

CLAMPS



MS21919 DG & WDG CLAMPS

Loop-type cushioned aluminum alloy clamp. Cushion (non-fuel resistant) is bonded to inner surface and edges of clamp. WDG clamps are cushion wedge type. Cushion assures tight fit and eliminates vibration, thus preventing line abrasion.

Tube Dia.	Dash No.	Price Each	Dash No.	Price Each	Tube Dia.	Dash No.	Price Each	Dash No.	Price Each
1/8	DG2	.	WDG2	.	1-5/16	DG21	.	WDG21	.
3/16	DG3	.	WDG3	.	1-3/8	DG22	.	WDG22	.
1/4	DG4	.	WDG4	.	1-7/16	DG23	.	WDG23	.
5/16	DG5	.	WDG5	.	1-1/2	DG24	.	WDG24	.
3/8	DG6	.	WDG6	.	1-9/16	DG25	.	WDG25	.
7/16	DG7	.	WDG7	.	1-5/8	DG26	.	WDG26	.
1/2	DG8	.	WDG8	.	1-3/4	DG28	.	WDG28	.
9/16	DG9	.	WDG9	.	1-7/8	DG30	.		
5/8	DG10	.	WDG10	.	1-15/16	DG31	.		
11/16	DG11	.	WDG11	.	2	DG32	.		
3/4	DG12	.	WDG12	.	2-1/16	DG33	.		
13/16	DG13	.	WDG13	.	2-1/8	DG34	.		
7/8	DG14	.	WDG14	.	2-1/4	DG36	.		
15/16	DG15	.	WDG15	.	2-3/8	DG38	.		
1	DG16	.	WDG16	.	2-1/2	DG40	.		
1-1/16	DG17	.	WDG17	.	2-5/8	DG42	.		
1-1/8	DG18	.	WDG18	.	2-3/4	DG44	.		
1-3/16	DG19	.	WDG19	.	2-7/8	DG46	.		
1-1/4	DG20	.	WDG20	.	3	DG48	.		
					3-1/8	DG50	.		

Less 15% in lots of 50. May be assorted.



QS 100 HOSE CLAMPS



Tangential worm-screw type for use on fuel, oil, air and coolant lines. Worm drive provides uniform clamping pressure without distorting hose. The QS100 series has stainless steel band with cadmium-plated carbon steel thumb screw. To attach, just push housing to the desired position on the band, snugly around hose, & the threads of the worm screw will drop into the slots. Tighten thumb screw with finger pressure - no tools required.

QS100 Dash No.	Dia. Range (In.)		Price Each	QS100 Dash No.	Dia. Range (In.)		Price Each
	Min.	Max.			Min.	Max.	
M6W	7/16	25/32	.	M24W	1-1/16	2	.
M8W	1/2	29/32	.	M28W	1-1/16	2-1/4	.
M10W	9/16	1-1/16	.	M32W	1-9/16	2-1/2	.
M12W	11/16	1-1/4	.	M36W	1-13/16	2-3/4	.
M16W	13/16	1-1/2	.	M40W	2-1/16	3	.

Less 15% in lots of 50. May be assorted.



QS 200 HOSE CLAMPS



Aero-Seal stainless steel clamps are for industrial & aircraft applications. This tangential worm-screw type clamp is for use on fuel, oil, air & coolant lines. The worm drive provides uniform clamping pressure without distorting hose. Attach by pushing housing snugly around the hose to desired position on the band—the threads of the worm screw will drop into slots. Tighten slotted head with screwdriver.

QS200 Dash No.	Dia. Range (In.)		Price Each	QS200 Dash No.	Dia. Range (In.)		Price Each
	Min.	Max.			Min.	Max.	
-06H	7/16	25/32	.	-44H	2-5/16	3-1/4	.
-08H	1/2	29/32	.	-48H	2-9/16	3-1/2	.
-10H	9/16	1-1/16	.	-52H	2-13/16	3-3/4	.
-12H	11/16	1-1/4	.	-56H	3-1/16	4	.
-16H	13/16	1-1/2	.	-60H	3-5/16	4-1/4	.
-20H	13/16	1-3/4	.	-64H	3-9/16	4-1/2	.
-24H	1-1/16	2	.	-72H	4-1/8	5	.
-28H	1-5/16	2-1/4	.	-80H	4-5/8	5-1/2	.
-32H	1-9/16	2-1/2	.	-88H	5-1/8	6	.
-36H	1-13/16	2-3/4	.	-96H	5-5/8	6-1/2	.
-40H	2-1/16	3	.	---	---	---	---

Less 15% in lots of 50. May be assorted.

BREEZE AERO-SEAL STAINLESS CLAMP KITS

Pack A : Contains 2 each QS200 -52H, -64H, -72H and -80H.

P/N 05-00942.....

Pack B : Contains 2 each QS200 -8H, -12H, -24H, -32H, -40H, & -64H.

P/N 05-01340.....



SNAPPER CLAMPS

A quick ratchet closure provides specific take-up, eliminating excessive tightening which may mutilate the hose.

3/8" for 1/4" fuel line

P/N 05-00940.....

1", for radiator hose

P/N 05-00941.....



AN742 PLAIN CLAMPS

Plain loop-type line support clamps, made of aluminum alloy meeting specification QQ-A-362, condition T. Heat-treated to a minimum tensile strength of 50,000 PSI.

Dash No.	For Tube O. D. (In.)	Price Each	Dash No.	For Tube O. D. (In.)	Price Each
-D3	3/16	.	-D8	1/2	.
-D4	1/4	.	-D10	5/8	.
-D5	5/16	.	-D12	3/4	.
-D6	3/8	.	-D15	15/16	.
-D7	7/16	.	-D16	1	.

Less 15% in lots of 50. May be assorted.



BREEZE MINIATURE CLAMPS

The best clamp for small diameter hose and tubing. Stainless steel band and housing with plated carbon steel screw. Applies an even circumferential pressure with less torque.

7/32" to 5/8"P/N 6504 Ea.

7/16" to 7/8"P/N 6506 Ea.

OETIKER STEPLESS SCREW CLAMPS



Oetiker Stepless Screw Clamps feature a unique tongue-in-groove design to provide a perfect 360° seal. Their narrow band width of 9 mm is designed to fit grooved objects. They are ideal where specialty clamping needs have to be met and the application calls for a smooth inner surface such as on flexible duct sleeves.

The tongue-in-groove design provides that "stepless" complete seal. Manufactured using 300 AISI series stainless steel.

P/N	Clamping O.D. Range Inches	Price Each	P/N	Clamping O.D. Range Inches	Price Each
028-9	13/16" - 1-1/8"	.	090-9	3-5/16" - 3-1/2"	.
031-9	15/16" - 1-1/4"	.	095-9	3-1/2" - 3-3/4"	.
032-9	1-1/16" - 1-1/4"	.	100-9	3-11/16" - 3-15/16"	.
036-9	1-1/4" - 1-7/16"	.	105-9	3-15/16" - 4-1/8"	.
040-9	1-3/8" - 1-9/16"	.	110-9	4-1/8" - 4-5/16"	.
045-9	1-9/16" - 1-3/4"	.	115-9	4-5/16" - 4-1/2"	.
050-9	1-3/4" - 2"	.	120-9	4-1/2" - 4-11/16"	.
055-9	1-15/16" - 2-1/8"	.	125-9	4-11/16" - 4-15/16"	.
060-9	2-1/8" - 2-3/8"	.	130-9	4-7/8" - 5-1/8"	.
065-9	2-5/16" - 2-9/16"	.	135-9	5-1/16" - 5-5/16"	.
070-9	2-9/16" - 2-3/4"	.	140-9	5-1/2" - 5-11/16"	.
075-9	2-3/4" - 3"	.	145-9	5-11/16" - 5-7/8"	.
080-9	2-15/16" - 3-1/8"	.	150-9	5-7/8" - 6-1/16"	.
085-9	3-1/8" - 3-5/16"	.	160-9	6-1/16" - 6-1/4"	.
			165-9	6-1/4" - 6-1/2"	.

LINE CLAMPS



These line clamps are lightweight but tough enough for the most rugged applications. Feature single piece .030" thick aluminum construction. No more messy bundles. Each clamp is shaped to hold braided line, tubing, or wiring securely, without pinching. Secured w/ standard tie wraps, these clamps keep movement and wear to a minimum. Can

be adjusted to mount on any tubing from 3/4".

Size	P/N	Price	Size	P/N	Price
1/4"	05-00004	.	5/8"	05-00007	.
3/8"	05-00005	.	3/4"	05-00008	.
1/2"	05-00006	.	1"	05-00009	.

30 piece assortment - includes 5 of each clamp
P/N 05-02205.....

NYLO-SEAL TUBING - POLY-FLO TUBING



NYLO-SEAL NYLON TUBING

Nylo-Seal type "NSF" semi-rigid natural color tubing is made of Nylon-II and is far superior to other types of Nylon tubing. It does not depend on moisture for flexibility and does not become brittle. It has excellent resistance to flexural fatigue and can be used where there is vibration or tube movement. Self-extinguishing under A.S.T.M. Test D635-44. Excellent for instrument lines. NSR nyloseal tubing is black in color and is rated to 2500 lbs. It can be used for higher pressure applications than the NSF tubing.

NSF TUBING

Part No.	O.D. (In.)	Wall (In.)	Burst Pressure (PSI)	Min. Bend Radius	Wt. (Lb/Ft)	Price per Ft.
05-01009	1/8	.026	1500	3/8"	.004	.
05-01010	3/16	.039	1500	5/8"	.008	.
05-01011	1/4	.050	1500	7/8"	.015	.
05-01012	3/8	.075	1500	1-1/2"	.032	.

NSR TUBING

Part No.	O.D. (In.)	Wall (In.)	Burst Pressure (PSI)	Min. Bend Radius	Wt. (Lb/Ft)	Price per Ft.
05-01228	1/8	.026	2500	3/8"	.004	.
05-01229	1/4	.050	2500	7/8"	.015	.
05-01231	3/8	.075	2500	1-1/2"	.032	.



NYLAFLOW NYLON TUBING

Nylon Polyenco® pressure tubing is a super-tough, low friction, high flexibility tubing that can be used for cable protectors or in short pieces, as small bushings and washers. Suitable for use in oil, air, vacuum, fuel and low pressure hydraulic lines. It Resists abrasion - wears better than aluminum or steel tubing. Has an extremely smooth inner surface with a very low coefficient of friction. Used for brake lines, and also as a conduit for the rudder cables in the Rutan VariEze and Long-EZ. Rated 1000 psi. Use Poly-Flo fittings.

Type	OD	ID	PSI	Part No.	Price
Thicker wall	1/8	.096	1000	05-00105	.
Thicker wall	3/16	.138	1000	05-00110	.
Thicker wall	1/4	.190	1000	05-00115	.
High Bursting Pressure	1/4	.150	2500	05-04349	.
High Bursting Pressure	3/16	.111 (appx.)	2500	05-04355	.

NEOPRENE HOSE

Neoprene tubing is used in instrument hookups and for battery drains. Use AN hose fittings such as AN840 with Breeze Mini Clamps, nylon or polyethylene hose fittings such as 0710-153. Not for use as fuel or oil lines.

I.D.	Wall	Part No.	Price/Ft
3/16"	1/16"	05-00200	.
1/4"	1/16"	05-00300	.
3/8"	1/16"	05-00400	.



TYGON TUBING

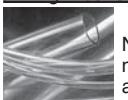
Tygon tubing is flexible, tough, abrasion-resistant and non-aging. Ideal or hookup of airspeed pitot and static lines (not recommended for pressurized applications). Use AN hose fittings such as AN840 with Breeze Mini Clamps, nylon or polyethylene hose fittings such as 0710-153.

3/8" O.D. X 1/4" I.D. P/N 05-00944 Ft
1/2" O.D. X 3/8" I.D. P/N 05-00945 Ft

BING ALCOHOL RESISTANT FUEL LINE

This fuel line is blue in color and does not rot or deteriorate from the inside, clogging the carburetor or fuel system. It withstands 50 PSI and tensile strength is 8000 PSI. It is resistant to temperatures of -65° to 220°F without deterioration, features exceptional resistance to gasoline, oil, oxygen, and ozone, and has high elastic memory allowing use of Delrin or nylon barbed fittings in low pressure applications without the need for external clamps.

Description	ID	OD	Part No.	Price
Bing Alcohol Resistant Fuel Line	1/4	3/8	05-00500	.
Bing Alcohol Resistant Fuel Line	1/8	1/4	05-00560	.



NYLON TUBING

Nylon tubing is a popular choice for low pressure pneumatic applications because of its combination of flexibility and toughness. Nylon retains its performance integrity in elevated temperatures and generally, because of its higher pressure and temperature characteristics, Nylon will have a greater flow passage than composite tubing made from other material with the same outside diameter.

Part No.	OD	ID	Price
0500-165	7/8	5/8	.
0500-180	1	3/4	.

POLY-FLO POLYETHYLENE TUBING



Poly-Flo tubing is a flexible, economical thermoplastic tubing fabricated from high molecular weight polyethylene for improved strength. The base resin has the greatest resistance to environmental stress cracking of all the regular polyethylenes. It meets A.S.T.M. D-1248-60T, Type 1, Class A, Grade 4 and Federal Specification LP-590, Type 2, Grade 7. Used for instrument or pneumatic lines. Use Nylo-Seal fittings (259-N inserts are required), nylon or polyethylene hose fittings such as 0710-153. Color - natural.

Part No.	Tube OD	Wall	Bend Radius	PSI at 75 F	PSI at 150 F	Price
44-P	1/4	0.040	1.250	190	75	.
66-P	3/8	0.062	2.00	205	80	.
88-P	1/2	0.062	2.500	150	60	.

CHEMICAL RESISTANCE

Chemical (at 72°F.)	Poly-Flo (Polyethylene)	Nylo-SealNSR (Nylon 11)
Hydrocarbons (Fuel & Oil)	U	A
Chlorinated Hydrocarbons	U	A
Acetone, MEK	VariesA	
Toluene, Xylene	U	A
Weak Acids	A	A
Strong Acids	A	Varies
Weak Bases	A	A
Strong Bases	A	A

A: Acceptable U: Unsatisfactory

PHYSICAL PROPERTIES OF TUBING BASE POLYMER

Physical Property	Poly-Flo (Polyethylene)	Nylo-SealNSR (Nylon 11)
Tensile Strength	2,100 psi	8,500 psi
Elongation	600%	160%
Water Absorption	0.014%	0.4%
Hardness	R-10	R-86
Specific Gravity	0.92	302°F.
Heat Distortion Point (66 psi)	107°F.	302°F.
Modulus of Elasticity	13,000 psi	177,000 psi

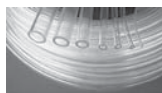
Data shown obtained from test on tubing raw material under A.S.T.M. procedures.

PRESSURE RATINGS

Operating Temperature	Poly-Flo (Polyethylene)		Nylo-Seal NSR** (Nylon 11)	
	Burst Pressure* PSI	Max. Work Pressure* PSI	Burst Pressure* PSI	Max. Work Pressure* PSI
Room Temp.	250-600	75-160	2500	625
140°F.	125-300	37-80	1800	425
230°F.	UNUSABLE		1400	350
280°F.	UNUSABLE		UNUSABLE	

*Depends on tube size and wall thickness. Working pressure based on a safety factor of 4.

**Satisfactory for continuous operation up to 180° F. Becomes embrittled above this point.



POLYURETHANE TUBING

Flexible polyurethane tubing has greater abrasion and tear resistance than any other type of plastic tubing. Won't age or oxidize. Excellent low temperature flexibility - avoids brittleness. Tensile strength 5900 PSI. Use AN hose fittings such as AN840 with Breeze Mini Clamps, nylon or polyethylene hose fittings such as 0710-153. Sold by the foot.

Mfg PN	OD	ID	Our PN	Price
0585-071	3/8	1/4	0585-071	.
0585-107	1/2	3/8	0585-107	.
0585-165	7/8	5/8	0585-165	.
0585-180	3/4	1	05-04246	.

PARKER SUPER-FLEX FL FUEL LINE HOSE

Parker's fuel line hose includes a new thermoplastic barrier that helps protect our atmosphere from harmful hydrocarbons that escape through the carcass of ordinary fuel hose. This new hose surpasses all of CARB's stringent permeation requirements and is similar to SAE30R7 specifications. The Super-Flex FL hose also features an abrasion and weather resistant cover to help protect from external application abuse. **Approved for biodiesel fuels that meet ASTM D 6751 requirements per UL guidelines for Biodiesel compatibility.** 4:1 Design factor

Tube:	NBR with a thermoplastic barrier
Cover:	Black Hypalon
Reinforcement:	Braided Polyester
Temperature Range:	-30°F to +257°F (-34°C to +125°C)

Part No.	ID (in.)	Reinf. Braids	OD(in.)	OD(mm)	Approx. wt. per 100 ft.	Min. Bend Rad.	Max Rec. WP	Price Per Ft.
05-03597	1/4	1	0.500	12.7	9.7	-	100	.
05-03598	3/8	1	0.625	15.9	1.30	-	100	.

HOSE - HOSE FITTINGS

MIL6000D OIL AND COOLANT HOSE



Inside and out, MIL6000D is designed to handle the effects of oil, alcohol, coolant, and water. The tube is oil resistant with a black cover reinforced with high strength mildew resistant yarns. It withstands extreme temperature conditions from -40°F to +250°F. Meets or exceeds U.S. military specs. Lightweight, flexible and easy-to-handle, making it the perfect hose for hard-to-get-to spots in tight engine compartments. Not recommended for fuel lines.

Part No.	Hose Dimensions		Burst Pressure (PSI)	Wt./ Ft. (Lb.)	Price Per Ft.
	I.D. (In.)	O.D. (In.)			
6000-4	1/4	5/8	1,000	.14	
6000-5	5/16	11/16	1,000	.16	
6000-6	3/8	3/4	1,000	.18	
6000-8	1/2	7/8	1,000	.22	
6000-10	5/8	1	1,000	.26	
6000-12	3/4	1-1/8	1,000	.27	
6000-14	7/8	1-1/4	1,000	.32	
6000-16	1	1-3/8	1,000	.38	

MIL-H-6000 HOSE AVAILABLE IN 10 FT MAXIMUM LENGTHS
MIL-H-6000 IS SUPERCEDED BY MIL-DTL-6000C
NOT RECOMMENDED FOR FUEL LINES

AEROQUIP 306 HOSE (MIL-H-5593)



A low-pressure hose for instrument air & vacuum lines. Consists of an inner tube of seamless synthetic rubber, reinforced with a single layer of cotton braid and a synthetic rubber cover. Used with slip-over hose fittings such as the AN840 series, or with Aeroquip 471 hose fittings when connecting to AN type fittings. Conforms to Specification MIL-H-5593. Specify hose I.D. when ordering.

Part No.	Hose Dimensions		Burst Pressure (PSI)	Wt./ Ft. (Lb.)	Price Per Ft.
	I.D. (In.)	O.D. (In.)			
306-2	1/8	11/32	1,000	.056	
306-4	1/4	15/32	1,000	.072	
306-6	3/8	19/32	1,000	.096	
306-8	1/2	3/4	750	.144	
306-10	5/8	7/8	700	.168	

AEROQUIP 471 HOSE FITTING USED WITH AEROQUIP 306 HOSE



471-2D

Aeroquip 471 hose fittings consist of an AN818 nut, an externally threaded 37° nipple and an internally threaded hose socket. All components are anodized aluminum. Fittings conform to MS27404.

Part No.	Tube Size (In.)*	AN818 Nut Thread Size	Price Ea.
471-2D	1/8"	5/6-24	
471-4D	1/4	7/16-20	
471-6D	3/8	9/16-18	
471-8D	1/2	3/4-16	

*Corresponds to tube O.D. of AN-type flared tube fittings. Not an Aeroquip dimension.

AEROQUIP ASSEMBLY MANDRELS FOR AIRCRAFT HOSE ASSEMBLIES



For use with Aeroquip 491 fittings. These tools are recommended to avoid damage to the sealing surface and to properly support the inner tube. Note: These are Aeroquip Factory Mandrels, which are highly recommended for best results.

Hose Size	#491 Fitting P/N	Mandrel P/N	Price	Hose Size	#491 Fitting P/N	Mandrel P/N	Price
3/16"	491-3	S-1051-3*		1/2"	491-8	S-1051-8	
1/4"	491-4	S-1051-4*		5/8"	491-10	S-1051-10	
5/16"	491-5	S-1051-5*		3/4"	491-12	S-1051-12	
3/8"	491-6	S-1051-6*					

*With Removable mandrel. Aeroquip Qty. Discount: 15% for 20 ft.; 20% for 50 ft.; 25% for 100 ft. or more (Per Item)

AEROQUIP FITTINGS - 8791

For AE701 Hose.



PN 8791-6D

Part No.	Price	Part No.	Price
8791-4		8791-8D	
8791-6D		8791-10D	

AEROQUIP FITTINGS - 526

For AE701 Hose.



526-6D

Part No.	Price	Part No.	Price
526-4		526-8D	
526-6D		526-10D	

AEROQUIP 303 HOSE



This standard hose is used in med-pressure a/c hydraulic fuel, oil and coolant systems. An inner tube of seamless synthetic rubber is reinforced with a synthetic-impregnated single-wire braid over a single cotton braid and an outer cover of synthetic-impregnated oil-resistant cotton braid. Operating temperature -65° to 250°F. Conforms to MILH-8794 (supersedes MIL-H-5511A). Used with Aeroquip 491 hose fittings.

Hose P/N*	For Tubing Size	Hose I.D.	Max. Oper. Pressure** (PSI)	Wt. per Ft. (Lb.)	Price Per Ft.
303-3	3/16	1/8	3,000	.120	
303-4	1/4	3/16	3,000	.132	
303-5	5/16	1/4	3,000	.156	
303-6	3/8	5/16	2,000	.228	
303-8	1/2	13/32	2,000	.264	
303-10	5/8	1/2	1,750	.372	
303-12	3/4	5/8	1,500	.456	

* Corresponds to dash no. of Aeroquip 491 hose fittings.

** Safety factor of 4.



P/N 491-3

AEROQUIP 491 HOSE FITTINGS USED WITH AEROQUIP 303 HOSE

Aeroquip 491 hose fittings consist of an AN818 style nut, an externally threaded 37° nipple and an internally threaded hose socket. Fittings of sizes 3 through 6 have nuts and nipples of cadmium plated steel. Nuts and nipples for size 8 and larger are of anodized aluminum. Fittings conform to MS24587.

Part No.	Tube Size (In.)*	AN818 Nut Thread Size**	Price Each
491-3	3/16	3/8-24	
491-4	1/4	7/16-20	
491-5	5/16	1/2-20	
491-6	3/8	9/16-18	
491-8D	1/2	3/4-16	
491-10D	5/8	1-1/16-12	
491-12D	3/4	1-1/16-12	

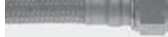
* Corresponds to dash no. of Aeroquip 816 hose fittings.

** Safety factor of 4.

MILSPEC MANDRELS

PN	Hose	Fitting	Price
05-01885	3/16	MS-3M	
05-01886	1/4	MS-4M	
05-01887	5/16	MS-5M	
05-01888	3/8	MS-6M	
05-04241	1/2	MS-8M	
05-04242	5/8	MS-10M	
05-04243	3/4	MS-12M	
05-04544	Includes 1 each of the MilSpec Mandrels		

AEROQUIP 666 HOSE



Aeroquip 666 medium pressure Teflon hose is widely used in aircraft applications handling fuel, oils, and other fluids. It is unaffected by all fuels, oils, alcohols, coolants, or solvents commonly use in aircraft. Construction of Aeroquip 666 hose is of spiral extruded Teflon resin for the inner tube with a reinforcement and outer cover of Type 300 Series stainless steel wire braid. The result is a lightweight hose able to withstand prolonged flexing and vibration under all service conditions. Aeroquip 666 hose is also use in hydraulic and pneumatic applications at pressures up to 1500 psi.

Hose Part No.	Hose I.D. (inches)	Hose O.D. (inches)	Max. Oper. Pressure	Wt. Per Ft. (lbs.)	Price Per Ft.
666-4	.188	.312	1500	.08	
666-5	.250	.375	1500	.09	
666-6	.313	.466	1500	.11	
666-8	.406	.562	1500	.14	
666-10	.500	.656	1500	.19	
666-12	.625	.789	1000	.24	



REUSABLE 37° FITTINGS FOR #666 HOSE

Use with Hose Size	Part No.	Price ea.	Use with Hose Size	Part No.	Price ea.
666-4	05-01320		666-8	05-01323	
666-5	05-01321		666-10	05-01324	
666-6	05-01322		666-12	05-01325	



STRAIGHT CRIMP FLARELESS FITTINGS FOR #666 HOSE

Part Number	Aeroquip Hose Size	Price ea.	Part Number	Aeroquip Hose Size	Price ea.
AE21502-E	666-4		AE21502-H	666-8	
AE21502-F	666-5		AE21502-J	666-10	
AE21502-G	666-6		AE21502-K	666-12	

Crimping tool and sleeve required for assembly.

HOSE - HOSE FITTINGS - ASSEMBLIES

AEROQUIP 816 & 8891 HOSE FITTINGS USED WITH AEROQUIP 601 HOSE



Aeroquip 816 straight hose fittings and 8891 90° hose fittings consist of a pre-assembled nut/nipple assembly and an internally threaded hose socket. The size 4 fitting has a cadmium plated steel nut and nipple. Sizes 6, 8 and 10 nuts and nipples, and all sizes of sockets, are anodized aluminum. Note: Aeroquip 816 fittings are not the same as AN816 fittings. Include the word "Aeroquip" with Part number when ordering.

Aeroquip 816			Aeroquip 8891		
Part No.	Pr Ea h	S	Nut Thr a S	Part No.	Pr Ea h
816-4		1/4	7/16-20	8891-4	
816-6D		3/8	9/16-18	8891-6D	
816-8D		1/2	3/4-16	8891-8D	
816-10D		5/8	7/8-14	8891-10D	

*Corresponds to tube O.D. of AN-type flared tube fittings. Not an Aeroquip dimension. ** Same thread size as AN818 nut of same dash no. Less 10%, 6 - 11 Aeroquip fittings; Less 15%, 12 - 24 Aeroquip fittings; Less 20%, 25 or more Aeroquip fittings may be assorted sizes and types.

