

# CARBURETORS

## REPLACEMENT CARBURETORS FROM KELLY AEROSPACE POWER SYSTEMS



**Overhauling Lycoming and Continental carburetors & Providing FAA approved replacement parts for 20 years! Look to Kelly Aerospace Power Systems for Quality Fuel System Overhauled Units**

Aircraft Spruce & Specialty, as a factory distributor, offers a carburetor exchange program covering all popular Marvel Schebler/Facet general aviation carburetors. These carburetors are overhauled to the strictest industry standards and carry a full one year warranty (from date of installation). Most carburetors are available from stock or within a week and are furnished complete with gaskets. Due to the various configurations of carburetor installations, we suggest you retain your carburetor core until receiving the exchange unit. This will enable you to transfer all external fittings and installation hardware to the new exchange unit. All cores being returned for credit shall be, as removed from the engine, complete and not disassembled. A reduction in core credit is charged for missing or damaged parts.

- Precision Carburetors
- TCM Fuel Systems
- Flow Dividers
- Fast Turn Time on Overhauls
- Unmatched Quality
- 100% calibration of fuel pumps and servos.
- Precision Fuel Servos
- Romec Fuel Pumps
- FAA/PMA Approved Replacement Parts
- Carburetor Overhaul Quick Kits
- Highly skilled/trained technicians

## LYCOMING CARBURETORS

Carb. Model	O.E.M. P/N	Vendor P/N	Our P/N	Price
MA-3A	61547	A10-3103-1	10-03103-1	.
MA-4SPA	69250	A10-3678-12	09-00984	.
MA-4SPA	72394	A10-3678-32	07-00871	.
MA-4-5	71098	A10-3878	10-03878	.
MA-4-5	71710	A10-4164-1	07-00872	.

Carb. Model	O.E.M. P/N	Vendor P/N	Our P/N	Price
MA-4-5	72740	A10-4404	08-01543	.
MA-4SPA	78728	A10-5009	07-00873	.
MA-4SPA	13659	A10-5135	10-05135	.
MA-3A	15496	A10-5199	07-00234	.
MA-4SPA	15986	A10-5217	10-05217	.

**\*\*\*NOTE\*\*\***

*If you do not see your model # here please contact Aircraft Spruce Sales Department for pricing and availability .*

*\*All prices shown are with factory acceptable exchange carburetor.*

*•Add . core charge on all models (except MA-4-5, MA-4-5AA, MA-6AA, MH-A-6. These have core charge of . to each price shown. Send exchange carburetor core to Aircraft Spruce. Upon factory approval of core, you will be refunded the core charge.*

**BE CERTAIN ALL FUEL IS REMOVED FROM THE CORE.**

*If Carburetor is not in stock we can have yours overhauled in 5-7 working days. Please call or email for more information.*

**EP**

## CONTINENTAL CARBURETORS

Carb. Model	O.E.M. P/N	Part No.	Our Price
MA-3SPA	40366	A10-2848	<b>CALL FOR QUOTE 1-877-4-SPRUCE</b>
MA-3SPA	40796	A10-2948	
MA-4-5	520120	A10-3168	
MA-3SPA	530490	A10-3237	
MA-4-5	535207	A10-3649-1	
MA-4-5	535207	A10-3759	
MA-4-5	538872	A10-3859	
MA-4-5	538872	A10-3859-1	
MA-4-5	539883	A10-3965-1	
MA-4-5	539883	A10-3965-11	
MA-4-5	539883	A10-3965	
MA-4-5	539883	A10-3965-12	
MA-3SPA	627143	A10-4115-1	
MA-4-5	626789	A10-4171	
MA-4-5	626859	A10-4191	

Carb. Model	O.E.M. P/N	Part No.	Our Price	
MA-3SPA	627365	A10-4233	<b>CALL FOR QUOTE 1-877-4-SPRUCE</b>	
MA-3SPA	627637	A10-4240		
MA-3SPA	628945	A10-4439		
MA-3SPA	629175	A10-4457		
MA-4-5	633027	A10-4893		
MA-4-5	641139	A10-4893-1		
MA-3SPA	633028	A10-4894		
MA-3SPA	633029	A10-4895		
MA-3SPA		A10-5067		
MA-3SPA	637035	A10-5082		
MA-3SPA	640416	A10-5128		
MA-3SPA	641860	A10-5192		
MA-4-5	646232	A10-5284		

\*All prices shown are with factory acceptable exchange carburetor. Add \$400 core charge on all models (except MA-4-5, MA-4-5AA, MA-6AA, MH-A-6. These have core charge of \$500.00) to each price shown. Send exchange carburetor core to Aircraft Spruce. Upon factory approval of core, you will be refunded the core charge.

**FRANKLIN ENGINE CARBURETORS ALSO AVAILABLE. ADVISE EXACT ENGINE AND CARBURETORS ALSO AVAILABLE. ADVISE ENGINE AND CARBURETOR MODEL NUMBERS AND REQUEST QUOTATION.**

# CARBURETOR PARTS

## MARVEL-SCHEBLER FACET REPLACEMENT CARBURETOR PARTS FROM KELLY AEROSPACE

Mfg. Ref.	Part No.	Description.	Price
CF16-A39	07-06601	Gasket	.
CF16-A42	07-06602	Gasket	.
CF16-A4B	07-06603	Gasket	.
CF16-A56	07-06604	Gasket	.
CF16-B44	07-06605	Gasket	.
CF16-B45	07-06606	Gasket	.
CF16-B85	07-06608	Gasket	.
CF17-372	07-06609	Rod	.
CF17-383	07-06610	Rod	.
CF194-580	07-06611	Pump Plunger	.
CF194-581	07-06612	Pump Plunger	.
CF194-591	07-06613	Pump Plunger	.
CF194-593	07-06614	Pump Plunger	.
CF194-605	07-06615	Pump Plunger	.
CF233-614	07-06616	Valve & Seat	.
CF233-615	07-06617	Float Valve	.
CF24-262	07-06618	Spring	.
CF24-A10	07-06619	Spring	.
CF24-A115	07-06620	Spring	.
CF24-A30	07-06621	Spring	.
CF24-A33	07-06622	Spring	.
CF29-182	07-06623	Clip	.
CF32-32	07-06624	Shaft	.
CF32-35	07-06625	Shaft	.
CF32-72	07-06626	Valve	.
CF34-91	07-06627	Valve	.
CF44-220	07-06628	Packing	.
CF44-223	07-06629	Packing'O' Ring	.
CF44-224	07-06630	Packing	.
CF44-49	07-06631	Packing	.
CF60-260	07-06632	Bushing	.

Mfg. Ref.	Part No.	Description.	Price
CF60-A160	07-06633	Bushing	.
CF778-1003	07-06634	Throttle Shaft	.
CF778-1004	07-06635	Throttle Shaft	.
CF15-483	07-06666	Screw	.
CF15-58	07-06667	Screw	.
CF15-A14	07-06668	Screw	.
CF15-A23	07-06669	Screw	.
CF15-B108	07-06670	Screw	.
CF15-B109	07-06671	Screw	.
CF15-B98	07-06672	Screw	.
CF16-222	07-06673	Gasket	.
CF16-224	07-06674	Gasket	.
CF16-625	07-06675	Gasket Kit	.
CF16-646	07-06677	Gasket Kit	.
CF16-653	07-06678	Gasket Kit	.
CF16-676	07-06679	Gasket Kit	.
CF16-696	07-06680	Gasket Kit	.
CF16-713	07-06681	Gasket Kit	.
CF16-735	07-06682	Gasket Kit	.
CF16-A107	07-06683	Gasket	.
CF16-A108	07-06684	Gasket	.
CF16-A16	07-06685	Gasket	.
CF16-A28	07-06686	Gasket	.
CF16-A30	07-06687	Gasket	.
CF16-A31	07-06688	Gasket	.
CF16-A32	07-06689	Gasket	.
CF16-A36	07-06690	Gasket	.
CF82-1	07-06691	Pin	.
CF82-11	07-06692	Pin-Cotter	.
CF82-14	07-06693	Pin-Cotter	.
CF99-44	07-06694	Plug	.

Mfg. Ref.	Part No.	Description.	Price
CF99-8	07-06695	Plug	.
CF47-850	07-06696	Nozzle	.
CF47-851	07-06697	Nozzle	.
CF47-852	07-06699	Nozzle	.
CF778-1005	07-06636	Throttle Shaft	.
CF778-1006	07-06637	Throttle Shaft	.
CF778-1007	07-06638	Throttle Shaft	.
CF778-1008	07-06639	Throttle Shaft	.
CF78-121	07-06647	Washer	.
CF78-388	07-06648	Washer	.
CF78-A109	07-06649	Washer	.
CF78-A110	07-06650	Washer	.
CF78-A111	07-06651	Washer	.
CF78-A40	07-06652	Washer	.
CF78-A97	07-06653	Washer	.
CF81-311	07-06654	Nut	.
CF13-1519	07-06655	Throttle Shaft	.
CF13-1520	07-06656	Throttle Shaft	.
CF13-1521	07-06657	Throttle Shaft	.
CF13-1522	07-06658	Throttle Shaft	.
CF13-1523	07-06659	Throttle Shaft	.
CF13-1531	07-06660	Throttle Shaft	.
CF13-1533	07-06661	Throttle Shaft	.
CF155-226	07-06662	Lever	.
CF155-307	07-06663	Lever	.
CF15-126	07-06664	Screw	.
CF43-648	07-06702	Needle	.
CF43-564	07-06701	Needle	.

EP

### REPLACEMENT CARBURETOR VENTURI'S (ONE PIECE)

These one piece Venturis replace old type primary and main Venturis in Marvel-Schebler carburetors. Order by new Venturi part number.

Old Main Venturi	New 1-Piece Venturi	Our Price	Old Main Venturi	New 1-Piece Venturi	Our Price
46-462	46-F7	.	46-A2	46-F10	.
46-486	46-F8	.	46-A70	46-F12	.

### FLOAT NEEDLE SEAT DRIVER



This Float Needle Seat Driver is applicable to Marvel-Schebler MA3 and MA4 carburetors and is quality made of alloy steel. It facilitates the easy removal of needle valve seats, prevents damage to the main casting and the new seat during installation, and insures proper torque application. Features 7/16" hex drive fitting. P/N 12-30190.....

### BENDIX/PRECISION RSA

### FUEL SERVOS & FLOW DIVIDERS

- Bendix/Precision (RSA-5, RSA-7da1, RSA-10 Overhaul/Exchange).
- Bendix/Precision (Flow Dividers Overhaul/Exchange).
- TMC Complete Fuel Injection Systems (IO-360, IO-550, L/TSIO-360, TSIO-520, GTSIO-520, TSI Overhaul Exchange).
- TCM Individual Fuel Injection Components Throttle Assemblies, Control Assemblies (without throttle Pumps, Manifold Valves, Pressure Regulators, No Assemblies (cleaning, rejetting, calibrating).
- FAA/PMA Replacement Parts.

Call or visit our website at: [www.aircraftspruce.com](http://www.aircraftspruce.com) for more info.

### REPLACEMENT FLOAT KITS



1984 FAA Service Bulletin A1-84 recommends replacing old Marvel-Schebler floats with the following float kits which feature metal floats to replace old plastic floats:

- Kit 666-915 - For MA3, MA3-SPA, MA4-SPA .... P/N 07-00677 .....
- Kit 666-916 - For MA4-5, MA5, MA6 ..... P/N 07-00678 .....
- Kit 666-917 - For HA-6 ..... P/N 07-00679 .....
- Needle and Seats for MA3-4 #233-615 ..... P/N 07-06617 .....
- Needle and Seats for MA4-5 #233-614 ..... P/N 07-06616 .....

### REPAIR KITS & PARTS FOR COMMON MARVEL-SCHEBLER CARBURETORS

Lycoming No.	Marvel-Schebler		Major Repair Kit Price
	Kit P/N	Carb P/N	
62289	286-1628	10-3346-1	.
69250	286-1624	10-3678-12	.
62830	286-1630	10-3565-1	.

NOTE: Many Marvel-Schebler replacement parts are no longer available from Facet. On items not priced in table above, order a minor or major repair kit. Major kits are priced above and minor kits are quoted on request.

### CARBURETOR HEAT BOX PARTS

#### Unique Elastomer Bearing Replaces Needle Bearing -



McFarlane's elastomer bearing is assembled with tension between the mating surfaces. This tension prevents micro-movement and its related metal erosion. The bearing contact area that transfers vibration motion from the heat box to the butterfly shaft is hundreds of times greater than that of the original needle bearing. This large surface effectively prevents localized metal erosion. • Absorbs shaft and butterfly vibration • Eliminates needle bearing failures • Increases service life of all components • Direct replacement for original parts. **Proven Design:** • Tested to over 700,000 cycles while exposed to avgas, heat and vibration without any change in performance • Extremely rugged and wear resistant in high temperature and fuel environments. **Convenient:** • Discontinued part numbers through the factory are now manufactured by McFarlane • Also available in kits containing the shaft, arm, bearing housings, monel rivets, and roll pin

#### CESSNA SHAFT

Description	Part No.	Price
Cessna Shaft MC0450068-2 Model: FA152 Serial No: FA1520337 thru FA1520425	05-04430	.
Cessna Shaft MC0550180-16 Model: 172B,C Serial No: 17247747 thru 17249544	05-04431	.
Cessna Shaft MC0550180-28 Model: F172D,E,F, G Serial No: F172-0001 thru F172-0319	05-04432	.
Cessna Shaft MC0509068-6 Model: 172Q Serial No: 17275869 thru 17276516	05-04433	.
Cessna Shaft MC1752078-4 Model: 177A,B Serial No: 17701165 thru 17702752	05-04434	.
Cessna Shaft MC0750112 Model: 180* Serial No: 30000 thru 32150	05-04435	.
Cessna Shaft MC0750126-19 Model: 180*, 180A,B Serial No: 32151 thru 50661	05-04436	.
Cessna Shaft MC0750133-8 Model: 175, 175A Serial No: 55001 thru 56777	05-04437	.
Cessna Shaft MC0750173-3 Model: 185, 185A,B, C,D,E/A185E* Serial No: 185-0001 thru 185-1300	05-04438	.
Cessna Shaft MC0750173-4 Model: A185E* Serial No: 185-1301 thru 18501832	05-04439	.

#### \*Partial model eligibility Partial model eligibility

#### CESSNA ARM

Description	Part No.	Price
Cessna Arm MCS2280-8-00 Model: 152, A152, F152, FA152 Serial No: 15279406 thru 15286033 A152 A1520735 thru A1521049 F152 F15201429 thru F1520198 FA152 FA1520337 thru FA1520425	05-04440	.
Cessna Arm MC0750111-19	05-04441	.
Cessna Arm MCS2280-3-157	05-04442	.

#### CESSNA BEARING

Description	Part No.	Price
Cessna Bearing HSG MC0750113-1 Model: 152 Serial No: MC0750113-1	05-04443	.
Cessna Bearing HSG MC0750113-3 Model: 172Q Serial No: MC0750113-3	05-04444	.

# CARBURETORS

## CARBURETOR OVERHAUL QUICK KITS

Kelly Aerospace "Quick Kits" are easy to use, and are designed to save you time and money. Quick Kits include not only the recommended replacement parts used in every overhaul, but the additional parts used by all fuel professionals to insure the job is done right.

Kits include (where applicable): Throttle shaft lever, throttle shaft, throttle adjusting screw, throttle valve screws, inlet strainer screws, throttle body screws, mixture control lever screw, gasket kit, pump connection rod, throttle adjustment spring, throttle opening spring, idle adjustment spring, float lever shaft, pump stem, throttle shaft bushings, inlet strainer washer, pump stem retainer washer, mixture control lever washer, throttle body washers, throttle lever lock nut, float shaft cotter pin, throttle nut cotter pin, pump lever, pump plunger assembly and float valve seat assembly.

KIT P/N	PRICE	Franklin Carburetors		Continental Carburetors		Lycoming Carburetors		Lycoming Carburetors	
		P/N	"Quick Kit" P/N	P/N	"Quick Kit" P/N	P/N	"Quick Kit" P/N	P/N	"Quick Kit" P/N
CF286-00	.	10-2971-P	CF286-02	10-4457	CF286-02	10-3856-1	CF286-06	10-5142	CF286-01
CF286-01	.	10-3007	CF286-06	10-4893	CF286-05	10-3856-11	CF286-06	10-5180	CF286-10
CF286-02	.	10-3063-2	CF286-06	10-4893-1	CF286-05	10-3856-12	CF286-06	10-5189	CF286-10
CF286-03	.	10-3148-1	CF286-06	10-4894	CF286-02	10-3878	CF286-08	10-5193	CF286-08
CF286-04	.	10-3479	CF286-06	10-4894-1	CF286-02	10-4057	CF286-09	10-5199	CF286-00
CF286-05	.	10-5069	CF286-02	10-4895	CF286-03	10-4057-1	CF286-09	10-5206	CF286-10
CF286-06	.	10-5093	CF286-00	10-4895-1	CF286-03	10-4164	CF286-08	10-5206-1	CF286-10
CF286-07	.			10-5067	CF286-02	10-4164-1	CF286-07	10-5206-11	CF286-10
CF286-08	.	<b>Continental Carburetors</b>		10-5082	CF286-02	10-4404	CF286-09	10-5210	CF286-10
CF286-09	.	P/N	"Quick Kit" P/N	10-5128	CF286-02	10-4404-1	CF286-09	10-5217	CF286-04
CF286-10	.	10-2848	CF286-02	10-5192	CF286-05	10-4910	CF286-04	10-5219	CF286-11
CF286-11	.	10-2948	CF286-02	10-5284	CF286-05	10-4910-1	CF286-04	10-5220-E	CF286-01
CF286-12	.	10-3168	CF286-05	10-5284	CF286-05	10-4953	CF286-00	10-5220	CF286-01
		10-3237	CF286-03	<b>Lycoming Carburetors</b>		10-4978-1	CF286-01	10-5221	CF286-12
		10-3649-1	CF286-05	P/N	"Quick Kit" P/N	10-5009	CF286-04	10-5224	CF286-11
		10-3759	CF286-05	10-2827	CF286-07	10-5009N	CF286-04	10-5227	CF286-12
		10-3859	CF286-05	10-2983	CF286-00	10-5034	CF286-07	10-5230	CF286-11
		10-3859-1	CF286-05	10-3103-1	CF286-00	10-5042	CF286-00	10-5235	CF286-11
		10-3965	CF286-05	10-3323	CF286-07	10-5045	CF286-10	10-5253	CF286-11
		10-3965-1	CF286-05	10-3346-1	CF286-02	10-5045-1	CF286-10	10-5255	CF286-11
		10-4171	CF286-05	10-3391-1	CF286-06	10-5050	CF286-01	10-5257	CF286-01
		10-4191	CF286-05	10-3565-1	CF286-02	10-5054	CF286-09	10-5267	CF286-01
		10-4233	CF286-02	10-3634	CF286-06	10-5062	CF286-04	10-5282	CF286-11
		10-4240	CF286-02	10-3678-12	CF286-04	10-5092	CF286-10	10-5283	CF286-11
		10-4240-1	CF286-02	10-3678-32	CF286-04	10-5126	CF286-01	10-5288	CF286-08
		10-4252	CF286-02	10-3729	CF286-02	10-5135	CF286-04	10-6014	CF286-11
		10-4439	CF286-03	10-3856	CF286-06				

See which Part No. is for your application in the charts to the right.



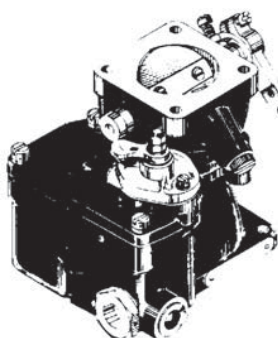
## ELLISON CARBURETORS



Ellison variable venturi throttle body injectors provide reliable fuel metering for a variety of homebuilt engine applications. Features include uniform fuel distribution, inverted flight operation, few moving parts, instantaneous response, easy starting, light weight, and low maintenance. When ordering, specify: Engine make, engine model/HP and displacement and RPM.

MODEL	EF54-5	EF5-3A
Part Number	07-00961	07-00959
Airflow Capacity*	400 CFM	
Fuel Regulation	Dual Value Diaphragm Controlled	SV Diaphragm Controlled
Application	180-260 HP Aircraft	>80 HP
Fuel Pressure Requirements**	2-6 PSI	1/2 - 3 PSI
Controllable Mixture	Yes	Yes
Fuel Fitting	3/8 Flared Tube	3/8 Flared Tube

## BENDIX STROMBERG NA-S3A1 CARBURETOR OVERHAUL PARTS FOR NA-S3A1 CARBURETOR



The NA-S3A1 carburetor is no longer in production. Only the parts listed are carried in stock. Others may be special ordered. Originally used on Cont. A-65, A-75, A-80, C-75, C-85 and C-90 engines.

- Gasket & Ring Set (Incl. gaskets for under seat) ..... P/N 07-02200 .....
- P-14222 Needle(Steel) & P17247 Set ..... P/N 07-14222 .....
- Needle (Delrin) ..... P/N 2523047 .....
- Metering Jet (C-85) ..... P/N 07-00684 .....
- Metering Jet (A-65) ..... P/N 07-00685 .....

Throttle Shaft (Ref. #34 in Manual) not available.

## STROMBERG NA-S3A1 CARBURETOR OVERHAUL MANUAL

P/N 07-02400 .....

\*The P/N 2523047 needle is still available but recent testing has determined that neoprene needles can expand when used with 100 LL avgas and unleaded auto fuels leading to engine damage from excessively lean operation. Recommended substitute is the P/N 2523047 Delrin needle or P14222 Steel Needle. Use P/N 390077 needle at your own discretion only.

# BING CARBURETORS



## COMPLETE CARBURETORS – TYPE 54

### To Order, Specify:

1. Model indicated by engine number 277, 377, 447, 503, or 532.
2. With intake silencer or Without intake silencer.
3. Single Carb or Dual Carb.
4. Hand Choke or Remote Choke.

**Model # 54/36/2040**

P/N 07-00303 .....

## TYPE 54 REBUILD KIT

- #17 Top O Ring
- #29 Bowl Gasket
- #25 Hinge Pin
- #21 Cable Grommet
- #7 Air Screw O Ring
- #26 Float Needle
- #10 Sieve Sleeve (Screen)

P/N 07-00304.....

## TYPE 54 FIX-IT KIT

- #12 New Spring Cup
- #56 Jet Needle O Ring
- #11 Clip

P/N 07-00305.....

## COMPLETE CARBURETORS – TYPE 84

### To Order, Specify:

1. Model indicated by engine number 277, 377, 447, 503, or 532.
2. With intake silencer or Without intake silencer.
3. Single Carb or Dual Carb.
4. Hand Choke or Remote Choke.

**Model # 84/32/3437**

P/N 07-00306.....

## TYPE 84 REBUILD KIT

- #17 Top O Ring
- #29 Bowl Gasket
- #25 Hinge Pin
- #21 Cable Grommet
- #7 Air Screw O Ring
- #26 Float Needle
- #10 Sieve Sleeve (Screen)

P/N 07-00307 .....



## ROTAX FLOAT & BOWL KIT

This float and bowl kit replaces a single float system. Includes float needle valve, clip float needle, float pin, float bracket, float chamber, and the float.

P/N 261-010.....

## BING CARBURETOR ACCESSORIES

- Bing Remote Choke Kit (w/8' cable) .... P/N 07-00308 .....
- Bing Remote Choke Kit (w/o cable)..... P/N 07-00309 .....
- Bing Aircraft Parts manual ..... P/N 07-00310 .....

## CARBURETOR SYNCHRONIZATION



### CARB MATE

Quick & easy synchronizing by direct comparison of a set of carbs / Fuel Injector throttle bodies. Range adjustable from 2 to 0,05cmHg per LED. Hook up 2 or 5 cylinder with the optional adapter kit.

P/N 07-01265.....

### SYNCHROMATE

Precise synchronizing by direct comparison of a set of carbs / Fuel Injection throttle bodies. Fixed resolution of 0, 5cmHg. Includes absolute vacuum & 'wireless' RPM measurement. Hook up 3 or 4 cylinders with the optional adapter kit.

P/N 07-01266.....

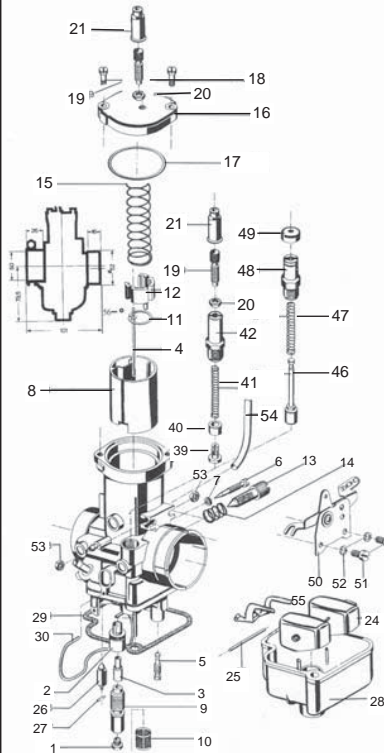


### 4-CHANNEL ADAPTER KIT

Converts the SynchroMate or CarbMate into a 4 carb/throttle valve synchroniser. This easy-to-mount & easy-to-use kit allows connection of SynchroMate's or CarbMate 2 channels (tubes) to 4 carbs / throttle valves at once.

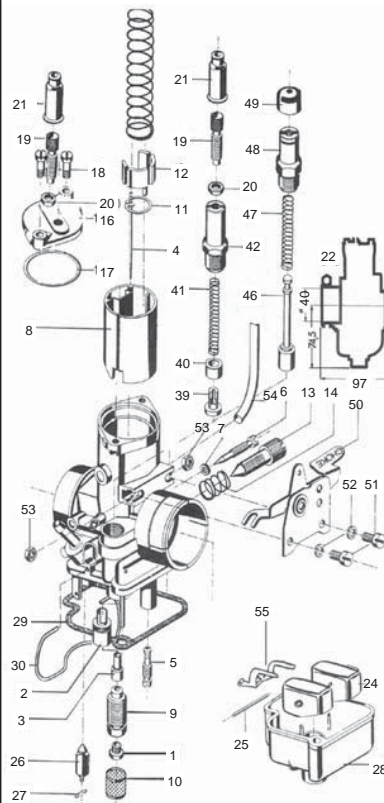
P/N 07-01267 .....

## REPLACEMENT PARTS – TYPE 54



No.	Part No.	Description	Price
1	268-978-998	Main Jet	.
2	251-554	Atomizer	.
3	963-691-699	Needle Jet	.
4	963-711-719	Jet Needle	.
5	963-140-147	Idler Jet	.
6	963-155	Air Screw	.
7	831-710	O Ring	.
8	963-679	Piston	.
9	963-700	Mixing Tube	.
10	261-625	Sieve Sleeve	.
11	963-500	Clip	.
12	827-345	Stock Spring Cup	.
12	827-347	New Style Spring Cup	.
13	963-160	Mix Screw	.
14	938-640	Spring	.
15	938-655	Slide Spring	.
16	963-720	Cover Plate	.
17	831-450	O Ring	.
18	241-430	Screw	.
19	241-440	Adjuster	.
20	942-541	Nut	.
21	260-370	Grommet	.
24	861-181	Indep. Float	.
25	929-700	Pivot Pin	.
26	261-705	Float Needle	.
27	261-710	Clip	.
28	261-010	Bowl Kit (bowl,24-27,55)	.
29	830-720	Gasket	.
30	963-180	Bowl Clip	.
39	963-740	Piston	.
40	268-850	Sleeve	.
41	661-050	Spring	.
42	963-750	Housing	.
46	268-847	Piston	.
47	239-730	Spring	.
48	261-770	Housing	.
49	260-490	Rubber Cap	.
50	261-755	Choke Lever	.
51	240-791	Screw(51) &	.
52	945-750	Washer(52)	.
53	261-200	Nut	.
54	256-035	Vent Tube	.
55	861-190	Float Arm	.
56	831-715	Jet Needle O Ring	.

## REPLACEMENT PARTS – TYPE 84



No.	Part No.	Description	Price
1	268-980	Main Jet 135	.
2	261-692	Atomizer	.
3	261-606	Needle Jet 262	.
4	261-643	Jet Needle 8H1	.
5	963-140	Idler Jet 50	.
6	963-155	Air Screw	.
7	831-710	O Ring	.
8	261-635	Piston	.
9	963-130	Jet Stock	.
10	261-625	Screen	.
11	261-650	Holding Plate	.
12	227-635	Spring Cup	.
13	963-160	Mix Screw	.
14	938-640	Spring	.
15	239-700	Slide Spring	.
16	261-660	Cover	.
17	261-670	O Ring	.
18	241-430	Screw	.
19	241-440	Adjust. Screw	.
20	942-541	Nut	.
21	260-370	Grommet	.
24	963-192	Float	.
25	929-700	Pin	.
26	261-705	Float Needle	.
27	261-710	Clip	.
28	963-170	Bowl	.
29	830-720	Gasket	.
30	963-180	Bowl Clip	.
39	963-740	Piston	.
40	268-850	Sleeve	.
41	661-050	Spring	.
42	963-750	Housing	.
46	268-847	Piston	.
47	239-730	Spring	.
48	261-770	Housing	.
49	260-490	Rubber Cap	.
50	261-750	Lever	.
51	240-791	Screw(51) &	.
52	945-750	Washer(52)	.
53	261-200	Nut	.
54	256-033	Vent Tube	.

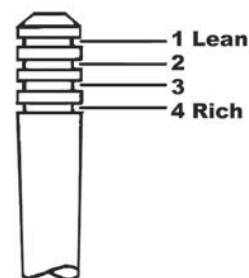
# CARBURETOR PARTS

## CARBURETOR JETTING CHART FOR ROTAX® UL ENGINES



Use this chart to identify part number you need, then use bottom chart to select correct part number to order.

ROTAX® ENGINE	MAIN JET	IDLER JET	NEEDLE JET	JET NEEDLE	CLIP POSITION	AIR SCREW
2771	148	45	2.72	8L2	2	1
2772	140	45	2.72	8L2	2	1
3771	165	45	2.70	8O2	2	.5
3772	155	45	2.70	8O2	2	.5
4471	165	45	2.70	15K2	2	.5
4472	155	45	2.70	15K2	2	.5
447DC1	135	50	2.70	6G1	3	1
447DC3	128	50	2.68	15K2	2	1
503SC1 Up to #3785371	180	45	2.74	8G2	3	.5
503SC2 Up to #3785371	158	45	2.74	6H2	3	.5
503SC1 From #3785372 Up	185	45	2.72	15K2	3	.5
503SC2 From #3785372 Up	165	45	2.70	15K2	3	.5
503DC1	158	45	2.74	8L2	1	.5
503DC3	148	45	2.68	11K2	2	1
532SC1	195	55	2.74	15K2	3	1
532SC3	170	55	2.74	15K2	3	1
532DC1	165	55	2.72	11G2	3	1
532DC3	145	55	2.68	15K2	3	1
5821	165	55	2.72	11G2	3	1
5823	145	55	2.68	15K2	3	1



1 = Without Rotax® intake silencer kit, with K&N RC1200 air filter, with or without Rotax® after muffler kit.

2 = With Rotax® intake silencer kit, with K&N CM0300 air filter, with or without Rotax® after muffler kit.

3 = With Rotax® dual intake silencer kit, with K&N RC1200 air filters, with or without Rotax® after muffler kit.

### KWIK TUNE FOR ROTAX ENGINES



An EAA member called his brother-in-law to ask if he knew of a way to hold the spring and plastic cup while changing the jet needle clip setting on a Rotax engine. Finding no solution, he decided to invent one; the handy Kwik Tune, a timesaving tool he launched at Sun 'n Fun. Kwik Tune helps remove and reinstall the aircraft throttle cable, cover, spring, and slide in a Bing carburetor. P/N 08-05206.....

### SILVERHAWK EX FUEL INJECTION SYSTEMS



The Silver Hawk EX, non-certified Fuel Injection System is proven technology drawn from decades of fuel metering engineering by Precision Airmotive. Manufactured as experimental, the new Silver Hawk kit provides experimental pilots with precise, dependable, and reliable fuel metering. Just what you'd expect from Precision Airmotive.

At a price that will make you soar. Manufactured using the highest quality materials and components, the Silver Hawk EX features a machined finish with clear coat anodize. Designed for these major engine manufacturer applications: Lycoming 320, 360, & 540 series; Continental 470 series; Superior and others.

- Specifically engineered and built to meet the demands of aviation's growing experimental segment.
- Precision Airmotive appointed worldwide network of factory authorized product support centers
- Backed by a Precision warranty program.

Model No.	Description	Part No.	Price
EX320-1	Application: Lycoming O-320 and IO-320 engines with 150/160 HP	07-00773	.
EX360-1	Application: Lycoming O-360 and IO-360 parallel valve engines with 160/180 HP Superior O-360 and IO-360 parallel valve engines with 180 HP	07-00774	.
EX360-2	Application: Lycoming O-360 and IO-360 angle valve engines with 200 HP	07-00775	.
EX540-1	Application: Lycoming O-540 and IO-540 parallel valve engines with 235-260 HP Continental O-470 engines	07-00776	.

### MAIN JET



- 125 = Part No. R268-978
- 128 = Part No. R261-085
- 130 = Part No. R268-979
- 135 = Part No. R268-980
- 138 = Part No. R268-998
- 140 = Part No. R268-981
- 145 = Part No. R268-982
- 148 = Part No. R268-995
- 150 = Part No. R268-983
- 155 = Part No. R268-984
- 158 = Part No. R268-996
- 160 = Part No. R268-985
- 162 = Part No. R268-990
- 165 = Part No. R268-986
- 170 = Part No. R268-987
- 175 = Part No. R268-988
- 180 = Part No. R268-989
- 185 = Part No. R261-080
- 190 = Part No. R261-084
- 195 = Part No. R268-992
- 200 = Part No. R261-082
- 205 = Part No. R261-087
- 220 = Part No. R261-081

### IDLER JET



- 30 = Part No. R963-141
- 35 = Part No. R963-143
- 40 = Part No. R963-142
- 45 = Part No. R963-144
- 50 = Part No. R963-140
- 55 = Part No. R963-147
- 60 = Part No. R963-145
- 65 = Part No. R963-146

### NEEDLE JET



- 2.62 = Part No. R261-606
- 2.68 = Part No. R963-691
- 2.70 = Part No. R963-698
- 2.72 = Part No. R963-697
- 2.74 = Part No. R963-699
- 2.76 = Part No. R963-693
- 2.78 = Part No. R963-696
- 2.80 = Part No. R963-695
- 2.82 = Part No. R963-694
- 2.94 = Part No. R961-022

### JET NEEDLE



- 2H2 = Part No. R963-717
- 4E2 = Part No. R963-716
- 6G1 = Part No. R261-642
- 6H2 = Part No. R963-719
- 8G2 = Part No. R963-712
- 8H1 = Part No. R261-643
- 8L2 = Part No. R963-714
- 8O2 = Part No. R963-711
- 1O = Part No. R961-045
- 11G2 = Part No. R961-043
- 11K2 = Part No. R961-044
- 15K2 = Part No. R963-718

### NEEDLE CLIP



P/N 07-00693.....  
Lower numbers indicate smaller jet size or opening.  
Low numbers = lean.  
High numbers = rich.  
First needle number denotes mixture above half-throttle.  
Needle letter denotes mixture below half-throttle.

EP

# FUEL PUMPS



## BUZZ PUMP AC2001

The Buzz Pump AC2001 is lightweight positive displacement, high volume, manual dual stroke auxiliary fuel pump for experimental aircraft. The Buzz Pump has capacity to operate aircraft engines as large as 300 HP models at full power. Eliminates the connection to a complicated electrical system and expensive high-pressure electrical fuel pump. The Buzz Pump is constructed with high quality engineered materials and components. It will bolt directly into standard Christen and D2 pump bolt patterns.

**Specifications:** • Weight: 2.4 lbs. • Aluminum billet housing construction • Double O-ring shaft seals • Triple precision bearing shaft support • Metal valves for long life • Pressure setting relief valve: 5-25psi • 90° stroke angle for comfortable operation • Housing dia.: 3.4" x 4.5" total length • Pump handle length: 4.5" • One input port and one output port @ 180° • 1/4-18 NPT tapped holes for fittings • Standard finish is clear anodize (light gray color) • Buzz Filter Sump AC2002, can bolt directly to the pump when an AN911-6D threaded nipple (not included)  
P/N 07-00654 .....

## BUZZ FILTER SUMP



The Buzz Filter Sump, AC2002 is a fuel filter/moisture sump for high-pressure applications, 50psi ideally suited for precision fuel injection systems. The Buzz filter/sump can mount directly to the Buzz Pump AC2001 or to the fuselage or firewall. Easy to replace fuel filter. The Buzz Filter/Sump is engineered and constructed with high

quality engineered materials and components and will mount directly to the Buzz Pump AC2001, with an AN911-6D threaded nipple.

**Specifications:** • High-pressure application to 50psi • Weight: 13 oz. • Aluminum billet housing construction • Large O-ring sump seal • 1/4-18 NPT tapped holes for fittings • CG-12 Fram filter with easy to replace insertion chamfer • Standard finish is clear anodize (light gray color) • Curtis drain fitting • AN fittings not included.  
P/N 07-00655 .....

## MIKUNI FUEL PUMP



Genuine Mikuni fuel pumps. Replace original parts on Rotax®, Hirth, & many other engines.

Single Pump ..... P/N 07-00777 .....  
Dual Pump ..... P/N 07-00778 .....  
Single Pump ..... P/N 07-01011 .....  
Dual Pump ..... P/N 07-01010 .....

## BING FUEL PUMP



Bing High-capacity pump. Use when tank is more than 5' away or significantly lower than engine. .... P/N 07-00779 .....

Diaphragm Repair kit... P/N 07-01007 .....

Bing Low Vol. fuel pump. .... P/N 07-01008 .....

Repair Kit for Low Vol pump. .... P/N 07-01009 .....

## ANDAIR FUEL BOOST PUMPS



The high pressure fuel boost pump from Andair features a brushless motor which is light weight, powerful, and reliable. The pump components are D2 tool steel providing unequalled wear characteristics. The model PX375-40A-5-25 boost pump is furnished with a BLX-150 controller that is needed to drive the

pump. This pump was designed to meet the requirements of an engine such as the Lycoming IO-360 at full power. The model XP375-40A-5 has none of the pressure relief or bypass features of the boost pump and is designed for a smoke system or transfer fuel from tank to tank. This pump is furnished with a BLX-165 controller. **Features:** \* Integral bypass and pressure relief valve. \* 11-14V DC, 6 amps max \* Flow: 16 GPH @ 25 PSI \* Open Flow: 56 GPH @ 8 PSI \* Pressure drop in bypass mode @ 36 GPH: <0.5 PSI \* No flow max pressure: 26 PSI \* Weight: 460g (16.23 oz) \* Soft Start - Continuous Duty \* Self Priming to 10ft (3M) Head through 3/8" tube. \* Aerospace Grade Aluminium Body. \* AN-6 male fittings. \* Mounting bracket included.

Fuel Boost Pump ..... P/N 07-01334 .....

Smoke Transfer Pump..... P/N 07-01335 .....

## FACET FUEL-IT

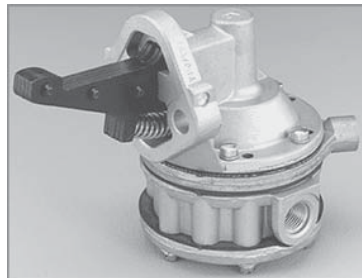


The Facet FUEL-IT electric transfer fuel pump is the perfect tool to efficiently pump 1 gallon of gas per minute, 15' of minimum dry lift, quickly and easily from your gas can or canister into your boat, ATV, snowmobile, garden or compact tractor or even your automobile. It's also handy for filling up generators, rotor tillers or everyday lawn mowers.

The Facet FUEL-IT pump eliminates lifting and holding up heavy gas cans. It's environmentally friendly because it helps you put the gas in the tank and not on the ground. .... P/N 08-06287 .....

Rechargeable Battery 12V ..... P/N 08-06288 .....

## TEMPEST LYCOMING & TCM FUEL PUMPS



The Early Model Lycoming Fuel Pump The New Continental Pump

MMO	Description	P/N	Price
<b>Overhauled Lycoming &amp; TCM Diaphragm Fuel Pumps</b>			
40174	Fuel Pump - Overhauled	05-02530	.
40296	Fuel Pump - Overhauled	05-02531	.
40595	Fuel Pump - Overhauled	05-19015	.
41234	Fuel Pump - Overhauled	05-02532	.
41270	Fuel Pump - Overhauled	05-02533	.
41271	Fuel Pump - Overhauled	05-02534	.
41272	Fuel Pump - Overhauled	05-02536	.
41452	Fuel Pump - Overhauled	05-02537	.
41617	Fuel Pump - Overhauled	05-02538	.
41812	Fuel Pump - Overhauled	05-02539	.
75246	Fuel Pump - Overhauled	05-02540	.
75247	Fuel Pump - Overhauled	05-02541	.
103396-01	Fuel Pump - Overhauled	05-02542	.
103586-01	Fuel Pump - Overhauled	05-02543	.
LW14282	Fuel Pump - Overhauled	05-02544	.
LW15399	Fuel Pump - Overhauled	08-15399	.
LW15472	Fuel Pump - Overhauled	05-19000	.
LW15473	Fuel Pump - Overhauled	05-19010	.
LW16335	Fuel Pump - Overhauled	05-02545	.
LW16775	Fuel Pump - Overhauled	05-02546	.
LW16947	Fuel Pump - Overhauled	05-02547	.
RJ4033	Fuel Pump - Overhauled	05-02548	.
R00253-1	Fuel Pump - Overhauled	05-02549	.
R00253-2	Fuel Pump - Overhauled	05-02551	.
R00253-501	Fuel Pump - Overhauled	05-02552	.
R00253-502	Fuel Pump - Overhauled	05-02554	.
AF1572	Fuel Pump - Overhauled	05-02555-1	.
AF15473	Fuel Pump - Overhauled	05-02556-1	.
<b>New Lycoming Diaphragm Fuel Pumps</b>			
AF15472	Fuel Pump - New	05-02555	.
AF15473	Fuel Pump - New	05-02556	.
<b>Overhauled TCM Centurion Fuel Pumps</b>			
4036/9076	Fuel Pump - Overhauled	05-19030	.
6861	Fuel Pump - Overhauled	05-19035	.
9051/9867	Fuel Pump - Overhauled	05-19025	.
40585	Fuel Pump - Overhauled	05-02557	.
40695	Fuel Pump - Overhauled	05-02558	.
AF40585	Fuel Pump - Overhauled	05-02562	.
AF40695	Fuel Pump - Overhauled	05-19045	.
AF631391	Fuel Pump - Overhauled	05-02563	.
<b>New TCM Centurion Fuel Pumps</b>			
AF6561	Screen Kit	05-02560	.
AF16335	Fuel Pump - New	05-02561	.
AF40585	Fuel Pump - New	05-02564	.
AF40695	Fuel Pump - New	05-02565	.
AF631391	Fuel Pump - New	05-19050	.

**\$100.00 CORE CHARGE ON TEMPEST OVERHAULED FUEL PUMPS.**

# FUEL PUMPS



## LYCOMING & CONTINENTAL FUEL PUMPS

Proven to be a trouble-free mechanical pressure pump. Original equipment on numerous airframe installations and adaptable to most applications with one of 3 dual diaphragm types. Overboard vent of this design provides operating assurance throughout all flights.

Engine Type	Engine Model No.	Our P/N	Lycoming Part No.	Our Price
Lycoming	O-235, O-290, O-320, O-340, O-360, HO-360, GO-480, O-540, YO-540	41271 4-6 PSI 05-02534	05-19000 LW15472	(Core.)
	IO-320, IO-360, AIO-360, HIO-360, IVO-360, IO-540, IGO-540, IO-720	41234 25-30 PSI 05-02532	05-19010 LW15473	(Core.)
	Can be used on A/C who formerly used low pressure (15 PSI) carb.	41272 (old 40595) 25-30 PSI	LW15473	(Core.)
	C-75 (-12, -12F), C-90 (-8,-8F,-12,12F)	05-19045	AF40695	(Core.)
	C-90 (-16F), O-200	05-19050	AF631391	

Adapt pump thread to AN fittings using AC Fuel pump adapters:  
P/N 75505 .. Fitting ... or P/N 75505-1 . Fitting & O-Ring.....

### LYCOMING/AC FUEL PUMP FITTINGS



These fittings are designed to fit mechanical fuel pumps used on Lycoming engines. These fittings feature 3/8" AN flare outlets for connection to aircraft hoses, and are available in straight, 45° and 90° angle versions. Straight fitting..... P/N 07-00780.....  
45° fitting..... P/N 07-00781.....  
90° fitting..... P/N 07-00782.....  
Tee fitting w/1/8" pipe thread tapping for fuel pressure..... P/N 07-00783.....

### WELDON HIGH PRESSURE ELECTRIC FUEL PUMP

Weldon's 8150 series high pressure electric fuel pump is a positive displacement "cammed vane" type used primarily in airborne applications. It features a low pressure relief valve and integral bypass valve. Applications include in-line fuel transfer priming of fuel-injected engines and an emergency fuel pump. The permanent-magnet, explosion resistant motor is rated for continuous duty. These self-priming, lightweight (2.6 lbs. max.) pumps have been used for over 15 years by major aircraft manufacturers.

Model No.	Flow GPH	Output	Fluid	Power	Price Ea
8150-B	35 Min.	4.5 PSI	Av Gas	24V DC @ 2A	.
8163-A	35 Min.	21 PSI	Av Gas MIL-G-5572	14V DC @ 5A	.
8170-A	35 Min.	4.5 PSI	Gasoline	12V DC @ 4A	.

### WELDON OVERHAULED FUEL PUMPS

We have the complete line of FAA approved overhauled fuel pumps. These pumps are warranted the same as OEM with guaranteed performance.

Weldon 18000A (14Volt) Replaces: Cessna C291504-0101, Duke 4140-00-17  
Weldon 18000B (28Volt) Replaces: Cessna C291504-0201, Duke 4140-00-15

18000-A WELDON PUMP 14V ..... P/N 08-07082 .....  
18000-A WELDON PUMP 28V ..... P/N 08-07083 .....

### MOUNTING BRACKET FOR WELDON FUEL PUMPS

This T-bolt quick release band clamp with mounting bracket fits all Weldon fuel pumps with 2-1/2" diameter motors. Made from certified aerospace quality stainless steel, this bracket offers secure holding power under extreme vibration. The band clamp rotates within the mounting foot to offer easy access to the quick release latch for a variety of mounting positions. P/N 05-00021..... ea.

### ACS FUEL PUMP COOLING SHROUD

Designed to keep the fuel pump cooler in the hot engine compartments, and reduce the risk of fuel vapor lock. The cooling shroud will fit carbureted or fuel injector Lycoming engines using a diaphragm style pump. P/N 08-06097.....

### FUEL PUMPS COOLING SHROUD

Designed to keep the fuel pump cooler in the hot engine compartments, and reduce the risk of fuel vapor lock. The cooling shroud will fit carbureted or fuel injector Lycoming engines using a diaphragm style pump. Black Anodized Coating P/N 08-07098.....



## FACET ELECTRIC FUEL PUMPS

**SOLID-STATE TYPE PUMPS** - These pumps measure less than 3" in any direction and weigh only 18 oz. Fuel is supplied as soon as the ignition is turned on so the engine will start faster at colder temperatures. Built-in pressure relief prevents flooding and

assures fast re-starts on hottest days. The all-steel plated case is water tight. Mounts with two bolts. For best results, mount the pump close to the fuel tank and below the liquid level. The tank is self-priming to 18" fuel lift. Standard 12 V models require only 1 amp at max. delivery. Many models are available, but these are the ones recommended by Rutan Aircraft Factory, Stoddard Hamilton and many other aircraft designers. All of the pumps shown feature the all nylon valve and plunger as specified by Rutan Aircraft in the Canard Pusher newsletter.

**FACET NO. 40105** - 12V Negative Ground, 2-1/2-4-1/2 PSI Max., 30 GPH. 1/8 x 27 internal pipe ports..... P/N 40105.....

**FACET NO. 40106** - 12V Negative Ground, 4-6 PSI Max., 30 GPH. 1/8 x 27 internal pipe ports..... P/N 40106.....

**FACET NO. 40164** - 24V Negative Ground, 4-C PSI Max, 30 GPH, 1/8 x 27 internal pipe ports..... P/N 40164.....

**FACET NO. 40108/40154** - Aircraft Spruce now carries 12V and 24V electric fuel pumps which have AN-style 37° male "dash 6" fittings built into the fuel pump to provide a simpler fuel line hookup than with the internal pipe threads on the older Facet fuel pumps.

4-6 Psi ..... P/N 40108 (12V) .....  
15 GPH. .... P/N 40154 (24V) .....

Facet filter for solid-state pumps..... P/N 479735..... ea.  
The pumps above do not feature an anti-siphoning valve and fuel will flow through them in event of pump failure.

### AEROQUIP FITTING FOR FACET PUMPS

On the recommendation of Rutan Aircraft Factory, we now stock Aeroquip #2071-6-6S fitting which is a steel elbow with a swivel nut which fits the 37 flares on the Facet 40108 and 40154 fuel pumps. This Aeroquip fitting makes installation of the pumps easy & economical. P/N 04-05800.....



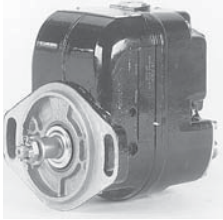
### INTERRUPTER TYPE PUMPS

**Fuel Compatibility:** All models of the Facet High Performance Gold-Flo Solid State Fuel Pumps are compatible with gasoline, diesel, biodiesel, blended alcohol fuels and fuel additives. **Reliability:** The new Gold-Flo Solid State Fuel Pump is an enhanced version of our Interrupter model. It has Solid State circuitry and will meet or exceed all performance specifications and is totally interchangeable. (These pumps have demonstrated an endurance life almost double that of the nearest competitor, according to our test data). **Easy to Install-Easy to Service:** Two bolt mounting makes installations easy. Nothing to adjust. For best results, mount the pump close to the fuel tank and below the fuel level. The pump is self-priming to 24 inches vertical fuel lift. Vertical mounting is preferred to assure maintenance of rated pressures. An installation kit is available for replacement applications. The only service normally required is a simple cleaning of the filter and fuel inlet cavity. **Eliminates Vapor Lock:** When properly installed on most vehicles a constant, smooth, dependable supply of fuel under pressure is assured in the hottest weather or in high altitudes. **AVAILABLE FEATURES:** • 12 - 24 inches dry lift • 20 - 45 GPH • 1 - 8 PSI • Transient Protection - 24 volt only • State of the art Electronics • Sealed Electronics • Built in Anti-Siphon Valve (Positive shut-off) • UL Certified • VCA Certified • Complies to Mil-std-461D • Replaceable 74 micron filter • Built in magnet to collect metal particles for additional filtration • 1.6 amp average • Self Priming and Self Regulating • 32 ounces and 5 inches • Corrosion Resistant over 100 hours of salt spray

Facet No.	Part #	Price
480545-12V Neg. Ground, 4-5 psi, 30gph. Incl. anti-siphoning valve. Used on Maule aircraft.	480545	.
478360-12V Neg. Ground, 4-5 psi, 30 gph. W/o anti-siphoning valve. Used on some Piper aircraft.	478360	.
476088-24V Negative Ground, 4-5 psi, 30 gph. Used on some Piper and Grumman models.	476088	.
480543-12V Neg. Ground, 6.5-7.5 psi, 45gph. Used by some engine rebuilders and aircraft modification shops.	480543	.
Facet filter for interrupter pumps.	479729	.
476410- 12V Negative Ground, 4-5 psi, 20gph.	476410	.
480534E- 12V Negative Ground, 8.-6 psi, 45gph, 1/4-18 fitting	05-00802	.
480564E- 24V Negative Ground, 4-5 psi, 32gph. Includes anti-siphoning valve. 1/4-18 fitting.	05-01003	.
476549E- 12V Negative Ground, 8.-6.5 psi, 32gph, 1/8-27 fitting	05-00813	.

EP

# BENDIX-SCINTILLA MAGNETOS



## BENDIX MAGNETOS (Outright Purchase)

S4LN-20 (RH).....P/N 10-600644-1..... S4LN-21 (LH)..... P/N 10-500514-1.....

All above magnetos have impulse coupling.

## REMANUFACTURED BENDIX MAGNETOS

S4LN-20(RH)	10-51360-29R	S4LN-21	10-51360-26R	D3000	10-682555-11R
S4LN-21 (LH)	10-51360-37R	S4LN-21	10-51360-37R	1200	10-68255-14
200 Series	10-16305-9	1200	10-34937-4		10-34931-1
	10-51365-47R	D3000	10-68256-11		10-51360-27R
	10-51360-28R		10-51365-39		10-79020-10

Exchange Price. Add \$180.00 core charge to price above. Refundable with return of rebuildable exchange magneto.

ALL MODEL NUMBERS AVAILABLE

## BENDIX MAGNETO ENGINE APPLICATIONS

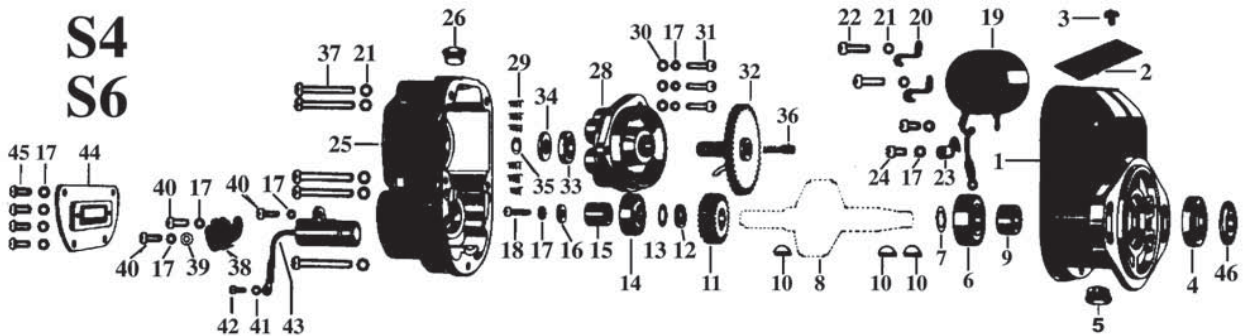
Make	Engine Model	Magneto Type	Magneto Replacement	Units per Engine
Continental	A-65-8, A-75-8,	S4RN-20	10-51360-27 (Rt. Side)	1
	C-75-8, C-85-8 with original crankcase	S4RN-21	10-51360-28 (Lt. Side)	1
	A65-8, A-75-8, C-75-8, C-85-8 with current crankcase castings No. 6794 & No. 6795	S4RN-21	10-51360-28	2
	C-75-12F, C-85-8F, C-85-12F, C-90-12,	S4LN-21	10-51360-26	2
	C-115, C-125-2, C-145-2, C-145-4	S6LN-21	10-51365-39	2
	E-165-2, E-185-2 (above S/N 10111) E-185-3, E-185-9 (above S/N 5937) (above S/N 20922), E-225-4, E-225-8 (all), O-470-7 (above S/N 5937)	S6LN-20	10-51365-43	2
	GO-300A, GO-300B	S6RN-21	10-51365-35	2
	O-470-2, -4, -13, -A, -B, -E, -G, -J, -K, -L, -M, BGSO-526-A	S6RN-25	10-79020-8	2
	O-470-13A	S6LN-23	10-52350-20	2
	PE-150-2, -6 Packette	S6LN-23	10-52350-20	1
Franklin	FSO-526-A	S6RN-26	10-85290-2	2
	6A4-150-B3, 6A4-165-B3	S6RN-21		2
Franklin	6V4-178-B3, -B33, O-335-2, -3	S6RN-21	10-51365-48	2

Make	Engine Model	Magneto Type	Magneto Replacement	Units per Engine
Franklin	6V4-200-C32, -C33, O-335-2, -3, -5, -6	S6RN-23	10-52350-19	2
	6A4-200-C6	S6RN-23	10-52350-21	2
	††O-145-B2, -B3, -C2, -C3, ††O-235-C,	S4LN-20	10-51360-29	1
Lycoming	O-235-C1, -C1A,	S4LN-21	10-51360-30	1
	O-320-A1A, -A2A, -B1A, -B2A, O-340-A, -A1A,	S4LN-21	10-51360-30 (25° Lag) or	2
	-A2A, -B1A, B2A, O-360-A, -A1A, -A1B, -B1A, -B2A	S4LN-21	10-51360-25 (35° Lag)	2
	O-290-G (single ignition)	S4LN-21	10-51360-25	1
	GO-435-C2, -C2A, -C2B, -C2B2, -C2C, -C2E, GO-480, -B, -B1A6, -B1C,	S6LN-20	10-51365-31	1
	-B1D, -C1A, -C1D6, -C2E6, -F1A6, -F2A6, -F3A6, -F4A6	S6LN-21	10-51360-32	1
	O-435-19, -20, VO-435A, -A1A, -A1B, -A1C, -A1D, GO-480-C1B6, -D1A,	S6LN-20	10-51365-33	1
	-G1B6, GSO-480-A1A6, -A1C6, -B1A6, -B1B6, -B1C6	S6LN-21	10-51365-34	1
	O-435-6, -6A, -23, -23A	S6LN-22	10-52350-22	1
	-23B, -A1C (optional), O-480-1	S6LN-23	10-52350-23	1
	O-435-17, GO-435-C2, -C2A, -C2B, -C2D,	S6LN-20	10-51365-44	1
	GO-480-B1, -B1B, -C2C6, -F3B6, -F4B6	S6LN-21	10-51365-45	1
	O-540	S6LN-20	10-51365-46	1
	S6LN-21	10-51365-47	1	

\*See Listing Below.

\*\*New P/N 10-357584. \*\*\*New P/N 10-357586.

## PARTS COMMON TO S4N & S6N MAGNETOS



Ref. No.	Part No.	Description	Price Ea.
1	10-50727Y	Housing - Magneto	
2	10-400012	Plate - Mag Ident	
3	10-22067	Drive Screw - Ident Plate	
4	10-357592	Oil Seal - Drive Shaft	
5	10-157134	Vent - Mag Housing	
6	10-81806	Bearing - Mag. Drive End	
7	2-161-1	Shim Washer - .0025"	
	2-161-2	Shim Washer - .004"	
	2-161-3	Shim Washer - .005"	
	2-161-4	Shim Washer - .008"	
	2-161-5	Shim Washer - .010"	
	2-161-6	Shim Washer - .012"	
	-----	(Drive End Bearing)	
8	-----	Magnet - Rotating	
9	10-25788	Bushing - Drive Shaft	
10	10-90788-5	Key - Woodruff	
11	10-157123Y	Gear-Distrib., Small (S4)	
11A	10-157120Y	Gear-Distrib., Small (S6)	
12	10-3503	Spacer-Bkr End Bearing	
13	2-199-1	Shim Washer - .002"	
	2-199-2	Shim Washer - .004"	

Ref. No.	Part No.	Description	Price Ea.
13	2-199-3	Shim Washer - .005"	
	2-199-4	Shim Washer - .008"	
	2-199-5	Shim Washer - .010"	
	2-199-6	Shim Washer - .012"	
	-----	(Breaker End Bearing)	
14	2-202	Bearing-Magnet, Bkr End	
15	10-88543-1	Cam - Breaker	
16	10-51354	Washer-Plain (Cam Screw)	
18	10-35936-10	Screw - Cam	
19	10-357164	Coil	
20	10-50765	Clamp - Coil Core	
21	-----	Washer - Lock	
22	10-35937-8	Screw - Coil Core Clamp	
23	10-5752	Clip - Primary Lead	
24	10-16479	Screw	
25	-----	Housing - Distributor	
26	10-157135	Plug - Distributor Housing	
27	-----	Bushing - Ground Terminal	
28	10-52949	Block - Distributor (S4)	
28A	10-52958	Block - Distributor (S6)	
29	10-50737	Spring-H.T. Cable Contact	

Ref. No.	Part No.	Description	Price Ea.
30	-----	Washer - Plain	
31	-----	Screw - Distributor Block	
32	10-357584	Gear-Distrib., Large (S4)**	
32A	10-357586	Gear-Distrib., Large (S6)***	
33	10-50752	Washer - Felt	
35	10-92815-37	Ring-Retain. (Distrib., Gear)	
36	10-9595	Brush - Carbon	
37	10-157158	Screw	
38	-----	Breaker Assembly*	
39	10-14268	Washer - Plain	
40	10-35936-6	Screw	
41	-----	Washer - Lock	
42	-----	Screw - Lead to Breaker	
43	10-51676	Condenser	
44	-----	Cover - Breaker	
45	10-157161	Screw - Breaker Cover	
46	10-51678	Oil Slinger - Drive Shaft	



# BENDIX-SCINTILLA MAGNETOS

## BENDIX BREAKER ASSEMBLIES

### Early S4, S6 Mags

P/N 07-06305 (10-357173) with spring (current production) ..... Ea.  
 P/N 07-06306 (10-357174) without spring (current production) ..... Ea.

All above breaker assemblies used on either Right or Left Magnetos. Late S4/S6 Mags, S200 Mags\*

P/N 10-382584 (LH) ..... Ea.  
 P/N 10-382585 (RH) ..... Ea.

Used on many late Lyc. engines.

Note: Specify Bendix mag P/N e.g., 10-51369-29

## REPLACEMENT COIL FOR BENDIX S4, S6 MAGS

Airborne FAA-PMA approved coil replaces both Bendix 10-357164 & 10-357165. Retrofits virtually the complete range of Bendix S20 & S200 series mags. Furnished with long & short "coil to points" leads. P/N ES-652 .....

NOTE: Part Nos. 10-357164-1, 10-357165-1, 07-06303, 07-06304 are all equivalents for ES-652

## REPLACEMENT COIL FOR BENDIX 1200 SERIES MAGS

Aero Accessories, Inc. FAA-PMA approved coil is a direct replacement for Bendix 10-391088 coil as used on Bendix 1200 series mags at tremendous savings. P/N 07-05600 .....

## REPLACEMENT COILS FOR CONTINENTAL ENGINES PER SERVICE BULLETIN NO. 637

TCM Ignition Systems has issued Service Bulletin No. 637 to retire from service certain older coils and rotating magnetos. The Bulletin applies to many S-20, S-200, S-600, and S-1200 series magnetos as identified in this chart. Compliance with this Bulletin is required at the next 100 inspection, annual inspection, or progressive maintenance inspection, whichever comes first. Order by new coil part number.

Magneto Series	Old Coil P/N	Color	New Coil P/N	Color	Our Price
S-20	10-51303	Opaque amber to Dark Purple	10-357164	Bright Red to Dark Red	.
	10-76384				
	10-160886				
S-200	10-163172	Opaque Amber to Dark Purple	10-357165-1	Bright Red to Dark Red	.
	10-163209				
	10-160887				
S-1200	10-349271	Opaque Amber	10-391088-1	Blue to Olive Green to Black	.



### ALTERNATOR FILTER

Replacement part for existing alternator filters. Wire won't break at the case and its clamp is made from heavy gauge steel. Double the capacitance compared to OEM alternator filters. For stubborn alternator noise, this Alternator filter combined with the Eliminator (P/N 11-08055) can trap a wide frequency range of electronic noise. Both of these filters have been thoroughly tested under a DO 160D and are FAA/PMA approved. P/N 11-08060.....



### MAGNETO FILTER

Eliminates ignition noise. Install in primary lead of magneto. Hooks up parallel to primary lead. Not FAA approved. P/N 07-03200 ..... ea



### MAGNETO FILTER FAA APPROVED

FAA approved ignition filters easily connect to the primary lead and grounds at the magneto and eliminate magneto noise. Size: 1"x1.8". 1yr warranty.

Specifications: • Heavy duty mounting clamp • Advanced feed-through design • Temp. range: -35°C to +80°C • Maximum current: 20 amps • Capacitance: .05 uf-self healing technology • Braided cable is shielded, silver plate over copper supplied in 8" lengths. • 1000 Vdc working voltage, 5000Vdc break down voltage P/N 07-00713 .....

Magneto filters not for use on slick mags.



### BENDIX MAGNETO GREASE

#10-27165 - Factory recommended lubricant for bearings in Bendix magnetos. 1 Lb. Can ..... P/N 10-27165 .....  
 #10-391200 - Grease for AD Note on 1200 Series magnetos. 1 Lb. Can ..... P/N 10-391200 .....  
 1 oz. tube ..... P/N 07-02500 .....



### GROMMET STRETCHER

Stop Cutting Grommets!

- Stretch grommets over large plugs and fittings.
- Great for spark plug wires or molex plugs.

P/N 11-06946 .....



