Pontiac applications. Features 7/16 high strength steel alloy cap screw bolts rated at 180,000 p.s.i. for unrivaled strength.

FORD SPORTSMAN®

® Sportsman is a Registered Trademark of Crower, Inc.

WEIGHT: 5.090" @ 560g • 5.155" @ 580g
HORSEPOWER RANGE: 500
RPM RANGE: 8200
TORQUE SPECS: 50 foot lbs.

Part No.	Engine	C- to -C	B.E. Bore	P.E. Bore	B.E. Width
SP91224B-8	302	5.090"	2.239"	.912"	.832"
SP91225B-8	302	5.155"	2.239"	.912"	.832"
SP91226B-8	302	5.315"	2.239"	.912"	.832"
SP91227B-8	302	5.090"	2.225"	.927"	.941"
SP91228B-8	302	5.155"	2.225"	.927"	.941"
SP91229B-8	302	5.315"	2.225"	.927"	.941"
SP91230B-4	2.0L	5.000"	2.165"	.944"	1.010"
SP91235B-4	2.0L	5.700"	2.165"	.927"	1.010"
SP91236B-4	2.0L	5.700"	2.125"	.927"	1.010"
SP91231B-4	2.3L	5.200"	2.172"	.912"	.990"
SP91232B-4	2.3L	5.400"	2.172"	.912"	.990"
SP91233B-4	2.3L	5.500"	2.172"	.912"	.990"
SP91234B-4	2.3L	5.700"	2.172"	.927	.990"
SP91237B-4	2.3L	5.700"	2.125"	.927	.990"
SP91220B-8	Custom 8 cylinder application (set/8)				
SP91221B-4	Custom 4 cylinder application (set/4)				

A Ford version of our extremely popular 4340 Sportsman high performance rod. Forged from USA made 4340 chromoly steel, these rods come standard with aircraft quality, 3/8 bolts (8740 material) and nuts rated to 180,000 p.s.i.

If Pressed Fit Pin desired, replace "B" after p/n (ex. SP91224PF-8). All weights are approximate.
SP91224 - Lt Model Stock / SP91225 - Early Model Stock
SP91231 - Stock 2300cc
.832" - Ford width, .941" - Chevy width

FORD SPORTSMAN®

® Sportsman is a Registered Trademark of Crower, Inc.

APROX. WEIGHT: 5.7" @ 625g • 6.0" @ 647g
HORSEPOWER RANGE: 500
RPM RANGE: 8200
TORQUE SPECS: 50 foot lbs.

Part No.	Engine	C- to -C	B.E. Bore	P.E. Bore	B.E. Width
SP93230B-4	2.0L	5.000"	2.165"	.944"	1.010"
SP93231B-4	2.3L	5.200"	2.172"	.912"	.990"
SP93232B-4	2.3L	5.400"	2.172"	.912"	.990"
SP93233B-4	2.3L	5.500"	2.172"	.912"	.990"
SP93234B-4	2.3L	5.700"	2.172"	.927"	.990"
SP93235B-4	2.0L	5.700"	2.165"	.927"	1.010"
SP93236B-4	2.0L	5.700"	2.125"	.927"	1.010"
SP93237B-4	2.3L	5.700"	2.125"	.927"	.990"
SP93238B-4	2.3L	6.000"	2.172"	.927"	.990"

If Pressed Fit Pin desired, replace "B" after p/n (ex. SP93230PF-4).
SP93230B-4 is SCCA legal

Crower offers the Ford Sportsman for the 2.0L & 2.3L Ford in a cap screw design. Forged from the best aircraft quality steel. Ford Sportsman's come standard with aircraft quality 3/8 8740 steel alloy cap screw bolts rated at 180,000 p.s.i.

For rod bushing specs. see pg. 197

Rod Bolts, & Nuts

ROD BOLTS

Available in three unique styles, depending on your rod design and horsepower requirement. All Crower Sportsman feature high strength steel alloy bolts (180,000 p.s.i.), while all Crower steel billet and titanium rods come standard with H-11 tool steel bolts (220,000 p.s.i.). But for extreme rpm and endurance applications, Crower offers the new AMS5844 bolt (285,000 p.s.i.) available as an upgrade option. Both feature a 12-point head and rolled fillets, thread rolled after heat-treat. To determine which bolts are required for a particular rod, contact Crower. Sold by the piece or set. Bolt lengths are measured from under the head to the end of the threaded portion.

Part No.	Description	Torque Specs	Dimension
	8740 STEEL ALLOY (180,000 p.s.i.)		
90800-1	Cap Screw 12-pt	70 ft lbs	7/16 x 2.000"
90802-1	Thru-bolt (SB, F)	65 ft lbs	7/16 x 1.715"
90803-1	Thru-bolt (F)	65 ft lbs	7/16 x 1.940"
90804-1	Thru-bolt (F)	65 ft lbs	7/16 x 2.320"
90805-1	Thru-bolt (B, SP^{SB})	50 ft lbs	3/8 x 1.920"
90807-1	Thru-bolt (SB)	65 ft lbs	7/16 x 2.070"
90828-1	Cap Screw bolt 12-pt (SP^{SB})	50 ft lbs	3/8 x 1.600"
90829-1	Cap Screw bolt 12-pt (SP^{BB})	70 ft lbs	7/16 x 1.800"
90846-1	Cap Screw (SSP)	70 ft lbs	7/16 x 1.440"
	H-11 TOOL STEEL ALLOY (220,000 p.s.i.)		
90820-1	Cap Screw bolt 12-pt	75 ft lbs	7/16 x 1.800"
90824-1	Cap Screw bolt 12-pt	25 ft lbs	5/16 x 1.500"
90825-1	Cap Screw bolt 12-pt	75 ft lbs	7/16 x 1.700"
90826-1	Cap Screw bolt 12-pt	75 ft lbs	7/16 x 1.540"
90827-1	Cap Screw bolt 12-pt	45 ft lbs	3/8 x 1.600"
	AMS5844 STEEL ALLOY (280,000 p.s.i.)		
90830-1	Cap Screw bolt 12-pt	90 ft lbs	7/16 x 1.540"
90831-1	Cap Screw bolt 12-pt	90 ft lbs	7/16 x 1.700"
90832-1	Cap Screw bolt 12-pt	90 ft lbs	7/16 x 1.800"
90842-1	Cap Screw bolt 12-pt	60 ft lbs	3/8 x 1.600"
90845-1	Cap Screw bolt 12-pt	30 ft lbs	5/16 x 1.500"
90847-1	Cap Screw bolt 12-pt	275 in. lbs	1/4 x 1.375"

Proper bolt torque: Torque rod bolts to 10 ft lbs on both sides, then torque to proper spec with one pull.

***Thru-bolt torque specs based on steel rods using motor oil.**
***Cap Screw 8740 torque specs based on steel rods using oil**
***Cap Screw H-11 torque specs based on steel rods using anti-seize.**
***AMS5844 torque specs based on steel rods using anti-seize.**
*** Bolts for titanium rods require special lubricant available from Crower.**

Specify -8 after part number if four cylinder, -12 if six or -16 in eight cyl.
Note: If using stretch method, Crower recommends .004" to .006".

ROD NUTS

Crower offers two grades of quality rod nuts. The H-11 tool steel nuts are rated at 220,000 p.s.i., while the high strength steel alloy nuts are rated at 180,000 p.s.i. Sold separately, by the piece.

Part No.	Description	Dimension
90811-1	Billet or Forged Rods	7/16
90813-1	Billet Rods	11/32
90814-1	Billet & Sportsman Rods , 12-point Alloy	3/8

STRETCH GAUGE

Crower highly recommends using a stretch gauge to tighten rod bolts to their recommended stretch figures. This tool will provide accurate and repeatable results every time if used correctly. Includes dial indicator, fixture and instructions.

Part No.	Description
90700	Rod bolt stretch gauge indicator

Bushings

ROD BUSHINGS

Crower uses premium aluminum-bronze one piece billet bushings in all of the rods we manufacture. These high quality bushings are sold separately, by the piece.

Part No.	Description	Dimension
90912-1	Ford, Aluminum-Bronze	.912"
90922-1	Custom, Aluminum-Bronze	–
90926-1	Import, Aluminum-Bronze	.826"
90927-1	SB Chevrolet, Aluminum-Bronze	.927"
90927N-1	SB Chevrolet, Alum-Bronze (small O.D.)	.927"
90940-1	Ford, Aluminum-Bronze	1.040"
90944-1	Ford, Aluminum-Bronze	.944"
90947-1	Import, Aluminum-Bronze	.748"
90966-1	VW, Chrysler, Honda, Alum-Bronze	.866"
90975-1	Ford, Aluminum-Bronze	.975"
90980-1	Pontiac, Aluminum-Bronze	.980"
90984-1	Mopar, Aluminum-Bronze	.984"
90990-1	BB Chevrolet, Aluminum-Bronze	.990"
90994-1	Mopar, Aluminum-Bronze	1.094"

Note: Custom orders available, specify bore, pin dia and length.
Customer needs to specify width or overall length.

ALIGNMENT SLEEVES

Crower hollow dowel connecting rod alignment sleeves are precision ground from high grade alloy. Sold by the piece.

Part No.	Description	Dimension
90850-1	Rod alignment sleeve (1 only)	5/16
90851-1	Rod alignment sleeve (1 only)	3/8
90852-1	Rod alignment sleeve (1 only)	7/16

ROD BOLT LUBRICANT

In order to achieve proper preload during rod bolt installation, it is important to use the lubricant that is recommended for that particular bolt and rod combination.