AEROQUIP FIRE SLEEVE



Aeroquip Firesleeve was specially developed to meet the fire resistance requirements of FAATSO - C53A OR TSO - C75. May be used for all fuel, oil, hydraulic, fire extinguisher & propeller feathering lines.

"Fire-proof" hose lines as defined by FAA must withstand a direct flame for fifteen minutes under specified flow conditions without failure. "Fire-resistant" lines must withstand a 5-minute exposure under these conditions. "Fire-proof" hose lines are obtained when the proper size Aeroquip Firesleeve is selected from the chart below and properly assembled.

900591B Clamps - used to secure firesleeve material on each end over the basic hose assembly. See chart for correct size.
900591B-1C P/N 05-02653.....
900591B-2C P/N 05-02652.....
900591B-3C P/N 05-02654.....

Part No.	U th Hose #		900591B Cap Dash #	Pr Ft.	Part No.	U th Hose #		900591B Cap Dash #	Pr Ft.
	303	601				303	601		
AE102-8	-3	-4	-1C		AE102-16	-10	-10	-3C	
AE102-9	-4	-5	-2C		AE102-18	-12	-	-3C	
AE102-10	-5	-	-2C		AE102-20	-	-12	-3C	
AE102-12	-6	-6	-2C		AE102-22	-16	-16	-3C	
AE102-14	-8	-8	-2C						

Quantity Discounts Same As Aeroquip Hose
Firesleeve Clamp Installation Tool - Band Width: 1/4 in - 3/8 in
P/N 05-00447
Economy Firesleeve Clamp Tool - for 3/8" or 1/4" roll band.
P/N 12-00684.....

AEROQUIP AE466



Integral silicone firesleeves on Teflon 666 hose assemblies.

This hose/sleeve combination meets the test requirements of TSO-C53A Type D and TSO-C75 Type IIIA and IIIB. The Silicone sleeve is applied directly onto the metal braid an fittings to form a smooth, tight bond. Hose flexibility is not impaired. Non-age sensitive for extra-long service life. Eliminates the use of band clamps. Temperature range -65°F to +450°F. Specify hose size and length of assembly in inches and eighths of an inch from sealing surface to sealing surface. Available in blue or brown.

Call 877-4-SPRUCE (444823), or email info@aircraftspruce.com for pricing and availability.

S	A ro up P/N
-3	AE3663161BXXXX
-4	AE3663161EXXXX
-5	AE3663161FXXXX
-6	AE3663161GXXXX

S	A ro up P/N
-8	AE3663161HXXXX
-10	AE3663161JXXXX
-12	AE3663161KXXXX

SILICONE HOSE



Temp. range -65°F to +350°F. Color; Blue

I	O	Wt / Ft. (Lb.)	Part No.	Pr / Ft
1/4"	0.45"	.064	05-00659	
3/8"	0.67"	.144	05-00660	
5/8"	0.95"	.220	05-00661	
3/4"	1.07"	.276	05-00671	

BLACK SILICONE FIRE JACKET



This black silicone fire jacket has a temperature range of -65°F to +2000°F AND IS 5/8" I.D. Fits all E185-E225 & IO-470 breather tubes.

P/N 05-00672.....

AEROQUIP 601/AE701 HOSE



An inner tube of seamless, specially formulated synthetic rubber reinforced with a stainless steel partial inner braid and full-coverage stainless steel outer braid. Operating temperature -40° to 300°F. Aeroquip 601 hose is widely used for aircraft fuel and oil lines where flexibility and light weight are prime considerations. Because of its lighter weight and lower operating pressure than type 303 hose, it is not recommended for hydraulic lines. Use with Aeroquip 816 hose fittings. Aeroquip 601/AE701 is a direct replacement for old 601 hose. AE701 hose has no shelf life and is the upgraded version of 601 hose.

Hose Part No.	For Tubing S	Hose I.D.	Max. Op r. Pressure** (PSI)	Wt. p r Ft. (Lb.)	Pr P r Ft.
601-4	1/4	7/32	1,000	.120	
601-6	3/8	11/32	1,000	.156	
601-8	1/2	7/16	1,000	.168	
601-10	5/8	11/16	1,000	.204	

* Corresponds to dash no. of Aeroquip 816 hose fittings. ** Safety factor of 4.



CUSTOM AEROQUIP 666 TEFLON HOSE ASSEMBLIES

Aeroquip Teflon hose is constructed with a conductive, seamless smooth bore inner tube covered with a stainless steel braid. Unattracted by fuel, oil, coolants and solvents used in aircraft systems. Service and shelf life of Aeroquip Teflon hose is unlimited for all practical purposes. They can be used in fuel, hydraulic and pneumatic applications at working pressures to 1500psi. Minimum burst pressures are 8000 psi sizes -3 to -8. Temperature range is -65° to +450° F. Hose assemblies prices are straight to straight. Call for 45° and 90° elbow pricing. Measurements are taken as follows:

F t t	M a u r t
Straight to Straight	End to end (overall length)
Straight to 45°	End of straight fitting to top of b-nut on 45° fitting
Straight to 90°	End of straight fitting to center of 90° fitting
45° to 45°	Top of b-nut on 45° fitting to Top of b-nut on 45° fitting
45° to 90°	Top of b-nut on 45° fitting to center of 90° fitting
90° to 90°	Center of 90° fitting to Center of 90° fitting

Call 877-4-SPRUCE (444823), or email info@aircraftspruce.com for pricing and availability.

S	A ro up P/N
-3	AE3660000BXXXX
-4	AE3660000EXXXX
-5	AE3660000FXXXX
-6	AE3660000GXXXX

S	A ro up P/N
-8	AE3660000HXXXX
-10	AE3660000JXXXX
-12	AE3660000KXXXX



AEROQUIP MS28741 CUSTOM RUBBER HOSE ASSEMBLIES

All hose assemblies are special-order and non-returnable. Custom-fabricated MS28741 hose assemblies fabricated (Aeroquip #303 or 302A) from MIL-H-8794 hose and MS24587 fittings (Aeroquip #491 or equivalent). Inner Tube: seamless synthetic rubber compound Reinforcement: synthetic impregnated single-wire braid over single cotton braid Outer Cover: synthetic impregnated oil-resistant cotton braid Operating Temperatures: • 303 Hose: -65° to +250°F • 302A Hose: -40° to +250°F. See measuring instructions above.

Call 877-4-SPRUCE (444823), or email info@aircraftspruce.com for pricing and availability.



SPEEDLOX LOCKING FITTINGS

Features: * No Wrenches Required * NHRA Approved * Retrofittable with existing hoses & hose ends * Eliminates the need for a wrench to seal the connection, Just hand tight * Eliminates cross-threading with the built in B-Nut guide * Prevents cavitation * Stays as a unit, no assembly required * Protects threads from F.O.D. (Foreign Object Damage) * Eliminates the need for safety wire * Reduces R & R time * Increased safety factor * Eliminates unscheduled maintenance * Eliminates hose twisting or binding * Greatly reduces contamination at the connection * Discourages over tightening the connection due to sealing system * Allows for torsional flex without losing the seal at the connection * Standard B-Nut is accessible to be torqued before locking, If required * Can be made tamper proof by filling the lock ring hole with a suitable material such as silicone or epoxy * Eliminates unnecessary contamination to the environment (leaks) * The hose end may be "Timed" in order to position the release tang away from any vulnerable areas * In the event an object should strike the sleeve in the unlocked position, the sleeve will absorb the impact of F.O.D. by snapping out of the unlock detent

S	Thr a	Part No.	Pr
SSA-3	Straight	04-01966	
SSA-4	Straight	04-01967	
SSA-6	Straight	04-01968	
SSA-8	Straight	04-01969	
SSA-10	Straight	04-01970	
SSA-12	Straight	04-01971	
SSA-16	Straight	04-01972	
SSA-20	Straight	04-01973	

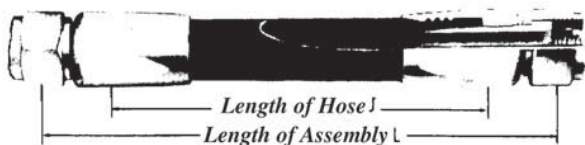
S	Thr a	Part No.	Pr
SPA-3	Pipe	04-01974	
SPA-4	Pipe	04-01975	
SPA-6	Pipe	04-01976	
SPA-8	Pipe	04-01977	
SPA-10	Pipe	04-01978	
SPA-12	Pipe	04-01979	
SPA-16	Pipe	04-01980	

HOSE ASSEMBLY

ASSEMBLY INSTRUCTIONS

USING 303 HOSE AND 491 FITTINGS

To make hose assembly of length "L", cut hose to length "J". Obtain "J" length by subtracting proper fitting allowances.

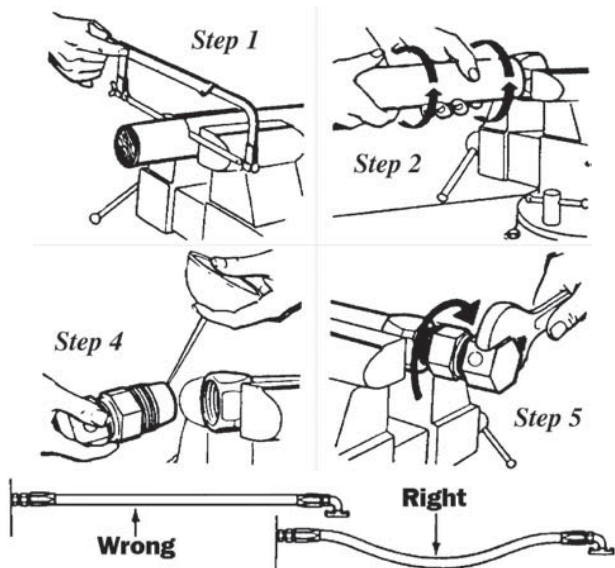


Hose & Fitting Dash No.	-3	-4	-5	-6	-8	-10	-12
Fitting Allowance* (in.)	1.30	1.30	1.48	1.54	1.88	2.00	2.00

*Allowance for 2 fittings.

- step 1 Cut hose squarely to length. Use hose cut-off machine or fine tooth hacksaw. Do not remove cover.
- step 2 Place socket in vise. Do not overtighten vise on thin-walled sockets of lightweight fittings. Screw hose into socket until it bottoms. Back-off 1/4 turn.
- step 3 Tighten nipple and nut on assembly mandrel.
- step 4 Lubricate inside of hose and nipple threads liberally. Use lubricating oil, petrolatum or light grease.
- step 5 Screw nipple into socket and hose using wrench on ass'y tool hex. Nut must swivel freely when assembly tool is removed. Maximum allowable gap is 1/16 inch. L.P.S.-1 is an excellent lubricant for use in hose assembly.

CLEAN, INSPECT, PROOF TEST



PLANNING HOSE LINE INSTALLATIONS

- Provide slack or bend in the hose line to provide for changes in length that will occur when pressure is applied.
- Observe linear stripe. Hose must not be twisted. High pressures applied to a twisted hose may cause failure or loosen the nut.



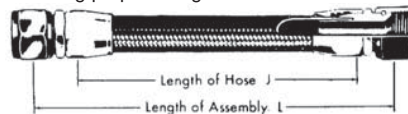
*10781-4 Clamp to be used to secure the Firesleeve material on each end over the basic hose assembly. Specify size. . .



End Dip for Firesleeve - P/N 5027

USING 601 HOSE AND 816 FITTINGS

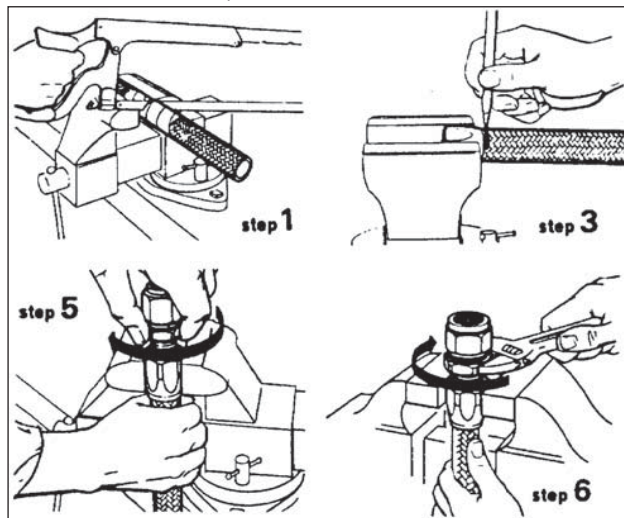
To make hose assembly of length "L", cut hose to length "J". Obtain "J" length by subtracting proper fitting allowances.



- step 1 - Cut hose squarely to length. Use hose cut-off machine or fine tooth hacksaw. To minimize wire braid flare-out, wrap hose with masking tape and saw through tape. Remove tape before step 2.
- step 2 - Insert hose in socket with a twisting, pushing motion until hose is in line with back of socket threads.
- step 3 - Important-mark hose position around hose at rear of socket. Use a grease pencil, painted line or tape.
- step 4 - Lubricate inside of hose & nipple threads liberally. Use SAE 30 lubricating oil. Avoid getting oil in the cutting spur of the nipple.
- step 5 - Carefully insert nipple and engage nipple and socket threads while holding hose in position with other hand. Make sure that hose does not push out of socket by observing mark made in step 3.
- step 6 - Complete assembly using wrench while continuing to hold in position. Maximum allowable gap is .041" in sizes 3, 4, & 5, and .031" in size 6 & up.
- step 7 - IMPORTANT—check for hose push-out by observing hose position mark. None should be evident.

CLEAN, INSPECT, PROOF TEST

Note: Hose push out after proof test should not exceed 1/32" on sizes 12 and up. None is allowable on smaller sizes.



STRATOFLEX 2650 FIRESLEEVE



Part No.	Use With Hose No.				*10781-4 Clamp	Price Per Ft.
	124	193	111	156		
2650-6	-4	-	-	-	-	-
2650-8	-6	-3	-	-4	22CR	-
2650-9	-	-4	-	-5	22CR	-
2650-10	-8	-	-4	-6	22CR	-
2650-11	-	-6	-	-	-	-
2650-12	-10	-	-5,-6	-8	22CR	-
2650-13	-	-8	-8	-	-	-
2650-14	-12	-	-	-	22CR	-
2650-16	-	-10	-10	-10	32CR	-
2650-18	-	-	-	-12	32CR	-
2650-20	-16	-	-12	-	32CR	-
2650-22	-	-	-16	-16	32CR	-

STRATOFLEX HOSE & FITTINGS



STRATOFLEX 111 HOSE

Part No	Tube O.D.	Hose ID.	Max Press	Wt Per lb./In.	Price Per Ft.
111-4	.250	.188	3000	.0120	
111-5	.312	.250	3000	.0130	
111-6	.375	.312	2000	.0190	
111-8	.500	.406	2000	.0220	
111-10	.625	.500	1750	.0310	
111-12	.750	.625	1500	.0380	
111-16	1.00	.875	800	.0368	

STRATOFLEX 300 STRAIGHT FLARED FITTINGS FOR 111 HOSE



Part No.	Tube O.D.	Thread	Price Ea.
300-3S	.188	3/8-24	
300-4S	.200	7/16-20	
300-5S	.312	1/2-20	
300-6S	.375	9/16-18	
300-8D	.500	3/4-16	
300-10D	.625	7/8-14	
300-12D	.750	1-1/16-12	
300-16D	1.00	1-5/16-12	

STRATOFLEX 156 MEDIUM PRESSURE HOSE



Part No	Tube O.D.	Hose ID.	Max Press	Mini Blend	Price Per Ft.
156-3	.188	.156	1500	1.75	
156-4	.250	.219	1500	2.00	
156-5	.312	.281	1500	2.25	
156-6	.375	.344	1500	2.50	
156-8	.500	.438	1250	3.50	
156-10	.625	.562	1250	4.00	
156-12	.750	.688	1250	4.50	
156-16	1.000	.875	1000	5.50	

STRATOFLEX 678 45° ELBOW FLARED FITTINGS FOR 156 HOSE



Part No.	Tube O.D.	Thread	Price Ea.
678-3S	.188	3/8-24	
678-4S	.250	7/16-20	
678-6D	.375	9/16-18	
678-8D	.500	3/4-16	
678-10D	.625	7/8-14	
678-12D	.750	1-1/16-12	
678-16D	1.00	1-5/16-12	



STRATOFLEX 193 HOSE

Part No	Tube O.D.	Hose ID.	Max Press	Weight per In. (l.b.)	Price Per Ft.
193-2	.35	.125	300	.0038	
193-3	.41	.188	250	.0050	
193-4	.48	.250	200	.0058	
193-6	.60	.375	150	.0079	
193-8	.75	.500	150	.0015	
193-10	.87	.625	150	.0138	

STRATOFLEX 646/640 45° ELBOW FLARED FITTINGS FOR 111 HOSE



Part No.	Tube O.D.	Thread	Price Ea.
646-4S	.250	7/16-20	
646-6S	.375	9/16-18	
646-8D	.500	3/4-16	
646-10D	.625	7/8-14	
640-12D	.750	1-1/16-12	
640-16D	1.00	1-5/16-12	

STRATOFLEX 649/643 90° ELBOW FLARED FITTINGS FOR 111 HOSE



Part No.	Tube O.D.	Thread	Price Ea.
649-4S	.250	7/16-20	
649-6S	.375	9/16-18	
649-8D	.500	3/4-16	
649-10D	.625	7/8-14	
649-12D	.750	1-1/16-12	

STRATOFLEX 676 STRAIGHT FLARED FITTINGS FOR 156 HOSE



Part No.	Tube O.D.	Thread	Price Ea.
676-3S	.188	3/8-24	
676-4S	.250	7/16-20	
676-5S	.312	1/2-20	
676-6D	.375	9/16-18	
676-8D	.500	3/4-16	
676-10D	.625	7/8-14	
676-12D	.750	1-1/16-12	
676-16D	1.000	1-5/16-12	

STRATOFLEX 680 90° ELBOW FLARED FITTINGS FOR 156 HOSE



Part No.	Tube O.D.	Thread	Price Ea.
680-3S	.188	3/8-24	
680-4S	.250	7/16-20	
680-5S	.312	1/2-20	
680-6D	.375	9/16-18	
680-8D	.500	3/4-16	
680-10D	.625	7/8-14	
680-12D	.750	1-1/16-12	
680-16D	1.000	1-5/16-12	

STRATOFLEX 311 STRAIGHT FLARED FITTING FOR 193 HOSE



Part No.	Tube O.D.	Thread	Price Ea.
311-2D	.125	5/16-24	
311-3D	.188	3/8-24	
311-4D	.250	7/16-20	
311-6D	.375	9/16-18	
311-8D	.500	3/4-16	
311-10D	.625	7/8-14	

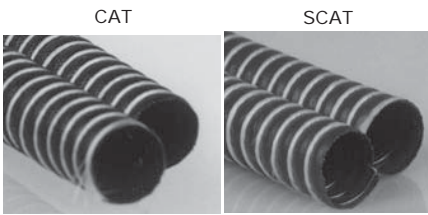
STRATOFLEX FLARED HOSE ASSEMBLIES

Call for quote on Stratoflex 111, 156, 193 and 124 PTFE flared hose assemblies. Our hose assemblies are competitively priced and available for immediate shipment.

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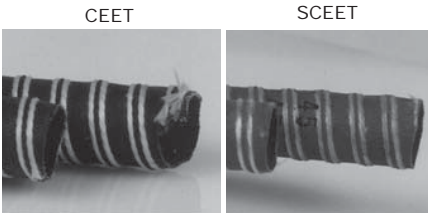
DUCTING

AIRCRAFT FLEXIBLE DUCTING



"CAT" - "CAT" type flexible hot or cold air ducting is extremely lightweight and highly flexible. Short lengths can be joined together to form a continuous length. Made of a single ply black neoprene-impregnated fiberglass with a spiral copper coated steel wire inside and wrapped with fiberglass cord on the outside. Suitable for conveying fumes and air at temperatures from -65° to over 350°F. Not recommended for handling liquids or highly abrasive materials, or for negative pressure applications.

"SCAT" - "SCAT" type ducting has the same type construction as "CAT" except with red silicone rubber impregnation. For use in conducting extremely cold or hot air with temperatures from -65° to over 550°F. Not recommended for negative pressure applications.



"CEET" - "CEET" type ducting has two plies of neoprene-impregnated fiberglass, similar to CAT except wire between plies. For use in hot or cold air applications and for conveying fumes at temperatures ranging from -65° to over 350°F. Not recommended for handling liquids or highly abrasive materials, or for negative pressure applications.

"SCEET" - "SCEET" type ducting has two plies of silicone rubber-impregnated fiberglass, similar to SCAT except wire between plies. Ideal for use in conducting extremely cold or hot air at temperatures from -80° to over 550°F, and for conveying fumes. Not recommended for handling liquids or highly abrasive materials, or for negative pressure applications.

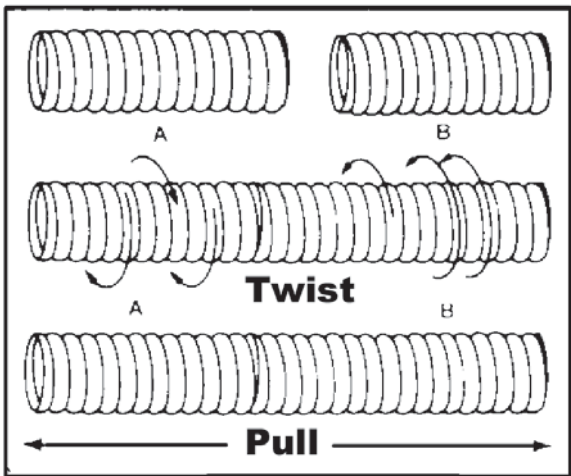
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Dash No.	Inside Diameter	CAT		SCAT		CEET		SCEET	
		Part Number	Price Per Foot	Part Number	Price Per Foot	Part Number	Price Per Foot	Part Number	Price Per Foot
-2A	5/8"	05-29801	.	05-29901	.	05-30501	.	05-30601	.
-3	3/4"	05-29802	.	05-29902	.	05-30502	.	05-30602	.
-3A	7/8"	05-29803	.	05-29903	.	05-30503	.	05-30603	.
-4	1"	05-29804	.	05-29904	.	05-30504	.	05-30604	.
-5	1-1/4"	05-29805	.	05-29905	.	05-30505	.	05-30605	.
-6	1-1/2"	05-29806	.	05-29906	.	05-30506	.	05-30606	.
-7	1-3/4"	05-29807	.	05-29907	.	05-30507	.	05-30607	.
-8	2"	05-29808	.	05-29908	.	05-30508	.	05-30608	.
-9	2-1/4"	05-29809	.	05-29909	.	05-30509	.	05-30609	.
-10	2-1/2"	05-29810	.	05-29910	.	05-30510	.	05-30610	.
-11	2-3/4"	05-29811	.	05-29911	.	05-30511	.	05-30611	.
-12	3"	05-29812	.	05-29912	.	05-30512	.	05-30612	.
-13	3-1/4"	05-29813	.	05-29913	.	05-30513	.	05-30613	.
-14	3-1/2"	05-29814	.	05-29914	.	05-30514	.	05-30614	.
-15	3-3/4"	05-29815	.	05-29915	.	05-30515	.	05-30615	.
-16	4"	05-29816	.	05-29916	.	05-30516	.	05-30616	.
-18	4-1/2"	05-29818	.	05-29918	.	05-30518	.	05-30618	.
20	5"	05-29820	.	05-29920	.	05-30520	.	05-30620	.
24	6"	05-29824	.	05-29924	.	05-30524	.	05-30624	.

Diameters not listed are available as a special order in full lengths only. Order CAT 2-3/4" diameter for Whisperflow air vents. Full factory lengths are 10 ft. on CAT and CEET and 12 ft. on SCAT & SCEET.

SCREWING DUCTING TOGETHER

Short lengths of ducting can be spliced to eliminate waste. For permanent splices, an adhesive should be applied to the ends before joining. To relieve wire tension when cut, bend end of wire in slightly.



ALUMINUM FLANGES FOR DUCTING

Simplify installation of cabin, carb. heat, cabin vent lines. Aluminum flange may be welded or riveted in place. Slip ducting over outlet and secure with clamp.



Flange Size	Part No.	Price
1"	10350-4	.
1-1/4"	10350-5	.
1-1/2"	10350-6	.
1-3/4"	10350-7	.
2	10350-8	.
2-1/4"	10350-9	.
2-1/2"	10350-10	.
2-3/4"	10350-11	.
3"	10350-12	.

Discount: 10% On 20; 15% On 50, 20% On 100 (Assorted)



ANTIQUE PIPER WING ROOT FRAME COVERS

This cover is constructed of a light-weight stiffener panel, 1/2" foam padding and headliner fabric. A flap extends into the back side of the wing root frame and glues in place for a professional finish.

P/N 09-17345.....

SOUNDPROOFING – INSULATION

E-A-R-COMPOSITE DAMPING FOAM



ADC-224 is a mid-temperature skin damping composite of 0.25" thick damping foam fixed with 0.005" thick aluminum foil and backed with pressure sensitive adhesive. Used in aircraft for weight efficient damping and to reduce radiated noise. Meets FAR 25.853 (A) for fire resistance. Furnished in 27" x 48" sheets.

P/N 09-00181 / sheet

Less 10% discount on 10 or more sheets

3M™ SOUND & VIBRATION DAMPING PANELS



Designed for damping resonant vibrations of thin sheet metal, these panels are pressure sensitive, specially compounded polyurethane damping foam with an aluminum foil backing. The adhesive on the foam is protected by a peel-off paper covering. It is an excellent insulator for conducted heat and is an excellent heat reflector. Fire-resistant and self-extinguishing per FAA test procedure. Excellent moisture resistance. Resistant to most solvents. Easily applied with only hand pressure for a permanent bond even on rough, irregular surfaces. Used extensively in commercial aircraft and highly recommended for metal home builds. Apply to firewall, fuselage — anywhere a vibration problem exists. Wt. 4 oz./sq. ft., 1/4" thick.

3M Sound Damp Panel 6" x 48"..... P/N 09-30206 ea.

3M Sound Damp Panel 12" x 48"..... P/N 09-30212 ea.

3M Sound Damp Panel 18" x 48"..... P/N 09-30218 ea.