### BOGERT AVIATION P-LEADS

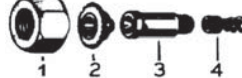
P-leads for all aircraft using a Slick or Bendix Style Magnetos. This includes nearly all piston aircraft such as: Cessna, Piper, Grumman, Mooney, as well as many homebuilt and experimental aircraft. As a general rule cables should be replaced when ever wear is apparent. Broken ground leads should not be permitted. A drop in rpm is expected when one magneto of the two mags is shut off. Should the propeller be moved by hand and a functional "hot" magneto exists, the engine may fire causing injury. If there is no drop in rpm the owner should call a mechanic immediately. Bogert is using 14gauge MS27500 wire with aviation approved terminals. The shrink tube has an adhesive inside the sleeve to improve durability and reduce the possibility of corrosion. Cables are ready to install.

Length inches	Slick Style		Bendix Round Nut		Bendix Hex Nut	
	Part No.	Price	Part No.	Price	Part No.	Price
30	11-06869	.	11-06891	.	11-06914	.
36	11-06870	.	11-06892	.	11-06915	.
42	11-06871	.	11-06893	.	11-06916	.
48	11-06872	.	11-06894	.	11-06917	.
54	11-06873	.	11-06895	.	11-06918	.
60	11-06874	.	11-06896	.	11-06919	.
66	11-06875	.	11-06897	.	11-06920	.
7	11-06876	.	11-06898	.	11-06921	.
84	11-06877	.	11-06899	.	11-06922	.
96	11-06878	.	11-06901	.	11-06923	.
108	11-06879	.	11-06902	.	11-06924	.
120	11-06880	.	11-06903	.	11-06925	.
132	11-06881	.	11-06904	.	11-06926	.
144	11-06882	.	11-06905	.	11-06927	.
156	11-06883	.	11-06906	.	11-06928	.
168	11-06884	.	11-06907	.	11-06929	.
180	11-06885	.	11-06908	.	11-06930	.
192	11-06886	.	11-06909	.	11-06931	.
204	11-06887	.	11-06910	.	11-06932	.
216	11-06888	.	11-06911	.	11-06933	.
228	11-06889	.	11-06912	.	11-06934	.
240	11-06890	.	11-06913	.	11-06935	.



### CONTINENTAL MAGNETO DRIVE GEARS

#36066 Gear ( Now 655845).....



### GROUND TERMINAL KITS

For S-20 series mags. Kit No. 10-52306 (AN3105).....

Reg. No.	Part No.	No. Req.	Description
1	10-30299	1	NUT - Coupling (Ground Terminal)
2	10-56507	1	CROMMET Assy.(Ground Terminal)
3	10-3383	1	FERRULE - Inner (Ground Wire)
4	10-25725	1	SLEEVE - Insulating (Ground Wire)



For 20 series mags. Kit No. P/N 10-52305 .....

Reg. No.	Part No.	No. Req.	Description
1	10-37669	1	NUT - Coupling (Ground Terminal)
2	10-7030	1	FERRULE - Outer (Ground Wire)
3	10-7029	1	FERRULE - Inner (Ground Wire)
4	10-37668	1	SLEEVE - Insulating (Ground Wire)
5	2-155	1	WASHER - Ground Wire Contact

### TCM/BENDIX IMPULSE COUPLINGS

Part No.	Price
10-40307	.....
10-40309	.....
10-40310	.....
10-40314	.....
10-40315	.....
10-40322	.....
10-40325	.....

\$50 core charge applies

### TCM/BENDIX CAM ASSEMBLIES

Part No.	Price
10-40166-4	.....
10-40167-4	.....
10-40167-6	.....
10-40167-10	.....

\$25 core charge applies

# BENDIX MAGNETO REPAIR KITS FROM TEMPEST

## REPAIR KIT

- 1 - Contact Assy. Kit (3)
- 1 - Capacitor
- 2 - Bearings
- 1 - Oil Seal
- 1 - Oil Slinger
- 3 - Woodruff Keys
- 1 - Cotter Pin
- 1 - Cam Screw
- 1 - Felt Washer
- 1 - Felt Strip
- 1 - Snap Ring
- 1 - Carbon Brush

These magneto repair kits are designed to simplify the Bendix magneto overhaul process by providing all of the commonly needed overhaul parts in one convenient kit. The Repair Kits contain the parts needed for minor repair such as a 500 hour inspection, and the Deluxe Repair Kits contain the parts needed for major repair such as a magneto overhaul. These parts are highest quality direct replacement parts and are approved for installation and use on certificated aircraft. The Repair Kit and Deluxe Repair Kit for the Bendix -200, -201, and -202 series magnetos contain two sets of contact assembly kits. Some parts that may be need replacing during magneto overhaul are not included in these kits.

## DELUXE REPAIR KIT

- 1 - Contact Assy. Kit (3)
- 1 - Coil Kit
- 1 - dist. Block Kit
- 1 - Gear Kit
- 1 - Capacitor
- 2 - Bearings
- 1 - Oil Seal
- 1 - Oil Slinger
- 3 - Woodruff Keys
- 1 - Cotter Pin
- 1 - Cam Screw

Bendix series	Magneto P/N	Magneto Type	Repair Kit P/N	Kit Price	Deluxe Repair Kit P/N	Kit Price				
S-20 & S21	10-51360-1	S4R(L)N -20,21	07-00855	.	07-00854	.				
	10-51360-3									
	10-51360-4									
	10-51360-6									
	10-51360-8									
	10-51360-10	S4R(L)N -20,21	07-00825	.	07-00856	.				
	10-51360-11									
	10-51360-12									
	10-51360-25									
	10-51360-26	S4R(L)N -20,21	07-00855	.	07-00854	.				
	10-51360-27									
	10-51360-28									
	10-51360-29	S4R(L)N -20,21	07-00825	.	07-00856	.				
	10-51360-30									
	10-51360-31	S4R(L)N -20,21	07-00855	.	07-00854	.				
	10-51360-33									
	10-51360-37	S4R(L)N -20,21	07-00825	.	07-00856	.				
	10-51360-40									
	10-51360-41									
	10-51360-45	S4RN-21	07-00860	.	07-00859	.				
	10-51360-46	S4R(L)N -20,21	07-00825	.	07-00856	.				
	10-51360-47	S4RN-21	07-00860	.	07-00859	.				
	10-51360-48	S4RN-21	07-00858	.	07-00857	.				
	10-51360-54	S4R(L)N -20,21	07-00825	.	07-00856	.				
	10-51360-55	S4R(L)N-20, 21	07-00860	.	07-00859	.				
	10-51360-58									
	10-51360-1 up to S.N.238468	S6R(L)N-20, -21	07-00862	.	07-00861	.				
	10-51365-1 up to S.N.238469	S6R(L)N	07-00864	.	07-00863	.				
	10-51365-2	S6R(L)N -20,21	07-00862	.	07-00861	.				
	10-51365-5									
	10-51365-7									
	10-51365-9									
	10-51365-13	S6R(L)N -20,21	07-00864	.	07-00863	.				
	10-51365-14	S6R(L)N -20,21	07-00862	.	07-00861	.				
	10-51365-15									
	10-51365-16									
	10-51365-17									
	10-51365-20									
	10-51365-25									
	10-51365-26									
	10-51365-27									
10-51365-28	S6R(L)N -20,21						07-00864	.	07-00863	.
10-51365-29										
10-51365-30										
10-51365-31										
10-51365-32										
10-51365-33										
10-51365-34										
10-51365-35										
10-51365-39	S6R(L)N -20,21	07-00862	.	07-00861	.					
10-51365-40										
10-51365-41	S6R(L)N -20,21	07-00864	.	07-00863	.					
10-51365-42										
10-51365-43										
10-51365-44										
10-51365-45										
10-51365-46										
10-51365-47	S6R(L)N -20,21	07-00862	.	07-00861	.					
10-51365-48										
10-51365-53	S6R(L)N -20,21	07-00864	.	07-00863	.					
10-51365-54										
10-51365-57	S6LN -20,21	07-00868	.	07-00867	.					

EP

# BENDIX MAGNETO REPAIR KITS FROM TEMPEST

Bendix Series	Magneto P/N	Magneto Type	Repair Kit P/N	Kit Price	Deluxe Repair Kit P/N	Kit Price
S-24 & S25	10-79020-5	S6R(L)N -24,25	07-00864	.	07-00863	.
	10-79020-6					
	10-79020-8					
	10-79020-10					
	10-79020-11	S6LN -25	07-00868	.	07-00867	.
	10-79020-13	S6R(L)N -24, -25	07-00864	.	07-00863	.
	10-79020-14					
	10-79020-16					
	10-79020-17	S6LN -25	07-00868	.	07-00867	.
	10-79020-18					
	10-79020-118					
	10-79020-19	S6RN-25	07-00866	.	07-00865	.
10-79020-119						
S-200	10-163005-1	S4R(L)N-200*	07-00844	.	07-00843	.
	10-163005-2					
	10-163005-3					
	10-163005-4					
	10-163005-5					
	10-163005-7					
	10-163005-10					
	10-163005-11	S4R(L)N-201*	07-00844	.	07-00843	.
	10-163015-1					
	10-163015-2					
	10-163015-3					
	10-163015-4	S4LN -204	07-00757	.	07-00847	.
	10-163045-1					
	10-163045-2					
	10-163045-3					
	10-163045-4					
	10-163045-6					
	10-163045-7					
	10-163045-1					
	10-163055-1					
	10-163055-2					
	10-163055-1	S4RN -204	07-00846	.	07-00845	.
	10-163055-2					
	10-163010-1					
	10-163010-2					
	10-163010-3					
	10-163010-4					
	10-163010-5					
	10-163010-6					
	10-163010-7					
	10-163010-8					
	10-163010-9	S6R(L)N -200*	07-00849	.	07-00848	.
	10-163010-10					
	10-163010-11					
	10-163010-15					
	10-163010-17					
	10-163020-1					
	10-163020-2					
	10-163020-3					
	10-163020-4	S6R(L)N-201*	07-00849	.	07-00848	.
10-163030-1						
10-163030-4						
10-163030-4	S6R(L)N-204	07-00849	.	07-00848	.	
10-163050-1						
10-163050-2						
10-163050-3	S6LN-204	07-00853	.	07-00852	.	
10-163050-5						
10-163050-6						
10-163050-7	S6RN -204	07-00851	.	07-00850	.	
10-163050-8						
10-163050-9						
10-163060-1	S6LN -204	07-00853	.	07-00852	.	
10-163060-2	S6RN -205	07-00851	.	07-00850	.	
10-163070-1	S6RN -205	07-00853	.	07-00852	.	
10-163070-3	S6RN -206	07-00853	.	07-00852	.	



\*The Repair Kit and Deluxe Repair Kit for the Bendix -200, -201, and -202 Series Magnetos contain two sets of Contact Assembly Kits.

## REPLACEMENT PARTS FOR BENDIX MAGNETS FROM KELLY AEROSPACE

P/N	Description	Price	P/N	Description	Price	P/N	Description	Price	P/N	Description	Price
07-06301	Bearing	.	07-06315	Breaker Points	.	10-50737	Spring	.	07-06341	Bushing	.
10-357078	Bushing	.	07-06316	Capacitor	.	07-06329	Felt Washer	.	10-160844	Brush	.
10-357164	Coil	.	07-06317	Washer	.	07-06330	Plug	.	07-06343	Bushing	.
10-357165-1	Coil	.	07-06318	Coil	.	10-51676	Capacitor	.	07-06344	Bushing	.
10-35717-3	Breaker Points	.	07-06319	Capacitor	.	07-06332	Washer	.	07-06345	Felt Strip	.
10-35717-4	Breaker Points	.	07-06320	Gasket	.	07-06333	Washer	.	07-06346	Packing	.
10-357193	Bushing	---	07-06321	Bushing	.	07-06334	Distributor Block	.	07-06347	Capacitor	.
07-06308	Capacitor	.	10-391088-1	Coil	.	07-06335	Distributor Block	.	07-06348	Washer	.
10-52949	Distributor Block	.	07-06323	Gasket	.	07-06336	Bearing	.	07-06349	Breaker Points	.
07-06311	Breaker Points	.	07-06324	Gasket	.	07-06325	Ring	.	07-06350	Breaker Points	.
10-382584	Breaker Points	.	07-06325	Distributor Block	.	07-06338	Ring	.	07-06351	Bearing	.
07-06313	Coil	.	07-06326	Distributor Block	.	07-06339	Bearing	.			
07-06314	Breaker Points	.	07-06327	Vent	.	07-00787	Coil	.			

# KELLY AEROSPACE IGNITION HARNESSSES



**PLATED STEEL NUT:** Steel nuts offer superior strength compared to aluminum nuts and reduce the potential for galling during installation FAA/PMA APPROVED FOR: - Franklin - Teledyne Continental Motors - Textron Lycoming .**ABRASION AND HEAT RESISTANT:** The abrasion resistant red polymer cover has been engineered specifically for the high-temperature environment of reciprocating engines. **UNIQUE SPRING DESIGN:** Kelly Aerospace ignition harnesses incorporate a negative-pitch spring design (the tip of the coil spring extends inward) allowing the coil spring tip to lie flat against the spark plug electrode, providing 360 contact. Ignition energy is maximized and flashover is reduced to a minimum. **REPLACEABLE CONTACT SPRINGS:** Replacement springs are available separately saving you time and money when a field repair is necessary. **STRAIGHT AND CLOCKABLE 90 DEGREE STEEL ELBOW LEADS AVAILABLE:** You have the option of using straight or clockable 90 elbow leads to make the installation neat and easy. **PERFORMANCE - Plus:** Using a tinned-copper, nickel plated braid shielding substantially reduces EMI and combined with a very flexible 19 strand conductor of stainless steel wire provides the ultimate in wire conductivity and ease of installation.

**NOTE: PART NUMBERING SYSTEM and CROSS REFERENCE:** The Kelly Aerospace part numbering system is "user Friendly" for quickly cross-referencing to both Champion and Unison Harnesses. The "KA1" prefix is equivalent to the Champion "CH1" or the Unison "M" with the balance of the part number remaining the same. Add the suffix "E" to the part number to designate the 90 degree steel elbow terminations whenever ordering an "Elbow" harness. (EXAMPLE: KA12121E).

P/N	BEND	SLICK	4 CYL	6CYL	ELBOW	STRAIGHT	Our P/n	Price
KA11480		X		X		X	08-01095	.
KA11480E		X		X	X		08-01096	.
KA1730	X			X		X	08-01098	<b>CALL</b>
KA11730E	X			X	X		08-01099	<b>CALL</b>
KA11740	X			X		X	08-01101	<b>CALL</b>
KA11740E	X			X	X		08-01102	<b>CALL</b>
KA11780		X	X			X	08-01103	<b>CALL</b>
KA11780E		X	X		X		08-01104	.
KA11878		X		X		X	08-01105	.
KA11878E		X		X	X		08-01106	.
KA11884		X		X		X	08-01107	.
KA11884E		X		X	X		08-01108	.
KA11950	X			X		X	08-01109	.
KA11950E	X			X	X		08-01110	.
KA11978	X			X		X	08-01111	<b>CALL</b>
KA11978E	X			X	X		08-01112	.
KA12007	X		X			X	08-01113	.
KA12007E	X		X		X		08-01114	<b>CALL</b>
KA12015	X			X		X	08-01115	<b>CALL</b>
KA12015E	X			X	X		08-01116	.
KA12037	X			X		X	08-01117	.
KA12037E	X			X	X		08-01118	.
KA12112	X		X			X	08-01119	.
KA12112E	X		X		X		08-01120	.
KA12120	X			X		X	08-01121	<b>CALL</b>
KA12120E	X			X	X		08-01122	.
KA12121	X			X		X	08-01123	<b>CALL</b>
KA12121E	X			X	X		08-01124	.
KA12130	X			X		X	08-01125	.
KA12130E	X			X	X		08-01126	.
KA12154	X			X		X	08-01127	.
KA12154E	X			X	X		08-01128	.
KA12157	X			X		X	08-01129	.
KA12157E	X			X	X		08-01130	.
KA12176	X			X		X	08-01131	.
KA12176E	X			X	X		08-01132	<b>CALL</b>
KA12216	X			X		X	08-01133	.
KA12216E	X			X	X		08-01153	.
KA12235	X		X			X	08-01134	.
KA12235E	X		X		X		08-01135	.
KA12244	X			X		X	08-01155	.
KA12244E	X			X	X		08-01156	.
KA12247	X			X		X	08-01157	.
KA12247E	X			X	X		08-01158	.
KA12259	X			X		X	08-01159	.
KA12259E	X			X	X		08-01160	.
KA12318		X		X		X	08-01161	.
KA12318E		X		X	X		08-01162	.
KA12339	X			X		X	08-01163	.
KA12339E	X			X	X		08-01154	.
KA12360	X		X			X	08-01136	.
KA12360E	X		X		X		08-01137	.
KA12364	X		X			X	08-01138	.
KA12364E	X		X		X		08-01139	.
KA12365	X		X			X	08-01082	.
KA12365E	X		X		X		08-01141	.
KA12381		X		X		X	08-01142	.
KA12381E		X		X	X		08-01143	.
KA12423	X		X			X	08-01144	.
KA12423E	X		X		X		08-01164	.
KA12447	X			X		X	08-01165	.
KA12447E	X			X	X		08-01166	<b>CALL</b>
KA12474	X			X		X	08-01167	.
KA12474E	X			X	X		08-01168	.
KA12508		X	X			X	08-01145	.
KA12508E		X	X		X		08-01169	.
KA12616	X		X			X	08-01170	.

P/N	BEND	SLICK	4 CYL	6CYL	ELBOW	STRAIGHT	Our P/n	Price
KA12616E	X			X		X	08-01171	.
KA12628	X			X		X	08-01172	.
KA12628E	X			X	X		08-01173	.
KA12709	X			X		X	08-01174	.
KA12709E	X			X	X		08-01175	.
KA12712	X			X		X	08-01176	.
KA12712E	X			X	X		08-01177	.
KA12742	X			X		X	08-01178	.
KA12745	X			X		X	08-01180	.
KA12745E	X			X	X		08-01181	.
KA12778		X		X		X	08-01146	.
KA12778E		X		X	X		08-01182	.
KA12790	X			X		X	08-01183	.
KA12790E	X			X	X		08-01184	.
KA12828		X		X		X	08-01185	.
KA12828E		X		X	X		08-01186	.
KA12851	X			X		X	08-01188	.
KA12851E	X			X	X		08-01189	.
KA12854	X			X		X	08-01190	.
KA12854E	X			X	X		08-01191	.
KA12865	X			X		X	08-01192	.
KA12865E	X			X	X		08-01193	.
KA12890	X			X		X	08-01194	.
KA12890E	X			X	X		08-01195	.
KA12932		X		X		X	08-01147	.
KA12932E		X		X	X		08-01196	.
KA14001		X	X			X	08-01148	.
KA14001E		X	X		X		08-01086	.
KA14002		X	X			X	08-01150	.
KA14002E		X	X		X		08-01151	<b>CALL</b>
KA14004		X	X			X	08-01152	.
KA14004E		X	X		X		08-01197	.
KA14033	X			X		X	08-01198	.
KA14033E	X			X		X	08-01199	.
KA17001	X			X		X	08-01202	.
KA17001E	X			X	X		08-01203	.
KA17002	X			X		X	08-01204	.
KA17002E	X			X	X		08-01205	.
KA17005	X		X			X	08-01206	.
KA17005E	X		X		X		08-01207	.
KA17006	X		X			X	08-01208	.
KA17006E	X		X		X		08-01209	.
KA17007	X		X			X	08-01210	.
KA17007E	X		X		X		08-01211	.
KA17008	X		X			X	08-01212	.
KA17008E	X		X		X		08-01213	.
KA17011		X	X			X	08-01214	.
KA17011E		X	X		X		08-01215	.
KA12365	X		X			X	08-01082	.
KA14001E		X	X		X		08-01086	.
KA11730	X			X		X	08-01098	.
KA11730E	X			X	X		08-01099	.
KA11740	X			X		X	08-01101	.
KA11740E	X			X	X		08-01102	.
KA12007E	X		X		X		08-01114	.
KA12120	X		X			X	08-01121	.
KA12176E	X			X	X		08-01132	.
KA12508		X	X			X	08-01145	.

P/N	BEND	SLICK	8 CYL.	ELBOW	STRAIGHT	Our P/n	Price	
KA17012	X			X		X	08-01216	.
KA17012E	X			X	X		08-01217	.

EP

# SLICK MAGNETOS

## 4300 AND 6300 SERIES SLICK MAGNETOS



These new lightweight aircraft magnetos are being used by many new equipment manufacturers. Weigh only 3-3/4 lbs. compared to 6-1/4 lbs. for typical old style magnetos. All units carry a six-month warranty after delivery to the user. These new model magnetos are completely rebuildable. The old 4000/4100 magnetos may not be returned as an exchange unit for a new magneto of the same model. Most other Magnetos may be returned for core credit. Drive gears are not included.

**IF NO CORE IS RETURNED, ADD \$150 TO THE PRICE OF A NEW MAGNETO.**

**ALL SLICK MAGNETO AND HARNESS PRICES SHOWN ARE WELL BELOW SLICK FACTORY LIST PRICE. WE WILL BEAT ANY COMPETITOR'S ADVERTISED PRICE!**

*Slick Harnesses are available in Black and Red.*

*Please Specify color choice at the time of order.*

### 4300 SERIES (4-CYLINDER) MAGNETOS

Application (See Note)	Magneto*	Rotation & Impulse	New Magneto (Exchange)	Complete Harness(2 Mags)		
				Sparkplug Connector		
Continental A65-8, A75-8, C75-8 C85-8, C90-8	4330	R.H. with Impulse	.	M2045	5/8-24	.
Continental C75-12,-14,-15 C85-12,-14,-15 C85-12F,-14F,-15F*** C90-12,-14,-16*** 0-200A,B,C	4301	L.H. with Impulse	.	M1780	5/8-24	.
Lycoming 0-235 0-290**, 0-320, 0-360	4370	L.H., no Impulse	.	M4001/ M4004	5/8-24	.
IO-320E1B,E2B AEIO-320E1B,E2B AEIO-360B1C6,H1A	4371	L.H. with Impulse	.	M2508	3/4-20	.
VW Conversion Single Ignition	4316	R.H. with Impulse	.	M2266 (1Mag)	5/8-24	.

\*4300 series replaces 4200 and feature improved cases and new bearings.  
Drive Gear No. 36066 applicable to Cont. A65-8, A75-8, C75-8, C85-8, C90-8, C85-12-14-15, C90-12-14-16 and 0-200A,B,C w/ light accessory case.....

\*\*\* The magnetos shown will fit the engine but installation is not FAA approved. Form 337 required. Note 2: Specify adapter thickness. M2638-1 (.560"), M2638-2 (.660"), M2638-3 (.760"), M2637 (.810"), measured from mounting pad to front of engine gear.

**PLEASE REMOVE DRIVE GEARS BEFORE RETURNING MAGNETO CORES FOR CORE CREDIT.**

EP

Starts determined by engine manufacturer. Lag angles: 4350 - no lag, 4351 - 20° lag, 4281 - 5° lag. Magneto Flange Gaskets not included. Order Lic. #62224 or Cont. #535324.

### 6300 SERIES (6-CYLINDER) MAGNETOS

Application	Magneto*	Rotation & Impulse	New Magneto (Exchange)	Complete Harness (2 Mags)		
				Sparkplug Connector		
Continental 0-300, C125**, C145	6364	L.H. with Impulse	.	M2932	5/8-24	.
				M2935	3/4-20	.
Continental GO-300	6367	R.H. with Impulse	.	M2938	5/8-24	.
				---	3/4-20	---
Continental	6362 or 6382 0-470 (All)	R.H. with Impulse	.	M1878	5/8-24	.
				M1480	3/4-20	.
Continental TSIO-470, IO-520	6362 or 6382	R.H. with Impulse	.	M1878	5/8-24	.
				M1480	3/4-20	.
Continental IO-470 (All)	6362 or 6382 680 Series	R.H. with Impulse	.	M1878	5/8-24	.
				M1480	3/4-20	.
				M1990	3/4-20	.

#### SLICK REBATE PROGRAM

Champion Aerospace offers the following cash values for upgrading piston aircraft engines to Slick Ignition products under their popular "REBATE PROGRAM":

Complete Engine Upgrade (2 mags+harness)...\$150.00

One Magneto.....\$30.00

One Ignition Harness.....\$35.00

Rebate does not apply to Slick Magneto cores. Factory rebates subject to change by factory. Aircraft Spruce will issue rebate credit upon receipt of acceptable cores.

**Slick Magneto upgrade kits available for most Continental & Lycoming Engines. Provide engine make & model and spark plug size and request quotation on applicable upgrade kit. 6300 Series Replaces 6210 & 6262 magnetos. Includes new improved case and bearings.**

# SLICK IGNITION KITS



## SLICK IGNITION KITS

We offer complete Slick factory upgrade/conversion kits for virtually all general aviation aircraft. These kits include two factory new Slick magnetos, a complete Slick ignition harness, and conversion information. A \$150.00 factory rebate is available for these kits. Rebate does not apply to Slick Magneto Cores. Add . core charge to the kit prices which is refundable upon return of the two old magnetos to Aircraft Spruce. Specify aircraft and engine make and model when ordering. Aircraft Spruce will issue rebate credit upon receipt of acceptable cores.

Slick Kit Part No.	Engine Application 4 Cyl. Single Impulse 2 Mags & 1 Set Ignition Harness	Spark Plug Size	Part No.	Price Add . Core Charge to all kits	The following information will aid you in selecting the correct magneto, upgrade kit, or ignition harness:  1. Engine Manufacturer: _____  2. Engine Model Number: _____  3. Engine Type (4 or 6 Cylinder): _____  4. Current Ignition System Manufacturer: _____  a) Number of impulse coupled magnetos (1 or 2): _____  Magneto Shaft Rotation (Right or Left) - See dataplate on current magneto _____ Lag Angle _____  b) Number of Direct Drive (Non-Impulse) Magnetos _____  c) Number of Retard Breaker Magnetos ____ d) Are the magnetos pressurized ? _____  e) Spark plug size (5/8" or 3/4") _____  5. Do you want to upgrade from a single impulse to a dual impulse system? _____  If yes, an additional drive gear and/or adapter purchase may be required.  6. Are you upgrading from a 600 Series to a 6200 Series magneto? _____  If yes, you will need to purchase an M3154 Adapter or a magneto equipped with an M3154 Adapter to be able to reuse the existing harness. Alternately, purchase a new harness configured for 6200 Series magnetos.  7. Are you upgrading a complete engine form a TCM/ Bendix to a Slick system ? _____  If yes, purchase a complete Engine Upgrade Kit.
KA516	Lycoming: 0-235-C1A, C1C, C2C, E1, E2B, F1, G2B, H2C, J2B 0-320-A1A, A2D, C1A, D1D, D2G, D2H, D3G, E1J, E2D, E2E, E2G, E3D10-320-B1B, E1B, E2B, A2B, AE10-320-E1B, E2B 0-360-A1NG, A2H, A4K, A4M, B1A, C1E, C1F, C2B, C2E, D1A 10-360-B1FG A10-360-A2B AE10-360-A2B, B1F6, B2F6, H1A	5/8" PLUGS INCLUDED	08-01472	.	
			08-01473	.	
K4315	Lycoming: 0-235-C1C, C2C, E2B, F1, G2B, J2B, N2C, 0-320-A1A, B1A, B2A, C1A, C2A, C2B, C2C, C3A, C3B, C3C, D1D, D2G, D2H, D3G, E1J, E2D, E2E, E2G, E3D, 0-320-B1B, E1B, A10-320-A2B, AE10-320-E1B, E2B 0-360-A1NG, A2H, A4K, B1A, C1E, C1F, C2B, C2E, D1A 10-360-B1F6 A10-360-A2B AE10-360-A2B, B1F6, B2F6, H1A	3/4" PLUGS INCLUDED	08-01389	.	
			08-01391	.	
Slick Kit Part No.	Engine Application 4 Cyl. Single Impulse	Spark Plug Size	Part No.	Price Add . Core Charge to all kits	Magneto Shaft Rotation (Right or Left) - See dataplate on current magneto _____ Lag Angle _____  b) Number of Direct Drive (Non-Impulse) Magnetos _____  c) Number of Retard Breaker Magnetos ____ d) Are the magnetos pressurized ? _____  e) Spark plug size (5/8" or 3/4") _____  5. Do you want to upgrade from a single impulse to a dual impulse system? _____  If yes, an additional drive gear and/or adapter purchase may be required.  6. Are you upgrading from a 600 Series to a 6200 Series magneto? _____  If yes, you will need to purchase an M3154 Adapter or a magneto equipped with an M3154 Adapter to be able to reuse the existing harness. Alternately, purchase a new harness configured for 6200 Series magnetos.  7. Are you upgrading a complete engine form a TCM/ Bendix to a Slick system ? _____  If yes, purchase a complete Engine Upgrade Kit.
K4517	Lycoming: 0-235-C1, C2A, E2A, F2A; G1, G2A, J2A 0-290-D 0-320-A1B, A2A, A2B, A3A, A3B B1A, B1B, B2A, B2B, B3A, B3B, C2A, C2B, C2C, C3A, C3B, C3C, D1A, E1A, E2A, E2H 10-320-B1C, B2A, E1A, E2A, AE10-320-E1A, E2A 0-360-A1AWD, A2A, A1H, A3A, A4A, A4J, B2A, C1A, C1G, C2A, D2A 10-360-A1B, B4A, AE10-360-A1D, B4A	5/8" PLUGS INCLUDED	08-01493	.	
			08-01491	.	
K4317	Lycoming: 0-235-C1, C2A, C2B, E2A, F2A, F2B; G1, G2A, J2A 0-290-D 0-320-A1B, A2A, A2B, A3A, A3B, B2B, B3A, B3B, D1A, D1C, D1F, D2A, D2C, E1A, E2A, E2H, E3H 10-320-B1C, B2A, D1A, D1B, E1A, E2A A10-320-A1B, B1B, C1B AE10-320-D1B, D2B, E1A, E2A 0-360-A1A, A1AWD, A1FG, A1G, A1G6, A1H, A2A, A2F A2G, A3A, A4A, AHG, A4J, B2A, C1A, C2A, D2A 10-360-A1B, B4A, C1D6, F1A AE10-360-B4A	3/4" PLUGS INCLUDED	08-01414	.	
			08-01418	.	
K4520	Continental: C-75-12, 15 C-85-14, 15, C-90-12, 14, 16, 16F 0-200-A, B, C	5/8"	08-01524	.	
K4335	Consists of 4333 AMAG + One Drive Gear	N/A	K4335	.	
K4334	A-65 All, A-75 All (Except -12,-15) C-85 All (Except-12, 14, & 15) Includes Drive Gears	5/8"	08-01458	.	
Slick Kit Part No.	Engine Application 6 Cyl. Single Impulse	Spark Plug Size	Part No.	Price Add . Core Charge to all kits	
K6520	0-470, B-C1, C, E, G,	5/8"	08-02819	.	
			08-02821	.	
K6320	G-C1, H, J, K, K-C1, L, L-C1, M, M-C1, N, P, R, S, U 10-470-A, C, D, E, F, G, H, J, K, L, LO, M, N, P, R, S, T, U, V, VO10-520-A, B, BA, BB, C, CB, D, E, F, G, H, J, K, L, M, MB, N, NB	3/4" PLUGS INCLUDED	08-02578	.	
			08-02581	.	

Add \$300.00 core charge to all kit prices (refundable with return of old Magnetos) Request quotation for kits for unlisted engines.  
\* Plugs included.


# SLICK HARNESSSES – SLICK START – LASAR

## SLICK IGNITION HARNESSSES

Engine	Magneto	Plug	Model	Part No.	Price	Engine	Magneto	Plug	Model	Part No.	Price
Cont A65, A75, C85, C90	SLK 4300 series	5/8-24	M2045	08-02346	.	Cont O/IO-470, 10-520	SLK 6300 series	3/4-20	M2381	08-03213	.
Cont C75, C85, C90, O200	BDX S4-20/S-200	5/8-24	M2007	08-02127	.	Cont O/IO-520	BDX S6-20/S6-200	5/8-24	M1978	08-02106	.
Cont O-200	BDX S4-20/S-200	5/8-24	M2007	08-02127	.	Cont TSIO-520	BDX S6-20/S-200	3/4-20	M1730	08-02079	.
Cont O-200	SLK 4301	5/8-24	M1780	08-02140	.	LYC O-320	BDX S4-20/S-200	5/8-24	M2364	08-03193	.
Cont O-300	BDX S6-20/S-200	5/8-24	M2130	08-03134	.	LYC O-360	BDX S4-1200	5/8-24	M2365	08-03197	.
Cont O-300	SLK 6300 series	5/8-24	M2932	08-05029	.	LYC O-320, O-360	BDX S4-20/S-200	3/4-20	M2360	08-03179	.
Cont C-125/145, O-300	SLK 664	5/8-24	M1884	08-04033	.	LYC O-235, O-320, O-360	SLK 4300 series	5/8-24	M4004	08-05302	.
Cont O/IO-470	SLK 662	3/4-20	M1480	08-02049	.	LYC O-235, O-320, O-360	SLK 4300 series	3/4-20	M2508	08-03749	.
Cont O/IO-470	SLK 662	5/8-24	M1878	08-04024	.	LYC O-540	BDX S6-20/S-200	5/8-24	M2121	08-02885	.
Cont O/IO-470, 10-520	BDX S-1200	3/4-20	M1740	08-02084	.	LYC O-540	BDX S6-20/S-200	3/4-20	M2120	08-02881	.
Cont O/IO-470, 10-520	SLK 6300 series	5/8-24	M2828	08-04812	.	LYC O-540	SLK 6300 series	5/8-24	M6000	08-05452	.
						LYC O-540	SLK 6300 series	3/4-20	M6003	08-05468	.


\*Available in Black or red. Part Numbers listed in chart above are for black. Please specify color at time of order.

EP



### SLICK START

The FAA-PMA approved SlickStart™ magneto booster system integrates solid state electronics with conventional ignition hardware to deliver optimum spark energy for improved engine starting under all operating conditions. SlickStart™ delivers over 400% more spark energy during start than conventional impulse coupled or retard breaker systems. This added energy enables the magnetos to fire partially fouled spark plugs, ignite less than optimum fuel mixtures, improve hot engine restarts and improve starting performance during extreme cold weather operations. SlickStart™ is designed to replace all TCM/Bendix starting vibrators used in conjunction with Slick Aircraft Products magnetos. SlickStart™ is also approved for use with Slick impulse coupled magnetos to enhance engine starting performance. SlickStart™ is not approved for installation on any airframe equipped with TCM/Bendix 20, 200, 1200, D-2000, or D-3000 series impulse coupled or retard breaker magnetos. SlickStart™ can be installed with either impulse coupled or retard breaker magnetos and can be used with either 12V or 24V electrical systems. Fits all Slick impulse coupled and retard breaker 4200/6200 Series and 4300/6300 Series magnetos. .... Slick Start for Slick Magnetos ..... P/N 08-01000 .....



### LASAR ELECTRONIC IGNITION SYSTEM BY CHAMPION

LASAR®, which stands for Limited Authority Spark Advance Regulator, is the first microprocessor based engine control system approved by the FAA for general aviation piston aircraft. With the system operating in its automatic mode, cylinder head temperature, manifold pressure, and engine speed (RPM) are monitored by the LASAR controller to establish and command the optimum ignition timing and spark energy to produce maximum torque from the engine. LASAR has an inherent mechanical magneto backup system that automatically assumes control if electrical power is interrupted or if the microprocessor detects a system fault. STC approval has been granted for most 320, 360 and 540 engines. Installation requires replacement of standard magnetos with Lasar magnetos, a LASAR Control Box, which is mounted to the firewall, a low-voltage control harness that carries the electronic signals between the system components. Specify exact aircraft and Engine Models for quotation or Lasar systems.

**Benefits from LASAR include:**

- \* Better engine starting with 3 times more spark energy and higher output voltage.
- \* Faster Rate of Climb
- \* Smoother transition in ignition timing from engine start to idle
- \* EGT reduced by 150°F on average
- \* Increased spark plug life
- \* Up to 8% Increased Horsepower.
- \* Up to 12% Reduced Fuel Consumption

Components	Part No.	Price
Champion 4771 Slick Lasar Mag.	08-06224	.
Champion 4755 Slick Lasar Mag.	08-06162	.
Champion 4776 Slick Lasar Mag.	08-06163	.
Champion 6755 Slick Lasar Mag.	08-06164	.
Champion 6766 Slick Lasar Mag.	08-06165	.
Champion 6776 Slick Lasar Mag.	08-06166	.

Components	Part No.	Price
Champion LC1011-04 Lasar Controller	08-06167	.
Champion LC1011-10 Lasar Controller	08-06168	.
Champion LC1011-14 Lasar Controller	08-06169	.
Champion LC101115 Lasar Controller	08-06170	.
Champion Lasar Controller Core Charge	08-14778	.

**CALL AIRCRAFT SPRUCE FOR THE BEST PRICE ON LASAR SYSTEMS!**



### SLICK MAGNETO ASSEMBLY & TIMING KIT

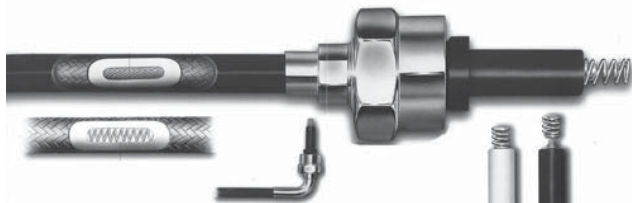
T-100 Assembly and Timing Kit for field-repairable Slick 4300/6300 Series Magnetos.

P/N 07-00788.....





# CHAMPION IGNITION HARNESSSES



- Heat resistant polymer coating has been specially engineered for high temperature engine environments.
- 5 mm conductor contains 19 strand of stainless steel wire.
- Flexible, copper-tin, nickel plated braid reduces EMI. Performance-proven leads offered in straight or elbowed configurations.
- Plated-steel nut offers greater strength than aluminum nuts.
- Replaceable spring saves you time and money.

## COMPLETE HARNESS ASSEMBLIES STRAIGHT SPARK PLUG CONNECTOR

CH11480
CH11730
CH11740
CH11780
CH11878
CH11884
CH11950
CH11978
CH12007
CH12015
CH12037
CH12120
CH12121
CH12130

CH12154
CH12157
CH12176
CH12216
CH12235
CH12360
CH12364
CH12365
CH12381
CH12423
CH12508
CH12778
CH12779
CH12932

## COMPLETE HARNESS ASSEMBLIES ELBOW SPARK PLUG CONNECTOR

CH14001
CH14002
CH14004
CH11730E
CH11740E
CH11780E
CH12007E
CH12015E
CH12121E
CH12154E
CH12364E
CH12365E
CH12381E
CH14001E

## IGNITION HARNESS ASSEMBLIES

CH12037E
CH12120
CH12120E
CH12130E
CH12157E
CH12176E
CH12235E
CH12360E
CH14002E

## E-MAG ELECTRONIC IGNITION



Replacement Drive Gear

E-Mag is a next-generation electronic ignition, designed to serve as an upgrade or replacement for traditional aircraft engine magnetos. The idea behind a next-generation "anything" is that it 1) builds on what came before, and 2) gives more of what the customer wants. EICAD™ expanded controls - E-MAG interactive control and display is an optional set of ignition control capabilities built into our newest series ignitions. • Customize Tach Output Signal • Monitor/Change/Store your preferred timing shift • Ignition status reports (roughly 3 pounds and 6.25" long with plug wires attached). Sealed electronics are impervious to water, dirt, and oil. The P model draws power from the aircraft buss, but is backed up by a built-in three phase brushless alternator. Forget about batteries or keeping a magneto for back-up. Includes a lockout feature that guarantees the ignition will not fire before TDC during start-up. Were this to occur, an expensive starter motor can be damaged or destroyed. Designed to endure significant voltage dips. Should take about two to three hours to install. Will let you set timing for one or both ignitions in about 60 seconds - without the need for any special tools. Detects whether it's installed on a right or left rotating engine, and adjusts automatically. Reuse your existing keyed (or other) kill switch to control E-MAG operation.

Description	Part No.	Price
"E" Model (E-MAG) Ignition - Ignition compatible with 4 cylinder Lycoming engines - includes mounting gasket and control plug. MAP sensor built in.	07-01291	.
"P" Model (P-MAG) Ignition - Same as the E model above, but has a built-in backup alternator.	07-01292	.
E-MAG Aircraft Harness - Trim-to-fit harness kit. Aircraft Harness kits include with the coil end fittings, tool, and appear on forms as "Air Packs".	07-01293 (one ignition) 07-01294 (two ignition)	.
E-Mag P Model Ignition with Alternator 4C Continental - Ignition compatible with most 4 cylinder Lycoming and Continental O-200 engines. Specify Ignition type as follows: Lycoming (and like) engine P114-L4, Continental O-200 engines P114-C4	07-01311	.
E-Mag E Model Ignition 4C Continental - Same as P model above, but without built-in alternator. Specify Ignition type as follows: Lycoming (and like) engine E114-L4, Continental O-200 engines E114-C4	07-01310	.
Replacement E-MAG Lycoming Drive Gear	07-01295	.
Replacement E-MAG Continental drive gear adapter	07-01314	.



## ELECTROAIR IGNITION SYSTEMS



Electroair Ignition Systems come complete with everything needed to install the EIS. Comprehensive installation procedure leaves little room for error when installing your system. For more information on these kits please visit: [www.aircraftspruce.com](http://www.aircraftspruce.com)

EIS-1 KIT	P/N	PRICE
4-cylinder Electronic Ignition System comes with: Coil Pack, Controller, Mag Timing Housing, MAP Sensor, spark plug wires, instruction manual. Specify engine make and model.	08-05953	.
EIS-2 KIT	P/N	PRICE
6-cylinder Electronic Ignition System comes with: Coil Pack, Controller, Crankshaft Timing Wheel, MAP Sensor, spark plug wires, instruction manual. Specify engine make and model.	08-05954	.

EIS-3 KIT	P/N	PRICE
Subaru EJ-22 4-cylinder Electronic Ignition System comes with: Coil Pack, Controller, Subaru Timing Wheel Kit ( replaces COG pulley & factory pick-up ), and instruction manual.	08-05955	.
EIS-4 KIT	P/N	PRICE
Rotorway RW 152 4-cylinder Electronic Ignition System comes with: Coil Pack, Controller, Trigger Wheel Kit ( mounts on V-Belt Pulley ), spark plug wires, and instruction manual.	08-05956	.

# CHAMPION IGNITION HARNESSSES

## AIRCRAFT ENGINE APPLICATION CHART

Engine Model	5/8"-24 Spark Plugs (REM)	Magneto Type	3/4"-20 Spark Plugs (RHM)	Magneto Type	Engine Model	5/8"-24 Spark Plugs (REM)	Magneto Type	3/4"-20 Spark Plugs (RHM)	Magneto Type
<b>TEXTRON LYCOMING</b>					<b>TEXTRON LYCOMING</b>				
O-235	-C1, -C1A, -C1B, -C1C, -C2A, -C2C, -E1, -E1B, E2A, -F1, -F1B, -F2A, -G1, -G1B, -G2A, -H2C, -J2A, -K2A, -K2C, -L2A, -L2C, -M1, -M2C, -M3C, -N2A, -N2C, -P1, -P2A, -P2C, -P3C	CH12364, CH12364E	CH12360, CH12360E		IO-540	-C4B5			
O-235	-C2B, -E2B, -F2B, -G2B, -J2B, -K2B	CH12365, CH12365E	CH12235, CH12235E		IO-540	-C1B5, -N1A5, -C2C, -C4C5, -D4A5			
O-235	-C1, -C1A, -C1B, -C1C, -C2A, -C2C, -E1, -E1B, -E2A, -F1, -F1B, -F2A, -G1, -G1B, -G2A, -H2C, -J2A, -K2A, -K2C, -L2A, -L2C, -M1, -M2C, -M3C, -N2A, -N2C, -P1, -P2A, -P2C, -P3C	CH14001, CH14001E	CH12508, CH12508E	SL 4000	O-540	A1A, -A1A5, -A1B5, -A1C5, -A1D, -A1D5, -A2B, -A2D, -A3D5, -A4A5, -A4B5, -A4C5, -A4D5, -B1A5, -B1B5, -B2A5, -B2B5, -B4A5, -B4B5, -D1A5, -E4A5, -E4B5, -F1A5, -F1B5, -H1A5, -H2A5			
O-235	-C1, -C1B, -C2A, -C2B, -J2C	CH14004, CH14004E	SL 4000		TIO-540	-C1A			
O-290	-D, -D2, -D2A, -D2B, -D2C	CH12364, CH12364E	CH12360, CH12360E		TIO-540	-A1A, -A1B, -A2A, -A2B			
O-290	-D2, -D2B	CH12365, CH12365E	CH12235, CH12235E		<b>TELEDYNE CONTINENTAL</b>				
O-290	-D, -D2, -D2A, -D2B, -D2C	CH14001, CH14001E	SL 4000		C-75	-12, -15			
O-290	-D, -D2, -D2B, -D2C	CH14004, CH14004E	SL 4000		C-75	-12, -15			
AEIO-320	-E1A, -E1B, -E2A, -E2B	CH12364, CH12364E	CH12360, CH12360E		C-85	-12, -12F1, -14, -15			
AEIO-320	-D1B, -D2B	CH12365, CH12365E	CH12235, CH12235E		C-85	-12, -12F1, -14, -15			
AEIO-320	-E1A, -E1B, -E2A, -E2B	CH14001, CH14001E	CH12508, CH12508E	SL 4000	C-90	-12, -14, -16, -16F			
AIO-320	-A1A, -A1B, -A2A, -A2B, -B1B, -C1B	CH12365, CH12365E	CH12235, CH12235E		C-90	-12, -14, -16, -16F			
IO-320	-A1A, -A2A, -B1A, -B1B, -B1C, -B2A, -C1A, -C1B, -E1A, -E1B, -E2A, -E2B, -F1A	CH12364, CH12364E	CH12360, CH12360E		C-125	-ALL			
IO-320	-B1D, -B1E, -D1A, -D1B, -D1C	CH12365, CH12365E	CH12235, CH12235E		C-125	-2, -2H			
IO-320	-A1A, -A2A, -B1A, -B1B, -B1C, -B2A, -C1A, -C1B, -E1A, -E1B, -E2A, -E2B, -F1A	CH14001, CH14001E	CH12508, CH12508E	SL 4000	C-125	-ALL			
IO-320	-E2A	CH14004, CH14004E	SL 4000		C-145	-ALL			
LIO-320	-B1A, -C1A	CH12364, CH12364E	CH12360, CH12360E		C-145	-2, -2H			
LIO-320	-B1A, -C1A	CH14001, CH14001E	CH12508, CH12508E	SL 4000	C-145	-ALL			
O-320	-A1A, -A1B, -A2A, -A2B, -A2C, -A2D, -A3A, -A3B, -A3C, -B1A, -B1B, -B2A, -B2B, -B2C, -B3A, -B3B, -B3C, -C1A, -C1B, -C2A, -C2B, -C2C, -C3A, -C3B, -C3C, -D1A, -D1B, -D1D, -D2A, -D2B, -D2G, -D2H, -D2J, -D3G, -E1A, -E1B, -E2A, -E2B, -E2D, -E2G, -E2H, -E3D, -E3H	CH12364, CH12364E	CH12360, CH12360E		E-165	-2			
O-320	-D1C, -D1F, -D2C, -D2F, -E1C, -E1F, -E1J, -E2C, -E2F	CH12365, CH12365E	CH12235, CH12235E		E-185	-1, -3, -8, -9, -11			
O-320	-A1A, -A1B, -A2A, -A2B, -A2C, -A2D, -A3A, -A3B, -A3C, -B1A, -B1B, -B2A, -B2B, -B2C, -B3A, -B3B, -B3C, -C1A, -C1B, -C2A, -C2B, -C2C, -C3A, -C3B, -C3C, -D1A, -D1B, -D1D, -D2A, -D2B, -D2G, -D2H, -D2J, -D3G, -E1A, -E1B, -E2A, -E2B, -E2D, -E2G, -E2H, -E3D, -E3H	CH14001, CH14001E	CH12508, CH12508E	SL 4000	O-200	-A, -B, -C			
O-340	-A1A, -A2A, -B1A	CH12364, CH12364E	CH12360, CH12360E		O-200	-A, -B, -C			
O-340	-A1A, -A2A, -B1A	CH14001, CH14001E	CH12508, CH12508E	SL 4000	E-225	-4, -8			
O-340	-A1A, -A2A	CH14004, CH14004E	SL 4000		O-300	-A, -B, -C, -D, -E			
AEIO-360	A1A, -A1D, -A1E, -A2A, -B1B, -B4A, -H1A	CH12364, CH12364E	CH12360, CH12360E		O-300	-A, -B, -C, -D, -E			
AEIO-360	-A1B, -A1B6, -A2B, -B1F, -B1F6, -B1G6, -B2F	CH12365, CH12365E	CH12235, CH12235E		IO-360	-A, -C, -CB, -D, -DB, -G, -GB, -H, -HB, -J, -JB, -K, -KB			
AEIO-360	A1A, -A1D, -A1E, -A2A, -B1B, -B4A, -H1A	CH14001, CH14001E	CH12508, CH12508E	SL 4000	IO-360	-C, -D, -G			
AIO-360	-A1A, -A1B, -A2A, -A2B, -B1B	CH12365, CH12365E	CH12235, CH12235E		TSIO-360	-E, -EB, -KB			
HIQ-360	-A1A, -B1A, -B1B, -C1A	CH12364, CH12364E	CH12360, CH12360E		TSIO-360	-A, -AB, -B, -CB, -C, -DB, -E, -EB, -F, -FB, -GB, -H, -HB, -JB, -KB, -LB, -MB			
HIQ-360	-C1B, -D1A	CH12365, CH12365E	CH12235, CH12235E		TSIO-360	-A, -B			
HIQ-360	-A1A, -B1A, -B1B, -C1A	CH14001, CH14001E	CH12508, CH12508E	SL 4000	GIO-470	-A			
HIQ-360	-B1A	CH14004, CH14004E	SL 4000		IO-470	-A, -C, -D, -E, -F, -G, -H, -J, -K, -L, -LO, -M, -N, -P, -R, -S, -T, -U, -V, -VO			
HO-360	-A1A, -B1A, -B1B	CH12364, CH12364E	CH12360, CH12360E		IO-470	-C, -D, -E, -F, -G, -H, -L, -M, -N, -P, -R, -S, -T, -U, -V			
HO-360	-A1A, -B1A, -B1B	CH14001, CH14001E	CH12508, CH12508E	SL 4000	IO-470	-F, -J, -K, -L, -N, -S			
HO-360	-A1A	CH14004, CH14004E	SL 4000		IO-470	-F, -J, -K, -N, -S			
IO-360	-A1A, -A1D, -A2A, -B1A, -B1B, -B1C, -B1D, -B4A, -C1A, -K2A	CH12364, CH12364E	CH12360, CH12360E		IO-470	-A, -C, -D, -E, -F, -G, -H, -J, -K, -L, -LO, -M, -N, -P, -R, -S, -T, -U, -V, -VO			
IO-360	-A1B, -A1B6, -A1C, -A1D6, -A2B, -A2C, -B1E, -B1F, -B2E, -B2F, -B2F6, -C1B, -C1C, -C1C6, -D1A, -E1A, -F1A	CH12365, CH12365E	CH12235, CH12235E		IO-470	-F, -J, -K, -L, -N, -S			
IO-360	-C1E6	CH12423, CH12423E	CH12616, CH12616E		IO-470	-A, -C, -D, -E, -F, -G, -H, -J, -K, -L, -LO, -M, -N, -P, -R, -S, -T, -U, -V, -VO			
IO-360	-A1A, -A1D, -A2A, -B1A, -B1B, -B1C, -B1D, -B4A, -C1A, -K2A	CH14001, CH14001E	CH12508, CH12508E	SL 4000	O-470	-A, -B, -P, -C, -E, -G, -G-C1, -H, -J, -K, -L, -LO, -M, -N, -P, -R, -S, -T, -U, -V, -VO			
IO-360	-A1C, -A2B, -A2C, -B2E, -C1B, -C1C, -D1A	CH14002, CH14002E	SL 4000		O-470	-R, -S, -U			
IO-360	-B1A, -B1B, -B1D, -B4A	CH14004, CH14004E	SL 4000		O-470	-R, -S, -U			
IJO-360	-A1A	CH12364, CH12364E	CH12360, CH12360E		O-470	-A, -B, -B-C1, -C, -E, -G, -G-C1, -H, -J, -K, -L, -LO, -M, -N, -P, -R, -S, -T, -U, -V, -VO			
IJO-360	-A1A	CH14001, CH14001E	CH12508, CH12508E	SL 4000	O-470	-A, -B, -E, -M, -P, -R			
IJO-360	-A1H6, -C1E6	CH12365, CH12365E	CH12235, CH12235E		O-470	-R, -S, -U			
LJO-360	-C1E6	CH12423, CH12423E	CH12616, CH12616E		O-470	-R, -S, -U			
O-360	-A1A, -A1C, -A1D, -A1H, -A1NG, -A2A, -A2D, -A2E, -A2H, -A3A, -A3D, -A4A, -A4D, -A4J, -A4K, -A4M, -A4N, -B1A, -B1B, -B2A, -B2B, -C1A, -C1C, -C1E, -C1G, -C2A, -C2B, -C2C, -C2D, -C2E, -D1A, -D2A, -D2B, -F1A6, -G1A6	CH12364, CH12364E	CH12360, CH12360E		IO-520	-A, -B, -BB, -BE, -C, -CE, -D, -DB, -E, -EB, -F, -G, -H, -J, -JB, -K, -KB, -L, -LB, -M, -N, -NB, -P, -R, -T, -U, -V, -VB, -VB6			
O-360	-A1F, -A1F6, -A1G, -A1G6, -A2F, -A2G, -A4G, -C1F	CH12365, CH12365E	CH12235, CH12235E		IO-520	-A, -B, -BA, -BB, -C, -CB, -D, -E, -G, -H, -J, -JB, -K, -KB, -L, -LB, -M, -N, -NB, -P, -R, -T, -U, -V, -VB, -VB6			
O-360	-A1A, -A1C, -A1D, -A1H, -A1NG, -A2A, -A2D, -A2E, -A2H, -A3A, -A3D, -A4A, -A4D, -A4J, -A4K, -A4M, -A4N, -B1A, -B1B, -B2A, -B2B, -C1A, -C1C, -C1E, -C1G, -C2A, -C2B, -C2C, -C2D, -C2E, -D1A, -D2A, -D2B, -F1A6, -G1A6	CH14001, CH14001E	CH12508, CH12508E	SL 4000	IO-520	-M, -NB, -N, -NB			
O-360	-A1A, -A1D, -A2A, -A2D, -D2A, -D2B	CH14004, CH14004E	SL 4000		IO-520	-A, -B, -BA, -BB, -C, -CB, -D, -E, -G, -H, -J, -JB, -K, -KB, -L, -LB, -M, -N, -NB, -P, -R, -T, -U, -V, -VB, -VB6			
VO-360	-A1A, -A1B, -B1A	CH12364, CH12364E	CH12360, CH12360E		IO-520	-D, -E, -F, -J, -K, -L			
VO-360	-A1A, -A1B, -B1A	CH14001, CH14001E	CH12508, CH12508E	SL 4000	IO-520	-B, -C			
AEIO-540	-D4A5	CH12121, CH12121E	CH12120, CH12120E		TSIO-520	-AE			
IO-540	-A1A5, -B1A5, -B1B5, -B1C5, -C1B5, -C1C5, -C2C, -C4B5, -D4A5, -E1A5, -G1A5, -K1C5, -K1D5, -N1A5	CH12121, CH12121E	CH12120, CH12120E		TSIO-520	-AE			

E = Elbow Connector \*FAA-PMA Pending BX = TCM / Bendix SL = Slick

\*CH14001 & CH14002 - Standard Harness Assemblies - Left Magneto Firing Top #1 Spark Plug

\*CH14004 - Non-Standard Assembly - Alternate Firing Sequence With Right Magneto Firing Top #1 Spark Plug

# SHIELDED IGNITION HARNESSSES



## AERO-LITE FAA APPROVED SHIELDED IGNITION HARNESSSES

Skytronics Aero-Lite harnesses are manufactured to rigid FAA-PMA and MIL-3702 specifications and are warranted to T.B.O. They are available for Lycoming, Continental and Franklin engines and come complete with all tiedowns and clamps. Original Aero-Lite harnesses feature the unique, screw-in magneto plate for easy replacement of worn-out leads. Aero-Lite II harnesses are built with new swaged (PMA) magneto plates, similar to those on original factory harnesses. Aero-Lite Custom harnesses use the customers original swaged magneto plates and are rebuilt to rigid Aero-Lite harness standards. Aero-Lite harnesses are available with or without 90° brass spark plug elbow fittings (see price table). Specify wire color choice of sky blue (standard), black, or red.



Continental Engines			Lycoming Engines		
Aero-Lite Part No.	replaces Slick	replaces Champion	Aero-Lite Part No.	replaces Slick	replaces Champion
C16-2BS-II	M1730	CH11730	A20-2AS-II	M2121	CH12121
C16-4BS-II	M1740	CH11740	A20-4AS-II	M2154	CH12154
C16-2AS-II	M1978	CH11978	A30-1BS-II	M2360	CH12360
C31-1AS-II	M2007	CH12007	A30-1AS-II	M2364	CH12364
C9-2BS-II	M2015	CH12015	A30-3AS-II	M2365	CH12365
C1-5AS-II	M2045	CH12045	A30-5AS-II	M4001	CH14001
C3-2AS-II	M2130	CH12130	<b>DUALS*</b>		
C1-1AS-II	M2351	CH12351	A45-10AS	M2917	10-821414-4
C16-11BS-II	M2381	CH12381			
C19-11AS-II	M2932	CH12932			

Stock 4 Cylinder Harnesses .....  
 Stock 6 Cylinder Harnesses .....  
 Stock 4 Cyl Dual Harnesses .....

**SEE WWW.AIRCRAFTSPRUCE.COM FOR LISTING OF STOCKED AEROLITE HARNESSSES.**

\*Core deposit of \$125 required unless dual magneto cover accompanies order.

\*\*Call us for prices on 8-cylinder harnesses or individual leads.

PRICES FOR SPECIAL ORDER AERO-LITE HARNESSSES		
<b>Aero-Lite Original harnesses</b> machined lead fittings screw into threaded magneto plate ports	4-cyl. Engines <b>\$195.00</b>	6-cyl. Engines <b>\$275.00</b>
<b>Aero-Lite II**</b> machined with new swaged magneto plates	4-cyl. Engines <b>From \$159.00</b>	6-cyl. Engines <b>From \$220.00</b>
<b>Aero-Lite Custom harnesses</b> Rebuilt to customer specifications using original swaged magneto plate.** An example of the Aero-Lite Custom harness is the dual Bendix harness.	4-cyl. Bendix	6-cyl. Bendix
<b>CALL FOR QUOTE</b>		
* Core deposit of \$125 required unless dual magneto accompanies order.		
** Call for prices on 8-cylinder harnesses or individual leads.		
Note: For 90° brass spark plug elbow fittings, add \$60 to 4-cylinder prices, and \$80 to 6-cylinder prices.		
All other Aero-Lite harnesses normally ship within 2 days.		

### ORDERING IS SIMPLE! JUST SPECIFY:

Harness Leads:            Threaded            or            Swaged  
 Lead Termination:        90° Elbows            or            Straight fittings  
 Spark Plug Size:            REM (5/8")            or            RHM (3/4")  
 Complete Engine Make and Model: \_\_\_\_\_

Complete Magneto Type: \_\_\_\_\_

Wire Color; Blue, Black, Red or Yellow: \_\_\_\_\_

**... AND WE'LL DO THE REST!**

## LIGHTWEIGHT HIGH TEMPERATURE SHIELDED IGNITION HARNESSSES MFG. BY ACS PRODUCTS CO.



New production ignition harnesses at remarkably low prices. Late type 5MM wire constructed of 16 strands of tightly braided copper wire impregnated with scuff resistant white silicone. All strands must fracture before a complete open circuit type failure occurs thus extending lead life. Lead flexibility is retained from -65° to 400° F. Moisture and cleaning solvent penetration is eliminated by the impregnated silicone coating. This extremely flexible wire lends itself to sharp bends thereby eliminating the need for old style harness elbows. No soldered joints in the grounding circuit. Custom made for most 4 cylinder and 6 cylinder engines using Bendix or Eisemann magnetos and 4 cylinder engines using Slick magnetos. Cable outlet plates are not furnished for Bendix and Eisemann mags as these are already installed on the magnetos in service. They must be purchased separately for new magneto installations. Harnesses for Slick magnetos are furnished with the backplates installed. Standard harnesses for the Bendix S4/S6 mags are fitted with a male nut which screws into the threaded outlet plate on the back of the mag. On some installations, the wires run through an unthreaded plate and attach directly to the mag terminals eliminating the use of the nut. If such a harness is required, send the old harness to us and it will be duplicated. Add \$60.00 to price of harness for custom work required. Harnesses for old style Bendix SF4 and SF6 magnetos are fitted with female nuts.

### HARNESSSES FOR BENDIX AND EISEMANN MAGNETOS

All 4-Cylinder Harnesses (8 wires) .....  
 All 6-Cylinder Harnesses (12 wires) .....  
 (Not Available for Bendix S1200 Magnetos)  
 Replacement Leads to 48" (Specify Length) ..... **Call For Quote**  
 (Bendix & Eisemann only)

### HARNESSSES FOR SLICK MAGNETOS

For 4000, 4200 & 4300 Series Mags (4 Cyl.) Only .....

All Harnesses Furnished with Cable Ties and Clamps  
 For plugs with 5/8-24 barrel size only.