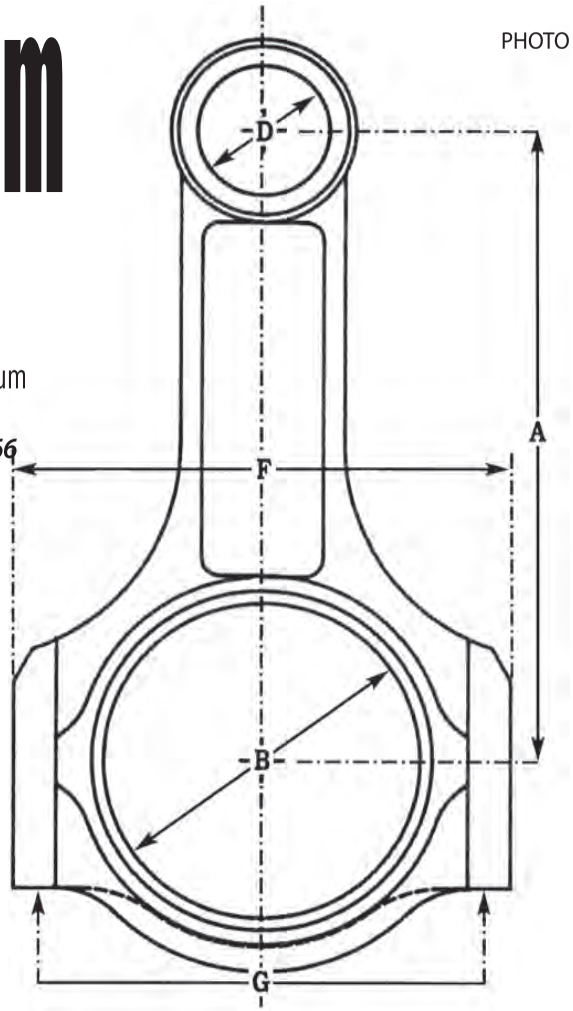
- Steel rods with 8740 bolts must use straight motor oil as lubricant.
- Steel rods with H-11 or upgraded AMS5844 bolts must use Anti-Seize (#90898).
- Titanium rods with H-11 or AMS5844 bolts must use special Crower titanium lube (#90897).

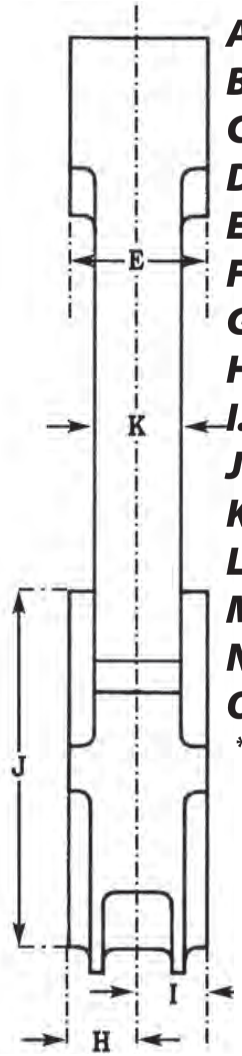
Part No.	Description
90897	Crower Titanium Lube (Titanium rods) 1/2 oz tub
90897C	Crower Titanium Lube (Titanium rods) 2 lb, 10 oz container
90898	Heavy-Duty Anti-Seize (Steel rods w/H-11 or AMS5844)

Note: For steel rods with 8740 or H-11 bolts use straight motor oil.
Note: Crower #90898 is same as Loctite #51609

Crowerod Form

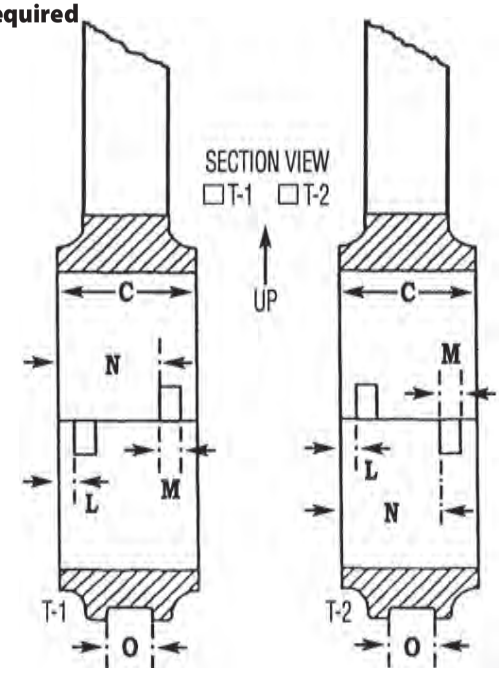
PHOTO COPY





A.* _____ Center to Center Length
B.* _____ Big End Housing Bore
C.* _____ Big End Width
D.* _____ Pin End Bore
E.* _____ Pin End Width
F. _____ Overall BE Width
G. _____ Bolt to Bolt Width
H. _____ BE Offset
I. _____ BE Offset
J. _____ Big End Ring Diameter
K. _____ Beam Width
L. _____ Tang Positioning
M. _____ Tang Width
N. _____ Tang Dimension
O. _____ Rib to Rib Width

***Required**



Quantity Desired: _____

☐ I-Beam ☐ H-Beam

☐ Premium Steel ☐ 94 Series ☐ Titanium

FAX COMPLETED FORM TO 619-661-6466
EMAIL: engr@crower.com

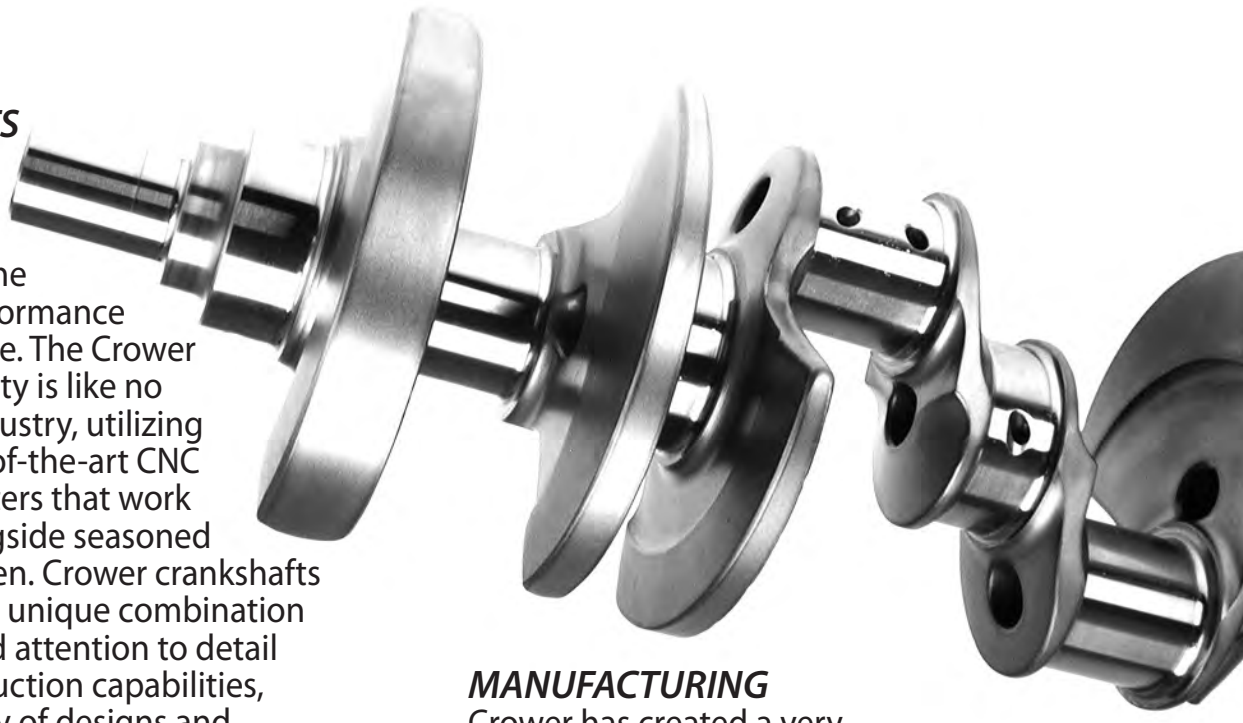
Measurement in inches or millimeters

Previous W.O. No.:_____
Customer: _____
Company:_____
Address:_____
_____
Phone: _____
Fax: _____
Email:_____

Engine Make: _____
No. of Cylinders: _____
Cylinder Bore Size:_____
Target Weight: _____
Max RPM: _____
Max Horsepower:_____
Turbo/Boost: _____p.s.i./bar
Nitrous Oxide: _____ HP Shot

For technical support call 619-661-6477 (7am to 5pm PST) • 24 hour fax: 619-661-6466 • www.crower.com

Crankshafts



CROWER CRANKSHAFTS

Choose a Crower crankshaft and you'll get the finest high performance crankshaft made. The Crower crankshaft facility is like no other in the industry, utilizing massive, state-of-the-art CNC machining centers that work in unison, alongside seasoned master craftsmen. Crower crankshafts incorporate the unique combination of precision and attention to detail with high production capabilities, in a wide variety of designs and applications.

THE MATERIAL

Crower Crankshafts are made from the finest quality materials in the world. Our top of the line forged cranks are made from aerospace quality, vacuum degassed 4340 chromoly steel. Our 4340 forged cranks are "non-twist" drop forged for the strongest crankshafts on the market. Crower's billet cranks utilize either 4340 or EN30B materials. It's your choice at Cower, we make what you want and need for your application.

MANUFACTURING

Crower has created a very effective combination of streamlined production capabilities and quality engineering that produces better crankshafts, quicker and more accurately than any competing crankshaft manufacturer. Crower combines the latest CNC machining centers with nearly 30 years of crankshaft manufacturing experience, to deliver the highest quality crankshaft, built to exacting specifications, at an affordable price. The capability of manufacturing from round bar allows Crower to produce steel billet crankshafts for just about any engine make to any desired stroke and horsepower needs.

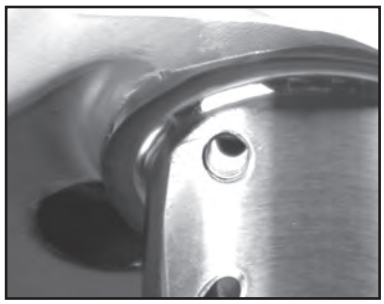
GUARANTEED

When you purchase a Crower crankshaft you'll get a quality crankshaft, manufactured from the finest materials to exacting tolerances, that goes unmatched in the high performance industry. You are guaranteed precision indexing and throw-to-throw consistency that engine builders swear is absolutely perfect. When you install a genuine Crower crankshaft in your engine, you'll do so with the peace of mind that it will perform flawlessly.