Less 15% on 12 or more pieces

FOR OTHER 3M™ PRODUCTS SEE PAGES 345-352

ALUMINUM FOIL TAPE



A 2 Mil. (50 micron) high strength aluminum foil coated with an aggressive, high temperature acrylic adhesive system. The foil conforms well to both fibrous and sheet metal ducts, providing an excellent vapor seal. The malleable foil also conforms well around corners and to irregular surfaces. Coated with a special cold weather acrylic pressure sensitive adhesive system which combines superior quick stick at normal temperature with superior low temperature performance below freezing - this is the ultimate in cold weather tapes. Recommended for use at normal and elevated temperatures also. **Applications:** Primarily used for vapor sealing fiberglass ductboard and sheet metal ducts; can also be used on FSK systems. tape described above. 2" x 25 Yd. Roll.

Description	Part No.	Price	Description	Part No.	Price
1"X 25YD	09-01273		4"X25 YD	09-01275	
2"X 25 YD	09-01274		6"X50 YDS	09-01276	

TEFLON ANTI-CHAFE TAPE



ISD Chafe Tape is a durable Teflon material with a pressure sensitive adhesive which resists solvents, and oils. Designed specifically to prevent aluminum chafing between airframes and engine cowls. It helps prevent black streaking on aircraft exterior due to cowl chafing. Not FAA/PMA approved. Operable temperature range: -100°F to +500°F. Width: 1". Roll length: 6 yds. Tkns: .012" P/N 09-31805 /roll

TEFLON COATED FIBERGLASS ANTI-CHAFE TAPE



These 1' wide rolls of Teflon on fiberglass anti-chafe tape are excellent for use on engine cowlings to keep cowl components from chafing. The tape is available in 5 mil thick and 10 mil thick and comes with a silicone adhesive on the tape. Just peel back liner and install. Rolls are 1" wide x 36 yds long.

5 Mil Anti-Chafe tape P/N 05-01024 /roll

10 Mil Anti-Chafe tape P/N 05-01025 /roll

UNI-WRAP SILICONE TAPE RUBBER SELF-BONDING TAPE



UniWrap silicone rubber sealing tape bonds to itself permanently to protect, repair, join, or insulate virtually any type of part on which ordinary tape can be used. But the big difference between UniWrap and ordinary tape is that it fuses to itself permanently to form a homogenous mass and provides unprecedented protection and insulating characteristics. UniWrap uses no adhesives so it is non-tacky. It has a 12 month shelf life and after fusing is unaffected by moisture, cold, heat, ozone shock, or vibration. Meets MIL-I-46852 Type II as well as strict aerospace industry performance requirements. Available in red, black, gray, or white. Furnished in 10 yard rolls, UniWrap is 1" wide and 0.020" thick UniWrap (red) P/N 09-30450.....

COWLING CHAFE SEAL



Off-white, 100% non-asbestos woven tape. Unaffected by most chemicals and temperatures. 15' roll. 1" P/N 09-31800 rl

NOXUDOL SOUNDPROOFING LIQUID



A paint-on soundproofing material that is applied to metal surfaces to reduce vibration and reverberant noise. Use to fill cracks and spaces where noise can enter. Buff color and can be painted. Paint engine mounts to increase fire resistance! Odorless and non-toxic when dry. Waterbased product. Non-Flammable. Shelf life: 1-year. Not FAA approved.

Quarts P/N 09-42740

Gallon..... P/N 09-00772

SUPER SOUNDPROOFING TAPE



This is a 1/8" thick by 2" wide self adhesive tape that can be placed on metal panels and wrapped around ducts to reduce vibration and reverberant noise transfer. Not FAA approved. 30 ft. rolls.

2" wide P/N 09-42745...../ea.

1" wide P/N 09-00381...../ea.

SUPER SOUNDPROOFING FLOOR MAT

This heavy duty, wear resistant vinyl mat with foam backing can be placed on aircraft floors to reduce noise & vibration. 54" width.

FAA approved. P/N 09-42750 /lin.ft.

Floormat 4" wide X 25' Roll..... P/N 09-00433..... /roll

Floormat without foam backing P/N 09-42751 /lin.ft.

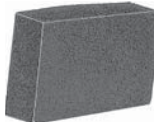
HOW TO SOUNDPROOF LIGHT AIRCRAFT



This excellent book explains how to properly use the soundproofing materials below to best reduce noise and vibration in your aircraft cabin. Illustration; 20 pages.

P/N 09-42755 FREE

SUPER SOUNDPROOFING SHEET WITHOUT ADHESIVE



This material is excellent for reducing noise levels in all types of certificated and homebuilt aircraft. It is a closed cell vinyl insulating material which will not absorb water or oil. Has fire retardant qualities and meets FAR 25.853a Appendix F, Pt1. It is smooth on one side for easy attachment to the inside cabin skins, sides, top and front firewall. Excellent for helicopters as well. Furnished in bulk 48" wide sheet, it is easily cut by scissors and attached with contact cement. Available in black only.

The Flammability Report (Burn Certs) are available on request.

Thick-ness	Wt. / Lineal ft.	P/N 09-	Price Per. Lineal Ft.	Thick-ness	Wt. per Lineal ft.	P/N 09-	Price Per. Lineal Ft.
1/8"	.25 lbs.	42719		3/4"	1.4 lbs.	42727	
1/4"	.60 lbs.	42720		1"	2.0 lbs.	42730	
3/8"	.80 lbs.	42723		1-1/2"	3.0 lbs.	72731	
1/2"	1.0 lbs.	42725		2"	4.0 lbs.	42760	

SUPER SOUND PROOF WITH ADHESIVE



Super Soundproofing Foam Mat for noise control: A closed cell vinyl-nitride noise control FOAM suitable for application to cars, boats, planes, home and office, anywhere a noise control mat is needed. Won't absorb moisture or odor, long lasting and durable. An excellent thermal insulator! (FAA

Approved for aircraft, too!) Just apply with vinyl or contact cement to reduce and absorb sound.

1/8" w/adhesive P/N 09-01243

1/4" w/adhesive P/N 09-01244

3/8" w/adhesive P/N 09-00443

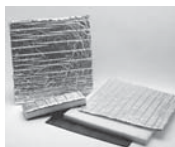
1/2" w/adhesive P/N 09-00444

3/4" w/adhesive P/N 09-01245

1" w/adhesive P/N 09-01246

2" w/adhesive P/N 09-01247

SOUND EX KITS



SoundEx™ is a premium aircraft soundproofing / insulation that incorporates excellent vibration damping and noise absorption properties. SoundEx™ is a superior product compared to other products on the market because of its thermal qualities, adds less weight to aircraft (4.5 oz. per sq. ft. for 1-1/8" thickness and 3 oz. per sq. ft. for 7/8" thickness), and affordability. Materials are available in bulk or soundproofing template kits. Stop the yelling and make flying fatigue a thing of the past. Improve your quality of flight with SoundEx™.

SEE WWW.AIRCRAFTSPRUCE.COM FOR A LIST OF SOUND EX AIRCRAFT KITS AND BULK MATERIAL.

SEE THE ENGINE PARTS SECTION OF THE CATALOG FOR MORE INSULATION PRODUCTS!

INSULATION MATERIALS

THE INSULATOR AIRCRAFT INSULATOR MATERIAL



The Insulator is one of the finest sound proofing and thermal insulation materials available, and will last the life of the aircraft. The dual sided Insulator panels are ideal for installation on interior skin, floor, engine covers, doors, headliners, and bulkheads. The Insulator uses multi-layered fiber plys bonded to reinforced high performance foil to provide optimum barrier to acoustics, radiant heat, thermal heat, and moisture. Insulator is available in 4' x 6' panels or by the lineal foot (4' wide). Install Insulator with Sticky Stuff spray adhesive (shown below) and Insul-Tape. Not FAA approved.

INSULATOR PANELS

Insulator – one ply 4' x 6' sheet.....	P/N 09-27400.....	ea
Insulator – two ply 4' x 6' sheet.....	P/N 09-27405.....	ea
Insulator – two ply 2' x 6' sheet.....	P/N 09-00282.....	ea
Insulator – three ply 4' x 6' sheet.....	P/N 09-27410.....	ea
Insulator – three ply 2' x 6' sheet.....	P/N 09-00283.....	ea

Discount: less 15% on orders for 20 sheets (assorted)

INSULATOR BY THE FOOT

Single side foil, single layer #6014; 4 ft. wide.	P/N 09-06014.....	/ft.
Double side foil, single layer #6016;	P/N 09-00275.....	/ft.
2 ft wide.....	P/N 09-06016.....	/ft.
4 ft wide.....	P/N 09-00226.....	/ft.
Double side foil, double layer #3200		

Discount: less 15% for 100 ft. (per P/N)

AP

STICKY STUFF ADHESIVE

Stick Stuff is one of the best performing spray adhesives available. It is ideal for installing the Insulator and has many other uses. One spray can will install two 4' x 6' panels.

P/N 09-27415...../ea.



INSUL-TAPE AIRCRAFT INSULATOR MATERIAL

This pressure sensitive aluminized foil tape conforms to irregular surfaces, seals seams and joints and provides a vapor barrier. Also mends damaged Insulator foil. Cuts easily with household scissors.



30' roll..... P/N 09-27420...../ea.

BLANKET IN-A-BOX



Insulating your aircraft made easy! Blanket is ready to install as is or can be modified to fit special areas. Each box contains all the materials to insulate your aircraft including an Orcotek strip blanket, tape, cutting knife, instructions and built-in work surface with measuring grid. FAA8110-3 airworthiness certificate in each box. Furnished as follows:

1" blanket-in-a-box contains 1 roll (1"x20"x100') Orcotek strip blanket, 2 rolls of Orcotape OT-16A (2"), utility knife, dispenser

P/N 09-45005...../box

2" blanket-in-a-box contains 1 roll (2"x20"x50') Orcotek strip blanket
1 roll of Orcotape OT-16A (3"), utility knife, dispenser box/work platform
P/N 09-45010...../box

CONTEGO FIRE BARRIER LATEX PRIMER -THE FIRE STOPS HERE-



Contego protects most building materials from the ravages of fire. Contego intumescent fire barrier products are all non-toxic, non-dermatic, and safe for pets. When exposed to fire, Contego fire retardant coatings expand to form a tough char barrier fire cannot penetrate. Deprived of fuel, the fire quickly dies. Contego not only helps prevent fires, it minimizes deadly smoke production, one of the leading causes of fatalities in residential

and commercial fires. Intumescent fire barriers are nothing new, but Contego Passive Fire Barrier Latex represents a quantum leap forward in terms of quality, versatility, affordability and fire safety-all in one truly impressive fire proofing product.

P/N 05-02615.....

AIRCRAFT CARPET TAPE



Orcotape OT-40 is a double-sided, pressure sensitive cloth tape used to adhere to floor coverings, such as carpet to aircraft flooring and meets the requirements of FAR 25.853. Furnished in a 25 yard roll.

2" width..... P/N 09-00402.....

INSULATION REPAIR & FABRICATION TAPE



Orcotape OT-16A is a lightweight, pressure sensitive, reinforced, metallized polyvinyl fluoride tape which is designed to be used in the fabrication, repair & installation of thermal/acoustic blankets. It is the companion tape to be used with the Orcotek strip blanket to seal the edges. Furnished in 60yd rolls.

2" width..... P/N 09-45040...../ea.
3" width..... P/N 09-45045...../ea.

ORCOTEK STRIP BLANKET



Aircraft insulation by the foot. This durable, state-of-the-art, light weight blanket meets the thermal and acoustic requirements of the major aircraft manufacturers and is now available for your airplane.

The blanket consists of fiberglass enclosed in moisture barrier. It can be used as is or cut in special shapes. Use Orcotape OT-16A 2" or 3" tape to seal the open edge(s) of the blanket. Strip blanket available in 1" thick x 20" wide or 2" thick x 20" wide.

1" thick x 20" wide..... P/N 09-45015...../linear ft.
2" thick x 20" wide..... P/N 09-45020...../linear ft.

VALCO CINCINNATI MULTI-PURPOSE SEALANT



Valco Cincinnati multi-purpose sealant is a paste-like, one component material that cures to a tough, rubbery solid upon exposure to moisture in the air. Because it does not flow due to its own weight, this sealant can be applied overhead or on sidewall joints and surfaces without sagging, slumping or running off. It adheres to clean metal, glass, most types of wood, silicone resin, vulcanized silicone rubber, ceramic, natural and synthetic fiber, and painted and many plastic surfaces.

Valco multi-purpose sealant has good resistance to weathering vibration, moisture, ozone and extreme temperatures. It may be applied in subzero weather without loss of extrusion or physical property characteristics and is effective to -46°C (-50°F). Fully cured Valco multi-purpose sealant can be used for extended periods at temperatures up to 204°C (400°F), and for shorter periods as high as 218°C (425°F)

2 oz. tube..... P/N 09-00277.....
7 oz. tube..... P/N 09-00278.....

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 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 & anti-corrosion coating on exhaust manifolds and turbine casings. Both 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.....

BAFFLING MATERIAL



FIBERFRAX

A new material made from washed ceramic fibers with binders added to form a lightweight, flexible asbestos-free insulation. Withstands temperatures to 2300° F. Excellent for aircraft firewalls. Available in 24" wide rolls in 1/16" and 1/8" thicknesses.

1/16" Thick..... P/N 05-02678 Lin ft.
1/8" Thick..... P/N 05-02679 Lin ft.
Discount Less 15% On 50Ft. Per Size



FIBERFRAX ADHESIVE

Recommended adhesive for installing Fiberfrax is QF-180 Hi-Temp White Glue. Coverage: 15 sq. ft. per pint & 120 sq. ft per gallon.

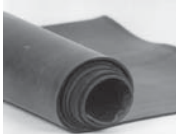
Fiberfrax Adhesive Pt..... P/N 05-00800.....
Fiberfrax Adhesive Gal..... P/N 05-00900.....



NEOPRENE BAR

Neoprene bar of proper Shore hardness for fabrication of shock absorber donuts. Used in Osprey II nose gear. Available in 2 sizes:

1/2" Th x 2" W..... P/N 05-02000 /ft.
3/4" Th x 3" W..... P/N 05-02100..... /ft.



RUBBER SHEET PACKING

Will not deteriorate in petroleum products. Recommended for oil and solvent service. Meets specification MIL-R-6855. Wt. 6 oz. per sq. ft. 1 Size: 1/16" thick x 36" wide roll. Sold in 36" 1 width only. Price is per Lin. Ft.

P/N 05-01000.....

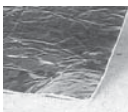
Discount: Less 15% On 20 Ft.

HEAT-PROOF TAPE

Heat-proof and fire resistant. Made of woven fiberglass. Non-metallic, commercial grade. Withstands up to 1000°F. 2" wide x 1/16" thick. Wt. 4-1/2 lbs. per 100 ft. roll. P/N 09-31500..... /ft.

Less 15% On 100 ft.

FIREWALL 2000 CERAMIC BLANKET



This blanket is .250" thick, weighs only 9.5 oz/sq. ft. and is flexible enough to cover compound curves. The heat side of the blanket is covered with stainless steel, the other side is aluminum. It is easy to rivet or can be glued into position. Sold by the running foot. Temp. range up to 1000°F. 24" wide P/N 05-00948.....

Less 15% on 25ft. roll

3M™ FIRE BARRIER 2000

A premium nonslump sealant bonds to most common construction material to form a flexible seal. Superior Adhesion. Remains elastomeric and is weather resistant. This product is great for through penetrations and may also be used for fire rated construction joints. P/N 05-00949.....

FOR OTHER 3M™ PRODUCTS SEE PAGES 345-352

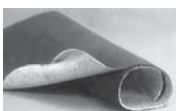
FIREWALL 2000 KIT

Contains 24"x48" sheet of Firewall 2000 and one tube of firewall caulk. Flammable. P/N 05-00950.....



FIREWALL BLANKET

Firewall blanket is black in color and comes 48" wide. Looks best when in 3' sections, anything larger has seams and stitching lines do not match well. Note: This material is used for cosmetic purposes on the inside portion of a firewall to cover up an unsightly firewall. It is not fireproof and is not an actual firewall material. Sold by the foot. P/N 09-00276..... /Linear ft.

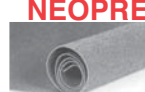


KOOLMAT HEAT BARRIER

Koolmat Insulation is a .070 thick fiberglass textile cured to a 1/8" silicone substrate. The latter providing a good wear resistant surface. Used by NASCAR, Winston Cup race teams as a firewall/

floor safety and comfort heat barrier for drivers and has applications in the homebuilt aircraft field. It can be used on steel, aluminum, fiberglass, wood and plastic surfaces. It is good to temperatures up to 1000° F and reduces cockpit heat up to 75%. Contains no asbestos. Can be used to insulate cowl and firewall forward area. (Not used on exhaust) Color: gray on top side (silicone) and white woven cloth (fiberglass). Wt: .72 lbs. per sq. ft. Sold in 30" width by the lineal foot.

Gray..... P/N 09-24730..... /lin ft.
Beige..... P/N 09-01277..... /lin ft.



NEOPRENE COATED PYROGLASS CLOTH

This neoprene coated cloth is designed for applications where its superb heat and flame resistance provide an extra margin of protection for people and equipment.

Self-extinguishing, it is used as aircraft firewall barriers, protective sleeves and tadpole tape covers, flat seals, gaskets, mounts and door seals. It is ozone and weather resistant, and can be used against caustics, gasoline, oil, water and steam. It does not support combustion and will operate in continuous temperatures from -40°F to +200°F. Thickness .070". Sold in 40" Width only.

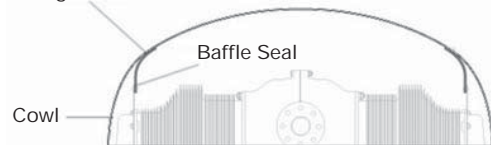
P/N 05-00600..... ft.

PRE-CUT PYROGLASS CLOTH BAFFLE STRIP

Cut from Pyroglass cloth above. 3"x 84"..... P/N 05-00700.....

COWL SAVER BAFFLE SEAL MATERIAL

Friction between baffle seal and cowl transfers engine motion and vibration



Cowl Saver™ Baffle Seal Material has 10 times Less Friction!

One side is silicone and the other is the revolutionary friction free surface unique to the patent pending Cowl Saver™. Cowl Saver™ dramatically reduces the friction between your cowl and baffle seals.

Low Friction Saves You Money!

Reduces transfer of damaging engine vibration to the engine cowl. Minimizes cowl chaffing and erosion from baffle seals. Extends baffle seal life. Reduces expensive cowl and cowl fastener repairs. Reduces fatigue and cracking in aluminum baffles and cowl skins.

The cowlings even goes on easier!

Unbeatable Performance. Ideal balance of flexibility and stiffness to insure a proper seal. Fiberglass reinforced. Meets industry standard AMS3320G specification. McFarlane quality you can count on! Not FAA-PMA approved

Part Number	Thickness	Size	Color	Spruce PN	Price
CS085X36X36G	.085"	36" x 36"	Gray	05-03403	
CS085X18X36G	.085"	18" x 36"	Gray	05-03404	
CS085X3X108G	.085"	3" x 108"	Gray	05-03405	

ACCESSORIES

6036 BAFFLE SEAL RETAINER STRIP - A baffle seal retainer strip used as a retainer for riveting baffle seals to baffles. Designed to be cut to desired lengths during installation. P/N 05-03399.....

RIVET KIT 2 - A baffle seal rivet kit containing soft Mil-Spec rivets that will not deform the baffles. Several sizes are included for various baffle thickness and hole sizes. P/N 05-03401.....

BAFFLE-KIT-1 - A convenient kit that includes (1) CS085X3X108G Cowl Saver™ Baffle Seal Material, (1) RIVET-KIT-2 Soft Rivets, (5) 6036 Retainer Strip P/N 05-03402.....

BAFFLE-KIT- 2 - This new baffle kit with more material. This kit is best for larger aircraft or curved baffle seals that cannot be cut from three inch strips. The new kit includes (1) 18x36 inch piece of Cowl Saver™ material, (2) Baffle Seal Rivet Kits and (10) Baffle Seal Retaining Strips. P/N 05-04108.....

INSPECTA-SHIELD FIRE RETARDANT PENETRANT



Inspecta-Shield is a durable, non-toxic, fire retardant chemical penetrant which when cured and dried, is odorless and colorless.

Inspecta-Shield will retard flame in materials such as fabrics, poly foam, paper, and wood. The flame protection will generally last for the life of the product to which it has been applied. Inspecta-Shield is environmentally compatible and will protect surfaces up to 2,200°. In addition, when it is applied to fabrics, upholstery, carpets or wood, these surfaces will retain their color and resist sun rot up to 50% longer. Inspecta-Shield is a Class A rated flame retardant that meets F.A.R. 25.853 (a & b). 1qt. spray bottle will treat an area of 150 sq. ft. Can be applied with most garden and household sprayers. Note: Inspecta-Shield is corrosive to aluminum and other metals. If it comes in contact with metals be sure to wipe off metal and clean thoroughly

Qt. P/N 09-05760.....

Gal. P/N 09-00274.....

SILICONE SEAL WITH ADHESIVE



A general use silicone with an acrylic sticky backing.

Can be used as any silicone seal where a sticky backing is used, such as Battery Box Covers (top), and Baffle anti-chafe (prevent wear between metal baffles and cylinder head fins) Low temp use only: 0 to +300 Thickness is .050"

Size	Part No.	Price
6"x6"	05-04254	
12"X36"	05-04253	
18"X36"	05-04252	
36"X36"	05-04255	

SEE THE ENGINE PARTS SECTION OF THE CATALOG FOR MORE INSULATION PRODUCTS!

RUBBER CHANNEL - COWL SEAL

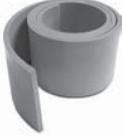


HIGH QUALITY RUBBER CHANNEL

Good-grade neoprene. Soft, flexible, oil-resisting.

Style B: 1/2" high - right, 3/8" high-left, 1/16" Groove 05-00596 /ft
 Style C: 3/8" high, 1/8" groove, 1/4" across bottom . 05-00597 /ft
 Style D: 1/2" high - left, 3/16" - right 1/32" Groove... 05-00598 /ft
 Style E: 1-1/8" high, 1/4" lip right side, 1/16" Groove.. 05-00599..... /ft

SILICONE COWL SEALS



This silicone rubber is excellent for replacement of baffle seals as it exceeds asbestos type seals in durability and flexibility over its entire operating heat range of -80 F to +425 F. Meets Mil Spec ZZR765B. ISR3 meets Mil Spec AMS3320. Available in red, blue & black.

IRON OXIDE RED

3/32" thick x 3" wide x 9' long P/N 05-00775 /ft
 3/32" thick x 36" wide P/N 05-00781 /ft
 3/32" thick x 3" wide P/N 05-00781-3 /ft
 1/8" thick x 2" wide x 9' long P/N 05-00795 /ft
 1/8" thick x 3" wide x 9' long P/N 05-00755 /ft
 1/8" thick x 4" wide x 9' long P/N 05-00760 /ft
 1/8" thick x 36" wide P/N 05-00772 /ft
 1/8" thick x 2" wide P/N 05-00772-2 /ft
 1/8" thick x 3" wide P/N 05-00772-3 /ft
 1/8" thick x 4" wide P/N 05-00772-4 /ft
 1/8" thick x 3"W x 9' (w/fiberglass mat) ... P/N 05-00770 /ft
 1/8" thick x 36"W (w/fiberglass mat)..... P/N 05-00771 /ft
 1/8" thick x 3" wide (w/fiberglass mat)..... P/N 05-00771-3 /ft

LIPSTICK RED

3/32" thick x 36" wide P/N 05-00786 /ft
 3/32" thick x 3" wide P/N 05-00786-3 /ft

DARK BLUE

3/32" thick x 3" wide x 9' long P/N 05-03055 /ft
 3/32" thick x 3" wide P/N 05-01831-3 /ft
 3/32" thick x 36" wide P/N 05-01831 /ft

BLUE

3/32" thick x 3" wide x 9' long P/N 05-00790 /ft
 3/32" thick x 36" wide P/N 05-00806 /ft
 3/32" thick x 3" wide P/N 05-00806-3 /ft
 1/8" thick x 3"W x 9' (w/fiberglass mat) . P/N 05-00792 /ft
 1/8" thick x 36"W (w/fiberglass mat)..... P/N 05-00791 /ft
 1/8" thick x 3" wide (w/fiberglass mat)..... P/N 05-00791-3 /ft

BLACK

3/32" thick x 3" wide x 9' long P/N 05-00810 /ft
 3/32" thick x 36" wide P/N 05-00811 /ft
 3/32" thick x 3" wide P/N 05-00811-3 /ft
 1/8" thick x 3"W x 9' (w/fiberglass mat) ... P/N 05-00826 /ft
 1/8" thick x 36"W (w/fiberglass mat)..... P/N 05-00825 /ft
 1/8" thick x 3" wide (w/fiberglass mat) ... P/N 05-00825-3 /ft

AIRCRAFT BAFFLE SEAL KITS

These pre-cut baffle seal kits are cut to original specifications. Please specify aircraft make, model, serial number, and color of seal. Kits are furnished with rivets, washers, drill bits, & silicone.



BAFFLE FASTENER KIT

This engine baffle fastener kit makes attaching baffle material much easier. The kit includes 12 soft aluminum fasteners.

1 Set..... P/N 05-56140
 Pkg. of 12 Sets..... P/N 05-01829

COWL SEAL HARDWARE & TOOLS

GB4-3A: Rivet - (Button head) 1/8" Dia. x 3/16" Grip - This rivet is used for mounting the baffle seal behind the metal baffle. This method requires a metal baffle strip or back-up washer to secure the seal to metal baffle
 Pkg. of 100 P/N 05-56100

GB-A4: Back-up Washers 1/8" Dia. x 1/4" Grip
 Pkg of 150 P/N 05-56130

GB-SF- 3/16: Screw Fastener (Post Type) Used for joining sides or overlapping of baffle material. P/N 05-56140

GB4-3AW: Rivet (white) 1/8" Dia. x 3/16"Grip (button head)
 Qty. 100..... P/N 05-56132

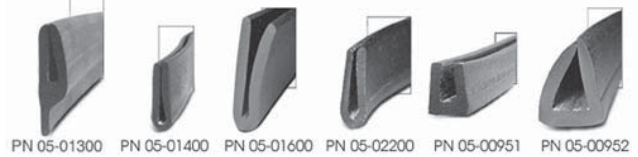
GB4-3AB: Rivet (black) 1/8" Dia. x 3/16"Grip (button head)
 Qty. 100..... P/N 05-56133

GBL4-3A: Rivet (Large Flange) 1/8" Dia. x 3/16"Grip
 Qty. 100..... P/N 05-56134

GBL4-2AW: Rivet (Large Flange white) 1/8" Dia. x 1/8"Grip
 Qty. 100..... P/N 05-56135

Silicone Revolving Punch Tool: Makes various size holes in baffle material. P/N 72.....