BENDIX MAGNETOS		SLICK MAGNETOS	
Engine/Magneto	Part No.	Engine/Magneto	Part No.
Cont. A-65/S4	12301-02	VW (M2266) *	12304-32
C-85/S4	12301-05	Lyc 0-235 (M2363)	12304-33
C-90/S4	12301-06	0-290 (M2363)	12304-33
0-200/S4	12301-05	0-320,0-360 (M2363)	12304-33
LYC. 0-100/S4	12301-21	Cont. 0-200 (1780)	12304-31
0-235/S4	12301-21	C-75 (1780)	12304-31
0-290/S4	12301-21	C-85 (1780)	12304-31
0-320/S4	12301-22	C-90 (1780)	12304-31
0-360/S4	12301-22	<b>EISEMANN MAGNETOS</b>	
Cont. A-65/SF4	12302-02	<b>Engine/Magneto</b>	<b>Part No.</b>
A-75/SF4	12302-03	Cont A65/LA-4	12303-04
Lyc. 0-100/SF4	12302-20	A75/LA-4	12303-04
0-235/SF4	12302-20	C-85/LA-4	12303-07
0-290/SF4	12302-20	E-185/LA-6	12306-12
Cont. E-185/S6	12305-10	Franklin 150/LA-6	12306-40
E-225/S6	12305-11	<b>*This harness only comes with 4-leads.</b>	
O-470/S6	12305-13	ACS Products ignition harnesses can be used on experimental aircraft or on certified aircraft with field approval (FAA Form 337). If FAA/PMA harness is mandatory or if for use with 3/4" spark plugs, use Slick Bendix, Aero-Lite or Champion harnesses.	
C-145/S6	12305-09		
O-300/S6	12305-09		
Lyc. 0-540/S6	12305-22		
IO-540/S6	12305-22		
Franklin165/S6	12305-41		
Cont.C-125-SF6	12307-08		
Lyc.0-435/SF6	12307-23		



# AUTOLITE® AVIATION SPARK PLUG APPLICATION CHART

FAA-PMA Approved Engine Applications	Massive Electrode				Fine-Wire Electrode			
	5/8"-24 thread		3/4"-20 thread		5/8"-24 thread		3/4"-20 thread	
	UREB37E	UREM37BY	UREM38E	UREM40E	URHB32E	URHB37E	URHB38E	URHB38S
Textron Lycoming								
AEIO-320: D1B, D2B, E1A, E1B, E2A, E2B	x	x	x	x	x	x	x	x
AEIO-360: A2A, A2C	x	x	x	x	x	x	x	x
AEIO-360: A2B	x	x	x	x	x	x	x	x
AEIO-360: A1D, A1E	x	x	x	x	x	x	x	x
AEIO-360: B1D, B1F6, B2F6, H1A	x	x	x	x	x	x	x	x
AEIO-360: B1H								
AEIO-360: A1C	x	x	x	x	x	x	x	x
AEIO-360: A1A, A1B, A1B6	x	x	x	x	x	x	x	x
AEIO-360: A1E6	x	x	x	x	x	x	x	x
AEIO-360: B1B, B1F, B1G6, B2F, B4A, H1B	x	x	x	x	x	x	x	x
AEIO-540: D4B5	x	x	x	x	x	x	x	x
AEIO-540: D4A5, D4C5, D4D5, L1B5, L1B5D	x	x	x	x	x	x	x	x
AEIO-540: L1D5								
AIO-320: A1B, A2A, A2B, B1B, C1B	x	x	x	x	x	x	x	x
AIO-320: A1A								
AIO-360: A1A, A1B, A2A, A2B	x	x	x	x	x	x	x	x
AIO-360: B1B	x	x	x	x	x	x	x	x
GO-435: C2, C2A, C2A2, C2B, C2B1, C2B2, C2C, C2D, C2E, D1	x	x	x	x	x	x	x	x
GO-480: G1A6	x	x	x	x	x	x	x	x
GO-480: B, B1A6, B1B, B1C, B1D, C1B6, C1D6, C2C6, C2D6, C2E6, C3A6, D1A, F1A6, F2A6, F2D6, F3A6, F3B6, F4A6, F4B6, F6	x	x	x	x	x	x	x	x
GO-480: G1B6, G1D6, G1H6, G1J6, G2D6, G2F6	x	x	x	x	x	x	x	x
GO-480: E1A6								
GSO-480: A1C6, A2A6	x	x	x	x	x	x	x	x
GSO-480: B1A6, B1B3, B1B6, B1C6, B1E6, B1G6, B1J6, B2C6, B2D6, B2G6, B2H6	x	x	x	x	x	x	x	x
GSO-480: A1A6								
HIO-360: E1BD								
HIO-360: A1A, A1B, B1A, B1B	x	x	x	x	x	x	x	x
HIO-360: C1A, C1B, D1A	x	x	x	x	x	x	x	x
HIO-360: E1AD, F1AD	x	x	x	x	x	x	x	x
HO-360: A1A, C1A	x	x	x	x	x	x	x	x
HO-360: B1A, B1B	x	x	x	x	x	x	x	x
IGO-480: A1A6, A1B6								
IGO-540: A1A, A1B, A1C, B1A, B1B, B1C	x	x	x	x	x	x	x	x
IGSO-480: 13/16" reach cyl.	x	x	x	x	x	x	x	x
IGSO-480: 1/2" reach cyl.	x	x	x	x	x	x	x	x
IGSO-540: B1A, B1C	x	x	x	x	x	x	x	x
IGSO-540: A1A, A1C, A1D, A1E, A1F, A1H	x	x	x	x	x	x	x	x
IO-320: F1A	x	x	x	x	x	x	x	x
IO-320: C1B	x	x	x	x	x	x	x	x
IO-320: A1A, A2A, B1A, B1B, B1C, B1D, B1E, B2A, D1A, D1B, D1C	x	x	x	x	x	x	x	x
IO-320: E1A, E1B, E2A, E2B	x	x	x	x	x	x	x	x
IO-320: 1/2" reach cyl.								
IO-320: 13/16" reach cyl.								
IO-360: C1A	x	x	x	x	x	x	x	x
IO-360: F1A	x	x	x	x	x	x	x	x
IO-360: A1B6	x	x	x	x	x	x	x	x
IO-360: A1B6D	x	x	x	x	x	x	x	x
IO-360: A1A, A1B, A1C, A1D, A1D6, A2A, A2B, A2C, A3B6, A3D6D, C1B, C1C, C1D6, C1E6, C1E6D, C1F, D1A, J1A6D, J1AD	x	x	x	x	x	x	x	x
IO-360: B1A, B1B, B1C, B1D, B1E, B1F, B1F6, B1G6, B2E-nd, B2E-wd, B2F, B2F6, B4A, E1A	x	x	x	x	x	x	x	x
IO-360: A3B6D	x	x	x	x	x	x	x	x
IO-360: K2A, L2A	x	x	x	x	x	x	x	x
IO-360: M1A	x	x	x	x	x	x	x	x
IO-360: C1G6								
IO-540: P1A5, R1A5	x	x	x	x	x	x	x	x
IO-540: K1A5, K1A5D, K1B5D, K1G5D, K1H5, K1J5, K2A5	x	x	x	x	x	x	x	x
IO-540: K1C5, K1D5, K1E5D, K1F5, K1F5D, K1G5, K1J5D, K1K5	x	x	x	x	x	x	x	x
IO-540: E1A5, E1B5, E1C5, K1B5	x	x	x	x	x	x	x	x
IO-540: J4A5								
IO-540: K1E5	x	x	x	x	x	x	x	x
IO-540: S1A5, U1A5D, U1B5D	x	x	x	x	x	x	x	x
IO-540: N1A5	x	x	x	x	x	x	x	x
IO-540: M1A5, M1A5D, M1B5D, M1C5, M2A5D	x	x	x	x	x	x	x	x
IO-540: A1A1A5, A1A1B5	x	x	x	x	x	x	x	x
IO-540: G1A5, G1B5, G1C5, G1D5, G1E5, G1F5	x	x	x	x	x	x	x	x
IO-540: A1A5, A1A1A5, B1A5, B1B5, B1C5, C1B5, C1C5, C2C, C4B5, C4C5, C4D5, C4D5D, D4A5, D4B5, D4C5, L1A5, L1A5D, L1B5D, L1C5, T4A5D, T4B5, T4B5D, T4C5D, V4A5D	x	x	x	x	x	x	x	x
IO-540: AB1A5, W1A5, W1A5D, W3A5D	x	x	x	x	x	x	x	x
IO-540: C4B5D								
IO-720: 13/16" reach cyl.	x	x	x	x	x	x	x	x
IO-720: 1/2" reach cyl.	x	x	x	x	x	x	x	x
IYO-360: A1A	x	x	x	x	x	x	x	x
IYO-540: A1A	x	x	x	x	x	x	x	x
LHIO-360: C1A, C1B	x	x	x	x	x	x	x	x
LHIO-360: F1AD	x	x	x	x	x	x	x	x
LIO-320: C1A	x	x	x	x	x	x	x	x
LIO-320: B1A	x	x	x	x	x	x	x	x
LIO-360: C1E6	x	x	x	x	x	x	x	x
LO-360: A1G6D, A1H6	x	x	x	x	x	x	x	x
LO-360: E1A6D, E1AD, E2AD, E2BD	x	x	x	x	x	x	x	x
LTIO-540: F2BD, J2B, J2BD, N2BD, R2AD	x	x	x	x	x	x	x	x
LTIO-540: K1AD, U2A, V2AD, W2A	x	x	x	x	x	x	x	x
LTO-360: E1A6D	x	x	x	x	x	x	x	x
LTO-360: A1A6D	x	x	x	x	x	x	x	x
O-235: C1, C1A, C1B, C1C, C2A, C2B, C2C, E1, E1B, E2A, E2B, F1, F1B, F2A, F2B, G1, G1B, G2A, G2B, H2C, J2A, J2B, K2A, K2B, K2C, L2A, L2C, M1, M2C, M3C, N2A, N2C, P1, P2A, P2C, P3C	x	x	x	x	x	x	x	x
O-290: A, AP, B, C, CP, D2A, D2B, D2C	x	x	x	x	x	x	x	x
O-290: D, D2								
O-320: D1A, D1B, D1C, D1D, D1F, D2A, D2B, D2C, D2F, D2G, D2H, D2J, D3G, E2A, E2C	x	x	x	x	x	x	x	x
O-320: A1A, A1B, A2A, A2B, A2C, A2D, A3A, A3B, A3C, B1A, B1B, B2A, B2C, B2D, B3A, B3B, B3C, C1A, C1B, C2A, C2B, C2C, C3A, C3B, C3C, E1A, E1B, E1C, E1F, E1J, E2B, E2D, E2F, E2G, E2H, E3D, E3H	x	x	x	x	x	x	x	x

Not a complete list. To find the right Autolite Aviation Spark Plugs for your engine, see our complete application guide & engine cross reference at [http://www.autoliteannex.com/pdf/application\\_guide.pdf](http://www.autoliteannex.com/pdf/application_guide.pdf).

# AVIATION SPARK PLUGS

## AUTOLITE SPARK PLUGS



OEMs and overhaul facilities around the world are choosing Unison's Autolite Aviation Spark Plugs for superior heat transfer and leakage protection, advanced reliability, long life, and cost-effectiveness. Minimized plug length allows for greater clearance between the plug and aircraft cowling. Completely FAA-PMA approved, these plugs are trusted for use in some of aviation's most demanding applications, including the Extra 300 aircraft flown by the Northern Lights

Aerobatic Team and the Exxon Flyin' Tiger climb machine.

Unison Part No.	Mo ntin T r . Si e	Reac	S ie in T rea	Equiv. C a pion P/N	Price Eac
UREM38E	18mm	1/2"	5/8"-24	REM38E	
URHM38E	18mm	1/2"	3/4"-20	RHM38E	
UREM40E	18mm	1/2"	5/8"-24	REM40E	
URHM40E	18mm	1/2"	3/4"-20	RHM40E	
URHB32E	18mm	13/16"	3/4"-20	RHB32E	
UREB37E	18mm	13/16"	5/8"-24	REB37E	
URHB37E	18mm	13/16"	3/4"-20	RHB37E	
UREM37BY	18mm	1/2"	5/8"-24	REM37BY	

## AUTOLITE XL FINE WIRE SPARK PLUGS

Unison's Autolite® Fine Wire Aviation Spark Plugs have longer life and more premium design features: • Resistant to lead attack • Improved scavenging • Pedestal mount for the welded side wire electrode • Projected gap design for improved combustion • Iridium side wire electrode tip • Proprietary glass seal and integral resistor • High temp. black paint for additional corrosion protection

Unison Part No.	Mo ntin T r . Si e	Reac	S ie in T rea	Equiv. C a pion P/N	Price Eac
URHB36S	18mm	13/16"	3/4"-20	RHB36S	
URHB32S	18mm	13/16"	3/4"-20	RHB32S	
URHM38S	18mm	1/2"	3/4"-20	RHM38S	
UREB36S	18mm	13/16"	5/8"-18	REB36S	
UREM38S	18mm	1/2"	5/8"-24	REM38S	

## NGK SPARK PLUGS

D R



Description	Part No.	Price
DCPR7E (for Rotax 912)	08-00504	
DCPR8E (for Rotax 912S)	08-01228	
CR7HSA	08-00649	
BR8EIX	08-00650	
BR8EG	08-00687	
DR8EA	08-00693	
B8ES (Solid)	08-00730	
B8ES (Non-Solid)	08-07075	
BR8ES	08-00736	
B7ES	08-07039	
B9ES	08-07040	
BR7ES	08-07041	
BR9ES	08-07042	
DCPR8E	08-07044	
BR7EIX	08-07045	
BR9EIX	08-07046	

R



## CHAMPION SPARK PLUG ANTI-SEIZE

Apply sparingly to second and third threads. Do not contact electrodes as it could short out the plug. Do not apply to shielding barrel threads. Unbreakable 4oz. bottle with applicator brush top.

P/N 2612

## AUTOLITE T-556 SPARK PLUG THREAD LUBRICANT & ANTI-SEIZE COMPOUND

Helps to prevent galling and lubricates threads during installation.

P/N 12-00709

## COPPER SPARK PLUG GASKETS

Made of solid copper to current aircraft standards. Available in 14 MM and 18 MM sizes.

AN4027-2, 14MM ..... P/N 07-01261 ..... ea

AN4027-1, 18MM ..... P/N 07-00877 ..... ea

## FOLDED STEEL SPARK PLUG GASKETS

The new type folded steel sparkplug gaskets provide better sparkplug retention with no adverse effect on heat transfer. Endorsed by FAA. These gaskets are not to be reused.

18mm Gaskets ..... P/N M677 ..... ea

## AN4062-1 DEHYDRATOR PLUGS 18MM

These plugs are used to prevent rust and corrosion in engines while in storage. Contain silica gel which turns from blue to pink when moisture is absorbed. Reusable & refillable. The pink silica gel may be reactivated (after removing from reservoir) by heating for 16 hours at 250°F.

AN4062-1 (18MM) ..... ea

G n icatin t pe rre illin pl

1/4 Lb. Bag ..... P/N 07-00731 ..... ea

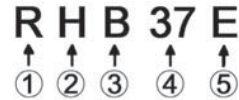
1 Lb. Can ..... P/N 07-03400 ..... ea

## AUTOLITE SPARK PLUG TYPE DESIGNATION SYSTEM



All Champion Aviation Spark Plugs are identified by type designations selected by virtue of the plug design as applied to the following Spark Plug Number and Symbol Chart. The symbol is composed of a rating position number together with prefix & suffix numbers to indicate major plug design characteristics.

### A TYPICAL SPARK PLUG NUMBER WITH SYMBOL EXPLANATION



R — Push-wire—90° to Center

### 1. RESISTOR

None — No Resistor

R — Mil-Spec. Resistor - Erosion protection

RR

None — Unshielded

E — Shielded 5/8"-24 Thread

H — Shielded 3/4"-20 Thread (All Weather Plug)

G R D R

B - 18mm 13/16"/2.06cm 7/8"/2.22cm M— 18mm 1/2"/1.27cm 7/8"/2.22cm

J - 14mm 3/8"/0.95cm 13/16"/2.06cm L — 14mm 1/2"/1.27cm 13/16"/2.06cm

U - 18mm 1-1/8"/2.85cm 13/16"/2.06cm

R G

Low number—cold High number—hot

R D D G

None—Conventional single E — Two prong massive N — Four prong massive

P—Fine wire (Platinum) W — Fine wire (Iridium) B —2 prong massive, Tangent to Center

## CHAMPION SPARK PLUGS

D D		R D	
5/8-24*	Price	3/4-20*	Price
REJ38 (14MM)		RHM38E	
REL37B (14MM)		RHM40E	
REB37E		RHU27E	
REM37BY		RHB32E	
REM38E			
REM40E			
REB32E			
D D R D		R D	
5/8-24*	Price	3/4-20*	Price
REM38S		RHB32S	
REB-36S		RHB36S	
		RHM38S	
D D		R D	
5/8-24*	Price	3/4-20*	Price
M41E (18MM)			

\* Shielded barrel thread size. Check barrel size - 5/8x24 or 3/4x20 threads before ordering and select proper plug number, See page 236 for Sparkplug Application Table.

\*\* The "Iridium S" sparkplugs replace the Platinum and "W" Iridium types. Increased bore diameter improves scavenging action. Greater clearance volume can accept more combustion deposits. Single Iridium electrode offers greater resistance to lead attack. Easy to clean Easy to gap

## CHAMPION RVL38S SPARK PLUGS

Used on M14 YAK P/N 08-06280



Spark plugs are shipped in factory sealed plastic cases. Opened spark plug cases make the spark plugs non-returnable. Please do not open any spark plug until you are sure you have received the correct spark plugs for your application.

## SURPLUS SPARK PLUG BARGAINS



New surplus 18MM longreach, shielded, 3/4-20 barrel. FAA approved for Continental IO-470, GIO-470, TSIO-470, IO-520 & GTSIO-520. Not for 0-470, which uses short reach plugs.

P/N 08-03699

SEE TOOL SECTION IN BACK OF CATALOG FOR FULL LINE OF CHAMPION SPARK PLUG TOOLS

EP

# LIGHTSPEED IGNITION

## LIGHT SPEED ENGINEERING PLASMA IGNITION SYSTEM

Light Speed Engineering, LLC (LSE) is a pioneer in the design and production of ignition systems for experimental aircraft. 22 years of research and development have been invested in producing the PLASMA CDI (Capacitive Discharge Ignition) system product line. LSE's PLASMA CD systems are the ideal replacement for yesterday's magneto technology. You can replace one mag with a PLASMA CDI or, for maximum performance, replace both magnetos with these state of the art systems. The Plasma CDI is a solid-state, high performance ignition system intended for today's home built aircraft. Light Speed Engineering currently offers two Capacitive Discharge Ignition Systems: the PLASMA II PLUS and the PLASMA III. Standard Plasma CDI kits include: direct crank sensor assembly, high tension leads, harness, spark plugs, spark plug adapters, and ignition coils with mounting bracket. One or two systems can be used.

### PLASMA II PLUS CDI



The Plasma II is Light Speed Engineering's basic electronic ignition system for aircraft. It is a lightweight, high-energy capacitor discharge system containing all of the essential Plasma CDI features. Its smaller size and lighter weight sets it apart from any other ignition source. Like all LSE ignition systems it features

automatic ignition advance based on engine load and RPM, auto retard for starting and a standard pulse tachometer output. The Plasma II was designed to provide a high tech ignition source at the cost of magnetos.

### PLASMA III CDI



Light Speed Engineering has introduced a new ignition system to its line of products. The new Plasma III Capacitor Discharge System is the latest high performance ignition for all 4-cyl and 6-cyl aircraft engines. Its long duration spark and optimized timing curve makes more horsepower and improves fuel efficiency- at all altitudes. Other benefits include quick starts, reduced maintenance, light weight, lower EGT's and up to 20% more range. As with all LSE ignitions, RPM and manifold pressure inputs are used for our proprietary timing curves. The Plasma III is also capable of displaying the current timing advance, manifold pressure and rpm on an optional lightweight LCD display. The Plasma III can easily replace one or both magnetos, making your engine run better under all conditions.

## PLASMA CAPACITIVE DISCHARGE IGNITION SYSTEMS

All Plasma CDI systems include: high tension leads, harness, spark plugs, spark plug adapters, ignition coils with mounting bracket, and Hall Effect Sensor module OR Direct Crank Sensor assembly.		
Description	Part No.	Price
Plasma II Plus: 4 Cylinder Direct Crank Sensor	08-06294	.
Plasma II Plus: 4 Cylinder Hall Effect Module	08-06295	.
Plasma III: 4 Cylinder Direct Crank Sensor	08-00675	.
Plasma III: 4 Cylinder Hall Effect Module	08-00676	.
Plasma III: 6 Cylinder Direct Crank Sensor	08-00677	.
Dual Plasma II Plus		
Dual Plasma II Plus: 4 Cylinder Direct Crank Sensor	08-06296	.
Dual Plasma II Plus: 4 Cylinder Hall Effect Module	08-06297	.
Dual Plasma III		
Dual Plasma III: 4 Cylinder Direct Crank Sensor	08-06298	.
Dual Plasma III: 4 Cylinder Hall Effect Module	08-06299	.
Dual Plasma III: 6 Cylinder Direct Crank Sensor	08-06300	.
On all Turbo and Super-Charged ignition systems add \$124.95		
On all Franklin and Continental engine ignition systems add \$194.99	08-06302	.

## S.5 SPARK PLUG ADAPTER FOR 14MM SPARK PLUGS

**RECOMMENDED BY KLAUS SAVIER OF LSE**



The high performance, electronic ignition, has demonstrated it's reliability, easy starts, greater power at altitude, and leaner, more efficient combustion. Yet your expensive aircraft Spark Plugs, can prevent the pilot from taking full advantage

of this electronic powerhouse. The S.5 is a precision CNC adapter, that installs easily in aircraft engines, that use 18mm "short reach" spark plugs, transforming the 18mm threaded hole down to 14mm.

The Spark Plug Adapter allows you to use:

- High performance 14mm automotive/ motorcycle spark plugs, that offer an almost unlimited variety of heat ranges, & electrode styles, designed specifically to take advantage of electronic ignitions.
- Shorter plugs with 90° silicon boots, give greater clearance for sleeker cowls and less drag, meaning higher speed, using less power.
- Precious and semi precious metal racing spark plugs (the ultimate in reliability and long life) for less than you'd pay for ordinary aircraft plugs. More speed, power, efficiency, as well as a cost savings each time you change spark plugs.
- New & improved corrosion resistant design substantially extends the operational life of the S.5 Spark Plug Adapter.

Set of 4 .....P/N 08-06753 .....



### WIRE TERMINAL CLIP

For 7 MM unshielded harnesses.

P/N 07-03500 .....

### HIGH TENSION CABLE



Unshielded 7MM ignition cable consists of tinned conductor, rubber insulation, reinforced glass

braid and Hypalon jacket that resists sun, weather, heat, chemicals and oxidation by ozone. Temperature range -65° to 250°F.

P/N 07-03700 ..... Ft.

## ENGINE BAFFLE IGNITION WIRE SEALS



P/N 526, 375, 376



P/N M2376

Sea T pe	Sea s or	MM Wire P/N	Eac
One-Wire		526	.
Two-Wire		375	.
Three-Wire		376	.
Slick 3-Wire		M2376	.

## BU AERO ROC ER COVERS



The Buzz Aero Model AC2003 cover is made to fit Lycoming straight valve cylinders. Available in red, white, blue or black anodizing. Specs: Wt: 9oz; Machined from billet aluminum; Nickel chrome plated stainless steel socket head cap screws supplied with kit;

Set of gaskets supplied with each kit. AC2003 Applications: Lyc. 0-235, 0-290, 0, 10, LI0-320, 0-340, 0- 360-A, B, C, D; 10-360-B; H0-360-A, B; H10-360-B, V0, IV0-360; 0- 540-A, B, E, F, G,

10-540-C, D, J, N, R.

Also Available by Special Order: AC2004 for Engines: 10-360-A, C, D; A10-360-A, B; H0-360-A, C, D, T10-360-A; LI0-360-C1E6; V0, G0-435; G0-480; 10, V0, TV10-540; 10- 720, TV0-435.

Description	Part No.	Price
Rocker Cover 4 Cyl. Kit Red	08-00806-1	.
Rocker Cover 4 Cyl. Kit White	08-00806-2	.
Rocker Cover 4 Cyl. Kit Blue	08-00806-3	.
Rocker Cover 4 Cyl. Kit Black	08-00806-4	.
Rocker Cover 6 Cyl. Kit Red	08-00807-1	.
Rocker Cover 6 Cyl. Kit White	08-00807-2	.
Rocker Cover 6 Cyl. Kit Blue	08-00807-3	.
Rocker Cover 6 Cyl. Kit Black	08-00807-4	.

# ZEFTRONICS VOLTAGE REGULATORS



As a factory authorized Zeftronics distributor, Aircraft Spruce can assure you the fastest delivery and best prices on all of your Zeftronics engine accessory requirements. We carry the complete Zeftronics product line. If you do not see the product you need listed, please call us for price and availability. We have complete information on file cross referencing Zeftronics part numbers to all OEM part numbers. If you are not sure what part number you need for your aircraft, please call us for immediate assistance.

## VOLTAGE REGULATORS, ALTERNATOR/GENERATOR CONTROLLERS, ALT. SYS. MONITORS, PARALLEL RELAYS, OVER-VOLTAGE RELAYS, TEMP. CONTROLLERS, TIMERS, CURRENT & VOLTAGE SENSORS

Spr ce P/N	Price	e tronics P/N	Part N ers Re erence Aircraft & Other Manufacturers	S s. Vo ta e	Aircra t E i i it
07-00628		R15V00A	Cessna: C611001-0101, -0102, -0201. Beech: 33-380010 Electrodelta: VR600 FORD: D4FF-10316-BA, D4FF-10316-CA	VR: 14V	CESSNA:150,A,B,C,D,E,F,G,H,J,K,L,M: A150,K,L,M: FA150,K,L,M. 172,B,D,E,F,G,H,I,K,L,M,N,P,Q: F172,D,E,F,G,H,I,K,L,M,N:FR172E, R172E, P172, R172K, 177, A,B,RG,F172RG, 180,F,G,H,J,K, 185,C,D,E: A185E,F, 182,E,G,H,J,K,L,M,N,P,Q: F182P,Q, T182 188,A188,T188. 205A. 206-U206,A,B,C,D,E,F,G: P206,A,B,C,D,E: T206;
07-00622		R15100A	R15V00 = R15100 with OV Protection	VR: 14V	TP206A,B,C,D,E: TU206 A,B,C,D,E,F,G, 207 A, T207A, 210,B,C,D,E,F,G,H,J,K,L:
07-00628		R15V00A	R15V00 Rev A is self protected R15100 Rev A is self protected	OV: 16V	210,F,G,H,J,K, Beech: 35A33, 35B33,35C33,E33,E33B,F33,H35,K35,M35,N35,P35. Gulfstream (Grumman): AA-5,A,B.
07-00637		V11100	Cessna: C593001-0101 Other No: 0800002. OS60. 0337. EM235	OV: 16V	Applicable For All Cessna Aircraft Models Listed For R151.00
07-00624		R1510N	Prestolite: VSF7201,2,3,4 VSF7202S,3A,3S. Electrodelta: VSF7203A TCM: 649684-1 Piper: 550-383.	VR: 14V	Citabria: 7GCAA,7ECA,7GCBC,7KCAB,8GCBC. Lake: LA-4,A,P. Grumman: AA-1,A, Commander: 112,B,TC,TCA. Varga: 2150A Beech: 19A,B,19,M19A,23,23A,A23A,A23-19, A23 -24,B23,C23,24,24R,B24R,C24R. Piper: 23,-160,235,250:PA24-260,PA30,39; Cessna: 175,185,188. Maule: M-5-180C,235C; M-6-180,235;M-7235,MX-7-180,235.
07-00630		R15V0N	R15V0N = R1510N + OV Relay + L/ OV Pin.	14V/16V	Schweizer: 269C. Bellanca:14-19,-19-2,19-3,19-3A; 17-30,31,31TC; ; 17-30A,31A,31ATC.
07-00638		V1510A	Piper: 450-397, 484-183, 550-380, 450-393 Beech: 138-1 Wico: X-17621. Lamar: B00289-2, B00339-1. Electrodelta: OS75-14. Delco-Remy: 1115831. Prestolite: FOC-4002B.	OV: 16V	Citabria: 7GCAA,7ECA,7GCBC,7KCAB,8GCBC. Lake: LA-4,A,P. Grumman: AA-1,A, Commander: 112,B,TC,TCA. Varga: 2150A. Beech: 19A,B,19,M19A,23,23A,A23A,A23-19 A23-24,B23,A24,24R,B24R,C24R,S35,V35,V35TC. Piper: 23,-160,235,250:PA24-260,400; PA30,39, Cessna: 175,185,188. Maule:M-5-180C,235C; M-6-180,235;M-7-235/MX-7-180,235. Bellanca: 14-19,19-2,19-3,19-3A; 17-30,31,31TC; 17-30A,31A,31ATC. Schweizer: 269C. Piper: PA28-140,150,151,160,161,180,235,236,201T. PA28R-180,200,201T. PA28S-160,180. PA28RT-201,201T. PA32-260,300. PA32S-300. PA32RT-300,300T. PA32R-301,301T. PA32-301,310T, PA34-200. PA38-112.
07-00623		R1510L	Piper: 450-392, 484-121,66804-03,756-055 Beech: 169-380063 Other mfr P/N: X16300B, X17990. 9000590 B00267-1,2 B00331-1,2. 1816110. VR200, A. FVR4004.4224. RBM: 87-87102-21		Bellanca: 7GCAA,7ECA,7GCBC,7KCAB,8KCAB. Commander: 112,B,TC,TCA. Beech: 19, 19 A,B,19,M19A,23,23A,A23A,A23-19, A23-24,B23,C23,A24,A24R,C24R,S35,V35,V35TC. Piper: PA24-260,400. PA28-140,150,151,160,161,180,235,236,201T. PA28R-180,200,201,201T. PA28S-160, 180. PA28RT-201,201T. PA32-260,300. PA32S-300, PA32RT-300,300T. PA32R-301,301T. PA32-301,310T. PA38-112. Grumman: AA-1B, AA-1C
07-00629		R15V0L	Piper: 557-337. Lamar: B00371-1, -8, -14 Electrodelta: VR371	VR: 14V OV: 16V	Bellanca: 8GCB,8KCAB. Maule: M-5-180C,235C; M-6-180C,235; M-7-235;MT-7-235:MT-8-235:MX-7-160,180,235:MX-7-160,180. Piper: PA24-260,400; PA28-140,150,151,160,161,180,235,236, 201T. PA28R-180,200,201,201T; PA28S-160,180. PA28RT-201,201T. PA32-260,300. PA32S-300. PA32RT-300,300T. PA32R-301,301T. PA38-112.
07-00631		R25101A	Cessna: C611004-0101,C611002-0102,-0105	VR: 27.7	Cessna: 152,A152,F152,FA152. 172,H,N;F172:FR172K;R172,K; 177,A,B,RG; 180,K; 182,P,Q,
07-00631		R25101A	Ford: C8FF/C6FF-10316-A, TCM:636147 Electrodelta: VR500-0101.	VR: 27.7	F182,P,Q: R182, FR182: T182,TR 182. 185,A185F. 188, A188, A,B; T188,C; 206, P206,TU206A, U206, G; 207A: T207A: 210,K,L,M,N; P210N: P210R: T210,K,L,M,N. 337,A,B,C,D,E,F,G,H; F337,A,B,C,D,E,F,G,H: P337H: T337B: T337B,C,D,E,F,G,H,H-SP: FT337E,F,GP,HP, M337B.
07-00632		R25102A	Cessna: C611004-0102	VR: 28.8	Applicable for CESSNA models listed for R25101 except 337A (USAF 02B), M337B (USAF 02A).
07-00615		EQ1500	Delco-Remy 1116887. PAC: 450-386	EQ: 12V	Piper: PA23-150, -160, -238, 250:PA30: PA39
07-00616		EQ2500	DELCO-REMY 1116902	EQ: 24V	Cessna: 310, A, B, C, D, E, F, G, H, I, J, K; E310H,I,J, 320, A, B, C, D, E, 320-1, Beech: 95, B95, B95A, D95A, E95, E95-55, -A55, -B55, -B55A, 58 A. Twin Commander: 500 -A, B.
07-00635		R25400	Cessna: C611005-0103, 0103, -0101, -0102 Electrodelta: VR515F, G. Pft: DGR3	VR: 28V OV: 2V	Cessna: 152,A152,F152,FA152: 172,N,P,RG;FR172,K;R172,K; F172N,P; 180,K; 182,Q,R; R182, FR182,TR182,F182R,T182R; 185,A185F; 206, U206; 207, T207; 210,N,R; P210N,R;T210N,R.
07-00639		V25101	Cessna: C593003-0101, -0102 Other P/N: OS100-0101. EM233	OV: 32V	Cessna: 152,A152,F152,FA152: 172: 172N, F172, R172K; R172K; 177,A,B,RG; 180,K; 182,Q;F182Q: R182: FR182: 185,A185F; 188,A188B,T188C; 206,U206: 207,T207; 210,K,L,M,N; P210,N: T210,K,L,M,N.
07-00633		R2510N	Prestolite: VSF7403A,4,3S. PAC: 550-381	VR: 28V	Piper: PA31,31-300,-31-310,-31-325,-31-350,PA36-285,-300,-375,PA60-600,601,601P,602P,700P
07-00636		R25V0N	R2510N with OV Protection & LV/OV warning	28V/32V	Cessna: 310,310P,310Q, 320. 401A,401B,402A, 402B,414,421,421A,421B. Schweizer: 269C.
07-00640		V2510A	PAC: 484182. Others: FOC4003A. OS75-28	32V	Twin Commander: 500S. Beech: E55, 58, F33A, F33C, A36, A36TC.
07-00634		R251DR	Delco-Remy, Beech, Piper: 9000591	27.7V	Cessna: 310N, 310L,320D,320E; Beech: B95A,D95A,95-B55,-C55; Piper: PA-31,-300,-310,-325
07-00625		R15300	Mooney: 800270-505, 880016-503 Electrodelta: VR415F. Pft: DGR1-1	VR: 14V OV: 16V	Mooney: M20C, M20D, M20E, M20F, M20G, M20J, M20K, Homebuilts.
07-00626		R1530B	Mooney: 880016-501 Other P/N: 20082. VR414 Beech: 35-380093-1,2,3. Other P/N: 20053, 20065, 20137, 20437 B00403-1, EM2073-1,2	VR: 14V OV: 16V	Mooney: M20C,M20D,M20E,M20F Beech: H35, J35, K35, M35, N35, P35, S35, V35. V35TC, V35A, V35A-TC, V35B, 36, A36 Beech: 33, A33, B33, C33, E33, C33A, E33A, E33C, F33A, F33C.

te lea e rea irin in tr cti n care ll pri r t in tallati n v lta e re lat r mpr per irin c nnecti n ill v i arrant  
R R R R G R G R R G R R G R G G R R R R

## GENERATOR CONTROL UNITS



Part No.	Price	S ste Vo ta e	Part No. Re erence	Notes
07-00617	.	14V/20A	1118736,1118904,111926,VR300-14-20	Requires FAA Form 337
07-00618	.	14V/35A	1118704,1118892,1119220,VR300-14-35	Requires FAA Form 337
07-00619	.	14V/50A	1118713,1118884,1119224,VR300-14-50	Requires FAA Form 337
07-00620	.	28V/25A	1118799,1111218C,1118976B,C, VR300-28-25	Requires FAA Form 337

# REGULATORS - ALTERNATORS

## KELLY AEROSPACE VOLTAGE REGULATORS

M . P/N	Description	Rep ace ent or	Part N er	Price
VR286	28V Voltage Regulator	Cessna 9910126-1,-2,-3	07-00920	
VR500-0101	27.7V Voltage Regulator	Cessna C11004-0101, C611002-0102, -0105	07-00912	
VR500-0102	28.8V Voltage Regulator	Cessna C611004-0102	07-00913	
VR515F	28V Voltage Regulator	Cessna C611501-0102, C611005-0101	07-00914	
VR515GA	28V Voltage Regulator	Cessna C611005-0103,-0102	07-00915	
VR580	28V Voltage Regulator	Cessna C611008-0101	07-00916	
VR600	14V Voltage Regulator	Cessna C611001-0101, -0102, -0201	07-00884	
VR801	28V Alternator Control	Cessna C611007-0101	07-00919	
VR371	14V Voltage Regulator	Zefronic R15V0L	07-00718	
VR415F	14V Voltage Regulator	Zefronic R15300	07-00910	
VSF7203A	12V Voltage Regulator	Zefronic R1510N	07-00921	
VR382	28V Voltage Regulator	Lamar B-00382-2	07-00908	
VR392	14V Voltage Regulator	Lamar B-00392-1	07-00909	
VR2000-28-2	28V Voltage Regulator	N/A	07-00895	
VSF7403A	24V Voltage Regulator	Voltage Regulator VSF7403A	07-00922	
VR200A	14V Voltage Regulator	Piper 484121	07-00896	
VR300-14-20	14V Voltage Regulator	Delco-Remy 1118736, E.1118904, 1119226	07-00899	
VR300-14-35	14V Voltage Regulator	Delco-Remy 1118704	07-00901	
VR300-14-50	14V Voltage Regulator	Delco-Remy 1118713, 1118884, 1119224C	07-00902	
VR300-28-25	28V Voltage Regulator	Delco-Remy 1118951, 1118975, 1119218C	07-00905	
VR300-28-40	28V Voltage Regulator	Delco-Remy 1119237,1119656	07-00906	
ell lta e Re lat r act r ver a le				
M . P/N	Description	Rep ace ent or	Part N er	Price
VR300-14P-50	14V Voltage Regulator	Cessna 0413205-11	07-00904	
VR418-5	14V Voltage Regulators	Zefronic R15400	07-00881	
-	14V Voltage Regulator	Zefronic R1510L	07-00623	
VR300-14-25	14V Voltage Regulator	Delco 1118384	07-00900	
VR711	14V Voltage Regulator	Lamar B-00288-1	07-00918	
VR417-2	14V Voltage Regulator	Christen 61235	07-00911	
VR300-28-50	28V Voltage Regulator	N/A	07-00907	
VR515G-2	28V Voltage Regulator	Schweitzer Aircraft Corp 269A4985	07-01108	
ell lta e en r nit r act r e				
M . P/N	Description	Rep ace ent or	Part N er	Price
GPM-001	28V Ground Power Motor	Cessna C593005-0101	07-01275	
OS60	14V Overvoltage Sensor	Cessna C5930001-0101	07-00890	
OS100-0101	28V Overvoltage Sensor	Cessna C593003-0101	07-00887	
OS100-0102	28V Overvoltage Sensor	Cessna C593003-0102	07-00888	
OS200-0101	28V Overvoltage Sensor	Cessna C593004-0101	07-00889	
OS75-14	14V Overvoltage Sensor	Zefronic V1510A	07-00891	
OS75-28	28V Overvoltage Sensor	Zefronic V2510A	07-00892	
cce rie				
M . P/N	Description	App ication	Part N er	Price
PT001	Adapter Cable	For use w/ VR415-F ONLY	07-00893	

EP

## OVERHAULED COMPONENTS

Alternators, generators, and starters which are remanufactured for installation in general aviation aircraft. **Fully FAA approved.**

<b>EXPERIMENTAL ALTERNATORS</b>				<b>AEROTECH GENERATORS</b>				Part No. Vo t/A p Price			Part No. Vo t/A p Price		
Part No.	Vo t/A p	Price		Part No.	Vo t/A p	Price		DEL1101911	24V25A		1109511R	12V	CALL
ES-6012	14V60A	CALL		DEL1101876	12V12A			DEL1101912	12V50A		1109514R	12V	CALL
ES-6024	28V60A	CALL		DEL1101877	12V26A			DEL1101913	12V35A		1109651R	12V	CALL
ES-6212	13.8V60A	CALL		DEL1101878	12V13A			DEL1101914	12V35A		DEL1109652	12V	
ES-6224	28V60A	CALL		DEL1101879	12V25A			DEL1101915	12V50A		1109656R	12V	CALL
ES-7024	28V70A	CALL		DEL1101880	12V26A			DEL1101917	12V35A		1109657R	12V	CALL
ES-10024	28V100A	CALL		DEL1101881	12V13A			DEL1101918	12V35A		1109660R	12V	CALL
<b>DELCO ALTERNATORS</b>				DEL1101882	12V26A			DEL1101923	12V50A		1109662R	24V	CALL
1100715R	12V70A	CALL		DEL1101887	12V35A			DEL1105052	24V40A	CALL	1109678R	12V	CALL
1100716R	12V52A	CALL		DEL1101888	12V50A			DEL1105053	24V40A	CALL	1109689R	12V	CALL
1100717R	12V70A	CALL		DEL1101890	12V20A			DEL1105054	24V50A		1109687R	24V	CALL
1100718R	24V50A	CALL		DEL1101891	12V20A			DEL1105055	24V50A		1109677R	12V	CALL
1100723R	24V50A	CALL		DEL1101892	12V35A			DEL1105056	24V40A		1109678R	12V	CALL
1100747R	24V50A	CALL		DEL1101895	12V50A			DEL1105057	24V50A		1109519R	12V	CALL
1100753R	24V65A	CALL		DEL1101897	12V35A			<b>DELCO STARTERS</b>			1109518R	24V	CALL
1100792R	24V65A	CALL		DEL1101898	12V35A			Part No.	Vo t/A p	Price	1109678R	12V	CALL
				DEL1101899	12V20A			DEL1108234	24V		Minimum Core Charge on Delco Alt. and Starters \$200.00 *Drive not included (DEL 1971890). For price see listing for drives. **Drive not included (DEL 1940969). For price see listing for drives.		
				DEL1101900	12V35A			1108249R	12V	CALL			
				DEL1101901	24V26A			DEL1109471	12V				
				DEL1101904	24V25A			1109511R	12V	CALL			
				DEL1101905	24V25A			1109517R	24V	CALL			
				DEL1101906	24V25A			1109511R	12V	CALL			
				DEL1101908	12V50A			1109518R	24V	CALL			
				DEL1101909	12V50A			1109511R	12V	CALL			
				DEL1101910	12V20A								



# KELLY AEROSPACE ALTERNATORS



## KELLY AEROSPACE ALTERNATORS

The most popular alternators in use on Cessna and Beech aircraft are of Ford manufacture. Chrysler alternators are usually found on Piper aircraft. These units are manufactured to aircraft specifications and are not available through automotive parts stores. Note: Core charge is billed on all exchange units & credited upon receipt of acceptable core.

### ALTERNATOR PRODUCT INFORMATION

Unit Description	Volts / Amps	First Drive Alternator (-) Is:	Drive Type	Unit Description	Notes
ALE-	12V / 40A	6	Belt Driven / No Blast Tube	LS	New Unit - No Pulley
ALH-	12V / 55A			RS	Factory Rebuilt/Overhauled - No Pulley
ALM-	12V / 30A			G	Ground Strap Attached
ALT-	24V / 50A	8	Belt Driven / Blast Tube	R	Factory Rebuilt/Overhauled
ALU-	24V / 70A			None	Factory New - Various Applications
ALV-	24V / 100A				
ALX-	12V / 70A	9	Gear Driven		
ALY-	12V / 60A				
ALZ-	12V / 50A				
ANG-	24V / 60A				

CHRYSLER ALTERNATORS - FACTORY OVERHAULED			
Mo e No.	Description	Part No.	Price
2098615R	12V/37A BD	08-07032	
2642996R	12V/37A BD	08-07033	
2642997R	12V/60A BD	08-07034	
3656623R	12V/41A BD	08-07035	
3659924R	12V/60A BD	07-06401	
4111810R	12V/60A BD	07-06402	
FORD ALTERNATORS - FACTORY OVERHAULED			
Mo e No.	Description	Part No.	Price
DOFF10300C	28V/60A GD	07-06413	
DOFF10300DR	28V/60A GD	07-06418	
DOFF10300ER	28V/38A GD	07-06414	
DOFF10300FR	15V/60A GD	07-06415	
DOFF10300JR	15V/60A BD	07-06416	
E3FF10300AAR	28V/95A BD	07-06417	
E3FF10300BAR	28V/60A BD	07-06419	
EOFF10300AAR	12V/95A BD	08-07036	
EOFF10300BAR	28V/60A BD	07-06419	

\*\*Alternator regulators for these alternators are new solid state units which replace the original blue colored Ford regulators. These are no longer available. Proper regulator for use with these alternators is Cessna Part No. C611001-0201, manufactured by Electro Delta. P/N VR600 ..... Net Price .

### KELLY AEROSPACE OVERHAULED COMPONENTS



Aircraft Spruce carries the full line of alternators, and starters which are remanufactured by Kelly Aerospace for installation in general aviation aircraft. Fully FAA approved. All prices shown are exchange prices. Core charges are billed when unit is shipped. Core credit is issued upon return unit of acceptable like model core to Aircraft Spruce West in Corona, CA.

NOTE: If core is not in stock at factory, customer must send core to Aircraft Spruce at time of order to have the core overhauled.

PRESTOLITE AL SERIES ALTERNATORS - OVERHAULED			
Part No.	Volts/Amps	Price	
ALE-6520R	12V/40A		
ALE-8520R	12V/40A		
ALE-8521R	12V/40A		
ALT-8520R	24V/50A		
ALT-8521R	24V/50A		
ALT-9522R	24V/50A		
ALU-6521RS	24V/70A		
ALU-8521R	24V/70A		
ALU-8521RS	24V/70A		
ALU-9522R	24V/70A		
ALV-8511R	24V/100A		
ALV-8512R	12V/100A		
ALV-9510R	24V/100A		
ALX-6523R	12V/70A		
ALX-8521R	12V/70A		
ALX-8521RS	12V/70A		
ALX9522R	12V/70A		
ALX-9524R	12V/70A		
ALX-9525BR	12V/70A		
ALY-6520R	12V/60A		
ALY-6521R	12V/60A		
ALY-6522R	12V/60A		
ALY-6527R	12V/60A		
ALY-8520R	12V/60A		
ALY-8520RS	12V/60A		
ALY-8524R	12V/60A		
ALY-8526R	12V/60A		
TCM ALTERNATORS - OVERHAULED			
Part No.	Volts/Amps	Price	
642056R	-		
646490R	-		
646843R	24V/60A		

ES4000 SERIES ALTERNATORS - OVERHAULED			
Part No.	Volts/Amps	Price	
649280R	28V/70A		
649281R	15V/80A		
649304R	24V/100A		
ALTERNATOR DRIVE COUPLINGS			
Part No.	Volts/Amps	Price	
ES4019RS	28V/130A		
ES-4020R	14V/60A		

ALTERNATOR & GENERATOR BELTS			
Part No.	Volts/Amps	Price	
37A19773-376			
37B19774-374			
37B19774-325			
539547-31.19			

### KELLY AEROSPACE NEW ALTERNATORS



As the OEM, Kelly Aerospace offers factory new alternators engineered specifically to meet the challenges and increased demands of today's aircraft electrical systems. Each unit is aviation designed & developed, no automotive parts used. For decades our alternators have been powering Lycoming/Continental engines with unmatched performance and reliability. No Core charges.

AL SERIES ALTERNATOR - Prestolite Style - FAA/PMA Approved				
Mo e No.	Volts/Amps	Description	Part No.	Price
ALT8520	24V/50A	Belt Driven	08-07122	
ALT8521	24V/50A	Belt Driven	08-07123	
ALT8521LS	24V/50A	Belt Driven	08-07124	
ALT9522	24V/50A	Gear Driven	08-07125	
ALU6521LS	24V/70A	Belt Driven	08-07126	
ALU8521	24V/70A	Belt Driven	08-07127	
ALU8521LS	24V/70A	Belt Driven	08-07128	
ALU8532LS	24V/70A	Belt Driven	08-07129	
ALX8521	12V/70A	Belt Driven	08-07130	
ALX8521LS	12V/70A	Belt Driven	08-07131	
ALX8523	12V/70A	Belt Driven	08-07132	
ALX9524	12V/70A	Gear Driven	08-07133	
ALX9525B	12V/70A	Gear Driven	08-07134	
ALY9524	12V/60A	Belt Driven	08-07135	
ALY6527	12V/60A	Belt Driven	08-07136	
ALY8520	12V/60A	Belt Driven	08-07137	
ALY8520LS	12V/60A	Belt Driven	08-07138	
ES4000 SERIES ALTERNATOR - Ford Style - FAA/PMA Approved				
Mo e No.	Volts/Amps	Description	Part No.	Price
ES4000	15V/60A	Belt Driven	08-07139	
ES400LS	15V/60A	Belt Driven	08-07140	
ES4001	15V/60A	Gear Driven	08-07141	
ES4002	15V/80A	Gear Driven	08-07142	
ES4003	15V/95A	Belt Driven	08-07143	
ES4004	28V/38A	Gear Driven	08-07144	
ES4006	28V/60A	Gear Driven	08-07145	
ES4008	28V/70A	Gear Driven	08-07146	
ES4009	28V/70A	Belt Driven	08-07147	
ES4011	28V/95A	Belt Driven	08-07148	
ES4019LS	28V/130A	Belt Driven	08-07149	
ES4020 SERIES ALTERNATOR - Chrysler Style - FAA/PMA Approved				
Mo e No.	Volts/Amps	Description	Part No.	Price
ES4020	14V/90A	Belt Driven	08-07150	
ES4029	28V/70A	Gear Driven	08-07151	

# PLANE POWER LIGHTWEIGHT ALTERNATORS



Plane-Power Lightweight Alternators are designed exclusively for aviation applications and constructed using only new, aviation-grade components. By maintaining higher quality standards and tighter tolerances, plane-power ensures improved performance, increased reliability and longer service than traditional OEM alternator solutions without the undesirable performance, weight and expense of conventional (heavyweight) OEM aircraft alternators. Plane-Power alternators are manufactured in Granbury, Texas by fellow aircraft owners and pilots who understand the importance of quality, value and simplicity desired by today's aircraft owners. Plane-Power alternators are available through dealers and FBO's worldwide. All Plane-Power alternators are warranted against failure in components and workmanship for a period of 2 years from the date of purchase. Finally Choice, Finally Plane-Power.

## PMA APPROVED ALTERNATOR REPLACEMENTS

Plane-Power Certified Alternators are PMA certified to replace any existing alternator in the aircraft and engine applications listed below. No STC paperwork required. Alternators ship complete with all hardware and brackets necessary for pain free installation. All Plane-Power PMA alternators produce up to 70 amps. Your airframe/application may use only a portion of the available output as limited by the aircraft electrical system components and design. Every Plane-Power alternator is tested to exceed all quality and performance specifications. Plane-Power PowerFlex Voltage Regulators are also available separately.

Mo e	Part No.	Price
AL12-F60	12-00998	
AL24-F60	12-00999	
AL12-F60C	12-01256	
AL24-F60C	12-01257	
AL12-P70	12-01001	
AL24-P70	12-01002	
AL12-70	12-01258	
AL24-70	12-01259	
AL24-FS60		2.95

American Cessna	OEM Part	Mo e
7ECA, 7GCAA, 7GCBC, 7KCAB, 8GCBC, 8KCAB	ALY-8420	AL12-P70
Beecraft	OEM Part	Mo e
19A, B19, M19A, 23, A23-19, A23-24, B23, C23, A24, A24R, B24R, C24R	33-380009-1	AL12-F60
19A, B19, M19A, 23, A23-19, A23-24, B23, C23, A24, A24R, B24R, C24R	ALE-8105A / ALE-8406	AL12-P70
76 Duchess, 77Skipper	ALY-8420	AL12-P70
76 Duchess	ALU-8421	AL24-P70
B19, C19, C24R	ALU-8421R	AL24-P70
Cessna	OEM Part	Mo e
177, 177A, 177B	C611501-0101	AL12-F60
172L, K, L, M, N, P, 177, 177A, 177B, 177RG	C611501-0102	AL12-F60
172Q, 177B	C611503-0102/ 9910591-7	AL24-F60
172R, 172S, 182S, 182T, T182T	9910591-5/ 9910591-11	AL24-FS60
P206A, P206B, P206C, P206D, P206E, U206, U206A, U206B, U206C, U206D, U206E, TP206A, TP206B, TP206C, TP206D, TP206E, TU206B, TU206C, TU206E, 207, T207, 210B, 210C, 210D, 210E, 210F, T210F, T210G, T210H, T210J	C611501-0101	AL12-F60C
180H, 180J, 180K, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, 185E, 185F, 188, P206C, U206C, U206D, U206E, U206F, U206G, TP206C, TU206B, TU206C, TU206E, TU206F, TU206G, 207, T207	C611501-0102	AL12-F60C
180H, 182G, 182H, 185D, 210E	0750217-1	AL12-F60C
188, A188, 210G, 210H	1570213-6	AL12-F60C
152, A152, 172M, 172N, 172P, 172RG, 177RG, R182, TR182	C611503-0102	AL24-F60
180J, 180K, 182P, 182Q, 182R, T182, U206E, U206F, U206G, TU206E, TU206F, TU206G, 207, T207, 210K, 210L, 210M, 210N, 210R, P210N, P210R, T210K, T210L, T210M, T210N, T210R	C611503-0102	AL24-F60C
188, 188A, 188B, A188, A188A, A188B, T188C, 207, T207	1570213-7	AL24-F60C
A188, A188A, A188B, 210K, T210K	1570213-6	AL12-F60C
Continental	OEM Part	Mo e
112, 112B, 112TC, 112TCA, 114, 114A, 114B, 114TC	LW14316	AL12-P70
Twin Continental Aircraft Corporation	OEM Part	Mo e
500-S	78314	AL24-P70
Diamond Aircraft Industries GmbH	OEM Part	Mo e
DA-40	ALU-8421LS	AL24-70*
Grumman (Gulfstream, Tiger)	OEM Part	Mo e
AA-1, AA-1A, AA-1B, AA-1C	ALE-6420 / ALY-6420	AL12-P70
AA-5, AA-5A, AA-5B, AG-5B, GA-7	LW-14310	AL12-P70
AG-5B	DOFF-10300J	AL12-F60
	ALU8421LS	AL24-P70

Moone	OEM Part	Mo e
M20C, M20E, M20F, M20G, M20J	ALY-8420 / ALX-8403	AL12-P70
M20J	ALU6421LS	AL24-P70
M20M	ES-4009LS	AL24-P70
Piper (Without Airconditioning)	OEM Part	Mo e
PA-23-250, PA-23-235, PA-24-260	ALX-8403	AL12-70*
PA-23-250, PA-23-235, PA-24-260	ALX-8403	AL12-P70
PA-23-250, PA-23-235	ALU-8403	AL24-70*
PA-23-250, PA-23-235	ALU-8403	AL24-P70
PA-44-180, PA-44-180T	751-346	AL12-P70
PA-28-151, PA-32R-301 (SP), PA-32-301T, PA-32R-301(HP), PA-32R-301T (SP), PA-32-301, PA-34-200, PA-38-112	551-984	AL12-P70
PA-44-180, PA-44-180T	ALX8421LS	AL12-P70
PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-180, PA-28-235, PA-28R-180, PA-28R-200, PA-32-260, PA-32-300	69670-00 (60 amp)	AL12-C60
PA-28-140, PA-28-151, PA-28-161, PA-28-180, PA-28-235, PA-28R-200, PA-32-300	69670-03 (60 amp)	AL12-C60
PA-28-151, PA-28-161, PA-28-181, PA-28-236, PA-28R-201, PA-28RT-201, PA-32-300, PA-32R-300, PA-32RT-300T	69670-04 (60 amp)	AL12-C60
Vancanair S.P.A	OEM Part	Mo e
P68, P68B, P68C, P68C-TC, P68 "OBSERVER", P68TC "OBSERVER", P68 "OBSERVER 2"	ALU-8421LS	AL24-P70
Lycoming Engines	OEM Part	Mo e
Engine Series 235, 320, 360, 540, 720	12v 70 amp or less Lycoming Alternators	AL12-P70
Engine Series 235, 320, 360, 540, 720	24v 70 amp or less Lycoming Alternators	AL24-P70
Engine Series 320, 360, 540, 720	12v 70amp or less Lycoming Alternators	AL12-70*
Engine Series 320, 360, 540, 720	24v 70amp or less Lycoming Alternators	AL24-70*
Superior Engines	OEM Part	Mo e
Engine Series O-360, IO-360	12v 70 amp or less Superior Alternators	AL12-70*
Engine Series O-360, IO-360	24v 70 amp or less Superior Alternators	AL24-70*

## PLANE-POWER LIGHTWEIGHT EXPERIMENTAL ALTERNATORS

Plane-Power Lightweight Experimental Alternators are specifically engineered for use in experimental aircraft. They are available in 6.9 lb. and 10 lb. versions. The 6.9 lb. version is designed for use in aircraft with a maximum gross weight of 2000 lbs. The 10 lb. version is designed for use in aircraft with a maximum gross weight of 3000 lbs. Both versions are fully pilot controllable through unique internal wiring. The dual internal fans are designed for aircraft engine rotation for maximum cooling. The AL12-E160 kit includes the tension arm, mounting brackets, required AN hardware, and V-Belt for Superior and most Lycoming\* engines. The AL12-E170 kit includes a high output internally regulated AIRCRAFT alternator (10 lbs.) with an exclusive internal crowbar over-voltage protection circuit. The alternator is fully pilot controllable through unique internal wiring. The dual internal fans are designed for aircraft engine rotation for maximum cooling. The AL12-E170 kit includes the tension arm, mounting brackets, required AN hardware, and V-Belt for Superior and most Lycoming\* engines with a 9-3/4 engine pulley. The AL12-E170 kit is an internally regulated alternator kit for Small Block Continental Engines. The alternator (6.9 lbs.) includes an exclusive internal crowbar over-voltage protection circuit and is fully pilot controllable through unique internal wiring. The alternator includes dual internal fans designed for aircraft engine rotation. The kit also includes a pre-wired enable/field plug. The EX14-50 kit fits C75, C85, C90, C125, C145, E165, E185, E225, IO-240, O-200 and O-300.



The kit comes with an internally regulated ultra compact lightweight AIRCRAFT alternator (6.9 lbs.) with an exclusive internal crowbar over-voltage protection circuit. The alternator is fully pilot controllable through unique internal wiring. The dual internal fans are designed for aircraft engine rotation for maximum cooling. The AL12-E160 kit includes the tension arm, mounting brackets, required AN hardware, and V-Belt for Superior and most Lycoming\* engines.



The kit includes a high output internally regulated AIRCRAFT alternator (10 lbs.) with an exclusive internal crowbar over-voltage protection circuit. The alternator is fully pilot controllable through unique internal wiring. The dual internal fans are designed for aircraft engine rotation for maximum cooling. The AL12-E170 kit includes the tension arm, mounting brackets, required AN hardware, and V-Belt for Superior and most Lycoming\* engines with a 9-3/4 engine pulley.

The kit is an internally regulated alternator kit for Small Block Continental Engines. The alternator (6.9 lbs.) includes an exclusive internal crowbar over-voltage protection circuit and is fully pilot controllable through unique internal wiring. The alternator includes dual internal fans designed for aircraft engine rotation. The kit also includes a pre-wired enable/field plug. The EX14-50 kit fits C75, C85, C90, C125, C145, E165, E185, E225, IO-240, O-200 and O-300.



Mo e	Output	Voltage	Part No.	Price
AL12-E160/B (Boss Mount)	60	12	07-01313	
AL12-E160/C (Case Mount)	60	12	07-01313-1	
AL12-E170/B (Boss Mount)	70	12	07-01414	
AL12-E170/C (Case Mount)	70	12	07-01414-1	
AL12-EE70/B (Boss Mount)	70	12	07-01005	

Mo e	Output	Voltage	Part No.	Price
AL24-EE70/B (Boss Mount)	70	24	07-01006	
AL12-EE70/C (Case Mount)	70	12	07-01005-1	
AL24-EE70/C (Case Mount)	70	24	07-01006-1	
EX14-50	50	12	07-01268	

# PLANE POWER CONVERSION ITS

## BELT DRIVEN GENERATOR CONVERSIONS

Aircraft Parts & Development	Plane-Power
Intermountain (Callair) A, A-2, A-4, A-5, A-5T, A-9, A-9B	SAL12-70
Aeriana Aircraft L.L.C.	
Bellanca 14-19-2, 14-19-3, 14-19-3A	SAL12-70C
Cessna Aircraft Co.	
180, 180A, 180B, 180C, 180D, 180E, 180F, 180G	SAL12-70C
182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H	SAL12-70C
185, 185A, 185B, 185C, 185D	SAL12-70C
210, 210A, 210.5 (205), 210-5A (205A)	SAL12-70C
206, P206	SAL12-70C
Cessna 310, 310A, 310B, 310C*, 310D*, 310E*, 310F*, 310G, 310H, 310J, 310K *10-9006 kit may be required for installation. View installation instructions online for further information	TAL24-70C
<b>Fred Garcia</b>	
Camair 480	TAL24-70C
ES 2003 Corporation (Piper)	
Piper PA-12, PA-12S	SAL12-70
<b>Hawker Beechcraft Co.</b>	
Beech H35, J35, K35, M35, N35, P35, 35-33, 35-A33, 35-B33, 35-C33	SAL12-70C
23	SAL12-70
Beech Baron 95-55, 95-A55, 95-B55, 95-B55A	TAL24-70C
Beech Travelair 95, B95, B95A, D95A, E95	TAL24-70
<b>Helio Aircraft, LLC</b>	
Helio H-250	SAL12-70
Helio 500	TAL12-70
WAD Co.	
Super-V	TAL12-70
<b>Latinoamerican De Aviacion</b>	
Piper PA-25, PA-25-235, PA-35-260	SAL12-70
Loc ee Aircraft Corp.	
402-2	SAL12-70C
Moone Airplane Company	
M20, M20A, M20B, M20C, M20D, M20E, M20F, M20G	SAL12-70
Piper Aircraft, Inc.	
Piper PA-16, PA-16S	SAL12-70
Piper PA-18, PA-18S, PA-18 "105" (SPECIAL), PA-19S	SAL12-70
PIPER PA-18A, PA-18 "125" (Army L-21A), PA18S "125", PA-18AS "125", PA-18 "135" (Army L-21B), PA18A "135", PA-18S "135", PA-18AS "135", PA-18 "150", PA-18A "150", PA18S "150", PA-18AS "150", PA-19 (Army L-18C), PA-20, PA-20S, PA-20 "135", PA-22, PA-22-135, PA-22S-135, PA-22-150, PA-22S-150, PA-22-160, PA-22S-160 (When modified with FAA Approved rear mounted oil cooler)	SAL12-70
Piper PA-20-"115", PA-20S-"115"	SAL12-70
Piper PA-22-108	SAL12-70
Piper PA-24, PA-24-250, PA-24-260, PA-24-400	SAL12-70
Piper PA-28-140, PA-28-150, PA-28-160, PA-28-180, PA-28-235, PA-28S-160, PA-28S-180	SAL12-70
Piper PA-23, PA-23-160, PA-23-235, PA-23-250, PA-E23-250	TAL12-70
Piper PA-30	TAL12-70
<b>Prop-Jets Inc.</b>	
Meyers 200, 200A, 200B, 200C, 200D	SAL12-70C
Raytheon Aircraft Co.	
35, A35, B35, C35, D35, E35, F35, G35, 35R, modified by STC conversion to O-470 or IO-470 engine.	SAL12-70C
<b>Revo, Inc.</b>	
Colonial C1, Colonial C2, Lake LA-4, LA-4A, LA-4P	SAL12-70
<b>Sierra Hotel Aero, Inc.</b>	
Navion D, E, F, G, H, and Navion (L-17A), Navion A (L-17-B & L-17C), B modified by STC conversion to O-470 or IO-470	SAL12-70C
Twin Comander Aircraft Corporation	
500A	TAL24-70C
500, 500-B, 500-U	TAL24-70

## GEAR DRIVEN GENERATOR CONVERSIONS

Aerospace	Plane-Power
T-211	ER14-50
Aerolision	
D-1190S	ER14-50
<b>Aeromca (Burl A. Rogers)</b>	
15AC, S15AC	ER14-50
<b>Aircraft Parts &amp; Development</b>	
A-3	ER14-50
American	
10A	ER14-50
American C-4 pion	
402, 7EC, 7ECA, 7FC, 7JC, S7EC	ER14-50
<b>Hawker Beechcraft</b>	
35, 35R, 45 (YT-34), A35, B35, C35*, D35*, E35*, F35*, G35*, (*When equipped with E225-8 Engine)	ER14-50
Cessna	
120, 140, 140A, 150, 150A, 150B, 150C, 150D, 150E, 150F, 170, 170A, 170B, 172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H	ER14-50
Continental Aircraft	
185	ER14-50
Earl Scott erns	
Trojan A-2	ER14-50
<b>FA 2001</b>	
J5A (Army L-4F) (when equipped with C75-12 Engine)	ER14-50
Silms Foundation	
GC-1A, GC-1B	ER14-50
<b>Goodyear</b>	
GA-22A	ER14-50
<b>Helio Aircraft</b>	
15A (when equipped with C145-2 Engine)	ER14-50
<b>Avion Jodel</b>	
150, D-1190, DR-1050 ER14-50	ER14-50
<b>The Don Luscombe Aviation History Foundation</b>	
8F, 8F, T-8F	ER14-50
Ma e Aircraft Company	
BEE DEF M-4, M-4, M-4C, M-14S, M4T	ER14-50
<b>Thomas H. McClish</b>	
B85C	ER14-50
Micco Aircraft Company	
MAC-125C, MC-145	ER14-50
S.O.C.A.T.A	
(Ralley) Series 100S, Rallye Series MS 880B, Rallye Series	ER14-50
<b>Navion</b>	
(Army L-4), (Army L-17B and L-17C)	ER14-50
Piper	
J3C-35* (Army L-4), L-4A*, L-4B (Navy NE-1*), L-4H*, L-4J* (Navy NE-2*), J3C-65S*, -4A**, J4E* (Army L-4E), PA-18, PA-19, PA-18S***, PA-19S*** (When equipped with (**C75-12)(**C85-12)(**C90-12F)Engine)	ER14-50
Part Mountain Aerospace	
11A	ER14-50
Senior	
(Culver) V, (Culver) V-2	ER14-50
<b>Taylorcraft Aviation</b>	
BC-12D-4-85, BCS12D-4-85	ER14-50
<b>Univair Aircraft</b>	
(Alon) A-2, (Alon) A-2A, (Forney) F-1, (Forney) F-1A, (Mooney) M10, ERCo 415-C*, ERCo 415-CD*, ERCo 415-D, ERCo E, ERCo G, (*When equipped with C75-12, C75-12F, C85-12 or C85-12F Engine)	ER14-50

## PLANE-POWER LIGHTWEIGHT STC GENERATOR TO ALTERNATOR CONVERSIONS



**BELT DRIVEN** - Plane-Power Belt Driven Generator to Alternator Conversion Kits include hardware and brackets to replace your existing generator and regulator. Plane-Power STC Belt Driven Generator Conversions allow for increasing the size of the output wire and circuit breaker to allow for a maximum of 70 amps of output. All Plane-Power alternators feature dual internal fans specially designed for aircraft engine rotation to maximize cooling. Models available for both 12 and 24 volt as well as for both Lycoming and Continental installations.