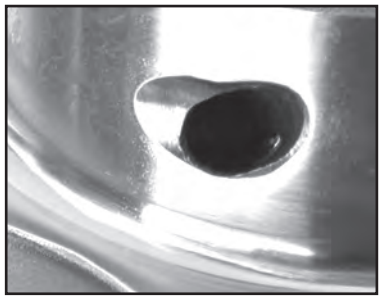
Crankshafts

A TYPICAL SCENARIO

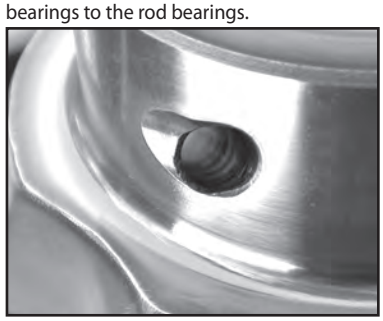
For years you've been running a stock crank and have never experienced rod bearing failure. You decide to "step-up" and replace your stock crank with an aftermarket brand. Immediately you encounter bearing scuff or total bearing failure. This scenario happens often, much to the dismay of the engine builder.



Looking from the rod, back up through the main, you can see daylight, indicating it's a genuine Crower crankshaft with the "straight-shot" oiling system.



The unique teardrop scoop and exclusive Crower "straight-shot" oiling system increases critical oil flow from the main bearings to the rod bearings.



Entry holes for the rod feed are located at the O.D. of the main, allowing oil to flow equally and unrestricted to the bearings. This is key to prolonging bearing life.

THE PROBLEM

On most aftermarket brands the rod feed hole is only drilled to the centerline of the main. This method of drilling doesn't deliver enough oil to the rod . Creating a high centrifuge, high pressure zone at the main, restricting critical oil flow intended for your rods. As engine rpm increases this centrifuge effect gets worse, possibly resulting in severe crankshaft damage or even total engine destruction. Not the performance characteristics you expected when you switched to an aftermarket brand crankshaft.

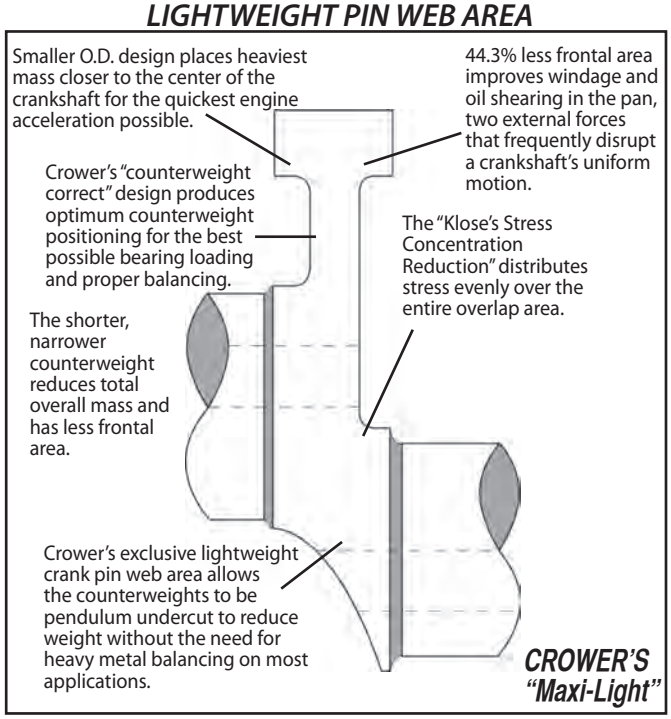
THE SOLUTION
STRAIGHT-SHOT OILING

After extensive research and design, Crower engineers developed the straight-shot oiling system and virtually eliminates bearing burnout and customer complaints. It features two Crower exclusives, off-center drilling and the teardrop design oil hole, which scoops oil at the main and forces it into the rod feed hole. Although it's time consuming, we feel it's worth it.

THE PROVEN FACTS

It has been proven time and time again, "the lighter the parts, the quicker the throttle response." This is no more evident than in the components that make up the bottom end of an engine. Reducing a crankshafts counterweight mass is critical in getting quicker acceleration and deceleration. It also alleviates stress and engine wear and improves oil shearing in the pan.

PENDULUM UNDERCUTTING AND LIGHTWEIGHT PIN WEB AREA



REVOLUTIONARY DESIGN

The Crower Maxi-Light crankshaft redefines the term "light rotating mass" by attaining just the right ratio of a smaller O.D. counterweight with an exclusive lightweight crank pin web area. By lightening the crank pin web area we are able to machine excess material from the center of the counterweights without adversely effecting balancing. This is Crower's patented pendulum undercutting. Lighter than any other crankshaft like it on the market, the Maxi-Light is structurally just as strong and easy to balance. Although competing manufacturer's claim to have comparable designs similar to the Crower Maxi-Light, consider the fact that it takes much more than just scalloping out the center of the counterweight to achieve the correct combination of light rotating mass and proper balance. Crower pioneered pendulum undercutting the counterweights back in 1989.

Crankshafts

PURE-STOCK®

® Pure-Stock is a Registered Trademark of Crower, Inc.

Ideal for stock class specifications

When the rules call for a "bone stock" crankshaft, go with Crower's Pure-Stock. Factory GM forging made from S38 micro alloy. Pure-Stock means just that. No lightening holes, O.D. trimming, or any other lightening features that would jeopardize "stock" status. Crower race-prepping includes 1⁄8" radii and Crower heat-treat for added strength (same heat-treat used on our 4340 cranks). Other Crower features include thorough magna-flux inspection, chamfered oil holes, end-to-end index check and polish.

WEIGHT: Stock Weight (55-56 lbs)

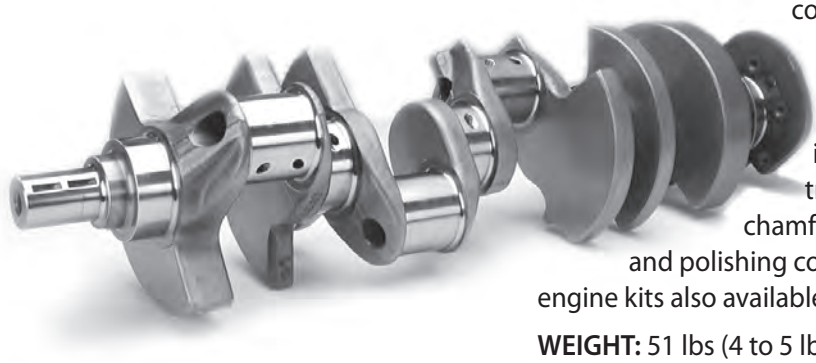
Part No.	Description	Stroke	Main
P95121	Chevrolet V8 Small Block	3.480"	2.448"
P95120	Chevrolet V8 Small Block	Custom	Custom

All weights are approximate.
Note: Only available in the above stroke and main size. No custom orders available.
Note: You must use Crower narrowed and chamfered engine bearings.

STOCK-PLUS®

® Stock-Plus is a Registered Trademark of Crower, Inc.

Raw GM crank forgings are shipped directly from GM to Crower. The stock GM part number is forged into the counterweight. Features include lightening holes and O.D. trimming that reduces weight by 4 to 5 lbs under stock. Crower race-prep includes 1⁄8" radii and Crower heat-treat. Thorough magna-flux inspection, chamfered oil holes, end-to-end index check and polishing come standard. Complete stock legal engine kits also available.



WEIGHT: 51 lbs (4 to 5 lbs under stock GM weight)

Part No.	Description	Stroke	Main
SP95121	Chevrolet V8 Small Block	3.480"	2.448"
SP95120	Chevrolet V8 Small Block	Custom	Custom

All weights are approximate.
Special order available, specify rod & main bearing.
Note: You must use Crower narrowed and chamfered engine bearings.

Crankshafts

Small Block Chevrolet V8 - 262 267 283 302 305 307 327 350 400

STANDARD

New lightened version of our popular Standard design. Premium 4340 NT (non-twist) forgings, Crower's standard crankshaft features straight-shot oiling, jumbo 1⁄8" radii, heat-treating, teardrop oil holes, "counterweight-correct" design. Four lightening holes come standard. 100% American Made

WEIGHT: 53-57 lbs (depends on stroke and main)

Part No.	Description	Stroke	Main
95120	Chevrolet V8 Small Block	Custom	Specify
95121	Chevrolet V8 Small Block	3.480"	Specify
95122	Chevrolet V8 Small Block	3.500"	Specify
95123	Chevrolet V8 Small Block	3.562"	Specify
95124	Chevrolet V8 Small Block	3.625"	Specify
95125	Chevrolet V8 Small Block	3.750"	Specify
95126	Chevrolet V8 Small Block	3.800"	Specify
95127	Chevrolet V8 Small Block	3.875"	Specify
95128	Chevrolet V8 Small Block	4.000"	Specify
95129	Chevrolet V8 Small Block	4.125"	Specify
95110C	Chevrolet V8 Small Block (Billet)	4.250"	Specify

All weights are approximate.
Note: Specify Rod & Main sizes.
Note: Specify rod length to insure proper piston to counterweight clearance.
Note: Specify Standard or BB Nose.

ENDURO

The Enduro is designed for extreme duarbility. Used in pro street, heavy nitrous and blown applications. Our 100% American made forging, is the same one used to make our Ultra-Light crankshafts.The only difference is the amount of machining time and less debur. 1⁄8" radii, heat-treat, "counterweight correct" design and straight shot oiling. Comes standard with four lightening holes. 100% American Made

WEIGHT: 57-59 lbs (determined by stroke, rod, and main size.)

Part No.	Description	Stroke	Main
E95121X4	Chevy Small Block	3.480"	Specify
E95122X4	Chevy Small Block	3.500"	Specify
E95124X4	Chevy Small Block	3.625"	Specify
E95125X4	Chevy Small Block	3.750"	Specify
E95127X4	Chevy Small Block	3.875"	Specify
E95128X4	Chevy Small Block	4.000"	Specify
E95129X4	Chevy Small Block	4.125"	Specify

Includes 4 lightening holes.
All weights are approximate.
Note: Specify Rod & Main sizes.
Note: Specify rod length to insure proper piston to counterweight clearance.
Note: Specify Standard or BB Nose.