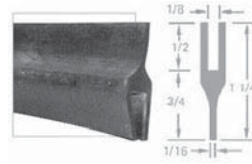
U CHANNEL BLACK 65 DURO EPDM U-CHANNEL.



Use CRL Glass and Acrylic Setting Rubber Channels if you have acrylic or glass panels you need to protect. Our Glass Setting Rubber Channels will provide you with the product you need. Available in multiple sizes for most applications.

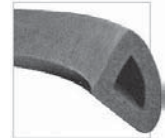
Groove	P/N	Height	Price/Ft.
1/16"	05-01300	6/16"	
1/16"	05-01400	6/16"	
1/16"	05-01600	1/2"	
1/16"	05-02200	6/16"	
1/8"	05-00951	1/4"	
1/4"	05-00952	6/16"	

OPEN SEAL

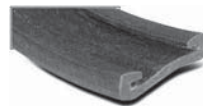


1/2" Legs 3/4" Curve 3/8" Radius
 Made in 12' Lengths -
 #4..... P/N 05-01500 Ft.

Neoprene sponge rubber 1/4-round door seal. Hollow core is more effective than solid core and makes a better seal. Manufactured in 25 Ft. lengths.
 #7..... P/N 05-01700 Ft

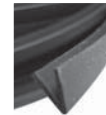


ANTI-CHAFE MOLDING



Anti-Chafe Molding for fuel tank straps. Neoprene channel accommodates metal straps 1" wide.
 #9..... P/N 05-01800 ft

"V" STRIP



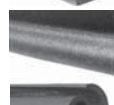
"V" Strip Canopy Channel 20 Ft. required for Long-EZ.
 #10..... P/N 05-01900 ft



QUARTER ROUND SOLID DOOR SEAL - Closed cell black neoprene with smooth outer surface. 1/2" Legs, 3/4" Curve, 1/2" Radius. 25 ft. Roll
 P/N 05-00000



PIPER DOOR SEAL - Used on Piper, Mooney and others, small cell sponge rubber. Packaged in 25 foot rolls JM189139. 25 ft. Roll
 P/N 05-00010



BAGGAGE DOOR SEAL - Flexible small cell sponge rubber seal used on many aircraft baggage doors. Packaged in 25 foot rolls. 25 ft. Roll
 P/N 05-00020



PIPER WING ROOT SEAL - Black packaged in 12-foot lengths, adequate for one wing root. 12 ft. Roll
 P/N 05-00030



BEECH WING ROOT SEAL - Black, packaged in 12-foot lengths, adequate for one wing root. 12 ft. Roll
 P/N 05-00040



J-3, PA-18 DOOR GAP SEAL - 24" length Standard color, black. P/N 05-00953

Note: The above moldings are not FAA approved.



CESSNA CHAFE SEAL

This seal is riveted to the firewall on the Cessna 150, 152, 172, and 182. Meets MIL SPEC: AMS3320-.093 black. 1-1/2" wide x 84" long.
 P/N 05-04489.....

AP

CHAFE SEAL - DOOR SEALS

EPDM WEATHERSTRIP

Self-adhesive rubber strip, made in Sweden of 100% EPDM rubber. Resistant to aging, weather, ozone, ultraviolet sun rays and many chemicals and solvents. Retains resilience at low temperatures (to -45°F). Excellent for all types of weatherstripping and canopy installations. Furnished in three sizes

P-STRIP



Furnished in full rolls as a double-width strip which splits in the middle to give two single-width P-strips as illustrated. 17 Ft. Roll 1/4" thick x 3/8" wide. COLOR: WHITE
P/N 05-01200 Ea.

D-STRIP WEATHERSEAL



17' Roll 5/16" thick x 23/64" wide. (2) 8-1/2" strips.
P/N 05-00897

ALL STRIP WEATHERSEAL



10' Roll 5/16" thick x 19/64" wide.
P/N 05-00898 Ea.

BEECHCRAFT COWL DOOR CHAFE SEAL

A Complete set of black silicone chafe seal for the upper cowl doors for Beech models 33, 35, 36. 3/8" wide X .020 thick. Kit includes silicone cement.

P/N 05-00665

BEECHCRAFT NOSE GEAR CHAFE SEAL

A Complete set of black silicone nose gear door seals designed to keep the nose gear doors from chafing against the airframe. Fits models 33, 35, 36. Kit includes silicone cement. P/N 05-00666

BEECHCRAFT MAIN LANDING GEAR DOOR CHAFE SEAL

A Complete set of black silicone chafe seals cut to the original design. These seals are cemented to the underside of the wing to reduce the chafing of the main landing gear doors when closed.

P/N 05-00667

BEECHCRAFT TAIL ROOT SEAL

A set of two tail root seals for models 33-36.
P/N 05-00669

BEECHCRAFT RUDDERVATOR SEAL

A set of two ruddervator seals for model 35.
P/N 05-00670

BEECHCRAFT UPPER WING SEAL

A set of two upper wing seals for models 33, 35, 36, 55, 58. Includes lower wing seals (2)..... P/N 05-00668

SILICONE AIRBOX & HEATER SEAL

This fiberglass reinforced silicone seal (1/16" thick) makes an excellent replacement for various airbox and heater box seals used in a variety of aircraft. Furnished as a 6" x 6" piece; Black.
P/N 05-00662

SILICONE GBP SEAL WITH 5/8" BULB

This seal makes an excellent replacement for felt type seals or other neoprene P-seals found in various aircraft. Overall size is 1-3/8" with a 5/8" bulb. Similar to Cessna #S2729-1 /ft.
P/N 05-00663

BLACK SILICONE SEAL 7/8 INCH

This seal makes an excellent replacement for felt type seals or other neoprene P-seals found in various aircraft. Overall size is 1-3/8" with a 7/8" bulb.
P/N 05-02144

BEECHCRAFT T34 CANOPY SEALS

AMS 3303 silicone seal -65 to +350 for Beechcraft T34 Canopy Seals. Package includes: • 1 ea Canopy Seal 50.0 Long • 2 ea. Canopy Bumper Seal 21.0 Long • 2 ea Canopy Bumper Seal 48.0 Long
P/N 05-04247

GB56 SILICONE ANTI-CHAFE SEAL

The kit includes: 15 Foot Roll with Adhesive, Anti-Chafe Seal and Catalyst. Sold in 15ft. rolls.
P/N 05-00664

SILICONE CEMENT FOR CHAFE SEAL

This silicone cement is the same cement that is included with some of the chafe seals on this page and is excellent for attachment of chafe seals. 2 oz. P/N 05-00996

AVTEK SQUEEZE-OUT DOOR SEAL KITS



Door Seal keeps water, cold, wind and noise out of your aircraft. The seal is designed for use on multiple aircraft make/model applications. The -02 is shipped with dual Air-Chambers. The installer can split the chambers using one near the hinges, where gaps are small, use two of three chambers in the rear where the gaps are larger. The -02 is very versatile, and works great on every aircraft, where as the -01 may not. Get the -01/-02 combination kit if you are unsure!

Description	Use	Features	Part No.	Price
AvTek Squeeze-Out Door Seal -01	Not Recommended for Most Aircraft. Use for Large Gaps in Cabin Doors.	Ear-Popping Tight	05-01504	
AvTek Air Chamber Door Seal -02	Recommended for All Aircraft. Fwd-Aft Cabin Doors & Bag Door.	Flex, E/Z Conform Will Not Push Door-Out	05-02198	
AvTek Thin Seal (Window) -03	Recommended for Cessna & Beech. Use for Windows, Paper-Thin Door-Gaps	Seals When No Other Seal Will	05-02199	
AvTek Thin Seal (Door) -03	Recommended for All Aircraft. Use for Very Small Gaps in Doors	Seals When No Other Seal Will	05-02201	
AvTek Thicker Seal (Door)	Recommended for All Aircraft. Seal installed on the door.	Resist Mildew, Mold, & Tearing	05-02202	
Air Squeeze Kit (Combo Kit of the Two Best Seals) Squeeze-Out-01 & Air Seal-02	Recommended for All Aircraft Squeeze-Out: Top & Rear of the Door Air-Seal: Bottom and Forward Door Where the Hinges are Located.	Ear-Popping Tight, Flex, Ez Conform Will Not Push Door Out.	05-02217	

AVTEK GAP SEAL



The "Spring-Steel" reinforcement channel has "Gripper" teeth to hold firmly in place. And when your door is closed the seal is pinched between the airframe. You can not pull the seal out when the door is closed...however applying adhesive into the channel is recommended. Length: 9ft. P/N 05-02203

HOMEBUILDERS GAP SEAL KIT FOR EXPERIMENTAL AIRCRAFT



Designed for experimental aircraft that have been identified as needing gap seals to improve control response and effectiveness. Features transparent, UV stable film with a long aging, acrylic adhesive. Remains flexible down to -40 deg. F. Easy to install with the use of simple hands tools. Kit includes 3M 8674 Film (PN 09-01643), 86A Adhesion Promoter to ensure maximum adhesion, Scotchbrite pad (PN 09-01753) and 3M Application Solution (PN 06-00604) P/N 05-03480

PIPER DOOR SEALS



This new seal was developed from a special rubber compound that meets military specifications and FAA requirements for aircraft seals. Has a memory, compresses and conforms to the sealing surface providing a perfect seal. Comes with pressure sensitive adhesive that makes it easy to apply and bonds well with any metal surface painted or bare. Installs in the channel on the fuselage opening, which allows for complete closing and sealing of the doors. Provides for an air- and water-tight seal. Also a kit designed for the baggage doors. FAA-PMA approved. Detailed instructions, an engineering drawing for installation of the new seal, including instructions for adjustment of the door as well as removal of the old seal from the door(s). **Please call or visit our website for additional photos and models.**

Description	Part No.	Price
PA-28 Front Entry Door	05-01240	
PA-28 Rear Baggage Door	05-01241	
PA-32 Front Entry Door	05-01242	
PA-32 Front Baggage Door	05-01243	
PA-32 Rear Entry Door-No Cargo Door	05-01244	
PA-32 Rear Entry Door w/Cargo Door	05-01245	
PA-34 Front Entry Door	05-01246	
PA-34 Front Baggage Door	05-01247	
PA-34 Rear Entry Door w/Cargo Door	05-01248	
Mooney Baggage Door	05-02481	
Mooney Vent Window	05-02483	
Front Mooney Baggage Door	05-02482	

• Mooney Door Seals • Call for Quotation
• Experimental • Provide Door Dimensions for Quotation

CESSNA DOOR SEALS



The new seal installed on the fuselage enables the door to fully close and be air and water tight. The new seals are FAA-PMA certified for all Cessna single engine aircraft including the 336 and 337 twins.

Cessna Entry Door Seal.....	P/N 05-01610.....
Cessna Window Seal.....	P/N 05-01611.....
Cessna Baggage Door Seal.....	P/N 05-01612.....
Cessna AFT ENT/CARGO Door Seal.....	P/N 05-01613.....
Cessna 207 Front Bag Door Seal.....	P/N 05-01614.....

AP

INTERIORS

BAGGAGE COMPARTMENTS



Our Baggage Compartments are custom designed and manufactured to provide your aircraft with a sturdy and attractive area for storing baggage, books, charts, etc. If your aircraft is not listed, please send us the old baggage compartment to use as a pattern for a new one. Available in two colors: off-white or olive drab canvas.

Note: Complete the part number with color choice. Use -1 for off-white or -2 for olive drab. Baggage Compartments are special order & non-returnable

Aircraft	Part No.	Pr
Aeronca 7AC	09-17265-	
Aeronca 11AC	09-17270-	
Aeronca 120/140*	09-17275-	
Cessna 150*	09-17280-	
Cessna 172*	09-17285-	
Cessna 310*	09-17290-	
Ercoupe	09-17295-	
Fairchild 24	09-17300-	

Aircraft	Part No.	Pr
Luscombe 8A	09-17302-	
Piper J3	09-17305-	
Piper J4	09-17307-	
Piper J5	09-17310-	
Piper PA12	09-17312-	
Stearman	09-17315-	
Taylorcraft	09-17317-	

THE ULTIMATE DOOR SEAL

The Ultimate Door Seal compensates for ill-fitting doors and in-flight door movement, thus keeping a positive seal to reduce the high pitched sound which causes fatigue, anxiety, and progressive hearing loss in pilots and passengers. The Deluxe Electric model features a panel mounted air control valve which is fully automatic in flight with electric power supply module. The Deluxe model features a handheld manometer bulb mounted permanently coiled hose and mounting bracket and panel mounted air flow control valve. The Economy model is the same system as the Deluxe but features a self-contained thumb screw air flow valve mounted on a manometer bulb with storage bracket mounted on the door. Requires no hoses or wires to be run. All systems contain everything needed for installation. All components covered under F.A.A. STC's & PMA.

AVAILABLE FOR AIRCRAFT MODELS

<ul style="list-style-type: none"> •CESSNA, 310, 320 •CESSNA, 170, 175, 180, 182, 185, 206, 210 •CESSNA P210, CABIN & EMERGENCY EXIT •BEECH 33, 35, 36, 50, 55, 56, 95, 58 •MOONEY ALL MODELS •PIPER PA23 SERIES •PIPER PA24, 30, 39, 40 •PIPER PA28, 32, 34, 44 •BELLANCA •PIPER AEROSTAR 601P, 602P, 700P •CABIN DOOR •EMERGENCY EXIT •PIPER PA32, 34, •CABIN DOOR •REAR DOOR •CARGO DOORS 	<ul style="list-style-type: none"> •PA32, 34 •REAR DOOR •CARGO DOORS WHEN ADDED TO THE EXISTING SYSTEM •PIPER PA31 •CABIN DOOR •CREW DOORS •BOTH DOORS •BEECH 36, 58 •CABIN DOOR •REAR DOORS •ELECTRIC ONLY REAR DOORS ADDED TO EXISTING SYSTEM •BFA 3000 COMPRESSOR NEW •RH50 RESISTOR PAK •BEECH 58 P SERIES SEAL •CESSNA P337
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CALL FOR A QUOTE FOR YOUR AIRCRAFT

MAP POCKET



10' elastic mouth, square black vinyl pocket mounted on fiberboard. Includes hardware.....P/N 09-17415

TAIL WHEEL BOOTS



To keep your aircraft components clean from contamination by dust, grime and dirt, install these quality covers made from black vinyl. No mounting hardware included.

Cessna 195.....P/N 09-17350

Staggerwing.....P/N 09-17352

Stearman.....P/N 09-17355

PIPER SHOCK BOOTS / COVERS



To keep your aircraft components clean from contamination by dust, grime and dirt, install these quality covers made from black vinyl. No mounting hardware included.

Aircraft	Description	Qt	Part No.	Pr
PA-22	1 Pc. Control Column Boot	Each	09-17410	
PA-25	Gate Control Rod Boot	Each	09-17357	
J-3	Piper Shock Boots	Pair	09-17360	
PA-25	Gate Control Rod Boot	Each	09-17375	
PA-25, SN25-2000 to -4171	Shock Strut Boots, pair	Pair	09-17377	

MISCELLANEOUS BOOTS / COVERS

Aircraft	Description	Qt	Part No.	Pr
Aeronca 7AC	Joy Stick Covers	Pair	09-17362	
Cessna172 (also fits 182)	Steering Linkage Covers	Pair	09-17365	
Citabria	Interior Boots	Each	09-17367	
Beech Bonanza	Gear Boots for Main Gear	Pair	09-17370	
Beech Bonanza	Dust Boot for Retractor Nose Gear	PAIR	09-17372	

SEAT SLINGS



These canvas slings are available in Off-White or Olive Drab. All seat slings include front and rear slings except:

Aeronca 65CA..... 1pc PA-12..... 3 pcs

Piper J-3..... 3 pcs Taylorcraft 1 pc

PA-22..... 1 pc

Note: Complete Part Number with color. Use -1 for Off White or -2 for Olive Drab.

Aircraft	Part No.	Pr
Aeronca 65CA	09-17320-	
Bellanca	09-17322-	
Citabria	09-17325-	
KR-1 & 2	09-17327-	

Aircraft	Part No.	Pr
Piper J-3	09-17330-	
Piper J-5	09-17332-	
Piper PA-12	09-17335-	
Piper PA-22	09-17337-	
Taylorcraft	09-17340-	

WINDLACE INTERIOR DOOR SEAL WELT



1/2" diameter vinyl covered material that provides additional sealing and ornamental edging for the door opening. The windlace is mounted between door post structure and upholstery panels or trim. Install with sheet metal screws. Black color only.

P/N 09-00281 / t.

ANTIQUE PIPER WING ROOT FRAME COVERS



This cover is constructed of a lightweight stiffener panel, 1/2" foam padding and headliner fabric. A flap extends into the back side of the wing root frame and glues in place for a professional finish.

P/N 09-17345.....

3M™ SUPER WEATHERSTRIP ADHESIVE

For adhering all types of rubber weatherstripping to metal. Light colored adhesive, very fast drying, exceptional bonding strength. Can be used for adhering vinyl trim head liners and side panels.

5 oz. tube, #8001..... P/N 09-27200

3M™ WEATHERSTRIP ADHESIVE

Adheres firmly to metal and has quick tack necessary for holding pads and linings in place securely. Can also be used for sealing windshields between rubber and glass.

5 oz. tube, #8011..... P/N 09-27300

3M™ FAST TACK TRIM ADHESIVE

This general purpose adhesive is used for bonding trim fabrics, floor mats, and rugs. Features quick tacking quality, does not bleed through fabric, and remains rubbery and flexible. Doesn't dry hard. Excellent for upholstery repairs.

5 oz. tube, #8031..... P/N 09-27210

3M™ GENERAL TRIM SPRAY ADHESIVE

This convenient sprayable adhesive is used for bonding a variety of trim fabrics. It is non-misting, very strong, light colored, and has a controllable spray pattern.

19.75 oz. Aerosol Can..... P/N 09-28330

FOR OTHER 3M™ PRODUCTS SEE PAGES 345-352

SCOTCH GRIP RUBBER ADHESIVE

This fast drying adhesive develops strength very quickly. It has excellent heat resistance; temperature performance is from -5 to 300°F. Meets specification requirements of MIL-A-1154C. Bonds neoprene, reclaim, SB-R, and butyl rubber to metal, wood, most plastics, and many other products. #1300L Qt Can..... P/N 09-27220

AERO-SEAL CEMENT



Designed for door seals and moldings. Adheres rubber to wood, other rubber, fiberglass or metal. 4 oz. brush-top container.

P/N 05-00955

HEADLINERS - INTERIOR MATERIALS

HEADLINERS

A sagging or torn headliner can make even the nicest airplane look unattractive and worn out. Headliners are actually quite inexpensive and easier to replace than many pilots realize. Our headliners are professionally manufactured and every headliner set comes with complete instructions. Available in Excell stretchable vinyl or wool. Specify fabric type and color as noted below the chart. Headliners are special order & non-returnable.

AIRCRAFT	PART NO.	PRICE
Aeronca		
7AC	09-17454	
11AC	09-17455	
15AC	09-17456	
Chief 65CA	09-17458	
Chief LA65	09-17460	
L-3 Defender	09-17462	
Bellanca Scout		
w/Greenhouse	09-17464	
Super King 1730	09-17466	
Cessna		
120/140	09-17468	
150 (59)	09-17470	
150 (60)	09-17472	
150 (61-63)	09-17474	
150 (64-65)	09-17475	
150 (66-68)	09-17476	
150 (69)	09-17478	
170A/170B	09-17480	
172 (56-58)	09-17482	
172 (59-60)	09-17484	
72 (61-62)	09-17485	
172 (63-70)	09-17486	
175	09-17488	
180	09-17490	

AIRCRAFT	PART NO.	PRICE
Cessna		
182 (56)	09-17492	
182 (57-59)	09-17494	
182 (60-61)	09-17495	
182 (62, Omnivision)	09-17496	
185 (75)	09-17498	
206/207	09-17510	
210 (75)	09-17512	
310	09-17514	
Citabria		
w/Greenhouse	09-17515	
w/o Greenhouse	09-17516	
Commonwealth		
Skyranger	09-17518	
Fairchild		
24	09-17520	
Maule		
M4	09-17522	
M5	09-17524	
Piper		
J-4 Coupe*	09-17525	
PA-121/J-5*	09-17526	
PA-14*	09-17528	
PA-15 agabond*	09-17530	

AIRCRAFT	PART NO.	PRICE
Piper		
PA-16 Clipper*	09-17532	
PA-18 Super Cub*	09-17534	
PA-20/22 (51-52)*	09-17535	
6 bows, 2 zippers		
PA-20/22 (52-58)*	09-17536	
8 bows, 3 zippers		
Colt 108*	09-17538	
PA-23/250 (early 1960)	09-17540	
PA-242 (thru 1965)	09-17542	
PA28/323	09-17544	
Stinson		
1084	09-17546	
10A	09-17548	
105-HW75	09-17550	
Taylorcraft		
BC12	09-17552	

1 Specify round or square windshield Round: S/N 12-01 thru 12-2903, -2907, -2914, -2915, -2917, -2925, -2950, -3028-S, -3901 -3902, -3903 Square: S/N 12-2904 and up except those listed above.

Note: Complete Part No. with Fabric & Color. Excell stretchable vinyl off white -1, wool off white -2, Tan -3, Gray -4.

HEADLINER FABRIC SWATCH SAMPLE



Wool Fabrics

Wool headlining fabrics are available in Off White, Tan or Grey. The fit is in the quality of the workmanship, therefore it can be made to conform to almost any curve.

Mellohite VFR

Mellohite VFR vinyl has a unique four-way stretch which easily eliminates tension wrinkles and produces a smooth, professional finish. Backing and facing are mildew resistant. All materials exceed FAR 23-853

P/N 09-02004 FREE

FIREWALL SETS

vinyl outside, backed with 1/4" closed-cell insulation. If your aircraft is not listed, please send us your current firewall set to use as a pattern. 1-Piece Bulkhead Firewall



Aircraft	Part No.	Price
Aeronca 11AC	09-35910	
Cessna 120/140	09-35915	
Piper PA20/22	09-35925	
Piper PA18	09-35930	
Piper PA28/140	09-35935	



CITABRIA

Bulkhead and wrap-around pad 3 piece set.

P/N 09-35950

LUSCOMBE 8A & 8E

Please specify model. Also specify if 8A is with or without dishpan. If "with dishpan", specify if round or oblong.

P/N 09-35940

w/Dishpan add P/N 09-35945

UPHOLSTERY HARDWARE

82° CSK Washer

Size 4 P/N 04-00393 Size 6 P/N 04-00394

82° Oval Head Screw

4x1/2 - A-OV P/N O4X8 6x1/2 - A-OV P/N O6X8

6x3/3 - A-OV P/N O6X12 6x1 P/N O6X16



Snap Studs - Males snaps attached to self-tapping phillips head screws. For canopies

#7 x 3/8" P/N 04-01520

#7 x 5/8" P/N 05-02131

HEADLINER WOOL

This is a quality versatile wool headlining fabric. Wrinkles can be removed by applying water in a fine mist then using heat, such as a hair dryer, allowing wool to shrink. This gives a nice tight fit. Colors: Off-white, tan and gray. Complete P/N with color choice using (-2) for Off white, (-3) for tan, or (-4) for gray.

P/N 09-17566 /yd.



3M™ HEADLINER CEMENT

Headliner, rubber & gasket adhesive.

Cart P/N 09-17570

FOR OTHER 3M™ PRODUCTS SEE PAGES 345-352



SUPER TRIM ADHESIVE #1081

A high temp high strength contact type adhesive. Bonds metal, foam, decorative laminates, fabrics, headliners. Variable width spray pattern. Meets Fed. Spec. MMM-A-130B.

16.5 Oz. Can P/N 09-42652 ea.

HEADLINER EXCELL STRETCHABLE VINYL

Unique four-way stretch that easily eliminates tension wrinkles, producing a smooth professional finish. Backing and facing are mildew resistant. 54" width. Color: Off white.

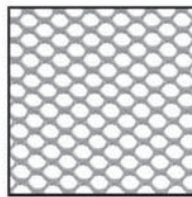
P/N 09-17564 /yd.



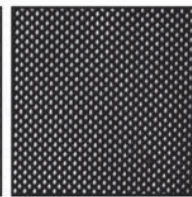
FELT

All wool, 1/4" thick felt for paddings. Firm but resilient construction for many aircraft applications. Gray/brown mix. NOTE: Sold in Full 36" Width only.

P/N 09-31600 /Lineal Ft.



Tan PN 09-00461



Black PN 09-00462

CARGO NETTING POCKET MESH - MSG mesh products are developed with customers to ensure the highest quality standard in both product design and longevity.

Black 50" wide P/N 09-00462 / yd.

Tan 60" wide P/N 09-00461 / yd.

AP

3M™ LEADING EDGE TAPES - PROTECTIVE BOOTS



3M™ 8672 POLYURETHANE PROTECTIVE TAPES

3M™ Polyurethane Protective Tape 8672 is made from a tough abrasion resistant polyurethane elastomer that resists punctures, tearing, abrasion and erosion. It is formulated for resistance to ultraviolet light.

Polyurethane Protective Tape 8672 provides a simple, easy method of protecting a surface from corrosion, abrasion and minor impact damage. It can be installed in a minimum amount of time with simple tools. It can be painted or applied over painted surfaces. Polyurethane Protective Tapes 8672 and 8672 GB are constructed with a long-aging, solvent resistant, pressure sensitive acrylic adhesive that is protected with an easy release paper liner. Polyurethane Protective Tape 8672 is a transparent tape with a paper liner on the adhesive side.