Model	Output	Voltage	Part No.	Price
SAL12-70	70 (max)	12	07-01301	
SAL12-70C	70 (max)	12	07-01299	
TAL12-70	70 (max)	12	07-01302	

Model	Output	Voltage	Part No.	Price
TAL24-70	70 (max)	24	07-01304	
TAL24-70C	70 (max)	24	07-01303	

**GEAR DRIVEN** - Plane-Power Gear Driven Generator to Alternator Conversion Kits replace your existing generator with an alternator which will provide higher output at lower rpm and allow for increasing the size of the output wire and circuit breaker to allow for a maximum of 50 amps of output. The ER14-50 will require the use of the existing late style continental gear, the Plane-Power ER14-GR or for E-Series Engines the gear support kit 'G-Pack' which will use the existing gear from the replaced generator. The ER14-50 weighs 6.9 lbs and comes with a pre-wired enable plug, 50 amp gear driven alternator, alternator inoperative lamp, Seals and R1224B Power-Flex voltage regulator.

Model	Output	Voltage	Part No.	Price
ER14-50	50 (max)	12	07-01321	



## PLANE-POWER ALTERNATOR VOLTAGE REGULATORS



Plane-Power Power-Flex Voltage Regulators are FAA-PMA Approved solid-state voltage regulators with over-voltage protection, field short (over current) protection, and reverse battery protection. Plane-Power Power-Flex voltage regulators also support precision load sharing for twin applications and an alternator inoperative lamp. Power-Flex voltage regulators are designed to be setup in the field for 12 or 24 volt operation by a simple placement of the two internal jumpers. For smaller mounting placement on the R1224, installation aid 12-1021 may be used. Installation Aid 12-1021 available separately.



Model	Description	Voltage	PN	Price
R1224	Replaces many Ford, Electrodelta, Prestolite, Interav, Wico, and FVR voltage regulators.	12 or 24	07-01305	
R1224B	Replaces voltage regulators on twin Cessnas, Beechcraft, and Vulcanair.	12 or 24	07-01306	

# B & C ALTERNATORS

## B & C LIGHTWEIGHT ALTERNATORS



### MODEL L40 ALTERNATOR

The model L40 is a belt driven 40 amp 14 volt alternator system for Lycoming engines including alternator assembly, mounting hardware, and belt, ready to install. The alternator weighs 6.1 lbs. and measures 3.9" in diameter and 5.6" long. The model L40 alternator was specifically designed to meet the rigorous demands of today's weight sensitive homebuilt designs and has undergone extensive in-flight service testing. This system incorporates the latest state-of-the-art advances in solid state electronic power management as well as incorporating a factory new, modern lightweight alternator. Applicable to Lycoming 118 H.P. through the 300 H.P. engines. L40 Boss Mount P/N 07-06815 .....

Note - On Models L40 & L60 Alternators, order as follows:

L40 Case Mount (Narrow Deck Bracket) P/N 07-06810 .....

el	an	alternat	r	re	ire	e	ternal	re	lat	r	e
		R	r						r		
		c	nvert	alternat	r	t					



### MODEL L60 ALTERNATOR

Model L60 is a belt-driven, 14 or 28 volt alternator system for wide deck (boss mount) 118HP through 300HP Lycoming engines. The kit includes a NEW alternator, steel mounting bracket, belt tensioning arm, belt and mounting hardware, ready to install.

Alternator with pulley installed weighs 8.5 Lbs. With 60 amps of output, the L6. Will provide sufficient power to operate electric heaters in the Eze type airplanes. Warning! It is unwise to use this (or any other high output alternator) unless true over voltage protection is also installed. The LR-3C linear regulator and alternator control system is recommended.

L60 Case Mount ..... P/N 07-06820 .....

L60 Boss Mount ..... P/N 07-06785 .....

re ire v lta ere lat r ee

### 30 AMP GEAR DRIVEN ALTERNATOR WITH PMR3



A 30amp gear-drive alternator for the Continental Engines (C-75 through O-300). After many customer requests for a gear-drive alternator with higher output, B&C Specialty Products introduces the latest product, model BC433-H.

Wt: 4lbs.; size: 4"dia. X 3.7" installed length. Features a billet aluminum mounting flange and creates 30 amps at cruise RPM. Ships with matching regulator. Sold without the Continental drive gear assembly (customer supplied), and requires the latest revision of the Hub (P/N 07-01327) and Retainer (P/N 07-01328) B&C has a limited supply of used drive gear assemblies, available at additional cost. NOTE: BC433-H requires purchase of PM/OV Kit 505-1 which provides crucial over voltage protection. P/N 07-00771 .....

### ACCESSORIES

505-1 B&C 14V Over Voltage Protection .. P/N 07-00772 .....

Generator Hub Coupling 653983 ..... P/N 07-01327 .....

Generator Attaching Retainer 653982 .... P/N 07-01328 .....

### PERMANENT MAGNET ALTERNATOR OVER VOLTAGE MODULE WITH NOISE FILTER



A must for the PM alternators. The PM/OV was designed to give over voltage protection to the permanent magnet alternator. The yellow light will announce if the alternator switch is left off, or if the crowbar over voltage protection has been tripped. The capacitor will filter some noise, and help enhance the regulation.

14 Volt ..... P/N 08-00658 .....

28 Volt ..... P/N 07-00708 .....

### MODEL LR3C LINEAR REGULATOR



More than a voltage regulator, LR3C is an alternator control system. Features (1) solid-state over-voltage protection, (2) a low-voltage warning system, (3) output short circuit protection and (4) a linear voltage

regulator, all housed in a single unit. This combination of features is normally available only as separately purchased and installed items. Originally designed for the Voyager, around-the-world aircraft, the LR3C represents the best that technology can offer in a single, cost effective package. The LR3C is all solid-state and compatible with 14 or 28V, aircraft or automotive alternators. Will not work if alternator has a built-in regulator. Size: 5.7"l x 3.1"w x 2.7"h; weight: 10oz. Supplied with low-voltage warning lamp assembly & complete installation instructions. Specify 14 or 28V. Alternators with built-in voltage regulators must be modified before installation with the LR3C. The optional LR3C temperature sensor adjusts bus voltage by sensing battery temperature. This feature is especially useful in areas of extreme climate temperature changes. LR3C (14V) ..... P/N 07-06742 .....

LR3C (28V) ..... P/N 07-06748 .....

LR3C Battery Temp Sensor .. P/N 07-06744 .....

### MODEL SD-8 ALTERNATOR & REGULATOR



The model SD-8 is a spline-driven, 14V alternator system for aircraft with an open vacuum pump drive pad. Features an ultra-reliable, brushless construction. A permanent magnet assembly supported on sealed ball bearings is spun around a fixed coil. With 8 amps of output, the model SD-8 is adequate for many VFR-day applications. The model SD-8 will power a solid state nav/com and transponder in addition to charging

a battery for engine starting. In production for over 10 years, hundreds of model SD-8 systems are flying. The model SD-8 is used by top aerobatic pilots around the world. Also used as backup power source on more sophisticated homebuilts. Wt.: 3.7lbs. Pricing includes adjustable, solid state voltage regulator. .... P/N 07-06770 .....

Over Voltage Kit 14V (required) ..... P/N 08-00658 .....

Over Voltage Kit 28V (required) ..... P/N 07-00708 .....

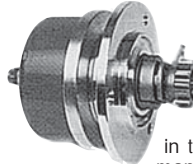
### MODEL SD-20 ALTERNATOR



The SD-20 is a high-performance spline-driven alternator that mounts on a standard vacuum pump accessory pad. May be used either as a primary or a stand-by alternator for a rated output 20 amps @ 2500 alternator RPM. Constructed of all NEW materials (with absolutely NO "re-manufactured" content), the SD-20 is designed for durable service, with heavy-duty sealed ball-bearings, 2 cooling fans, a dynamically balanced rotor, and a special "shear section" designed into the drive coupling. The SD-20 is available for both 14 and 28 volt applications, and is externally-regulated. It may be appropriately matched with our LR3C, LS-1A, or SB1B Controllers (depending) on your application and electrical system configurations). Measuring 4.6" wide and 6" deep, and weighing only 5.75lbs., SD-20 will clear the tachometer cable and oil filter on stock Lycoming engines. P/N 07-06771 .....

for over 10 years, hundreds of 200G systems are in service. With 12 amps of output the 200G will support a modest VFR-night system load. Wt 4.25 Lbs. Pricing includes an adjustable solid state voltage regulator. You supply a Continental generator drive gear assembly. Gear must be shipped by the factory to Aircraft Spruce for installation. P/N 07-06575 .....

### MODEL 200G ALTERNATOR



Gear-driven, 14V alternator system for aircraft powered with Continental C85-12 engines. Features ultra-reliable, brushless construction. Permanent magnet assembly supported on sealed ball bearings is spun around a fixed coil. Use in the prototype Vari-Eze. Has also seen service on many Cassuts, Vari-Ezes, Q-200s, etc. In production

for over 10 years, hundreds of 200G systems are in service. With 12 amps of output the 200G will support a modest VFR-night system load. Wt 4.25 Lbs. Pricing includes an adjustable solid state voltage regulator. You supply a Continental generator drive gear assembly. Gear must be shipped by the factory to Aircraft Spruce for installation. P/N 07-06575 .....

New Drive gear ..... P/N 07-06500 .....

Over Voltage Kit 14V (required) ..... P/N 08-00658 .....

Over Voltage Kit 28V (required) ..... P/N 07-00708 .....

### TURBO STAND-BY ALTERNATOR



The BPE-14 Turbo Alternator was designed to be installed on most classic, antique and homebuilt aircraft without an electrical system. This is a new design of the old Wind Generator, using the newest in technology techniques and materials. Particular effort was made to optimize the power output (6amp @ 85mph) with size (5" dia.) and weight (5 lbs). STC'd for several aircraft, the unit contains the Turbo Alternator with a built-in regulator and installation kit. A battery is not needed but the Turbo will only produce current while flying. The basic BAE-14/28 Power Supply is a manually deployed, ram air driven, emergency supply for small aircraft. This unit is a true emergency back up unit and is capable of supplying electric power to drive a basic complement of flight-critical instruments. The Turbo Alternator remains stowed inside the airframe or wing until needed. By tugging on the single t-handle activator cable, a small gas cylinder spring pushes the storage door open and deploys the ram air turbine alternator into the slipstream. For the BPE-14, please specify aircraft model, paint color and voltage. For the BAE-14/28, please specify aircraft model, voltage, registration number and serial number. STC'd for C182, C210, C206, Bonanza, PA-28, Piper PA-32 & Mooney.

BPE-14 Turbo Alternator ..... P/N 10-00747 .....

BAE-14/28 Auxillary Power Supply ..... P/N 10-00748 .....

# STARTERS ALTERNATORS



## B & C LIGHTWEIGHT STARTERS FOR LYCOMINGS

This extraordinarily light weight starter was specifically designed to meet rigorous demands of today's weight sensitive aircraft designs. Weighing only 10.2 pounds, B & C starters develop more torque than standard starters. The first lightweight starter to be developed, the B & C starter has been in production for over 16 years. It is manufactured from 100% new components and features total ball-bearing construction. The pinion gear is mechanically engaged with the ring gear before power is applied to the motor. Cantilevered pinion gear mounting requires no forward shaft support bearing thus eliminating cowl interference. If battery failure precedes engine starting, a positive spring retraction system insures pinion gear disengagement. STC'd and PMA'd versions for installation on certificated aircraft are available. STC'd for aircraft powered by any of the following series of Lycoming engines:

- O-235      • O-290      • O-320      • IO-320      • AIO-320
- AEIO-320      • O-360      • IO-360      • AIO-360      • AEIO-360
- HO-360      • HIO-360      • O-540      • IO-540      • AEIO-540
- HIO-540      • TIO-540



## B & C LIGHTWEIGHT STARTERS FOR CONTINENTALS

This new starter for the Continental O-200 or O-240 engine solves all the problems that other starters have had — worn out clutches, cracked pinion gears, hard to find parts. In addition, the BC320 is 4.3 to 5.2 lbs. lighter depending on whether you are replacing a key-type starter or a pull-cable type starter. The BC320 starter is STC'd for use in certificated aircraft and is available with, or without, the STC. Also available are two installation kits — one for replacing a key-type starter, the other for replacing a pull-cable type starter.

If you are replacing a key-type starter, you will need installation kit 501-1. Before installing the BC320, a needle bearing will need to be removed from your engine. To aid in removing this needle bearing, you may purchase Bearing removal kit, 501-2, for \$119.00. If you do not care to keep this tool, you may return it and be refunded \$80.00. If you are replacing a pull-cable starter, you will need installation kit 501-3. Before installing the BC320, you will need to cut off a steel shaft that is installed in your engine case. The new BC320 starter is a complete starter, ready to install, that will replace the existing motor, clutch, and pinion-gear. Tested by Continental with over 5000 start cycles without a problem. Recommended by Rutan Aircraft Factory. Except for paperwork, there are no differences between STC'd starters and starters for homebuilts. A starter must be ordered to match your battery voltage.

### FOR CERTIFICATED AIRCRAFT APPLICATIONS

Part No.	Mo e No.	Pinion Gear Pitch	Teet on Rin Gear	Batter Vo ta e	Price
G					
07-06700	BC315-100-1	10/12	122	12	
07-06705	BC315-100-2	12/14	149	12	
07-06710	BC315-100-3	10/12	122	24	
07-06715	BC315-100-4	12/14	149	24	
07-06716	BC320-1			12	

### FOR EXPERIMENTAL AIRCRAFT APPLICATIONS

Part No.	Mo e No.	Pinion Gear Pitch	Teet on Ring Gear	Batter Vo ta e	Price
G					
07-06720	BCS206-122-12	10/12	122	12	
07-06725	BCS206-149-12	12/14	149	12	
07-06730	BCS206-122-24	10/12	122	24	
07-06735	BCS206-149-24	12/14	149	24	
CONTINENTAL					
07-06737	BC320-H			12	

### B & C ACCESSORIES

- 501-1 ..... Installation Kit (key type).....P/N 07-06752 .....
- 501-2 ..... Bearing Removal Kit .....P/N 07-06753 .....
- 501-3 ..... Installation Kit (pull cable).....P/N 07-06754 .....



## GENNIPOD WIND GENERATOR

The GenniPod wind generator has been designed and built for use on EXPERIMENTAL and Ultra-light Aircraft. Utilizing a new solid state voltage regulation system, the GenniPod has been designed to target 13.5 volts at a 4 amp output. Final Phase testing demonstrated sufficient power for, Instrument panel gauges, GPS, Handheld Nav-Com, VW Ignition (point), and a fuel transfer Pump for those long cross country flights, (OSHKOSHI) Targeted airspeed for this unit was a cruise of 75 mph, and an aircraft Vne of 110 mph. Your GenniPod is delivered ready to mount on your airplane. Two wires, (Positive and Negative), will be linked to your electrical system. You will supply generator switch, 5 amp Breaker, and wiring to link the GenniPod to your system. A small motorcycle lead acid battery is also required. These items are not supplied to allow you to build to your needs, and to keep our prices low. The GenniPod measures approximately 9" long, with a diameter of 7" at the prop. Weight will be approximately 3.5 pounds installed.

P/N 11-07182.....

## INTERAV BELT DRIVEN ALTERNATOR ITS FAA APPROVED ALTERNATOR CONVERSION KITS



This high quality alternator kit is STC'd for most 14 volt aircraft and enables you to replace your belt driven generator with a current day alternator system. The superior features of this system include quick installation, voltage spike guard, built-in radio noise suppression, transistorized voltage regulator, and overvoltage relay protection. Kit includes alternator, mount, regulator, and overvoltage control.requires 60 Amp. Circuit Breaker(P/N 295-29694).

- Single Engine Kit..... P/N 07-06800.....
- Twin Engine Kit..... P/N 07-06850.....

### INTERAV KITS INCLUDE

Mo e No.	Re . No.	Description	P rc ase it Co ponents Individually. Part No.	Price Per Component
015-01237	A-152A	Alternator Assy	07-00027	
625-61623	A-153C	Voltage Regulator	625-61623	
635-62448	OVR-128	Overvoltage Relay	635-62448	
015-01240	A-167D	Mounting Bar Assy	07-01290	
245-23709	A-178	Spike Guard Capacitor	07-00828	
165-15041	A-178-2	Clamps	---	
435-42408	A-178-4	Lead Kit	---	
395-37992	A-178C	Hardware Kit	---	
415-40054	OVR-12A-6	Pacard	---	
---	R-65-113	Installation Instructions	---	

### ACCESSORIES

- 115-09964 Brush Holder Assembly.....P/N 07-00317 .....
- 295-29694 60 Amp. Circuit Breaker .....P/N 295-29694 .....



## SKYTRONICS JASCO GEAR DRIVEN ALTERNATOR ITS

This Jasco alternator kit is STC'd for many aircraft including the early Cessna 150, 172, and 175 series as well as Beech Model 35's with early E series Continental engines. Applicable to Continental C-90, O-200 and O-300 engines. This kit includes 50 amp alternator, voltage regulator, over-voltage control, and STC documents. Available for 14V systems only. Well-proven over many years of use in a variety of aircraft. In stock for immediate shipment. STC'd for Cessna 150-170, 172, 175, Beech 35 Series, Navion A. Skytronics Kit #6560-1.

P/N 07-06900.....

Vo ts	A ps	Drive	A t. P/N	it P/N	Price
12	50	4 stud. 6 spline sqr pad	6555T	6555-1	
12	50	Round pad like Delco config.	6560T	07-06900	
12	50	6 stud. 16 spline rnd. pad	6565T	6565-1	
24	50	4 stud. 6 spline sqr. pad	7555T	7555-1	
24	50	6 stud. 16 spline rnd pad	7565T	07-75651	
24	70	Hillier UH12E round pad	7555H-72B	07-07555	
24	70	4 stud. 6 spline sqr. pad	7655T	07-00703	
24	70	7555H-72B Kit		07-00702	
		Alternator	7555H-72B	07-07555	
		J12M24SPH Reg. Controller	J12M24SPH	07-00314	
24	70	17-10 Resist. 150 omega	17-10	07-01710	
		7655T Kit		07-00703	
		Alternator	7655T	07-00703	
24	70	J12M24SPH Reg. Controller	J12M24SP	07-00696	
		17-10 Resist. 150 omega	17-10	07-01710	
		Voltage Controller	J12M20SP	07-00697	
24		Voltage Controller	J12M24SP	07-00696	
24		Voltage Controller	J12M24SPH	07-00314	
24		Voltage Controller	J24-100SP	07-00698	
24		150 (omega) Resistor	17-10	07-01710	
24		75 (omega) Resistor	17-1	07-00699	
		Terminal Conversion kit	FSC-2	07-00701	

## JASCO ALTERNATOR GASKET SA36100



Jasco Alternator Gasket SA36100 used only on a 6560T Alternator.

P/N 07-01287.....

# KELLY AEROSPACE LYCOMING STARTERS

## KELLY AEROSPACE X-DRIVE STARTERS

The X-Drive starter is newest in the light weight, high torque starter lineup from Kelly Aerospace. Targeted toward users that want one of the industries lightest but most powerful starter on the market, the X-Drive delivers the same high torque, low current draw, and superior duty cycle that had previously been available only to E-Drive customers. X-drive uses No Bendix, the same powerful permanent magnet motor as the E-drive, and is the lightest starter available. The X-Drive starter is FAA/PMA'd and allows Kelly Aerospace to service virtually all OEM/aftermarket Lycoming applications. Spin Better, not faster!



Lightest available starter

- Weight: 7.6 lbs. – Lightest Starter Available
- No Bendix
- Lowest Inrush & Operating Current Draw in the industry
- FAA/PMA
- Maintenance Free
- Aviation Solenoid
- No Automotive parts used

- All metal gear train
- Silver plated contacts reduce electrical arcing damage during engagement.
- 33% Higher Torque
- Superior Duty Cycle
- Environmentally tested under the most extreme conditions
- Available in Left or Right Solenoid mounts.

Description	Part No	Price
Kelly X-Drive Starter SRB-9021	08-06271	
Kelly X-Drive Starter SRB-9022	08-06272	
Kelly X-Drive Starter SRB-9031	08-06273	
Kelly X-Drive Starter SRB-9032	08-06274	
Kelly X-Drive Starter SRZ-9021	08-06275	
Kelly X-Drive Starter SRZ-9022	08-06276	
Kelly X-Drive Starter SRZ-9031	08-06277	
Kelly X-Drive Starter SRZ-9032	08-06278	

### APPLICATION DATA GUIDE

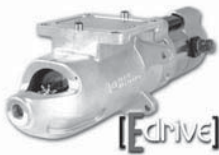
Solenoid to the Left: (X-Drive series: see figure 1)	
SRZ-9021 (12 Volt - 149 tooth)	SRZ-9022 (12 Volt - 122 tooth)
SRB-9021 (24 Volt - 149 tooth)	SRB-9022 (24 Volt - 122 tooth)
Solenoid to the Right: (X-Drive series: see figure 2)	
SRZ-9031 (12 Volt - 149 tooth)	SRZ-9032 (12 Volt - 122 tooth)
SRB-9031 (24 Volt - 149 tooth)	SRB-9032 (24 Volt - 122 tooth)

### CROSS-REFERENCE CHART

Sky-Tec P/N	X-Drive P/N	Sky-Tec P/N	X-Drive P/N
122-12LS	SRZ-9022	149-12PM	SRZ-9031
122-12PM	SRZ-9032	149-24HT	SRB-9021
122-24LS	SRB-9022	149-24LS	SRB-9021
122-24PM	SRB-9032	149-24PM	SRB-9031
149-12LS	SRZ-9021		

EP

## KELLY AEROSPACE E-DRIVE STARTERS



Immune to Kick-Back Damage  
There is no longer a need to replace overload devices (shear pins) after a kick-back event. The E-drive is unaffected by kick-backs saving hours of service time and replacement costs. The engine and starter are both protected by a proprietary torque limiting clutch drive design.

Solid-State Solenoid Control  
The Printed Circuit Board (PCB) solenoid controller uses the latest in Surface Mount Technology (SMT) components. Each control is environmentally hardened and tested under the most extreme conditions. The field serviceable unit eliminates mechanical contacts for improved reliability and longer life. Monitoring the health status of the engine, starter, battery, and operational duty cycle will soon become a reality through enhancements to our proprietary solenoid control system.

Design & Source Control on All Components  
Kelly Aerospace believes in engineering products specifically for the aviation industry and has design and source control over all components. Absolutely no automotive aftermarket parts are used. Why trust a part supplied from the automotive market where design details frequently change?

R D RR R RG



- High Performance Armature
- Increased commutator bar length
- Thin laminations
- High quality magnetic alloy
- 12 & 24 volt winding configuration
- Redesigned Brush Holder
- Metal construction for heat sinking
- Offset brush position for increased brush contact area
- Robust spring design
- High performance field housing
- Rare earth neodymium magnets
- Small package
- Stronger flux field
- Improved temperature stability
- 9.5 lbs.



- Starter system designed for maximum performance.
- Drive assembly integrates proprietary pinion gear, clutch, torque limiter, and actuator in one complete module.
- Available for coarse and fine pitch ring gears, clock-wise and counter-clock-wise rotation.
- No periodic service or recurring maintenance required.
- 9.5 lbs.

### APPLICATION CHART

Drive	mer	ppr	ve	lternative	rte	ll	in
ERB-8011		ERB-8012		ERZ-8011		ERZ-8012	
MHB-4001		MHB-4015		MZ-4205		MZ-4204	
MHB-4002		MHB-4002		MZ-4206		MZ-6204	
MHB-4003		MHB-6001		MZ-4207			
MHB-4005				MZ-4217			
MHB-4007				MZ-4218			
MHB-4010				MZ-4219			
MHB-4012				MZ-4221			
MHB-4013				MZ-4224			
MHB-4014				MZ-4222			
MHB-4016				MZ-4223			
MHB-4017				MZ-4225			
MHB-4019				MZ-6222			
MHB-4020				MZ-6224			

MODEL	DESCRIPTION	PART NO.	PRICE
ERZ-8011	Clockwise rotation, 12 Volt, 149 tooth - 12/14 Pitch Gear	07-01102	
ERZ-8012	Clockwise rotation, 12 Volt, 122 tooth - 10/12 Pitch Gear	07-01103	
ERB-8011	Clockwise rotation, 24 Volt, 149 tooth - 12/14 Pitch Gear	07-01099	
ERB-8012	Clockwise rotation, 24 Volt, 122 tooth-10/12 Pitch Gear	07-01101	

# KELLY AEROSPACE STARTERS

## TCM ENERGIZER STARTERS

FACTORY NEW				FACTORY OVERHAULED			
Mo e	Core	Part No.	Price	Mo e	Core	Part No.	Price
ES646238-2	.	CALL	CALL	646238-2R	.	CALL	CALL
ES646238-3	.	CALL	CALL	646238-3R	.	07-06501	.
ES646275-1	.	CALL	CALL	646275-1R	.	07-06502	.

### KELLY AEROSPACE FACTORY OVERHAULED STARTERS

If No Cores are Available at factory, we will require your core for overhaul.



M . Re .	P/N	Core	Price
MC-6501	07-06503	.	.
MHB-4004R	08-06206	.	.
MHB-4005R	08-06207	.	.
MHB-4008R	08-06203	.	.
MHB-4014R	08-06209	.	.
MHB-4016R	07-06504	.	.
MHB-4017R	08-06211	.	.
MHB-4018R	08-06212	.	.
MHB-4020R	CALL	.	CALL
MHJ-4003SR	07-06505	.	.
MHJ-4004R	08-06204	.	.
MHJ-4005R	08-06205	.	.
MMU-4001R	07-06506	.	.
MZ-4204R	CALL	\$165.00	CALL
MZ-4208R	08-06208	.	.
MZ-4214R	07-06513	.	.
MZ-4219R	CALL	.	CALL
MZ-4220R	08-06198	.	.
MZ4222R	07-06509	.	.
MZ-4224R	CALL	.	CALL
MZ-4225R	08-06201	.	.
MZ-4226R	08-06202	.	.

### KELLY AEROSPACE NEW STARTERS

Description	Part No.	Price
MHJ-4003S NEW KELLY STARTER	08-06180	.
MHB-4014 NEW KELLY STARTER	08-06182	.
MHB-4016 NEW KELLY STARTER	07-01110	.
MHB-6014 NEW KELLY STARTER	07-01109	.
MZ-4214 NEW KELLY STARTER	08-06179	.
MZ-4220 NEW KELLY STARTER	08-06186	.
MZ-4222 NEW KELLY STARTER	08-06188	.
MZ-6220 NEW KELLY STARTER	07-01296	.

#### OVERHAULED EXCHANGE UNITS AVAILABLE FOR ALMOST ALL ELECTRICAL ACCESSORIES

Call for quote on unlisted requirements. We stock all accessories at competitive prices.



### KELLY AEROSPACE STARTER DRIVES

Designed to fit prestolite starters. Shipping Weight: all units, 2 Lbs.

Description	Part No.	Price
EBB75A MZ series 42054207, 42174219. MHB series 40014007 & 40104013	07-06515	.
EBB124AMHJ series-All, MMU series-All, M24204, MHB4015	07-06510	.
EBB131AMZ series 4221 to 4223, MHB 4016 to 4019	07-06511	.
EBB142A STARTER DRIVE ES EBB142A	07-06512	.
Lamar 9301001-F 01 OVERHAUL KIT PM1201 & 2401 Series Starters includes shear pin	07-01180	.

### CONVERSION CHART

The Magnaflite lightweight starter listed in the table below will be superseded by the E-Drive and/or X-Drive starter listed therein. All Magnaflite P/N's listed below that are currently installed, being installed or in inventory are in no way affected. Standard Limited Warranty, is in effect and returns for reason of supercedure will not be accepted.

APS Part Number	X-Drive Left Hand Solenoid	X-Drive Right Hand Solenoid	E-Drive
MHB-6016	SRB-9021	SRB-9031	ERB-8011
MHB-6018	SRB-9021	SRB-9031	ERB-8011
MMU-6001	SRB-9022	SRB-9032	ERB-8012
MZ-6204	SRZ-9022	SRZ-9032	ERZ-8012
MZ-6222	SRZ-9021	SRZ-9031	ERZ-8011
MZ-6224	SRZ-9021	SRZ-9031	ERZ-8011
MZ-6226	SRZ-9021	N/A	ERZ-8011

# SKY-TEC STARTERS

## SKY-TEC STARTERS FOR CONTINENTAL ENGINES

Sky-Tec starters are now the factory OEM starter for Teledyne Continental engines. Features of Sky-Tec's ST2 and ST3 starters for TCM engines include low current draw, high-torque and very light weight. All Sky-Tec Continental starters feature Sky-Tec's exclusive Kickback Protection System either by means of a field-replaceable shear pin (ST2 model starters) or torque limiter (ST3 model starters). Sky-Tec ST2 and ST3 starters are maintenance free and FAA-PMA manufactured to exacting TCM OEM standards. ST2 starters fit engines from A65-12 (Mooney Mite engine) up to O-300C (Cessna 172) and ST3 starters fit all TCM engines with a right-angle starter adapter gearbox on the rear of the engine (O-300D through TIO-520 engines).

Sky-Tec ST2 Model Starters weigh only 9.2 lbs. replacing heavyweight old OEM starters weighing more than twice as much. Installation is simple via PMA (factory key-start replacement C12ST2 starter) or STC (pull start conversion kit KCST2 starter). ST2 starters replace trouble-prone continuous running sprag clutched heavyweight old starters. Key-start ST2 starters can be installed without removing the needle bearing in the engine.

Sky-Tec ST3 Model starters weigh only 6.5 lbs. replacing heavyweight old OEM starters weighing up to three times as much! ST3 Model starter installation is a very simple bolt-off/bolt-on affair and certification is via FAA-PMA (no 337's or STC's required). Sky-Tec ST3 starters unique centrifugal clutch feature permit the ST3 starter to release the TCM starter adapter faster than any other starter making it the safest starter available for all types of TCM starter adapters. Sky-Tec ST3 model starters are the only lightweight permanent magnet starters recommended for use on all types of TCM starter adapters by the most respected starter adapter rebuilders. All Sky-Tec starters carry a generous 2-Year warranty.

## SKY-TEC ST2 & KCST2 MODEL STARTERS FOR SMALL CONTINENTAL ENGINES



**SKY-TEC C12ST2 - FOR FACTORY KEYSTART STARTER FOR A65-12 THROUGH O-300C ENGINES** - 9.2 lbs., Bolt-off / Bolt-on, High Torque, Low-Current, Gasket Included, Replaces TCM starter & continuous running sprag clutch in TCM factory keystore engines.

**SKY-TEC KCST2 - STC-CERTIFIED CONVERSION KIT FOR FACTORY PULL-START ENGINES** - STC Modification of Engine Required (removal of OEM starter pinion shaft in rear of engine). STC Modification of Airframe Required (replacement of pull-start T-handle with Sky-Tec-supplied push button & wiring) High Torque, Low-Current, 9.2 lbs.

**Complete Conversion Kit includes:** C12ST2/S Starter, Push Button Switch, Wiring Harness, Gasket, Instructions, STC for Airframe Modification, STC for Engine Modification

Model C12ST2.....P/N 07-00614  
 Model C12ST2/S (Starter only) .....P/N 07-00719  
 Model KCST2 .....P/N 07-00721  
 KCSW Switch and harness only.....P/N 07-00722

## SKY-TEC ST3 MODEL STARTERS FOR LARGE CONTINENTAL ENGINES



Safe for all types of TCM starter adapters! Feature Sky-Tec's exclusive proprietary clutch design virtually eliminating starter-induced TCM starter adapter wear. FAA-PMA certified replacement part approved for all TCM starter adapters including "classic Style", "improved style", "permold", and "sand cast" engines. Simple bolt-off / bolt-on installation.

Designed to crank no slower than TCM heavyweight OEM starters. Generous 2-Year factory warranty.

Model C12ST3 12 Volt.....P/N 07-00766  
 Model C24ST3 24 Volt.....P/N 07-00767

## SKY-TEC STARTER FOR ROTAX ENGINES



4.1 lbs. Bolt-off / Bolt-on. High Torque, Low-Current. Heavy-Duty "Gold"-type Starter. Fits Rotax 912 and 914-series engines.

P/N 07-01263

## SKY-TEC BCE-6 EXTENSION CABLE KIT



6" Battery Cable Extension kit aids the installation of starters in aircraft that have limited slack available in the aircraft's starter power cable. Generally not required for TCM starter installations. May be needed in some PM, and NL model Lycoming installations.

P/N 07-00923

## SKY-TEC STARTERS FOR LYCOMING ENGINES

For more than twenty years, Sky-Tec has focused solely on one obsession: making the world's best aircraft engine starters. Sky-Tec's passion and commitment to general aviation continues today with a full line of lightweight, high-performance starters for Lycoming, Continental and even Rotax engines. Every Sky-Tec starter is engineered, designed, manufactured and supported by pilots and aircraft owners like you. Sky-Tec starters are specially designed for each aircraft engine application with a relentless focus on performance, reliability and trouble-free fit. Sky-Tec uses only FAA-PMA certified airworthy components resulting in reliability that exceeds engine TSO. Sky-Tec's legendary innovations include Sky-Tec's exclusive Kickback Protection System (KPS), ultra-lightweight high-torque motors, proven Bendix-free electromechanical solenoid engagement (and disengagement), and super-strong, lightweight housings designed to endure years of use on every aircraft. Every Sky-Tec starter comes backed by the best warranty in the industry (2-years) by the best people in the business. **There is NEVER A CORE CHARGE on Sky-Tec starters!**

## SKY-TEC STARTERS HIGH-TORQUE INLINE STARTERS FOR LYCOMING ENGINES



Featuring Sky-Tec's Exclusive KPS® Kickback Protection System, Sky-Tec's NL-series of starters are now available in Extended Cranking SuperDuty versions (see table below) - perfect for hard to start as well as hard to fit aircraft. The /ec series starters feature

unprecedented duty cycle capabilities and are virtually impossible to hurt on even the hardest starting 24V aircraft. Now available as factory original equipment on nearly all new Lycoming-powered airplanes, no other starter is manufactured to more exacting standards for quality, reliability and workmanship than Sky-Tec's Inline series starters. All NL-series starters are FAA-PMA certified as replacement parts for all non-geared, flat Lycoming engines. Sky-Tec NL-series starters fit without modification or 337 paperwork. At only 9.4 lbs., the NL-series is the lightest Bendix-free inline available. Generous two-year warranty.

Mo e No	Vo ta e/ Description	Pitc	FAA-PMA Eligible	Part No.	Price
122-NL	12 Volt (Also 24 Volt Switchable)	10/12 (for 122-Tooth Rng Gears)	Lyc. 235, 290, 320, 360, 540 & 720	07-00761	.
149-NL	12 Volt (Also 24 Volt Switchable)	12/14 (for 149-Tooth Rng Gears)	Lyc. 235, 290, 320, 340, 360, 540	07-00762	.
149-NLR	12 Volt (Also 24 Volt Switchable)	12/14 (for 149-Tooth Rng Gears)	Lyc. LIO-320, LO-360, LTO-360, LIO-360, LHO-360 & LTO-540	07-00763	.
122-NL/ec	24 Volt Super Duty	10/12 (for 122-Tooth Rng Gears)	Lyc. 235, 290, 320, 360, 540 & 720	08-07061	.
149-NL/ec	24 Volt Super Duty	12/14 (for 149-Tooth Rng Gears)	Lyc. 235, 290, 320, 340, 360, 540 &	08-07062	.
149-NLR/ec	24 Volt Super Duty	12/14 (for 149-Tooth Rng Gears)	Lyc. LTO-540	08-07060	.

## SKY-TEC HIGH-TORQUE STARTER



Newly Improved! The original High-Torque starter is available with Sky-Tec's exclusive Extended Cranking Super Duty 24 Volt motor. Also stronger and more durable thanks to an improved strontium-fortified aluminum alloy and beefed-up mount castings. Still one of the lightest Lycoming starters available at only 8.5 lbs. Spins twice as fast as most heavyweight OEM starters. Zero maintenance. FAA-PMA approved for most Lycoming engines. Also available specifically configured to directly replace costly B&C starters on Robinson helicopters. Some airframe applications may require modification for best fit. Confirm aircraft fit, ring gear tooth count and voltage before ordering. Generous 2-Year factory warranty.

Mo e	Vo ta e	Description	Part No.	Price
122-12HT	12 Volt	10/12 (122 Tooth)	07-06250	.
149-12HT	12 Volt	12/14 (149 Tooth)	07-06251	.
122-HT/ec	24 Volt Super Duty	10/12 (122 Tooth)	07-01323	.
149-HT/ec	24 Volt Super Duty	Duty 12/14 (149 Tooth)	07-06255	.
149-12HT-H	12 Volt	Replaces B&C Starters on 12 Volt Robinson Helicopters	07-01336	.
149-HT/ec-H	24 Volt Super Duty	Replaces B&C Starters on 24 Volt Robinson Helicopters	07-01337	.

## SKY-TEC FLYWEIGHT™ STARTERS FOR LYCOMING ENGINES



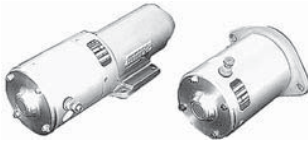
Newly Improved! The original Flyweight™ starter that started the lightweight revolution is now even stronger and more durable thanks to an improved strontium-fortified aluminum alloy and beefed-up mount castings. Still one of the lightest Lycoming starters available at 8.25 lbs. Spins twice as fast as most heavyweight OEM starters. Zero maintenance. FAA-PMA approved for most Lycoming engines. Some airframe applications may require modification for best fit. LS model has the solenoid offset to the left side and PM model is offset to the right. Confirm aircraft fit, ring gear tooth count and voltage before ordering. Generous 2-Year factory warranty.

Mo e	Part No.	Price
122-12LS	07-06245	.
149-12LS	07-06246	.
149-24LS	07-06247	.
122-12PM	07-06252	.
149-12PM	07-06253	.
122-24PM	07-06249	.
149-24PM	07-06257	.



# LAMAR STARTERS

## LAMAR STARTERS (NEW)



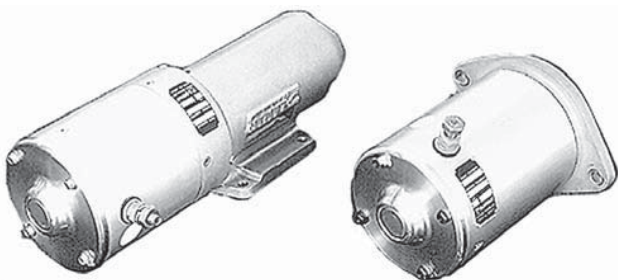
Lamar Permanent Magnet Starters represent the next generation in starter technology, setting new standards in performance and reliability. These new lightweight starters deliver exceptional torque to start virtually any general aviation piston engine in nearly any environment, yet weigh about 40 percent less than conventional starters. The key is Presicion's patented permanent magnet motor design. It replaces the bulky windings of a conventional starter motor with lightweight permanent magnets. This revolutionary design not only eliminates considerable weight, but results in more efficient starter operation and improved performance under all conditions. During extensive performance testing, Lamar starters consistently provided quicker engine starts than conventional starters under a variety of operating conditions. These TBO starters are built to go the distance between engine overhauls. Conventional starters generally don't last. They usually have to be pulled off for repair or replacement at least once during the life of the engine.

These TBO starters are built to go the distance between engine overhauls. Conventional starters generally don't last. They usually have to be pulled off for repair or replacement at least once during the life of the engine.

P/N 12V	PRESTOLITE	LYCOMING	PRICE	P/N 24V	PRESTOLITE	LYCOMING	PRICE
PM1203	MZ-4204	76210	.	PM2401	MHB-4001	76212	.
PM1201	MZ-4205	76213	.	PM2401	MHB-4002	75700	.
PM1201	MZ-4206	76211	.	PM2401	MHB-4003	76214	.
PM1201	MZ-4207	75699	.	N/A	MHB-4004	77879	---
N/A	MZ-4208	75787	---	PM2401	MHB-4005	78791	.
PM1204	MZ-4216	LW-10556	---	PM2401	MHB-4007	LW-11936	.
PM1201	MZ-4217	LW-14209	.	PM2401	MHB-4008	LW-12023	.
PM1201	MZ-4218	LW-14207	.	PM2401	MHB-4009	LW-12159	.
N/A	MZ-4219	LW-14211	---	PM2401	MHB-4010	LW-14208	.
PM1204	MZ-4220	LW-14215	---	N/A	MHB-4011	LW-14212	---
PM1201	MZ-4221	LW-15573	.	PM2401	MHB-4012	LW-14210	.
PM1201	MZ-4222	LW-17771	.	PM2402	MHB-4013	LW-14213	---
N/A	MZ-4223	LW-15576	---	PM2401	MHB-4014	LW-14214	.
PM1202	MZ-4224	LW-16460	---	PM2403	MHB-4015	LW-15483	.
PM1201	MZ-4225	LW-18047	.	PM2401	MHB-4016	LW-15572	.
PM1201	MZ-4226	LW-18989	.	N/A	MHB-4017	LW-15571	---
				PM2402	MHB-4018	LW-15577	---
PM1207	---	646238	.	PM2401	MHB-4019	LW-15574	.
				PM2401	MHB-4020	LW-18990	.
				N/A	MHB-4004	77879	---
				N/A	MHB-4005	LW-12787	---
				PM2403	MHB-4001	LW-16207	.
				PM2407	---	642275	.



## LAMAR OVERHAULED STARTERS



In addition to the factory new Lamar starters listed above, Aircraft Spruce also stocks overhauled Lamar starters. The PM1201 starter is ideal for the Lycoming O-320 & O-360 series engines and the PM2401 is applicable to the Lycoming O-540 series engines. Like the new Lamar starters, these overhauled starters are FAA/PMA approved, fully bench tested, provide superior cold weather performance, utilize a patented permanent magnet design, use a planetary gear reduction for optimum speed and torque (110 RPM), and draw less amperage than lightweights to help lengthen battery life.

Overhauled PM1201 starter ..... P/N 08-01201.....  
 Overhauled PM2401 starter ..... P/N 08-02401.....

## LAMAR SUPER SWITCH



The Super Switch is designed to replace all contractors on the aircraft with a wide variety of applications from master contractor through starter, external power, and alternator contractors.

The Super Switch reduces weight and increases reliability through solid state technology. Both Bi-directional and Uni-directional functions allow multiple applications. Current limiting is available for special applications requiring "Smart" technology.

Features & Benefits:

- Up to 66% lighter weight.
- 5 to 44 volt operating range.
- Solid State technology
- Up to 600 amps momentary operation.
- Uni-Directional .....
- Bi-Directional .....
- 99% more reliable.
- Replaces all mechanical contractors.
- No moving parts
- Up to 100 amps continuous
- Negative or positive turn on
- Uni-Directional ..... P/N 07-01283..... CALL FOR PRICE
- Bi-Directional ..... P/N 07-01284..... CALL FOR PRICE

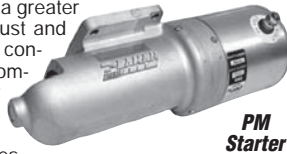
# LAMAR ELECTRICAL COMPONENTS

## LAMAR MC10 MASTER ELECTRICAL CONTROL UNIT



**MC10**

The Lamar MC10 is a master electrical control unit developed for 14V and 24V single engine experimental aircraft. It is designed to mount on the firewall or fuselage. It houses all the major electrical components except for the battery, starter, and alternator. The MC10 provides a greater degree of protection against moisture, dust and accidental electrical shorts along with the convenience of all the primary electrical components in one location. Features low installation cost, ease of installation and simplified troubleshooting and repair with several new performance & safety features.



**PM Starter**

• Master (battery) (solenoid) control closing the master switch on pilot's panel connects the battery to the primary bus. • 3 aircraft bus outputs, protected via resettable circuit breakers. • Alternator Control; voltage regulation, overvoltage protection, field output overload protection, alternator feeder fault protection • Starter control (solenoid) • Low voltage warning. (L model also includes overvoltage, over-current and reverse-current annunciation) • Battery charge/ discharge ammeter drive (current shunt) • Clock output (always-on) protected with easily accessible external mounted fuse. • Ground power receptacle & control (solenoid) with reverse polarity protection.



**XT60**

Description	Part No.	Price
Lamar Master Controller only 14V Exper.	11-03295	.
Lamar Master Controller 28V Exper.	11-03298	.
Lamar XT2860 New Alternator 28	07-00839	.
Lamar Master Control 14V Exp. MC-10	11-03295	.
Lamar AC14-EXP 28V	11-05041	.
Lamar GC07-EXP Generator Control	11-05042	.
Lamar GC11-EXP Generator Control	11-05043	.
Lamar MC09-T1 Master Control Turbo	11-05055	.

## LAMAR ELECTRICAL COMPONENTS


LAMAR	DESCRIPTION	APPLICATIONS	OUR P/N	PRICE
A-00258-1	Switch, Alternator INOP	Piper: PA23 Series, PA30, PA39, PA38, PA28 Series, PA32 Series, PA34-200T, PA34-220T, Maule*, Raytheon:A36, V358, F338, F33, F33A, F33C, E33a, V35A, 36	07-01146	.
A-00258-2	Switch, Alternator INOP	Piper: PA23 Series, PA31Series, PA34, PA31P, Twin Commander 700 Maule*, Raytheon: 57, E55, 5895B55, D55	07-01147	.
B-00266-2	Overvoltage Relay, 28V, Piper	Piper: PA23-235, PA23-250, PA31 Series, PA36 Series, Islander*: BN2A, BN2B, BN2T, BN2T-4, Trislander*: BN2A MK 11 Series	07-01148	.
B-00286-1	Regulator, 28V, Parallel OP (twin)	Piper:PA23-235, PA23-250, PA31, PA300, PA44-180/180T, PA31P, PA34-220T, Cessna*:421, 414, 402, 340, 310	07-01449	.
B-00288-1	Regulator, 14V, Parallel OP (twin)	Piper: PA23-235, PA23-250, PA30,PA39, PA34-200T, PA34-220T, PA44-180, PA44-180T, Gulfstream Aero*	07-01150	.
B-00289-2	Overvoltage Relay, 14V	Piper: PA18, PA30, PA39, PA23-235, PA23-250, PA28 Series, PA32 Series, PA34-220, PA34-220T, Beech*: 19A, B19, M19A, 23, A23, A23A, A23-19, A23-24, B23, C23, A24, A24R, B24R, C24R, Bellanca*: 14-19, 19-2, 19-3, 19-3A, 17-30, 31, 31TC, 17-30A, 31A, 31ATC, Citabria*: 70CAA, 7ECA, 7GCBC, 7KCAB, 1GCBC, 1KCAB, Commander*: 112, B, TC, TCA, Cessna*:175, 185, 188, Grumman*: AA-1, Lake*: LA-4, A, P, Maule*: M-5-180C, 235C, M-6-180, 235, M-7-235, MX-7-180, 235, Varga*: 2150A	07-01151	.
B-00306-3	Regulator, 28V, Parallel OP (twin)	Piper: PA60, PA60-601, PA60-601P, PA60-602P, PA60-700P	07-01153	.
B-00307-1	Voltage Regulator, 28V	Twin Commander 700, 500s	07-01454	.
B-00325-1	Timer, Pneumatic, 28V	Piper: PA23 Series, PA31 Series, PA31T Series	07-01455	.
B-00331-2	Voltage Regulator, Type 1, 14V	Piper: PA38	11-04130	.
B-00337-0	Overvoltage Relay, 28V	Twin Commander 690C, 695, 695A, 690D, 695B	07-01456	.
B-00337-1	Overvoltage Relay, 28V	Twin Commander 700	07-01157	.
B-00341-1	Time Delay Switch	Piper: PA31 Series, PA42-720	07-01158	.
B-00345-1	Thermostat Control	Piper: PA31T, T1	07-01159	.
B-00353-1	Timer Module, Surface De-ice	Piper: Pa31 Series, PA31P, PA42-720, PA42-1000	07-01161	.
B-00363-1	Timer, Courtesy Light, Beech-28V	Raytheon: E55, 58, 58TC, 58P, 38P, 38P-1, 38P-2, 390	07-01162	.
B-00364-1	Timer Courtesy Light (15 min.)	Piper: PA42-720, PA42-1000, PA46-350, PA31T Series	07-01163	.
B-00364-2	Timer Courtesy Light (30 sec.)	Piper PA 31 Series, PA46-310, PA46-350	07-01164	.
B-00368-25	Alternator Control, 28V Load	Experimental	11-03164	.
B-00369-2	Timer (15 sec.)	Piper: PA31T3	07-01166	.
B-00371-1	Alternator Control, 14V	Piper: PA 28 Series, PA32 Series, PA38, Bellanca*: 80CB, 8KCAB, Maule*: M-5-180C, 235C, M-7-235, MT-7-235, M-8-235, MX-7-180, MXT-7-160, 180, 235, Aviat*:Pitts S-2B, S2S, Zenair*: Zenith 2000	07-01167	.
B-300371-25	Alternator Control, 14V	Experimental	11-03163	.
B-00372-1	Alternator Control, Load Balancing	Raytheon: 58, E55, 95B55	07-01168	.
B-00375-1	Monitor Low Voltage	Twin Commander 690C, 690D, 695, 695A	07-01169	.
B-00375-2	Monitor Low Voltage	Piper: PA31P, PA31T Series, PA34 Series, PA46-310, PA46-350, PA31 Series	07-01170	.
B-00378-4	Monitor Low Voltage, 14V	Experimental	11-03166	.
B-00378-5	Monitor Low Voltage, 28V	Experimental	11-03167	.
B-00380-2	Sensor-Alt Out, 28V Pulsed	Raytheon: 58	07-01171	.
B-00382-1	Alternator Control, 28V Load	Piper: PA31-350, PA34-220, PA46-310, PA46-350, PA31	07-01172	.
B-00387-1	Voltage Regulator with Overvoltage Protection, 28V	Raytheon: A36, F33A, B36TC, 58, V35B, F33C	07-01173	.
B-00392-1	Alternator Control, 14V, Piper	Piper: PA44-180, PA44-180T	07-01174	.
B-00393-1	Motor Control	Piper: PA46-310P, PA60-700P	07-01175	.
B-00396-2	Dimmer Assembly, 14V/28V	Experimental	11-03165	.
B-00403-1	Voltage Regulator with Overvoltage Protection, 14V	Raytheon: F33A, F33C, V35B, A36	07-01176	.

R R G


EP

# ENGINE PARTS


## INTAKE HOSES

 Lycoming 1-3/4" Intake Hose  
69603 .....  
Cont. #22800 OUTER & Cont.  
#21185 INNER Hose (8 sets required)  
for A-65 thru 0-300) P/N 08-03700 .....  
Cont. #22800 OUTER Intake Hose  
22800 .....  
Cont. #21185 INNER Intake Hose  
21185 .....


## INTAKE GASKETS

 Cont. #21327 (4) for A-65 only. ea  
Cont. #22250 (4) for C-85 — 0-300 ..... ea


## EXHAUST GASKETS

 Cont. #21493 (08-05237) for  
A-65 thru 0-300 (4) **List \$4.30** ea  
Cont. #632837 Stainless Steel ..... ea  
Lyc. #65321 for 0-235 — 0-540 (4) ..... ea


## EXHAUST NUTS

 Cont. #22022 (5/16-24) for A-65 thru  
0-300 (8) ..... ea  
Cont. #MS20500-428  
(1/4-28) for 0-470 (12) ..... ea  
Lyc. #STD1410 (5/16-18) ..... ea


## ROCKER BOX GASKETS

 Cont. #530162 for A-65 thru 0-300  
(4 required) ..... ea  
Lyc. #75906 for 0-235 thru 0-320 (4 req) ..... ea

## ROCKER BOX COVER SCREWS

 Cont. #535091 (24) ..... Ea  
Lyc. #STD1925 (24) ..... Ea


## CYLINDER BASE SEALS

 Cont. #21477 for A-65 thru  
0-200 (4) ..... Ea


## MAGNETO FLANGE GASKET

 Cont. #535324 All Cont.  
engines. ..... Ea  
Lycoming #62224 ..... Ea


## TACH OIL SEAL

 Cont. #642714 (was #640087)  
for A-65 thru 0-300 .....  
Lyc. #LW14260 for 0-235, 0-290 .....  
PN 642714


## OIL PRESSURE HOUSING GASKETS

 Lyc. #61173 for 0-235, 0-290 (1) (2  
with oil cooler) ..... Ea


## CARBURETOR GASKETS

 For A-65 thru 0-200 Cont.  
#21051 (Top) ..... Ea  
Cont. #21323 (Bottom) ..... Ea

## GENERATOR DRIVE BELT

 Lyc. #60886 for 0-235,  
0-290 .....  
O SERIES

## LYCOMING VALVE COVER GASKETS


 These homebuilder's  
Lycoming valve cover gas-  
kets replace the original cork  
gaskets which come standard  
on Lycoming 0-235, 0-320  
and 0-360 engines. NOT FAA approved. For  
experimental aircraft only.  
P/N 08-01187 .....

## ANGLED VALVE IO SERIES LYCOMING VALVE COVER GASKETS



These gaskets are for the fuel injected "IO" series, sometimes referred to as the Angle Valve cylinder Lycoming They are not FAA approved and are not manufactured under a PMA. These are used on Angled valve Lycoming engines IO-360, IO-540, IO-720. P/N 08-05882 .....


## MAGNETO DRIVE GEAR

 Used on Bendix S4LN-21 and S4RN-21 magnetos. Not to be used on a C-90-8 engine. FAA PMA'd #36066 .....


## PUSH ROD SEALS

 Continental #539840 for A-65 thru  
0-200 (8) ..... Ea.


## OIL SUMP GASKET & PLUG

 Cont. #3577 Gasket .....  
Cont. #532432 Plug .....

## CRANKSHAFT OIL SEALS

 Cont. #530019 for A-65 thru 0-200,  
Flanged Shaft .....  
Cont. #24321 for A-65 and C-85,  
Taper Shaft .....  
Lyc. #76940 for 0-235, 0-290 .....

## AN900 COPPER GASKETS

 Cont. Engine Applications, A-65  
thru 0-200 (1) each:  
-10: Oil sump drain plug ther-  
mometer hole in oil screen, suc-  
tion tube ass'y ..... Ea  
-14: Oil relief valve ..... Ea  
-22: Tach drive housing ..... Ea  
-28: Oil pressure screen ..... Ea


## AERO-SEAL HOSE CLAMPS

 Aero-Seal Clamps for Cont.  
Intake Hoses.  
P/N QS100-M32W ..... Ea


## PROP GOVERNOR GASKET

P/N 07-00878 .....


## RING HOSE CLAMPS

 Cont. #536388 (16) Required . Ea

## ENGINE MOUNT BUSHINGS

 Cont. #22387 for A-65, C-85,  
C-90 except C-90-14F (8) Req'd . Ea  
Lyc. #60883 for 0-235 and 0-290,  
7/8" hole (8) Req'd ..... Ea  
Lyc. #71032 for 0-320 with 1" hole (8) Req'd . Ea.

## ENGINE MOUNT WASHERS

 Cont. #21530 for A-65, C-85,  
C-90 except C-90-14F (8)  
Req'd ..... Ea  
Lyc #STD619 for 0-235 thru  
0-320 (8) Req'd ..... Ea.

## LYCOMING PARTS TO CONVERT 0-235 WITH SPIN ON OIL FILTER TO OIL SCREEN

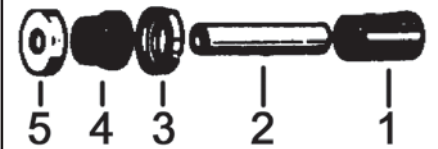
Oil Pressure Screen Housing  
P/N 68974 .....  
Oil Screen P/N 62817 .....  
Oil Screen Housing Gasket  
P/N 61173 .....  
FOR OIL COOLER INSTALLATION ADD:  
Spring P/N 69436 .....  
Plunger P/N 62415 .....  
Gasket P/N AN900-10 .....  
Cont. Oil Screen ..... P/N 08-01544 .....  
D R R

## GENERATOR ATTACHING PARTS FOR CONT. C85, C90 & 0-200



Re.	P/N	Ite	Price
#2	352068	Oil Seal	
#3	530406	Hub Coupling	
#4	352030	Retainer	
#5	626543	Bushing	ea
#6	530407	Sleeve	
#7	531325	Gear	
#8	530412	Slotted Nut	
#9	35019	Gen. Gskt	
#10	352179	Starter Gskt	

## ENGINE MOUNTING PARTS FOR CONT. C-90-14F & 0-200 ONLY



Re.	P/N	Ite	t.	Price
#1	628555-16	Hose	(4)	
#2	530627	Spacer	(4)	
#3	530626	Seat	(8)	
#4	530740	Bushing	(8)	
#5	530741	Washer	(8)	
	AN6-55	Bolt	(4)	
	AN310-6	Nut	(4)	
	MS24665-283	Pin	(4)	

## ALTERNATOR & GENERATOR BELTS



Lycoming ..... 37A19773-376 (Alt.) .....  
Lycoming ..... 37B19774-374 (Gen.) .....  
Lycoming ..... 37B19774-325 (Gen.) .....  
Continental ..... 539547-31.19 .....

## 24031 VALVE SPRING



Continental Inner Valve  
Spring Used on C90 & 0-200  
Engines  
P/N 07-24031 .....

# ENGINE PARTS

## CONTINENTAL ENGINE PARTS

<u>rice ac</u>	<u>rice ac</u>
639640 Bearing set, rod (2 req.) .....	643967 Ex. nut .....
21477 Cyl base seal .....	SA643873 Exhaust Valve .....
530917 Crankshaft seal taper .....	653191 Gasket, rocker, angle .....
SA402151 Ex. stud.....	SSR628260 Gasket, no-blow .....
22022 Ex. nut .....	SSR536413 Gasket, intake .....
646612 Exhaust Valve .....	646546-A1 Gasket set, moh .....
653728 Gasket, rocker .....	642917-1 Intake hose .....
632837 Gasket, no-blow .....	646263 Piston .....
22250 Gasket, intake .....	539467 Piston pin .....
646539-A1 Gasket set, moh .....	SA534610 Push rod packing .....
21185 Intake hose .....	649226 Ring set, steel barrel .....
641792 Intake Valve (30 degree) .....	649226CP Ring set, chrn barrel .....
530019 Nose seal, flange sft.....	SSR539740 Rocker shaft .....
530830 Piston pin.....	637837 Spring, valve, outer .....
539840 Push rod packing .....	631521 Springs, valve, inner.....
649632-A1 Ring set, steel barrel.....	
	<u>G D</u>
627246-A1 Bearing set, main .....	SSR532200 Cyl base seal .....
639640 Bearing set, rod (2 req.) .....	PA641250 Crankshaft seal .....
653851 Camshaft follower,tappet.....	SA402151 Ex. stud .....
21477 Cyl base seal .....	Ex. nut MS20500-428.....
530019 Crankshaft seal .....	643967 Ex. nut.....
SA402151 Ex. stud.....	SA643873 Exhaust Valve .....
22022 Ex. nut .....	653191 Gasket, rocker, angle head.....
646612 Exhaust Valve .....	628260 Gasket, no-blow .....
530162 Gasket, rocker .....	SSR536413 Gasket, intake.....
627429 Gasket, no-blow .....	646546-A1 Gasket set, moh .....
22250 Gasket, intake .....	642917-1 Intake hose.....
646539-A1 Gasket set, moh .....	646283 Intake Valve .....
22800 Intake hose.....	539467 Piston pin .....
641792 Intake Valve (30°) .....	SA534610 Push rod packing .....
646255 Piston .....	SSR539740 Rocker shaft.....
530830 Piston pin.....	
539840 Push rod packing .....	630826 Bearing set, rod.....
649632-A1 Ring set, steel barrel.....	653888 Camshaft follower tappet.....
653394 Ring set, chrn barrel.....	SSR641066 Cyl base seal .....
	PA641250 Crankshaft seal .....
	SSR401893 Ex. stud .....
	SSR638125 Ex. stud, rosan.....
	Ex. nut MS20500-428.....
639640 Bearing set, rod (2 req.) .....	643967 Ex. nut.....
653851 Camshaft follower tappet.....	SA643873 Exhaust Valve .....
21477 Cyl base seal .....	653191 Gasket, rocker .....
530917 Crankshaft seal .....	SSR628260 Gasket, no-blow.....
SA402151 Ex. stud.....	SSR536413 Gasket, intake .....
22022 Ex. nut .....	642917-1 Intake hose.....
646612 Exhaust Valve .....	646283 Intake Valve .....
530162 Gasket, rocker .....	654850 Piston IO-520 .....
627429 Gasket, no-blow .....	630046 Piston pin .....
22250 Gasket, intake .....	SA534610 Push rod packing .....
6465417-A1 Gasket set, moh .....	652148 Ring set, steel cyl IO-520 .....
21185 Intake hose .....	
641792 Intake Valve (30°) .....	<u>G</u>
646255 Piston .....	539547-30.00 .....
530830 Piston pin.....	539547-31.19 .....
539840 Push rod packing .....	539547-32.00 .....
649632-A1 Ring set, steel barrel.....	539547-35.00 .....
625958 Springs outer .....	642759 .....
	37A19973-376 (76026) .....
	37A19973-382 (74519) .....
	37B19774-325 (60886) .....
	37B19774-341 (71579) .....
	<u>D R</u>
653888 Camshaft follower tappet.....	O200 new assy 654377A10 .....
SSR532200 Cyl base seal .....	
PA641250 Crankshaft seal .....	
SSR401893 Ex. stud .....	
Ex. nut MS20500-428.....	

## LYCOMING ENGINE PARTS

<u>R rice ac</u>	<u>rice ac</u>
69373 Bearing, rod, 8 req. ....	SSRSTD-1196 .....
71105 Camshaft follower tappet .....	Intake hose 1-1/2.....
SSR62869 Cyl base seal .....	69603 Intake hose 1-3/4 .....
STD-2180 Cyl drain hose.....	73938 Intake Valve.....
LW-11997 Crankshaft seal.....	75089 .....
SSR31C-12 Ex. stud .....	Piston, high compression .....
STD-1410 Ex. nut.....	75413 .....
41271 .....	Piston, low compression.....
Fuel pump, mechanical .....	SSRLW-13444 Piston pin.....
75906 Gasket, rocker 4 required.....	SSRLW-18661 .....
77611 Gasket, no-blow .....	Push rod packing.....
71973 Gasket, intake .....	74241 Ring, compression .....
SSR61499-1 .....	steel cylinder .....
Gasket set, moh .....	SSR73857 .....
SSRSTD-1196 .....	Ring, oil ctl steel cylinder.....
Intake hose 1-1/2' .....	
LW11901 Intake Valve .....	
SSRLW-13445 Piston pin.....	SSA72877 Camshaft follower .....
68028 Piston pin plug.....	SSR71481 Cyl base seal .....
SSRLW-18661 .....	LW-11997 Crankshaft seal.....
Push rod packing.....	SSR31C-12 Ex. stud .....
LW-11800 Spring, valve outer.....	STD-1410 Ex. nut.....
	LW-19001 Exhaust Valve.....
	LW15473 Fuel pump, mech. ....
69373 Bearing set, rod.....	75906 Gasket, rocker .....
SSR72877 Camshaft follower .....	77611 Gasket, no-blow .....
SSR71481 Cyl base seal .....	71973 Gasket, intake .....
SSR31C-12 Ex. stud .....	SSR75439-1 .....
STD-1410 Ex. nut .....	Gasket set, moh .....
41271 .....	69603 Intake hose 1-3/4' .....
Fuel pump, mechanical .....	75089 .....
75906 Gasket, rocker .....	Piston, high compression .....
77611 Gasket, no-blow .....	SSRLW-18661 .....
71973 Gasket, intake .....	Push rod packing.....
SSR69371-1 .....	74241 Ring, comp steel cyl .....
Gasket set, moh .....	SSR73857 .....
SSRSTD-1196 .....	Ring, oil ctk steel cyl.....
Intake hose 1-1/2" .....	LW11795 .....
Intake Valve 73938.....	Springs, Valve, Inner .....
69841 Piston .....	LW-11800 .....
SSRLW-18661 .....	Springs, Valve, Outer .....
Push rod packing.....	
62916 Ring, .....	
compression steel cylinder.....	SSR72877 Camshaft follower .....
69401 Ring, .....	SSR71481 Cyl base seal .....
oil control steel cyl.....	13792 Crankshaft seal .....
LW11795 Spring, Valve, inner .....	SSR31C-12 Ex. stud .....
LW-11800 .....	STD-1410 Ex. nut.....
69373 Bearing, rod.....	LW15473 Fuel pump, mech. ....
SSR72877 Camshaft follower .....	75906 Gasket, rocker, most .....
SSR71481 Cyl base seal .....	77611 Gasket, no-blow .....
LW-11997 Crankshaft seal.....	71973 Gasket, intake .....
SSR31C-12 Ex. stud .....	SSR71569-1 Gasket set, moh .....
STD-1410 Ex. nut.....	69603 Intake hose 1-3/4" .....
LW-19001 Exhaust Valve.....	73938 Intake Valve.....
	75089 Piston .....
	60828 Piston pin plugs .....
<u>G D R</u>	SSR70310 Push rod packing .....
O-235C,E,H chrome stud.....	74241 Ring, comp steel cyl .....
LW15318 O320H new ass'y .....	SSR73857 .....
LW12427 O-360 new ass'y .....	Ring, oil ctl, steel cyl.....
LW12988 O540/HIO360 .....	LW11795 Spring, Valve, inner .....
new ass'y.....	LW-11800 .....
	Springs Valve, outer.....
71973 Gasket, intake .....	