Crankshafts

LIGHT-WEIGHT

Our 4340 Light-Weight includes standard features like straight shot oiling, 1⁄8" radii, heat treat, plus lightweight profiling, center counterweight removal, four lightening holes and radius edges. Smaller O.D. reduces rotating mass for quicker response, and less drag.100% American Made. Perfect choice for 50lb class restrictions.

WEIGHT: 48-51 lbs (Determined by stroke, rod, and main size)

Part No.	*Description*	*Stroke*	*Main*
LW95120	Chevrolet V8 Small Block	Custom	Specify
LW95115	Chevrolet V8 Small Block	3.000"	Specify
LW95118	Chevrolet V8 Small Block	3.125"	Specify
LW95119	Chevrolet V8 Small Block	3.250"	Specify
LW95111	Chevrolet V8 Small Block	3.320"	Specify
LW95112	Chevrolet V8 Small Block	3.330"	Specify
LW95113	Chevrolet V8 Small Block	3.335"	Specify
LW95114	Chevrolet V8 Small Block	3.340"	Specify
LW95121	Chevrolet V8 Small Block	3.480"	Specify
LW95122	Chevrolet V8 Small Block	3.500"	Specify
LW95123	Chevrolet V8 Small Block	3.562"	Specify
LW95124	Chevrolet V8 Small Block	3.625"	Specify
LW95125	Chevrolet V8 Small Block	3.750"	Specify
LW95126	Chevrolet V8 Small Block	3.800"	Specify
LW95127	Chevrolet V8 Small Block	3.875"	Specify
LW95128	Chevrolet V8 Small Block	4.000"	Specify
LW95129	Chevrolet V8 Small Block	4.125"	Specify

Note: Specify Rod & Main sizes
Note: Specify Std. or BB Nose.

Crankshafts

Small Block Chevrolet V8 - 262 267 283 302 305 307 327 350 400

MAXI-LIGHT ®

This premium crankshaft was developed for Sprint car and various Late Model applications. The Maxi-Light combines the best features from our race proven Ultra-Light and Light-Weight designs. Machined from our premium USA made 4340 non-twist chromoly forging to create the strongest, most reliable crankshaft that money can buy. This crankshaft delivers a small rotating mass for improved throttle response. 100% American Made

WEIGHT: 43 - 45 lbs

Note:
Specify rod and main diameters.
Specify Standard or BB Nose.
All cranks come with 1/8" radius for strength and reliability.
Rod and Main Bearings are available from Crower.

Part No.	Description	Stroke	Main
ML95120	Chevrolet V8 Small Block	Custom	Specify
ML95115	Chevrolet V8 Small Block	3.000"	Specify
ML95118	Chevrolet V8 Small Block	3.125"	Specify
ML95119	Chevrolet V8 Small Block	3.250"	Specify
ML95111	Chevrolet V8 Small Block	3.320"	Specify
ML95112	Chevrolet V8 Small Block	3.330"	Specify
ML95113	Chevrolet V8 Small Block	3.335"	Specify
ML95114	Chevrolet V8 Small Block	3.340"	Specify
ML95121	Chevrolet V8 Small Block	3.480"	Specify
ML95122	Chevrolet V8 Small Block	3.500"	Specify
ML95123	Chevrolet V8 Small Block	3.562"	Specify
ML95124	Chevrolet V8 Small Block	3.625"	Specify
ML95125	Chevrolet V8 Small Block	3.750"	Specify
ML95126	Chevrolet V8 Small Block	3.800"	Specify
ML95127	Chevrolet V8 Small Block	3.875"	Specify
ML95128	Chevrolet V8 Small Block	4.000"	Specify
ML95129	Chevrolet V8 Small Block	4.125"	Specify

Small Block Chevrolet V8 - 262 267 283 302 305 307 327 350 400

ULTRA-LIGHT®

® Ultra-Light is a Registered Trademark of Crower, Inc.

The Crower Ultra-Light is Crower's premium crank. Includes all the standard 4340 NT (non-twist forging) features, plus ultra-lightweight profiling, pendulum undercutting, gun drilled mains, four lightening holes and radius edges. Less drag in oil increases horsepower, rapid response throttle . 100% American Made.

WEIGHT: 36-39 lbs (Determined by stroke, rod, and main size.)

Part No.	Description	Stroke	Main
UL95120	Chevrolet V8 Small Block	Custom	Specify
UL95115	Chevrolet V8 Small Block	3.000"	Specify
UL95118	Chevrolet V8 Small Block	3.125"	Specify
UL95119	Chevrolet V8 Small Block	3.250"	Specify
UL95111	Chevrolet V8 Small Block	3.320"	Specify
UL95112	Chevrolet V8 Small Block	3.330"	Specify
UL95113	Chevrolet V8 Small Block	3.335"	Specify
UL95114	Chevrolet V8 Small Block	3.340"	Specify
UL95121	Chevrolet V8 Small Block	3.480"	Specify
UL95122	Chevrolet V8 Small Block	3.500"	Specify
UL95123	Chevrolet V8 Small Block	3.562"	Specify
UL95124	Chevrolet V8 Small Block	3.625"	Specify
UL95125	Chevrolet V8 Small Block	3.750"	Specify
UL95126	Chevrolet V8 Small Block	3.800"	Specify
UL95127	Chevrolet V8 Small Block	3.875"	Specify
UL95128	Chevrolet V8 Small Block	4.000"	Specify

Note:
All rod and main diameters available.
Specify Standard or BB Nose.
Large 1/8" Radius is Standard chamfered
Bearings available from Crower.

Crankshafts

Small Block Chevrolet V8 - 262 267 283 302 305 307 327 350 400

DIHEDRAL ULTRA-LIGHT®

Designed for the ultimate racing application. Features include tapered "airplane wing" counterweights for less windage and pendulum undercutting of the counterweights. Available in standard or big block nose. Star flange and high rpm oil drilling included. Specify rod & main size when ordering. 100% American Made.

WEIGHT: 36-39 lbs (Determined by stroke, rod, and main sizes.)

Part No.	*Description*	*Stroke*	*Main*
UL95120D	Chevrolet V8 Small Block	Custom	Specify
UL95119D	Chevrolet V8 Small Block	3.250"	Specify
UL95111D	Chevrolet V8 Small Block	3.320"	Specify
UL95112D	Chevrolet V8 Small Block	3.330"	Specify
UL95113D	Chevrolet V8 Small Block	3.335"	Specify
UL95114D	Chevrolet V8 Small Block	3.340"	Specify
UL95121D	Chevrolet V8 Small Block	3.480"	Specify
UL95122D	Chevrolet V8 Small Block	3.500"	Specify
UL95123D	Chevrolet V8 Small Block	3.562"	Specify
UL95124D	Chevrolet V8 Small Block	3.625"	Specify
UL95125D	Chevrolet V8 Small Block	3.750"	Specify
UL95126D	Chevrolet V8 Small Block	3.800"	Specify

Note:
Crower cranks are made to customer's specifications. All rod and main diameters available.
Specify Std or BB Nose.
Large 1/8" Radius is Standard chamfered
Bearings available from Crower.

Crankshafts

ENDURO™

Crower's Enduro crank features our premium 4340 NT (non-twist) forging, straight-shot oiling, jumbo 1⁄8 radii, four lightening holes, heat-treat and "counterweight-correct" design. Designed for extreme durability! Used in pro street, sportsman class, monster trucks, off shore boats, heavy nitrous, and blown applications. 100% American made.

WEIGHT: 82-85 lbs (Determined by stroke, rod, and main size.)

Part No.	Description	Stroke	Main
E95132x4	Chevy Big Block	3.760"	Specify
E95133x4	Chevy Big Block	4.000"	Specify
E95135x4	Chevy Big Block	4.250"	Specify
E95136x4	Chevy Big Block	4.375	Specify
E95137x4	Chevy Big Block	4.500"	Specify
E95140x4	Chevy Big Block	4.750"	Specify

All weights are approximate.
Note: Specify rod length to insure proper piston to counterweight clearance.

Crankshafts

Big Block Chevrolet V8 - 366 396 402 427 454 502

STANDARD

Redesigned lightened version of our popular Standard crankshaft. Precision machined from premium 4340 NT forgings. Standard features are straight-shot oiling, jumbo 1⁄8" radii, heat-treating, teardrop oil holes. "Counterweight-correct" design. This crankshaft can be ordered with or without center counterweights to fit your application. 100% American Made

WEIGHT: 71-83 lbs (Determined by stroke, rod, and main size.)

Part No.	Description	Stroke	Main
95130	Chevrolet V8 Big Block	Custom	Specify
95132	Chevrolet V8 Big Block	3.760"	Specify
95133	Chevrolet V8 Big Block	4.000"	Specify
95134	Chevrolet V8 Big Block	4.125"	Specify
95135	Chevrolet V8 Big Block	4.250"	Specify
95136	Chevrolet V8 Big Block	4.375	Specify
95137	Chevrolet V8 Big Block	4.500"	Specify
95138	Chevrolet V8 Big Block	4.562"	Specify
95139	Chevrolet V8 Big Block	4.625"	Specify
95140	Chevrolet V8 Big Block	4.750"	Specify
95141	Chevrolet V8 Big Block	4.875"	Specify
95142	Chevrolet V8 Big Block	5.000"	Specify
95143C	Chevrolet V8 Big Block (Billet)	5.125"	Specify
95144C	Chevrolet V8 Big Block (Billet)	5.200"	Specify

All weights are approximate.
Note: Specify rod length to insure proper piston to counterweight clearance.
Note: If you prefer a machined billet crankshaft, specify "C" after crank part number. EN30B material available.

Crankshafts

Big Block Chevrolet V8 - 366 396 402 427 454 502

LIGHT-WEIGHT

The 4340 NT (non-twist) LightWeight includes standard features like straight-shot oiling, 1⁄8" radii, heat-treat, teardrop oil holes and "counterweight-correct," plus lightweight profiling, with or without center counter weights, four lightening holes and radius edges. Less drag, more power. 100% American made.