W	L	Color	Description	Part No.	Price
1"	12yd	Gloss Black	3M™ 8672 Tape	09-01636	.
1"	12yd	Clear	3M™ 8672 Tape	09-01632	.
2"	12yd	Gloss Black	3M™ 8672 Tape	09-01637	.
2"	12yd	Clear	3M™ 8672 Tape	09-01633	.
3"	12yd	Gloss Black	3M™ 8672 Tape	09-01638	.
4"	12yd	Gloss Black	3M™ 8672 Tape	09-01639	.
4"	12yd	Clear	3M™ 8672 Tape	09-01635	.
6"	18yd	Clear	3M™ 8672 Light A/C Kit	09-20110	.
6"	18yd	Gloss Black	3M™ 8672 Tape	09-02104	.
1"	36yd	Clear	3M™ 8672 Tape	09-00841	.
2"	36yd	Clear	3M™ 8672 Tape	09-20140	.
3"	36yd	Clear	3M™ 8672 Tape	09-00843	.
4"	36yd	Clear	3M™ 8672 Tape	09-20145	.
6"	36yd	Clear	3M™ 8672 Tape	09-00845	.
1"	36yd	Gloss Black	3M™ 8672 Tape	09-00842	.
2"	36yd	Gloss Black	3M™ 8672 Tape	09-00811	.
3"	36yd	Gloss Black	3M™ 8672 Tape	09-00844	.
4"	36yd	Gloss Black	3M™ 8672 Tape	09-00812	.
6"	36yd	Gloss Black	3M™ 8672 Tape	09-00846	.

3M™ 8674 POLYURETHANE PROTECTIVE TAPES



3M™ Polyurethane Protective Tape 8674 is made from a tough abrasion resistant polyurethane elastomer that resists punctures, tearing, abrasion and erosion. It is formulated for resistance to ultraviolet light. Polyurethane Protective Tape 8674 provides a simple, easy method of protecting a surface from corrosion, abrasion and minor impact damage. It can be installed in a minimum amount of time with simple tools. It can be painted or applied over

painted surfaces. Polyurethane Protective Tape 8674 is constructed with a long-aging, solvent resistant, pressure sensitive acrylic adhesive that is protected with an easy release poly liner. This tape is a transparent film and available in 2 liner configuration: Protective Tape 8674 has a single poly liner on the adhesive side. Protective Tape 8674DL has dual liners, one on each side of the tape. The adhesive side has a poly liner, and the liner on the top of the urethane tape is polyester.

W	L	Color	Description	Part No.	Price
1"	12yd	Clear	3M™ 8674 Lead Edge Tape	09-01642	.
1"	36yd	Clear	3M™ 8674 Lead Edge Tape	09-00847	.
2"	12yd	Clear	3M™ 8674 Lead Edge Tape	09-01643	.
2"	36yd	Clear	3M™ 8674 Lead Edge Tape	09-00813	.
3"	12yd	Clear	3M™ 8674 Lead Edge Tape	09-01644	.
3"	36yd	Clear	3M™ 8674 Lead Edge Tape	09-00849	.
4"	12yd	Clear	3M™ 8674 Lead Edge Tape	09-01645	.
4"	36yd	Clear	3M™ 8674 Lead Edge Tape	09-00814	.
6"	36yd	Clear	3M™ 8674 Lead Edge Tape	09-00850	.
1"	12yd	Clear	3M™ 8674DL Lead Edge Tape	09-01646	.
1"	36yd	Clear	3M™ 8674DL Lead Edge Tape	09-00851	.
2"	12yd	Clear	3M™ 8674DL Lead Edge Tape	09-01647	.
3"	12yd	Clear	3M™ 8674DL Lead Edge Tape	09-01648	.
3"	36yd	Clear	3M™ 8674DL Lead Edge Tape	09-00852	.
4"	12yd	Clear	3M™ 8674DL Lead Edge Tape	09-01649	.

AP



3M™ POLYURETHANE PROTECTIVE BOOTS

3M™ Polyurethane Protective Boots SJ8665 are pre-formed and used extensively in private, commercial and military aircraft to fit the complex curvatures of a variety of applications. These boots are designed to help provide long lasting protection of radomes, wing and stabilizer tips, landing gear pods, composite parts, and other portions of aircraft from rain, moisture ingress, UV light, insects, sand, sleet, snow, and most other airborne particle erosion damage. The boots are part of a 3M family of high performance surface protection products available for various aerospace applications worldwide.

Boot Application	3M P/N	Our P/N	Price
Aero Commander			
500-1000, Radome	FP-20	09-00854	.
Shrike, Radome	FP-91	09-00855	.
Aerostar			
601 P Radome	FP-127	09-00856	.
Beechcraft			
Baron Norton Radom (Honeycomb)	FP-55	09-00857	.
Baron Non-Honeycomb (#58-410015-613)	FP-68	09-00858	.
Baron Honeycomb Nose (#58-410017-603)	FP-69	09-00859	.
Beech/Mitsubishi Diamond Radome	FP-84	09-00860	.
Duchess Radome	FP-129	09-00861	.
Duke Radome	FP-179	09-00862	.
90,100,200,1300,1900,Most King Air, 65/A65,70,80, A80,B80,U-8F, U-21A	FP-5	09-00863	.
99	FP-35	09-00864	.
1900& King Air Series Vertical Fairing Dome	FP-173	09-00865	.
Bombardier			
Learjet 23,24,25,Radome (PN2411241-1)	FP-7-1	09-00866	.
Learjet 33, 36 Wing Tip	FP-13-1	09-00867	.
Learjet M-45 Navigational Lens Ass'y	FP-195-1	09-00868	.
Learjet M-45 Radome	FP-174-1	09-00869	.
Learjet 50, 55, 60, (PN5411212-1)	FP-14-1	09-00870	.

Boot Application	3M P/N	Our P/N	Price
Cessna			
208 Wing Mounted Radome	FP-34	09-00871	.
208 Prop Spinner	FP-87	09-00872	.
335,340,340A,401-421			
Radome Long Nose	FP-25	09-00873	.
310K-Q w/Norton Rad, 320, 310R (#4096)	FP-90	09-00875	.
310q w/Norton Radome PN4131	FP-130	09-00876	.
310R w/Norton Radome PN4096	FP-114	09-00877	.
Citation S, I, II, IV, V	FP-29	09-00878	.
Citation II, IV, VII	FP-70	09-00879	.
210 Centurian,182,206,337 w/Wing Pod	FP-126	09-00880	.
425-441 Series Radome	FP-41	09-00881	.
Piper			
Aztec (Turbo) "C" non Coleman/Apache	FP-143	09-00882	.
Aztec E-F Radome	FP-136	09-00884	.
Cheyenne I, PA31P, Mojave, PA31T1/3, etc.	FP-12	09-00885	.
Cheyenne II	FP-4	09-00886	.
Cheyenne III, IV	FP-24	09-00887	.
Navajo (except PA31P)	FP-23	09-00888	.
Seneca	FP-54	09-00889	.

3M™ POLYURETHANE PROTECTION TAPE APPLICATION SOLUTION.

A pre-mixed, water-based solution for applying 3M Polyurethane Protective Tape and Boots. Solution is provided pre-mixed in a ready to use squirt bottles. Allows wide width and contoured performed boots to be easily installed.

P/N 06-00604.....



3M™ TAPE ADHESION PROMOTER 86A & CLOTH

Tape Adhesion Promoter 86A is intended for use in enhancement of 3M Polyurethane Protective Tape adhesion levels to certain types of surfaces. It is most effective when used over polyurethane enamel surfaces.P/N 06-00605



Adhesion Promoter Cloth (Sold Each)P/N 05-03479



3M™ TAPE & RESIDUE REMOVE - Use for removal of polyurethane protective tapes, neoprene rubber and other tape residues; such as carpet tape from interior cabin composite surfaces. 16 Ounce..... P/N 05-02682..... Gallon..... P/N 05-02683.....

FOR OTHER 3M™ PRODUCTS SEE PAGES 345-352

LEADING EDGE TAPE - WINGWALK

LEADING EDGE TAPE



Clear plastic tape with adhesive backing for application to wing and tail leading edges for protection against nicks caused by stones and gravel. 100 Ft. Rolls.

Width	Color	P/N	Price/roll
2"	Clear	09-31610	
3"	Clear	09-31615	
4"	Clear	09-31620	
6"	Clear	09-31625	

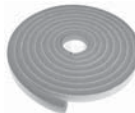
3M™ POLYURETHANE LEADING EDGE TAPE



Designed to help protect light aircraft from the damaging effects of rain, insects, sand, snow and sleet. A tough durable, protective tape for exposed surfaces. 3M #8672 Polyurethane Protective Tape is designed to help protect the leading edges of aircraft wings, struts, and horizontal and vertical stabilizers from airborne particle damage. Versions of this tape are used extensively for surface protection in both military and commercial aircraft applications. May be applied to clean metal or to commonly used aircraft paints over metal or fabric. Not to be used on props, helicopter rotors or balanced surfaces such as elevators or ailerons. Clear in color. Sold in full rolls only.

2" wide..... P/N 09-20140.....
4" wide..... P/N 09-20145.....
6" wide..... P/N 09-20110.....

MD FOAM TAPE



An excellent canopy seal which helps stop vibration. Recommended for use on Quickie. Size: 3/8" thick x 1/2" wide x 10 ft. P/N 05-01100.....

3M™ DUCT TAPE



A general-purpose gray cloth tape with good adhesive qualities. 2" x 60 Yd. Roll..... P/N 09-30900.....

FOR OTHER 3M™ PRODUCTS SEE PAGES 345-352

MASKING TAPE



Armak general or 3M purpose crepe masking tape. Long shelf life.
1/4" x 60 yd. Roll..... P/N 09-20101..... ea.
3/4" x 60 Yd. Roll..... P/N 09-20100..... ea.

CLOTH TAPE



Has many uses in aircraft maintenance work. Strip over sharp corners to protect fabric. Strips under doped fabric will prevent fabric from sticking to parts. Pressure-sensitive adhesive backing. Easily applied, easily removed.

1" x 60 Yd. Roll..... P/N 09-17100.....

GLASS STRAPPING TAPE

A pressure-sensitive transparent acetate film tape reinforced with glass strands. Possesses high tensile strength (375 lbs./inch width) and good impact strength. Especially effective for carton sealing applications.

#RG-2A, 3/4" x 60 Yd. Roll..... P/N 09-31200.....

POLYPROPYLENE TAPE

A pressure-sensitive transparent polypropylene plastic tape for packaging & edging. Outstanding stretchiness/conformability. Waterproof, flame, abrasion and solvent resistant.

#371, 2" x 110 Yd. Roll..... P/N 09-31300.....

RESCUE TAPE



Rescue Tape is a self-fusing silicone repair product with infinite uses. First used by the US Military and now seen at consumer and industrial trade shows across America, this is the most versatile and easy to use emergency repair product available. Just stretch, wrap and Get Rescued! You can repair leaks on plumbing and hoses in a flash, use for electrical wiring or as shrink wrap, wrap tool handles, and much, much more. Incredible 700 PSI Tensile Strength, Insulates 8,000 Volts per layer, Withstands 500° F Degrees of heat! (260° C) ~ Remains flexible to -85° F! (-60° C), Creates a Permanent Air-Tight, Water-Tight Seal in seconds, Resists Fuels, Oils, Acids, Solvents, Salt Water, Road Salt, UV Rays.

Description	Color	Part No.	Price
Rescue Tape Standard Roll 1"x12"x.020"	Red	01-00989	
Rescue Tape Standard Roll 1"x12"x.020"	Black	01-00990	
Rescue Tape Standard Roll 1"x12"x.020"	Clear	01-00991	
Rescue Tape Industrial Roll 2"x36"x.030"	Black	01-00992	
Rescue Tape Industrial Roll 2"x36"x.030"	Red	01-00993	

CLEAR SLIP RESISTANT WING WALK



This patented slip-resistant material is an excellent alternative to black Wing Walk which has been used on aircraft for many years. This material is nearly clear (slightly opaque) and has an adhesive backing that requires heat or 1500 lbs. of pull to remove it from the surface on which it is applied. Imagine how much better a newly painted aircraft can look with a clear material which does not alter the paint design. The material is impervious to chemicals, compounds, and water and will expand and contract with the metal or fabric. Surface roughness of the material is about the same as standard black Wing Walk. Furnished in 16" x 30" sheets.

P/N 09-31810..... Ea.

NON-SKID WING WALK TAPE

Our non-skid adhesive tape is excellent for wing walk applications. The white and clear is perfect for pilots wishing their step areas to blend in, not stand out. This tape meets all applicable Mil Specs and has superior adhesion qualities. Sold by lineal foot.

DISCOUNT: LESS 15% ON 50 FT (Per P/N)

Width	Color	Part No.	Price/Ft.	Width	Color	Part No.	Price/Ft.
6"	Clear	09-31645		12"	White	09-31660	
12"	Clear	09-31650		6"	Black	09-31665	
6"	White	09-31655		12"	Black	09-31670	
24"	Clear	09-31685		24"	White	09-31680	
24"	Black	09-31675					

ULTRA WING WALK COATING



Developed exclusively for Aircraft Door Seals by a major chemical company, this phenomenal new wing walk coating reduces the chance of slipping when climbing up on the wing. Unlike the mundane wing walk coating found on most aircraft, ULTRA WING WALK is a fast-drying polyurethane-based semi-gloss black coating with fine particles of rubber that adds class to any plane. P/N 05-04366.....

RANDOLPH WING WALK COMPOUND



Black Wing Walk Compound is a special grit mixed into a tough black enamel material. Used to form non-slip surfaces on airplane wing walks. Apply with a coarse brush directly over regular finish after thoroughly cleaning the surface, and breaking the glaze if the surface is old. Thin with toluene as required. Conforms to MIL-W-5044. Randolph X-1567.

Qt..... P/N X-1567-QT.....
Gal..... P/N X-1567-1G.....

3M™ SAFETY WALK SHEET



A durable, mineral coated, non-slip fabric for wing walks. Waterproof, weatherproof and unaffected by vibrations, heat, cold, gasoline or oil. Assures safe footing. Pressure-sensitive backing should have additional coating of Pliobond to assure adhesion for aircraft applications. Sold by lineal foot.

12" Width (3M)..... P/N 09-32250..... /Ft.
1/2 pt..... P/N 09-28000.....
1 pt..... P/N 09-28100.....
1 qt..... P/N 09-28200.....

3M™ SAFETY WALK EDGE SEALING COMPOUND

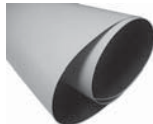


3M Safety Walk Edge Sealing Compound is recommended for sealing around the edges of safety walk installations exposed to outdoor weathering or to excessive amounts of grease, oil or water.

5 oz. Tube..... P/N 09-32300.....

FOR OTHER 3M™ PRODUCTS SEE PAGES 345-352

RAC WING WALK



RAC wing walks are not made from the usual, sandpaper-like material, which can decompose and scratch both the wing surface and your knees. Instead, they use a low profile, synthetic rubber, that combines a comfortable feel with good gripping power. The RAC wing walk comes pre-cut to 26 1/2" x 9 1/2". Installation is easy with the aggressive, self-adhering backing. Each wing walk comes rolled in its own, 4"x4"x10" box and installation instructions are also provided with each box. Black P/N 09-28210..... ea.

PLIOBOND



Pliobond #20 is a viscous, quick setting highly versatile adhesive. Bonds metal; wood, plastics, fabrics; ceramics, glass, vulcanized rubber, paper, leather and concrete. Thin with MEK.

1/2 Pt. Brush Top Can P/N 09-28000.....
Pt. Can..... P/N 09-28100.....
Qt. Can..... P/N 09-28200.....

Discount Less 15% on 12 (Assorted)



GASKETS - O-RINGS - GROMMETS



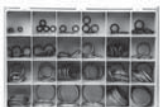
AN900 GASKETS

AN900 (MS35769) annular copper-asbestos gaskets are suitable for temperatures up to 500° F. and pressures up to 200 PSI. Ring width is 1/8"; thickness is 3/32.

AN900 Dash No.	MS35769 Dash No.	I.D. (In.)	Price Each	AN900 Dash No.	MS35769 Dash No.	I.D. (In.)	Price Each
-3	-1	3/16		-17	-24	1-1/16	
-4	-2	1/4		-18	-26	1-1/8	
-5	-5	5/16		-19	-29	1-3/16	
-6	-6	3/8		-20	-31	1-1/4	
-7	-8	7/16		-21	-33	1-5/16	
-8	-9	1/2		-22	-35	1-3/8	
-9	-10	9/16		-23	-38	1-7/16	
-10	-11	5/8		-24	-39	1-1/2	
-11	-13	11/16		-25	-41	1-9/16	
-12	-15	3/4		-26	-42	1-5/8	
-13	-17	13/16		-27	-46	1-11/16	
-14	-18	7/8		-28	-48	1-3/4	
-15	-20	15/16		-29	-51	1-13/16	
-16	-21	1		-30	-52	1-7/8	

Discount Less 20% For 100 Per Size

AN900 GASKET KIT



144 piece kit of copper crush washers in common sizes. Complete with durable plastic case with dividers and size chart. P/N 05-02220.....

AN901 O-RINGS

AN901 tube connection seals are fabricated from type 1100 alum., H14 temper.



AN901 Dash No.	Tube O.D.	Price Each	AN901 Dash No.	Tube O.D.	Price Each
-4A	1/4		-8A	1/2	
-5A	5/16		-10A	5/8	
-6A	3/8		-12A	1-1/16	

Discount Less 20% For 100 Per Size

MS28778 TUBE FITTING BOSS GASKET (FORMERLY AN6290)

Straight-thread tube fitting boss gaskets are used to provide a seal between straight-thread fittings, such as AN815, and ports of instruments with female straight threads instead of the more common female tapered pipe threads.

MS28778 Dash No.	Tube O.D.	Price Ea.	MS28778 Dash No.	Tube O.D.	Price Ea.
-2	1/8		-5	5/16	
-3	3/16		-6	3/8	
-4	1/4				



AN931 ELASTIC GROMMETS (MS35489)

Flexible grommets, made of black synthetic rubber to specification MIL-G-3036. Resistant to hot oil & coolant. Used to protect tubing, wiring and control cables where they pass through bulkheads & firewalls.

PN	MS35489	ID	OD	Hole Size	Thickness	Price
AN931-2-9	-2	1/8	3/4	9/16	3/16	
AN931-2-16	-3	1/8	1-1/4	1	1/4	
AN931-3-5	-4	3/16	7/16	5/16	3/16	
AN931-3-9	-134	3/16	3/4	9/16	3/16	
AN931-4-7	-6	1/4	5/8	7/16	3/16	
AN931-4-12	-7	1/4	1	3/4	1/4	
AN931-4-16	-8	1/4	1-1/4	1	1/4	
AN931-5-9	-9	5/16	13/16	9/16	5/16	
AN931-5-12	-10	5/16	1	3/4	5/16	
AN931-6-10	-11	3/8	7/8	5/8	5/16	
AN931-6-16	-12	3/8	1-1/4	1	1/4	
AN931-7-11	-13	7/16	15/16	11/16	5/16	
AN931-8-13	-14	1/2	1-1/16	13/16	5/16	
AN931-8-20	-15	1/2	1-1/2	1-1/4	1/4	
AN931-9-13	-16	9/16	1-1/16	13/16	5/16	
AN931-10-14	-17	5/8	1-1/8	7/8	5/16	
AN931-10-20	-18	5/8	1-1/2	1-1/4	1/4	
AN931-11-16	-19	11/16	1-5/16	1	3/8	
AN931-12-17	-20	3/4	1-3/8	1-1/16	3/8	
AN931-12-20	-135	3/4	1-5/8	1-1/4	1/4	
AN931-12-23	-21	3/4	1-13/16	1-7/16	3/8	
AN931-14-20	-22	7/8	1-5/8	1-1/4	7/16	
AN931-16-22	-23	1	1-3/4	1-3/8	7/16	
AN931-20-38	-25	1-1/4	2-3/4	2-3/8	7/16	



O-RINGS

O-rings give effective sealing over wide ranges of pressure, temperature, and movement, with the advantage of sealing pressure in both directions and reducing friction and wear on moving parts. The use of O-rings as gaskets or static seals permits metal-to-metal contact and allows almost unlimited pressures under extreme vibration. All O-rings should be lubricated before installation and constant lubrication should be provided for running seals to avoid excessive wear. Avoid sharp edges, threads, and cross-drilled ports over or through which rings must be installed. AN6227B and AN6230B O-rings are manufactured to Spec. MIL-P 25732 for use in hydraulic systems using MIL-O-5606 hydraulic oils. MS28778 O-rings meet Spec. MIL-P-5510A and are suitable for MIL-O-5606 hydraulic fluid at 160° F.

AN6227B Dash#	Dimensions (In.)			Price Each	AN6227B Dash#	Dimensions (In.)			Price Each
	W	I.D.	O.D.			W	I.D.	O.D.	
1	1/16	1/8	1/4		24	1/8	1-5/16	1-9/16	
2	1/16	5/32	9/32		25	1/8	1-3/8	1-5/8	
3	1/16	3/16	5/16		26	1/8	1-7/16	1-11/16	
4	1/16	7/32	11/32		27	1/8	1-1/2	1-3/4	
5	1/16	1/4	3/8		28	3/16	1-1/2	1-7/8	
6	1/16	5/16	7/16		29	3/16	1-5/8	2	
7	1/16	3/8	1/2		30	3/16	1-3/4	2-1/8	
8	3/32	3/8	9/16		31	3/16	1-7/8	2-1/4	
9	3/32	7/16	5/8		32	3/16	2	2-3/8	
10	3/32	1/2	11/16		33	3/16	2-1/8	2-1/2	
11	3/32	9/16	3/4		34	3/16	2-1/4	2-5/8	
12	3/32	5/8	13/16		35	3/16	2-3/8	2-3/4	
13	3/32	11/16	7/8		36	3/16	2-1/2	2-7/8	
14	3/32	3/4	15/16		37	3/16	2-5/8	3	---
15	1/8	3/4	1		38	3/16	2-3/4	3-1/8	
16	1/8	13/16	1-1/16		39	3/16	2-7/8	3-1/4	
17	1/8	7/8	1-1/8		40	3/16	3	3-3/8	
18	1/8	15/16	1-3/16		41	3/16	3-1/8	3-1/2	
19	1/8	1	1-1/4		42	3/16	3-1/4	3-5/8	
20	1/8	1-1/16	1-5/16		43	3/16	3-3/8	3-3/4	
21	1/8	1-1/8	1-3/8		44	3/16	3-1/2	3-7/8	
22	1/8	1-3/16	1-7/16		45	3/16	3-5/8	4	
23	1/8	1-1/4	1-1/2		46	3/16	3-3/4	4-1/8	

AN6230B Dash #	Dimensions (In.)			Price Each	AN6230B Dash #	Dimensions (In.)			Price Each
	W	I.D.	O.D.			W	I.D.	O.D.	
1	1/8	1-5/8	1-7/8		6	1/8	2-1/4	2-1/2	
2	1/8	1-3/4	2		7	1/8	2-3/8	2-5/8	
3	1/8	1-7/8	2-1/8		8	1/8	2-1/2	2-3/4	
4	1/8	2	2-1/4		9	1/8	2-5/8	2-7/8	
5	1/8	2-1/8	2-3/8		10	1/8	2-3/4	3	

See Page 805 for AN/MS O-Ring Equivalent Chart.

AN/MS O-RING KIT



This AN/MS O-Ring Kit includes over 382 O-rings made of Nitrile Buna N 70 duro material. These rings have a temperature range of -6 to 275°F and are for use with petroleum oils and fluids. Size range in kit is 0 through 30.

(O-Ring Set An6227B-1, -30)..... P/N 05-02210.....

AS568A O-RING KIT



- 70 Duro Nitrile
- 382 O rings
- Great kit for the homebuilder
- Sizes: -06 to -32

P/N 13-02804.....

MS29513 FUEL RESISTANT O-RINGS

These MS29513 series O-rings are resistant to fuel and are ideal for applications such as fuel injection connections and primers. A small amount of fuel proof grease applied to these O-rings helps the installation and operation of primers. Not resistant to automotive fuels.

Part Number	Nominal Size			Price Each
	I.D.	O.D.	W	
MS29513-006	1/8"	1/4"	1/16"	
MS29513-007	5/32"	9/32"	1/16"	
MS29513-008	3/16"	5/16"	1/16"	
MS29513-009	7/32"	11/32"	1/16"	
MS29513-010	1/4"	3/8"	1/16"	
MS29513-011	5/16"	7/16"	1/16"	
MS29513-012	3/8"	1/2"	1/16"	
MS29513-110	3/8"	9/16"	3/32"	
MS29513-111	7/16"	5/8"	3/32"	
MS29513-112	1/2"	11/16"	3/32"	
MS29513-113	9/16"	3/4"	3/32"	
MS29513-114	5/8"	13/16"	3/32"	
MS29513-115	11/16"	7/8"	3/32"	
MS29513-116	3/4"	15/16"	3/32"	

TIE RODS - GROMMET EDGING



BRUNTON TIE RODS

These high quality aircraft wires and terminals are manufactured in Scotland by Bruntons Aero Products who first originated streamline wires in 1909. They feature the stronger rolled threads and are available in high polish or satin finish.

Material is 316 high tensile stainless steel. Wires are also available in BSF or metric threads. Special wires with combination streamline and round section commonly used for biplane roll wires or seaplane float installations are available. Wires are manufactured to AN specifications and are 100% proof loaded. Wires ordered with terminal assemblies are supplied assembled. Quality certifications are provided with all orders. Aircraft tie rods carry tensile loads for bracing wings, tail assemblies as well as float installations. They may be ordered separately or with terminal assemblies (AN665 terminal, clevis pin, jam nut, cotter pin). AN specs define thread lengths as well as a fixed difference in length between rod length and pin center length (K). Order pin center lengths ONLY when AN665 terminals are used on both ends of the wire. All other installations must order rod length. Due to fluctuations in international exchange rates, the prices of Brunton tie rods are subject to change. We guarantee the lowest prices and fastest delivery on all Brunton tie rods. Request current pricing. Allow 8-10 weeks for delivery of Brunton tie rods.