## OIL COOLER GASKET SETS

O r P/N	Continenta P/N	Price ea.	O r P/N	Continenta P/N	Price	O r P/N	Continenta P/N	Price
08-00951	631059/630849	.	08-00956	626342	.	08-00961	632372	.
08-00952	537282 4 Req./eng.	.	08-00957	654554	.	08-00962	632372	.
08-00954	626342	.	08-00958	626342	.	08-00963	629116	.
08-00955	654554	.	08-00959	654554	.	08-00964	629116	.
			08-00960	631059/630849	.			

# CHALLENGER AIR FILTERS



## CHALLENGER AVIATION HIGH-FLOW AIR FILTER W/ K&N FILTER MEDIA

Features & Benefits of Prime air filters: • 40% - 50% better airflow • Can be washed and serviced up to 25 times • Increase horse power 2%-4% • Save money and improve engine efficiency • FAA-PMA approved • Properly serviced, can be used to TBO of an engine • Ecologically sound • Better takeoff and climb-out performance • Fire retardant • Faster airspeed and/or better fuel consumption • Have been used on high performance vehicles for 40yrs • Accordion fold design provides up to 5 times the filtering surface of non-pleated designs. **PART NUMBERS WITH A -1 INCLUDE GREASE.**

Model	Application	Installation	Part No.	Price
CPE-1957	Aero Commander - A-9, A9A, A9B	Brackett BA-104 Fram CA-161PL	08-00719-1	.
CP-1150	Aeronca - S65, S65CA, 7AC, 7ACA, 7 BCM(L-16A) ARMY, 7CCM(6-16B) ARMY, 7DC, 7EC, 7FC, 7JC, 7ECA, 7GCAA, 7GCBC, 7KC, 7KCAB, 7TAC, 7TCCM, 7TDC, 7TEC P/N CP-3274 Is the installation kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106	08-00843	.
CPE-1957	Aeronca - 7GC, 7GCA, 7HC, 7GCB, 7GCB, 7KC	Donaldson P10-4145, Fram CA-161-PL, Air Maze 13203	08-00719-1	.
CP-2004	Beech Baron - 95-C55 S/N TE-1 thru TE-451 except TE-50, 95-C55A S/N TE-1 Thru TE-451 Except TE-50, D55 S/N TE-452 Thru TE-492, D55A S/N TE-452 Thru TE-492, E55 S/N TE-768 Thru TE-1079, E55A S/N TE-768 Thru TE-1079, 58 S/N TH1-TH740. No sealing grease or gasket required for this application.	Donaldson P12-7996, Air Maze 121128-2, Brackett BA-6210-1	08-01024	.
CP-2003	Beech Bonanza/Debonaire - 35, A35, B35 S/N D2606 & UP, CBG35, 35-33, 35-A33, 35-B33, 35-C33, H35, J35, K35, M35, N35, P35, V35, V35A, V35B, S35, E33 all 225 H.P., E33A, F33, F33A, E33C, F33C, G33, 36, A36, A36TC, B36TC, G36, T-34 with STC SA1450SW, A45(T-34A) with STCSA1864SW, D45(T-34B) WITH STC SA1864SW, A45(B-45) with STC SA1864SW, A45(B-45) with SA1864SW, A45(T-34A) WITH STC SA1042GL, D45(T34B) with STC SA1042GL, A45(B-45) with STC SA1042GL. P/N C-P3276 is the install kit. Use P/N CP-2502 to replace gasket at annual.	Beech 35-380035-1-3-5-7, Donaldson - P10-5304, P10-137627, Brackett - BA-7110, BA-7210, BA-7410	08-00719-1	.
CPE-1957	Beech Musketeer - A23A, A23, A23-24, B23, 23	Brackett BA-104, Beech 169-3	08-07101	.
CP-1182	Bellanca - 14-19-3-A, 17-30 P/N CP-3276 Is the install kit. Use P/N CP-2602 To replace gasket at annual.	Brackett BA-8110	08-00870	.
CPE-1957	Bellanca - 17-30A	Brackett BA-104	08-00719-1	.
CPE-1957	Brantly B2B	Fram CA161PL	08-00719-1	.
CP-1150	Cessna - 120, 140, 150, 150A-M, A150K, A150L, A150M, 152, A152 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106, Donaldson P10-7150, Cessna C294510-0201	08-00843	.
CP-1172	Cessna - 170, 170A, 170B, 172, 172A-G, H, I, K, L, M, N, P, Q P/N CP-3274 Is the install kit. Use P/N CP-2302 To replace gasket at annual.	Cessna C294510-0301, Donaldson P10-7172, Brackett BA-5110	08-00902	.
CPE-1173	Cessna - 172R, S	Donaldson P198281, Fram 3559	08-00894-1	.
CP-1182	Cessna - 180, (exception 1953-1955 models), 180A-H, 180J-K, 182, 182A-H, 182J-R, T182 S/N 18208001 AND ON, 182S S/N 18280945 AND ON, 182T S/N 18280945 AND ON, 185, 185A-E, A185E, A185F P/N CP-3276 Is the install kit. Use P/N CP-2602 To replace gasket at annual.	Cessna 0750038-1-4, Donaldson P10-6110, Brackett BA-8110	08-00870	.
CPE-1202	Cessna - 182S, S/N >s 18280001 thru 18280944	Donaldson P19-8290, Fram CA3717	08-00903-1	.
CPE-1178	CIRRUS - SR-20, SR-22 No sealing grease required for this application.	Brackett BA-111	08-01221	.
CP-2175	GREAT LAKES - 2T1A-1, 2T1A-2	12009, P57A, AC-6486197 BA-101	08-06282	.
CPE-1040	GRUMMAN - AG CAT G164B	Brackett BA-105	08-00717-1	.
CPE-1957	LAVIA S.A. - PA25, PA25-235, PA25-260(PRIOR TO S/N 1477)	Fram CA-161PL, Brackett BA-104	08-00719-1	.
CP-1150	LUSCOMBE - 8, 8A, 8B, 8C, 8D, 8E, 8F, T-8F P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106	08-00843	.
CP-1172	MAULE - M-4, M-4T, M-4C, M-4S, M-4-180C, M-4-180S, M-180T, M-4-220, M-4-220C, M-4-220S, M-4-220T, M-5-180C, MX-7-160, MX-7-180, M-5-210C, M-5-235C, M-5-210TC, M-5-220C, M-6-180, M-6-235, M-7-235 P/N CP-3274 Is the install kit. Use P/N CP-2302 To replace gasket at annual.	Brackett BA-6110, Donaldson P12-6491	08-00902	.
CPE-1178	MAULE - M-4-210, M-4-210C, M-4-210S, M-4-210T, M-5-210C. No sealing grease required for this application.	Brackett BA-111	08-01221	.
CP-1150	MOONEY - M10 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106, Donaldson P12-0494	08-00843	.
CP-1172	MOONEY - M20, M20A, M20B, M20C, M20D, M20G P/N CP-3274 Is the install kit. Use P/N CP-2302 To replace gasket at annual.	Fram 13219, Brackett BA-6110, Donaldson P12-6491	08-00902	.
CP-1176	MOONEY - M20 E,F REPLACEMENT GASKET P/N-CP-2802	Donaldson P10-4065 Brackett BA-6310	08-01031	.
CP-1174	MOONEY - M20J (201)	BRACKETT BA-6210	08-00896	.
CP-1175	MOONEY - M20K S/N 25-1000 & UP	Donaldson P13-6287	08-01020-1	.
CPE-1179	MOONEY - M20M, M20R, M20S	MOONEY 600417-503, AM EDD4028, Donaldson P524257	08-01263-1	.
CPE-1151	PIPER - PA-18 S/N 18-6964 and up O-320	Piper 454-118, Fram CA-122PL, Brackett BA-112	08-01032-1	.
CPE-1040	PIPER - PA28R-180, PA28R-200, PA28R-200T, PA28R-201, PA28RT-201, PA28R-201T, PA30, PA-34-200, PA39, PA44-180, PA44-180T	Piper 460-630 Brackett BA-105	08-00717-1	.
CPE-1957	PIPER - PA23-235A, PA23-235B, PA23-250B, PA-24 S/N 1479 and up, PA24-180 S/N 1477 and up, PA24-250 S/N 1477 and up, PA24-260, PA25-150, PA25-235, PA25-260 PRIOR TO S/N1477, PA28-140, PA28-150, PA28-160, PA28-180, PA28-181, PA28RT-201T, PA28-235, *PA32-260, *PA32-300 S/N 32-7640001 & UP, *PA32R-300, *PA32RT-300T, *PA32R-301 (SP), *PA34-200T, *PA34-220T, *PA36 W/CONT. *COVER PLATE CPE-0528 MAY BE REQUIRED WHEN REPLACING Brackett FILTER.	Fram CA-161PL, Piper 460-632, Brackett BA-104, PURO AFP-2, AC-6485710	08-00719-1	.
CP-1150	PIPER - J3, J3C-65, J3C-65S, J5A, J5A-80, PA-11, PA-11S, PA-12, PA-12S, PA-16, PA-17, PA-18, PA-18A, PA-18S, PA-18-105, PA-20-115 PA-20-135, PA-22-108, PA-22-135, PA-22-150, PA-22-160, PA-38-112 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106, Piper 460-638	08-00843	.
CPE-1956	PIPER - PA28-151, 161 REPLACEMENT GASKET P/N CP-2604.	Brackett BA-16, Piper 560-679	08-01033	.
CP-2003	PIPER - PA-28-236, S/N 7311001 thru 7911282 P/N C-P3276 Is the install kit. Use P/N CP-2502 To replace gasket at annual.	560-854, P13-6602	08-00816	.
CP-1150	REIMS/(Cessna) F150G, F150H, F150J, F150K, F150L, F150M, FA150K, FA150L, F152, FA152 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Cessna C294510-0201 Brackett BA-4106 Donaldson P10-7150	08-00843	.
CP-1172	REIMS/(Cessna) - F172D, F172E, F172G, F172H, F172K, F172L, F172M P/N CP-3274 Is the install kit. Use P/N CP-2302 To replace gasket at annual.	Cessna C294510-0301 Brackett BA-5110 Donaldson P10-7172	08-00902	.
CPE-1220	ROBINSON - R-44	ROBINSON C771-1	08-00720-1	.
CPE-1104	ROBINSON - R-22	ROBINSON A771-1 Brackett BA-110	08-01021-1	.
CP-2100	ROCKWELL COMMANDER - 100-180, 112, 112B	124748-019 Brackett BA-3910	08-05915	.
CP-2500	ROCKWELL TWIN COMMANDER - 500A,B,U, 560F, 500S, 680F, 680FL, 680FL(P)	3610239 Brackett BA-151	08-05916	.
CP-1172	SOCATA - TB9, TB10 P/N CP-3274 Is the install kit. Use P/N CP-2302 To replace gasket at annual.	Brackett BA-5110	08-00902	.
CP-2003	SOCATA - TB20, TB21, TB200 P/N C-P3276 Is the install kit. Use P/N CP-2502 TO REPLACE GASKET AT ANNUAL	Brackett BA-7110 Brackett BA-7112	08-00816	.
CP-1150	TAYLORCRAFT - BF65, BF12-65, BFs65 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106	08-00843	.
CP-1150	TIGER AIRCRAFT/LLC/GULFSTREAM AMERICAN - AA-1, AA-1A, AA-1B, AA-1C, AA-5 P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4210 AMS13202	08-00843	.
CP-1958	TIGER AIRCRAFT/GULFSTREAM AMERICAN - TIGER AA-5B	Brackett BA-4106	08-01022-1	.
CP-1150	UNIVAIR - A-2, A2A (FORNEY) F-1, F-1A - P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106	08-00843	.
CP-1150	GLOBE/SWIFT - SWIFT GC-1A, GC-1B P/N CP-3274 Is the install kit. Use P/N CP-2402 to replace gasket at annual.	Brackett BA-4106	08-00843	.



## CHALLENGER RE-CHARGING KIT

Challenger's recharger kit includes non-aerosol bottles of air filter cleaner and air filter oil for recharging air filters. Restores airflow efficiency. P/N 08-05884

# BRACKETT AIR FILTERS

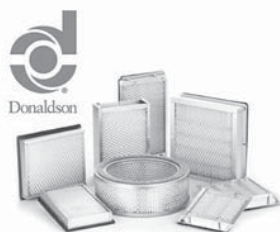


The specially treated polyurethane element in the Brackett filter assures near total protection from any foreign material entering the system. Repels water, fire retardant and has good air flow for proper fuel/air ratio. Has no pleats to collect dirt. Low-cost maintenance with increased engine life. FAA approved. Replace original air filter unit with a Brackett assembly. Thereafter, throw away element and replace with new one at minimal cost.

Aircraft Model	Ass Price	Element Part No.	Element Price	Aircraft Model	Ass Price	Element Part No.	Element Price
Aero Commander A9, A9A, A9B	BA104	BA3		<b>DeHavilland:</b> DHC-2 (L-20)	BA8210-1	BA8205	
100-100A	BA8910	BA8905		<b>Great Lakes:</b> 2TIA-2	BA101	BA8	
100-180, 112, 112A, 112B	BA3910	BA3905		<b>Helio:</b> H295	N/A	BA21	
112TC, 112TC-A, 114, 114A	BA4010	BA4005		<b>Hiller:</b> UH-12, UH-12-E	BA102	BA2	
500A-B, 560F, 680F, FL, FLP, 500U	BA151	BA151E		<b>Grumman American</b>			
560, 560A, 560E, 680 - L	BA2610L	BA2605L		AA-1, AA-1A, AA-1B, AA-5, AA-1C, AA-5	BA4210	BA4108	
560, 560A, 560E, 680 - R	BA2610R	BA2605R		AA-5B-Tiger, GA-7, G164B	BA120	BA20	
Airco Pe 415C, CD, D, E, G	BA8810	BA8805		AgCat, G164, G164A	BA8210	BA8205	
F-1, A-1, A2-2	BA4106	BA4108		AA5A	N/A	BA19	
Beec 23, A23, A23A, A23-19	BA104	BA3		<b>Hughes:</b> 269A, 269A-1, 269B-C	BA102	BA2	
A23-19A, A-23-24, B23	BA104	BA3		La e LA4, LA4-200	BA3110	BA7305	
C-23, C24R, A24R, B24R, B19	BA7510	BA7305		L sco e 8, 8A thru 8F, T8F	BA4106	BA4108	
33, A33, B33, C33, F33, F33	BA7110	BA7112		Ma e M-4-210T, M-5-210C	BA111	BA24	
C33A, F33A, F33, F33A, F33C, G33	BA7210	BA7112		M-4-210, M-4-210C, M-4-210-S	BA111	BA24	
35, A35, B35 thru S/N2605	BA7310	BA7305		MA-4, M-4C, M-4S, M-4T	BA6110	BA6108	
B35, C35A, D35, F35, F35, G35, H35, J35	BA7110	BA7112		M-4-220, M-4-220C, M-4-220S	BA6110	BA6108	
K35, M35, N35, P35, 35R	BA7110	BA7112		M-4-220T, M-4-180C, M-4-180S	BA6110	BA6108	
S35 thru S/N D7671	BA7410	BA7112		M-4-180T, M-5-220C, M-5-235C	BA6110	BA6108	
S35, V35, V35A, V35B, 36 A36	BA7210	BA7112		M-5-180C, M-5-210C, M-6-180	BA6110	BA6108	
A36TC, B36TC, A45(T-34)	BA7210	BA7112		M-6-235, MX7-180, M-7-235	BA6110	BA6108	
B45(T-34A), D45(T-34B)	BA7210	BA7112		Moone M-10	BA4106	BA4108	
W/STC, SA1450 SW Cont. IO-520	BA7210	BA7112		M-18C	BA5110	\$39.95 BA4108	
50, B50, C50, D50, D50A, D50B, D50C, D50E	N/A	N/A	BA4805	M20, M20A, B, C, D, G	BA6110	BA6108	
F50 (L-23D, RL-23D), F50	BA100	BA7		M20E, F	BA6310	BA6305	
55, A55, B55	BA7610	BA7605		M20J	BA6210	BA6205	
G50, H50, J50	BA100	BA7		<b>Navion:</b> A with (E) Series Engines	BA113	BA25	
C55, D55, E55, 355	BA6210-1	BA6205		B, G, H, or with 10-470	BA4310	BA4305	
S/N TE768-1078 58 thru S/N TH 740	BA6210-1	BA6205		<b>North American:</b> AT6 (SNJ)	N/A	N/A	BA8305
E55, 355A, SN TE-1079 & up	BA7710	BA7705		<b>Partenavia:</b> P68, P68B, P68C	N/A	N/A	BA162E
58, 58A, SN TH741 & up	BA7710	BA7705		Piper 600, 601	N/A	N/A	BA4
A65, 70, 65-B80, B88	BA100	BA7		J-3, J-4, J5, PA-11, 11S, 12, 12S, 16, 17	BA4106	BA4108	
76	BA7010	BA7005		PA-18, 19, 20, 115, 135, PA-22-ALL	BA4106	BA4108	
77	BA2010	BA6108		PA-18-"150", 18A-"150", 18S-"150", 18S-"150"	BA112	BA13	
95, B95, B95A, D95A	BA7810	BA7805		SN18-6964 & up w/TCDS Item 110 Installed	BA112	BA13	
Be				PA-23, 160, 24-180 up to SN1476	BA3110A	BA7305	
47G-2, 47G2A, 47G2A-1, 47G-3, 47G-3B	BA102	BA2		PA-24-250 up to SN 1476	BA3210	BA3205	
47G-3B-1, 47G-3B-2, 47G-3B-2A, 47J, 47J-2	BA102	BA2		PA-23-235, 250, PA-25-235, 260	BA104	BA3	
47J-2A, 47G-3B, 47G-3B, 47G-3B-1	BA102	BA2		PA-28-140, 150, 160, 180, 235	BA104	BA3	
47G-3B-2, 47G-4, 47G-4A, 47G-5, 47J-2, 47J-2A	BA103	BA9		PA-28-181, 201T, PA-28R-201T	BA104	BA3	
Beanca 14-19-3A, 17-30	BA8110	BA8103-1		PA-28RT-201T, PA-32-260	BA104	BA3	
17-30A	BA104	BA3		PA-23-250, E23-250, SN27 2505 & up	BA115	BA15	
Brant B-2, B-2B	BA104	BA3		PA-23-250, E23-250, w/Turbo Lyc.	N/A	N/A	BA3505
Cessna 340, 340A, 402C, 414, 414A	BA109	BA22		PA-23-250 w/Air Research Turbo	N/A	N/A	BA8605
402B, SN0801 & after, 421, T310R	BA108	BA13		PA-24-260C	N/A	N/A	B-4505
421A, 421B, 421C, T310R	BA108	BA13		PA-24-180 & PA-24-250 SN1477 & up	BA104	BA3	
337, 337A, H, R172K, F337E, H, 336, T41B-D	BA111	BA24		PA-24-25 SN103-1476 w/Piper Kit 754-285 Install	BA104	BA3	
P337, T337 Rear Engine, 172RG	BA5810	BA5805		PA-24-260 SN4000-4802 except 24-4783	BA104	BA3	
R182, TR182, T-182, FR182	BA2510	BA2505		PA-32-300, SN76-40001 & up	BA104	BA3	
190, 195, 195A, 195B	BA8410	BA8405		PA-32R-300, PA-32RT-300, PA-32R-301	BA104	BA3	
120, 140, 140A, 150, 150A-M, 152, 152A	BA4106	BA4108		PA-34-200T, 220T	BA104	BA3	
170, 170A-M, 172, 172A-M	BA5110	BA6108		PA-28R-201, PA-28RT-201, PA-28R-180, PA-28R-200	BA105	BA10	
172N, 172P, F172N, F172P	BA5110A	BA6108		PA-28-236 S/N 28-7911283 & Up	BA2910	BA2905	
175, 175A-C, L-19	BA101	BA8		PA-30-160	BA105	BA10	
177, 177A, B, RG, F177RG	BA5710	BA5705		PA-31P, 31P-350	N/A	N/A	BA3305
180 ("53-55)	BA8010	BA8005		PA-38	BA4106	BA4108	
180A-K, 182, 182A-R, F182P, F182Q	BA8110	BA8103-1		PA-28-151, 161	N/A	N/A	BA16
185, 185A-E, A185E, A185F	BA8110	BA8103-1		PA-28-236 SN 28-7911283 & up	BA2910	BA2905	
188, 188A	N/A	N/A	BA14	PA30, with Ray Jay Turbo	BA121	BA27	
205, 205A, 210, 210A, B, C, 310A, B, C, D	BA2110	BA2305		PA31, PA-31-300, -310, -325, -350	BA100	BA7	
P206A-E, U206A-G, 207, 207A	BA2210L	BA2205-L		PA-31P, 31P-350	N/A	N/A	BA3305
210D-N (to SN 64535 w/o air)	BA2210L	BA2205-L		PA-32-300 w/IO-540-K1A5	BA115	BA15	
210D-N (to SN 64535 w/o air)	BA2210R	BA2205-R		PA-32RT-300T	BA100	BA7	
210N(SN645436 & up w/air), 210R, T210F-N	BA2410	BA2405		PA-32-301T, 32R-301T	BA100	BA7	
P210 All	BA8710	BA8705		PA-34-200w/LYC10360C01ES or LI0-360-C1E6	BA105	BA10	
310F thru L	BA2310	BA2305		PA-44-180T	N/A	N/A	BA3505
310N-O, T310P, T310Q, 401 S/N 145-401B S/N 221, 402 S/N 145-402B S/N 800	BA107	BA12		Roinson R22	BA110	BA23	
F150G thru M, FA150K-L, F152, FA152	BA4106	BA4108		Stearman All Series 75	BA118	BA18	
R172K, FR172E-K	BA111	BA24		Stinson 108, 108-1, -2, -3	BA9110	BA9105	
TP206, TP206A-E, TU206A-G, T207, T207A	BA2410	BA2405		Sit GC-1A, GC-1B	BA4106	BA4108	
411, 411A	N/A	N/A	BA3805	Ta orcraft	BA4106	BA4108	
Bobcat T-50, AT-17, UC-78, JRC-1	N/A	N/A	BA2705	Var a 2150A	BA4106	BA4108	
Campion 7GC, 7GCA, 7GCBC, 7HC	BA104	BA3					
8KCAB, 8GCBC, 7KCAB, 7GCBC, 7GCAA	BA8110	BA8103-1					
7GCAA, 7GCBC, 7KCAB, 8KCAB, 7ECA	BA106	BA11					
7ECAw/Cont. 0-200-7ACA, 7ECA, 7FC, 65CA	BA4106	BA4108					

EP

# DONALDSON AIR FILTERS



Donaldson has been the OEM source for Cessna, Piper, Beechcraft, and Maule & Mooney since the 1960's. They currently supply Cessna all of their SE Piston aircraft filters, Beech Bonanza & Baron filters, Mooney & Maul with their filters. For Piper they currently supply all of their Turbo charge aircraft with filters. Aircraft Spruce is a factory authorized distributor for Donaldson filters.

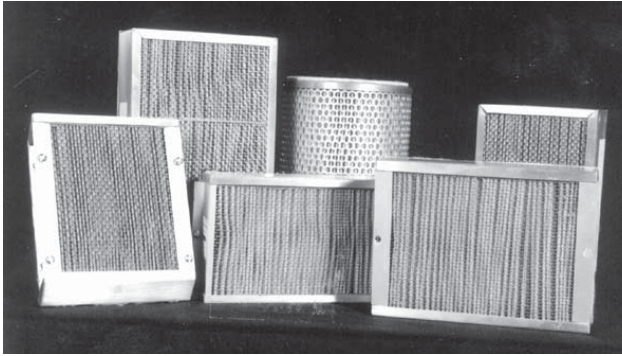
**R • High Performance Engine Intake Filters • Synthetic media:** offers improved air flow and better dust capturing efficiency • Engineered to last 500 Flight Hours • Washable filter element, use compressed air/warm soapy water • Clean installation: dry media, no sticky/messy oil to trap dirt • OEM choice for GA aircraft for over 30 years • Meets All Flammability requirements per FAR 23.853 • Solid Construction with no removable parts-no loose screens, elements or screws • Exceptional wet weather performance, no oil to wash away in wet weather • Moisture passes thru the filter, doesn't build up an oiled surfaces (no oil present) • All filters starting with "P" feature our Premium Synthetic filter media • No Airworthiness Directives against Synthetic media filters • Cost efficient over the life of the filter, 3 years, 500 FH 5 cleanings

nl filter it a ter part n m er ave cell l me ia

Donaldson	OEM	Description	O r PN	Price
P107150	C-294510-0201	Engine Intake air filter	08-06027	.
P107172	C-294510-0301	Engine Intake air filter	08-06024	.
P15-1936	PS600073	Engine Intake air filter	08-06029	.
P107336	C-294510-0401	Engine Intake air filter	08-06038	.
P108337	C-294510-0501	Engine Intake air filter	Call for Quote	.
(AM107635FP*)	C-294510-0601	Engine Intake air filter	08-06040	.
P106150	0750038-4	Engine Intake air filter	08-06023	.
P131367	C-294510-0901	Engine Intake air filter	08-06042	.
P107188	C-294510-0101	Engine Intake air filter	08-06043	.
P112206	1250704-3	Engine Intake air filter	08-06044	.
(AM102135FP*)	1250704-3	Engine Intake air filter	08-06033	.
P113206	1250704-4	Engine Intake air filter	08-06045	.
(AM102235FP*)	1250704-4	Engine Intake air filter	08-06046	.
P107210	1250846-1	Engine Intake air filter	08-06047	.
P131364	C-294510-0801	Engine Intake air filter	08-06049	.
P108421	99100181	Engine Intake air filter	08-06056	.
P109337	C-294510-0701	Engine Intake air filter	Call for Quote	.
(AM102335FP*)	C-294510-0701	Engine Intake air filter	08-06051	.
P108337	C-294510-0501	Engine Intake air filter	Call for Quote	.
(AM102035FP*)	C-294510-0501	Engine Intake air filter	08-06052	.
P138988	C-294510-1001	Engine Intake air filter	Call for Quote	.
P148670	C-294510-0902	Engine Intake air filter	08-06053	.
(AM102735EA*)	9910018-2	Engine Intake air filter	08-06054	.
P126138	9910200-1	Engine Intake air filter	Call for Quote	.
(AM102935EA*)	9910200-1	Engine Intake air filter	08-06055	.
P128156	9913001-1	Engine Intake air filter	08-06028	.
P128157	9910141-1	Engine Intake air filter	08-06057	.
(AM103035EA*)	9910141-1	Engine Intake air filter	08-06058	.
EBG03-0001	C-294501-0101	Instrument air filter	08-06059	.
P105290	C-294501-0203	Instrument air filter	08-06060	.
(AM106735EA)	99100181	Instrument air filter	08-06030	.
AM103435IA	C-294501-0301	Instrument air filter	08-06035	.
AM103535IA	C-294501-0302	Instrument air filter	08-06036	.
P122322	169-380064-3	Engine Intake air filter	08-06061	.
P130374	45-91210	Engine Intake air filter	08-06062	.
P102646	35-380035-3	Engine Intake air filter	Call for Quote	.
P105304	35-380035-5	Engine Intake air filter	08-06032	.
P137627	35-380035-7	Engine Intake air filter	08-06026	.
P136680	105-389000-3	Engine Intake air filter	08-06063	.
P133881	P13-3881	Engine Intake air filter	08-06064	.
P128219	P12-8219	Engine Intake air filter	08-06065	.
P127996	P12-7996	Engine Intake air filter	08-06066	.
P12-8167	96-389005-1	Engine Intake air filter	08-06025	.
P10870	50-389070-15	Engine Intake air filter	08-06067	.
P124439	50-389070-23	Engine Intake air filter	08-06069	.
P105798	50-389070-11	Engine Intake air filter	08-06070	.
AM101720FP*	50-389070-11	Engine Intake air filter	08-06071	.
EBG03-0003	205538-089	Instrument air filter	08-06072	.
EBG03-0018	101-380039-1	Instrument air filter	08-06034	.
P114419	26874-0	Engine Intake air filter	08-06073	.
P136602	P13-6602	Engine Intake air filter	08-06074	.
P138683	P13-8683	Engine Intake air filter	08-06075	.
P106590	P10-6590	Engine Intake air filter	08-06076	.
AM105770FP*	47075	Engine Intake air filter	08-06077	.
P136739	P13-6739	Engine Intake air filter	08-06078	.
P138580	86881-2	Engine Intake air filter	08-06080	.
P128156	PS60007-3	Engine Intake air filter	08-06028	.
AM108365FP*	P13-6287	Engine Intake air filter	08-06081	.
204418-156	77852	Spin on oil Filter adapter	08-06037	.
P11-0172	C-294510-0601	Engine Intake air filter	08-06228	.
P198281	P198281/CA3559	Engine Intake air filter	08-07051	.
P198290	P198290/CA3717	Engine Intake air filter	08-07052	.
P197268	P197268	Engine Intake air filter	08-07053	.
P13-0234	125997-010 BA6210	Engine Intake air filter	08-07054	.
ED04011	600417-501	Engine Intake air filter	08-07055	.
ED04028	600417-503	Engine Intake air filter	08-07056	.
P10-5225	C-294501-0103	Instrument air filter	08-07057	.



# AIR FILTERS



## BEECH AIR FILTERS

lte	O r P/N	Beech Equivalent P/N	Aircra t T pe	Price
1	08-00017	35-534470-19 P13-0374	Beech 33, 35	.
2	08-00018	P10-5304 35-534470-19	Beech 33, 35, 36	.
3	08-00019	P12-7996 (121128-2) TE946 thru TE1078 TH1 thru TH740	Beech 58	.
4	08-00020	P12-8219 (122601)	Beech 55	.
5	08-00021	P10-8700	Duke B60	.
5A	08-00022	P12-4439 (50-389070-23)	P Baron (58P)	.
6	08-00023	P12-8167 (96-389005-1) TE1079 & after TE741 & after	Beech E55 & 58 Late Model	.
7	08-00024	169-380035-7		.

## CESSNA AIR FILTERS

lte	O r P/N	Cessna Equivalent P/N	Aircra t T pe	Price
2	08-00000	C294510-0201	Cessna 150	.
3	08-00001	C294510-0301	Cessna 172	.
4	08-00002	C294510-0401	Cessna 336, 337A-H	.
4A	08-00003	C294510-0501	Cessna 172 RG Cutlass	.
5	08-00004	C294510-0601	Cessna 177	.
6	08-00005	C294510-0801	Cessna P210N, R	.
7	08-00006	C294510-0901	Cessna 182RG	.
8	08-00007	0750038-4	Cessna 182	.
9	08-00008	1250704-3 (Port)	P206,A,B,C,D,E	.
9A	08-00009	1250704-4 (Stb)	To S/N 64535 w/o Air	.
10	08-00010	1250846-1	T206,A,B,C,D,E	.
11	08-00011	C294510-0501	Cessna 337	.
12	08-00012	9910018-1	Cessna T310R	.
13	08-00013	9910018-2	310N,P,Q,T310P,T310Q	.
14	08-00014	9910200-1	Cessna 310R	.
15	08-00015	9910141-1	Cessna 404	.
16	08-00016	9913001-1 (108)	Cessna 340,340A Late Model	.

## PLEATED PAPER AIR FILTERS

These pleated paper aircraft induction air filters are manufactured in South Africa and are fully approved by the South African Dept. of Transport, Division of Civil Aviation. Strict quality control standards are enforced at all stages of manufacture. The filters feature aluminum frames and cured EA131 pleated elements with 96% micron rating. Rubber gaskets are waterproof, oil solvent, and chemical resistant. Mesh overlays are of stainless steel for enhanced strength, durability, and appearance. Not FAA approved at this time.

## MOONEY AIR FILTERS

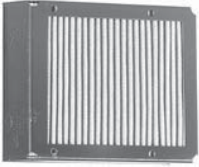
lte	O r P/N	Moone Equivalent P/N	Aircra t T pe	Price
1	08-00025	125997-010	M20J	.
2	08-00026	125685-004	M20K	.

## PIPER AIR FILTERS

lte	O r P/N	Piper Equivalent P/N	Aircra t T pe	Price
1	08-00027	560-854 (P13-8602) 28-7911001 thru 28-7911282	Dakota PA28-236	.
2	08-00028	560-772	Tomahawk (PA38)	.
3	08-00029	124997-005	Navajo/Chieftain (PA31)	.
4	08-00030	13681-02	Tri-Pacer (PA22)	.
5	08-00031	560-947	Saratoga (PA32-301T)	.
6	08-00032	125196	Piper Turbo Aztec (PA23)	.
7	08-00033	CA161	PA28 & 32 Series (PA 36 Pawnee) (PA 34 Seneca)	.
8	08-00034	CA162	PA32 & PA23	.
9	08-00035	35477-00	PA28-161	.
10	08-00036	CA122	Super Cub (PA18)	.



# AIR FILTERS



## AIR-MAZE AIR FILTERS

Filter for Continental for A-65 thru C-125*.....	P/N A40599.....
Filter for Lycoming O-235, O-290, some O-320 (advise aircraft application) .....	P/N A40599.....
Aeronca 7AC, 11AC .....	P/N 2-849.....
R	R R R D

## K&N AIR FILTERS



Our K&N Filters are the industry standard in excellence. All filters are constructed with ultra-strong molded pliable rubber flanges which absorb vibration and provide secure attachment. These flanges can be stretched up to 1/8" (3mm) to fit in-between sizes. K&N Universal air filters are available in round, tapered, and oval designs, to fit just about any application. Use the dimensioned sketch and the selection chart to find the filter best suited to your application.

Part No.	App ication	T roat	Len t	Dia.	St e	Price
08-01053	Rotax®/Bing 36mm	2"	2"	5-3/8"	Round Straight	.
08-01273	Mikuni 32mm	2-1/4"	4"	3-1/2"	Round Straight	.
08-04977	Mikuni 34mm	2-1/2"	3-1/2"	4"	Round Straight	.
08-04980	Kawasaki/Mikuni 32mm	2-3/4"	3"	5"	Round Straight	.
08-04981	Mikuni 36mm	2-1/4"	4"	3-1/2"	Tapered	.
08-04978	Rotax®/Bing 32mm	1-3/4"	3"	2-1/2"	Tapered	.
08-01274	Rotax®/Bing 36mm	2-1/16"	4"	3-1/4"	Round Straight	.
08-01275	Rotax®/Bing 36mm	2-1/16"	4"	3-1/2"	Tapered	.
08-04979	Rotax® 532/582 Dual Carbs	2-1/16"	8-1/2"	3"	Dual Oval	.
08-04976	Rotax® 503 Dual Carbs	2-1/16"	8-1/2"	3"	Dual Oval	.
08-04977	Mikuni 34mm	2-7/16"	3-1/2"	4"	Straight	.
08-01278	Rotax® 503/532 Aerobatic carb.	3-1/2"	4-5/8"	4-1/2"	Tapered	.
08-01279	Rotax® 912 Offset	2"	5-7/8"	2"	Round offset	.
08-01280	Rotax® 814 Rd. Center	2-7/16"	3-1/2"	5"	Round Centered	.
08-04983	Rotax®/Bing 36mm	2-1/16"	3"	3"	Round Straight	.
08-04984	Rotax®/Bing 36mm	2-1/16"	3"	3-1/2"	Round Straight	.



## K&N AIR FILTERS

Rubber end cap instead of chrome makes this filter less likely to create damage in the event of a prop strike. Also includes rubber boss for safety wire attachment.

K&N AIR FILTER # SP2704 .....08-06098.....

K&N AIR FILTER # SP2706 .....08-06099.....

## K&N FILTERCHARGER OIL



K&N Air Filter Oil is the only oil specially formulated to work in combination with the cotton fabric in K&N Filtercharger elements, providing a superior air filtration system. When used as directed, it quickly penetrates the filter pleats, where it remains suspended in the cotton fabric. Saturation is maintained until the element is cleaned with K&N Air Filter Cleaner.

6.5 oz. aerosol can - red ..... P/N F99-0504 .....

8 oz. squeeze bottle - red..... P/N F99-0533 .....



## K&N AIR FILTER CLEANER & DEGREASER

This is the only cleaner formulated to clean K&N Filtercharger elements. The use of any other cleaning solution will void the filter's warranty, and quite possibly could damage the cotton material. K&N Cleaner works to dissolve the dirt build-up and old filter oil, and can be washed away with water. It is biodegradable and safe on paint, chrome, cast aluminum, plastic, rubber, and vinyl when used as directed. Complete instructions on the bottle.

12-fluid oz. squirt bottle ..... P/N F99-0606 .....

## K&N SEALING GREASE



K&N Sealing Grease provides an airtight fit around sealing surfaces on all types of air filter elements. It resists heat and will not melt or run off. Not to be used on clamp-on filter elements.

8 oz. squeeze tube - black ..... P/N F99-702 .....



## VARI-EZE / LONG EZ AIR INTAKE FILTER

NAPA #2904 air intake filter (equivalent to Purolator #AFP-177 & AC #44-8C)  
P/N 2904.....



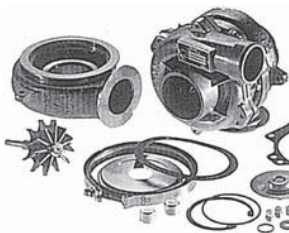
## K&N RECHARGER KIT

K&N Recharger® kits contain K&N air filter cleaner and air filter oil for recharging any K&N Filtercharger® Air Filter. Restores air flow efficiency so your K&N air filter performs like new!  
P/N 08-00722 .....



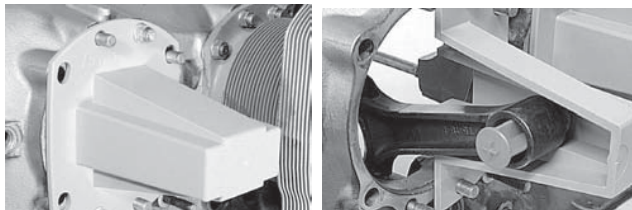
# JANITROL HEATERS - LUBRICANTS

## RAJAY TURBOCHARGER UNITS



Call Aircraft Spruce for quotation on all Rayjay turbocharger units, controllers, scavenge pumps, and valves. STC's Rayjay Turbocharging kits are available for certified and experimental aircraft such as Mooney, Piper, Cessna, Beech, Lancair, and Vans. Kits includes new exhaust system, turbocharger, scavenge pump, fuel pump, induction air box, and the hoses, valves, and fittings needed for installation.

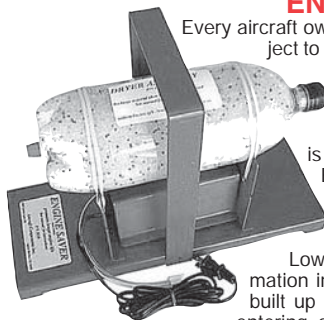
## TOPCAP ENGINE PROTECTOR



Install TopCap in place of a removed cylinder to protect the engine from dirt, debris, and stray parts. Made from fuel and solvent resistant polymer, TopCap allows for full crankshaft rotation. One size fits Lycoming wide deck 320, 360, 540, 720 and Continental 470, 520, and 550.

P/N 08-00373..... /pr.

## ENGINE SAVER



Every aircraft owner knows that his engine is subject to moisture build up and internal rust formation when not flown regularly. Oil companies spend millions developing special additives to minimize rust. Now there is a better way to fight this rust! The Engine saver produces a continuous supply of very low humidity air that is introduced into the engine through the breather. Low humidity air prevents water formation in the engine. The slight pressure built up keeps the moist outside air from entering, allowing the dry air to flow past the piston rings into the upper cylinder area protecting it as well.

The Engine Saver is 110vac powered, requires no installation or FAA approval, and works with all piston engines. Pilots are flying less and the Engine Saver will save them money by reducing maintenance costs.

P/N 08-00724.....

## AIRCRAFT HEATER KART 7600



A powerful blower draws in the hot air from your kerosene heater and blasts it out at high pressure and velocity. The adjustable discharge nozzle allows you to aim the hot air up into your engine cowling from below. The hot air naturally flows up and around the engine. The blower moves so much air that a tight seal with the cowling is not needed. Just roll the heater into position, turn it on and do your pre-flight. Aircraft Heater Kart 7600

P/N. 13-03150.....

## JANITROL HEATERS



Our Janitrol heaters, rebuilt right at the factory by Janitrol Heater Products, a division of Kelly Aerospace feature new CermaKote combustion tubes and a more efficient, lightweight permanent magnet blower motor. These heaters are rebuilt to factory new tolerances and upgraded to the latest model configuration with a new serial number. These heaters are not affected by FAA AD Note 96-20-07. Three year, 1000 hour limited warranty, 1500 hour TBO.

## JANITROL HEATER CERMAKOTE COMBUSTION TUBES

Janitrol Heater Products, division of Kelly Aerospace produces extended life "CermaKote" combustion tubes for individual sale. The "CermaKote" combustion tubes incorporate a special process to coat the areas susceptible to flame erosion. The FAA/TSO approved OEM combustion tube is engineered to provide years of safe operation through improved materials designed to better withstand the high temperatures and corrosive environment inside your heater. This product improvement will greatly decrease your routine heater maintenance cost and give you the added assurance that your heater is being maintained with the highest quality parts on the market today!

## TANIS ENGINE DEHYDRATOR



Remove moisture, reduce corrosion, and increase engine life with the Tanis engine dehydrator. The Tanis engine dehydrator, features a closed loop system that removes moisture by circulating crankcase air through a self-contained desiccant. Easy set-up with one hose connected to the oil fill tube and the other to the crankcase vent. Includes adaptors for easy connection to Lycoming and large bore Continental engines.

Features : \* Blower circulates humid engine air through a desiccant \* Color changing desiccant absorbs moisture \* Built-in oven regenerates desiccant - no need to remove desiccant to regenerate! \* Digital thermometer/humidity sensor monitors performance

P/N 08-07105.....

EP

## AIM-A-SQUIRT



Aim-A-Squirt was developed out of the need to apply lubricants, corrosion inhibitors and solvents in those hard to reach areas with out getting the products all over everything. Aim-A-Squirt has been tested with hundreds of different products which have had no affect on the special plastics the straw is made of. The straw is flexible enough that it will not kink when it is twisted in a small circle.

P/N 09-02325.....

## LIN ITE AVBLEND LUBRICANT

An oil supplement for all piston engine-powered aircraft owners and operators worldwide. AvBlend produces a wetting action that allows lubrication to penetrate the pores of an engine's metal surfaces. Providing critical lubrication at start-up, AvBlend helps prevent accumulation of combustion chamber areas. Wear is reduced, engines stay cleaner and combustion chambers stay properly sealed. Proper cylinder sealing is essential for achieving optimum peak pressure and design-level output. FAA approved. 4-cylinder engines require 1 can at each oil change, and 6 cylinder engines require 2 cans.

12oz. can .....P/N 08-05470.....

1Case (24 cans) .....P/N 08-05470-1.....

# LUBRICANTS GASKETS – DEGREASERS

## REAL GASKET PUSHROD TUBE SEALS

These seals from Real Gasket Tennessee provide 37% more sealing area at the point of contact with the pushrod tube, and vector spring pressure by its beveled top and companion washer. FAA Approved for the Continental engines shown below.

Part No.	Application	Price
RG-360PR	IO/TIO-360 complete engine*	
RG-360PR-1	IO/TIO-360 single cylinder**	
RG-520PR	O/IO-470, IO-520, IO-550A,B,C***	
RG-520PR-1	As above except single cylinder	
RG-550GPR	IO-550-G complete engine	

Continental      Continental      Continental

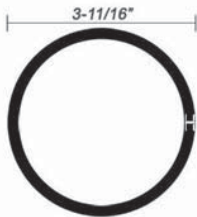
## REAL GASKET PUSHROD TUBE CONVERSION KITS FOR CONTINENTALS

These kits from Real Gasket Tennessee replace problematic pushrod tubes of continental engine models: A-65, A-75, C-75/85/90/125/145, O-200, O-300 and GO-300. The installation does not require loosening or removal of the cylinder and converts it to an "independently serviceable" spring loaded pushrod tube system, similar to IO-470, IO-520, and IO-550 continental engines. It also allows access and service to the lifters. The kit is designed for easy installation and uses real gasket's FAA-PMA pushrod tube seals as used in the continental IO-470, IO-520 and IO-550 engines. For certified aircraft engines, form 337 is required.

- 1-cylinder kit ..... P/N 08-00802
- 4-cylinder kit ..... P/N 08-04444
- 6-cylinder kit ..... P/N 08-44444

## REAL GASKET FRANKLIN ENG. PARTS

- RG-17794-S/12 ... Pushrod Tube Seal ..... P/N 08-00779
- RG-17864-S/12 ... Pushrod Tube Seal ..... P/N 08-00780
- RG-10366 ..... Oil Pan Gasket ..... P/N 08-00781
- RG-17794-S/12 ... Valve Cover Gasket ..... P/N 08-00782
- RG-17794-S/12 ... Crankcase Cover Gasket ..... P/N 08-00783



## LW12681 LYCOMING MAGNETO GASKET

Lycoming Magneto Gasket model # LW12681. For Lycoming O320 all letter designations EXCEPT the "H" series. P/N 08-00285

## PERMATEX HI-TEMPERATURE SEALANT

This quality sealant increases reliability of seals at high temperatures, cuts repair time, and reduces breakdowns. It seals flanges, threaded connections and fasteners in high temperature applications up to 600°F. Also seals steam lines and exhaust manifolds on industrial engines. Applies easily.

- 7 oz. tube ..... P/N 09-28425

## PERMATEX FORM-A-GASKET NO. 1

Seals and repairs a wide range of gaskets. Fills in uneven flanges surfaces. Seals pipe fittings, air ducts, boilers, plumbing connections and threaded assemblies. Dries fast, sets hard for sealing permanent or rigid assemblies. Easy to apply. Improves gasket sealing power, adds reliability to rigid or permanent assemblies. Eliminates delays.

- 3 oz., Tube, #1B ..... P/N 09-28415
- 11 oz, Tube, #1C ..... P/N 09-28430

## PERMATEX FORM-A-GASKET NO. 2

A non-hardening, heavy-bodied, pliable sealant for semi-permanent assemblies. Use on threaded assemblies, over plates and hose connections, metal-to-metal applications. Temperature range -65° to 400° F., pressures up to 5000 PSI. Apply with putty knife or stiff bristle brush. Conforms to MIL-S-45180B Type II.

- 3 Oz. Tube #2B ..... P/N 09-28420
- 11Oz. Tube #2C ..... P/N 09-28400

## AVIATION FORM-A-GASKET NO. 3

A non-hardening sealant. Recommended for heating hose connections, close fitting metal parts and threaded connections. Resists water, gasoline, acids and alkalis. Temperature range -65° to 400°F., pressures to 5000 PSI. Conforms to MIL-S-45180B, Type III.

- 4 Oz. Can #3H ..... P/N 09-28500
- 1 Pint Can #3D ..... P/N 09-28600

## BENDIX MAGNETO GREASE

Factory recommended lubricant for bearings in Bendix magnetos.

- 1 Lb. Can ..... P/N 10-27165



Grease for AD Note on 1200 Series

- magnetos.
- 1 Lb. Can ..... P/N 10-391200
- 1 oz. tube ..... P/N 07-02500
- Distributor block bushing coating P/N 10-39140-0
- High temperature breaker/cam lubricant P/N 10-86527

## GUNK SUPER CONCENTRATE DEGREASER

A concentrated self-emulsifying degreasing solvent for engine and parts. Dilute one part concentrate with nine parts of kerosene or light Diesel fuel oil for very effective cleaning. Spray or brush on. Does not harm electrical system, strip paint or cause rust. Water rinse.

- SC-2A, Qt. (2 Lbs.) ..... P/N 09-29400
- SC-3, Gal. (8 Lbs.) ..... P/N 09-29500
- SC-5, 5 Gal. Pail (41Lbs.) ..... P/N 09-29600



## GUNK "ENGINE BRITE" ENGINE CLEANER

Ready-to-use engine cleaner in convenient aerosol or squirt can.

- EB-1, 16 Oz. Aerosol ..... P/N 09-29700



## GUNK HYDRO-SEAL

Two-layer room temperature carbon digester and paint stripper. No flash point. Safe on all metals. Simply soak and pressure rinse or solvent rinse. 5 gal. pail contains parts soaking basket.

- HS-3, 1 Gal. Can (11 Lbs.) ..... P/N 09-29900

HS-5K, 5 Gal. Pail w/ parts basket (Wt. 56 lbs., truck shipment req'd) ..... P/N 09-30000

act r direct ipment n al rm G n an r eal arl tte



## TITSEAL

Prevents corrosion and seizing of metal parts. Assures leakproof, pressure tight connections. Unaffected by water, oil, gasoline.

- Light Wt., #T20-66, 1 Lb. Can ..... P/N T20-66
- Medium Wt., #T25-66, 1 Lb. Can ..... P/N T25-66



## MARVEL MYSTERY OIL

Standard for break-in on new or overhauled engines and for carbon removal from cylinder heads, piston rings, valves, etc. Mix with regular oil for perfect engine operation to -20°F. Lubricates tight nuts, control hinges and landing gear. Dust repellent.

- 4 oz. #012 ..... P/N 09-27515
- Qt. #013 ..... P/N 09-27500
- Gal. #014 ..... P/N 09-27600



## MOUSE MIL OIL

For speedy help in removal of rusted or frozen studs, nut and bolts; frees up cables, slides and linkage; unequalled wherever a lubricant and penetrant are required. Lasting lubricating qualities.

- 8 Oz. .... P/N 09-39608
- 32 Oz. .... P/N 09-39632



EP

# ENGINE PREHEATERS



## RED DRAGON ENGINE PREHEATERS

For quick engine starts in cold weather. Propane heated air is blown directly into engine compartment by a 12V fan (can be used to heat cabin, thaw ice or warm hanger). 12V comes from either plane or car battery with no appreciable electrical drain. Easy-to-operate electric igniter allows you to ignite heater with a push of a button. Entire unit weighs only 14 lbs. 100% safety control stops fuel flow should flame go out. Complete with 5ft. of pressure propane hose, excess flow valve, regulator, safety control and 10ft. power cord with alligator clips to attach to battery. All UL approved. Now includes high limit safety control package - provides total protection from over-heat situations and will effectively shut down fuel upon an over-heat situation. Use standard propane bottles.

- el ..... P/N 08-04300
- D This model is the same as MH-300 except it uses 115 VAC to power the fan. Wt: 17lbs. P/N 08-04305
- D This Red Dragon preheater is a cart style self contained preheater. Includes preheater, cart, battery box, fuel cylinder, and ducting. Excellent for FBO's. Wt: 58lbs. P/N 08-04315

### RED DRAGON ACCESSORIES

- eat D ctin 12' long x 4" diameter; Heavy-Duty Flexible Ducting. P/N 08-04310
- 6'Lx4" Dia. Heavy-Duty Flexible Ducting. P/N 08-04325
- Carrying Case - Strong Plastic Case w/lock, for model MH300. size: 20.25" x 9.5" x 9.5" P/N 08-04320
- igarette igniter P/N 08-04330
- Propane Quick Disconnect set - For Rapid Connect & Disconnect of Fuel Line from Propane Bottle w/o Tools (even under pressure) P/N 08-04340
- Propane Bottle - Std. Refillable Bottle (5 Gal. Cap. or 20 Lbs.) Supplies Minimum of 2 Hours of Heating. (Empty) P/N 08-04351
- Soft Carrying Case - This soft carrying case is for 115V preheaters only. P/N 08-01218
- Red Dragon Disposable Cylinder Adapter - Has a shut off valve and is disposable usually for 1 preheat. P/N 08-01295

## DESIGN LOGIC ENGINE PREHEATERS



Constructed of solid aluminum, known for their dependability, performance, and overall value. An improved design saves time and money by allowing easy transfer to other engines or reinstallation after overhaul. Ea. 08-04425 kit includes 2 adapter plates, 1 flat and 1 curved (curve fits Continental sumps). The applicable adapter plate is simply screwed to the heater plate. This

assembly is then adhered to the engine sump with thermally conductive adhesive (included). When necessary to remove the preheater, simply remove 4 screws! Specifications: 330W (08-00425) or 220W (08-00372). Thermostatically controlled 170°-200°F. Thermal fuse to prevent overheating should thermostat fail and heater become dislodged. FAA/PMA approved for over 600 engines. 2-yr, no hassle warranty. Application: Continental (except kidney shaped) 5"x4-3/8"x7/8".

- P/N 08-04430
- Application: Lycoming (except as below), Continental (except kidney shaped), Franklin, Garrett, & Marathon. 2-yr. warranty. Size: 5"x 4-3/8"x 5/8" (7/8" w/curved plate) P/N 08-04425
- Application: Lycoming IOs w/air intake on bottom (IO 360A1A, for example); for engines where a smaller footprint required; typically mounts on side of sump. 2-yr warranty. Size: 5"x 2-7/8"x 5/8" P/N 08-00372
- Replacement part
- Continental Adapter Plate ..... 08-01092
- Replacement Adhesive ..... 08-01054
- Replacement Adhesive Kit ( includes Applicator, Tie wraps, and Safety Wire) ..... 08-01055

## ENNON INSULATED ENGINE BLANKETS



Kennon's insulated engine covers are custom made from the specific year, make and model of aircraft for a snug fit. Kennon makes its own engine blanket material using a bonded fiberfill that doesn't need to be quilted to stay in place, which can destroy the loft and put thousands of needle holes in the cover where heat can escape. The outer shell is made from red, blue, or black polyester rather than nylon, increasing the useful life of the cover and the inner layer is fluorescent orange which can be used as a signaling device in the event of an emergency. Flaps for oil doors to check or fill the oil and cowling inlet flaps for preheating purposes can be added for \$10 each. Insulated prop and spinner covers are also available.

- 2-Seat A/C (sml) 07-00983 ..... 4-6 seat A/C (reg.) 07-00984
- Twin Eng. A/C ... 07-00985 ..... Spinner Cover 07-00987
- Prop Cover ..... 07-00988 ..... Cessna 207 ..... 07-01307
- Cessna 208 ..... 07-00991 ..... Piper Malibu ..... 07-00992
- Dehavilland Beaver .. 07-00993 ..... Beech B18 ..... 07-00994

## E-Z HEAT AIRCRAFT ENGINE PREHEATER



Preheating engines for winter operations is at best a miserable chore and at worst can be a disaster for the plane, the pilot & flight operations. E-Z Heat Preheaters feature easy peel & stick application. 7 models are available. Efficient engine heating for virtually all propeller driven aircraft. The heaters consist of a flexible

synthetic pad that easily conforms to the contours of the oil pan. Heat 12 qts of oil from -40° to +60°F in an hour while using approximately 300 watts of electricity. The heater is 1/32" thick. enable immediate heat transfer from heater to engine. The heaters are thermostatically controlled, so leaving them plugged in overnight means the plane will be ready to go in the morning. Pre-heating normally takes 3-5 hours for the entire engine to be nice and warm. The Lite Brite power cord is included on all 110V E-Z Heat pre-heaters. Molded into the male plug end is a newly designed light emitting diode (LED). This LED allows the operator to visually recognize if there is electrical power to the preheat system even from a distance. FAA Approved for certificated aircraft. 2 year "No hassle" warranty.

P/N	App ication	Heater #	Price
07-00756	Cont. A-65 to o-200 (round)	260	.
07-05315	Cont. A-65 to 0-200 (rectangle)	270	.
07-05100	Cont. C-125 to 0-300, E-165 to E-225, IO-360 to T10-360 Lyc. 0-235, 0-290, 0-320*	440	.
07-05200	Cont. 0-470, IO-470, 0-520, IO-520 Lyc. 0-320*, 0-360, IO-360, 0-540, IO-540C, D, T10-540C	441	.
07-01320	Cont. O-470, IO-470, O-520, IO-520	470	.
07-05210	Lyc. IO-360A & C Series	442	.
07-05345	Cont. 0-470, IO-470, 0-520, IO-520 IO-550 Lyc. 0-540, T10-540 (except C), IO-720	411, 440 or 540	.
07-05200-2	Model 441 - 220Volt	441-2	.

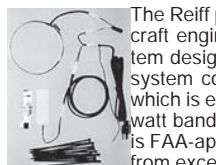
cept an Rear ar

## REIFF HOTSTRIP OIL SUMP HEATERS



HotStrip is thin and lightweight like a silicone pad, but made of steel for maximum durability. Works either as a stand-alone sump heater or integrated with the Hot Band Cylinder Heating Systems. Bonds to the bottom or side of oil sump and electrically heats the oil. Features dual heating elements for redundancy. System includes two 100W elements thermostat, and power cord. FAA Approved Lycoming 0-235; All 290, 320, 360 series; All 435, 480, 540, 541 series; Continental IO-346; All 300, 600 series; E-165, E-185, E-225, All 470, 520, 550 series. P/N 08-00688

## REIFF PREHEATER FOR ROTAX 912/914



The Reiff preheat system for Rotax 912 and Rotax 914 aircraft engines is an engine-mounted electric preheat system designed for easier cold-weather starts. The preheat system consists of a 100-watt metal "hot strip" element, which is epoxied to the bottom of the crankcase, and a 50-watt band heater that is clamped to the oil tank. The Reiff is FAA-approved, and includes a thermostat to keep the oil from exceeding 150° F. P/N 08-06219

## SAFE-HEET ENGINE HEATERS



SAFE-HEET is a thin flexible pad that is bonded to the engine oil sump. The kit is complete with materials and step-by-step instructions. A log book entry is all that is required for permanent installation; No S.T.C. or 337 form required. There are no airframe modifications required. SAFE-HEET can be used with a timer or the 707 temperature controller, and uses standard 110 A.C. voltage. We recommend using the SAFE-HEET 707 Temperature Controller to cure the adhesive for faster installation.

- MODEL 700 Dimension: 4" x 4" ..... P/N 05-04420
- MODEL 720 Dimension: 4" x 7" ..... P/N 05-04421
- MODEL 705 Dimension: 7.3" x 3.5" ..... P/N 05-04422

**VARIABLE TEMPERATURE CONTROLLER** - The SAFE-HEET Variable Temperature Controller can be used with any 700 Series SAFE-HEET Engine Pre-heater as an installation aid, or for providing temperature control for continuous pre-heat without promoting internal engine corrosion. P/N 05-04423



# TANIS PRODUCTS - ENGINE PREHEATERS

## TANIS AIRCRAFT PRODUCTS

### TANIS PREHEATER FOR ROTAX ENGINES



Rotax 912 Engines - Preheat your Rotax 912 engine in cold weather for faster and safer starts. This system directly heats the cylinder heads, crankcase, and oil reservoir. The kit includes all heating elements, wiring harness with 120 volt power plug, instructions, and complete installation materials. Cylinders are heated with the exclusive Tanis heated bolts that take the place of the Allen head cap screws that secure the rocker covers.  
PN 08-07084 .....

### TANIS PREHEATER FOR JABIRU ENGINES



Preheat your Jabiru engine in cold weather for faster and safer starts. This system directly heats the cylinder heads and oil sump. The kit includes all heating elements, wiring harness with 120 volt power plug, instructions, and complete installation materials. Cylinders are heated with elements that bond to the rocker covers. Available for four and six cylinder engines.  
TAS100-33 (Jabiru 2200)  
PN 08-07087 .....

TAS100-31 (Jabiru 3300)  
PN 08-07088 .....

### TANIS ENGINE PICKLE KITS



Recommended by engine manufacturers for long-term storage of piston engines. Each kit includes cylinder protectant spray, corrosion preventative oil additive, exhaust and intake desiccant bags, dehydrator plugs to replace spark plugs, complete instructions and service letters.

PKL-4 (for 4 cylinder engines)  
PN 08-07085 .....

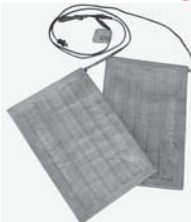
PKL-6 (for 6 cylinder engines)  
PN 08-07086 .....

### TANIS COCKPIT PREHEATER



Heat the cockpit for comfort and the instruments for longer life with the Tanis ceramic heater. The ceramic heater produces 500 watts of heat in a triple-protected compact unit (5"x7.5"x1.5"). Temperature is controlled with a thermostat built into the 120 volt power cord. The ceramic heater has no glowing parts. .... PN 08-07091 .....

### TANIS HEATED FLOOR MATS



Preheat the cockpit of your aircraft with Tanis heated floor mats. Heated floor mats come in matched sets of two with a total heat output of 500 watts. They are interconnected with a harness and contain a thermostat in the power cord for temperature control. The mats can be integrated with the Tanis engine preheat system by connecting to the preheat harness. Or, they can be plugged into any 120Volt outlet. These durable floor mats can remain in the aircraft during flight and come in two sizes for the best fit in your aircraft.

12"x18" ..... PN 08-07089 .....

8.5"x32" ..... PN 08-07090 .....

## AEROTHERM AIRCRAFT ENGINE HEATER - THE DEUCE



- \* Industrial heater
- \* No propane tank needed
- \* Hot air is recirculated through engine compartment
- \* Engine will heat completely (including oil) in 3 hrs at 0 degree hangar temperature
- \* Hoses rated from -60 to 260 degrees
- \* Thermostat to shut off air at desired temperature
- \* Portable and lightweight
- \* 120V

### PURCHASED BY NASA!

Aircraft owners have long been familiar with the AeroTherm Engine Pre-Heater, but now there's a new and improved model. It's the AeroTherm Deuce, doing double the work, it has double the airflow and heating power of the original model.

The AeroTherm makes it easy to keep your airplane's engine warm in the winter. Instead of blasting extreme heat into the engine compartment like some heaters, the AeroTherm evenly and consistently heats all parts of the engine using the same principal as your home furnace.

Rather than using propane (and the accompanying tanks to be hauled around and refilled), The Deuce uses two 800 watt heating elements. It's easy-to-set thermostat maintains the desired temperature automatically. The Deuce can be kept plugged in all winter, keeping the engine warm, or it can be used as a traditional preheater. The Deuce consists of very durable components; a 40,000-hour high output CFM fan from Germany, a 100,000-cycle thermostat and a back-up reset thermostat. All components are modular and easy to replace.

When it's plugged in, the AeroTherm Deuce supplies 6500 BTUs of heat at 210°F to the engine compartment. It then draws the same heat out of the compartment and back through the heater, until the desired temperature is reached.

When used as a preheater, the engine will be warm enough to start in about 90 minutes. Or, it will heat completely (including oil) in three hours at 0°F outside temperature.

Weighing just 11 lbs., the AeroTherm Deuce comes with two hoses, a nylon suspension band that allows the unit to hang from the prop of your aircraft, carrying tubes and four sponges to seal the engine intakes. It's portable enough to take with you.

P/N 13-06101 .....

### TEMPEST AA1000 ENGINE PRESERVATION SYSTEM



**TEMPEST**  
AA1000 Engine  
Preservation System

protect r n i n e i t t e  
empe t

All engines accumulate moisture when they are not run everyday. Moisture will oxidize and create rust in the engine causing potential damage as well as faulty oil analysis.

AA1000 EPS pumps dry air into the engine oil filler cap and removes the moisture already in the engine. Continuous operation

will prevent any additional moisture from accumulating. Removal of the moisture preserves and protects your engine.

P/N 08-07062 .....

### ACCESSORIES

Replacement Desiccant for AA1000 EPS (1 lb)  
P/N 07-03400 .....

Replacement Desiccant for AA1000 EPS (1/4 lb)  
P/N 07-00731 .....

EP

# OIL FILTERS – OIL SYSTEMS

## KELLY AEROSPACE AVIATION OIL FILTERS



ave en  
in i rm re  
t e ame lter

- Shorter height than the leading competitor for easier installations.
- Improved synthetic / cellulose blended media that exceeds SAE ARP1400B filtration requirements.
- Silicone impregnated gasket for easier removal.
- Manufactured and Independent lab tested to meet or exceed Industry standards.
- Improved weld on hex nut
- Meets TCM By-Pass Valve opening pressure specs.
- Anti-Drainback valve on ES48108-1 & ES48109-1 models.