WEIGHT: 65-74 lbs

Part No.	*Description*	*Stroke*	*Main*
LW95130	Chevrolet V8 Big Block	Custom	Specify
LW95132	Chevrolet V8 Big Block	3.760"	Specify
LW95133	Chevrolet V8 Big Block	4.000"	Specify
LW95134	Chevrolet V8 Big Block	4.125"	Specify
LW95135	Chevrolet V8 Big Block	4.250"	Specify
LW95136	Chevrolet V8 Big Block	4.375	Specify
LW95137	Chevrolet V8 Big Block	4.500"	Specify
LW95138	Chevrolet V8 Big Block	4.562"	Specify
LW95139	Chevrolet V8 Big Block	4.625"	Specify
LW95140	Chevrolet V8 Big Block	4.750"	Specify
LW95141	Chevrolet V8 Big Block	4.875"	Specify
LW95142	Chevrolet V8 Big Block	5.000"	Specify

All weights are approximate.
Note: Specify rod length to insure proper piston to counterweight clearance.
Note: If you prefer a machined billet crankshaft, specify "C" after crank part number.
Specify rod diameter when ordering.

Crankshafts

Big Block Chevrolet V8 - 366 396 402 427 454 502

MAXI-LIGHT®

® Maxi-Light is a Registered Trademark of Crower, Inc.

The Maxi-Light includes standard 4340 NT features, maxi-light profiling, pendulum undercutting, center counterweight removal, four lightening holes and radius edges. Less drag and weight increases horsepower and torque. 100% American made.

WEIGHT: 59-64 lbs

Part No.	*Description*	*Stroke*	*Main*
ML95130	Chevrolet V8 Big Block	Custom	Specify
ML95132	Chevrolet V8 Big Block	3.760"	Specify
ML95133	Chevrolet V8 Big Block	4.000"	Specify
ML95134	Chevrolet V8 Big Block	4.125"	Specify
ML95135	Chevrolet V8 Big Block	4.250"	Specify
ML95136	Chevrolet V8 Big Block	4.375	Specify
ML95137	Chevrolet V8 Big Block	4.500"	Specify
ML95138	Chevrolet V8 Big Block	4.562"	Specify
ML95139	Chevrolet V8 Big Block	4.625"	Specify
ML95140	Chevrolet V8 Big Block	4.750"	Specify
ML95141	Chevrolet V8 Big Block	4.875"	Specify
ML95142	Chevrolet V8 Big Block	5.000"	Specify

ULTRA-LIGHT®

® Ultra-Light is a Registered Trademark of Crower, Inc.

The Ultra-Light Includes standard 4340 NT features, plus ultra-lightweight profiling, pendulum undercutting, center counterweight removal, four lightening holes and radius edges. Smaller O.D. quickens throttle response, reduces stress and wear, creates less drag in oil and increases horsepower and torque. Crower's Ultra-Light delivers all of this without compromising overall strength. 100% American made.

WEIGHT: 58-62 lbs

Part No.	*Description*	*Stroke*	*Main*
UL95130	Chevrolet V8 Big Block	Custom	Specify
UL95132	Chevrolet V8 Big Block	3.760"	Specify
UL95133	Chevrolet V8 Big Block	4.000"	Specify
UL95134	Chevrolet V8 Big Block	4.125"	Specify
UL95135	Chevrolet V8 Big Block	4.250"	Specify

All weights are approximate.
Note: Due to bob-weight considerations some BB Chevrolet Ultra-Light crankshafts must be custom ordered.
Note: Specify rod length to insure proper piston to counterweight clearance.
Note: If you prefer a machined billet crankshaft, specify "C" after crank part number.

Crankshafts

Ford 460 Crank.

Ford 302-351 Crank.

Pontiac 400-455 Crank.

FORD

FORGED - 4340 "Non-Twist" Chromoly Steel

Part No.	Description	Stroke	Main
95185	Ford 302 V8 or SVO Forging	Custom	Specify
LW95185	Ford 302 V8 or SVO Forging	Custom	Specify
ML95185	Ford 302 V8 or SVO Forging	Custom	Specify
UL95185	Ford 302 V8 or SVO Forging	Custom	Specify
95185C	Ford 351C V8 or SVO Billet	Custom	Specify
95186	Ford 351C V8 or SVO Forging	Custom	Specify
LW95186	Ford 351C V8 or SVO Forging	Custom	Specify
ML95186	Ford 351C V8 or SVO Forging	Custom	Specify
UL95186	Ford 351C V8 or SVO Forging	Custom	Specify
95186C	Ford 351C V8 or SVO Billet	Custom	Specify

Note: Specify desired stroke when ordering.
Specify rod journal diameter and width when ordering.

FORD

BILLET - 4340 Round Chromoly Steel

Part No.	Description	Stroke	Main
95187C	Ford 429-460 V8	Custom	Specify
95187Cx1	Ford 429-460 V8	5.000 & up	Specify
95191C	Ford 427-428 V8	Custom	Specify

Note: Specify desired stroke when ordering.
Specify rod journal diameter and width when ordering.
For LightWeight or Ultra-Light profiling, place "LW" or "UL" in front of part number.

V6 CHEVY & BUICK

Premium billet 4340 chromoly crankshafts are available for Chevrolet and Buick V6 applications on a custom order basis. Any desired stroke available.

Part No.	Description	Stroke	Main
95151C	Chevy V6 (Billet)	Specify	Specify
95156C	Buick V6 (Billet)	Specify	Specify

Note: Specify rod length to insure proper piston to counterweight clearance.

PONTIAC

Part No.	Description	Stroke	Main
95194C	Pontiac 400-455	4.250	400
95196C	Pontiac 400-455	4.500	400
95208	Custom Strokes Available		

Crankshafts

Mopar • Imports • Vintage • Custom

MOPAR

FORGED - 4340 "Non-Twist" Chromoly Steel

Part No.	Description	Stroke	Main
95160	Mopar 426 Hemi V8	Custom	Specify
95161	Mopar 426 Hemi V8	3.600"	Specify
95162	Mopar 426 Hemi V8	3.750"	Specify
95163	Mopar 426 Hemi V8	3.875"	Specify
95164	Mopar 426 Hemi V8	4.000"	Specify
95165	Mopar 426 Hemi V8	4.125"	Specify
95166	Mopar 426 Hemi V8	4.250"	Specify
95167	Mopar 426 Hemi V8	4.375"	Specify
95168	Mopar 426 Hemi V8	4.500"	Specify
95169	Mopar 426 Hemi V8	4.625"	Specify
95170	Mopar 426 Hemi V8	4.750"	Specify

Note: Specify rod length for proper piston to counterweight clearance.
Balanced or unbalanced specify when ordering.

MOPAR

BILLET - EN30B Round Steel

Part No.	Description	Stroke	Main
95160C	Mopar 426 Hemi V8	Custom	Specify
95161C	Mopar 426 Hemi V8	3.600"	Specify
95162C	Mopar 426 Hemi V8	3.750"	Specify
95163C	Mopar 426 Hemi V8	3.875"	Specify
95164C	Mopar 426 Hemi V8	4.000"	Specify
95165C	Mopar 426 Hemi V8	4.125"	Specify
95166C	Mopar 426 Hemi V8	4.250"	Specify
95167C	Mopar 426 Hemi V8	4.375"	Specify
95168C	Mopar 426 Hemi V8	4.500"	Specify
95169C	Mopar 426 Hemi V8	4.625"	Specify
95170C	Mopar 426 Hemi V8	4.750"	Specify
95171C	Mopar 273-340-360 V8	Custom	Specify

Note: Specify rod length for proper piston to counterweight clearance.
Balanced or unbalanced specify when ordering.
For LightWeight or Ultra-Light profiling, place "LW" or "UL" in front of part number.

Part # LW 95160

IMPORT/CUSTOM BILLETS & FORGINGS

Crower can machine custom 4340 crankshafts for any application. Call for pricing and availability.

Part No.	Description
95204	Custom 4 cylinder crankshaft (most applications)
95206	Custom 6 cylinder crankshaft (most applications)
95208	Custom 8 cylinder crankshaft (most applications)
95210	Custom 10 cylinder crankshaft (most applications)
95212	Custom 12 cylinder crankshaft (most applications)
95261	Honda/Acura B series 4340 forged crankshaft (84.5mm stroke)
95264	Honda/Acura B series 4340 forged crankshaft (89mm stroke)
95266	Honda/Acura B series 4340 forged crankshaft (95mm stroke)