STREAMLINE TIE RODS



AN Number	Size & Thread	Diameter Inches	Thread Length (IN.)		K	Minimum Strength Pounds
			RH	LH		
AN671AC-	6-40	.138	1 3/4	1 1/4	1 1/4	1,200
AN673AC-	10-32	.190	1 7/8	1 3/8	1 1/2	2,400
AN674AC-	1/4-28	.250	2 1/8	1 5/8	1 7/8	4,200
AN675AC-	5/16-24	.3125	2 1/4	1 3/4	2 1/8	6,900
AN676AC-	3/8-24	.375	2 3/8	1 5/8	2 1/4	10,000
AN677AC-	7/16-20	.4375	2 5/8	2 1/8	2 1/2	13,700
AN678AC-	1/2-20	.500	2 7/8	2 3/8	2 7/8	18,500
AN679AC-	9/16-18	.5625	3 1/8	2 5/8	3 1/4	24,000
AN680AC-	5/8-18	.625	3 3/8	2 7/8	3 1/2	29,500
AN682AC-	3/4-16	.750	3 3/4	3 1/4	4 3/8	42,000

CALL FOR CURRENT PRICING!

ROUND TIE RODS



AN Number	Size & Thread	Diameter Inches	Thread Length (IN.)		K	Minimum Strength Pounds
			RH	LH		
AN701AC-	6-40	.138	1 3/4	1 1/4	1 1/4	1,000
AN703AC-	10-32	.190	1 7/8	1 3/8	1 1/2	2,100
AN704AC-	1/4-28	.250	2 1/8	1 5/8	1 7/8	3,400
AN705AC-	5/16-24	.3125	2 1/4	1 3/4	2 1/8	6,100
AN706AC-	3/8-24	.375	2 3/8	1 7/8	2 1/4	8,000
AN707AC-	7/16-20	.4375	2 5/8	2 1/8	2 1/2	11,500
AN708AC-	1/2-20	.500	2 7/8	2 3/8	2 7/8	15,500

CALL FOR CURRENT PRICING!

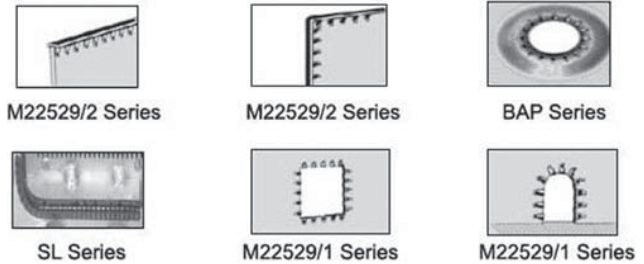
SEALS-IT GROMMET SEALS

Grommet seals have many applications. In race cars they serve to keep unwanted smoke and fumes from entering the driver's area while protecting lines from chafing and abrading on rough surfaces.

In hot rods and custom car applications, they provide the perfect "finishing touch" to all through panel installations. Wiring, fuel and oil lines, air and liquid hoses, and all other lines that make up your rod or custom, can make an otherwise detailed installation look unfinished. Seals-It grommet seals add the well-organized, professional appearance you want. Grommet seals also have many other applications including: marine, commercial equipment, motor homes, etc.

Grommet Seal 1 Hole Series				Grommet Seal 2 Hole Series			
Dia.	Hole	P/N	Price	Dia.	Hole	P/N	Price
1.5"	n/a	05-02493		All Rubber Blank 5-1/4"		05-02510	
2.0"	n/a	05-02494		1-1/2"	2.125	05-02511	
3.0"	n/a	05-02495		2 Hole Blank 5-1/4"		05-02512	
3.0"	.250	05-02496		1.4"	n/a	05-02493	
3.0"	.375	05-02497		3/8"	n/a	05-02494	
3.0"	.500	05-02498		1/2"	n/a	05-02495	
3.0"	.625	05-02499		5/8"	.250	05-02496	
3.0"	.750	05-02501		3/4"	.375	05-02497	
3.0"	.950	05-02502		1"	.500	05-02498	
3.0"	1.180	05-02503		3.0"	.625	05-02499	
4.0"	n/a	05-02504		3.0"	.750	05-02501	
4.0"	1.00	05-02505		3.0"	.950	05-02502	
4.0"	1.80	05-02506		3.0"	1.180	05-02503	
4.5"	1.50	05-02507		4.0"	n/a	05-02504	
4.5"	2.12	05-02508		4.0"	1.00	05-02505	
6.0"	n/a	05-02509		4.0"	1.80	05-02506	
				4.5"	1.50	05-02507	
				4.5"	2.12	05-02508	
				6.0"	n/a	05-02509	
				2 Hole Blank 5-1/4"		05-2519	
				1/4"	2.750	05-02520	
				3/8"	2.750	05-02521	
				1/2"	2.750	05-02522	
				5/8"	2.750	05-02523	
				3/4"	2.750	05-02524	
				1"	2.750	05-02525	
				.700	3.625	05-02526	

SPRING-FAST GROMMET EDGING



Spring-Fast® Composite Grommet Edging covers sharp edges of panels that come in contact with wires and cables, and mechanically locks on indefinitely with finger pressure, in only seconds per foot, a significant time reduction and long-term reliability solution. Eliminates nylon caterpillar plastic grommets and associated toxic solvents, adhesives, ancillary materials and volatile organic compounds. Provides a cushion between sharp metallic edges and an aircraft's wiring, cabling, and tubing. Qualifications: resistance to shock, vibration, salt spray and immersion. Applications: avionics racks, ribs, bulkheads, intercostals, and other airframe structures.

Spring-Fast Grommet Edging is approved by the U.S. Defense Department and FAA per NASM 22529/1 and NASM 22529/2 for all aircraft applications. Meets FAR 25.853 for flammability and Mil Std 1344 for shock & vibration. Spring-Fast is available in 8 different sheet thickness ranges from 0.025 to 0.260 and can be purchased in either 10 piece packs of 12.75" long pieces, or 25 or 100-foot reels. Use Spring-Fast BAP and SL series for flanged lightning holes and three-axis contours. The BAP Series Flexi-Grommet is perfect for roll formed edges and small lightning holes. Where wires routed in the same plain as the sheet metal, the Spring-Fast SL Series is just right and provides a trim characteristic for all edges with or without cabling nearby.

To make installation easier consider these tools. All Spring-Fast series products are easy to fabricate to length utilizing the DTI Shears P/N 05-04446. In addition, for repetitive cutting tasks the PSA backed Mylar Grommet Scale PN 05-04448 mounts on most table top surfaces. For grommet installation in tight or repetitive areas, the Roller installation tool (pictured to the right) PN 05-04449 is just the thing.

Spring-Fast is used in a wide variety of aviation and aerospace applications:

- Lightning Holes
- Seating
- Fuselage
- Tail Sections
- Ferrules
- Electrical Power Centers
- IFE (In-Flight Entertainment)
- Ground Control
- EAU (Electrical Avionic Units)
- APU (Auxiliary Power Units)
- Wing Sections
- Intercostals
- Avionics
- Tactical Satellite Emulators
- Navigation Systems
- Racks
- Bulkheads
- Air Traffic Control
- PSU (Personal Safety Units)

MFG Number	Sheet Thickness	Package Size	Our P/N	Price Ea.
M22529/2-1R	.025-.036	Per Foot	05-00673	
M22529/2-1R-10PK	.025-.036	10pcs/12.75"	05-00674	
M22529/2-2R	.036-.063	Per Foot	05-00675	
M22529/2-2R-10PK	.036-.063	10pcs/12.75"	05-00676	
M22529/2-3R	.059-.074	Per Foot	05-00677	
M22529/2-3R-10PK	.059-.074	10pcs/12.75"	05-00678	
M22529/2-4R	.070-.093	Per Foot	05-00679	
M22529/2-4R-10PK	.070-.093	10pcs/12.75"	05-00680	
M22529/2-5R	.090-.111	Per Foot	05-00681	
M22529/2-5R-10PK	.090-.111	10pcs/12.75"	05-00682	
M22529/2-6R	.105-.134	Per Foot	05-00683	
M22529/2-6R-10PK	.105-.134	10pcs/12.75"	05-00684	
M22529/2-7R	.178-.198	Per Foot	05-00685	
M22529/2-7R-10PK	.178-.198	10pcs/12.75"	05-00687	
M22529/2-8R	.240-.260	Per Foot	05-00688	
M22529/2-8R-10PK	.240-.260	10pcs/12.75"	05-00690	

Accessories	Part No.	Price
DTI Shears 830 PS	05-04446	
Grommet Scale 860GSB	05-04448	
Roller Installation Tool 840R	05-04449	

25ft. rolls are 20% discount off per foot prices



SPECIAL SPRING-FAST FULL BYPASS CUT-OFF SHEARS

P/N 05-00689.....

AP

CONTROL SYSTEM SUPPLIES



AN100 CABLE THIMBLES

Made of cadmium plated steel or stainless steel per procurement specification MIL T-5677. Used to form sturdy eye end on control cable. Form cable around thimble and secure with Nicopress sleeve.

Cadmium Plated Steel Thimbles			Cable Size	Stainless Steel Thimbles		
AN Part No.	Price Each	Price Per 100		AN Part No.	Price Each	Price Per 100
AN100-3			1/16"	AN100C-3		
AN100-4			3/32", 1/8"	AN100C-4		
AN100-5			5/32"	AN100C-5		
AN100-6			3/16"	AN100C-6		
AN100-7	---	---	7/32"	AN100C-7	---	---
AN100-8			1/4"	AN100C-8		
AN100-12			3/8"	AN100C-12		



AN111 CABLE BUSHINGS

Made of cadmium plated steel. Used in same manner as AN100 cable thimble.

Dash No.	Cable Size	Price Ea.
-3	1/16", 3/32"	
-4	1/8"	
-5	5/32"	
-6	3/16"	

Less 20% for 100



AN115 CABLE SHACKLES

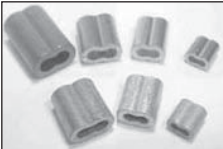
Made of cadmium plated forged steel per specification MIL-S-5675.

AN 115 Dash No.	Shackle Strength Lbs.	Cable Size	Used With		Price Each
			Thimble	Clevis Pin	
-8	800	1/16"	AN100-3	AN393-9	
-21*	2100	3/32", 1/8"	AN100-4	AN393-11	
-32	3200	5/32"	AN100-5	AN394-15	
-46	4600	3/16"	AN100-6	AN395-17	
-61	6100	7/32"	AN100-7	AN396-19	

*Replaces AN115 - 16.

DISCOUNT: Less 10% for 12, 15% for 25, 20% for 50 or more. May be assorted.

WIRE ROPE SLEEVES (MS51844)



Oval shaped copper sleeves used in making eye or lap splices in flexible cable. Sleeves are slipped over the two strands of cable to be fastened and are then compressed with special Nicopress hand squeezers. Provides a bond that is even stronger than a standard splice. "18" Series sleeves are plain copper and "28" Series sleeves are zinc plated.

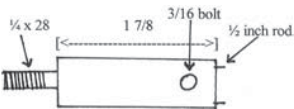
Part No	Nicopress Ref.	Cable Dia.	Matl./Finish	Price	
				Each	100
MS51844-42	18-1-C	1/16"	Copper/Plain		
MS51844-43	18-2-G	3/32"	Copper/Plain		
MS51844-44	18-3-M	1/8"	Copper/Plain		
MS51844-45	18-4-P	5/32"	Copper/Plain		
MS51844-46	18-6-X	3/16"	Copper/Plain		
MS51844-22	28-1-C	1/16"	Copper/Zinc		
MS51844-23	28-2-G	3/32"	Copper/Zinc		
MS51844-24	28-3-M	1/8"	Copper/Zinc		
MS51844-25	28-4-P	5/32"	Copper/Zinc		
MS51844-26	28-6-X	3/16"	Copper/Zinc		

STOP SLEEVES

These copper stop sleeves are used on the ends of bare cables.

Cable Dia.	Model No.	Part No.	Price Ea.
1/16"	ST2-2	04-00899	
3/32"	ST2-3	04-00901	
1/8"	ST2-4	04-00902	
5/32"	ST2-5	04-00903	

ROD END SWIVEL BEARING



Permanently lubricated in-line swivel for rod end bearing or clevis fork. For applications where rod needs to swivel in a rotary motion to reduce binding while maintaining a straight line to control or stabilizer rod. For use on 1/2" rod and will fit 1/4" x 28 female rod end or clevis fork.

P/N 05-01021.....



P/N MS27976-1

AN481 CLEVIS FORK ROD ENDS (MS27976)

Manufactured of 1035 or 1042 carbon steel and cadmium plated. Minimum tensile strength 65,000 PSI. For welding to steel tubing or riveting to aluminum tubing. All sizes fit inside of 3/8" O.D. x .035 wall steel tubing.

Current Part No.	Old Part No.	Clevis Pin Hole Dia.	Fork Width		Price Each
			Overall	Inside	
MS27976-1	AN481-1P	1/4"	1/2"	17/64"	
MS27976-2	AN481-2P	1/4"	5/16"	9/64"	
MS27976-3	AN481-3P	3/16"	1/2"	17/64"	
MS27976-4	AN481-4P	3/16"	5/16"	9/64"	



AN486 THREADED CLEVIS FORK ROD ENDS (MS27975)

These rods ends are machined from 1035 or 1042 carbon steel and cadmium plated. Minimum tensile strength 65,000 PSI. They are internally threaded 1/4"-28 to fit threaded 1/4" dia. rod. Used for engine controls. For experimental aircraft only.

Current Part No.	Old Part No.	Clevis Pin Hole Dia.	Fork Width		Price Each
			Overall	Inside	
MS27975-1	AN486-1P	1/4"	1/2"	17/64"	
MS27975-2	AN486-2P	1/4"	5/16"	9/64"	
MS27975-3	AN486-3P	3/16"	1/2"	17/64"	
MS27975-4	AN486-4P	3/16"	5/16"	9/64"	
AN486-1032	Special	3/16"	7/16"	3/16"	

AN490 THREADED ROD ENDS

Manufactured of 4130 steel, heat-treated and cadmium plated. Minimum tensile strength 125,000 PSI. For welding to steel tubing or riveting to aluminum tubing.



PN AN490HT-16P

Part Number	Thread Size	Used With Tube Size	Price Each
AN490HT5P	1/4-28	5/16"x.035	
AN490HT6P	1/4-28	3/8"x.035	
AN490HT8P	1/4-28	1/2"x.035	
AN490HT10P	5/16-24	5/8"x.035	
AN490HT11P	5/16-24	3/4"x.035	
AN490HT14P	3/8-24	3/4" x .035	
AN490HT15P	5/16-24	1/2"x.058	
AN490HT16P	3/8-24	1/2"x.058	



AN665 THREADED CLEVIS TIE ROD TERMINALS

These cadmium plated steel terminals are manufactured to "AN" specifications, with either right-hand or left-hand threads. Example: P/N AN665-10L has a 6-40 lefthand thread. AN665-34R has a 1/4-28 right-hand thread. Order terminal "assemblies" if locknut, clevis pin, and cotter pin are required along with terminal. Otherwise, only terminals are supplied.

Dash No.	Right Hand	Left Hand	Thrd. Size	Fork Pin Hole Dia.	Inside Width	Sgth. (Lbs.)	AN665 Rt. only Price Ea.	AN665 Lt. only Price Ea.
-10R	-10L	6-40	.190"	.109"	1200			
-21R	-21L	10-32	.190"	.150"	2400			
-34R	-34L	1/4-28	.250"	.203"	4200			
-46R	-46L	5/16-24	.313"	.203"	4600			
-61R	-61L	5/16-24	.375"	.203"	6900			
-80R	-80L	3/8-24	.375"	.266"	10000			

AN665 TERMINAL ASSEMBLIES

These terminal assemblies include the AN665 terminals plus the appropriate lock nut, clevis pin, and cotter pin.

Description	Part No.	Price	Description	Part No.	Price
AN665-10R	05-02300		AN665-10L	05-02400	
AN665-21R	05-02500		AN665-21L	05-02600	
AN665-34R	05-02700		AN665-34L	05-02800	
AN665-46R	05-02900		AN665-46L	05-03000	
AN665-61R	05-03100		AN665-61L	05-03200	
AN665-80R	05-03300		AN665-80L	05-03400	

CABLE TERMINALS

The finest and best means of attaching fittings to cable. Properly swaged to the cable, these terminals will maintain the minimum rated breaking strength of that cable. These terminals are made of stainless steel alloy having the best swaging and corrosion resistant properties and have a polished finish.



**SA110
PLAIN BALL**

Dash No.	Cable Dia.	Sphere Dia.	Breaking Strength Lbs.	Price
2	1/16	.188	380	
3	3/32	.250	730	
4	1/8	.315	1050	



**MS20664C
BALL & SINGLE SHANK**

Dash No.	Cable Dia.	Sphere Dia. after Swage	Breaking Strength Lbs.	Price
2	1/16	.190	480	
3	3/32	.253	920	
4	1/8	.315	2000	
5	5/32	.379	2800	
6	3/16	.442	4200	



**MS20663C
BALL & DOUBLE SHANK**

Dash No.	Cable Dia.	Sphere Dia. after Swage	Breaking Strength Lbs.	Price
2	1/16	.190	480	
3	3/32	.253	920	
4	1/8	.315	2000	
5	5/32	.379	2800	
6	3/16	.442	4200	

MS20667 FORK END



PN-MS20667-2

Dash No.	Cable Dia.	Breaking Strength Lbs.	Pin Hole Dia.	Fork Width "G"	Price
2	1/16	480	.190	.093	
3	3/32	920	.190	.108	
4	1/8	2000	.190	.195	
5	5/32	2800	.250	.202	
6	3/16	4200	.313	.260	

MS20668 EYE END



Dash No.	Cable Dia.	Breaking Strength Lbs.	Pin Hole Dia.	Eye End Width "J"	Price
2	1/16	480	.190	.088	
3	3/32	920	.190	.103	
4	1/8	2000	.190	.190	
5	5/32	2800	.250	.197	
6	3/16	4200	.313	.255	

MS21259 STUD END



Dash No.	Cable Dia.	Breaking Strength Lbs.	Thread Size NF-3	Price
2	1/16	480	6-40	
3	3/32	920	10-32	
4	1/8	2000	1/4-28	
5	5/32	2800	1/4-28	
6	3/16	4200	5/16-24	

Add "RH" or "LH" after dash numbers for right or left hand threads

MS21260 TURNBUCKLE END



S=Short
L=Long

Dash No. Short	Price Each	Dash No. Long	Price Each	Cable Dia.	Thread Size	Min. Breaking Strength (lbs)
-S2RH		-L2RH		1/16"	6-40	480
-S2LH		-L2LH				
-S3RH		-L3RH		3/32"	10-32	920
-S3LH		-L3LH				
-S4RH		-L4RH		1/8"	1/4-28	2000
-S4LH		-L4LH				
-S5RH		-L5RH		5/32"	1/4-28	2800
-S5LH		-L5LH				
-S6RH		-L6RH		3/16"	5/16-24	4200
-S6LH		-L6LH				



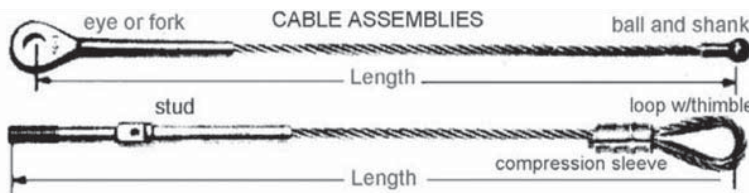
**SA361 EYE END &
SA362 FORK END**

Part No.	Cable	Hole Dia	Width	Price
SA361-2	1/16	.188	.088	
SA361-3	3/32	.188	.103	
SA361-4	1/8	.188	.190	
SA362-2	1/16	.188	.093	
SA362-3	3/32	.188	.108	
SA362-4	1/8	.188	.195	

Discounts:

All Items This Section:
Less 10% For 12 Ea. 15% On 50 Or More (Per Size)

CUSTOM-MADE CABLE ASSEMBLIES



Measure eye and fork terminals from center of pin holes. Measure ball fittings from center of ball. Measure stud terminals from end of terminal. Measure loop with thimble from surface of thimble.

**SEE "TOOLS" SECTION FOR KEARNEY PORTABLE SWAGER.
CUSTOM-MADE CABLE ASSEMBLIES ARE SPECIAL ORDER AND NON-RETURNABLE**

The terminals featured on this page must be installed with a rotary swaging tool, which is too costly for purchase by a homebuilder or small shop. We offer swaging service and custom-made cable assemblies in cable sizes of 1/16" to 5/32" diameter.

Select the cable fittings of your choice, specify cable size, cable construction, stainless steel or galvanized cable and length. Measure length of cable assembly as shown in the illustration. We will furnish complete cable assembly ready for installation. A simple drawing of the assembly required is appreciated and will expedite shipment.

The cost of custom-made cable assembly is base charge (up to 10 ft. - \$10.00, 10 to 20 ft. - \$15.00, over 20 ft. - \$20.00), plus the cost of selected fittings and cable plus swages at \$6.95 each. For cable assemblies requiring a third swage, such as an assembly with two end fittings plus a ball swaged at some point on the cable, add \$6.95 plus cost of the ball.

Example: The cost of a 10 ft. long cable assembly using 1/8" 7 x 19 galvanized cable, an MS20667-4 fork end and an MS21259-4RH stud end is 10 x . /ft. for cable plus . and . for the fittings plus \$6.95 per swage + \$10.00 setup = \$41.15 total cost. For added MS20663C-4 ball add \$6.95 for swage plus . for ball.

Swaging Service - For cable assemblies requiring swaged fitting on one end only. \$6.95/swage plus cost of cable, fittings, and the base charges as described above.

Nicopress Swages - Performed for \$4.95/Swage plus cost of Nicopress sleeve and the base charges described above.

TOLERANCE - ±1/8"

AP

CABLE – FORKS – PUSHROD FITTINGS

CONTROL CABLE

7 x 7 7 x 19 1 x 19



Cable Dia. (In.)	Con-Struc-tion	Breaking Strength (Lbs.)		Part Number		Price/Ft.	
		Galva-nized	Stain-less	Galva-nized	Stain-less	Galva-nized	Stain-less
1/16	7x7	480	480	05-03600	05-03500		
3/32	7x7	920	920	05-03800	05-03700		
3/32	7x19	1000	920	05-04000	05-03900		
1/8	1x19	2100	2100	05-04200	05-04100		
1/8	7x19	2000	1760	05-04400	05-04300		
5/32	1x19	3300	3300	05-04600	05-04500		
5/32	7x19	2800	2400	05-04800	05-04700		
3/16	7x19	4200	3700	05-05000	05-04900		
1/4	7x19	7000	6400	05-05200	05-05100		

CABLE SPECIFICATIONS

Galvanized - MIL-DTL-83420 replaces MIL-2-83420
Stainless - MIL-DTL-83420 replaces both Galvanized & Stainless

CONTROL CABLE SPECIFICATIONS

• **7 X 7 FLEXIBLE CONTROL CABLE** - Has seven strands of seven wires each. Used for control purposes where extreme flexibility is not required but where abrasion is a factor.

• **7 X 19 FLEXIBLE CONTROL CABLE** - Has seven strands of 19 wires each. Its greater metallic area makes it stronger than 7 x 7 cable. Because of its fine wires the best service is obtained where abrasion is not too severe. These same wires, however, make it flexible to meet severe bending.

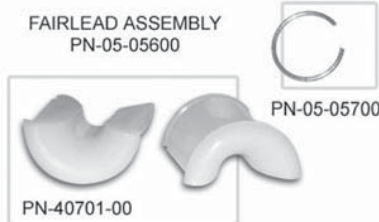
• **1 X 19 NON-FLEXIBLE CABLE** - Is one strand of 19 wires. It has more metallic area than 7 x 7 or 7 x 19 constructions which makes it the strongest but also the least flexible. 1 x 19 is generally used for bracing purposes, drag and anti-drag wires. It is often used with swage type terminals.

• The major difference between aircraft and commercial cable is the lubrication applied to aircraft cable, which provides substantially better fatigue life than non-lubricated commercial cable. Aircraft cable requires extensive extra testing, documentation, certification to meet military specifications. Aircraft Spruce obtains its aircraft cable from domestic sources and the cable is certified to MIL Spec MIL, W-83420 and QPL Certified.

AP

CABLE FAIRLEADS

Nylon construction for external use. Two halves with retaining clip.



Less 15% for 12 or more
3/4" O.D. x 3/4" L..... P/N 05-05500 Set
3/4" O.D. x 1" L..... P/N 05-05600 Set
Clips Only..... P/N 05-05700 Ea.

SEE TOOL SECTION FOR CABLE TENSIOMETERS

WING STRUT ADJUSTMENT FORK & BARREL SETS



Forks have 7/16 x 20 male threads and mate with an internally threaded steel barrel which is welded into strut allowing adjustment as required. Barrel has 7/16 x 20 undersize thread to permit retaping after welding. All forks have rolled threads and 100% magnafluxed. FAA Approved.

Barrels..... P/N 05-05900 ea
Forks w/ 5/16" dia. hole (equivalent to Piper P/N 13770-00)..... ea
P/N 05-06000 ea
Use AN25-14 clevis bolt..... ea
Forks with 3/8" dia. hole (equivalent to Piper P/N 14481-00)..... ea
P/N 05-06100 ea

WIRE SWIVELS



OD	ID	Length	Conduit	Part No.
.437 x .312	.225 x .100	3/4	3/16	2361

P/N 06-01282.....

CONDUIT RETAINER - STRAIGHT



OD	ID	Length	Conduit	Part No.
5/16-24	.260	2	7/32	2386

P/N 06-01281.....

ASSORTED SPRINGS



Spring	Part No.	Application	Spring Type	Length	Price ea.
Century Spring #186-C	01-27200	VariEze	Tension	2"	
Rudder Return Spring	01-27300	"	Tension	4 1/2"	
Landing Brake	01-27600	VE/Long-EZ	Tension	10"	
Tension Spring*	01-37500	"	Tension	30"	
Landing Brake	01-27900	Cozy	Tension	12 1/2"	

FLIGHT CONTROL CABLES



These FAA-PMA approved cable assemblies are available in stainless or galvanized cable and are constructed of highest quality U.S. made materials. All components are fully traceable and each assembly is load tested and length stabilized. Over 2000 cable assemblies in stock. Custom cable assemblies can be fabricated to your specification.

- **AS0510105** Series for Cessna 170, 172, 180, 182, and 185
- **AS0400107** Series for Cessna 150, and 152
- **AS1660300** Series for Cessna 188
- **AS62701** Series for Piper PA28, PA32, and PA34
- **ACA** Series for Schweizer G-164

Call the Cessna/Piper parts specialist at 1-877-4SPRUCE with your Cessna or Piper cable assembly part number for pricing or for assistance in determining the part number you require for your aircraft.