Part No.	Part P/N	Engine Application	Price	4 Pack	Price
ES48103-1 Short	08-00968	O-320, IO-320, O-360, IO-360, LO-360, TO-360, HIO-360, LHO-360, LHO-360 Series		08-07065	
ES48104-1 Long	08-00969	O-320, IO-320, O-360, IO-360, LO-360, TO-360, HIO-360, LHO-360, LHO-360 Series, 6-285, IO-346, IO-360, TSIO-360, LTSIO-360		08-07066	
ES48108-1 Short	08-00970	O-470, IO-470, LHO-470, TSIO-470, IO-520, TSIO-520, GTSIO-520, LTSIO-520, IO-550 Series, 6-285, IO-346, IO-360, TSIO-360, LTSIO-360		08-07067	
ES48109-1 Long	08-00971	O-470, IO-470, LHO-470, TSIO-470, IO-520, TSIO-520, GTSIO-520, LTSIO-520, IO-550 Series, O-235, IO-320 Series LHO-320, AIO-320, AEIO-320		08-07068	
ES48110-1 Short	08-00972	O-360, IO-360, AIO-360, HIO-360, LHO-360, TIO-360, LHO-360, AEIO-360, O-540, IO-540, HIO-540, TIO-540, AEIO-540, LHO-540, TIO-541, IO-580, IO-720 Series		08-07069	
ES48111-1 Long	08-00973	O-360, IO-360, AIO-360, HIO-360, LHO-360, TIO-360, LHO-360, AEIO-360, O-540, IO-540, HIO-540, TIO-540, AEIO-540, LHO-540, TIO-541, IO-720 Series		08-07070	
Mechanics 4-Pack	08-07160	Includes 2 ES48108-1 & 2 ES48110-1		---	

## CHAMPION SPIN-ON OIL FILTERS



Engine Application	Part No.
Beech E33, F33, A35 thru S35	CH48109-1
Cessna 120, 140, 170, 172, 180, 182, 185, 205, 210, 310	CH48110-1
Mooney M20, M22	CH48110-1
Piper PA-18, PA-22, PA-23, PA-24, PA-25, PA-28, PA-30, PA-31, PA-34, PA-60	CH48110-1

Part No.	Price	12 Pack	Price	Part No.	Price	12 Pack	Price
CH48103-1		08-00905-12		CH48110-1		08-00909-12	
CH48104-1		08-00906-12		CH48111-1		08-00910-12	
CH48108-1		08-00907-12		CFO-100-1		----	----
CH48109-1		08-00908-12					

## FM ENGINE MOUNTED OIL FILTER ADAPTER



FM engine mounted oil filter adapters eliminate the need for oil screens and provide increased filtering capabilities for longer engine life. Being engine mounted with no external lines, they reduce mess during oil changes and increase the time between oil changes. Includes adapter, filter, gaskets and STC. (CO-300 Pictured)

Engine Application	Part No.	Price
T.A.F.-L Cont. C-75-12 C-85-12 O-200 O-200A	08-00631	
CO-300 Cont. C-125, C-145, CO-300	08-00632	
C6LC-S Cont. O-470, Cont. IO-470, Cont. IO-520	08-00633	
C6LC-L Cont. O-470 IO-470, IO-520	08-00634	
C6SC Cont. IO-360	08-01038	
C6LC-11/15 Cont. O-470-11, Cont. O-470-15	08-01037	
KS 5639 Filter Torque Wrench	12-00758	

R R

## ROTAX OIL FILTER 825-701

825-701(825-703) Oil Filter - Rotax 912. Original factory replacement filter.

P/N 08-06100 .....



## TEMPEST OIL FILTERS

Proven full size design, in use for 30 years! Leaf spring technology for lateral stability of filter pack. Powder coated finish for durability. Available in six packs.  
\* Full Can Thickness: .019" \* Base Plate Thickness: .187" \* Burst Pressure: 700 psi \* Media Size: 311 sq. in. \* Bypass Relief Valve TCM specs: 12-14 psi



Filter No.	Order Part No.	Price
AA48103	08-01266	
AA48104	08-01267	
AA48108	08-01268	
AA48109	08-01269	
AA48110	08-01270	
AA48111	08-01271	

## SPIN-ON OIL FILTER - SIX PACK

Part No.	Tempest	Price	Part No.	Tempest	Price
08-04969	AA48103-6PK		08-04972	AA48109-6PK	
08-04970	AA48104-6PK		08-04973	AA48110-6PK	
08-04971	AA48108-6PK		08-04974	AA48111-6PK	

## TEMPEST AA472 OIL FILTER TORQUE WRENCH



The Tempest AA472 oil filter torque wrench is a great addition to any toolbox. Its 1" hex allows easy installation or removal of all oil filters. The torque wrench also comes present to 17 foot pounds and is easily recalibrated. P/N 08-07023 .....

## AIRWOLF REMOTE MOUNTED OIL FILTER KIT



The remote mount oil filter kit by Airwolf Filter Corp. replaces the Lycoming oil screen and housing allowing every aircraft to have an oil filter and to locate it on the firewall where its easy to get to. The adapter takes up no more space on the engine than the original part, so even the tightest installations can benefit from it. Your Vernatherm and oil temp bulb are reused and transferred directly to our adapter, everything else is included. Universal STC'd kit fits any Lycoming powered Single/Multi engine airplane less than 450hp. All other STC'd for specific aircraft. Hoses not included unless where indicated.

- \* Avion \* Aeronca \* Bellanca \* Beech \* Cessna \* Cozy MK-IV
- \* Glasair \* Grumman \* Lancair \* Long EZ \* Maule \* Mooney
- \* Piper \* Pitts \* RV \* Skybolt \* T-18 \* Vari-EZ
- \* Velocity
- \* it c min erie n ine
- \* Easy To Install \* Extends Engine Cooling \* FAA/PMA Approved
- \* Full Flow \* Total Weight under 4 Lbs \* Change oil in minutes not hours.

Application	Part No.	Price
Lycoming Filter Relocation Kit - Requires existing Lycoming 77852 Spin-on adapter. Application does not include helicopters.	08-00038	
STC'd Pratt & Whitney R985 Kit	08-00039	
P&W R985 Kit, Stearman	08-00995	
P&W R1340 Kit, T-6/Harvard	08-00996	
AFC-K015-D P&W R1830 Kit, DC-3/C-47	08-00997	
AFC-K015-E R985 Kit, Beach-18, Staggerwing, DGA-15	08-00998	
P&W R1340 Kit, Otter	08-00999	
AFC-K015-G P&W R985/1340 Kit, AG-Cat	08-01001	
AFC-K015-H P&W R1340 Kit, AT301/401/501	08-01002	
R1340 Kit, Thrush/S2D (Snow)	08-01003	
AFC-K015-L P&W R985 Kit.	08-01004	
Lycoming Homebuilt Kit	08-05605	
STCD Husky Kit AFC-K005	08-05635	
STCD Super Cub Kit AFC-K006	08-05630	
STCD Universal Lycoming Kit	08-05660	
STCD Lycoming Kit-Fits all with Single Drive Dual Magneto Engines.	08-05665	
STCD Lycoming Kit - Fits All IO-720 Engines	08-05670	
STCD Universal Continental Kit - Fits A50, A65, A75, A80, C75, C85, C90, C125, O-200, & IO-240 Engines.	08-05675	
STCD Continental Kit-Fits C145, O300, GO300, & IO360A, C, D, G, H, J, K	08-05680	
STCD Continental Kit (O470, IO470, IO520, TSIO520, GT, SIO520, & IO550 Engines)	08-05685	
STCD Continental Kit (O470-11 & -15 Military Engines used on T34 & Cessna 305 Birddogs.)	08-05690	
STCD Continental Kit - Fits E-165, E-185, E-205, E-225	08-05700	
STCD Continental Kit (TIO360, IO520BA, C, M, TSIO520 B, D, E, J, K, L, N, U, BE, VB, WB & IO550B, C Engines)	08-05800	
STCD Continental Kit - Fits W-670 Radials (Stearman)	08-05805	
STCD Continental Kit - Fits W-670 Radials (Waco)	08-05810	
STCD Franklin Oil Filter Kit	08-05815	
Replacement Filter Standard Length (Champion oil filter)	CH48108-1	
Replacement Filter Long (Champion oil filter)	CH48109	

# OIL FILTERS ADAPTERS OIL DRAIN VALVES

## K&N OIL FILTERS



K&N powersports oil filters are 'TUV' product endorsed and 'TUV' factory production monitored. This means every K&N oil filter is equal to or will exceed all OEM specifications. Our filters contain a modern synthetic filter media, designed for ultimate flow with less pressure drop, yet engineered for outstanding filtration to meet or exceed all OEM specifications.

All K&N powersports 'spin-on' oil filters feature a heavy-duty metal can with a 17mm nut affixed onto the end that allows for easy installation and removal. The 17mm nut is crossed-drilled so racers can safety wire the filter to their bike.

K&N OIL FILTER KN-141 ..... P/N 08-06231 .....  
K&N OIL FILTER KN-142 ..... P/N 08-00691 .....

## B&C MODEL BC700 LYCOMING OIL FILTER ADAPTER

This 90°, spin on oil filter adapter is FAA approved for replacement of existing oil pressure oil screens or spin-on filter adapters on Lycoming O-235; O, IO, LIO, AIO, AEIO-320; O, IO, LIO, HO, HIO, TIO, AEIO-360; O, IO, HIO, TIO, LTI, AEIO-540 & IO-720 series engines. It is CNC milled from solid aluminum billet and fits

perfectly without interference with the magnetos, vacuum pump, or the mechanical tach drive. Adapter kit comes complete with new gasket, new aluminum washer for the vernathern, new copper gasket for the oil temperature sensor, sealant for the gaskets, & new Lycoming bolts for mounting the adapter. Wt: 4lbs. Uses CH48108 or CH48109 filters.

Adapter Kit w/ STC (for certified A/C) ..... P/N 08-00195 .....

Adapter Kit w/o STC (for homebuilt A/C) ..... P/N 08-00196 .....

Re ire tem

B&C Oil Temp Probe Adapter ..... P/N 08-07092 .....

B&C Vern-a-therm Opening Plug ..... P/N 08-07093 .....

## CESSNA / CONTINENTAL OIL FILTER ADAPTER ITS

Part No.	Aircraft Application	Price
0450404-202	C150, A150, F150, FA150, FRA150	
0556010-200	C172, F172	
1250922-201	C180, C185, C188, T188	
1250922-200	C205, C206, U206, P206, 207	

All the Continental spin on adapter kits above require the following items in addition to the adapter: Oil Filter ..... P/N CH48110 .....  
Nut ..... P/N 1250405-1 .....  
AN123883 O-Ring . P/N 08-04930 .....

## LYCOMING SPIN-ON FILTER ADAPTER KITS

Part No.	Aircraft Application	Price
LW-13743	All Applicable Engines Except Models Shown In Table Below	
LW-13744	O-235 Series	
LW-13745	IO-720 with 1200 Series Series Magnetos	
08-00513	O-320-H (LW-14969)	
LW-13904	All Engines with Dual Magnetos. Includes Converter Plate Assembly and Does Not Include Filter	

Il c min pin n il filter a apter it a ve incl e a apter il filter a em l a apter plate a et attac in ar are it al c ntain il c ler pa valve a em l el il eal r il c ler in tallati n

## LYCOMING 90° OIL FILTER HOUSING



Designed to provide sport plane builders and owners several improvements over the standard Lycoming oil screen or filter hardware. This device locates the filter in the vertical plane for two unique advantages. 1) The filter is now in "free" space, permitting installation with tight engine to firewall clearance (that would otherwise be limited to an oil screen). 2) The filter is easily accessible without contortions or broken knuckles. 3) When it is time for filter changes . . . a prick punch in the top of the filter allows oil to drain back to the sump such that none is spilled during removal. No accessory case, lower cowl, or nose gear cleanup is required after filter removal.

its Inc e \* Housing \* Filter \* O-Ring and Washer

CH48109-1 filter ..... P/N 08-00977 .....

Experimental Adapter plus CH48108-1 filter ..... P/N 08-00976 .....

Experimental Adapter only ..... P/N 08-00975 .....

STC'd Adapter plus CH48109-1 filter ..... P/N 08-01237 .....

STC'd Adapter plus CH48108-1 filter ..... P/N 08-01236 .....

STC'd Adapter only ..... P/N 08-01094 .....

## AEROQUIP E-Z OIL DRAIN SUMP VALVES



Makes aircraft oil changes easy. The hand actuated valve when attached to the oil drain port permits engine oil changes from the ground without removing the engine cowling. The spring loaded E-Z Drain valve cannot be accidentally opened.

Actuation of the valve requires a combination push/twist motion. It also contains a dual seal arrangement which combines both an O-ring & metal-to-metal seal to prevent accidental leakage of oil through the valve. FAA Approved for use on the engines listed. Incorporates fine Aeroquip quality hose. Installation eligibility listing furnished with each unit.

Part No.	Engine Application	Thread	Price
AE99950G	Cont. C-90, O-200, GO-300, IO-360, TSIO-360, O-470, IO-470, TSIO-470, IO-520, TSIO-520, GTSIO-520	5/8-18	
AE80666H	Cont. O-300, late C-145	1-18	
AE80664H	Lycoming Engines	1/2NPT	

Valve O-Ring, All Models ..... MS28775-011 ..... Ea.

Interface O-Ring ..... AE99950G MS28775-113 ..... Ea.

AE805555H MS28775-118 ..... Ea.

t t e e n i p e r e l R R R



S6250

## SAF-AIR OIL DRAIN SUMP VALVES

Changing engine oil has never been easier. With the Saf-Air oil Drain Valve, no wrench is needed to remove the drain plug. A simple push and turn of the Saf-Air valve locks it in the open position. The valves are made completely from aluminum & stainless steel parts. FAA & PMA APPROVED

Part No.	Engine Application	Thread	Price
S6250	Cont. (same as Aeroquip AE99950G)	5/8-18	
S1000	Cont. (same as Aeroquip AE80666H)	1-18	
P5000	LYC (same as Aeroquip AE80664H)	1/2NPT	
M12175	ROTAX 912, 914	12mm x 1.75	
S7516	Cont IO-520-F	3/4"-16	
P7500	Franklin Engines	3/4" NPT	
S5020J	Jabiru 2200 / 3300	1/2"-20	
M20150	Subaru 2.2L / 2.5L	20-1.50mm	

F62



## SAF-AIR LOW PROFILE 2-PIECE OIL DRAIN SUMP VALVES

Perfect for a close clearance engine oil drain application such as on the Piper Arrow. These low profile oil drain valves are designed to clear retractable landing gears & other restrictions. The valve is very affordable and can be rebuilt. It is a simple procedure to sample or drain hot oil. The valve is made from 360 brass & 302 stainless steel. FAA & PMA APPROVED.

M No.	Part No.	Engine Application	Thread	Price
F62	05-00981	Continental	5/8-18	
F10	05-00982	Pratt & Whitney	1-18	
F50	05-00983	Lycoming	1/2-18 NPT	

## LOW PROFILE OIL DRAIN VALVE FOR LANCAIR

This is exactly what Lancair IV owners have needed for their continental engine! Forget the huge mess when changing oil! Engineered to fit and will not interfere with the retracted nose strut! Finally, makes oil changing simple and easy in your Lancair IV! Fits any 5/8"-18 thread drain plug. Brass and steel construction; yellow zinc plated dust cover provides protection between changes. Drains via hose directly into container. P/N 08-01298 .....

## SAF-AIR OIL DRAIN VALVES

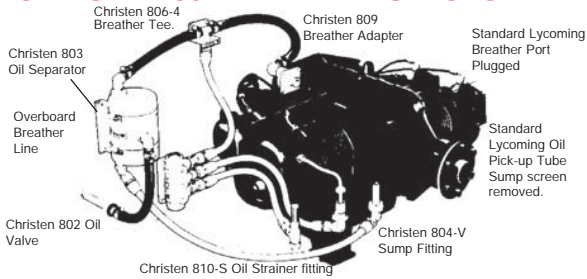


Changing hot engine oil has never been easier! With the SAF-AIR oil drain valve, no wrench is needed to remove the drain plug. A simple push and turn of the SAF-AIR valve locks it in the open position. The valve is made completely from anodized aluminum and stainless steel components. These materials are used throughout the aircraft industry due to their strength and durability. FAA & PMA APPROVED.

Description	Part No.	Price	Description	Part No.	Price
S7516	05-00984		S6250	06-00637	
P7500	05-00985		S5020J	05-00986	
P5000	07-00879		M12175	07-00876	
M20150	05-00987		S1000	07-00880	

# OIL SYSTEMS

## CHRISTEN 801 INVERTED OIL SYSTEM



This accessory kit for Lycoming engines provides normal engine lubrication with minimal oil loss during aerobatic flight. It functions as a self-contained extension of the normal engine oil and breather systems. Can be installed in a few hours without engine disassembly.

Part No.	Description	Price
801-4	For four-cylinder engines. Includes 802 Oil Valve (with plug wrench and plugs for unused ports), 803 Oil Separator, 806-4 Breather Tee, and product manual which provides detailed instructions for application. Weight: 4.75 lb. installed.	
801-6	For six-cylinder engines. Same as 801-4 Kit, but is supplied with 806-6 Breather Tee. Weight: 4.75 lb. installed.	
811-V	For vertical-screen sump engines. Includes 810-S Oil Strainer Fitting, 810-R Oil Return Fitting, 804-V Sump Fitting (vertical type) with crush gasket and MS20822-10D elbow. Weight: 0.50 lb. installed.	
811-A	For horizontal-screen sump engines. Includes 810-S Oil Strainer Fitting, 810-R Oil Return Fitting, 805 Sump Plug with insertion tool, 804-A Sump Fitting (angular 360° swivel-type) with crush gasket and wrench for swivel clamping screw. Weight: 0.36 lb. installed.	
811-S	For horizontal-screen sump engines. Includes 810-S Oil Strainer Fitting, 810-R Oil Return Fitting, 805 Sump Plug with insertion tool, 804-S Sump Fitting (straight-type) with crush gasket. Weight: 0.33 lb. installed.	
809-K	For engines with forward breather ports such as the O-235 and O-290 models. Includes 809 Breather Adapter with gasket, AN842-12D hose elbow, and MS20913-6D plug for forward breather port. Weight: 0.53 lb. installed.	
812-2	For addition of oil ports to engine sumps. Includes two 812 Weld Bosses and quantity of 5% silicon-aluminum welding rod (type 4043). Weight: 0.12 lb. installed.	
812-1	Same as 812-2 Kit, except with only one 812 Weld Boss for addition of single sump port. Weight: 0.06 lb. installed.	
813-4	Stainless steel spring wire. Installed inside breather hose to permit relatively sharp bends without collapsing or kinking. 10 x 47/64". Weight: 0.12 lb. installed.	
813-6	Stainless steel spring wire. Installed inside breather hose to permit relatively sharp bends without collapsing or kinking. 10 x 63/64". Weight: 0.12 lb. installed.	
807-4	All hoses and fittings required for deluxe show-plane quality installation on four-cylinder engines. Includes Aeroquip braided stainless steel hose for oil lines, MIL-H-6000 rubber-fabric hose for breather lines, thin abrasive cut-off wheel for professional-quality hose cuts, AN and MS fittings (blue anodized), Aeroquip hose and fittings (blue and red anodized), and miniature stainless steel hose clamps. All materials are factory new; no surplus. Weight Excluding Hose: 1.53 lb. installed.	

10-page detailed manual - describes system operation & procedure for selecting proper components for each engine model.

P/N 05-20600 ..... ea.

### CHRISTEN OIL VALVE

Multiple port gravity operated ball valve. It is cast aluminum with textured white epoxy enamel finish and all internal steel parts are cadmium plated. Normally installed on firewall or on engine mount. Designed for fittings to be installed either at side or front or both. Requires 3 AN816-10D nipples for hose connection. Wt. 1.75 lbs. installed. P/N 08-06745 ..... ea.

### CHRISTEN OIL SEPARATOR

Features welded aluminum construction with a textured white epoxy enamel finish. All internal parts are cadmium plated, and unit includes stainless steel positioning clamps. Normally installed on fire wall or on engine mount. Requires 2 AN842-12D or -16D hose elbows and one AN823-10D hose fitting. Wt. 2.8 lbs. installed. Applicable to all Lycoming engine applications. Used to replace a worn out or broken oil separator on Christen 801-4 systems only. P/N 08-06740 ..... ea.

### AERO CONVERSIONS OIL SEPARATOR

The AeroConversions Oil Separator is a high-quality welded and powder-coated aluminum assembly designed to save oil vs. direct overboard crankcase breathers in normal flight operations. In addition, the AeroConversions Oil Separator features an extra-high-volume design offering enhanced inverted flight performance in entry-level aerobatic aircraft, allowing oil to be retained and returned to the engine during short-duration inverted and limited negative G maneuvers. The AeroConversions Oil Separator's angled design makes it a perfect fit for Sonex Aircraft angled firewalls, while retaining compatibility with traditional vertical firewall installations in other aircraft. The AeroConversions Oil Separator ships with comprehensive installation instructions suitable for a wide-range of engine installations. P/N 08-07107 ..... ea.

## RAVEN WELD BOSS ITS

These kits for sump mods come with fittings and welding rod. Aluminum Sumps (most 4 cyl) One boss... P/N 08-00789 ..... Two boss... P/N 08-00790 ..... Magnesium Sumps (most 6 cyl.) One boss... P/N 08-00791 ..... Two boss... P/N 08-00792 .....

## RAVEN KNIFE EDGE MODIFICATION KITS

Horizontally mounted valve and fittings to reduce or eliminate knife edge oil pressure problems. Includes valve, specialized fittings, and one weld boss kit to add on to a regular inverted system (requires sump modification) 4cyl. kit..... P/N 08-00793..... 6 cyl. kit..... P/N 08-00794.....

## ADC OIL FILTER SYSTEM

The ADC Oil Filter System has a cleanable element which provides remarkable filtering ability, additional oil cooling (15-20 degrees), visual bypass indicator light, outstanding engine diagnostic ability, and longer engine life. STC's and PMA's for all Lycoming and Continental engines, and most all aircraft. The Remote Spin-On Adapter Kit uses standard Champion CH48108 and CH48109 spin-on filters with the benefit of firewall or engine mount mounting for easy access for filter changes. This kit has a provision for the ADC optional chip detector, comes with lines and fittings, and is machined, rather than cast or welded. Anti-torque feature prevents D Rem te pin n ilter it firewall damage. STC's and PMA's for all Lycoming and Continental engines, and most all aircraft.

ADC Oil Filter System - Includes everything to install, including STC, installation instructions, filter element, all hardware, hoses, fittings, electrical components and engine adapter:

- c min n ine O-235&O-290 engines w/standard screen housing. P/N 07-06930 .....
- All engines w/factory installed spin-on filter ..... P/N 07-00225 .....
- 320 series & up w/ standard screen housing.... P/N 07-06925 .....
- ntinental n ine All engines w/spin-ons or screen housing...P/N 07-00226 .....
- D Rem te pin n ilter it Includes STC, installation instructions, all hardware, hoses, fittings and engine adapter. c min n ine O-235 & O-290 engines w/standard screen housing P/N 07-06933 .....
- All engines w/factory installed spin-on filter.... P/N 07-00227 .....
- 320 series & up w/ standard screen housing ..P/N 07-06935 .....
- ntinental n ine All engines w/spin-ons or screen housing...P/N 07-00228 .....

e t c D en ine a pter r c min ntinental en ine all r in rmati n an pricin

## RAVEN BASIC INVERTED OIL SYSTEM

Raven systems consist of the valve with three pipe plugs, tank, mount, and clamps. The tank is constructed from aluminum and is tig welded using stainless steel internal parts prevent corrosion. Valve is machined from solid aluminum, and all parts are power coated black or white. Valve is 5-1/2" h x 1-1/2" x 1-1/2" & weighs 1.85 lbs, 5" tank is for 4 or 6 cylinder applications, & 4" tank is for 4 cyl. applications only. 5" tank-black .....P/N 08-00796 ..... 5" tank-white ..... P/N 08-00800 ..... 4" tank-black ..... P/N 08-00797 ..... 4" tank-white ..... P/N 08-00801 .....

## RAVEN INVERTED SYSTEM VAC ADAPTERS

These vac adapters are machined from solid aluminum with anodized finish. Furnished with a seal installed, and complete with AN fitting and gaskets. Vac-6 for 6 cyl Lycomings..... P/N 08-00784 ..... Vac-4 for 4 cyl Lycomings..... P/N 08-00785 ..... Non-Acc'y Vac Pad Oil P/U ..... P/N 08-00786 .....

## RAVEN SUMP FITTING KITS

These sump fitting kits come with specialized fittings, washers, O rings needed to install the kit. Sump kit for Horizontal screen 4 or 6 cyl. Lyc. P/N 08-00787 ..... Sump kit for Vertical screen 4 or 6 cyl. Lyc. ... P/N 08-00788 .....

## SLIME FIGHTER

For engines that have horizontal oil filters, this system will eliminate the problem of oil dripping down into the engine and on the firewall while the filter is being removed. A tray is supplied that catches the oil coming from the engine flange and filter while it is being unscrewed. The oil in the tray pours down a hose connected to the bottom of the tray. The filter can now be removed and thrown away. Includes the welded aluminum tray, oil filter wrench and hose. Full set of instructions included.....P/N 08-00974 .....



# OIL FILTER SYSTEMS

## AIRWOLF AIR/OIL SEPARATOR



The Airwolf Air/Oil Separator will improve the efficiency of your aircraft dramatically whether it is a single engine fun craft of a twin powered corporate plane. Designed to separate air and oil in the crankcase breather & wet vacuum pump systems on conventional aircraft engines, Airwolf recovers oil from the crankcase, thus eliminating the oily overboard discharge and the ever present "oily belly" syndrome. Oil loss is greatly reduced - tests have indicated a recovery of up to 80% of crankcase oil previously wasted, depending on the type and condition of the engine. The Airwolf oil recovery system is only slightly larger than an oil filter cartridge (4" dia. x 7.5") and it is available for all conventional engines regardless of displacement. It can be easily

removed and disassembled for inspection and cleaning. With no moving parts, the Airwolf is designed to last the life of your engine. Available for planes with either wet or dry vacuum pump. Now STC'd for most aircraft. Available in black epoxy finish only. Specify aircraft model no., serial no., and engine model. Now manufactured by Airwolf.

Air o	App cation	P/N	Price
AFC-W300-A	Beech H35, J35, K35, M35, N35, P35 (S/N D-4866 thru D-7309) Debonair 35-33, 35-A33, 35-B33, 35-C33 (S/N CD-2 thru CD-1118)	08-00645	.
AFC-W302-A	Cessna 180/182/185/A185	08-03806	.
AFC-W304-A	Beech Bonanza (Pressure Gyro Systems Only) Beech V35B (S/N D-9787) Beech V35B (S/N D-9806 & after) Beech A36 (S/N E-716) Beech A36 (S/N E-732 & after) Beech F33 (S/N CE-602 & after)	08-01299	.
AFC-W307	Bellanca Viking 17-30A	08-01301	.
AFC-W309-A	Beech (Vacuum Gyro Systems Only) Baron All 55 Series (with IO470)	08-01302	.
AFC-W311-A	Mooney M20 A/B/C/D/E/F/G/J	08-01303	.
AFC-W314-A	Piper PA24-250/260 Comanche	08-03834	.
AFC-W316-A	Cessna (Non Turbo Charged) P206A, B, C, D, E U206A, B, C, D, E, F, G T210L, M	08-00652	.
AFC-W318-A	Cessna (Turbo Charged) TP206A, B, C, D, E TU206A, B, C, D, E, F, G T210L, M	08-01297	.
AFC-W321-A	Cessna Skyhawk 1721, K, L, M (3/8" Rocker Box Drain Lines)	08-00655	.
AFC-W322	Cessna Cardinal 177	08-01304	.
AFC-W323-A	Cessna Skyline RG 182	08-01306	.

CALL ON UNLISTED MODELS!

## AIRWOLF MINI AIR/OIL SEPARATOR



Reduce oil consumption and remove harmful water vapor with Airwolf's Walker Air/Oil Separator. The AirSep distills and recirculates crankcase oil vapor generated by normal operation, extending engine life.

The Airwolf Walker AirSeps uses a tiny amount of vacuum pump discharge air, to help condense the oil inside the AirSep, and to overcome crankcase pressure to return collected oil to the engine while the engine is running. The competitive systems are only gravity flow so no oil returns into the engine until the engine is completely shut off. Thus, one system is large enough to clean both the engine breather oil and wet vacuum pumps discharge. It

comes with a lifetime warranty on workmanship and material of all new AirSeps produced. STC'd

Airwolf Mini Air/Oil Separator ..... 08-05887 .....



## CHALLENGER FAA/PMA LIFETIME OIL FILTER SYSTEM

The challenger Lifetime Oil Filter System for piston engine aircraft, is the most technologically advanced oil filtration system in the last fifty years. Challenger's revolutionary technology oil filter assembly is machined from 6061-T6 aircraft billet aluminum. Inside the aluminum housing is a high flow, 22 micron, cleanable woven stainless steel filter element. Large inlet and outlet passages provide for a maximum oil flow rate of twenty two gallons per minute (22 GPM), double the flow of the largest "Throw-Away" oil filters. It's plain and simple, clean oil preserves piston engine components service life. You'll find that unscheduled removal of engine parts is a thing of the past, and parts that haven't reached their life limit can now be returned to service, saving a bundle on engine overhaul cost. Every year millions of throw-away oil filters and used oil is thrown into landfills. Challenger's cleanable oil

filter with up to 100 hours between oil changes will help reduce waste. One time Form 337 required for installation. Our cleanable oil and air filters are STC and PMA approved, therefore, a one time 337 is needed for installation.

C a en er	Rep ces	O r P/N	En ine Mo e	Price
CP-48103C 13/16-16 Thread w/o relief valve	CH48103-1	08-06017	LYCOMING O-320, IO320, O360, IO-360, LO-360, TO-360, HIO-360, LTO-360, LHIO-360 SERIES	.
CP-48104C 13/16-16 Thread w/o relief valve	CH48104-1	08-06018		.
CP-48108C 3/4-16 Thread w/o relief valve	CH48108-1	08-06019	CONTINENTAL 6-285, IO-346, IO-360, TSIO-360, O-470, IO-470, LIO-470, TSIO-470, IO-520, TSIO-520, GT- SIO-520, LTSIO-520, IO-550 SERIES	.
CP-48109C 3/4-16 Thread w/ relief valve	CH48109-1	08-06020		.
CP-48108C 3/4-16 Thread w/ Nipple w/o relief valve	CH48110-1	08-06021	LYCOMING O-235, IO-320 SERIES LIO-320, AIO-3230, AEIO-320, O360, IO360, AIO-360, HIO-360, LIO-360, TIO-360, LHIO-360, AEIO-360, O-540, IO-540, HIO-540, TIO-540, AEIO-540, LTIO-540, TIO-541, IO-580, IO-720 SERIES	.
CP-48109C 3/4-16 Thread w/ nipple w/o relief valve	CH48111-1	08-06022		.

## CHALLENGER ACCESSORIES

Bonanza Gasket	08-01041	.
Gasket C140 150 152	08-01043	.
Gasket C170 172	08-01044	.
Gasket c180 182 185	08-01045	.
Gasket PA28-151, 161	08-01046	.
Gasket Mooney 20E, F	08-01047	.
Gasket Mooney M20J	08-01048	.
Gasket Oval	08-01049	.
Gasket Piper Round	08-01050	.
Gasket C177 Cardnal	08-01264	.

EP

# AIR OIL SEPARATORS

## SLIME FIGHTER AIR-OIL SEPARATOR



Universal air-oil separator ideal for virtually any experimental aircraft. They are machined from aluminum stock and welded by a certified welder. Oil separation is provided by baffles attached on the inside. This is a one pipe system with no extra drain lines or hoses required.

Oil drains back immediately to the engine and warm air without oil goes out. No back pressure. The unit is the size of a salt shaker and weighs only ounces. Installation instructions and fittings included. Easy to install. Currently in use on over 100 RV aircraft.

P/N 08-00661 .....

## SUPER SLIME FIGHTER®



Following in the success of the Slime Fighter® series of air separators, Aircraft Spruce now offers the Super Slime Fighter with the same ease of installation for large Lycoming engines found in aircraft such as the RV-10, Glassair III and the F1 Rocket. Installs in 20 minutes with no additional drain line required. Instructions, clamps and hoses included.

RV-10 kit includes custom hose shape. Not FAA approved. Standard Experimental..... P/N 08-06151 .....

RV-10 Experimental ..... P/N 08-06152 .....

## HOMEBUILDER'S OIL BREATHER/SEPARATOR



These 4 inch diameter reservoirs have beaded outlets for 5/8" I.D. hoses and a mounting flange for easy firewall attachment. These units are of a new, improved design and the reservoir body is now a spun aluminum bowl for optimum performance. The oil separators minimize oil loss and allow free breathing of the engine. They are recommended for experimental aircraft use only and are not STC'd for any certificated aircraft. Size: 4" dia. x 3-3/8" h. P/N 10570.....

## RMJ-AERO OIL SEPARATOR



Designed to remove oil from the engine crankcase breather line providing the builder with a cleaner plane, less oil consumption, and prolonged engine life from maximum cooking, cleaning, & lubrication. Fashioned after Tony Bingelis's proven design, these separators incorporate several enhancements, including O-ring seals for the lid.

Fabricated from aircraft quality materials, TIG welded, and alodined for corrosion control. They can be firewall or cooling baffle mounted with the cushion clamp provided. The design allows for easy installation in the breather line by the use of hose clamps. Oil from the separator is returned thru tubing to a port in your engine's housing. Should your engine not have an available oil return port, RMJ-Aero can provide a Self Sealing Clamp-On Adapter utilizing your engine's oil filler neck. Installation of this adapter is easy for both flying and aircraft under construction. When clamped in place around the filler neck, the adapter provides a return port for separated oil and an integral seal, which prevents leakage. Installation & maintenance guidelines are included.

Description	Part No.	Price
Oil Separator for Lycoming (3/4" inlet/outlet)	08-00571	.
Oil Separator for Cont. (5/8" inlet/outlet)	08-00572	.
Adapter for Lycomings	08-00577	.
Adapter for Continentals	08-00578	.

## HOMEBUILDER'S ENGINE CRANK CASE OIL BREATHER



This is a 3-1/4" dia. can reservoir with a 3/4 od hose barb outlet, 1/8npt curtis drain valve on bottom of can, and a fire wall mounting bracket. Item also available with a 5/8 od hose barb outlet, please call or email for price & availability.

It keeps oil in can and off belly of airplane then can be drained later with petcock. Helps to keep crank case condensation to a minimum. Recommended for experimental aircraft use only not STC'd for certified aircraft. P/N 08-00765 .....

## AEROMAG



AeroMag is a powerful high-tech magnet assembly that fits around your oil filter to trap and hold steel particles against the inner wall of the filter canister. These are the particles that are missed by the standard aircraft filter. This results in fewer damaging wear particles recirculating in your oil, and prolonged engine life. Install is simple, and there are no moving parts. AeroMag fits all Lycoming & Continental engine filters. For experimental aircraft only (FAA approval pending). P/N 08-01088.....

AeroMag for 3" Dia. Filters (Rotax)..... P/N 08-01235 .....

## M-20 AIR-OIL SEPARATOR



The M-20 Air/Oil Separators for crankcase breathers have set the performance standards for aviation. A simple performance test for any separator is to fill the engine oil to the full mark and take a 2 hour flight. Only with the M-20 will the oil still read full with none blown out on the belly. This difference makes them preferred over all others. Only the

M-20 Separators carry FAA approval for all 1600 makes and modelos of certified piston aircraft from 45 hp to 950 hp. They are also applicable to all homebuilts and foreign made aircraft with similar power.

No vacuum pump connection is used, since the addition of as little as 1/16 PSI will make a new engine perform like it is run-out. M-20's vent the crankcase pressure and use only gravity for returning the oil.

The -A and -B suffix varies only in the direction of the oil return tube. On the -A models the direction is away from the inlet, on the -B towards the inlet. The -A's generally favor Lycoming, Franklin and radials, the -B's favor Continentals. Either may be mounted in-line; the -B may also be firewall mounted since it has a blank side.

typical airplane	el	art	rice
Model 300-A, 45 to 315 hp		08-00182	.
Model 300-B, 45 to 315 hp		08-00409	.
Model 400XL-A, 315 to 950 hp		08-00413	.
Model 400XL-B, 315 to 950 hp		08-00861	.
Model 300H-A, 45 to 315 hp		08-00411	.

## MODEL 605Y "Y" FITTING

The oil returns of both the M-20 Breather separator and the Wet Pump Separator may be combined using the Model 605Y. This "Y" fitting has a venturi for scavenging the drop-by-drop return oil from the breather separator by the stream of oil from the wet pump separator.

P/N 08-00862.....



## RAVEN AIR/OIL SEPERATOR

This oil/air separator, used in non aerobatic applications uses female threaded inserts so you can use any size of straight or angled fittings to custom fit your application. P/N 08-00798 .....

## ENGINE OIL CHIP DETECTION SYSTEM



The Chip Detector gives advance warning of possible excessive engine wear, which could prevent an impending failure. This early warning can also greatly reduce the cost of engine overhaul. Inexpensive and easy to install. It simply replaces the drain plug, and includes a warning light on the instrument panel which illuminates when metal chips bridge the gap in the magnetic probe, or when the press to test switch is activated. FAA approved (STC's) for all opposed Continental and Lycoming aircraft engines. Specify aircraft and engine make and model. Plus 14V or 28V. Available for installation in the oil filter or oil sump.

Single Engine Lyc. (Oil Filter).....	P/N 08-06762 .....
Single Engine Lyc. (Oil Sump).....	P/N 08-06766 .....
Single Engine Cont. (Oil Filter).....	P/N 08-06763 .....
Single Engine Cont. (Oil Sump).....	P/N 08-06765 .....

## ANDAIR OIL/AIR SEPARATOR



Manufactured from aircraft grade materials and anodised for corrosion protection, this unit is extremely light weight and rugged. The OS8850 has been designed to remove the oil from the crankcase breather on Lycoming and Continental Engines. This gives reduced oil consumption, cleaner aircraft, and environment. The CS850 has some unique features that make it the best

on the market.

\* Upper outlet can rotate through 360° allowing easy installation. \* The unit can be dismantled for inspection/cleaning. \* Vortex swirl separation. O-Ring seals. \* Light weight: 6.4 oz. \* 4 off 10-32 mounting lugs on the base of the separator for easy fire wall mounting. P/N 08-01034 .....

## ANDAIR CONDENSATION TRAP



This new device is a small and very light weight condensation trap. It is used to extract the water from the oil when used in conjunction with the Andair Oil / Air Separator. Water can build up in the engine due to water in the air condensing during a cold night.

Overnight this water sinks to the bottom of the sump settling at the lowest point. This is generally where the oil pump pick up is. Therefore there is a real potential that if one of these devices is not used water can build up in the engine. Flight test has shown that the worst possible condition for water in the oil is on humid days, cold nights and where short flights are undertaken..... P/N 08-01035 .....

# OIL COOLERS

## STEWART WARNER OIL COOLERS STEWART WARNER 8406R



Stewart Warner South Wind 8406R (formerly Harrison P/N 8526250). Applicable to all Lycoming installations from 4-cylinder IO-235 through 6-cylinder IO-540 engines. Inlet & outlet ports accept 3/8" pipe fittings. Fits Beech B-19 Sport (0-320-E2C), C-23 Sundowner (0-360-A4G), Muskateer (0-360-A2G), Cessna 172 Skyhawk (0-320-E2D), 177 Cardinal (IO-360-AF6D), 177 Cardinal RG (0-360-AFGD), Mooney Ranger (0-360-A2D). Size: 7.75"l x 3.5"d x 4.75"h. Wt.: 4 lbs.

Model 8406R ..... P/N 8406R .....

el R Fits Beech A24R Sierra (IO-360-A2B), Mooney Chaparral (IO-360-A1A), Mooney Mark 22 (TIO-541-A1A). Weight 4 lbs. size: 5-3/4"Hx8"Wx3-5/8"L ..... P/N 8432R .....

el R Fits Piper Single Engines..... P/N 10611R .....

el R Fits Cessna and Stoddard..... P/N 10599R .....

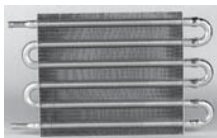
el R Fits Gulfstream AA-1 ..... P/N 10578R .....

el R Fits Cessnas ..... P/N 10610R .....

el R Fits Piper, Cessna, Mooney .. P/N 10614R .....

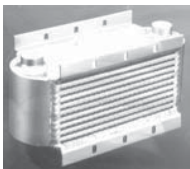
el R Fits Gulfstream AA5B, GA-7.. P/N 10568R .....

te The oil coolers manufactured by Stewart Warner will fit the aircraft listed but in most cases are not furnished with the FAA/PMA certification for those aircraft. The exceptions are P/N 8406R and P/N 8432R are furnished with FAA/PMA approval for certain Mooney aircraft. For all other applications, Form 337 field approvals are required for installation on certificated aircraft. Call for further information.



## LIGHTWEIGHT OIL COOLER FOR HOMEBUILTS

Lightweight, compact oil cooler improves cooling in closely cowled homebuilts. Mounts in any position. Furnished with 4 ft. of 5/16" I.D. hose and 4 clamps. Size 7-1/2H x 12-3/4L x 3/4D. P/N 403 .....



## POSITECH OIL COOLERS

PosiTech factory new oil coolers are designed for use on experimental aircraft such as RV-4, 6, & 8, Glasair, Lancair, & Europa. Offered at exceptional savings compared to equivalent coolers. 2-yr/2000-hour warranty.

Posi-Tec Part No.	No. of Oil Passes	Overall (WxHxD)	PC No.	Applications	Original P/N	Price
P10578C	4	8"x 3.68"x 3.62"	4213MN	O-200	08-01285	.
P10568C	5	8"x 4.17"x 3.62"	4212MN	O-300	4212	.
P20002C	6	8"x 4.66"x 3.62"	4211MN	O-360	4211	.
P20003C	7	8"x 5.15"x 3.62"	4220MN	O-360	08-01286	.
P20004C	8	8"x 5.64"x 3.62"	4215MN	IO-360	4215	.
P20005C	10	8"x 6.62"x 3.62"	4216MN	IO-360	4216	.
P20006C	11	8"x 7.11"x 3.62"	4219MN	IO-540	4219	.
P20008C	14	8"x 8.63"x 3.62"	4221MN	IO-540, Hell.	08-01287	.
P10634C	12	8"x 7.60"x 3.62"	4222MN	IO-540	08-01288	.
P20104C	8 Two Pass	8"x 5.64"x 3.62"	4214MN	Various	4214	.
P10641C	9 Two Pass	8"x 6.13"x 3.62"	4217MN	Various	08-01289	.
P10631C	11 Two Pass	8"x 7.11"x 3.62"	4218MN	Various	08-01290	.
P010904	9	11.25" x 5.35" x 1.25"	4228MN	Rotax	08-01291	.

## OIL COOLER APPLICATION CHART

Aircraft Model	Aero-Classic Part No.	Positech Part No.	Stewart Warner Part No.
Beech 10, C23, A24R, C24R	8000075	4211	8406R
Cessna 150,152,A152,170,170,172,175,177	8000075	4211	8406R
Experimental	8000081	4215	10599
Piper PA23-150, PA28-140, PA23-160 (SN 23-163 up), PA28-150, -151, PA28-160, -161, PA28-180, -181	8000075	4211	8406R
PA18, PA18A, PA22-135, -150, -160	8000328		
Pitts S2B	8000215	4219	10611
Stinson 108, 108-1, -2, -3	8000075	4211	8406R
Taylorcraft F22B, F22C, F22R	8000075	4211	8406R

## AERO CLASSIC OIL COOLERS



Aero-Classic oil coolers are ideal for experimental aircraft and offer superior performance, lighter weight, and lower cost. In side by side tests, these aluminum plate and fin engine oil coolers out performed competitive models. Pressure tested at 400 PSIG and corrosion protected per MIL-C-5541 Class 1A. AERO-Classics oil cooler P/N 8000307 is FAA-PMA for installation on TCM IO-520-A, D, E, F, J, K, and L series engines. P/N 8000307 is also an FAA-PMA replacement for Niagara P/N 20618A and TCM P/N 654593 oil coolers. AERO-Classics oil cooler P/N 8000319 is FAA-PMA for installation on TCM O-470-F, K, L, R and IO-520-A, D, E, F, J, K, and R series engines. P/N 8000319 is also an FAA-PMA replacement for Niagara 20446A and TCM P/N 639151 oil coolers.

Model No.	No. Plates	Dimensions (WxHxD)	Wt. (Lbs)	Part No.	Price Eac
8000075	7	8.14"x 4.52"x 3.62"	1.74	08-00640	.
8000074	9	8.14"x 5.33"x 3.62"	2.08	08-00641	.
8000081*	10	8.14"x 5.74"x 3.62"	2.25	08-00642	.
8000215	13	8.14"x 6.96"x 3.62"	2.79	08-00643	.
8000216	17	8.14"x 8.59"x 3.62"	3.46	08-00644	.
8000353	18	8.14"x 9.00"x 3.62"	3.82	08-00808	.
8000328	bar&plate	7.02"x 3.00"x 3.62"	2.80	08-00809	.
8000343	9x2	8.14"x 5.75"x 3.62"	2.23	08-00810	.
8000356	bar&plate	11.38"x 7.25"x 3.50"	4.48	08-00811	.
8000357	bar&plate	11.38"x 7.25"x 3.50"	4.48	08-00812	.
8000307	11	7"x 4"x 12"	7.00	11-03590	.
8000319	11	7"x 4"x 12"	7.00	11-03591	.

el i apprv

EP

# OIL COOLERS

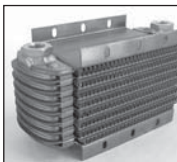
## AERO CLASSIC CONTINENTAL OIL COOLERS



Pressure tested to 300 PSIG. Optimized internal oil flow design. Corrosion Protection per MIL-C-5541, Class 1A.



AERO Part	TCM Part	7th St	FAA-PMA Eligibility	P/N	Price
8000545	639171	NO	0-470-R, S, U IO-550-D, E, F, L IO-520-A, D, E, F, J, K, L TSIO-520-C, G, H, M, P, R, T, AF, CF	08-04961	
8000677	654595	YES	IO-550-D, E, F, L IO-520-A, D, E, F, J, K, L TSIO-520-C, G, H, M, P, R, T, AF, CF	08-04962	
8000319	639151	NO	IO-470-F, K, L, R IO-520-A, D, E, F, J, K, L	08-04963	
8000307	654593	YES	IO-520-A, D, E, F, J, K, L	08-04964	
8000531	639152	NO	O-470-M IO-470-D, U, V IO-520-A, D, E, F, J, K, L	08-04965	
8000127	652759	YES	IO-520-A, D, E, F, J, K, L	08-04966	
8000683	626189	NO	O-470-B, J, K, L, M, R IO-470-D, F, L, M, S IO-520-A, D, E, F, J, K, L /TSIO-520-AE	08-04967	
8000687	65271	YES	IO-520-A, D, E, F, J, K, L /TSIO-520-AE	08-04968	



## NDM OIL COOLERS

NDM is one of the world's largest volume manufacturers of FAA approved oil coolers. An approved supplier to both Lycoming and Continental, as well as many airframe manufacturers, NDM holds FAA/PMA's for most of these oil coolers. NDM oil coolers are manufactured utilizing the vacuum oven brazing process rather than the less costly

Controlled Atmosphere Brazing (CAB) method used by others to save costs. Utilizing the vacuum oven process guarantees a high quality product and lower warranty returns. If you are not sure which NDM oil cooler is FAA Approved for your aircraft, please provide the aircraft model & serial number and we will determine the correct oil cooler for your application.

Part No.	NDM P/N	Stewart Warner P/N	Price
08-00739	20001A	N/A	
08-00740	20002A	8406R	
08-00741	20003A	N/A	
08-00742	20004A	10599R	
08-00743	20005A	N/A	
08-00744	20006A	10611R	
08-00745	20007A	N/A	
08-00746	20008A	10614R	



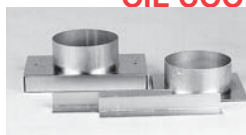
## X-SERIES OIL COOLERS BY AIRFLOW SYSTEM

The first new aircraft oil cooler design in 50 years. Computer modeling and flight testing have been used to develop coolers that deliver significantly lower oil temps with no increase in oil cooler size or oil pressure drop. Designed as a direct replacement for popular oil coolers used in experimental aircraft,

the X- SERIES oil coolers are built to Airflow Systems specifications and certified aircraft oil cooler standards. Flight testing on the popular RV series of aircraft has shown oil temperature drops of 10 -15 degrees F for coolers of the same size in the same location. Not FAA approved.

Model	Horsepower	PN	Price
2006X	160 hp to 280 hp	08-06154	
2008X	280 hp to 390 hp	08-06155	

## OIL COOLER DUCT SYSTEM



This economical duct system provides the aircraft builder with a simple way to route cooling air to Stewart Warner style oil coolers. Manufactured from .040 aluminum, this kit was designed for use on RV series aircraft but is ideal for virtually any homebuilt using a firewall mounted oil

cooler. Kit includes baffle duct, oil cooler duct, hardware, & installation instructions. P/N 08-05000..... ea

## ADC OIL COOLER ADAPTER KIT



The ADC Oil Cooler adapter is a direct replacement for Lycoming adapter LW14959 which is no longer produced. The ADC adapter allows installation of an oil cooler on Lycoming 0-235 and 0-290 series engines providing much needed oil cooling and enhanced performance. The ADC adapter is machined from solid bar stock, rather than cast like

the Lycoming adapter, thus producing a stronger and leak resistant product. The ADC kit is STC'd for all 0-235 (E-223) & 0-290 (E-229) and is ideal for certificated and homebuilt aircraft using these engines. Adapts to virtually any oil cooler and attaches to the engine underneath the oil screen housing.

P/N 07-06950.....

## OIL COOLER AIR DUCTS



This lightweight air transition system provides the aircraft builder with an easy and simple way to supply cooling air to a firewall mounted oil cooler. Manufactured from composite materials, this duct system was designed to effectively and efficiently route cooling air to the oil cooler, thereby increasing the performance

of any oil cooler installation. Kit includes instructions and is made in the USA.

Part No.	Application	Price
08-01281	20002A Niagara, 800075 Aero Classics 8406R Stewart Warner, P20002C PosiTech	
08-01282	20004A Niagara, 800081 Aero Classics 10599R Stewart Warner, P20004C PosiTech	
08-01283	20006A Niagara, 800215 Aero Classics 10611R Stewart Warner, P20006C PosiTech	

## TUNDRA IN-FLIGHT ADJUSTABLE OIL COOLER COVER



The Tundra Cover is designed to fit your Rotax radiators either from the front or rear. It is in-flight adjustable so you have complete control of your engines' temperature at all times.

In-Flight adjustable to give you complete control of your engines' temperature at all times. Control the Tundra Covers from the cockpit with precision and ease. Can adjust full open (giving approx. 80% airflow) to full closed or anywhere in between.

Installs easily with all hardware supplied using only simple tools.

PN 13-05601.....

## TUNDRA GROUND ADJUSTABLE OIL COOLER COVER



A new ground adjustable Oil Cooler Cover is now available for your Rotax 912 or HKS engine.

Comes complete and ready to install. There's a better way to get your engine's oil temps back in the green, so get rid of that Duct Tape and cardboard!

PN 13-05602.....

## OIL DIPSTICKS



New manufacture oil tank dipsticks stamped with proper calibration markings.

Dipstick Long Neck.....	P/N 08-00037.....
Dipstick Short Neck.....	P/N 08-04612.....
Dipstick Shrt NK 0-200&C-90.....	P/N 08-04613.....
Dipstick Ercoupe Long Neck.....	P/N 08-04614.....

**VERNI-THERM VALVE** - Lycoming thermostatic oil cooler bypass valve wt. 4 oz. P/N 53E19600.....

# OIL ANALYSIS KITS - ENGINE TREATMENT

## METAL CHECK OIL FILTER TEST KIT



Includes oil and oil filter analysis. Oil filter debris analysis should be part of all preventative maintenance programs. Piston engines generate fine wear and larger particles as the wear becomes more critical. Filter analysis is critical for turbine engines because they generate predominately larger wear particles that are trapped by small micron filtration. The oil filter is rinsed and the exact alloys presents in the debris are determined by SEM/EDXRF. The AMS number, amount, type, form, and condition of the particles are reported. Features: • Largest Oil Analysis Results Database • The Most Accurate Interpretive Results Guidelines • The Most Experienced staff. • Recommended, Approved, or Authorized by Engine Manufacturers. • 24 Hour a Day Service Available 7 Days a Week • Filter Debris Analysis and Alloy Determination Using Scanning Electron Microscopy Energy Dispersive X-Ray Fluorescence SEM/EDXRF. P/N 08-06270.....



## AOA OIL ANALYSIS KIT

Why not take the extra worry out of flying: Examine the interior condition of your aircraft engine with Aviation Oil Analysis. How would oil analysis help you? Safety is the main factor for oil analysis. Preventive maintenance that can be done on the basis of reports can save you money by: Replacement of worn parts prior to total engine failure. Ability to schedule maintenance at your local FBO, rather than emergency repairs away from home. Minimum down time for equipment. Possible longer time between overhauls.

Small vial, mailing bag, shipping form and instructions are furnished with order. Upon receipt at the laboratory in Phoenix, Az., the oil sample is analyzed and a full report is forwarded in 24 hrs. AOA, unlike others, specialize in aviation analysis only so are most perspective in their findings.

Kit for reciprocating engines..... P/N 08-00436.....  
Kit for turbine engines..... P/N 08-00435.....

## LAB ONE AVIATION (LOA) OIL ANALYSIS KIT



Oil is the life blood of your engine. An aviation oil analysis can forecast future engine problems and save you money. This kit includes a sample bottle, shipping container and the paperwork. Upon receipt, your sample will be processed within 24 hours with the results emailed or mailed from Lab One in Phoenix, AZ. Kits can be used on any reciprocating or turbine engine and helicopter transmissions and tail rotors. P/N 08-01222.....

## CHAMPION CH48200 OIL FILTER ANALYSIS KIT



Champion Oil Filter Analysis Kit can help you detect abnormal engine wear and even predict impending engine trouble, because it provides a comprehensive analysis of both the larger wear particles in the oil filter and the finer wear particles in the engines oil. With this Kit you will get a detailed report on the filter element and the oil that is based on the state of the art analytical techniques and lab results interpretation. The report will be generated within 24 hrs of the receipt of the sample, and cost less than 1 hour of lab maintenance in the shop! ac it ntain te ll in item •Customer Information Form (CIF) •Plastic Oil Filter Bottle •Oil Sample Bottle •Oil Sample Hose •User label for Oil Filter Bottle •User label for Oil Sample Bottle •Shipping label address to Aviation Laboratories •The laboratory analysis of the oil filter debris and oil sample included in the price of the kit (if sent with the oil filter). The filter can be returned; however, the cost of this is not included in the price. P/N 08-01051.....

## AVIATION SERVICE REMINDERS

These reminder cards provide an excellent maintenance reminder for aircraft owners. They attach by static cling, leaving no residue on the windshield. Cold weather or hot, they stick in the corner of the windshield to remind the pilot of oil status every time they fly.

P/N 08-42305..... 10/pk



## NEXT AIRCRAFT SERVICE DUE - STICKERS



Printed on white semigloss with black type and "FILL IN" blanks. Removable decals are designed to adhere to any surface and not leave residue behind. Measure 3.0" h x 2.75" h. Fields include: \* Tail Number \* Oil and Filter Change (Last and next hour and date) \* Annual Inspection Due Date (Month and Year) \* ELT Battery Due Date (Month and Year) \* Transponder Test / Inspection Due Date (Month and Year) \* Altimeter & Static System Test Due Date (Month and Year) \* 100 Hour Inspection (Last and Next) P/N 09-02137.....

## VPCI-326™ CORROSION INHIBITOR OIL ADDITIVE



An approved Lycoming engine oil additive for prevention of oxidation of all metals. Designed for use in engine oil at 1:10 concentration, VpCI™ (Vapor Phase Corrosion Inhibitors) will protect your engine from corrosion (in solution and in all void spaces) for up to 3 years during storage. For hydraulic oil and gearbox assemblies. Performs effectively under the adverse conditions of 100% relative humidity, and in the presence of such corrosive species as chlorides, sulfur compounds or hydrogen sulfide. There are no hazardous chromates, nitrites or phosphate inhibitors, and it utilizes the finest paraffinic petroleum distillates as carriers. Possesses an exceedingly high flash point, enhancing in-plant safety when compared to common oil protectants. It comes in concentrate form, which is easily diluted with lubricating, hydraulic or preservative oils, saving shipping and inventory expense. Not only effective on ferrous metals, but also effective on zinc, aluminum, galvanized steel, copper, cadmium, silver, brass and many other alloys. Can be upgrade most lubricants in their anti-corrosion ability. Passes through 1 micron filter. Conforms to MIL-PRF-46002C. Conforms to MIL-I-85062 (Additives to oils). Conforms to MIL PRF-16173E. • NATO 6850-66-132-6100. • NSN 6850-01-470-3358 P/N 09-02002.....

## CAMGUARD OIL ADDITIVE



Designed to dramatically improve the performance of all mineral based, semi-synthetic and fully synthetic motor oils in the areas of corrosion protection, wear reduction, and seal protection. Designed to make regular engine oil what it needs to protect and lubricate any engine. A synergistic blend of advanced oil additives from all over the world, designed to reduce wear, curb deposit formation and more importantly protect engines against rust and corrosion. It contains multiple corrosion inhibitors for both ferrous and non-ferrous metals. A combination of ashless anti-wear compounds, anti-oxidants designed to reduce carbon deposits and special seal conditioners to prevent oil weeping. Camguard is FAA accepted and approved for use in piston engine aircraft oils meeting SAE-1899 standards. Compatible with piston aircraft oils, passenger car motor oils, most marine oils, and heavy-duty diesel oils. Camguard aircraft oil additive 1 pint..... P/N 08-07096.....  
Camguard aircraft oil additive Case of 4 pints..... P/N 08-07097.....

## MICROLON AIRCRAFT ENGINE TREATMENT



One-time metal treatment that virtually eliminates friction in all internal combustion engines which improves performance (horsepower), reduces wear, and extends engine life. Also decreases fuel consumption, reduces oil consumption, and lowers operating temperatures. Impregnates the engines bearing surfaces, forming a dry film lubricant that lasts no matter how many times the oil is changed. Continental A-65, C-85, and C-90 engines take the Half Kit. Most Lycoming and Continental engines used in light aircraft take the Single Kit. Turbocharged and Radial engines take from 2 to 6 Single Kits. Call for details if you have any questions on the quantity of Microlon needed for your application. Microlon CL-100 Aircraft Kit (Single)..... P/N 09-35805.....  
Microlon CL-100 Aircraft Kit (Half)..... P/N 09-35810.....

## FRICTION MASTER IT



Friction Master Engine treatment is an oil additive that enhances the engine performance in many ways. Friction Master has fluoropolymer (PTFE) particles penetrate the metal surfaces leaving a surface with a lower coefficient of friction. In essence the metal-to-metal contact is changed to a PTFE to PTFE contact which is more efficient, meaning less energy is used to overcome friction. it is for engines up to 300 cubic inches, (approx. 125 HP max.) P/N 05-04302.....  
it is for engines up to 600 cubic inches, (approx 400 HP max.) P/N 05-04303.....

## POLY-FIBER ESO ENGINE STORAGE OIL



A fine lubricating and preservative oil used to prevent corrosion in internal combustion engines during extended storage. MIL-1-21260. Quart..... P/N 09-42450.....  
Gallon..... P/N 09-42455.....

## GOLDEN SPECTRO 2-CYCLE ENGINE OIL



A modern synthetic blend that surpasses the lubrication and protection ability of petroleum oils. Formulated with clean-burning synthetics, it will not foul spark plugs. High film strength components ensure complete protection against piston seizure and scuffing due to inadequate lubrication. Special additives protect against rust and corrosion. Leaves your engine free of harmful deposits and offers essentially smoke-free operation when used at the recommended ratios. P/N GS001.....

# AVIATION OIL - GREASE

## AEROSHELL AVIATION OILS



Aeroshell W100 is an ashless, SAE 50 dispersant oil that provides excellent service in all four cycle aircraft piston engines. Aeroshell W Multigrade 15W-50 is an antiwear, ashless, dispersant, semi-synthetic oil. It is fully approved in all Lycoming, Continental, and Pratt & Whitney aircraft piston engines. Reduces engine wear, fuel consumption, and oil consumption. Helps engines start faster and eliminates the need for seasonal oil changes. Aeroshell W100 Plus contains additive LW16702 which reduces engine wear and corrosion. Ideal for operations in mild to warm temperatures. Aeroshell W100 & SAE 50 oils meet MIL-L-22851C specification. Aeroshell Turbine Oil 500 provides superior high temperature corrosion protection & excellent anti-wear protection. Shell Oil W80 Plus introduces the anti-wear and anti-corrosion additives of AeroShell W100 Plus engine oil into a lighter, single-grade oil for use in colder climates. The anti-wear additive reduces wear on start-up by forming a microscopic layer on the engine's moving parts to prevent metal-to-metal contact when there is little oil present. Combined with a corrosion inhibitor, it is designed for pilots who fly either in cooler weather or less frequently.

Description	t. P/N	Price/ t.	Case P/N	Price/Case
W80 Plus	08-05920		08-05919	
W100 SAE 50	08-05400		08-05401	
15W-50 Multigrade	08-05450		08-05451	
W100 Plus	08-05485		08-05486	
Mineral Oil	08-05410		08-05411	
Turbine Oil 500	08-00581		08-00582	
20W-50 Mineral oil	08-05310		08-05311	

## AEROSHELL OIL SPORT PLUS 4



AeroShell Oil Sport Plus 4 is ideal; as it is extremely resistant to the immense shear forces that occur in areas of high-pressure contact such as high-speed gearboxes, valve trains, bearings, pistons and liners. This is where the blend of base oil and additives is most crucial. AeroShell Oil Sport Plus 4 is made up of a blend incorporating synthetic technology and high performance additives to provide long lasting protection. In addition, detergents in the oil keep important areas, such as the pistons and cylinders, clear of carbon based particles that tend to adhere to these surfaces. So when you change your oil to new AeroShell Oil Sport Plus 4, you are not only removing dirt from your engine, you are also replenishing the additives used to protect your engine during normal operation.

4 Cycle Sport Plus 4 Oil (Liter) ..... P/N 08-07048 .....  
 4 Cycle Sport Plus 4 Oil (Case of 12) ..... P/N 08-07047 .....

## 2 Cycle Sport Plus 2 Oil Available Early 2009!

## PHILLIPS 66 X/C AVIATION OIL



X/C oils provide easy starting and quick lubrication under low temperature conditions. Provides film strength and low wear under high temperature conditions. Provides excellent protection against engine deposits, ring groove carbon, piston lacquer, crankcase sludge and oil oxidation. Contains ashless dispersant which keeps engine clean. With more than 10 years of outstanding field performance, X/C oil meets Avco-Lycoming & Teledyne Continental engine specifications.

Description	t. P/N	Price/ t.	Case P/N	Price/Case
X/C 20W-50 Av. Oil	08-05300		08-05301	
20W-50 Mineral oil	08-05310		08-05311	

## PHILLIPS 25W-60 ENGINE OIL GALLON



X/C 25W-60 is the first and only multiviscosity aviation oil designed and approved for radial engines originally designed to run on 120 grade. Pilots and mechanics will notice immediate benefits with X/C 25W-60 over single grade oils. Benefits such as improved oil flow at startup, quicker warm-up time, cooler operating temperatures and a cleaner operating engine. X/C 25W-60 also has proven corrosion protection in extreme conditions. X/C 25W-60 can be used year-round, during break-in and on TBO. P/N 08-00885 .....

## EXXON ELITE AVIATION OIL



Exxon Elite™ 20W-50 is a multigrade oil with the flexibility to lubricate effectively over a wider range of temperatures than monograde oils. Compared to a monograde oil, a multigrade oil provides better cold-start protection and a stronger lubricant film at typical operating temperatures. Other benefits include lower oil consumption and better fuel economy as a multigrade oil, Exxon Elite™ 20W-50 has all these intrinsic advantages. • Meets SAE J1899 • Meets MIL-L-22851D (obsolete) • U.S. military approved • Contains anti-wear/anti-scuffing additive required by some Lycoming engines • FAA approved fluid for Alternative Method of compliance w/AD-80-04-03-R2, paragraph b.1

Quart ..... P/N 08-00392 .....  
 Case ..... P/N 08-00432 .....