CROWER CUBIC INCH CHART

STROKE

BORE DIAMETER

	3.000	3.125	3.250	3.375	3.480	3.500	3.562	3.625	3.750	3.760	3.875	4.000	4.125	4.250	4.375	4.500	4.625	4.750	5.000	5.125
3.8750	283.0	294.8	306.6	318.4	323.0	330.2	336.1	342.0	353.8	354.7	365.6	377.4	389.2	401.0	412.8	424.6	-	-	-	-
3.9375	292.2	304.4	316.6	328.8	339.0	340.9	347.0	353.1	365.3	366.2	377.5	389.7	401.8	414.0	426.2	438.4	-	-	-	-
4.0000	301.6	314.2	**326.7**	339.3	**349.8**	351.9	358.1	364.4	377.0	377.9	389.6	402.1	414.7	427.3	439.8	452.4	-	-	-	-
4.0300	306.4	318.8	331.9	344.7	355.1	357.4	363.5	370.2	**383.0**	383.6	395.7	408.5	421.3	434.0	446.4	459.2	-	-	-	-
4.0625	311.1	324.1	337.0	350.0	360.8	362.9	369.4	375.9	388.9	389.8	401.8	414.8	427.8	440.7	453.7	466.6	-	-	-	-
4.1250	320.7	334.1	347.5	360.8	372.0	374.2	380.9	387.6	400.9	401.9	414.3	427.6	441.0	454.4	467.7	481.1	-	-	-	-
4.1550	325.6	339.2	352.8	366.3	**377.5**	379.9	386.4	393.5	407.1	**407.8**	420.6	**434.2**	447.8	461.4	474.6	488.1	-	-	-	-
4.1875	330.5	344.3	358.1	371.8	383.4	385.6	392.5	399.4	413.2	414.2	426.9	440.7	454.5	468.3	482.0	495.8	-	-	-	-
4.2500	340.5	354.7	368.8	383.0	394.9	397.2	404.3	411.4	425.6	426.6	439.8	454.0	468.1	482.3	496.5	510.7	524.8	539.1	567.5	581.6
4.3125	350.6	365.2	379.8	394.4	406.6	409.0	416.3	423.6	438.2	439.3	452.8	467.4	482.0	496.6	511.2	525.8	540.4	555.0	584.3	598.8
4.3750	360.8	375.8	390.9	405.9	418.5	420.9	428.4	436.0	451.0	452.1	466.0	481.1	496.1	511.1	526.2	541.2	556.0	571.0	601.3	616.3
4.4375	371.2	386.6	402.1	417.6	430.5	433.0	440.8	448.5	464.0	465.2	479.4	494.9	510.4	525.8	541.3	556.8	572.0	587.7	618.6	634.1
4.5000	381.7	397.6	413.5	429.4	442.7	445.3	453.3	461.2	477.1	478.4	493.0	508.9	524.8	540.7	556.7	572.6	588.5	604.4	636.1	652.1
4.5625	392.4	408.7	425.1	441.4	455.1	457.8	466.0	474.1	490.5	491.7	506.8	523.2	539.5	555.9	572.2	588.6	604.9	621.3	653.9	679.5
4.6250	403.2	420.0	436.8	453.6	467.6	470.4	478.8	487.2	504.0	505.3	520.8	537.6	554.4	571.2	588.0	604.8	621.6	638.0	671.9	688.7
4.6875	414.2	431.4	448.7	465.9	480.4	483.2	491.8	500.5	517.7	519.1	535.0	552.2	569.5	586.7	604.0	621.3	638.5	655.7	690.2	707.5
4.7500	425.3	443.0	460.7	478.5	493.3	496.2	505.0	513.9	531.6	533.0	549.3	567.1	584.8	602.5	620.2	637.9	655.6	673.4	708.8	726.5

INDICATES APPLICABLE SMALL BLOCK CHEVROLET C.I.D.

CUBIC INCH FORMULA: BORE x BORE x STROKE x .7854 x NO. of CYLINDERS

For technical support call 619-661-6477 (7am to 5pm PST) • 24 hour fax: 619-661-6466 • www.crower.com

Rod & Main Bearings

ROD BEARINGS

Crower high performance rod bearings are quality engine bearings designed to withstand the extreme loads of professionally tuned racing engines. Features high strength trimetal copper-lead material in the load area for superior strength and embedding. Lead overplate provides excellent fatigue strength and superior conformability to compensate for distortion and/or misalignment. Superlative bearing-to-bearing size consistency enables you to "build-in" the exact oil clearance you require, while narrowed and chamfered versions are available for large fillet journals where additional clearance is necessary. If running aluminum rods, Crower has chamfered rod bearings with dowel pin holes.

STANDARD

Part No.	Description
85300	CHEVROLET 283-327 V8
85301	CHEVROLET 302-305-327-350-400 V8
85310	CHEVROLET 396-402-427-454 V8

CHAMFERED

Part No.	Description
85300C	CHEVROLET 283-327 V8
85301C	CHEVROLET 302-305-327-350-400 V8
85310C	CHEVROLET 396-402-427-454 V8

CHAMFERED w/DOWEL PIN HOLE

Part No.	Description
85300CD	CHEVROLET 283-327 V8
85301CD	CHEVROLET 302-305-327-350-400 V8
85310CD	CHEVROLET 396-402-427-454 V8
85330CD	CHRYSLER 426 Hemi V8

Note: Specify standard, .010", .020" or .030" undersized when ordering.

MAIN BEARINGS

Crower high performance main bearings offer professional racers and engine builders the extreme accuracy and bearing-to-bearing consistency required to build an engine that can handle the extreme loads associated with high performance racing. Features high strength copper-lead in the load area for superior strength and embedding. Crower high performance main bearings are designed to deliver improved bearing-to-bore contact for better heat transfer and a reduction in high rpm bearing chatter and or failure. Order chamfered bearings, for use with large fillet journals. A must when running any Crower crank.

STANDARD

Part No.	Description
85400	CHEVROLET 283-327 V8
85401	CHEVROLET 302-305-327-350-400 V8
85402	CHEVROLET 400 V8
85410	CHEVROLET 396-402-427-454 V8

CHAMFERED

Part No.	Description
85400C	CHEVROLET 283-327 V8
85401C	CHEVROLET 302-305-327-350-400 V8
85402C	CHEVROLET 400 V8
85410C	CHEVROLET 396-402-427-454 V8
85430C	CHRYSLER 426 Hemi V8

BEARING SPACER KIT

Part No.	Description
85200	Adapts Chevrolet 350 crank to 400 block includes bearings.

Note: Specify standard, .010", .020" or .030" undersized when ordering.

Engine kits

1 CRANKSHAFT

- Forged or billet, USA milled, premium 4340 chromoly material.
- Choice of Enduro, Standard, LightWeight or Ultra-Light design.
- Available for most applications in your choice of stroke and journal diameter.
- Maximum radii journals provide even load distribution for extended crank, connecting rod and bearing life.
- Crower heat-treat produces unrivaled structural integrity and core strength.
- Nitriding increases surface hardness.
- Exclusive Crower "straight-shot" oiling enhances journal lubrication at every degree of the crankshaft's rotation.
- Lightweight profiling, lightening holes, and center counterweight removal available upon request.
- Minimum "heavy-metal" balancing.
- Precision end-to-end indexing and stroke accuracy guarantees true to blueprint specifications.

2 CONNECTING RODS

- Forged or billet 4340 chromoly or 6AL4V billet titanium. Choose from a variety of beam widths.
- H-11 tool steel cap screw bolts rated at 220,000 p.s.i. For AMS5844 bolts (280,000 p.s.i.), specify "UPG".
- Clover leaf journal pads assure constant, true round tracking and even bearing seating.
- Reinforced pin end eliminates pin bind and pinch.
- Double ribbed cap for non-flex performance.
- Excellent combination of tensile and shear strength properties and unrivaled Crower craftsmanship that cannot be duplicated.

3 PISTONS

- Your choice of brand (JE, Ross, Arias, Wiseco, CP, SRP, etc...).
- Your choice of compression ratio, bore diameter and pin boss location.
- Choice of valve pocket dimension.
- Maximum possible pin boss/pin seat area prevents pin flex and hole elongation.
- Lightweight design for quick acceleration and deceleration.
- Your choice of dome or flat top design.

4 BEARINGS

- Premium quality rod and main bearings.
- Features high strength trimetal copper-lead in the load area for superior embedding.
- Lead overplate provides exceptional fatigue strength and conformability to compensate for distortion and misalignment at high engine rpm.
- High strength steel back.

5 PINS

- Premium H-11 tool steel.
- Precision ground with or without tapered wall cross section.
- Lightweight design.

6 RINGS

- Speed-Pro or Total Seal brand plasma-moly top rings provide proper lubrication.
- Offers maximum assurance against galling and scuffing.
- Gap-less rings available.

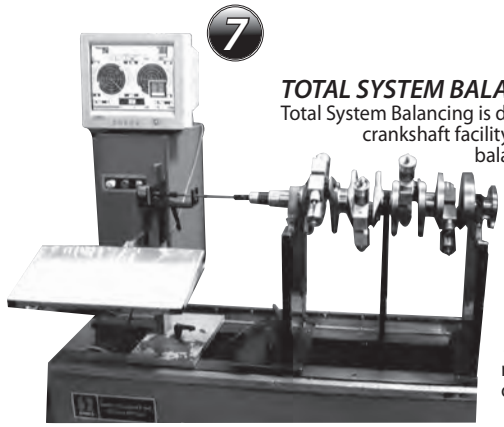
INSTANT HORSEPOWER AND TORQUE

Get your hands on one of Crower's complete bottom end assemblies and you'll instantly discover just how much potential your motor really has to offer. After an extensive "research & development" program, which included hours of rigorous dyno and track testing, Crower has developed a vast selection of correct crank, rod and piston combinations that will satisfy any performance requirement. You'll benefit from our research, field testing and ability to supply matched and balanced components that function in harmony to provide you the torque and horsepower you need, when you need it. Our "one-stop-shopping" format makes it easy to obtain a Crower rotating assembly that will arrive at your door totally system balanced, matched and ready to install. The kits listed on the following pages are among our most popular crank, rod and piston combinations. However, if you need a combination that is not shown, feel free to "mix & match" the components to create your own kit design. Call Crower's tech line for pricing and availability.

EACH KIT CONSISTS OF:

- Crower crankshaft
- Crower connecting rods
- Choice of pistons
- Rod and main bearings
- Plasma-moly rings
- H-11 wrist pins
- System balanced (extra charge)

7 TOTAL SYSTEM BALANCED



Total System Balancing is done in-house at the Crower crankshaft facility. State-of-the-art Hines balancing equipment provides the most accurately matched assembly possible. This service allows for immediate engine assembly, trouble-free of oversights and costly coordination errors. You'll save both time and money, while receiving the finest rotating assembly available on the market. Balancing is an extra charge.

Engine Kits

Small Block Chevrolet V8

Pictured is an Ultra-Light kit (96011) with an Maxi-Light crank and Steel rods. All kits include pistons, pins, rings, rod and main bearings.

PURE-STOCK®

PURE-STOCK CRANK • SPORTSMAN RODS
When the rules call for a "bone stock" crank and rods, this is the kit you need.

Part No.	Description
95510	SB Chevy, Pure-Stock Crank w/Sportsman Rods (SP)
95511	SB Chevy, Pure-Stock Crank w/Stroker Sportsman Rods (SSP)

Note: Pure-Stock crank only available in 3.480" stroke. Specify 5.7" or 6.0" rod length.

STOCK-PLUS®

STOCK-PLUS CRANK • SPORTSMAN RODS
Most economical. Lightened stock GM crank, system balanced, perfect for stock restricted applications.