PUSHROD THREADED END FITTING



Fits 5/8" diameter pushrods. 1/4 - 28 threaded hole. Secure to aluminum pushrod with two cross riveted or bolted fasteners. Made from 6061-T6 5/8" diameter x 1-5/8" long rod. Two sizes available.
Fits: 5/8" x .049" tube..... P/N 05-01140
Fits: 5/8" x .058" tube..... P/N 05-01150

PUSHROD BALL ROLLER GUIDES



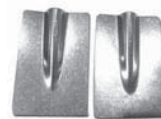
Provides almost frictionless push - pull and rotary movement of aileron and elevator push rods. Design is similar to that used in German sailplanes. Unit contains four nylon roller balls and provides 3.5" pushrod travel. Aluminum case size, 1.25" x 3.0" long. Fits 5/8" diameter pushrods..... P/N 05-01110 ea.

PUSHROD FORKED END FITTING



Fits 5/8" diameter pushrods. 3/16" pivot hole with .090" wide slot for bellcrank. Secure to aluminum pushrod with two cross riveted or bolted fasteners. Made from 6061-T6 5/8" diameter x 2-3/8" long rod. Two sizes available.
Fits: 5/8" x .049" tube..... P/N 05-01120..... ea.
Fits: 5/8" x .058" tube..... P/N 05-01130..... ea.

RUDDER CABLE FAIRING SETS FOR RV'S



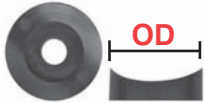
Pre-formed .025" thick aluminum fairings for rudder cable exit on RV fuselages. (None are supplied with the RV kits). Set contains (2) identical fairings - 1 for use on cables and 1 spare (could be used on elevator trim). Each will require some trimming to fit before riveting. P/N 12-00635.....

BOWDEN CABLE INNER WIRE



Stainless stainless steel wire .078" diameter. Sold by the foot. P/N 05-15510.....

SADDLES - FITTINGS - TANGS - BRACKETS



SUPER-TOUGH STANDOFF SADDLES - TYPE II

P/N	Max Air #	Fits	O.D.	Hole	HT	Price
05-02052	S01-14	1.000	1.000	.266	.188	
05-02055	S01-24	1.500	1.000	.266	.188	
05-02056	S01-84	1.625	1.000	.266	.188	
04-00922	S01-44	1.750	1.000	.266	.188	
05-02060	S01-74	1.875	1.000	.266	.188	
05-02062	S01-94	2.000	1.000	.266	.188	
05-02064	S04-94	2.000	1.000	.266	.440	



ULTRALIGHT SADDLES

SUPER-TOUGH SADDLES - TYPE I

P/N	Max Air #	Fits	OD	Hole	HT	Price
S4436	---	.875	0.875	.260	.125	
S4352	---	1.00	1.00	.260	.125	
S4350	---	1.00	1.00	.340	.125	
S4353	---	1.00	1.00	.260	.250	
S4326	---	1.125	1.00	.260	.125	

SUPER-TOUGH SADDLES - TYPE II

P/N	Max Air #	Fits	OD	Hole	HT	Each
S4451	S-24	1.500	1.375	.266	.188	
S4453	S-84	1.625	1.375	.266	.188	
S4456	S-44	1.750	1.375	.266	.188	
S4459	S-74	1.875	1.375	.266	.188	
S4460	S-74	1.875	1.375	.320	.188	
S4462	S-94	2.000	1.375	.266	.188	
S4482	S-94	1.750	1.000	.320	.188	

ALUMINUM SADDLES

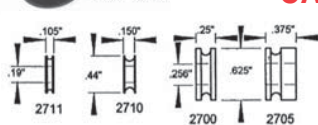
P/N-Type	Our P/N	Fits	Base OD	Hole	Height	Price
4300/I	04-00923	1.00	1.00	.266	.125	
4327/I	04-00924	1.13	1.00	.266	.125	
4328/I	04-00925	1.25	1.00	.266	.125	
4310/II	04-00926	1.50	1.00	.266	.250	
4315/I	04-00927	1.63	1.00	.266	.125	
4320/III	04-00928	1.63	1.50	.378	.125	
4325/I	04-00929	1.88	1.00	.266	.125	
4329/I	04-00930	2.00	1.00	.266	.125	

TUBE CONNECTORS - NYLON



Fits 1 x .049 Tube P/N 05-02096
 Fits 3/4 x .049 Tube P/N 05-02095
 Fits 1 x .049 (Maxair TC-1) P/N 05-02097

CABLE FITTINGS



1/16" Cable, Steel, AN111-3
 P/N CF2710
 3/32" Cable, Aluminum
 P/N CF2700
 3/32" Cable, Aluminum
 P/N CF2705
 1/16" Cable, Stainless, AN111C-3 ... P/N CF2710S

REAR SPAR CONTOUR FITTING

Maxair#WT262, Contour
 P/N 05-01936



POLY TIP RIB END FITTING

Maxair#PT-1
 Poly Tip P/N 05-01932

THREADED INSERTS

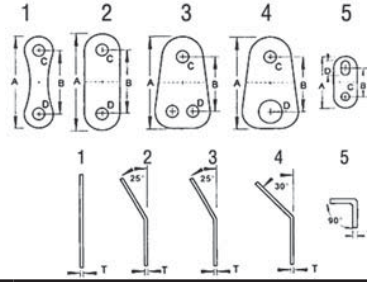
Inserts into tube connector (1" x .049 wall). 7/16" dia. Cross hole
 3/16" Cad2 Type 2 Yellow Chromate. P/N 05-02071

NYLON WASHERS

Model	P/N	O.D.	I.D.	Tkns	Each
NW2061	05-01971	1.000	.256	.125	
NW2059	05-01970	.875	.256	.031	
NW2045	05-01968	.875	.256	.062	
NW1540	05-01967	.440	.190	.062	
NWPW-3	05-01972	.625	.190	.062	
NWPW-4	05-01973	.625	.250	.062	

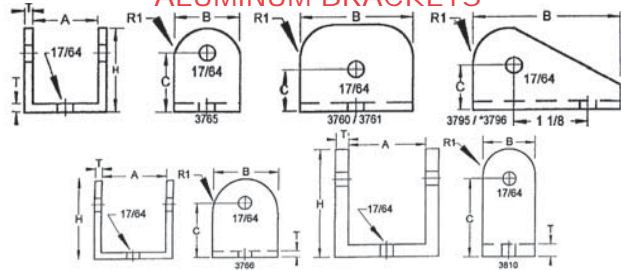
TANGS

Made of 304 stainless steel. All measurements are in inches.



No.	Maxair	Description	T	A	B	C	D	Part No.	Price
1	T12-HT4	Figure 8	14G	2.0	1.38	.26	.26	05-02076	
	--	2-Hole Flat	16G	2.0	1.25	.26	.26	05-02072	
2	T0-FT	2-Hole Flat	13G	2.0	1.25	.26	.26	05-02073	
	--	2-Hole Bent	13G	2.0	1.24	.26	.26	05-02074	
	--	2-Hole Bent	12G	2.0	1.24	.26	.26	05-02075	
3	T11-DFT	3-Hole Flat	14G	1.91	1.09	.26	.26	05-02077	
	--	3-Hole Flat	12G	1.91	1.09	.32	.26	05-02078	
	--	3-Hole Bent	14G	1.86	1.04	.26	.26	05-02079	
	--	3-Hole Bent	12G	1.86	1.04	.32	.26	05-02080	
4	--	Anchor Tang	14G	1.91	1.19	.26	.50	05-02081	
5	--	SS EYE Bent	13G	1.13	.563	.188	--	05-04371	

ALUMINUM BRACKETS



Model	Part No.	A	B	C	H	T	R1	ALLOY	Each
B3772	05-01930	.500	.750	.500	.750	.125	---	6061-T6	
B3765	05-01928	1.000	1.000	.875	1.250	.125	.500	6063-T5	
B3760	05-01926	1.000	1.750	.625	1.250	.125	.500	6063-T5	
B3761	05-01927	1.000	1.750	.906	1.250	.125	.750	6063-T5	
B3795	---	1.000	2.250	.670	1.250	.125	.500	6063-T5	--
B3766	05-01929	1.250	1.250	1.062	1.500	.125	.750	6063-T5	
B3796	---	1.250	2.375	.875	1.500	.125	.500	6063-T5	--
B3810	05-01931	1.500	1.000	1.500	2.000	.250	.500	6061-T6	



STAINLESS STEEL BRACKETS

Fits	Model No.	Part No.	Price
1.000" Tub	B3740	05-01922	
1.125" Tube	B3742	05-01923	
Fits 1.250" Tube	B3744	05-01924	
Fits 1.375" Tube	B3746	05-01925	



PLASTIC ID TUBE CAPS

Model	Part No.	Fits Tube Size	Maxair	Each
TC4116	05-02093	1-1/2 x .083	---	
TC4115	05-02092	1-1/2 x .049	EC-6	
TC4100	05-02088	1-1/8 x .058	EC-4	
TC4080	04-00158	3/4" universal	14-209A	
TC4095	05-02084	1 x .083	EC-3	
TC4096	05-02085	1 x .058	EC-1	
TC4098	05-02087	1 x .049	EC-1	
TC4092	05-02083	7/8 x .049	EC-78	
TC4090	05-02082	5/8 x .058	---	
TC4097	05-02086	1 x .065	EC-2	
TC4106	05-02089	1-5/8 x .049	EC-7	
TC4110	05-02090	1-3/4 x .049	EC-8	
TC4112	05-02091	2 x .049	EC-10	



CONTROL CABLE FAIRINGS

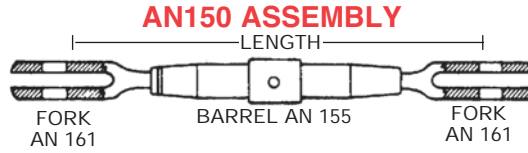
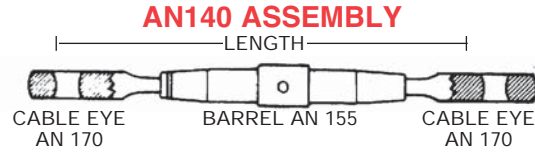
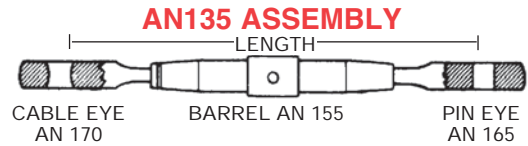
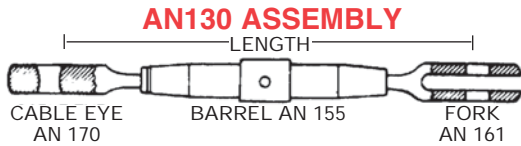
Injection molded ABS plastic fairings used to cover hole in airframe where control cables emerge such as the rudder cables at the rear of the fuselage. May be installed on any airframe surface but is most normally used on fabric covered aircraft where they are bonded on with fabric cement and covered with a fabric patch.
 P/N 05-05750 pair

AP

TURNBUCKLE COMPONENTS

TURNBUCKLES COMPLETE ASSEMBLIES

Complete turnbuckle assemblies consist of a brass barrel and two steel ends, one with right-hand thread and the other with left-hand thread. Order by proper AN number and add dash number and a letter to indicate length and strength required.



AN 146 Assembly consists of 1 - AN 155 barrel, 1-AN161 Fork and 1 MS21260 Turnbuckle End.

Dash No.	LENGTH (inches)*				Strength (pounds)	PRICE (complete assembly)**			
	AN130	AN135	AN140	AN150		AN130	AN135	AN140	AN150
-8S	4-1/2	4-1/2	4-1/2	4-1/2	800				
-16S	4-1/2	4-1/2	4-1/2	4-1/2	1600				
-16L	8	8	8	8	1600				
-22S	4-17/32	4-17/32	4-1/2	4-17/32	2200				
-22L	8-1/32	8-1/32	8	8-1/32	2200				
-32S	4-19/32	4-19/32	4-1/2	4-19/32	3200				
-32L	8-7/64	8-7/64	8	8-7/64	3200				
-46S	4-21/32	4-21/32	4-1/2	4-21/32	4600				
-46L	8-5/32	8-5/32	8	8-5/32	4600				
-61L	8-9/32	8-9/32	8	8-9/32	6100				
-80L	8-5/16	8-5/16	8	8-5/16	8000	---	---	---	

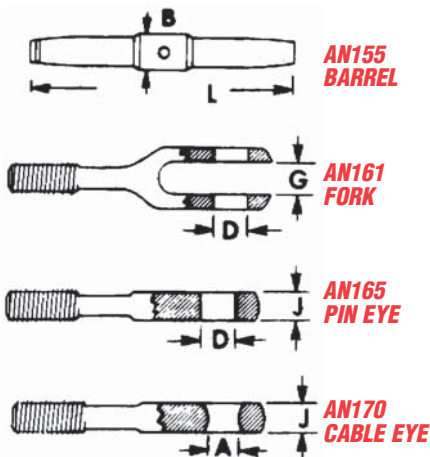
*Length measured with threads flush with ends of barrel.

**Less 10% for 6 or more assemblies, 15% for 12 or more assemblies. May be assorted.

AP

TURNBUCKLE PARTS DIMENSIONS

The "R" or "L" following the dash number designates "right" or "Left." The "S" or "L" (2nd letter following dash number) indicates "short" or "long." AN 161 Fork and AN 170 Cable Eye are available with either right or left-hand thread.



Dash No.	Thread Size	AN 155 Barrel		AN 161 Fork		AN 165 Pin Eye		AN170 Cable Eye	
		"L"	"B"	"G"	"D"	"J"	"D"	"J"	"A"
-8S	6-40	2-1/4	.250	.109	.188	.125	.188	.125	.188
-16S	10-32	2-1/4	.344	.156	.188	.1625	.188	.188	.219
-16L	10-32	4	.344	.156	.188	.1625	.188	.188	.219
-22S	1/4-28	---	---	.187	.188	.188	.188	.219	.281
-22L	1/4-28	---	---	.187	.188	.188	.188	.219	.281
-32S	1/4-28	2-1/4	.438	.218	.250	.219	.250	.219	.281
-32L	1/4-28	4	.438	.218	.250	.219	.250	.219	.281
-46S	5/16-24	2-1/4	.500	.250	.313	.281	.313	.281	.313
-46L	5/16-24	4	.500	.250	.313	.281	.313	.281	.313
-61L	3/8-24	---	---	.270	.375	.281	.375	.281	.344
-80L	3/8-24	4	.625	.312	.375	.328	.375	.328	.375

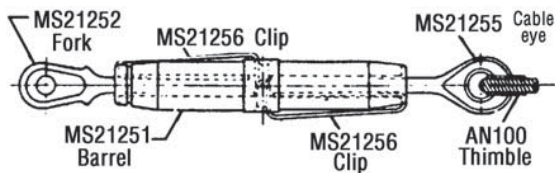
TURNBUCKLE PARTS PRICES

AN155 Dash No.	Barrel Price Each	TURNBUCKLE ENDS			
		Dash No.	Price Each		
			AN 161	AN 165	AN 170
-8S		-8RS			
-8S		-8LS			
-16S		-16RS			
-16S		-16LS			
-16L		-16RL			
-16L		16LL			
		-22RS			
		-22LS			
		-22RL			
		-22LL			

AN155 Dash No.	Barrel Price Each	TURNBUCKLE ENDS			
		Dash No.	Price Each		
			AN 161	AN 165	AN 170
-32S		-32RS			
		-32LS			
-32L		-32RL			
		-32LL			
-46S		-46RS			
		-46LS			
-46L		-46RL			---
		-46LL			---
-61L	Use -80L	-61RL			
6.95		-61LL			
-80L		-80RL			---
		-80LL			---

TURNBUCKLES – SAFETY WIRE

MS CLIP-LOCKING TURNBUCKLE ASSEMBLIES



Clip-Locking Turnbuckles utilize 2 locking clips instead of lock-wire for safety. The turnbuckle barrel and terminals are slotted lengthwise to accommodate the locking clips. After the proper cable tension is reached the barrel slots are aligned with the terminal slots and the clips are inserted. The curved ends of the locking clips expand and latch in the vertical slot in the center of the barrel. Build up MS turnbuckle assemblies, similar to the AN assemblies listed on the preceding page, by selecting a turnbuckle barrel, 2 end fittings and 2 clips from the components listed in the Table below. The price of the complete assembly is the sum of the prices shown for the components. Example: An MS turnbuckle assembly for 3/32" dia. cable, with fork end and pin eye consists of:

- 1 MS21251-B3S Barrel.....
- 1 MS21252-3LS Fork End.....
- 1 MS21254-3RS Pin Eye End.....
- 2 MS21256-1 Clips...../ea.

Less 10% for 6 or more complete assemblies,
Less 15% for 12 or more complete assemblies.

Turnbuckle Component	Part No.	Cable Dia.	Thread Size	Min. Breaking Strength(lbs)	Price Each
Barrel (Supercedes AN155)	MS21251-B2S	1/16"	6-40	800	
	-B3S	3/32"	10-32	1600	
	-B5S	1/8", 5/32"	1/4-28	3200	
Fork End (Supercedes AN161)	MS21252-2RS	1/16"	6-40	800	
	-2LS				
	-3RS	3/32"	10-32	1600	
	-3LS				
	-5RS	1/8", 5/32"	1/4-28	3200	
Pin Eye End (Supercedes AN165)	MS21254-2RS	1/16"	6-40	800	
	-2LS				
	-3RS	3/32"	10-32	1600	
	-3LS				
Cable Eye (Supercedes AN170)	MS21255-2RS	1/16"	6-40	800	
	-2LS				
	-3RS	3/32"	10-32	1600	
	-3LS				
Cable Swage End (Supercedes AN669)	MS21260-S2RH	1/16"	6-40	480	
	-S2LH				
	-S3RH	3/32"	10-32	920	
	-S3LH				
Clip*	MS21256-1	--	--	--	



SAFETY WIRE

Available in Type 302/304 stainless steel (soft temper) per MS20995. Also, in soft annealed brass per specification QQ-W-321, Type A. Stainless steel safety wire furnished in convenient 1 lb. dispensing can (center core) or 25 Ft. coil.

Annealed brass safety wire is furnished in a convenient 1 lb. dispensing can.

Wire Dia. In.	Wire Type	Part No.	Price Per lb.
.020	Stainless Steel	05-02684	
.032	Stainless Steel	05-02685	
.032	Brass	05-02686	
.041	Stainless Steel	05-02687	
.041	Brass	05-06600	

Less 10% on orders for 6 or more spools, 20% on 10 spools.
May be assorted.

25 FT. COIL OF STAINLESS STEEL SAFETY WIRE:

- .032" Dia.P/N 01-15725
- .041" Dia.P/N 01-15825

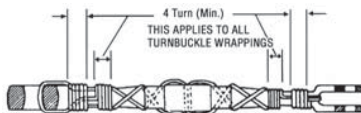
ADJUSTABLE CABLE CONNECTOR

The ACC provides a strong positive connection with tensioning and maximum liner travel in a confined cable installation. Accommodates 3 standard cable terminals, (SA-110 plain ball, MS20664C ball & single shank, and AN111 cable bushing) including combinations of cable-to-cable & cable-to-bracket. It is light & compact without compromising safety. It utilizes an original design of overlapping walls and ridges to enhance the strength of each working surface. The ACC is precision CNC machined 7075 anodized aluminum. Stainless Steel Allen screws work in tandem to provide cable tensioning. 2 stainless tube-nuts provide additional structural security and prevent loosening with interlocking threads. 2 stainless steel pins are locked in place between the adjustment screws and provide an anchor for cable bushings or customized brackets. If necessary, longer adjustment screws can be used to accommodate insufficient cable lengths.

Avail. Sizes	Pin Dia.	Part No.	Price
ACC-3 – 1/6", 3/32"	.188	05-01341	
.032	.188	05-01342	
.032	1/4"	05-01343	
.041	5/16"	05-01344	

SAFETY METHODS FOR TURNBUCKLES

Safety all turnbuckles with .040 dia. annealed safety wire using either the double or single wrap as described and illustrated. Do not reuse safety wire. Adjust the turnbuckle to the correct cable tension so that no more than 3 threads are exposed on either side of the turnbuckle barrel. Do not lubricate turnbuckles.



(A) DOUBLE WRAP (SPIRAL)

Of the methods using safety wire for safety turnbuckles, the method described here is preferred, although either of the other methods described are satisfactory. The method of double wrap safety is shown in figure (A). Use 2 separate lengths of the proper wire. Run one end of the wire through the hole in the barrel of the turnbuckle and bend the end of the wire towards opposite end of the turnbuckle. Then pass the second length of the wire into the hole in the barrel and bend the ends along the barrel on the opposite side first. Spiral the 2 wires in opposite directions around the barrel to cross each other twice between the center hole and the ends. Then pass the wires at the end of the turnbuckle in opposite directions through the holes in the turnbuckle eyes or between the jaws of the turnbuckle fork as applicable, laying one wire along the barrel and wrapping the other at least four times around shank of the turnbuckle and binding the laid wires in place before cutting the wrapped wire off. Wrap the remaining length of safety wire at least 4 turns around the shank and cut it off. Repeat the procedure at the opposite end of the turnbuckle.



(B) DOUBLE WRAP

Another satisfactory double wrap method is similar to Method A. except that the spiraling of the wires is omitted as shown in figure (B).



(C) SINGLE WRAP (SPIRAL)

The single wrap methods described and illustrated are acceptable but are not the equal of the double wrap methods.

Pass a single length of wire through the cable eye or fork at either end of the turnbuckle assembly. Spiral each of the wire ends in opposite directions around the first half of the turnbuckle so as to cross each other twice. Thread both wire ends through the hole in the middle of the barrel so that the third crossing of the wire ends is in the hole. Again, spiral the two wire ends in opposite directions around the remaining half of the turnbuckle, crossing them twice. Then, pass one wire end through the cable eye or fork in the manner described above, wrap both wire ends around the shank for at least four turns each, cutting off excess wire.



(D) SINGLE WRAP

Pass one length of wire through the center hole of the turnbuckle and bend the wire ends toward opposite ends of the turnbuckle. Then pass each wire end through cable eye or fork and wrap each wire end around the shank for at least four times, cutting off excess wire. After safety, no more than 3 threads of the turnbuckle terminal should be exposed.

AP

PULLEYS

PULLEYS



AN210A & AN210B (MS24566)

Anti-Friction Bearing Control Pulley with phenolic body and ball bearing with seal. The AN210A pulleys are dimensionally the same as the "B" pulleys but have metal-shielded bearings rather than removable composition-seal type bearings. The low allowable design load of the -3A and -3B pulleys is based on cable fatigue. AN210-1A, AN210-3A, AN210-1B and AN210-3B shall not be installed on frequently used aircraft controls to bend the cable more than 15° from a straight line.

MS20220 (AN220) Flight Control Pulley with phenolic body and ball bearing with seal. Also available with aluminum body (MS20220A). The low allowable load limit of the -1 pulley is based on cable fatigue. When used on frequently used aircraft controls the cable wrap angle should not be more than 15° from a straight line.

MS20219 (AN219) Aircraft Secondary Control Pulley with phenolic body and ball bearing with seal. MS20219A (AN219A) Pulley with anodized aluminum body and ball bearing with seal. The aluminum body is recommended for -1 and -3 pulleys. The -1 pulley shall not be installed in flight control systems.

Examples of Part No.: Phenolic Body - MS20219-1
Aluminum Body - MS20219A1

NAS383 Series Pulley with phenolic body and graphite impregnated bronze sleeve. This is a low cost pulley widely used in aircraft, winches, cranes and remote mechanical actuation devices.

A-223 and A-224 Pulleys with plain phenolic bore are used as guide and secondary control pulleys in production aircraft.

BB-128-1 and BB-120-1 Pulleys have high pressure phenolic bodies and ball bearings with Teflon seals. Used in Christavia and many other aircraft.

SPECIAL PULLEYS



1-1/2 Inch Pulley

For smooth control operation. Manufactured for aircraft float rudder operation, the pulleys can be used in virtually any application. Solid UHMW plastic for use in tough, caustic environments. Bushing insert is stainless steel with minimum lubrication required. Used with 1/16" thru 1/8" - 7x7 or 7x19 control cable. Bushing is clamped in pulley bracket. Pulley rotates on bushing. Pulley: 1-1/2" dia. x .283" wide.

Bushing: 1/4" O.D. x 3/16" I.D. x .328" long. Weight: .26 oz. (including stainless bushing). P/N 05-29725..... ea.

2 Inch Pulley

Larger cables, bigger job? Wherever you need a tough, durable pulley, look no further. Replace your old worn out, sticky pulleys with NAP UHMW plastic for smooth control operation. Used with 3/32" thru 3/16" - 7x7 or 7x19 control cable. Bushing insert is stainless steel with minimum lubrication required. Bushing is clamped in pulley bracket. Pulley rotates on bushing. Fits DeHavilland Beaver floats Pulley: 2" dia. x .470" wide. Bushing: 5/16" O.D. x 1/4" I.D. x .487" long. Weight: .58 oz. (including stainless bushing). P/N 05-29730..... ea.

PIPER PULLEYS

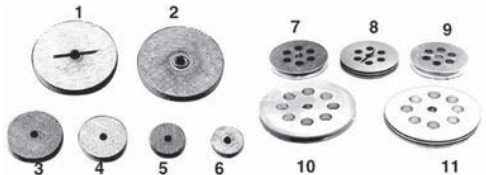


Fig.	Ref. #	Description	O.D.	I.D.	Part No.	Price
1	41171-000	Pulley, trimcrank with bushing (fiber)	2 3/4"	3/8"	05-02636	
1a	40991-000	Pulley (no slot)	2 3/4"	3/8"	05-02637	
2	41001-008	Pulley w/ bearing (fiber)(41001-010)	2 3/4"	5/16"	05-02638	
3	80421-000	Pulley (fiber)	1 3/4"	1/4"	05-02639	
4	481-609	Pulley (fiber)	1 1/2"	1/4"	05-02640	
5	11200-000	Pulley (fiber)	1 1/8"	1/4"	05-02641	
6	43001-000	Pulley (fiber)	1"	1/4"	05-02642	
7	43061-000	Pulley, Stabilizer screw (aluminum)	2 3/4"	3/8"	05-02643	
8	12983-000	Pulley, double groove (aluminum)	2 3/4"	3/8"	05-02644	
9	10080-000	Pulley, trimcrank (aluminum)	2 3/4"	3/8"	05-02645	
10	11008-000	Pulley, adj. screw(alum.) single groove	4"	3/8"	05-02646	
11	12982-000	Pulley, adj. screw (alum.) dbl. groove	4"	3/8"	05-02647	

AIRCRAFT PULLEY OIL

Save the labor of re-oiling the control system every year! Aircraft pulley oil prevents pulley drag and stickiness.