## CASTROL AD & S PISTON OILS



Castrol® Aviator AD piston oils are formulated from selected, highlyrefined mineral basestocks blended with an advanced additive system designed to enhance low temperature fluidity, high temp. stability, corrosion inhibition and anti-wear protection. The additive system is ashless and of a dispersant nature offering greater engine cleanliness and maximum protection.

Oil	arts P/N	Price	Case P/N	Price
Aviator S65	08-00923		08-00915	
Aviator S80	08-00924		08-00916	
AviatorS100	08-00925		08-00917	
Aviator S120	08-00926		08-00918	
Aviator AD65	08-00927		08-00919	
Aviator AD80	08-00928		08-00920	
Aviator AD100	08-00929		08-00921	
Aviator AD120	08-00930		08-00922	
Aviator A80	08-06992-1		08-06992	
Aviator A100	08-06993-1		08-06993	
Aviator A120	08-06994-1		08-06994	

## LYCOMING OIL ADDITIVE



Avco Lycoming has approved oil additive LW-16702 that contains an anti-scuffing agent and can dramatically reduce engine wear. This additive is applicable to all Avco Lycoming piston aircraft engines, and factory recommends use at every oil change or every 50 hours, whichever occurs first. For 6-8 qt. sump, use one 6 oz. can, for 12-15 qt. sump, use (2) 6 oz. cans, for 17-19 qt. sump, use (3) 6 oz. cans, for 23 qt. sump, use (4) 6 oz. cans. 6 oz. can ..... P/N 08-05600 .....

## PENN OIL OIL



Two-cycle oil for air-cooled engines. Recommended by engine manufacturers for air- and water-cooled engines.

8oz. Single Bottle ..... P/N 08-06261 .....  
 16 oz. Single Bottle ..... P/N 08-01240 .....  
 Case of 24 8oz. Bottles ..... P/N 08-06260 .....

## AVIATION GAS TURBINE OILS

Case quantities are 24 quarts.

Oil	t. P/N	Price	Case P/N	Price
Aeroshell Turbine 500	08-00581		08-00582	
Aeroshell Turbine 555	08-00757		08-00758	
Aeroshell Turbine 560	08-00759		08-00760	
British Petroleum 2380	08-00761		08-00762	

## AEROSHELL GREASES

Mineral Grease #5 (MIL-G-3545C) ..... P/N 08-05455 .....  
 General Purpose Grease #6 (MIL-PRF-24139A) .. P/N 08-05460 .....  
 Synthetic Grease #7 (MIL-PRF-23827C) ..... P/N 08-05475 .....  
 Mineral Grease/Helicopter #14 (MIL-G-25537C) .. P/N 08-05480 .....  
 Synthetic Grease #22 (MIL-PRF-81322G) ..... P/N 08-05490 .....  
 Synthetic Lithium Grease #33 (MIL-PRF-23827C) . P/N 08-00825 .....  
 Syn. High Pressure Grease #33MS(MIL-G-21164D). P/N 08-00824 .....

## MOBIL GREASE 28



Mobilgrease 28 meets the quality level of U.S. Military Specification MIL-G-81322E, General-Purpose, Aircraft, and is approved against U.S. Military Specification DOD-G-24508A (Navy) for shipboard auxiliary machinery. It can be designated U.S. Military Symbol WTR and NATO Symbol G-395. P/N 08-06157 .....

## ENGINEGUARD AERO OIL ADDITIVE



EngineGuard Aero is corrosion inhibiting oil additive for protecting aero engines over winter or for inhibiting an engine for prolonged periods. Combining both powerful contact and vapour phase corrosion inhibitors, it provides an unprecedented level of protection against internal corrosion. Engine Guard Aero is supplied in 250ml tins.

EngineGuard Aero has been specifically formulated to provide outstanding protection to Aero engines that are used infrequently or that are inhibited and in long term storage. P/N 09-02068 .....

## MOBIL JET OIL II (AVIATION)



If you believe that one synthetic jet engine oil is the same as another, we have good news to share. They are not. Mobil Jet Oil II is a one-of-a-kind performer. No Standard Type II commercial aviation oil helps control jet engine deposits better than our products. Mobil Jet Oil II helps keep oil systems clean. That can mean less maintenance more flying and greater revenue. Mobil Jet Oil II has a history of helping to keep aircraft where they belong - in the air generating revenue. Let us show you what the world's most reliable lubricant for gas turbine engines can do for your fleet. Today, about 160 major airline use Mobil Jet Oil II in more than 11,000 gas turbine engines. Plus it can be less maintenance, more flying and greater revenue. QT ..... P/N 08-00763 .....  
 Mobil Jet II Case ..... P/N 08-00764 .....

# FUNNELS OIL DRAIN SYS—CABIN HEATERS



## CLEAN FUNNEL™

Clean Funnel™ is the funnel that keeps itself clean. Replacing the caps on each end after each use prevents left over fluid from dripping out, and keeps your work area or baggage compartment clean. No need to wipe your funnel out with a rag before reusing. Clean Funnel™ is ideal for use with fuel or oil as well as windshield washer fluid, detergents, antifreeze, hydraulic fluid, and more. Great for aircraft, automobiles, motorcycles, tractors, boats, ATV's snowmobiles, and more.

- Model 112 (turquoise) has a 1 pint fluid capacity and a 12" vinyl tube attached to its spout, making it very handy to reach into small or tight spaces.
- Model 415 (red) has a 1-1/2 quart capacity, 17" long with flexible spout, and spout I.D. is 9/16".
- Model 428 (black) has 1-1/2 quart & 13-1/4" long with a flexible spout and 1-1/8" O.D. spout.

Model	Color	Part No.	Price
112	Turquoise	12-00374	
415	Red	12-00375	
428	Black	12-00376	

## DISPOSABLE FOLDING OIL FUNNELS

These disposable funnels are very popular among aircraft owners and pilots for adding engine oil. They store flat, clean and dry in a recloseable bag, and eliminate the messy cleaning when using a regular funnel. Also ideal for brake fluid, resins, and paints. Furnished in pack of 10 funnels.

Pack of 10.... P/N 08-00040.....

## LYCOMING OIL SCREEN ADAPTER

This oil screen adapter replaces the standard Lycoming oil screen housing on Lycoming 0-320 series engines and up. It retains the thermistor valve and the oil temperature sender but eliminates the oil screen, eliminating the need for constant service.

P/N 08-06752.....

## OIL DRIP PAN

The drip pan is 54-1/2" x 32-1/2" x 2" and is manufactured out of an extremely durable and chemical resistant plastic (high density polyethylene). White in color, our drip pan is neat and clean in appearance

and allows for easy visual inspection and monitoring of any engine leaks. The size and design of the drip pan will collect virtually any leaking fluids and eliminate the need for five quart pails and other messy collection containers. It is also a convenient place to pour fuel samples. Specifically designed for general aviation... P/N 08-06700.....

## DRIP TRAP - OIL ABSORBENT

Drip Trap is a mat made of corn stalks which captures oil, coolant, and other aviation fluids that can drip from the aircraft. Drip Trap measures 20" x 20" and can absorb up to 6 quarts of oil.

It won't blow away, can be driven on, won't tip over like a drip pan, and can be walked on without tracking the fluids on the hangar floor. Excellent for use with aircraft, cars, SUV's, trucks, motorcycles and in shops. When Drip Trap is fully saturated just dispose of it and replace. Drip Trap is the environmentally friendly and economical way to capture and contain drips and spills.

P/N 13-04950.....

## DRAIN MATE

The patented Drain Mate is a handy new pilot tool that works like a second pair of hands. Great for complete draining of motor oil bottles and other fluid containers, Drain Mate saves time, money, and frustration. Simple to use. The spring clamp attaches to the funnel, bucket or bowl. Bend or flex it to near vertical drain position, then insert bottle for final draining (after conventional bulk removal). Depress finger tabs to clamp/unclamp bottle. The Drain Mate can also be used for other draining chores around the hangar, home, garage, marina, and shop.

P/N 08-00570.....

## OIL UIC DRAIN PROBE ITS

STC SA4024NM - Drain oil in wind or shop with little clean up. - Save money on clean up, solvent, labor and parts. - Oil goes into bucket with out splashing or spilling.

Approved for Cessna Aircraft Models: 210J through 210 R, T210J through T210R, P210H through P210R, 337 through 337H, T337H through T337H, and P337H 310 through 310R, T310P through T310R 320 through 320F, 340, and 340 A401 through 401B, 402 through 402C, 404, 411, 411A, 414, 414A, and 421 through 421C

Description	Part No.	Price
Single Engine Cessna Oil Quick Drain Kit Includes: 1 STC Paper Work, 1 Probe, 1 Valve With o-ring, 1 AN900-10 Gasket	12-02101	.
Twin Engine Cessna Oil Quick Drain Kit Includes: 1 STC Paper Work, 1 Probe, 2 Valve With o-ring, 2 AN900-10 Gasket	12-02102	.
Nylon probe only	12-00697	.



## EVANS NPG + COOLANT FOR ROTAX ENGINES

NPG+ is new coolant providing dramatic improvements in heat transfer and viscosity that make the new fluid a "pour-in," not requiring changes to cooling system components. NPG+ waterless coolant virtually eliminates boil over in gasoline or diesels - the waterless coolant allows engines to tolerate running hotter, without boiling over, and allows the cooling system to run at very low or no pressure. Because there is no water in the system engines operating with NPG+ will be free from corrosion and electrolysis, and the engines will run well no matter how hard they are driven or how hot or cold the environment is. Specified coolant for Rotax Aircraft Engines, Type 912 and 914 (series).

P/N 08-04535.....

## EVANS PREP FLUID

Evans Waterless Flush is used when systems cannot be drained properly of all the conventional water and antifreeze. Suggested to be used with experimental aircraft conversion and all motorcycle, ATV and import cars. Not intended to be used as a coolant.

P/N 08-04534.....

## EXXON OIL BOTTLE ADAPTER

This adapter allows easier pouring from the large mouth Elite oil bottles in certain aircraft and includes a built-in valve to allow the flow of oil to be regulated. .... P/N 08-01042.....

## OIL VALVE - THE SPILL STOPPER

Oil Valve The Spill Stopper

• Takes the mess out of adding oil • On/Off control • No more spills • Re-usable P/N 13-02833.....

## OIL BUDDY (NO SPILL)

For do it yourself oil changes or refilling small tanks in lawn mowers, snowblowers and chainsaws, Oil Buddy is your best tool. Eliminating the messy cleanup and spillage problems, Oil Buddy gets the job done fast and easy without getting your clothes dirty. For small fill ups, the Oil Buddy screws onto the head of the oil container and can be left there for further use if the bottle is still partially full. When the valve is closed, oil can't get out and dirt can't get in. Even if the oil container gets knocked over, no spillage will occur. Fits most 1-Quart /1-Litre bottles.

P/N 13-03144.....

## OIL AND OIL FILTER RECYCLING CONTAINERS

**Distinctive Features:** • Attractive, user-friendly design • Wide-mouth drain pan / lid make oil changing easy and neat. Snug-fitting top prevents spillage. • Large capacity. • Holds oil and filters for at least two average oil and oil filter changes. • Size: 4-1/2 gallons. Color: Yellow • Unique filter tray. • Filters drain on tray allowing for clean handling and removal. • Environmentally friendly. • Container's lid and tray are made of post-consumer recycled plastic. P/N 08-04975.....

## RANS AIRCRAFT CABIN HEATER

The RANS aircraft heater is the answer to the winter flying "chills". It is very lightweight, inexpensive and installs easily in just two hours. This heater utilizes ram air & the heat off the engine muffler. Operation is simple. Slipstream air is forced through the heater inlet, passing over the muffler, picking up the heat and delivering it to the cabin or pod via an Aeroduct hose. Contains no moving parts. Fits Rotax mufflers and adaptable to other engines. P/N 05-17400.....

## INFRA-RED CABIN HEATERS

These small, lightweight units are forced air infra-red D.C. quartz heaters that warm you almost instantly. Each model is thermally protected by a safety valve heat limiter and fuse protection is another safety feature. Select the heater you require according to the size of your alternator and your other electrical needs. All models weigh 2 lbs. and are 4"h x 5"w x 6"d. For use in homebuilt aircraft, boats, RVs, vans & heavy equipment.

Model	Volts	Amperes	Watts	Max BTU's	Min BTU's	Price
K12-2500	12	25	355	1212	808	
K12-3500	12	35	497	1696	1131	
K12-4700	12	47	658	2250	1125	
K24-2500	24	25	700	2389	1593	
K24-3000	24	30	840	2867	1912	
K24-3500	24	35	980	3345	1673	

## PROLUBER ENGINE PRE-OILER

ProLuber is a device that is added on to your oil system to give you pre-start oil pressure. You just turn on the ProLuber for a couple of seconds, watch your oil pressure gauge rise, and then start the engine when the pressure reaches the desired level. It is able to generate 40-60 lbs. of oil pressure in your engine before you hit the ignition switch. Simple to install and requires no drilling through your oil pan or the block. Complete kit for installation.

P/N 08-00197.....



# ULTRALIGHT ENGINE ACCESSORIES

## SPARK PLUG CADDY



Handy case holds (2) 14mm spark plugs. Small enough to fit into your pocket.

P/N 13-03869 .....

## SPARK PLUG WRENCH



Loosen or tighten your spark plugs with this handy tool.

P/N 13-03921 .....

## PLASTIC STARTER HANDLE



Black flexible plastic heavy duty handle. Tested to -40°F

P/N 13-03865 .....

## SPARK PLUG JACK



Rivets or screws to any flat surface and holds two spare 14mm plugs. Tough polycarbonate plastic with spring-loaded plug anchors keeps plugs dry and protects gaps.

P/N 13-03870 .....

## NYLON STARTER ROPE



The perfect replacement rope for worn-out manual starters.

P/N 13-03922 ..... per t.

## SPARK PLUG CAPS



Original NGK. Black. 5000 ohm resistance. P/N 08-00737 is used on threaded type plugs. P/N 08-04960 is used on solid top plugs.

P/N 08-00737 .....

P/N 08-04960 .....

## SPARK PLUG WIRE



High-quality multi-strand copper core unshielded wire. 7mm diameter. For all Rotax® and most other engines. Replaces Rotax® Part No. 965-158.

P/N 11-04105 ..... per t.

## FLEXDRIVE



PosiFlex coupler for Quicksilver®

For 377/477 w/o high-thrust mod ..... P/N 05-01985 .....

For all high-thrust mods ..... P/N 05-01986 .....

## ULTRALIGHT 503 IN-CABIN HEATER



This is a complete Rotax 503 In Cabin Heater Kit works great on Chinooks, Challengers, and other ultralight.

P/N 05-03064 .....

## ULTRALIGHT 912 ALTERNATOR KIT



External alternator kit comes with all necessary components other than wiring. It allows the owner of a Rotax 912 to achieve extra amperage for accessories (increases output between 35-40 amps). The external alternator is driven by a pulley/belt setup which is attached to the standard 912 prop flange. We have also machined an extra belt groove in the prop flange pulley which could be used for another belt driven device, such as a vacuum pump. The complete assembly weights less than 9 lbs.

P/N 05-03063 .....

## RATIO-RITE CUP

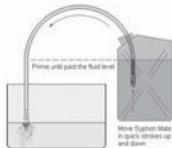


Getting the right oil-to-gas ratio is no problem with this tough polypropylene cup. Just fill the cup with oil to the ratio level desired, and mix with gasoline. Ratios from 16:1 to 50:1. Graduated in ounces and CCs for filling chain cases, etc. 18 oz. capacity.

Cup ..... P/N 08-01091 .....

Lid ..... P/N 08-03677 .....

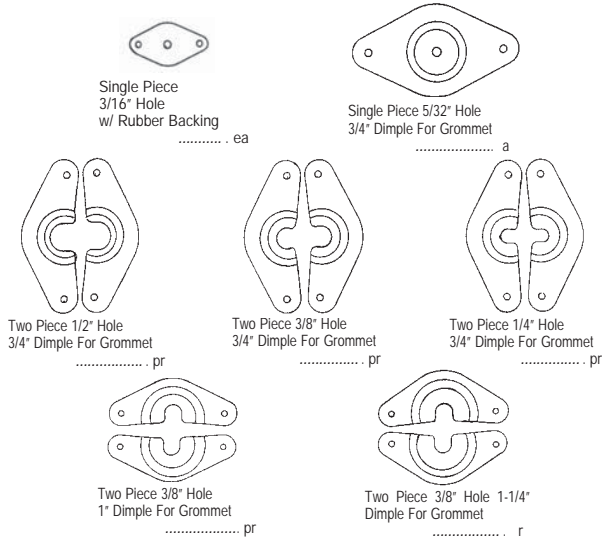
## SYPHON MATE



Here's a safe and easy method of fuel transfer. A simple jiggle of the Syphon Mate establishes the flow, and then air pressure maintains it. Never wears out, and it's guaranteed for three years. The outlet end is 1/2" standard pipe thread for easy attachment to a garden hose, if needed.

P/N 05-01018 .....

## STAINLESS STEEL FIREWALL SHIELDS



Two piece shields for use over cables or wires with large end-fittings or existing installations. Single piece for use where the cable or wire may pass through the hole. Flat shields designed for use on wooden or composite firewalls using a fire resistant sealant to prevent leaks. Both types of shield available in flat or with dimple to accommodate rubber grommets up to outside diameter.

Actual hole size in 2 piece shields is slightly larger than indicated to prevent chafing cable. Ream pilot hole in single piece shields oversize for the size grommet used. Use grommets that fit tightly around the cable or wire to insure a good seal.

Shields may be installed with screws, bolts and plate nuts or rivnuts. Install cable and grommet in firewall. Locate the shield to insure that it is centered on the cable - then drill attach holes in firewall. Shields pre-drilled with 5/32" mounting holes. If more than one cable passes through grommet fire resistant sealant must be applied to grommet.

Caution: Any holes drilled in the firewall are potential source of carbon monoxide in the cockpit. Extreme caution must be exercised when installing firewall shields in your aircraft. They do not provide the necessary seal around cables or wires to prevent carbon monoxide, smoke or fire from entering the cockpit. The shields are designed only to protect the sealing material (grommets/gaskets) from excessive heat.

## HOMEBUILDERS CONICAL LYCOMING ENGINE MOUNT BUSHINGS



These new bushings offer superior damping qualities and do not harden over time as original mounts can do. They are molded from hi-tech silicone rubber which offering a much lower compression set which reduces engine sagging over time. Silicone also withstands a very wide temperature range and is compatible with grease and oil. These mounts are not PMA'd or FAA approved and are for use on experimental aircraft only. Not an approved replacement for Lycoming 71032 bushings. Sold in set of 8 bushings.

P/N 08-00662 ..... /Set

## LORD ENGINE MOUNTS FOR ULTRALIGHTS



All altitude mounts for vibration isolation and shock prevention in all directions. Available in soft, medium, or hard rubber.

Soft ..... P/N 08-07049 .....

Medium ..... P/N 08-01013 .....

Hard ..... P/N 08-07050 .....

Snubbing Washer ..... P/N 9810145-01804 .....

## RUBBER ENGINE MOUNTS



Used to isolate vibration from engine/exhaust system to airframe. P/N 10-01557 .....

## RUBBER ENGINE MOUNTS



Natural Rubber and steel. P/N 13-03824 .....

## LORD S UARE MOUNT

Natural Rubber and steel. P/N 13-03823 .....





# BARRY ENGINE MOUNTS

## BARRY MOUNTS



Barry Controls has actively supported the general aviation market since 1981 and holds PMA approvals on a wide range of engine mounts. Barry mounts are warranted for 500 hours or 12 months and feature outstanding quality & value. Call for unlisted part numbers.

### BEECHCRAFT

Aircraft		P/N	Engine	Price
Company Name	Model			
Skipper	77	94150-40	All	.
Sport	B19, M19A	94150-01	All	.
Musketeer	23	94150-01	All	.
Sundowner	C23	94150-01	All	.
Bonanza	S-35-V35, A, B, C33A, E33A, C, F33A, C, 36	7351231-3	All	.
Bonanza	A36	7351231-3	All	.
Sport (Musketeer)	19A	94150-01	All	.
Twin Bonanza	E50, G50, H50, F50, J50	94110-40	All	.
Turbo Baron	56TC, A56TC	94011-04	All	.
Baron	58P	94031-03	All	.
Baron	58TC	94031-03	All	.
Baron	A24, A24R, B24R, C24R, D55, D55A, E55, E55A, 58, 95-C55, 95-C55A	96068-01	All	.
Baron	99-55, 95-A55, 95-B55, 95-B55A	96071-01	All	.
Bonanza	C35-G35	96115-01	All	.
Duke	60, A60, B60	94011-04	All	.
Queen Air	65, A65, 65/80, 65/88, 65-A80, 65-B80, 70	94110-40	All	.
Duchess	76	94011-02(2)	All	.
Travel Air	95, B95, A, D95A, E95	94150-40	All	.

Note: (1) Denotes 1ea. per engine. (2) Denotes 2 ea. per engine. All others require 4 engine

### GULFSTREAM

Aircraft		P/N	Engine	Price
Company Name	Model			
	111	94011-02(02)	All	.
		94011-20(02)	All	.
	112, B, T, TC, TCA	94011-02(02)	All	.
		94011-20(02)	All	.
Twin Commanders	500	94110-01	All	.
	500A	94110-40	All	.
	560A, E, F	94110-40	All	.
	680, E, F, FL, FLP	94110-40	All	.
	685	94001-01	All	.
	720	94110-40	All	.
Cougar	GA-7	94011-20	All	.
Tiger	AA5B	94011-20	All	.

Note: (1) Denotes 1ea. per engine. (2) Denotes 2 ea. per engine. All others require 4 engine

### VANS

Aircraft		P/N	Engine	Price
Company Name	Model			
	RV-3	94011-20	All	.
	RV-4	94011-20	All	.
	RV-6	94011-20	All	.

### CIRRUS DESIGN

Aircraft		P/N	Engine	Price
Company Name	Model			
Cirrus	SR20	94006-01	All	.
Cirrus	SR22	94001-01	All	.

### CESSNA

Aircraft		P/N	Engine	Price
Company Name	Model			
	152, 152A	94150-40	All	.
Skyhawk	172I, J, K, L, M, N, P	94011-20	All	.
	P172D	94110-40	All	.
	R172E	94017-01	All	.
SkyLark	175, A, B, C	94110-40	All	.
Cardinal	177, A, B	94011-20	All	.
	180, A thru H	94110-40	All	.
Skylane	182, A thru R	94110-40	All	.
	R182, TR182, T182	94011-02	All	.
Skywagon	185, A thru F, A185F	94110-40	All	.
	188	94110-40	All	.

### CESSNA CONT.

Aircraft		P/N	Engine	Price
Company Name	Model			
Stationair	206, U206, A thru G, P206, A thru E	94030-01	All	.
		94031-01	All	.
	TP206, A thru E, TU206, A thru G	94030-01	All	.
		94031-01	All	.
	207, A, T207, T207A	94030-01	All	.
		94031-01	All	.
Yates Aircraft Conversion	A188B	94007-01	All	.
Centurion	210, A thru C 210, D thru H, J	94110-40	All	.
		94030-01 (2)	All	.
		94031-01 (2)	All	.
Centurion	210K thru N	94030-01 (2)	All	.
		94031-01 (1)	All	.
		94031-02 (1)	All	.
Turbo Centurion	T210F thru H	94030-01 (2)	All	.
		94031-01 (1)	All	.
		94031-02 (1)	All	.
Turbo Centurion	T210J thru N	94030-01 (2)	All	.
		94031-01 (1)	All	.
		94031-02 (1)	All	.
Pressurized Centurion	P210N, R	94030-01 (2)	All	.
		94021-01 (1)	All	.
		94021-02 (1)	All	.

**G R R**

	310B, C	94110-40	All	.
Skynight	320, A thru C	94016-03	All	.
	320D, E, F	94006-01	All	.
	ALT	94017-01	All	.
Skymaster	336	94016-01	All	.
	337, A thru F	94017-01	All	.
	P337H	94017-01	All	.
	T337, B thru F	94017-01	All	.
	340, A	94006-01	All	.
	401, A, B	94006-01	All	.
Business Liner	402, A thru C	94006-01	All	.
Titan	404	94001-01	All	.
	411, A	94001-01	All	.
Chancellor	414, A	94006-01	All	.
Golden Eagle	421, A thru, C	94001-01	All	.

Note: (1) Denotes 1ea. per engine. (2) Denotes 2 ea. per engine. All others require 4 engine

### DEHAVILLAND

Aircraft		P/N	Engine	Price
Company Name	Model			
Beaver	DHC-2 MK1	MB100875	P&W R985	---
Otter	DHC-3	MB4040	P&W R-1340	---

### PIPER

Aircraft		P/N	Engine	Price
Company Name	Model			
Cherokee 140	PA28-140	94150-01	*20002-24999	.
		94011-02 (2)	*25000-7125641	.
	PA28-140	94011-20 (2)	*25000-7125641	.
		94011-02 (2)	*7225001 & UP	.
	PA28-140	94011-20 (2)	*7225001 & UP	.
Cherokee 150	PA28-150	94150-01	All	.
Cherokee 160	PA28-160	94150-01	All	.
Warrior	PA28-151	94011-02 (2)	0-320-E3-D	.
		94011-20 (2)	All	.
Warrior	PA28-161	94011-02 (2)	All	.
		94011-20 (2)	All	.
Cherokee180	PA28-180	94150-01	*1761-4377	.
		94150-01	*4378-5149	.
Cherokee Six	PA32-300	94110-02	*32-7240056 & UP	.
Archer	PA28-180	94011-20	*5151 & UP	.
Archer II	PA28-181	94011-20	All	.
Arrow	PA28R-180	94011-20	*3000 & UP	.
	PA28R-200	94011-20	*35001-7135329 IO-360-C1C	.
Arrow II	PA28R-200	94011-20	*7235001 & UP	.
Turbo Arrow II	PA28R-201T	94006-01	TSIO-360-F, FB	.
Arrow III	PA28R-201	94011-20	*7737002 & UP	.
Turbo Arrow III	PA28R-201T	94006-01	All	.
Dakota	PA28-236	94011-02	*0-540-J3A5D	.
Comanche 250	PA25-250	94110-01	0-540-A1A	.
Comanche 260	PA24-260	94110-01	IO-540-E or D4A5	.

EP

# BARRY MOUNTS CONT. - ENGINE MOUNTS

## PIPER CONT.

Aircraft		P/N	Engine	Price
Company Name	Model			
Comanche 400	PA24-400	94011-04	IO-720	
Cherokee Lance	PA32R-300	94110-02	IO-540-K1G5D	
Lance II	PA32RT-300	94110-02	IO-540-K1G5	
Saratoga	PA32-301	94011-02 (2)	All	
		94011-03 (2)	All	
Saratoga S.P.	PA32R-301	94011-02 (2)	All	
		94011-03 (2)	All	
Tomahawk	PA38-112	94150-01	0-235	
Brave	PA36-300	94110-02	All	
Pawnee 235	PA25-235	94110-01	All	
Pawnee 260	PA25-260	94110-01	All	
<b>G R R</b>				
Apache 235	PA23-235	94110-01	0-540-B1A5	
Aztec	PA23-250	94110-01	0-540, IO-540	
Aztec C, F	PA23-250	94011-02	IO-540-C4B5, CIB5	
Twin Comanche	PA30	94011-03	All	
	PA39	94011-03	All	
Turbo Navajo	PA31	94011-02	All	
Navajo C/R	PA31-325	94011-02	TIO-540-F2BD(L)	
Navajo Chieftain	PA31-350	94011-02	TIO-540-J2BD(L)	
Seneca	PA34-200	94011-20	All	
Seneca II	PA34-200T	94006-01	All	
Seneca III	PA34-220T	94006-01	All	
Seminole	PA44-180	94011-20	All	
Turbo Seminole	PA44-180T	94011-20	All	
Aeorstar	PA60-700P	94011-40	All	
	PA60-600, 601	94011-01	All	
	PA60-601P, 602P	94011-01	All	

Note: (1) Denotes 1ea. per engine. (2) Denotes 2 ea. per engine. All others require 4 engine. \* AIRCRAFT SERIAL NUMBERS

## MAULE

Aircraft		P/N	Engine	Price
Company Name	Model			
Rocket	M-4-210, C, S, T	94016-01		
	M-5-210C	94016-01		
	M-5-235, C	94016-02		
	M-6-235	94016-02		
Orion/Super Rocket	M-7-235/260, M-8-235	94016-02	0-540-J/10-540-J	

## MOONEY

Aircraft		P/N	Engine	Price
Company Name	Model			
PFM	M20L	95167-01	Porche	
Chaparral	M20E 1964 Only	94150-01	0-360-A1A	
Chaparral(Super 21)	M20E 1965 & Newer	94011-02	IO-360-A1A	
Executive	M20F	94011-02	IO-360-A1A	
201	M20J	94011-20		
231	M20K	94006-01	TSIO-360	
	CAP231	94016-44	ALL	
	M20A	94150-40	0-360-A1A, D	
	M20A	94150-01	0-360-A1A	
Master	M20D	94150-40	0-360-A1D, A2D	
Ranger	M20B	94150-40	0-360-A1A, D	
Ranger Mark 21	M20C	94150-40	0-360-A1A, D	
Statesmen	M20G	94150-40	IO-360-A1D	

## LANCAIR

Aircraft		P/N	Engine	Price
Company Name	Model			
Lancair	235	94150-41	0-235	
Lancair	320	94150-41	0-320	
Lancair	360	94150-41	0-320, 0-360	
Lancair	4	94001-01 (2)	TIO-550, TIO-520	
		94011-20 (2)	TIO-550, TIO-520	
Lancair	ES	94017-01	All	
Columbia	300	94001-01	IO-550	

Note: (1) Denotes 1ea. per engine. (2) Denotes 2 ea. per engine. All others require 4 engine.

## SIAI MARCHETTI

Aircraft		P/N	Engine	Price
Company Name	Model			
	F260	94110-01	All	
	S208	94110-01	All	

## SOCATA

Aircraft		P/N	Engine	Price
Company Name	Model			
Rallye	235C, E	94011-20	0-540-B4B5	

## BARRY MOUNT FOR VANS AEROBATIC AIRCRAFT



Barry Controls is a manufacturer of many aircraft engine mounts of both experimental and certified types. They also manufacture engine mounts for experimental and kit airplanes of various makes and models. Please call or visit our website for application information.  
P/N 94016-08.....

## DYNAFOCAL ENGINE MOUNT RINGS & KITS



Standard rings furnished with 2-3/4" I.D. retainers, completely welded, ready for mount assembly. The Dynafocal ring kits contain all tubing cut and bent, with 2-3/4" I.D. retainers, ready to weld.

Dynafocal Ring for Lyc. 0-235 to IO-360 (200 HP)..... P/N 33521.....  
 Dynafocal Ring for Lycoming 0-320B..... P/N 33521-B.....  
 Dynafocal Ring Kit for Lyc. 0-235 to IO-360 (200 HP) . P/N 33522.....  
 Retainer Cups & Rings Kit ..... P/N 33253.....  
 (includes 8 cups & 4 rings - everything in #33522 kit above except the tubing)  
 Engine mount ring for most Lyc. IO-540's..... P/N 08-00795.....

## VIP ENGINE MOUNTS FOR EXPERIMENTAL AIRCRAFT

Spruce P/N	Lord Equip.	Barry Equip	Price ea.
08-00774	J9613-49	94110-20	
08-00776	J15198-1	- - -	

## SANDWICH MOUNTS FOR HOMEBUILT AIRCRAFT



Sandwich assemblies of natural rubber and specially blended synthetic compounds bonded to 2 metal plates. Normal installation requires 4 assemblies, each consisting of 2 sandwich mountings and 1 spacer. Satisfactory performance requires that the spacer be designed to the correct length to precompress each mounting to guarantee proper positioning of the mountings. Set consists of eight bonded sandwich mountings equivalent to Lord Mount No. J-7402-5 (2" Dia.) and four 4130 steel spacers with mounted rubber shoulder. Use with dynafocal engine mount rings using 2-3/4" I.D. retainer cups. Used on many homebuilts including the Defiant and Long-EZ .....P/N 08-03500.....

## SPECIAL HEAVY DUTY MOUNT SETS



Designed for use on aerobatic aircraft such as Christen Eagle and Acro. Same style as homebuilt type but inner core has been "beefed up" and elastomers added to encapsulate the spacer. 2-inch diameter. Set of 8 Mountings

Intercontinental Airplane Intercontinental Airplane  
 50401-300 w/4 Spacers .....P/N 08-03600.....  
 D

## LORD MOUNTS FOR COZY ENGINE MOUNT



These Lord J-7402-24 mounts fit the engine mount for Lyc. 0-360 manufactured by CG Parts.....P/N 07-01115.....

## 912/914 ROTAX RING MOUNT



This ring mount for Rotax 912/914 engines is 4130 chrome-moly construction, powder coated, and fits all 912 and 914 engines. Not FAA approved, but built using the same processes and quality control required for certified parts. Standard color is white. Options include additional clearance for a 12-volt high-amp starter cable connection and powder coating in other colors. The mount is furnished with installation instructions and the required shim washers recommended by Rotax. Mounting hardware is not included.



Rotax 912/914 (WHITE)  
 P/N 08-07113.....  
 Rotax 912/914 Special Color  
 P/N 08-07152.....  
 Starter cable clearance option  
 P/N 08-07153.....

# LORD ENGINE MOUNTS

## LORD ELASTOMERIC ENGINE MOUNTS



These compression type couplings consist of bonded rubber joints pressed into the sockets of metal hubs. These dynafocal engine suspensions provide proper flexible support to isolate engine vibrations and reduce noise transmission to airframe structure in all aircraft applications. Careful design assures maximum strength to hold the engine under ultimate load and emergency conditions. Suspensions also distribute loads in most desirable patterns, control engine motions, accommodate thermal expansion and manufacturers' tolerances.

**PROMPT SHIPPING GUARANTEED! IF YOU REQUIRE UNLISTED LORD MOUNTS, PLEASE CALL US FOR YOUR BEST PRICE. WE BEAT ALL COMPETITOR'S PRICES! LET US KNOW OF ANY LOWER PRICE AND WE WILL BEAT IT!**

Aircraft Model	Application/Engine	No. per A/C	Part No.	Price Each	Aircraft Model	Application/Engine	No. per A/C	Part No.	Price Each
A-1	Lyc. O-360-C1G/A1P	8	J-1552		17-31, 17-31A	Lyc. IO-540-K	4	J-9868-5	
S-1	Lyc. O-320	8	J-7401-2		17-31A	Lyc. IO-540-KIE5	4	J-9868-5	
S-1S, -2A	Lyc. O-360-B4A, A1P	8	J-7401-2		17-31TC, 17-31ATC	Lyc. IO540-G, K	4	J-9868-5	
<b>R</b>					7ACA	Franklin 2A-120A, B	8	J-3608-1	
19	Lyc. O-320-E2C	4	J-7402-16		7ECA	Cont. O-200-A	8	J-3608-1	
B19, M19A	Lyc. O-320-E2D	4	J-7402-16		7ECA	Lyc. O-235-C1	4	J-6230-1	
23	Lyc. O-360-A4G	4	J-7402-16		7GCAA, 7GCBC	Lyc. O-320-A2B	4	J-6230-1	
23	Cont. IO-346-A	4	J-10778-4		7GCAA, 7GCBC	Lyc. O-320-A2D	4	J-6230-1	
A23-24	Lyc. IO-360-A2B	4	J-10778-4		7KCAB	Lyc. O-320-E2A	4	J-6230-1	
C-23	Lyc. O-360-A4K	4	J-7402-16		7KCA	Franklin 2A-120A, B	8	J-3608-1	
24, A24, A24R, B24R	Lyc. IO-360-A2B	2 ea*	J-10778-14		8GCBC-CS	Lyc. O-360-C1E	4	J-6230-1	
C-24R	Lyc. IO-360-A1B6	2 ea*	J-10778-16		8GCBC-FP	Lyc. O-360-C2E	4	J-6230-1	
B33, C33	Cont. IO-470-K	4	J-7518-2		8GCBC	Lyc. O-360-C2E	4	J-6230-1	
C33A	Cont. IO-520-B	4	J-10520-1		8KCAB	Lyc. IO-320-E1A	4	J-6230-1	
E33, F33	Cont. IO-470-K	4	J-7518-2		8KCAB-CS	Lyc. AEIO-320-E1B	4	J-6230-1	
E33A/C, F33A/C	Cont. IO-520-BB	4	J-10520-1		8KCAB-FP	Lyc. AEIO-320-E2B	4	J-6230-1	
G33	Cont. IO-470-N	4	J-10520-1		8KCAB-180	Lyc. AEIO-360-H1A	4	J-6230-1	
35, A35, B35	Cont. E185-8	8	J-2245-1						
C35, D35, E35, F35	Cont. E185-11	4	J-3804-26		120-140	Cont. C-85	8	J-3608-1	
E35, F35, G35	Cont. E225-8	4	J-3804-26		140A	Cont. C-90	8	J-3608-1	
H35	Cont. O-470-G	4	J-7518-2		150, 150A-L	Cont. O-200-A	8	J-3608-1	
J35, K35, M35	Cont. IO470-C	4	J-7518-2		152, 152 Aerobat	Lyc. O-235-L2C	4	J-7402-1	
N35, P35	Cont. IO-470-N or-C	4	J-7518-2		170, 170A, B	Cont. C-145	4	H-3006-1	
S35, T35, V35, V35A, B	Cont. IO-520-BB	4	J-10520-1		170B	Cont. O-300-A	4	H-3006-1	
36, A-36	Cont. IO-520-BB	4	J-10520-1		172	Cont. O-300-A	4	H-3006-1	
A36TC	Cont. TSIO-520-UB	4	J-10520-1		172A	Cont. O-300-C	4	H-3006-1	
V35A-TC	Cont. TSIO-520-D	4	J-10520-1		172 B-H	Cont. O-300-C, D	4	H-3006-1	
B50	Lyc. GO-435-C2/C2E	8	J-3804-10		172 I-P	Lyc. O-320-E2D	4	J-9613-49	
C50	Lyc. GO-480-F1A6	8	J-3804-10		172P	Cowl Mount	--	J-7444-14	
D50, D50B/C/E	Lyc. GO-480-G2F6	4	J-3804-10		F172P	Cowl Mount	--	J-7444-14	
E50, F50, G50, H50	Lyc. GSO-480-B1B6	4	Use		F172P	Cowl Mount	--	J-7444-24	
G50, H50, J50	Lyc. IGSO-480-A1B6	4	J-7525-1 & J-6545-1		F172	Cowl Mount	--	J-7444-36	
55, A55, B55	Cont. IO-470-L	8	J-7518-2		172	Lyc. O-320-D2J	4	J-9613-49	
55, A55, B55, B55A	Cont. IO-470-L	8	J-9613-5		172N	Lyc. O-320-H2AD	4	J-9613-49	
C55(1967), D55,					172	Cont. IO-360-K	4	J-9613-42	
D55A, E55, E55A	Cont. IO-520-CB	8	J-10778-16		172RG	Lyc. O-360-A1F6	2 ea*	J-9613-49	
56TC, A56TC	Lyc. TIO-541-E1B4	8	J-9613-9						
58	Cont. IO-520-CB	8	J-10778-16		172O	Lyc. O-360-AL/N	2 ea*	J-9613-49	
58 (1984-on)	Cont. IO-550-C	8	J-10778-16						
58P	Cont. TSIO-520-L/LB	8	J-12453-12		172P, Q	Cowl Mount	--	J-7444-24	
58P	Cont. TSIO-520-WB	8	J-12453-12		172	Cowl Mount	--	J-7444-36	
58TC	Cont. TSIO-520-L/LB	8	J-12453-12		P172	Cont. GO-300-E	4	J-6545-1	
58TC	Cont. TSIO-520-WB	8	J-12453-12		R172E, K	Cont. IO-360-D	4	J-9613-42	
60, B60	Lyc. TIO-541-E1C4	8	J-9613-9		175	Cont. GO-300-A	4	J-6545-1	
65, A65, 70	Lyc. IGSO-480-A1E6	4	J-7525-1		175A, B	Cont. GO-300-C, D	4	J-6545-1	
		4	J-6545-1		175C	Cont. GO-300-E	4	J-6545-1	
76TC	Lyc. TO-360-C1A6D	2 ea*	J-9613-49		177	Lyc. O-320-E2D	4	J-9613-49	
76	Lyc. O-360-A1G6D	2 ea*	J-9613-50		177A	Lyc. O-360-A2F	4	J-9613-49	
77	Lyc. O-235-L2C	4	J-7402-1		177B	Lyc. O-360-A1F6D	4	J-9613-49	
80, A80, B80, 88	Lyc. IGSO-540-AID	4	J-7525-1 & J-6545-1		177RG	Lyc. IO-360-A1B6	4	J-9613-59	
		4	J-6545-1		180	Cont. O-470-A, J	2 ea*	J-3804-14	
C90, C90A	PWC PT6A-21	6	LM427SA7						
E90, F90	PWC PT6A-28, -135, -135A	6	LM427SA7		180	Cont. O-470-K	4	J-6545-1	
H90	PWC PT6A-34B	6	LM427SA7		180A-H	Cont. O-470-K, R	4	J-6545-1	
95, 95A, 95B	Lyc. IO-360-B1B	8	J-7402-1		180H, J	Cont. O-470-R, U	4	J-6545-1	
D95A, E95	Lyc. IO-360-B1B	8	J-7402-1		182, 182A-R	Cont. O-470-R, U	4	J-6545-1	
A100	PWC PT6A-28	6	LM427SA7		182, 182A-N	Accessory Mount	--	J-14290-4	
B100	GA TPE331-6-252B	4&2*	LM821SA49		182H-N	Panel Mount	--	J-6984-64	
			LM821SA50		T182	Lyc. O-540-L3C5D	4	J-9613-12	
200, 200C, 200CT	PWC PT6A-41	8	LM427SA7		TR182	Lyc. O-540-L3C5D	4	J-9613-12	
A200/C/CT	PWC PT6A-41	8	LM427SA7		185, 185A-E	Cont. IO-470-F	4	J-6545-1	
B200	PWC PT6A-42	8	LM427SA7		185	Cont. IO-520-D	4	J-6545-1	
C90, E90, C99, 200C/CT, A200/C/CT, B200/C/CT/T	Overhaul kit for Barry Controls P/N5906-2SA5	8	LM427SA12		A185F	Cont. IO-520-D	4	J-6545-1	
					188	Cont. O-470-R	4	J-6545-1	
					188	Cont. IO-520-D	4	J-6545-1	

Indicate maintenance requirements





# HEAT BOXES – EXHAUST COMPONENTS

## WARM/COOL AIR SELECTOR/MIXER



This unit has not only the capability of providing warm air to the cockpit, but also cool air, or both. There are two parts to the unit. The "T" section (engine side of firewall) has a flapper to direct cool air from one side and/or warm from the other side. This section is designed to be riveted or bolted to the firewall. The short expanded section slips over the protruding tube and is clamped with a stainless steel hose clamp. The flap in this section closes off all air from the unit. The hose clamp, a gasket and 4 stainless steel blind rivets are furnished. The shafts, arms, and flapper valves are all stainless steel. The bushings are brass and the tubing is 2" O.D. 6061-T4. Weight: 5.2 oz. P/N 08-00629..... ea.

## DELUXE HOMEBUILDER'S CABIN HEAT BOX



This cabin box is a modification of our popular standard heat box. Re-engineered as a one-piece unit with two tube-end outlets, rather than one tube-end outlet and one flush outlet; it is smooth, efficient and very light. Originally designed for use on the popular RV series of aircraft, it is applicable to most homebuilts. They are constructed of aircraft grade aluminum and weigh only 5.5 oz. The new design enables the cabin box to be more easily mounted to the forward face of the firewall with the 2" outside diameter outlet tube extending through the firewall; and is useful in ducting hot exhaust air out of the plenum area. (Both the inlet and outlet tubes are 2" outside diameter.) The outlet tubes are designed to accept a 2" inside diameter "Y" tube for leak-free ducting of warm air to more than one location. Cabin boxes are furnished with a gasket and four LP4-3 pop rivets for installation on the firewall. Superior craftsmanship and quality.

P/N 08-04005.....

Also available: Identical to the regular deluxe cabin heat box P/N 08-04005 with these exceptions: •Stainless steel mounting surface, box to firewall •Steel shaft and stainless flapper.

Extra protection in case of high temperatures, no smoke or flame could reach the cabin area through the cabin heat box.

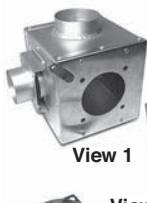
Box with 2" outlets..... P/N 08-04010.....

Box with 2.5" inlet & outlet w/ 2" dump tube. P/N 08-04015.....

## DELUXE HOMEBUILDER'S CABIN HEAT BOX – ALL STAINLESS

This cabin heat box is identical to the Deluxe Homebuilder's Cabin Heat Box except that the tubing that goes through the firewall and the mounting flange are also stainless steel for extra protection from fire. Features one inlet (2"O.D.) & two outlets (2"O.D.). All stainless except bushings. P/N 08-04025..... ea.

## CARBURETOR HEAT BOX FOR ELLISON TBI



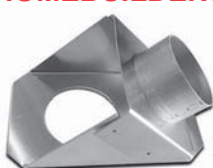
The carburetor heat box and air grid are designed specifically for the Ellison TBI to eliminate carburetor icing problems. There must always be a constant flow of air through a heat muff. The carburetor heat box has an automatic dump of hot air when carb heat is not being used, thereby eliminating the chance of heat muff burnout. The box has a 2.5" inlet for ram air and a 2" inlet for carb heat. The box is made of 5052 aluminum, stainless steel and 6061-T4 tube. The mounting surfaces, shaft, flapper, arm and rivets are stainless. In addition, the box is strengthened in the mounting hole area to eliminate the possibility of metal fatigue. A 4" inspection/ mounting hole with a cover plate secured by nut plates and screws is located on the bottom of the box (not visible in the photo.) The purpose of the air grid is to eliminate air flow turbulence. The 1/2" stainless steel vanes straighten the air before it reaches the throat of the carburetor and achieves better air/fuel distribution. This is a proven performance enhancement technique.

Carburetor Heat Box..... P/N 08-00813.....

Air Grid (w/one gasket)..... P/N 08-00814.....

Extra Gaskets..... P/N 08-00815.....

## HOMEBUILDERS CABIN HEAT SHUTTLE KIT

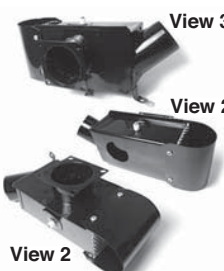


Easily assembled and designed so that it can be modified for custom applications. Kit includes construction plans and directions along with installation hints for the popular Vans RV series of homebuilt aircraft. Controlled by ratchet type control cable such as ACS model A740 (P/N 05-12500). Order control cable separately. P/N 08-04460.....

## HOMEBUILDER'S CABIN HEAT BOX



This cabin box has been engineered to be the smoothest, most efficient and lightest heat box built. Fabricated from aircraft-grade aluminum with stainless steel shaft, arm and flapper. Originally designed for use on the popular RV-4 homebuilt, but is applicable to most other designs. Total weight is only 5.2 oz. Furnished with a gasket flange for the forward side of the firewall for leak-free ducting of warm air to anywhere the builder wants it. Inlet and outlet are 2" OD 6061-T4 seamless aluminum. The body of the box is constructed of 5052-032 aluminum. Can be either riveted or bolted to the firewall of aircraft. The mounting flanges have holes for both bolts and rivets. The outlet tube extends through the firewall so that scot tubing can be attached to route the warm air. 4 stainless steel blind rivets and a mounting gasket are furnished. Superior craftsmanship and quality. P/N 08-04000..... ea.



## VAGABOND CARB HEAT BOX

This air grid carburetor heat box designed to fit the Piper PA-15 Vagabond. Dimension: 11" x 3-1/2" x 4"

P/N 08-06290.....

## TUBING CONNECTORS

**2" ALUMINUM FLANGE** - Accepts 2" scot tube. Flange allows riveting to firewall, baffles, etc. Wt: 0.2 oz. P/N 08-04135.....

**CARB HEAT CONNECTOR** - Mounts on FAB airbox or similar airbox. Flange accepts 2" scot tube from muff. Standoff design allows hot air to escape when carb heat is not selected. Weight: 0.9 oz. P/N 08-04145.....

**FLANGED DUCT** - Accepts 2" ducting on both ends. Helps route ducting through bulkheads, firewalls, etc. Especially useful for getting heat to the back seat of the aircraft. 3" square plate with 2" tubing projecting 1" from each side. Wt:0.7 oz. P/N 08-04140.....

## CABIN HEAT BOX



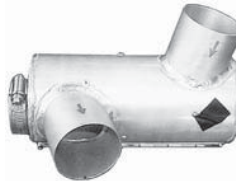
Custom built aluminum box mounts to firewall. Lever on butterfly may be attached to push-pull control for close adjustment of cabin air flow. Two 2" intake ports, one 2" outlet. Wt. 1 lb. 7-1/2" long. Fine quality construction. P/N 08-01500.....

## HOMEBUILDER'S HEAT MUFFS



These superior quality heat muffs are made entirely of 6061 and 5052 aircraft grade aluminum, offset from the center to clear the close cowling of most homebuilts. The muff can be installed anywhere on the exhaust system where there is 12" of straight pipe, baffle, or even on an aft vertical baffle. The reason for using forced air through the muffs rather than just taking warm air from the low pressure plenum is that in order to have cabin heat you have to have forced air. The muff is constructed so that it can be used for either cabin heat or carb heat, or both, as there is 1 outlet & 1 inlet. The muff is split and piano-hinged to "clam-shell" over the exhaust pipe. This is necessary if you have downturns on your exhaust pipes and do not want to cut off the downturns should you later want to remove the muff. Stainless steel clamps are furnished with the muff. Inlet and outlets are 2" dia. and will fit 1.75" dia. pipes. The standard 9" body has 1 inlet & 1 outlet and generally used for cabin heat (wt:10.4 oz.). The shorter 6.5" body 1 inlet & 1 outlet and generally used on the front crossover section of the exhaust to duct heat to the carburetor box (wt: 8.9oz.).

P/N 08-03900



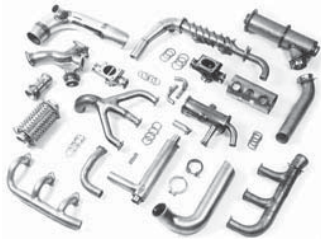
P/N 08-00473

Standard 9" body..... P/N 08-03900.....

Standard 6.5" body..... P/N 08-00473.....



# EXHAUST SYSTEMS



## EXHAUST SYSTEMS BY AEROSPACE WELDING MINNEAPOLIS INC.

Aerospace Welding, Inc. has earned a reputation for its uncompromising commitment to quality exhaust systems and components. Aircraft Spruce is an authorized distributor of AWI products, and as such can assure our customers of minimal down time and fast shipment through the Priority Service Program at AWI. All exhaust systems are built in fixtures for precise fit and are FAA approved for the listed aircraft. Available in factory new (N) and overhauled (OH) condition as noted.

Aircraft	OEM Part No.	Description	OEM Part No.	Price	Aircraft	OEM Part No.	Description	OEM Part No.	Price	
C-150	0450400-3	LH Muffler (N)	08-00061		PA28-235	65012-00	Muffler (OH)	08-00137		
	0450400-26	RH Muffler (N)	08-00062			65813-00	Muffler (OH)	08-00138		
	0450338-70	RH Riser (N)	08-00063			68718-03	Muffler (OH)	08-00139		
	0450338-69	LH Riser (N)	08-00064			65038-00	LH Stack (OH)	08-00140		
	0450338-66	RH Tailpipe (N)	08-00065			65039-00	RH Stack (OH)	08-00141		
	0450338-67	LH Tailpipe (N)	08-00066		PA28-236	67517-00	Muffler (N)	08-00142		
C-152	0454009-5	Muffler (OH)	08-00067			LW16826	LH Stack (OH)	08-00144		
	0454009-6	Muffler (OH)	08-00068			LW12127	Transition (N)	08-00145		
	FL0099001-716	Muffler (OH)	08-00069			LW12437	Transition (N)	08-00146		
C-170B/172	0550157-9	LH Muffler (OH)	08-00070		40310-09	Lower Tailpipe (OH)	08-00147			
	0550157-32	RH Muffler (OH)	08-00071		40310-08	Upper Tailpipe (OH)	08-00148			
	0550157-7	Riser (N)	08-00072		40310-10	Upper Tailpipe (OH)	08-00149			
C-172 Cont.	0550157-8	Curved Riser(OH)	08-00073		PA32-260	68718-00	Muffler (OH)	08-00150		
	0550176-59	Muffler (N)	08-00074			65038-00	LH Stack (OH)	08-00151		
	0550157-7	Riser (N)	08-00075			65039-00	RH Stack (OH)	08-00152		
C-172	0550176-13	Riser (N)	08-00076		PA32-300	68796-00	Muffler (OH)	08-00153		
	1754001-25	Muffler (N)	08-00077			68793-00	Stack (OH)	08-00154		
	1754001-15	Muffler (N)	08-00078			67517-00	Muffler (N)	08-00155		
C-177	1754007-1	Riser (OH)	08-00079		PA32R-301-T	W15859	Westgate (OH)	08-00156		
	1754008-1	Riser (OH)	08-00080			W16759	Westgate (OH)	08-00157		
	1754009-1	Riser (OH)	08-00081		PA34-200-I	78463-10	LH Tailpipe (OH)	08-00158		
	1754010-1	Riser (OH)	08-00082			78463-10	RH Tailpipe (OH)	08-00159		
	C-177RG	1754001-25	Muffler (N)	08-00083		PA38-112	77669-02	Muffler (OH)	08-00160	
1754001-9		Muffler (N)	08-00084		PA44-180		86299-07	Muffler (OH)	08-00161	
C-180		2054000-42	LH Muffler (OH)	08-00085		B-33 & 35A-G	186	LH Muffler (OH)	08-00162	
	2054000-40	LH Muffler (OH)	08-00086		189		RH Muffler (OH)	08-00163		
	2054000-31	LH Muffler (OH)	08-00087		B-V35/A36	35-950005-1	LH Stack (OH)	08-00164		
	2054000-39	RH Muffler (OH)	08-00088			35-950005-3	RH Stack (OH)	08-00165		
C-180/182	0750290-3	Muffler (OH)	08-00089		701-4	LH Muffler (OH)	08-00166			
	0750130-9	Muffler (OH)	08-00090		701-20	LH Muffler (OH)	08-00167			
	0750130-12	Muffler (OH)	08-00091		701-5	RH Muffler (OH)	08-00168			
C-182/185	0750130-44	Muffler (OH)	08-00092		701-19	RH Muffler (OH)	08-00169			
	0750130-48				35-950004-7	LH Tailpipe (OH)	08-00170			
	0750161-89	Muffler (N)	08-00094		35-950004-9	RH Tailpipe (OH)	08-00171			
	0750238-20	Stack (N)	08-00095		35-950005-61	LH Tailpipe (N)	08-00172			
	C-182RG	1250251-12	LH Muffler (OH)	08-00096		35-950005-57	RH Tailpipe (N)	08-00173		
1250250-5		RH Muffler (OH)	08-00097		B-35H-P	492-27	RH Muffler (OH)	08-00174		
1250263-2		LH Collector (OH)	08-00103			35-950004-7	LH Tailpipe (OH)	08-00176		
C-206/210	1250264-2	RH Collector (OH)	08-00104		35-950004-9	RH Tailpipe (OH)	08-00177			
	1250250-5	LH Muffler (OH)	08-00105		35-950005-61	LH Tailpipe (N)	08-00178			
	650-43	LH Muffler (OH)	08-00106		35-950005-57	RH Tailpipe (N)	08-00179			
	1250251-13	RH Muffler (OH)	08-00107		B-55/58	96-950002-55	LE OTNBD Tailpipe (OH)	08-00180		
	1250251-16	RH Muffler (OH)	08-00108			96-950002-57	RE INBD Tailpipe (OH)	08-00181		
	1250256-7	LH Tailpipe (N)	08-00109			96-950002-59	LE INBD Tailpipe (OH)	08-00200		
	1250257-7	RH Tailpipe (N)	08-00110			96-950002-61	RE OTNBD Tailpipe (OH)	08-00201		
	12502646-6	RH Tailpipe (N)	08-00111			96-950002-31	Riser Cyl. #3 (OH)	08-00202		
	1250860-110	Tailpipe (OH)	08-00112			96-950002-7	Riser Cyl. #4 (OH)	08-00203		
	1250860-104	RF Stack (OH)	08-00113		96-950002-33	Riser Cyl. #5 (OH)	08-00204			
1250860-105	Turbo Inlet (OH)	08-00114		96-950002-9	Riser Cyl. #6 (OH)	08-00205				
	1250860-203	Heat Exchanger (OH)	08-00115		B-Sundowner	099001-127	Muffler (OH)	08-00206		
	1250860-90	Crossover (OH)	08-00116			B-Sport	099001-126	Muffler (OH)	08-00207	
	1250860-100	Riser (N)	08-00117			B-Sierra	099001-131	Muffler (OH)	08-00208	
C-T206/T210	1250860-07	Tailpipe Adapter(OH)	08-00119		3-1493R		Muffler (OH)	08-00209		
	C-337	1250250-5	Muffler (OH)	08-00120		3-1493L	Muffler (OH)	08-00210		
Piper J-3	1555001-1	Muffler (OH)	08-00121		Bellanca Citabria	4-1104	Muffler (OH)	08-00211		
	PA18	71053-02	Muffler (OH)	08-00122			4-1105	Muffler (OH)	08-00212	
PA22	12433-014	Muffler (OH)	08-00123		Bellanca 8KCAB	099001-046	Muffler (OH)	08-00213		
	12457-002	Stack (OH)	08-00124		Bellanca 8GCBC	099001-046	Muffler (OH)	08-00214		
	10308-003	Muffler (OH)	08-00126		Bellanca 7GCAA	099001-050	Muffler (OH)	08-00215		
	12043-22	Stack (OH)	08-00127		Bellanca 7GCBC	099001-050	Muffler (OH)	08-00216		
	12043-23	Stack (OH)	08-00128		Bellanca 7ECA	099001-049	Muffler (OH)	08-00217		
PA28-140/180	99482-00	Muffler (OH)	08-00129		Grumman AA1 Yankee	099001-113	Muffler (OH)	08-00218		
	99482-02	Muffler (OH)	08-00130		Grumman AA1 A&B	099001-137	Muffler (OH)	08-00219		
	99044-02	Stack (OH)	08-00131		Grumman AA5 Traveler	099005-148	Muffler (OH)	08-00220		
	99044-04	Stack (OH)	08-00132		Grumman AA5A Chetah	099005-195	Muffler (OH)	08-00221		
	99044-05	Stack (OH)	08-00133		Grumman AA5B Tiger	099001-191	Muffler (OH)	08-00222		
	99044-03	Stack (OH)	08-00134			Mooney M20	630060-501	180 Muffler (OH)	08-00223	
PA28-151/161/180/191	66894-03	Muffler (N)	08-00135			630060-503	200 Muffler (OH)	08-00224		
PA28R-180/200	67517-00	Muffler (N)	08-00136							

te r ater e cripti n in icate e r ver a le c n iti n ll ver a le part carr a care car e lea e r er acc r in t r art

# HEAT BOXES – HEAT SHIELDS



## VHT FLAMEPROOF COATINGS

Originally designed for NASA's reentry spacecraft, VHT FlameProof is a scientifically formulated compound designed to withstand temps. up to 1500°F (816°C) VHT FlameProof coatings are capable of withstanding extreme environments of spacecraft, satellites, military aircraft, and motor sports. It survives where other paints can't, shields & protects, maintains the finish, prevents rust & corrosion, and resists oils & solvents. For aircraft applications the typical use is on high temperature steel components such as exhaust & turbocharging systems. Excellent for use as a heat resistant and anti-corrosion coating on exhaust manifolds and turbine casings. Both the Flat Aluminum and Flat Black are non-facing colors.

Flat Aluminum 16 oz. aerosol spray..... P/N 08-00713.....  
 Flat Black 16 oz. aerosol spray..... P/N 08-00714.....  
 Flat Black Quart Can..... P/N 08-00716.....



## THERMO-TEC HEAVY-DUTY SPRAY ADHESIVE

Thermo-Tec's new Heavy-Duty Spray Adhesive is a fast-drying, quick-bonding, high temperature contact adhesive. Use it wherever you need a secure, long-lasting, easy-to-apply bond. It is available in a generous 16.75 oz. can.

P/N 08-01026.....

## BLACK SATIN COATING

The easiest to apply, Black Satin also requires bead or sand-blasting of all parts. It does not, however, require oven curing or burnishing. One 4oz bottle will cover one average exhaust system and will provide a long-lasting flat black finish.

4 oz..... P/N 13-01024.....



## EXHAUST HEAT SHIELD



This heat shield is placed on exhaust where fuel lines, cable, etc. are close to exhaust and where heat may be a problem.

Mounts with stainless radiator type clamp (not included). Fits exhaust pipes up to 2.5" diameter. Very popular on RV's and other homebuilt aircraft.

Single Unit..... P/N 08-00050.....  
 Double Unit..... P/N 08-00051.....

## RADIANT HEAT SHIELD KIT



The purpose of this kit is to help the aircraft home-builder make their own heat shields. Experience has shown that a heat shield is rarely over 8 inches, thus the 20 inches of shield material in the kit should provide the various lengths needed. You would not be limited to heat shields that are fixed in length. Also you can position the brackets in many configurations allowing the shield to be attached to the exhaust pipe without interference with bends, other clamps, probes, and so forth. You do not have to limit the location based on standard heat shield attachment configuration.

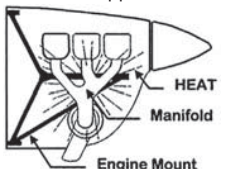
P/N 08-06286.....

## ENGINE MOUNT HEAT SHIELDS



Heat damaged O-470 & O-520 engine mounts are a definite problem area. You can easily protect these engine mounts from further damage with these heat shields. The aircraft manufacturers overlook providing heat protection in these areas when they designed and produced the aircraft. INSPECT ENGINE MOUNTS. Flaking paint, deterioration or pitting leads to cracking, and breakage – in other words, an UNSAFE CONDITION. If you want long-lasting protection from corrosion damage, the solution is install custom engine mount heat shields that are FAA & STC/PMA approved.

Avoid downtime and save money on airplane maintenance with this practical new device. The heat shields are built from an extremely durable 6061-T6 aluminum alloy and install in minutes. The complete kit includes installation hardware, instructions & copy of the Supplemental Type Certificate.



For Cessnas: Heat shield kit for 180, 180A-H, 180J, 180K, 182, 182A-R

P/N 08-01660.....  
 Heat shield kit 185A-E, A185F. Fits Standard and 3 bladed mounts. P/N 08-00767.....  
 Replace. Intake Shields (heavy duty) PMA'd. P/N 08-00769.....  
 Cowling Off Ground Run Filter for 1960-1986 carbureted Cessna 180/182..... P/N 08-01665.....  
 For Pipers: Heat shield kit for PA-30, PA-39 (4 shields prevent surging in hot weather)..... P/N 08-00768.....



## CARBURETOR INTAKE ASSEMBLIES (HEAT BOXES)

P/N A40522 for Continental A-65 through C-125. Also fits Lyc. O-235, O-290, O-320 engines with MA3SPA, MA4SPA carburetors. Complete assembly includes heat box, filter, gaskets, studs and pins. Not for Certified Aircraft, Homebuilts Only.

Component	Part No.	Price
Heat Box	50256	
Filter	A40599	
Gasket	35923	
Studs (4 required)	24306	
Pins (4 required)	24308	
Bottom Carb. Gasket	21323	
A40522 Assembly	08-01300	

## CONT. O-200 HEAT BOX CESSNA 170 STYLE HEAT BOX



For Cont. O-200 engine as used on Cessna 150. Also fits Cessna 120, 140, and PA-22 Tripacer. Order filter, gaskets, studs & pins separately.

P/N 641534.....  
 Cable 'B' Nut..... P/N 05-16245.....  
 Heat Box for Cessna 170 - Similar to P/N 641534 above, but larger P/N 08-01625.....  
 Similar to Cessna 170 box. Fits Lyc. O-360, O-470, etc. Uses bracket BA-5110 filter..... P/N 08-01630.....

## LYCOMING AND CONTINENTAL CARBURETOR HEAT BOXES



Lycoming O-320 and Continental A65-100 Carb Heat Boxes. The 100-320 is 2-1/2" diameter height is 1" smaller flange.

Lycoming O-320 Carb Heat Box..... P/N 05-01388.....  
 Cont. A65-100 Carb Heat Box..... P/N 05-01387.....