Part No.	Description
95500	SB Chevy, Pure-Stock Crank w/Sportsman Rods (SP)
95501	SB Chevy, Pure-Stock Crank w/Stroker Sportsman Rods (SSP)

Note: Stock-Plus crank only available in 3.480" stroke. Specify 5.7" or 6.0" rod length.

ENDURO™

ENDURO CRANK • SPORTSMAN or BILLET RODS
Forged 4340 Enduro crank w/choice of Sportsman or billet rods. Inexpensive, very reliable. Race or street.

Part No.	Description
95502	SB Chevy, Enduro Crank w/Sportsman Rods (SP)
95503	SB Chevy, Enduro Crank w/Stroker Sportsman Rods (SSP)
95506	SB Chevy, Enduro Crank w/Billet Rods (B, SB M, LW, UL, ML)

STANDARD

STANDARD CRANK • SPORTSMAN or BILLET RODS
Forged 4340 Standard crank w/choice of Sportsman or billet rods. The original Crower engine kit.

Part No.	Description
96000	SB Chevy, Standard Crank w/Sportsman Rods (SP)
96002	SB Chevy, Standard Crank w/Billet Rods (B, SB M, LW, UL, ML)

LIGHTWEIGHT

LIGHTWEIGHT CRANK • SPORTSMAN or BILLET RODS
Forged 4340 LightWeight crank w/choice of Sportsman or billet rods (steel or titanium). Great light weight package.

Part No.	Description
96006	SB Chevy, LightWeight Crank w/Sportsman Rods (SP)
96008	SB Chevy, LightWeight Crank w/Billet Rods (B, SB M, LW, UL, ML)
96009	SB Chevy, LightWeight Crank w/Billet Titanium Rods (T, ST)

ULTRA-LIGHT®

ULTRA-LIGHT CRANK • BILLET RODS
Forged 4340 Ultra-Light crank w/choice of billet rods (steel or titanium). Best possible acceleration, low drag.

Part No.	Description
96010	SB Chevy, Ultra-Light Crank w/Billet Rods (B, SB M, LW, UL, ML)
96011	SB Chevy, Ultra-Light Crank w/Billet Titanium Rods (T, ST)

Engine kits

Big Block Chevrolet V8

1 ENDURO™

ENDURO CRANK • SPORTSMAN or BILLET RODS
Forged 4340 Enduro crank w/choice of forged or billet rods. Inexpensive, very reliable. Race, street, tow.

Part No.	Description
95520	BB Chevy, Enduro Crank w/Sportsman Rods (SP)
96101	BB Chevy, Enduro Crank w/Billet Rods (B, SB, M, LW, ML)

2 STANDARD

STANDARD CRANK • FORGED or BILLET RODS
Forged 4340 Standard crank (extra debur) w/choice of forged or billet rods. The original Crower engine kit.

Part No.	Description
95521	BB Chevy, Standard Crank w/Sportsman Rods (SP)
96106	BB Chevy, Standard Crank w/Billet Rods (B, SB, M, LW, ML)
96107	BB Chevy, Standard Crank w/Billet Rods (B, SB, M, LW) 4.375" & up
96108	BB Chevy, Standard Crank w/Titanium Rods (T, ST)

3 LIGHTWEIGHT

LIGHTWEIGHT CRANK • BILLET RODS
Forged 4340 LightWeight crank w/choice of billet rods (steel or titanium). Very light, very reliable package.

Part No.	Description
96111	BB Chevy, LightWeight Crank w/Billet Rods (B, SB, M, LW, ML)
96112	BB Chevy, LightWeight Crank w/Billet Rods (B, SB, M, LW) 4.375" & up
96113	BB Chevy, LightWeight Crank w/Titanium Rods (T, ST)

4 ULTRA-LIGHT®

ULTRA-LIGHT CRANK • FORGED or BILLET RODS
Forged 4340 Ultra-Light crank w/choice of forged or billet rods (steel or titanium). Best possible acceleration.

Part No.	Description
96116	BB Chevy, Ultra-Light Crank w/Billet Rods (B, SB, M, LW, ML)
96117	BB Chevy, Ultra-Light Crank w/Billet Rods (B, SB, M, LW) 4.375" & up
96118	BB Chevy, Ultra-Light Crank w/Titanium Rods (T, ST)

Engine Kits

Ford • Mopar • Honda/Acura • Custom

FORD

FORGED or BILLET CRANK • BILLET RODS

Forged or billet 4340 chromoly crank with billet rods.
Forged Sportsman or billet titanium rods also available.

Part No.	Description
96200	Ford 289-302 Crank w/Sportsman Rods (SP) or Billet Rods (B)
96201	Ford 351C or 351W Crank w/Billet Rods (B)
96202	Ford 429-460 Crank w/Billet Rods (B)

Note: Four and six cylinder Ford kits available. See custom applications below.

MOPAR

FORGED or BILLET CRANK • BILLET RODS

Forged or billet 4340 chromoly crank with billet rods.
Ultra-Light crank and titanium rods available.

Part No.	Description
96204	Mopar 426 Hemi or 440 Crank w/Billet Rods (B)

Note: Kits available for any cubic inch displacement. Specify when ordering.

HONDA/ACURA

FORGED or BILLET CRANK • BILLET RODS

Crower offers stroker kits for the B series VTEC engine platform. Turn your 1.6L into a 1.97L or your 1.8L into a 2.1L. Kit includes choice of billet or forged crank, custom billet rods, choice of piston brands (CP, JE, Arias, Ross), premium pins, rings, locks and bearings. You spec stroke (billet crank only), bore and compression. 4340 forged cranks are available in 84.5mm, 89mm, 92mm and 95mm strokes for B series blocks only.

Part No.	Description
96222	Forged Crank w/Custom Rods and Pistons made to specs (B series only)
96221	Billet Crank w/Custom Rods and Pistons made to your specs (All makes)

CUSTOM

BILLET CRANK • BILLET RODS

Create a custom kit for just about any application:
- Mitsubishi 4G63/Evo (102 stroke x 86mm bore = 2.4L)
- Toyota 2JZGTE (94mm stroke x 87mm bore = 3.4L)
- Nissan VQ35 (88mm stroke x 100mm bore = 4.15L)
- Nissan SR20DE (91mm stroke x 91mm bore = 2.35L)
- Honda K20A (92mm stroke x 89mm bore = 2.3L)

Features a custom 4340 steel billet crank and steel billet rod combination, custom CP pistons in your choice of bore and compression, premium pins, rings and locks. Stock samples and 50% deposit are required.

Part No.	Description
96205	Custom Crank w/Custom Rods and Pistons made to your specs

Centrifugal CrowerGlides

11" 2 DISC GLIDE

CROWER CLUTCHES

Since their inception in 1966, Crower clutches have been regarded as the ultimate solution to high horsepower, high torque, power to ground control. There is no other clutch available on the market that can harness the extreme power output of a competition engine and control it as accurately and consistently as a genuine Crower clutch. Our ongoing trackside research and development program insures you of the latest and most innovative components available.

10" AA
FULL TITANIUM GLIDE

THE "CROWERGLIDE"

The most copied clutch in racing, the original "Crowerglide" incorporates a completely centrifugal design and is totally adjustable. It was the industries first real slipper clutch, which is why it is so prevalent in racing today.

Features:

- •Aluminum or Titanium
- •Two through five disc set-up
- •Choice of six or twelve stand configurations
- •Fully machined 7075t6 Billet aluminum pressure plate assembly
- •Including stall speed springs
- •Counterweights
- •Available in 8", 10", 10.7", and 12.5"
- •Available stands are standard (except 8" mini "CROWERGLIDE)
- •S. F. I Certified

All Crower clutches are shipped complete with flywheel bolts, washers, one pilot bearing, feeler guages, additional counterweights and instructions.

8" 3 DISC GLIDE

POPULAR APPLICATIONS

- • Truck and Tractor Pulling
- • Drag Racing
- • Sand Drags
- • Monster Trucks
- • Mud Racing

Clutches

Pedal Clutches

10" PRO SPORTSMAN

10" AA

10.7"

CROWER PEDAL CLUTCHES

Unlike the completely centrifugal "Crowerglide," the Crower pedal clutch offers the conventional style foot control launch combined with centrifugal assistance and static spring adjustment. This highly versatile Crower clutch is available in an assortment of centrifugal lever and static spring combinations.

Features:

- •Alluminum or Titanium
- •7075t6 construction
- •Titanium adjusting stands
- •Dial indicator for setting pressure plate height
- •Installation procedures

All Crower clutches are shipped complete with flywheel bolts and washers, one pilot bearing, additional counterweights, and instructions.

POPULAR APPLICATIONS

- • Alcohol Dragster & Funny Car
- • Pro Modified
- • Comp Eliminator
- • Sand Dragsters
- • Truck & Tractor Pulling

HOW TO ORDER CROWER CLUTCHES

Due to the variety of applications and amount of variables involved in building a clutch that will function properly, Crower recommends that you call our Clutch Department at 619-690-7848 for personalized support or fax the following information to 619-690-7846.

- • Engine make
- • Application or class of competition
- • Estimated rpm power range
- • Transmission spline info (O.D. and number of teeth)

PARTS & SERVICE

Crower offers complete service and repair on all Crower clutches and Crower products, as well as technical support. All clutches and components returned for service and repair will be subject to a $60.00 minimum tear-down and inspection charge. Used parts requiring machine work will be subject to a machining charge based on prevailing rate. All used parts not meeting Crower's specifications will be replaced at the customer's expense.