## CARB HEAT BOXES FOR PUSHER AIRCRAFT

Designed for airplanes and rotorwing aircraft with engines in pusher configuration using MA3/MA4 carburetors (not MA4-5). Uses same baskets as J-3 & C-150 boxes. P/N 08-00855.....

## USHER CARBURETOR HEAT BOXES

These high quality carburetor heat boxes are available for most common Lycoming & Continental engines. Not FAA approved. (Shown here with tube)

K1F Heat Box w/o tube..... P/N 08-01601.....  
 K1M Heat Box with tube..... P/N 08-01602.....  
 KO320 Heat Box with tube..... P/N 08-01603.....  
 KO360 Heat Box with tube..... P/N 08-01604.....



## CARBURETOR INTAKE BOX BRACKET FOR CESSNAS



This carburetor intake box bracket mounts on top of the heat box and attaches to the engine to provide support for the heat box. Fits Cessna 150. P/N 08-01305.....

## CARBURETOR HEAT BOX REPAIR KITS



Prevent carburetor heat box cracking - a common problem on Cessna 150 aircraft and Cont. O-200 engine. Kit consists of actuating shaft, 2 bearing assemblies and arm. Kit no. FG100 fits Cont. O-200-A, B, C

Engines. Kit No. FG105 fits Cont. O-300-A, B, C, D, E engines.  
 Model FG100..... Kit No. 08-01309.....  
 Model FG105..... Kit No. 08-01310.....

## ECONOMY CARB HEAT BOX REPAIR KITS



These kits include new shaft & bearings.  
 Kit for Cont. C-85, C-90, O-200 Engine P/N 07-00110.....  
 Kit for Cont. C-145, O-300 Engine P/N 07-00120.....

Repair in tallies in certified aircraft

## CARB HEAT BOX ARM HOLE REPAIR KIT

Use this kit to repair an elongated hole in the carburetor heat box actuating arm. Kit comes complete with new bolt and attaching hardware made of stainless steel. P/N 07-00130.....



## CARBURETOR INDUCTION MANIFOLD (INTAKE SPIDER)

For O-200 engine..... P/N 35145A-1.....  
 For A-65, C-75, C-85 & C-90 engines. P/N 35145.....



# EXHAUST GASKETS – HEAT MUFFS



## AERONCA HEAT MUFF

Aluminum muffers for models 7AC and 11AC exhaust stacks. Fit either left or right side.

P/N 05-08715.....

## CESSNA TYPE HEAT MUFF

Heli-arc welded aluminum muff with rustproof stainless steel fins for clamping to stack. Similar in design to the new Cessna type. Furnished with attaching clamps.

Muff w/2" Outlet..... P/N 08-02400  
Muff w/ 2.5" Outlet..... P/N 08-02500

## VARIEZE / LONG EZ CARBURETOR HEAT BOX

This box is an improved redesign of the original heat box. It eliminates the possibility of engine stoppage caused by worn parts plugging the carburetor intake.

Without Filter..... P/N 08-01600  
VE/LE Heat Box Repair Kit ... P/N 08-01610  
VE/LE Filter Only..... P/N 08-01615  
VE/LE Filter Cleaner Kit (cleaner & oil)  
P/N 08-01620.....

## EXHAUST MANIFOLD NUTS



Part No.	Thread	Type	Engine Application	Price Each
21247	1/4-28	Brass	Cont. O-480	
22022	5/16-24	Brass	Cont. A-65, C-75 thru C-90, O-200, O-300	
STD1410	5/16-18	Steel	Lycoming	

## STAINLESS STEEL EXHAUST STUDS FOR LYCOMING ENGINES

These high quality exhaust studs are produced from corrosion resistant 321 stainless steel in 5/16 x 18 standard thread size (oversize available soon) and are a direct replacement for the Lycoming part number 31C12 stud. FAA approved for all Lycoming engines from 0-235 thru 0-540. P/N 08-06780.....

## BLO-PROOF EXHAUST GASKETS

These gaskets are manufactured in a 1-piece design in 7/64" thick steel. They have a split metal inner ring which provides an absolute seal and they are guaranteed not to blow off. Engine manufacturer's parts.

Continental P/N 627429 for all A, C and E Series..... Ea  
Continental..... P/N 628260 for 0-470-R..... Ea  
Lycoming P/N 77611 for 4 & 6 Cylinder Engines..... Ea

## COPPER EXHAUST GASKETS

Continental P/N 21493 (now P/N 632837 stainless steel)  
Cont.#21493 for A-65 to 0-300 (4)  
P/N 08-05237..... Ea  
Cont. #632837 Stainless Steel..... Ea  
Lycoming 0-235 to 0-540..... P/N 65321..... Ea

## AIRBORNE SOLID COPPER BLO-PROOF GASKETS

2 gaskets used per cylinder, with raised beads interlocked facing the exhaust stack flange. Eight required for 4 cyl. engine, 12 for 6 cyl. engine.

Engine Model	Air borne P/N (Use 2/Cyl.)	Price Each
All Lycoming Engines except IO-540-B,-E,-M,-WD,IGO-540-B,IGSO-540-B,TIO-540 series,TIO-541 series TIGO-541 series, IO-540-B,-E,-M,-WD,IGO-540-B,IGSO-540-B	160	
TIO-540 Series, TIO-541 Series, TIGO-541 Series	161	
A-65 Series, C-85 Series, C-90 Series, O-200 Series, O-300 Series, GO-300 Series, E-185 Series, E-225 Series, O-470-A, -E, -J, IO-470-J, -K	157	

## ROTAX EXHAUST SPRING 938-795

Genuine Rotax replacement spring for use with any Rotax exhaust system. #938-795 Spring. 2 1/4" x 5/8"  
P/N 08-06101.....

## EVLAR HEAT SHIELD

\* Can be used for various uses\* Can be used as a header blanket\* Improve driver comfort\* Protect engine components\* Continuous heat up to 1100 degrees F\* Reflects 90% of radiant heat up to 3000 degrees F. \* Size: 26" x 40" Sheet  
P/N 08-07162.....



## EXHAUST INSULATING WRAP

The original Exhaust Insulating Wrap was developed over 14 years ago by Thermo-Tec. Exhaust Insulating Wrap is an innovative way to create more horsepower and reduce under-hood temperatures. Wrapping headers maintains hotter exhaust gases that exit the system faster through decreased density. Increased exhaust scavenging is produced, along with lower intake temperatures. Exhaust Insulating Wrap withstands continuous heat up to 2000°F, and contains no asbestos. Thermo-Tec exhaust wrap will not over-insulate a system when properly installed due to a proprietary coating developed by Thermo-Tec -- Thermal Conduction Technology (TCT) -- that conducts heat across the wrap's surface. This coating controls heat build-up and dissipation. The Header Wrap is sold in 2" wide, 50'rolls with a low profile 1/6" thickness. P/N 09-41600.....

## CLAMP ON HEAT SHIELDS

The new and improved flexible clamp on pipe heat shield blocks over 95% of the damaging radiant heat of the exhaust. The High-tech composite construction of the heat shield provides the ultimate in protection. The kits come complete with all clamps and new stainless stand offs. Installs in minutes. Clamp-on pipe heat shields are available in one, two and three foot lengths. Clamp-on pipe heat shields incorporate Thermo-Tec's proprietary coating technology developed by Thermo-Tec, Thermal Conduction Technology.

6"X 1..... P/N 08-07073  
6" X 2..... P/N 08-07074.....

## HI-HEAT COATING

To finish off a clean and well-protected Exhaust Insulating Wrap application we recommended the use of Hi-Heat Coating. The coating will protect the wrap from abrasion and harmful liquid spills. Extra resins and binders toughen the surface, extend the life of wrap by protecting it from friction, and seal the pores to minimize the penetration of harmful liquids. The 11 oz. coating comes in black and aluminum colors. Black..... P/N 08-06725  
Aluminum..... P/N 08-06730.....

## SNAP STRAPS

The multi-purpose stainless steel Snap Straps are used to secure the Exhaust Insulating Wrap -- and more. The high-temperature stainless steel straps have a narrow profile to fit tight spots, and can be cut to the exact length needed. Snap Straps secure with easy-to-use slide-through fasteners. 9" 12 pack..... P/N 08-13150  
18" 6 pack..... P/N 08-13160.....

## ALUMINIZED HEAT BARRIER STOPS UNWANTED HEAT TRANSFER

Keep heat where you want it with this hi-tech aluminized heat blanket. Thickness, 0.060". Furnished in 36"x40". Sheets (10 Sq. Ft.) P/N 08-06735..... ea.

## STEEL EXHAUST STACK FLANGES MILD STEEL

Cont. A&C Series, 0-200, 0-300..... P/N 33011..... Ea  
Lycoming 0-235 to 0-540..... P/N 33021..... Ea

## STAINLESS STEEL

Continental A & C Series..... P/N 33101..... Ea  
Continental IO-470 thru IO-520..... P/N 33103..... Ea  
Lycoming 0-235 thru IO-360..... P/N 33102..... Ea  
Lycoming IO-540..... P/N 33104..... Ea

## EXPRESS SLEEVES

Express Sleeves are just the thing that our customers have been looking for. An new easy to use sleeving which is a combination of a high temperature insulation material to a highly reflective mylar foil with a Velcro closure. The sleeving is designed to provide maximum protection for wires, hoses, and cables from the very damaging effect of radiant heat with an easy application. Simply pull apart the material, wrap around the wire, and re-close the sleeving. Express Sleeves reflect over 90% of radiant heat, is fireproof and fire resistant, and just looks good. Express Sleeves come in 1 1/2" diameter in 3' & 12' lengths.

Description	Size	PN	Price
Thermo-Tec Express Sleeve	1-1/2" X 3"	09-02060	
Thermo-Tec Express Sleeve	1-1/2" X 12"	09-02061	

## THERMO-GUARD FR

Thermo-Guard FR offers the best in head and sound insulation. This lightweight, durable shield does everything: reduces sound, absorbs vibration, protects from radiant heat and provides an extra layer of insulating padding. The product features 100% synthetic fiber felt that provides sound and comfort control and high-tech foil heat barrier that blocks more than 90% of radiant heat. 48"x72" 1-Sided..... P/N 08-01028  
48"x72" 2-Sided..... P/N 08-01029.....



# EXHAUST INSULATING PRODUCTS

Ultra-high temperatures produced by today's engines have a dramatic effect on performance. Solution? Thermo-Tec's full line of high performance heat control products that focus on utilizing heat as a performance tool. For over 15yrs Thermo-Tec has been developing & manufacturing products for the Automotive Performance, Aerospace & OEM industries.



## HIGH VELOCITY EXHAUST JACKET

The quick-wrap high-velocity Exhaust Jackets are an innovative way to insulate and block radiant heat. The jackets cover the tubes vertically allowing for a consistent fit. The fit allows the exhaust system to expand as it comes up to operating temperatures without restrictions and provides air space for added insulation. This product uses Thermal Conduction Technology (TCT), developed by Thermo-Tec, and can be applied with the headers in the vehicle.

4-6 cyl. kit...P/N 08-00597 ..... 8 cyl. kit...P/N 08-00598 .....

## SPARK PLUG WIRE HEAT SHIELD



The ultimate protection for spark plug wires and boots from conductive and radiant heat. The dual-purpose sleeve has a surface that reflects over 90% of radiant heat, while the inside silica-based fabric prevents conductive heat from penetrating. P/N 08-00612.....

## TURBO KIT



The Turbo Kit was designed to protect, improve performance, and eliminate turbo lag of a turbo charger. This complete kit, to contain the heat produced by a turbo, fits a wide variety of turbines. The custom cut-to-fit kit comes with an excessive amount of material to cover turbos from the smallest automotive application to heavy-duty truck applications. 2 Turbo Kits are available: a 4 cyl. kit & a 6 - 8 cyl. kit.

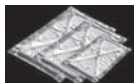
4 cyl. kit...P/N 08-00613..... 6-8 cyl. kit...P/N 08-00614.....



## MUFFLER/CAT HEAT SHIELD KIT

The 40"x 24" mylar Heat Shield is made up of woven silica with a flexible mylar finish. The highly-reflective heat shield can be installed between the catalytic converter, muffler, or any other component to reflect radiant heat away from the undercarriage of the car. The kit includes all necessary fasteners.

P/N 08-00616.....



## HEAT TERMINATOR ULTRA-LITE

Designed with the racer in mind, Heat Terminator is made of the highest-quality insulating materials available today. The material is made of a highly-textured aluminum composite surface on one side, with a high-temperature silica felt center and a durable mylar composite facing. The Heat Terminator uses Thermal Conduction Technology (TCT), developed by Thermo-Tec.

8"x 12".....P/N 08-00617 ..... 10"x 18".....P/N 08-00618 .....  
18"x 18".....P/N 08-00619 ..... 18"x 24".....P/N 08-00620 .....  
24"x 24".....P/N 08-00621 ..... 24"x 36".....P/N 08-00622 .....



## STARTER HEAT SHIELD

In today's high-heat environment, starters take in a lot of damaging heat that destroys the windings of the starter & solenoid. To combat this problem, Thermo-Tec created a non-conductive strap-on heat shield with a highly-reflective mylar surface. The Starter Heat Shield will reflect over 90% of radiant heat, adding life to the starter and assuring reliable starts. The Starter Heat Shield is a universal kit that fits all starters. P/N 08-00611.....



## THERMO SHIELD

Thermo-Shield protects hoses & wires from radiant heat. Used in applications where it is difficult or not practical to disconnect one end of the hose or wire. The adhesive-backed composite construction tape can easily be wrapped around the hose or wire to make a clean, professional appearance. 15"x 1.5" roll. P/N 08-00602.....



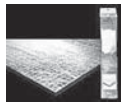
## THERMO-FLEX

Thermo-Flex Aluminum is a composite heat shield material with unlimited uses. The material is manufactured with a combination of materials to provide abrasion-resistance, thermal insulation, and physical containment of hoses and wiring. The combination of aluminum, silica, and stainless steel is combined to produce a sleeving that is flexible, lightweight, and strong. The aluminum-silica combination can be slit for applications such as wire looms or hose covering without disconnecting the ends of the wire or hoses. Thermo-Flex Aluminum can withstand extreme temperatures of up to 750°F. Packaged in 10 ft. lengths.

5/8".....P/N 08-00623 ..... 1.25".....P/N 08-00626 .....  
0.75".....P/N 08-00624 ..... 1.5".....P/N 08-00627 .....  
1".....P/N 08-00625 ..... 3".....P/N 08-00628 .....

## FIREPROOF SHIFTER BOOT

The Fireproof Shifter Boot is made up of woven silica with a flexible Mylar finish. The shifter boot was developed as a fire barrier for high speed engine fires, which can burn away rubber boots in seconds. P/N 08-00615.....



## COOL-IT MAT

Use the Cool-It Mat to battle excessive heat and noise that penetrate the driver compartment through the firewalls and floorboards. It is also perfect in doors, under hoods, and above transmission housings. Cool-It Mat is composed of resin-bonded silica blanketing insulation sandwiched between a mylar facing on one side and a foil facing on the other. The highly-reflective mylar reflects heat away from surfaces, while the foil side is orientated away from the heat source to conduct any penetrating heat across its surface thus providing the ultimate in heat protection. The silica blanketing is a dual-density composite and is the main sound insulator. It is easy to trim and can be applied with the push-in fasteners provided or any weather strip adhesive. P/N 08-00610.....



## THERMO-SLEEVE

Lamination of a high-temperature fabric to a highly-reflective foil is the makeup of Thermo-Sleeve, which provides protection from radiant heat for hoses and wires.

Thermo-Sleeve's ultra light-weight construction provides more insulating than traditional bulky rubber-coated fiberglass. The aluminized sleeving reflects over 90% of radiant heat, and is fireproof & oil resistant. Comes packaged in 12-ft lengths, and sold in 5 different inside diameter sizes.

12" 1/2" ID.....P/N 08-00605 ..... 12" 1" ID...P/N 08-00606 .....  
12" 1-1/2" ID...P/N 08-00607 ..... 12" 2" ID...P/N 08-00608 .....  
12" 2-1/2" ID...P/N 08-00609 .....



## HEAT BARRIER - ADHESIVE BACKED

Aluminized Heat Barrier is made up of woven silica with a flexible aluminized finish. The highly reflective surface of the material is capable of withstanding radiant temperatures in excess of 2000°F. The adhesive backed composite construction material can easily be applied to any surface or wrapped around a hose or wire to make a clean professional appearance. Note: Clean surface before applying. Adhesive is rated up to 300° F. Don't apply to any parts of exhaust system. This product is designed to block radiant heat only!

12" x 12".....P/N 08-00630 ..... 12" x 24".....P/N 08-00600 .....



## HEADER MANIFOLD BLANKET

The Header Manifold Blanket provides excellent heat-retention for exhaust headers and manifolds. This flexible heat shield simply clips into place on the upper portion of the header. The fabric side of the material should be facing the heat source, and the aluminized side facing away, offering protection from abrasion and harmful liquid spills. Available in two sizes: (2) 20" by 24" blankets for V6 & V8 applications, and (1) 36" x 40" blanket for straight 6 & 4 cylinder engines.

20"x24".....P/N 08-00603 ..... 36"x40".....P/N 08-00604 .....



## COOL-IT PLUG WIRE SLEEVES

This unique spark plug & ignition wire protector comes in five sporty colors: red, orange, blue, black & natural. These dual-purpose sleeves enhance performance, reduce misfires, extend plug wire life and will not react with petroleum products. The double-wall construction keeps the wire and boot cooler in a high-temperature engine. Its universal size fits most boots, is easy to install & non-flammable.

4-Pack.....P/N 08-01027 ..... 6-Pack.....P/N 08-01030 .....



## GRAPHITE BLACK WRAP

Graphite Black Wrap offers the same unrivaled performance and insulating properties as our original exhaust wrap and more. Traditionally, high-heat coating spray had to be applied to the exhaust wrap to color it black. Now new Graphite Black Wrap eliminates the process of coating the wrap with its patented Thermal Conduction Technology (TCT) high-heat color pigment. Graphite Black Wrap is available in 2" widths, in 50-ft rolls.

P/N 08-00596 .....



## GENERATION II COPPER HEADER WRAP

Generation II Copper Header Wrap improves heat resistance up to 30% more than current technology, by utilizing a new proprietary coating developed by Thermo-Tec; improved Thermal-Conduction-Technology (T-C-T). Creates more horsepower & reduces underhood temps, increases exhaust scavenging, withstands continuous heat up to 2000°F, contains no asbestos. Sold in 1" or 2" wide, 50 ft rolls with low profile 1/16" thickness.

1"X50.....P/N 08-11031 .....

2"X50.....P/N 08-11032 .....



## MICRO LOUVER AIR SHIELD

Lightweight yet durable, the aluminum Micro Louver Air Shield features micro air louvers, which allow air to flow through the metal shield. The movement of the vehicle creates dynamic air flow, cooling by natural convection. The textured surface created by the micro air louvers creates more area for heat dissipation. The Micro Louver Air Shield is flexible yet durable; it bends and flexes easily by hand, making a custom fit trouble-free.

12"X24".....P/N 08-11710 .....

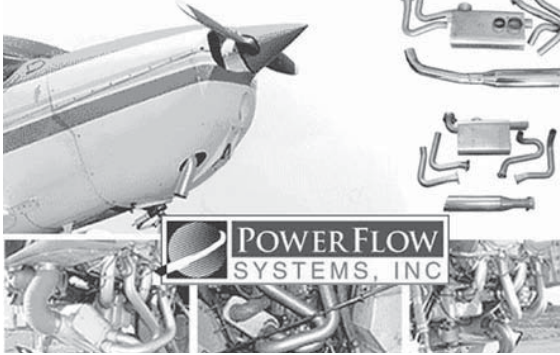
24"X24".....P/N 08-11720 .....

48"X24".....P/N 08-11740 .....

EP

# POWER FLOW SYSTEMS INC. EXHAUST SYSTEMS

**BOLT ON  
HORSEPOWER  
GUARANTEED**



**POWER FLOW  
SYSTEMS, INC**

Power Flow Systems, Inc., the world leader in designing, manufacturing, and retailing of FAA Certified High Performance aircraft tuned exhaust systems.

Their Tuned Exhaust System is totally different. When you break down their exhaust system, you have two "sets" of pipes; the primary (header/collector combination) and the secondary (pipe after the collector). The primary contains four independent tubes that all join at the "4-1 Collector". As each "exhaust puff" of spent fuel travels through the primaries, it leaves a vacuum behind. In their tuned exhaust system, they have adjusted the length of each tube so that the vacuum reaches the collector just in time to "suck out" the exhaust from the next cylinder. The exhaust gases are not only being pushed out by the cylinder, but "extracted" by the vacuum, so a bigger, fresher charge will enter the cylinder during the next cycle. A tuned exhaust system really promotes a smoother, cooler, and finally more powerful running engine.

Benefits with Power Flow Systems:

- Shorter Take Off Roll
- Greatly Improves Rates of Climb
- More Usable Power
- Fuel Savings at Current Speeds
- Smoother Running Engine
- Runs cooler at Current Speeds
- Go up to 8 knots faster
- Mandrel Bent Tubes to maintain consistent interior dimension

Kit Contents:

- Kit includes everything to "bolt on" a Complete Replacement Exhaust System
- New Headers, Heater, & Muffler
- No blow gaskets, Nuts, Lock washers, Flat washers, Cotter pins etc.
- Stainless Steel Construction
- Up to 40% thicker than stock
- New Improved Heating System

EP

Airplane	Type of System	Power Flow P/N	Old P/N	Price
Cessna 172 C-172 w/ O-320	Classic Polished	PFS-13204	08-00358	.
	Classic Ceramic	PFS-13204-Ceramic	08-05957	.
	Short Stack Polished	PFS-13204-InternalC	08-05958	.
Cessna 172 or 175 C-172 w/ O-360	Short Stack Ceramic	PFS-13204-Internal-CCER	08-05959	.
	Classic Polished	PFS-13204-O360	08-00359	.
	Classic Ceramic	PFS-13204-O360-Ceramic	08-05960	.
Cessna 177 C-177 w/ O-320	Short Stack Polished	PFS-13204-O360-InternalC	08-05961	.
	Short Stack Ceramic	PFS-13204-Internal-CCER	08-05962	.
	Classic Polished	PFS-13704	08-00360	.
Cessna 177A C-177 w/ O-360	Classic Ceramic	PFS-13704-Ceramic	08-05963	.
	Short Stack Polished	PFS-13704-InternalC	08-05964	.
	Short Stack Ceramic	PFS-13704-Internal-CCER	08-05965	.
Cessna 177B (O-360)	Classic Polished	PFS-13704-O360	08-00361	.
	Classic Ceramic	PFS-13704-O360-Ceramic	08-05966	.
	Short Stack Polished	PFS-13704-O360-InternalC	08-05967	.
Cessna 177RG (IO-360)	Short Stack Ceramic	PFS-13704-O360-InternalCCER	08-05968	.
	Classic Polished	PFS-13705	08-00880	.
	Classic Ceramic	PFS-13705-Ceramic	08-05969	.
Grumman AA-5 (below serial #640)	Short Stack Polished	PFS-13704-InternalC	08-05970	.
	Short Stack Ceramic	PFS-13705-Internal-CCER	08-05971	.
	Classic Polished	PFS-15102-CERAMIC	08-07165	.
Grumman AA-5 (above Serial #640) & Grumman AA-5A	Short Stack Polished	PFS-13706	08-07163	.
	Short Stack Ceramic	PFS-13706-CERAMIC	08-07164	.
	Classic Polished	PFS-13801	08-00635	.
Grumman AA-5B & AA-5B	Classic Ceramic	PFS-13801-Ceramic	08-05972	.
	Short Stack Polished	PFS-13801-InternalC	08-05973	.
	Short Stack Ceramic	PFS-13801-Internal-CCER	08-05974	.
Grumman AA-5A	Classic Polished	PFS-13802	08-00636	.
	Classic Ceramic	PFS-13802-Ceramic	08-05975	.
	Short Stack Polished	PFS-13802-InternalC	08-05976	.
Grumman AA-5B & AA-5B	Short Stack Ceramic	PFS-13802-Internal-CCER	08-05977	.
	Classic Polished	PFS-13803	08-00637	.
	Classic Ceramic	PFS-13803-Ceramic	08-05978	.
Grumman AA-5B & AA-5B	Short Stack Polished	PFS-13803-InternalC	08-05979	.
	Short Stack Ceramic	PFS-13803-Internal-CCER	08-05980	.

Airplane	Type of System	Power Flow P/N	Old P/N	Price
Glastar & Sportsman 2+2 Experimental/Homebuil	Polished	PFS-16104	08-04986	.
	Ceramic	PFS-16104-Ceramic	08-05981	.
Piper PA-28-140	Classic Polished	PFS-14150	08-05924	.
	Classic Ceramic	PFS-14150-Ceramic	08-05982	.
	Short Stack Polished	PFS-14150-InternalC	08-05983	.
	Short Stack Ceramic	PFS-14150 - Internal-CCER	08-05984	.
Piper PA-28-150, 160 w/ Dynafocal Mounts (Below Serial #1761)	Classic Polished	PFS-14150	08-05985	.
	Short Stack Polished	PFS-14150-Internal-InternalP	08-05987	.
	Short Stack Ceramic	PFS-14150-InternalP-CER	08-05988	.
Piper PA-28-150, 160 w/ Conical Mounts (Below Serial #1761)	Classic Polished	PFS-14151	08-04985	.
	Classic Ceramic	PFS-14150-Ceramic	08-05986	.
	Classic Ceramic	PFS-14151-Ceramic	08-05989	.
	Short Stack Polished	PFS-14151-InternalP	08-05990	.
Piper PA-28-180 (Below Serial #1761)	Short Stack Ceramic	PFS14151-InternalP-CER	08-05991	.
	Classic Polished	PFS-14150	08-05992	.
	Classic Ceramic	PFS-14150-Ceramic	08-05993	.
	Short Stack Polished	PFS-14150-InternalP	08-05994	.
Mooney M20 (B,C,D,G) w/ O-360	Short Stack Ceramic	PFS-14150-InternalP-CER	08-05995	.
	Polished	PFS-16101	08-00694	.
Mooney M20 (E,F,J) w/ IO-360	Ceramic	PFS-16101-Ceramic	08-05996	.
	Polished	PFS-16201	08-01219	.
Diamond DA 40	Ceramic	PFS-16201-Ceramic	08-05997	.
	Polished	PFS-15102	08-05949	.
Raytheon Beechcraft 23 (O-360)	Ceramic	PFS14152-Ceramic	08-05998	.
	Polished	PFS-14152	08-05950	.
	Ceramic	PFS-13804-Ceramic	08-06000	.
	Polished	PFS-113804	08-05999	.

# EXHAUST SYSTEMS

All exhaust stacks are heli-arc welded using Type 321 stainless steel tubing for light weight and long service life. Stainless steel stacks weight 50% less than a set in mild steel. All stacks are custom made and the workmanship is consistently of exceptional quality.

**WHEN ORDERING, SPECIFY COMPLETE MODEL NUMBER AND HP OF ENGINE AND AIRCRAFT TYPE.**

## STRAIGHT STAINLESS STEEL EXHAUST STACKS



Basic exhaust pipes for Pitts Special, Smith Miniplane, Acro Sport, Starduster and many other homebuilts with Lycoming engines O-235 through O-360. This exhaust system fits under the intake tubes, starting at the rear cylinders, around the front intake tube, then points

aft. Two mufflers (P/N 33205) or two tail pipes (P/N 33204) can be used with this system. With stainless swivel joints for vibration dampening and for positioning of tail pipes through 25° range. Wt. 7-1/4 lbs.

Set of two basic stacks consist of  
 Right Hand, P/N 33202 & Left Hand, P/N 33203  
 Set of Two.....P/N 33202/33203.....  
 (Tail Pipes not included.)



System for Lyc. O-320B (Fuel-Injected)  
 Tightest system for this engine.  
 P/N 33270-1.....  
 (Tail Pipes not included.)

### ADD OPTIONS:

#### STRAIGHT TAILPIPES



P/N 33204 (14")..... Pr. P/N 33204-24 (24")..... Pr.  
 P/N 33204-18 (18")..... Pr. P/N 33204-28 (28")..... Pr.  
 P/N 33204-20 (20")..... Pr. P/N 33204-36 (36")..... Pr.

#### MUFFLER WITH 8" TAILPIPE (NO HEAT EXCHANGER)



P/N 33205..... Ea.

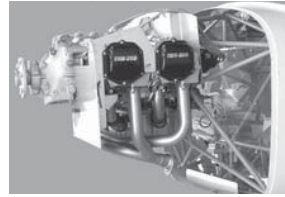
#### MUFFLER WITH 8" TAILPIPE & HEAT EXCHANGER



2" Dia. Inlet & Outlet.....P/N 33206-1..... Ea.  
 2-1/2" Dia. Inlet & Outlet.....P/N 33206-2..... Ea.  
 en r erin m ler it eat ec an er a vi e i inlet tlet  
 pipe iameter tert an r i pre erre  
 en r erin m ler it eat ec an er a vi e iameter  
 inlet an tlet pipe pre erre r ter

## HOMEBUILDERS SPECIAL STACKS

Designed to fit Lycoming engines O-235 to O-360. Mild steel. These stacks do not fit Pitts Special. Applicable to many home builts. Wt. 7.25 lbs.  
 P/N 08-01900-1.....



## STAINLESS STEEL CROSSOVER EXHAUST SYSTEMS

A exhaust system allows your engine to breathe properly by reducing crossover back pressure and by picking up the correct firing order of the cylinders. This results in increased HP compared to an untuned exhaust. The added HP will

be evident as higher takeoff RPM, higher cruise speed and lower fuel consumption.

This crossover system fits all Lycoming engines from O-235 to IO-360 (180 HP) with bottom or aft mounted carburetors or fuel injection controllers. It is designed for tight cowling and in most cases no cowling modification will be necessary. If fit is the problem, custom tighter crossover systems are available by special order (Additional charges may apply). The system has slip joints between cylinders and ball joints where tail pipes or mufflers connect to collector tubes to prevent cracking due to expansion and vibration and to allow for positioning of the tail pipes. The exhaust system can be ordered in the following combinations:

With straight tail pipes

With two mufflers (no heat exchangers)

With two mufflers (one heat exchanger)

With two mufflers, both with heat exchangers.

All mufflers include removable 8" tail pipes. Heat shrouds have one inlet and one outlet for 2" or 2-1/2" flex tubing

impre in prin used on Exhaust System Ball Joints. 6 required per system. P/N 33703.....

### STANDARD CROSSOVER SYSTEM

Basic system with all Collector Tubes (Without Tail Pipes)

P/N 33251.....

DD  
 Straight Tailpipes (14").....P/N 33204..... Pr.  
 Muffler w/8" Tailpipe (no heat exchanger) ....P/N 33205..... ea  
 Muffler w/8" Tailpipe & Heat Exchanger. ....P/N 33206-1..... ea

### COMPLETE STANDARD CROSSOVER SYSTEM PRICES

Basic System with Two Straight 14" Tailpipes.

Ass'y # 33270.....

Basic System for O-320B w/o Tailpipes. ....Ass'y # 33270-1.....  
 System with 2 Mufflers, Removable 8" Tailpipes & No Heat Shrouds.

Ass'y # 33272.....

System w/2 Mufflers, 1 Heat Shroud for either Cabin heat or Carb. heat.....Ass'y # 33274.....

System w/2 Mufflers, Both w/ Heat Shrouds for Cabin heat & Carb. heat.....Ass'y # 33276.....

Stainless Crossover Systems for IO-360 (200HP)  
 Please specify front (35), bottom (40), or rear injector (45)  
 P/N 08-057-.....

De n t incl e tailpipe r eat m

### SPECIAL CROSSOVER SYSTEM FOR VERY TIGHTLY COWLED AIRCRAFT

De i ne r t e r p e R tan an  
 t er in c t en ine

Basic System with all Collector Tubes — Please furnish exact engine designation to insure proper fit. P/N 33250.....

Special Mufflers for the T-18 with Heat Shrouds for Cabin Heat and Carb. Heat. P/N 33250-1..... Ea.

Special Tailpipes for the T-18 (to be used when mufflers are not used). Comes with same ball joint as the mufflers and an attaching bracket. P/N 33250-2..... Pr.

**NOTE: PRODUCTS ON THIS PAGE ARE FOR EXPERIMENTAL AIRCRAFT AND ARE NOT FAA APPROVED. ALL EXHAUST SYSTEMS ARE SPECIAL ORDER AND ARE NON RETURNABLE**



# EXHAUST SYSTEMS

## EXHAUST SYSTEM FOR OSPREY AIRCRAFT

This stainless steel exhaust system is specifically designed for the Osprey Aircraft. Ideal for amphibians as the tailpipe exits vertically upward. Fits aircraft using the following engines: O-235 thru O-360. RH & LH Stacks Only



P/N 33420.....  
DD Muffler Only ..... P/N 33422.....  
Muffler with Heat Exchanger ..... P/N 33424.....

## EXHAUST SYSTEM FOR CONTINENTAL O-200

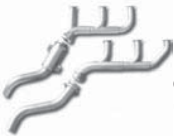
This universal stainless steel exhaust system is designed for experimental aircraft using Continental A65 thru O-200 engines. Consists of 2 manifolds, left hand manifold has heat shroud with 2-1/2" connection for carb heat. Muffler outlet are 3" long. Tailpipe extensions may be required, sold separately



Mufflers ..... P/N 33401 .....  
8" Tailpipe Extensions. Furnished with slip joint and pin clamp.  
P/N 33402 .....  
R D R R

## EXPRESS AIRCRAFT EXHAUST MANIFOLDS Y-STYLE

Fits Lycoming IO-540 (Angle Valve Engine) (Includes Custom 2-1/4" Tailpipes With Cabin heat shroud) (Optional studding to increase cabin heat available)

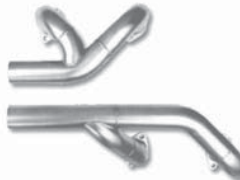


P/N 08-02105 .....

**WHEN ORDERING EXHAUST SYSTEMS, PLEASE SPECIFY COMPLETE MODEL NUMBER & HP OF ENGINE AND AIRCRAFT TYPE**

## STAINLESS STEEL STACKS FOR PUSHER TYPE AIRCRAFT

Designed specifically for tightly cowled engines. Exhaust fits inside of intake tubes.



Applicable to:  
For Continental C-85 thru O-200  
P/N 33601 .....

For Lycoming O-235 thru O-360 ..... P/N 33602.....

## COZY MARK IV PUSHER EXHAUST SYSTEM



This custom stainless exhaust system was designed specifically for the Cozy Mark IV aircraft.

For Lycoming O-235 to O-360 (180 HP or less)  
P/N 33702.....

For Lycoming IO-360 (200 HP) Angle Valve Engine  
P/N 33702-1.....

Replacement Cozy Extension Spring  
P/N 33704..... ea



**NOTE: PRODUCTS ON THIS PAGE ARE FOR EXPERIMENTAL AIRCRAFT AND ARE NOT FAA APPROVED. ALL EXHAUST SYSTEMS ARE SPECIAL ORDER AND ARE NON RETURNABLE**

## EXHAUST SYSTEM COMPONENTS

Fabricate your own exhaust system with these precision-formed type 321 stainless steel components.

### STAINLESS STEEL 45° & 90° BENDS

T in Si e	P/N	Ra i s	An e	Price
1-1/2" X .035	33241	2-1/2"	90°	
1-1/2" X .035	33242	2-1/2"	45°	
1-3/4" X .049	33236	1-3/4"	90°	
1-3/4" X .035	33243	2-7/8"	90°	
1-3/4" X .035	33245	4"	90°	
1-3/4" X .035	33237	5-1/2"	90°	
1-3/4" X .035	33244	2-7/8"	45°	
2" X .049	33238	2-1/2"	90°	
2" X .035	33246	4"	90°	
2-1/8" X .049	33239	2-3/4"	90°	
2-1/4" X .049	33240	2-3/4"	90°	
2-1/2" X .049	33247	4"	90°	
3" X .049	33248	4-1/2"	90°	



### STAINLESS STEEL 180° "U" BENDS

T in Si e	P/N	Ra i s	An e	Le Len t	Price Eac
1-1/2" X .035	33260	2-1/2"	180	6"6"	
1-1/2" X .035	33262	2-1/2"	180	10"10"	
1-1/2" X .035	33261	2-1/2"	180	11"14"	
1-3/4" X .035	33265	2-7/8"	180	6"6"	
1-3/4" X .035	33264	2-7/8"	180	10"10"	
1-3/4" X .035	33263	2-7/8"	180	11"14"	



### STAINLESS SWIVEL BALL JOINTS - CLAMP TYPE

T in I.D.	P/N	Ma e S	Fe a e S	Price
1-3/4" X 1-3/4"	33231	1-3/4"	1-3/4"	
1-3/4" X 2"	33232	1-3/4"	2"	
2" X 2"	33233	2"	2"	
2-1/2" X 2-1/2"	33234	2-1/2"	2-1/2"	
2-3/4" X 2-3/4"	33235	2-3/4"	2-3/4"	



**CUSTOM AIRCRAFT HARDWARE KIT - Ball Joint Hardware Kit.** Kit Includes: (3) Nuts (3) Bolts (3) Washers (3) springs Fits 33231 thru 33234  
P/N 08-07168 .....



### HYDRO-FORMED SLIP JOINTS - TWO PIECE UNIT 4" LONG

Slip joint Si e	P/N	Fan e Len t	Price
1-1/2"	33221	2-3/4"	
1-5/8"	33226	2-5/8"	
1-3/4"	33222	2-5/8"	
2"	33223	2"	
2-1/4"	33227	2"	
2-1/2"	33224	2-3/8"	
3"	33225	2-1/4"	



### STUB EXHAUST STACKS

Stainless tubing 6"L welded onto stainless exhaust flange.

1-1/2" x .035 for Continental (doesn't fit O-240)  
P/N 13352 .....

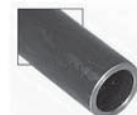
1-3/4" x .035 for Lyc. .... P/N 13354 .....



### STAINLESS TUBING FOR EXHAUST STACKS

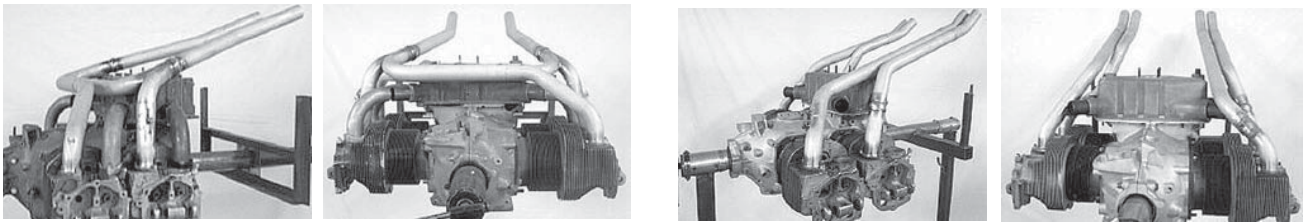
Stainless type 321 welded tubing for exhaust stacks.

T in Si e (O.D. x Wall)	P/N	Price per Ft.	Tubing Size (O.D. x Wall)	P/N	Price per Ft.
1-1/2" x .035	03-16300		1-3/4" x .035	03-16400	
			2" x .035	03-16500	



# EXHAUST SYSTEMS

## VETTERMAN RV EXHAUST SYSTEM



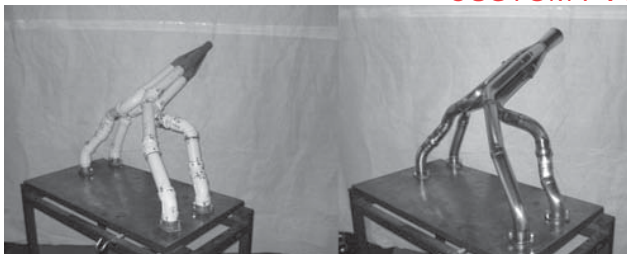
Vetterman Exhaust has been manufacturing exhaust systems for the Van's Aircraft RV series since 1990. Exhaust systems for all RV models & Van's approved engine models are available. All systems are manufactured from MIL Spec 321 stainless steel, which is mandrel bent, trimmed to length and tack welded on a Lycoming engine. This method assures the best fit possible. All systems incorporate ample slip & ball joints which greatly reduces breaking potential. All systems include blow proof gaskets, stainless exhaust nuts & washers for installation. Also include tail pipe mounting kits or pipe support brackets. Some systems also include a cabin heat muff.

AIRCRAFT	DESCRIPTION	P/N	PRICE
RV-3	O-320 Conical Mount 4 pipe sys.	08-00583	.
RV-3	O-320 Dynofocal Mnt. 4 pipe sys.	08-00584	.
RV-3	O-360 Dynofocal Mnt. 4 pipe sys.	08-00585	.
RV-4	O-320 Conical Mount 4 pipe sys.	08-00586	.
RV-4	O-320 Dynofocal Mnt. 4 pipe sys.	08-00587	.
RV-4	O-360 Dynofocal Mnt. 4 pipe sys.	08-00588	.
RV-4	O-320 Dynofocal Mnt. X-over sys.	08-00589	.
RV-4	O-360 Dynofocal Mnt. X-over sys.	08-00590	.
7-7A,8-8A,	*Includes tail pipe mounting kit	08-00591	.
RV-6,7,8,9A	*Includes tail pipe mounting kit	08-00592	.
RV 7-7A	*Includes tail pipe mounting kit	08-00593	.
RV8	*Includes tail pipe mounting kit	08-00594	.
RV 8A	*Includes tail pipe mounting kit	08-00595	.

EP

**NOTE: EACH OF THESE SYSTEMS WILL NOT INTERCHANGE BETWEEN AIRCRAFT AND ENGINE MODELS. THESE SYSTEMS ARE DESIGNED AND INTENDED FOR USE ON RV AIRCRAFT ONLY. PRICES DO NOT INCLUDE SHIPPING CHARGES.**

### CUSTOM PVC MOC UP ITS



Finished PVC Mock Up

Finished Exhaust System

- 18+ HP increase in some applications from a standard muffler system.
- These kits allow you to design and build your own system when there is not any other available to fit your airframe & engine combo.

Kit comes with 1 or 2 collectors and 4 or 6 stub risers, depending on engine size and style. Components are sized to fit 1.1/2" schedule 40 PVC, which is same OD (1.3/4") as finished primary tubes used. (Some Continental and Rotax may use different size PVC which will be specified in kit instructions) All PVC pipe and bends needed are standard stock at any hardware store. Kit comes with full instructions and details about equal length of tubing to collector theory and tips to obtaining the most horsepower depending on your engine style. When you send your completed mockup to us we build a fixture around it and build an identical system using polished 321 stainless steel. Kits come complete with hardware, clamps, cabin and carb heat shrouds. After the order feel

free to call or E-mail us with any questions while building the mock up. When the system arrives customers will be in direct contact with a fabricator to ensure correct placement and size of components like ball joints, heat shrouds and parts and to answer any questions. Kits available for 4 and 6 cylinders: \* Rotax \* Continental \*Lycoming \*Jabiru

4 into 1.....P/N 08-00673.....

Dual 3 into 1.....P/N 08-06158.....

# NICROCRAFT EXHAUST PARTS

## NICROCRAFT EXHAUST PARTS BUILT TO TAKE THE HEAT

Aircraft Spruce & Specialty Co. offers fully overhauled and factory new exhaust components for use in most general aviation aircraft. Manufactured by Wall Colmonoy Corp. Nicrocraft exhaust parts are built to the latest original equipment specifications. Heat-resistant 321 stainless steel is used in the construction of all new parts. Bellows are made of Inconel alloy for superior heat resistance. Individual exhaust components and complete systems are available for virtually all single and twin engine Cessna, Piper, Beech, Bellanca, Grumman, Mooney, and Rockwell aircraft. (Please provide your complete aircraft and engine model and serial numbers, year of aircraft, and exact components required.) Most components are available for immediate shipment.

### FACTORY NEW EXHAUST PARTS



**CESSNA 150 (MODELS G-L)**

Aircraft	Description / OEM	Part No.	Price
Cessna 150	Muffler RH / #0450400-26	8300-4	.
Cessna 150	Muffler LH / #0450400-3	8300-3	.

**CESSNA 152/A152**

Aircraft	Description / OEM	Part No.	Price
Cessna 152 (S/N 735-975) & A152 (S/N 978 & up)	Muffler/#454009-5	CEM0025	.
	Muffler/#454009-6	CEM0024	.

**CESSNA 170/172**

Aircraft	Description / OEM	Part No.	Price
C170,172, A	Muffler LH / #0550157-9	221-9	.
Cont 0-300/C145	Muffler RH / #0550157-32	221-32	.

**CESSNA 172B-H/175**

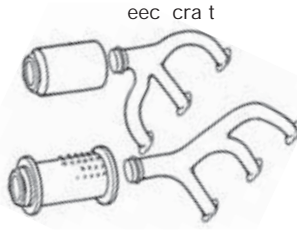
Aircraft	Description / OEM	Part No.	Price
Cessna C172B-H & 175 B-D	Muffler LH&RH / #	568-110	.
Cessna R172	Muffler / #1455009-3	CEM0023	.

**CESSNA 172**

Aircraft	Description/OEM	Part No.	Price
C172 O-320	Stack/#1754007-1	W1754007-1	.
C172 O-320	Stack/#1754008-1	W1754008-1	.
C172 O-320	Stack/#1754009-1	W1754009-1	.
C172 O-320	Stack/#1754010-1	W175010-1	.

**CESSNA 180/182/185**

Aircraft	Description / OEM	Part No.	Price
Cessna C180,C182, & 185 late model	Muffler/#0750161-28/89	CEM0002	.
180B,C,D,E,F	Heat Muffler 0750130-44	CEM0001	.
182B,C,D,E,F	Heat Muffler 0750130-9	CEM0006	.
	Heat Muffler 0750130-12	CEM0009	.
210B s/n58086&up to M	Heat Muffler LH/#1250250-5	650-43	.
C210B	Muffler RH 1250251-16	650-92	.
C210B	Collector LH 1250263-2	650-25	.
C210B	Collector RH 1250264-2	650-36	.



**BEECHCRAFT 33/A33/B33/35**

Aircraft	Description / OEM	Part No.	Price
Beechcraft 33, A33, B33, 35	Heat Muffler RH/#186-30	186-30	.
	Muffler RH / #189	189	.
	Stack Assy RH/#35-950116	BES-0001	.
	Stack Assy LH/#35-950118	BES-0002	.

**BEECHCRAFT C33A/36/A36**

Aircraft	Description / OEM	Part No.	Price
C33A, E33A, F33A	Muffler LH/#701-20	701-20	.
C, S35, 36, A36	Heat Muffler RH/#701-19	701-19	.
C33A, 36, A36	Collector LH / #35-9016-1S	08-00853	.
C33A, 36, A36	Collector RH / #35-9016-3/5S	08-00854	.

**BEECHCRAFT H35/P35 THRU S/N D-7108**

Aircraft	Description / OEM	Part No.	Price
Beechcraft H35, J, K, M, N, P35	Heat Muffler LH/492-43	492-43	.
	Muffler RH/#492-27	492-27	.

**PIPER PA-12, 14, 16, 20, 22, 25**

Aircraft	Description / OEM	Part No.	Price
PA-12, 14, 16, 20, 22, 25	Muffler / #10308-03	PIM0003	.

**PIPER PA-18**

Aircraft	Description / OEM	Part No.	Price
Piper PA18	Muffler / #12433-15	PIM0006-100	.

**PIPER PA-28**

Aircraft	Description / OEM	Part No.	Price
PA-28-140, 150, 160	-140 Muffler w/o shroud / #99482-00	PIM0001	.
PA-28-151,161,180,181	Muffler (2 req.)/#66894-03	PIM0007	.
PA-28R,180, 200, 201, 236	Muffler (2 req.)/#67517-00 3 req. for 236	PIM0004	.
PA32-300,32-760001 & up, PA32-R300	Muffler (3 req.) 67517-00	PIM0004	.

**PIPER34-200 SENECA I**

Aircraft	OEM No.	Part No.	Price
Left hand Tailpipe Core	78463-10	08-05885	.
Right hand Tailpipe Core	78-463-18	08-05886	.

### OVERHAULED EXHAUST PARTS

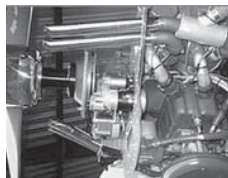
Aircraft	Description / OEM	Part No.	Price
Beechcraft C33A, E33A, F33A, C, S35, 36, A36	Heater Muffler RH w/o shroud / #701-19	701-19R	.
Cessna 210B	Heater Muffler LH / #1250250-15	1250250-5R	.
Piper PA-18	Muffler / #12433-15	12433-15R	.

# EXHAUST SYSTEMS



## LONG-EZ EXHAUST SYSTEM

Long-EZ exhaust system fits all Lycoming 4 cylinder engines.  
P/N 08-00832 .....



## LONG-EZ EXHAUST SYSTEM INSIDE THE COWL

With this configuration the exhaust tips are located where the cooling air exits. This design eliminates cutting the cowl for exhaust exit and improves propeller efficiency by moving the exhaust pulses inboard, closer to the center of the prop hub. Fits Lycoming O-320 & O-360 parallel valve engines.  
P/N 08-00833 .....

## BERKUT 4 PIPE EXHAUST SYSTEM

Fits all Lycoming 4 cylinder engines.  
P/N 08-00834 .....



## BERKUT 6 PIPE EXHAUST SYSTEM

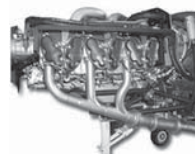
Fits 6 cylinder Berkut only. P/N 08-00835 .....



## VELOCITY EXHAUST SYSTEM

Velocity exhaust system fits 6 cylinder Lycoming parallel valve and angle valve engines.  
Parallel .....P/N 08-00836 .....

Angled .....P/N 08-00837 .....



## LANCAIR LEGACY EXHAUST SYSTEM

Lancair legacy exhaust system, left & right hand manifolds with tailpipes and cabin heat shroud. Fits IO-550 Continental.  
Exh. Sys. 33805-1 .....P/N 08-00838 .....

Exh. Sys. 470-550 .....P/N 08-02103 .....

Legacy Exhaust ..... P/N 08-02104 .....



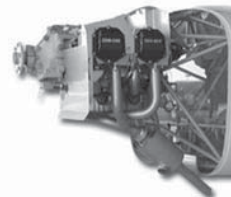
## GLASAIR I & II CROSSOVER EXHAUST SYSTEMS

Fits Lyc. O-320 to O-360 with vertical induction.  
P/N 08-00839 .....

Fits Lyc. engines w/ horizontal induction up to 180HP  
P/N 08-00840 .....

## GLASTAR CROSSOVER EXHAUST SYSTEM

Includes exhaust system with (1) heater muffler, (1) non-heater muffler and tailpipes. Fits Lycoming O-235 and O-360 with vertical induction. P/N 08-00842 .....



## EXPERIMENTAL SUPER CUB CROSSOVER EXHAUST SYSTEM

PN 08-02100-Fits Lycoming O-320 (Vertical Induction Intake) (Must use "short" miniature light weight Sky Tec starter for clearance) (Optional studding to increase cabin heat available) PN 08-02102-Fits Lycoming O-360 (Vertical Induction Intake) (Must use "short" miniature light weight Sky Tec starter for clearance) (Optional studding to increase cabin heat available) P/N 08-02100 .....

P/N 08-02102 .....



EP



## 2" DIAMETER 90° TUBE

This unit is designed to slide over the end of the 2" O.D. tube protruding from a cabin heat box that extends through the firewall. The short end of this unit is expanded to 2" I.D. Two stainless steel clamps are furnished with the unit. If you use scat tube, the 90° angle allows you to run the scat tube parallel to the firewall and away from undesirable areas (brake pedals, etc.) Constructed of seamless 6061T4 .028 wall tube. Weight: 1.4 oz. P/N 08-00863 .....

undesirable areas (brake pedals, etc.) Constructed of seamless 6061T4 .028 wall tube. Weight: 1.4 oz. P/N 08-00863 .....



## 2" DIAMETER "Y" TUBE

"Y" tube is designed to be used with the Homebuilders cabin heat box to make warm air available to 2 or more locations in the aircraft. Constructed of seamless 2024T6 tube, it weighs only 2 oz. These tubes are expanded to 2" I.D. on the inlet end to slip over and clamp to the 2" O.D. tube of the cabin heat box. Due to the very light weight, "Y" tubes can be installed in scat tubing as well as attaching directly to cabin heat boxes. One stainless steel clamp is included with "Y" tube. Due to the light weight of only 1.7 oz., the non-expanded Y-tube can be placed anywhere in a run of tubing to give more options for heating additional areas of the aircraft. Furnished w/2 stainless steel hose clamps

Standard "Y" tube .....P/N 08-04100 .....

Non-expanded "Y" tube .....P/N 08-04130 .....

## 2 1/2" INLET AND 2" OUTLET HOMEBUILDERS CABIN HEAT BOX



This box is identical to the deluxe stainless steel cabin heat box, except that the inlet is 2 1/2" OD so that it can be used on larger heat muff applications where the builder is using 2-1/2" scat tubing. This box is currently being used on the MICCO certified aircraft. Weight is 7.2 oz. P/N 08-04013 .....

## IN-LINE HEATER/DEFROSTER VALVE

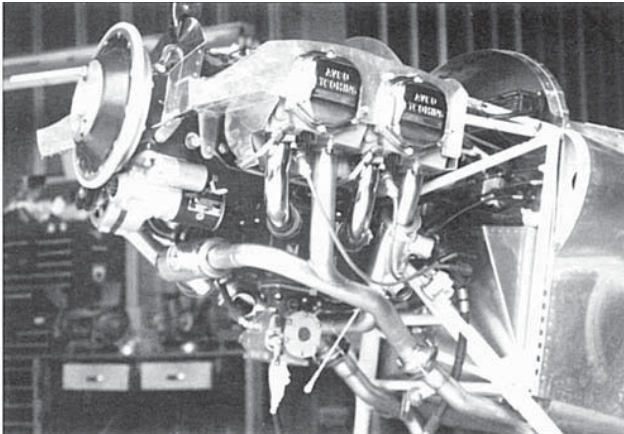


This in-line valve connects to 2" SCAT ducting. It comes complete with cable end and can be hooked up in any combination to direct air to either heater outlets or defrost outlets. Actuating lever is adjustable to any position. Very popular on RV's & other home-built aircraft. P/N 08-00053 .....

P/N 08-00053 .....

# EXHAUST SYSTEMS

## SNOWLINE RV-4 CROSSOVER EXHAUST SYSTEM

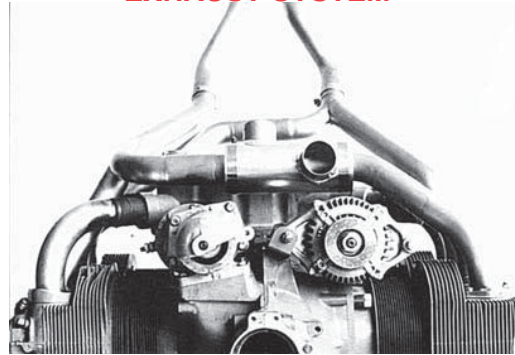


The material used on this System is 1-3/4" O.D. x .035 wall 321 stainless steel. This system is designed for use with Lycoming engines up to 180 H.P. Bending is performed using an inside mandrel which the tube is drawn over during bending to maintain the inside diameter. Flanges are made from 1/4" Stainless Steel. This heavy material greatly reduces warping and cracking. Tail pipes are fitted with a stainless steel spring-type swivel ball joint. This flexible joint not only allows for easy alignment of the tail pipes through the opening in the bottom cowling; but most important, this joint allows the engine and tail pipes to move independently, and greatly reduces the chance of cracking. One heat muff has been provided on the front cross-tube. This muff is intended for carburetor heat. If an injection system is being used, this muff can be used for cabin heat. An optional cabin heat muff can be ordered when carburetor heat requires the use of the standard heat muff. All hardware is provided to install the system. Stainless steel nuts, bolts, washers, blow-proof exhaust gaskets, two stainless clamps for attaching tail pipes to the firewall or engine mount. Building brackets and positioning mixture and throttle cables is always a hassle. A bracket which simply bolts to the engine case and positions the cables in front of the mixture & throttle arms for easy attachment is available as an option. A U-type clamp attaches cable housing securely in place

RV-4 Crossover Exhaust System P/N 08-05785 .....

D G G D R

## SNOWLINE RV-6 & RV-6A CROSSOVER EXHAUST SYSTEM



The material used on these systems is 1-3/4" O.D. x .035 wall 321 stainless steel tubing. 2 models are available; one for Lycoming engines up to 180 H.P. and the other for the Lycoming IO-360 (200 H.P. engine). Bending is performed using an inside mandrel which the tube is drawn over during bending to maintain the inside diameter. Flanges are made from 1/4" stainless steel. This heavy material greatly reduces warping & cracking. Tail pipes are attached to the header with a slip joint. Simply slide the tail pipes onto the header, position the end of the pipe as desired in the bottom opening, and attach with the stainless steel retaining clamp. One heat muff has been provided on the front cross-tube. This muff is intended for carburetor heat. If an injection system is being used, this muff can be used for cabin heat. An optional cabin heat muff can be ordered when carburetor heat requires the use of the standard heat muff. All hardware is provided to install the system. Stainless Steel nuts, bolts, washers, blow-proof gaskets, 2 stainless clamps for attaching tail pipes to the firewall or engine mount. Building brackets and positioning mixture and throttle cables is always a hassle. A bracket which simply bolts to the engine case and positions the cables in front of the mixture & throttle arms for easy attachment is available as an option. U-type clamp attaches the cable housing securely in place.

RV-6/RV-6A Crossover Exhaust Sys. (To 180 H.P.)  
P/N 08-05790.....

RV-6/RV-6A Crossover Exhaust Sys.\* (To 200 H.P.)  
P/N 08-05795.....

Optional Cabin Heat Muff..... P/N 08-00679.....  
ill n t r i t r n t m n t e i n e c t r

e R R e a t t e m a r e r e c m m e n e  
r t e e a i r c r a f t n l  
r t e r e p e r m e n t a l t e R t e m m a i t e t t e r n e r  
c l a i t i i l t i t e r t t e e n i n e

## REAL PREMIUM SILICONE VALVE COVER GASKETS

REAL are twice as thick as typical gaskets and have been hot oil and dry heat tested at 300°F. Only REAL gaskets seal uneven surfaces, eliminate corrosion, and reduce maintenance costs. They may be reused, are installed dry, and maintain screw torque. Indefinite shelf life. Highly recommended by Rutan Aircraft Factory.



Part No.	App icaion	Price Ea.	Part No.	App icaion	Price Ea.	Part No.	App icaion	Price Ea.
RG	0-235; 0-290; O,IO,LIO-320; O-340;O-360-A,B,C,D; IO-360-B; HO-360-A,B;HIO-360-B; VO,IVO-360;O-540-A,B,E,F,G; IO-540-C,D,J,N,R.		RG	IO-540-B,E,M; TIO-540-A; IGO, IGSO-540-B.		RG	O-470;IO,TSIO-470;IO,TSIO-520	
			RG	A-65; C-75, 85, 90, 145, 175; O-200; O-300.		RG	IO, TIO, TSIO-360.	
RG	IO-360-A,C,D; AIO-360-A,B; HO-360-A,C,D; TIO-360-A; LIO-360-C1E6;VO,GO-435; GO-480; IO,VO,TVIO-540; IO-720; TVO-435;		RG	E-185; E-225; IO-346; O-470-A,E,J; IO-470-J,K		RG	4A-235, 6A-335, 6A4-150, 6A4-165, 6A4-200, 6A5-335, 6A5-350.	



# GASKETS



## “O” SERIES LYCOMING VALVE COVER GASKETS

These homebuilder's Lycoming valve cover gaskets replace the original cork gaskets which come standard on Lycoming O-235, O-320 and O-360 engines. These new gaskets are molded from high temperature silicone rubber and do not harden over time so they can be re-used again and again. This hi-tech silicone rubber offers a much lower compression set, so it is superior at maintaining an oil-tight seal for the life of the engine. NOT FAA approved. For experimental aircraft only.

P/N 08-01187 .....



## ANGLED VALVE “IO” SERIES LYCOMING VALVE COVER GASKETS

These gaskets are for the fuel injected “IO” series, sometimes referred to as the Angle Valve cylinder Lycoming, as well. these gaskets are molded from the same high-temperature silicone rubber as the “O” series gaskets above, and do not harden over time, so they can be reused again and again. This hi-tech silicone rubber offers a much lower compression set, so it is superior at maintaining an oil-tight seal for the life of the engine. They are not FAA approved and are not manufactured under a PMA. These are similar to Lycoming part number 67193 used on Angled valve Lycoming engines IO-360, IO-540, IO-720.

P/N 08-05882 .....



## RAPCO REPLACEMENT EXHAUST GASKETS

High quality, economical stainless and copper beaded gaskets. Extra thick spiral woundstyle available “Blow Proof”

St e	RAPCO P/N	Use As Replacement For			Use on These Engine Models	O r P/N	Price Eac	
		OEM P/N	Air orne P/N	S perior P/N				
CONTINENTAL	Solid	RA-630365	630365	N/A	SA630365	IO-360-A, C, D, G, H, J, K	08-05215	.
	Spiral Wound	RA-970	N/A	970	N/A	IO-360-A, C, D, G, H, J, K TSIO-360-A, B	08-05270	.
	Solid	RA-632837	632837 21493	157	SA 632837	A-65, A-75, C-85-12F, C-90-8F, 12F, 14F, -16F, E-165, E-185, E-225, O-200-A, B, O-300-A, C, D, O-470-A, E, J	08-05237	.
	Spiral Wound	RA-627429	627429	999	SA 627429	E-165, E-185, E-225O-200-A, B, O-300-A, C, DO-470-A, E, J	08-05229	.
	Solid	RA-631544	631544 537379	158	SA631544	O-470-B, G, K, L, M, P, R, S, U	08-05244	.
	Spiral Wound	RA-628260	628260	972	SA628260	O-470-B, G, K, L, M, P, R, S, U, IO-470-D, U, V, TSIO-470-B TSIO-520-B, C, D GTSIO-520-C, D	08-05260	.
LYCOMING	Solid	RA-75118	75118 73720 67196 65321	160	N/A	0-290, 0-320, IO-320, 0-340, 0-360, HO-260-B, IO-360-A, -B, -C, HIO-360-A, -B, -C, VO-435, TVO-435, GO-480, GSO-480, ISGO-480, O-540-A, -B, -E, -G, IO-540-A, -C, -D, -G, -J, -K, IO-540-A, IGSO-540-A, 10-720-A	08-05218	.
	Spiral Wound	RA-77611	77611	1000	SL77611		08-05211	.
	Solid	RA-LW15619	LW15619 74756	161	SL15619	TIO-541	08-05219	.
	Spiral Wound	RA-LW15486	LW15486	971	N/A		08-05286	.
	Solid	RA985	3503			R-985-AN-1, -3, -4, -6, -6B, -10, 12, -12B, -14B	08-64452	.



## REPLACEMENT GASKET FOR WOODWARD GOVERNORS

Part Name	Approved Replacement or Part No.	Mo e E i i i t	Part No.	Price
Engine Accessory Drive Gasket	Woodward Gov. 206684 Pratt & Whitney 3039526	PT6A-20/20A/-20B/-21/-25C/-27/-28/-34/-34AG/-34B/-36/-38/-41/-42/-42A/-60A/-60AG/-61/-67A/-67AF/-67AG/-67B/-67D/-67R/-67T  PT6A-45A/-45B/-45R/-65B/-65AG	08-06264	.
Governor Gasket	Woodward Gov. 206685 Pratt & Whitney 3118953-01	PT6A-6/-6A/-6B/-11/-11AG/-15AG/-20/-20A/-20B/-34/-34AG/-34B/-36/-38/-41/-42/-42A/-45/-45A/-45B/-45R/-60A/-60AG/-61/-65B/-65R/-65AG/-65AR/-67/-67A/-67AF/-67AG/-67B/-67D/-67R/-67T/-110/-112/-121	08-07154	.



## CARBURETOR AIR BOX GASKET FOR CESSNAS

OG031 GASKET (Carburetor Air Box Gasket) REPLACES CESSNA PART #0750142-1 Engine - Cessna 180 & 185 experimental n l n t t e e n c e r t i e aircraft  
P/N 07-01308.....



## 2577256 PRECISION AIRMOTIVE GASKET PEX-1

Gasket part number 365533 is no longer available from Precision Airmotive. The new gasket, part number 2577258 is available and should be used in place of 365533. P/N 07-01312.....



**LYCOMING S** Propeller governor gasket for Lycoming O-320 A & E Series engines. P/N 72053 .....