Apparel

CROWER T-SHIRTS

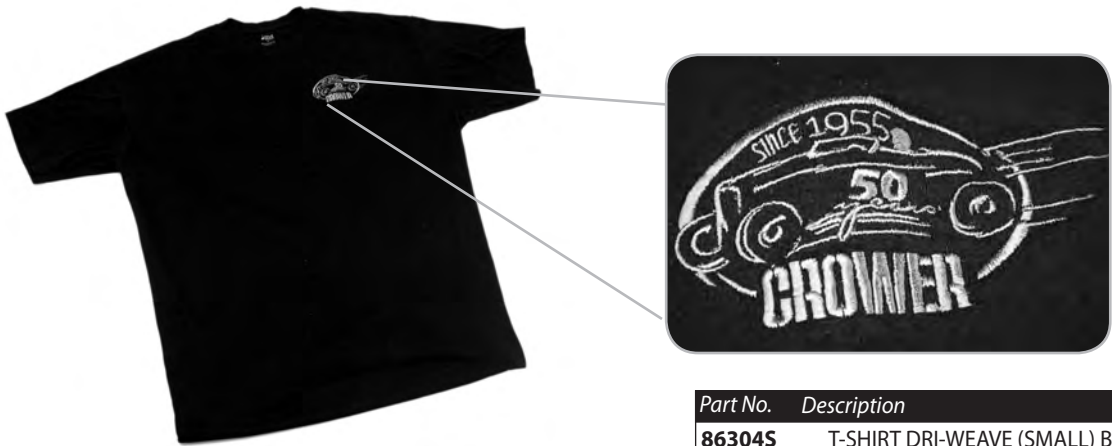
Crower T-shirts feature cool, comfortable 100% heavy cotton construction that holds shape with minimal shrinkage. Includes handy front pocket and Crower logo silkscreened on front and back. Colors vary according to season. Specify size when ordering.

Part No.	*Description*
86320	T-Shirt (Small), 100% Cotton
86321	T-Shirt (Medium), 100% Cotton
86322	T-Shirt (Large), 100% Cotton
86323	T-Shirt (X-Large), 100% Cotton
86324	T-Shirt (XX-Large), 100% Cotton

CROWER T-SHIRTS

Crower 's new 50 Year Anniversary T-shirt's feature cool, comfortable 100% heavy cotton construction that holds shape with minimal shrinkage. Includes handy front pocket and Crower logo silkscreened on front and back. Colors vary according to season. Specify size when ordering.

Part No.	*Description*
86310S	White T-Shirt (Small), 100% Cotton
86310M	White T-Shirt (Medium), 100% Cotton
86310L	White T-Shirt (Large), 100% Cotton
86310XL	White T-Shirt (X-Large), 100% Cotton
86310 XXL	White T-Shirt (XX-Large), 100% Cotton
86311S	Black T-Shirt (Small), 100% Cotton
86311M	Black T-Shirt (Medium), 100% Cotton
86311L	Black T-Shirt (Large), 100% Cotton
86311XL	Black T-Shirt (X-Large), 100% Cotton
86311 XXL	Black T-Shirt (XX-Large), 100% Cotton



CROWER PERFORMANCE DRI-RELEASE T-SHIRTS

Crower Performance Dri-Release T-shirts feature a unique fabric that feels like cotton. With its micro-blend performance fabric, wearers will keep comfortable, and dry. Includes a Crower logo embrioded on the top left of the t-shirt. Specify size when ordering.

Part No.	*Description*
86304S	T-SHIRT DRI-WEAVE (SMALL) BLACK
86304M	T-SHIRT DRI-WEAVE (MEDIUM) BLACK
86304L	T-SHIRT DRI-WEAVE (LARGE) BLACK
86304XL	T-SHIRT DRI-WEAVE (EXTRA LARGE) BLACK
86304XXL	T-SHIRT DRI-WEAVE (XX-LARGE) BLACK

Apparel

CROWER BUTTONDOWN SHIRTS

Made from 7 oz., 100% cotton this short sleeve design is very cool and comfortable. Features embroidered Crower logo over breast and over-sized left chest pocket. Generous fit. Machine washable. Available in black, white and blue denim. Specify size when ordering.

Part No.	Description
86260-020	Buttondown Shirt-White (Small), 100% Cotton
86260-021	Buttondown Shirt-Denim (Small), 100% Cotton
86260-022	Buttondown Shirt-Black (Small), 100% Cotton
86261-020	Buttondown Shirt-White (Medium), 100% Cotton
86261-021	Buttondown Shirt-Denim (Medium), 100% Cotton
86261-022	Buttondown Shirt-Black (Medium), 100% Cotton
86262-020	Buttondown Shirt-White (Large), 100% Cotton
86262-021	Buttondown Shirt-Denim (Large), 100% Cotton
86262-022	Buttondown Shirt-Black (Large), 100% Cotton
86263-020	Buttondown Shirt-White (X-Large), 100% Cotton
86263-021	Buttondown Shirt-Denim (X-Large), 100% Cotton
86263-022	Buttondown Shirt-Black (X-Large), 100% Cotton
86264-020	Buttondown Shirt-White (XX-Large), 100% Cotton
86264-021	Buttondown Shirt-Denim (XX-Large), 100% Cotton
86264-022	Buttondown Shirt-Black (XX-Large), 100% Cotton

CROWER APRONS

Made from a super-durable poly/cotton twill fabric that's designed to resist rips and snags. Crower aprons feature three front pockets, an adjustable neck strap, long ties at waist and a soft-release finish that will keep it looking fresh, neat and wrinkle-free wash after wash. 24" coverage length. Available in black with white embroidered Crower logo on front. Fully adjustable, one-size-fits-all. Machine wash and dry.

Part No.	Description
86350	Apron, Black w/Three Pocket Front and Embroidered Logo

CROWER BASEBALL CAPS

Crower baseball caps are made from a durable wool blend for years of cool, comfortable wear. Six panel styling includes one metal eyelet per panel to release heat. Choose from all black cap and embroidered white Crower logo or white cap with black bill and embroidered black Crower logo. Fully adjustable, button strap back.

Also available in black wool crown and purple swede bill. Premium design. One-size-fits-all.

Part No.	Description
86361B	Baseball Cap, wool blend, all black
86361W	Baseball Cap, wool blend, white crown, black bill.
86366	Baseball Cap, wool blend black crown, purple suede bill

Note: Cap colors and styles depend on availability at time of order. If desired color or style is not in stock, you will be sent the next available color and/or style.

CROWER LIGHTWEIGHT CAPS

Made from nylon tactel material (poplin) this hat is lightweight and cool. Available in all black with white embroidered Crower logo and your choice of "Racing Products" or "Clutches" description. Also available in white crown with black bill. Features rugged six panel styling and eight stitch bill. Fully adjustable, heavy-duty plastic, snap-button strap on back.

One-size-fits-all. Specify description when ordering.

Part No.	Description
86364B	Cap, All Nylon Tactel Material, Black (Racing Products)
86365B	Cap, All Nylon Tactel Material, Black (Clutches)

Specify "W" after part number for white crown and black bill.

Apparel

CROWER SWEATSHIRTS

Relax in this full-fitting mid-weight sweatshirt. Made from 50/50 poly/cotton for warmth and durability, it features drop shoulder styling for comfort and black trim at neck, cuffs and waist. Available in all black with white embroidered logo. Perfect for both men and women. Machine wash, dry on low heat. Specify size and desired color when ordering.

Part No.	*Description*
86400B	Sweatshirt, Poly/Cotton Blend (Small)
86401B	Sweatshirt, Poly/Cotton Blend (Medium)
86402B	Sweatshirt, Poly/Cotton Blend (Large)
86403B	Sweatshirt, Poly/Cotton Blend (X-Large)

Only available in black at this time.

CROWER WINDBREAKER

This versatile windbreaker features an extra long, extremely durable 100% Dupont Oxford nylon shell, acrylic lining, quilt-lined sleeves and slash pockets. Available in solid black with white embroidered Crower logo on front. Specify size when ordering.

Part No.	*Description*
86345	Windbreaker, Quilted Lining (Small)
86346	Windbreaker, Quilted Lining (Medium)
86347	Windbreaker, Quilted Lining (Large)
86348	Windbreaker, Quilted Lining (X-Large)
86349	Windbreaker, Quilted Lining (XX-Large)

CROWER NOSTALGIA JACKET

Created with the old varsity style in mind, these jackets were first offered by Crower in 1966. Features wool midsection with leather sleeves, snap-up front, ribbed knit collar and cuffs, handwarmer slash pockets and old style Crower chenille logo patch on the back. Available in all black or deep purple midsection with black sleeves, just like the old days! Specify size with order.

Part No.	*Description*
86314	Nostalgia Varsity Style Jacket

Sizes: S(34-36), M(38-40), L(42-44), XL(46-48), XXL(50-52), XXXL(54-56).

Decals

CROWER DECALS

Crower vinyl decals are white with the Crower logo and product name in black. Measures 3 1⁄2" x 7 3⁄4" with a adhesive back. Specify product description.

Part No.	*Description*
86362C	Decal, Crower Clutches
86362D	Decal, Crower Camshafts
86362G	Decal, Crower Rocker Arms
86362H	Decal, Crower Connecting Rods
86362K	Decal, Crower Crankshafts
86362R	Decal, Crower Racing Products

Note: A larger size decal (4 3⁄4" x 12 1⁄4") is available in Racing Products & Camshafts.

FAMOUS "BEAST" MASCOT

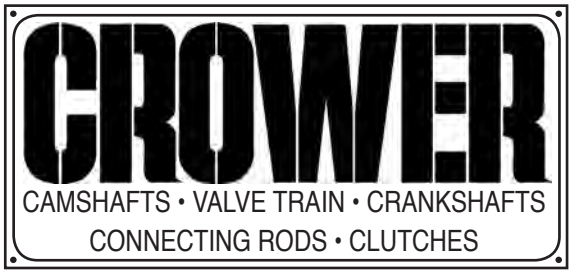
The Crower "Beast" cams decal is a multi-color design with a clear backing that is cut around the image (approx. 4" x 4").

Part No.	*Description*
86362B	Decal, Crower "Beast" Cams Mascot

CROWER THERMAL CUT DECALS

Thermal cut vinyl decals available in white or black. Actual size is 6.75" x 2.0". Perfect for rear windows or any other clear surface.

Part No.	*Description*
86363B	Decal, Thermal Die Cut Crower Racing Products, Black
86363W	Decal, Thermal Die Cut Crower Racing Products, White



CROWER TYVEK BANNERS

Large 3 ft. x 6 ft. banner made from extremely durable, weather resistant tyvek material with heavy-duty metal eye rings. Available in your choice of black with white logo or white with black logo.

Part No.	*Description*
86370	Banner, Black w/White Logo
86371	Banner, White w/Black Logo