Pully Oil Pint..... P/N 05-04178.....

Pully Oil Kit - Includes: 1 Pint of Pulley Oil, 1 Needle, 1 Each 4.5" Extension, and 1 Each 8" Extension

P/N 05-04179.....

Pully Oiler Kit - Includes: 1 Needle oiler with oil, 1 each 4.5" extension & 1 each 8" extension

P/N 05-04180.....



ALUMINUM PULLEYS

Dimensions of these aluminum pulleys are same as equivalent size of MS20219 and MS20220 Phenolic Pulleys in table.

Part No	Price Each
MS20219A1	
MS20219A3	
MS20220A1	
MS20220A2	
MS20220A3	
MS20220A4	

PHENOLIC PULLEYS

Part Number	Cable Size (In.)	OD	Groove Dia	Hub Dia.	Bore Dia.	Width	Load Limit (Lbs.)	Price Each
MS24566-1B	1/16, 5/64, 3/32	1.250	.972	.625	.1900	.297	300	
MS24566-2B	1/16, 5/64, 3/32	2.500	2.222	.777	.1900	.297	500	
MS24566-3B	1/8, 5/32, 3/16	2.000	1.510	.901	.2500	.484	600	
MS24566-4B	1/8, 5/32, 3/16	3.500	3.010	.901	.2500	.484	1200	
MS20219-1	1/16, 3/32	1.312	1.000	.423	.2500	.438	480	
MS20219-2	1/16, 3/32	1.750	1.438	.423	.2500	.438	480	
MS20219-3	1/16, 3/32	1.750	1.438	.769	.6250	.438	480	
MS20219-4	1/16, 3/32	2.625	2.312	.423	.2500	.438	920	
MS20220-1	1/8, 5/32, 3/16	1.755	1.255	.475	.3125	.625	500	
MS20220-2	1/8, 5/32, 3/16	3.005	2.505	.475	.3125	.625	1680	
MS20220-3	1/8, 5/32, 3/16	4.255	3.755	.475	.3125	.625	2500	
MS20220-4	1/8, 5/32, 3/16	5.505	5.005	.475	.3125	.625	2500	
A-223	1/16, 3/32, 1/8	1.000	.688	---	.2500	.281	---	
A-224	1/16, 3/32, 1/8	1.750	1.375	---	.2500	.250	---	
A-138 (NAS)	1/16, 3/32, 1/8	1.250	.875	---	.2500	.265	---	
A-123 (NAS)	1/16, 3/32	2.000	1.500	---	.2500	.265	---	
A-124 (NAS)	1/16, 3/32	2.500	2.000	---	.2500	.265	---	
A-130 (NAS)	1/8, 5/32	2.000	1.375	---	.3750	.438	---	
A-120 (NAS)	5/32, 3/16	3.000	2.375	---	.3750	.438	---	
05-29710	3/16	2.500	1.875	---	.2500	.440	---	
05-29720	3/16	3.000	2.375	---	.2500	.440	---	

MCS378 SERIES PULLEYS FOR CESSNAS



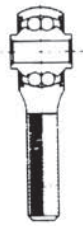
Aircraft Spruce stocks all pulleys required for Cessna single engine aircraft. Our MCS378 series pulleys replace the AN, NAS and S378 series pulleys commonly used on the Cessna aircraft. Pulley kits are available that contain all of the pulleys and cotter pins required for one aircraft.

Approved Replacements for Cessna Pulleys - Cessna Model/Series 120, 140, 140A, 150, A150, A-A150, F150, FA150, FRA150, 152, A152, F152, FA152, 170, 172, F172, FR172, 172RG, FP172, R172, 175, 177, 177RG, F177RG, 180, 182, A182, F182, FR182, R182, TR182, T182, 185, A185, 188, A188, A 188, T188, 205, 206, P 206, TU206, T206, TP206, U206, 207, T207, 208, 210, P210, T210, T303, 310, T310, 320, 335, 336, 337, F337, P337, FP-337, T337, O-2, 340, 401, 402, 404, 411, 414, 421, 425, 441, 500, 501

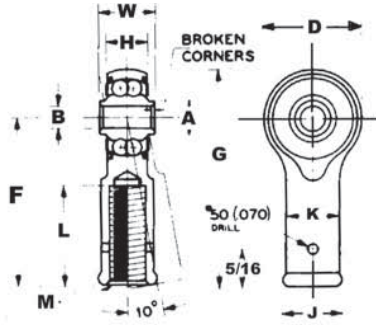
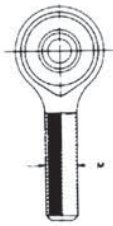
*Replaces the listed Cessna part numbers in the specific aircraft illustrated parts catalogs. Installer must verify applicability prior to installation.

Model No.*	Replaces Cessna Part No.*	Part No.	Price
MCS378-1	S378-1 and S378-1L	05-03422	
MCS378-2	S378-2, A124, AN210-2B and NAS383-2	05-03423	
MCS378-3	S378-3, S378-3L, A130, AN210-3B, BB-208 and NAS383-3	05-03424	
MCS378-4	S378-4, A114, AN210-4B and NAS383-4	05-03425	
S378-5	S378-5	05-03426	

BEARINGS



AN 946
MS 21151
MALE THREADED SHANK



AN 951
MS 21153
FEMALE THREADED SHANK



AN948 HOLLOW SHANK
SOLID SHANK



MS21152
MS21150

Bearing No.	MS Dash No.	B	D	W	H	A	F	G	L	J	K	M		Balls		Lbs. Approx.	Weight Type Seal	Price Each	
		Bore +.0000 -.0005 In.	Outside Diam. +.010 -.010 In.	Width Inner Ring +.000 -.010 In.	Width Outer Ring +.010 -.010 In.	Shoulder Diam. Inner Ring (Approx.) In.	Bore Center to end of Shank +.010 -.010 In.	Overall Dimen- sion +.010 -.010 In.	Thread Length of Shank Hole Depth In.	Bead or Hex Diam. Across Flats In.	Shank Diam. +.010 -.010 In.	Thread Or Drill Size Inches	Pitch Diam.	No.	Size				
MALE THREAD MS 21151																			
RE3ML3	-1	.1900	.781	.437	.328	.281	1.375	1.766	.750			10-32	.1697	20	1/8"	.04	Solid Seal		
RE3MR3	-2	.1900	.781	.437	.328	.281	1.375	1.766	.750			10-32	.1697				Solid Seal		
RE3M6A	-3	.1900	.969	.500	.407	.304	2.031	2.516	1.313			3/8"-24	.3479				Solid Seal		
RE3M6-2N	-4	.1900	.781	.437	.328	.281	1.375	1.766	.750			3/8"-24	.3479				Solid Seal		
REP4M6	-8	.2500	.938	.593	.438	.345	1.875	2.344	1.125			3/8"-24	.3479				Plyo-Seal		
REP4ML6	-9	.2500	.938	.593	.438	.345	1.875	2.344	1.125			3/8"-24	.3479				Plyo-Seal		
REP5M6	-10											3/8"-24	.4050				Solid Seal		
RE5M10												5/8"-18	.5889				Solid Seal		
FEMALE THREAD MS 21153																			
REPB3N*	-1	.1900	.781	.437	.328	.281	1.375	1.766	.750	.438	.375	1/4"-28	.2298				Plyo-Seal		
REPB3N2***	-2	.1900	.781	.437	.328	.281	1.375	1.766	.750	.438	.438	5/16"-24	.2884				Plyo-Seal		
RE3F4	-3	.1900	.781	.500	.328	.281	1.375	1.766	.750	.438	.375	RH	.2268	20	1/8"	.06	Solid Seal		
REP4F5	-6	.2500	.938	.593	.438	.345	1.469	1.938	.750	.438	.438	5/16"-24	.2884				Plyo-Seal		
HOLLOW SHANK MS 21152																			
REP3H5**	-1	.1900	.781	.437	.328	.281	1.375	1.766	.875		.435		.272	20	1/8"	.06	Plyo-Seal Solid Seal		
RE4H6																	Solid Seal		
REP4H6	-2	.2500	.938	.593	.438	.345	1.875	2.344	1.219		.625		.386	22	5/32"	.12	Plyo-Seal		
REP4H8	-3	.2500	.938	.593	.438	.345	1.625	2.093	.875		.625	33/64	.515	22	5/32"	.08	Plyo-Seal	---	
SOLID SHANK MS21150																			
REP4S10	-2	.2500	.938	.593	.438	.345	1.875	2.344			.625		SOLID	22	5/32"	.16	Plyo-Seal		

AP

*Dimensionally Same as Heim F34-14
 **Dimensionally Same as Heim F31-14
 ***Dimensionally Same as Heim F35-14

Bearings with the letter "P" in part number are new manufacture, with Plyoseals.
 Bearings without the letter "P" in part number are new surplus, with solid metal seals.

BEARINGS

KP SERIES—AN200 / MS27640



KP SERIES

FAFNER ANDMS AFBMA Bearing No.	Bore 27640	B		D		W		H		A		E		C		Balls		Pure Moment Rating Inch	Moment Constant 1 Lbs.	Weight Pounds (Approx.)	Price Each
		Diameter +.0000 - .0005 Inches	Outside Inner Ring +.0000 - .0005 Inches	Width Outer Ring +.000 - .005 Inches	Width Inner Ring +.000 - .005 Inches	Shoulder Width Bore Ring (Approx.) Inches	Corner Chamfer x 45° Inner Ring O. D. +.015 - .000 Inches	Outer Ring +.015 - .000 Inches	No.	Size											
KP3L*	-3A	.1900	.6250	.245	.203	.280	.005	.010	10	5/32"	51.8	12.08	.01								
KP3	-3	.1900	.7774	.297	.270	.331	.005	.022	12	5/32"	93.7	10.13	.03								
KP4	-4	.2500	.9014	.484	.335	.390	.005	.032	11	1/4"	130	8.84	.04								
KP5	-5	.3125	1.2500	.558	.375	.469	.015	.032	9	5/16"	335	6.77	.09								
KP6	-6	.3750	1.4375	.620	.469	.591	.015	.032	10	11/32"	580	5.44	.15								
KP8	-8	.5000	1.6875	.620	.500	.768	.015	.044	10	11/32"	1060	4.46	.21								

* Stainless steel shield (for "Plya-Seals" use KP3A which has same bore and O.D.)

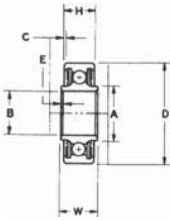
KP-A SERIES Equivalent Thrust Load = Thrust + .8 Radial Load + Moment Constant x Moment in Inch Lbs.

KP SERIES—AN201 / MS27641

AP

FAFNER AND MS AFBMA Bearing No.	Bore 27641	B		D		W		H		A		E		C		Balls		Maximum Static Non-Brinell Rating Radial Thrust Lbs.	Pure Moment Rating Inch-Lbs.	Moment Constant 1 Inch	Weight Pounds (Approx.)	Price Each
		Diameter +.0000 - .0005 Inches	Outside Inner Ring +.0000 - .0005 Inches	Width Outer Ring +.000 - .005 Inches	Width Inner Ring +.000 - .005 Inches	Shoulder Diameter Bore Ring (Approx.) Inches	Corner Chamfer x 45° Inner Ring O. D. +.015 - .000 Inches	Outer Ring +.015 - .000 Inches	No.	Size												
KP3A	3	.1900	.6250	.297	.234	.297	.005	.016	10	1/8"	800	600	51.8	12.08	.01							
KP4A	4	.2500	.7500	.281	.219	.380	.005	.016	12	1/8"	1100	900	73.8	10.17	.02							
KP5A	5	.3125	.8125	.297	.234	.415	.015	.016	14	1/8"	1300	1000	100	8.76	.02							
KP6A	6	.3750	.8750	.313	.250	.495	.015	.016	16	1/8"	1400	1100	130	7.68	.03							
KP8A	8	.5000	1.1250	.375	.313	.616	.015	.016	16	5/32"	2200	1700	250	6.14	.05							
FW1/2	NORMA	.5040	.9690	.250	.250																.03	----

KP SERIES—AN200 / MS27645



KS SERIES SELF-ALIGNING

FAFNER AND MS AFBMA Bearing No.	Bore 27645	B		D		W		H		A		E		C		F		Balls		Maximum Static Rating		Weight Pounds (Approx.)	Price Each
		Diameter +.0000 - .0005 Inches	Outside Inner Ring +.0000 - .0005 Inches	Width Outer Ring +.000 - .005 In.	Width Inner Ring +.000 - .005 In.	Shoulder Width Bore Ring (Approx.) In.	Corner Chamfer x 45° Inner Ring O.D. +.015 - .000 In.	Outer Ring +.015 - .000 In.	(Approx.)	No.	Size	Radial Lbs.	Thrust Lbs.										
KSP3L	3A	.1900	.6250	.245	.203	.257	.005	.016								13	3/32"	400	100	.01			
KSP3	3	.1900	.7774	.297	.270	.342	.005	.022	.275	12	1/8"	800	200	.03									
KSP4	4	.2500	.9014	.484	.335	.400	.005	.032	.408	12	5/32"	1100	300	.04									
KSP5	5	.3125	1.2500	.558	.375	.562	.015	.032	.408	13	3/16"	1400	300	.10									
*KS6A	6A	.3750	.8750	.313	.250	.475	.016	.016	.277	15	1/8"	1000	200	.03									

* NOTE: These bearings are self-aligning for 10° in either direction except for KS6A (not AN200) which is self-aligning for 8° in either direction.

DP SERIES—AN207 / MS27644



DP SERIES DOUBLE ROW, BALL

FAFNER Bearing No.	MS 27644	B		D		W		H		A		E		C		F		Balls		Maximum Static Non-Brinell		Weight Pounds (Approx.)	Price Each
		Bore +.0000 - .0005 Inches	Diameter +.0000 - .005 Inches	Outside Inner Ring +.000 - .005 Inches	Width Outer Ring +.000 - .005 (Approx.) Inches	Shoulder Width Inner Ring (Approx.) Inches	Corner Chamfer x 45° Diameter Bore +.015 - .000 Inches	Inner Ring O. D. +.015 - .000 Inches	No.	Size	Radial Lbs.	Thrust Lbs.											
DPP3	-3	.1900	.7774	.495	.473	.302	.005	.02	20	5/32"	2500	1700	.04										
DPP4	-4	.2500	.9014	.620	.491	.410	.005	.032	22	5/32"	3000	1800	.06										
DPP5	-5	.3125	1.2500	.745	.687	.469	.015	.032	20	1/4"	6900	4200	.17										
DP6	-6	.3750	1.4375	.870	.794	.551	.015	.032	18	5/16"	9700	5800	.26									---	
DPP8	-8	.5000	1.6875	.932	.856	.735	.015	.044	20	11/32"	13000	7800	.38									---	

DSP SERIES—AN206 / MS27643



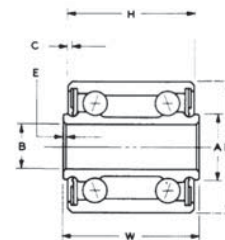
FAFNER Bearing No.	MS 27643	B		D		W		H		A		E		C		F		Balls		Maximum Static Non-Brinell		Weight Pounds (Approx.)	Price Each
		Bore +.0000 - .0005 Inches	Diameter +.0000 - .005 Inches	Outside Inner Ring +.000 - .005 Inches	Width Outer Ring +.000 - .005 (Approx.) Inches	Shoulder Width Inner Ring (Approx.) Inches	Corner Chamfer x 45° Diameter Bore +.015 - .000 In.	Inner Ring O. D. +.015 - .000 In.	No.	Size	Radial Lbs.	Thrust Lbs.											
DSP3	-3	.1900	.7774	.500	.392	.304	.005	.022	24	1/8"	1000	200	.04										
DSP4	-4	.2500	.9014	.687	.464	.430	.005	.032	30	1/8"	13000	300	.06										
DSP5	-5	.3125	1.2500	.812	.656	.515	.015	.032	28	3/16"	2600	600	.16										
DSP6	-6	.3750	1.4375	.937	.750	.564	.015	.032	28	7/32"	3600	800	.24										
DSP8	-8	.5000	1.6875	1.000	.812	.775	.015	.044	30	1/4"	5000	1000	.36										

BEARINGS REGREASERS – GREASE FITTINGS

DW SERIES (MS 27647)



- Extra Wide, Double Row, Ball
- Equipped with removable Plya-Seals



FAFNER AND MS AFB MA Bearing No.	Bore 27647	B		D		W		H		A		E		C		Balls		Pure Moment Rating Inch-Lbs.	Moment Constant 1 Inch	Weight Pounds (Approx.)	PRICE EACH
		Diameter +.0000 - .0005 Inches	Outside Inner Ring +.0000 - .0005 Inches	Width Outer Ring +.000 - .005 Inches	Width Inner Ring +.000 - .005 Inches	Shoulder Width Bore Ring (Approx.) Inches	Inner Ring O.D. +.015 - .000 Inches	Outer Ring +.015 - .000 Inches	No.	Size											
† DW4K2*	-4A	.2500	.6250	.562	.500	.344	.016	.016	16	3/32"	121	3.49	.025								
DW4K*	-4	.2500	.7500	.875	.750	.435	.005	.016	14	9/64"	365	2.27	.04								
DW5	-5	.3125	.8750	.9375	.8125	.472	.005	.016	26	9/64"	830	1.85	.07								
DW6	-6	.3750	1.0625	1.1875	1.0625	.576	.005	.016	24	3/16"	1830	1.38	.12								
DW8	-8	.5000	1.4375	1.5000	1.3750	.715	.005	.032	22	17/64"	4330	1.07	.29								

EQUIVALENT THRUST LOAD = THRUST + .6 RADIAL LOAD + MOMENT CONSTANT x MOMENT IN INCH-LBS.

*Bearing stamped DW4K. †Bearing stamped DW4K2.

These bearings are not to be used as track rollers, cam follower rolls and the like.

* RETAINER TYPE

AP

SINGLE ROW, BALL, DOUBLE SEATS



FAFNER AND AFBMA Bearing Number	B		D		W		H		A		E		C		R		Balls		Maximum Safe Working Load Radial Lbs.	Weight Pounds (Approx)	Price Each
	Bore +.0000 - .0005 Inches	Outside Diameter +.000 - .002 Inches	Width Inner Ring +.000 - .005 Inches	Width Outer Ring +.000 - .005 Inches	Shoulder Diameter Inner Ring (Approx.) Inches	Corner Chamfer x 45° Inner Ring Bore +.015 - .000 Inches	Corner Outer Ring O.D. Inches	Radius Outside Diameter Contour	No.	Size											
K3L3	.1900	.635	.245	.203	.280	.005	.020 Rad.	.550	10	1/8"	200	.01									
K3LR48	.1900	.687	.245	.203	.280	.005	.020 Rad.	.500	11	5/32"	200	.20	---								
KP4R16	.2500	.901	.484	.335	.390	.005	.005 x 45°	1.000	11	5/32"	400	.04									
KP4R16-2	.2500	1.000	.390	.335	.390	.005	.015 x 45°	1.000	11	5/32"	500	.06									

The maximum safe working load is that radial load to obtain 100,000 feet peripheral travel life.

ACS BEARING REGREASERS



The ACS bearing regreasers restore bearings, rod ends and pulleys to "like-new" condition. O-ring in base of regreaser provides positive seal when bearing is secured by the threaded center post. Grease, entering under pressure at the grease fitting, is forced to flow through the bearing, flushing out the old grease and

dirt, and recharging the bearing with fresh grease. Anodized aluminum construction. Available in five sizes.

Bearing Regreaser Number	Part No.	Bearing Size		Price Each
		O.D.	Bore	
3	10650-3	3/4"	3/16"	
4	10650-4	1"	1/4"	
5	10650-5	1-1/4"	5/16"	
6	10650-6	1-1/2"	3/8"	
8	10650-8	1-1/2"	1/2"	

Complete Set of Five - P/N 12-11500

GREASE FITTINGS

Surface Check fittings of the MS15000 series have spring-loaded ball check in the tip. Conform to MIL-F-3541.



MS No.	Thread	Shank Length	Eff. Thread Length	Overall Length	Tip Angle	Price Each
MS15001-1	1/4-28	3/16"	.109	1/2"	0°	
MS15001-4	Taper	3/16"	.109	1/2"	90°	
AS15002-1P	1/4-28	1/8"	.075	17/32"	0°	
	Straight					
MS15003-5	1/8" Pipe	9/32"	.188	31/32"	65°	
MS15003-6	1/8" Pipe	9/32"	.188	15/16"	90°	



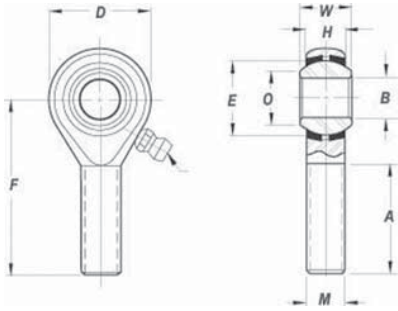
LUBRICAPS

These bright red Lubricaps are made of molded rubber and are used as grease fitting covers. The internal lip holds the cap in place and keeps out dirt, sand, and fluids. M-24529 (20% discount for 100/each)

P/N 04-01940

BEARINGS

HEIM ROD ENDS MALE THREADED M AND HM SERIES



Rod Ends male threaded (HM M Series)

- Outer Member: Aircraft Quality Carbon Steel, Magnetic particle inspected, with protective coating for corrosion resistance.
- Ball: 52100 Alloy Steel, heat treated, chrome plated.
- Inserts: Brass, 16 size has one piece carbon steel race.



Heim "M" and "MD" series bearings are now manufactured in magnafluxed version only. As old stock is depleted, magnafluxed equivalents will be furnished as substitutes at current (higher) prices unless otherwise requested on the order.

"L" in rod end number designates left hand thread. In this series, the "D" in rod end number (MD35 14) denotes drilled hole in the shank. Add suffix "G" to indicate lubricator is required. Example: HM-SG. Add suffix "FG" to indicate flush type lubricator is required. Example: M34-14FG. Lubricator (G) (FG) available with minimum qty. required. Please Call for Pricing.

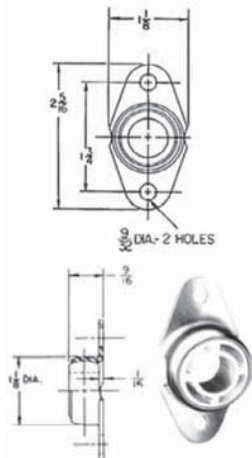
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Rod End No.	Equiv. Spherco No.	DIMENSIONS											Max Static Radial Load in Pounds Approx.	Approx. Weight in Pounds	Price Each	
		Bore	ball Width	Housing Width	Ball Flat Diam.	Head Diam.	Length to center of ball	Overall Length	Other Dimensions							
		B	W	H	O	D	F	G	A	N	Ball Diam.	M				
M34-14M	NONE	.1900	.437	.328	.273	.750	1.560	1.935	1.000			33/64	1/4"-28	1,695	.05	.
MD35-14	NONE	.1900	.437	.328	.273	.875	1.375	1.812	.750	#33	33/64	5/16"-24	2,184	.07	.	
MDL35-14										.113		UNF			.	
MD36-14	NONE	.1900	.437	.328	.273	.750	1.375	1.750	.750	#33	33/64	3/8"-24	2,848	.07	.	
MDL36-14										.113		UNF			.	
MD36-16M	NONE	.1900	.500	.375	.321	.812	1.812	2.219	1.062	#29	19/32	3/8"-24	2,769	.08	.	
MDL36-16										.136		UNF			---	
M44-14	NONE	.2500	.437	.304	.354	.812	1.562	1.968	1.000			9/16	1/4"-28	1,695	.06	.
ML44-14												UNF			---	
MD46-15	NONE	.2500	.484	.335	.395	.875	2.312	2.750	1.500	#29	5/8	3/8"-24	3,151	.10	.	
MDL46-16										.159		UNF			.	
HM-2M	NONE	.1250	.250	.187	.187	.469	.937	1.172	.500			5/16	6-32	452	.02	.
HML-2M												UNC			.	
HM-2AM	NONE	.1562	.281	.219	.249	.562	1.125	1.406	.625			3/8	8-32	666	.02	---
HML-2AM												UNC			.	
HM-3M	TRE-3	.1900	.312	.250	.306	.625	1.250	1.563	.750			7/16	10-32	910	.03	.
HML-3M	TREL-3											UNF			.	
HM-4M	TRE-4	.2500	.375	.281	.355	.750	1.562	1.937	1.000			33/64	1/4"-28	1,695	.05	.
HML-4M	TREL-4											UNF			.	
HM-5M	TRE-5	.3125	.437	.344	.447	.875	1.875	2.312	1.250	#33	5/8	5/16"-24	2,205	.08	.	
HM-6M	TRE-6	.3750	.500	.406	.517	1.000	1.938	2.438	1.250	#21	23/32	3/8"-24	3,172	.11	.	
HML-6M	TREL-6									.159		UNF			.	
HM-7M	TRE-7	.4375	.562	.437	.586	1.125	2.125	2.688	1.375	#21	13/16	7/16"-20	4,633	.16	.	
HML-7M	TREL-7									.159		UNF			---	
HM-8M	TRE-8	.5000	.625	.500	.698	1.312	2.438	3.094	1.500	#3	15/16	1/2"-20	5,876	.24	.	
HML-8M	TREL-8									.213		UNF			.	

UNF= Universal Fine, UN=Universal Coarse

TRIANGLE MFG. BEARINGS

Manufactured by Triangle Mfg. Co., these bearings are spherical on the outside and are contained in a flanged, stamped metal cage, so they provide sliding, rotating, and pivoting motion. The bearings are available in nylon, bronze, or iron as shown in the table below. The FMN10 is used in the wing roots and on the torque tubes inside the fuselage of the Cozy Mark IV.



PART NO.	I.D.	BEARING MATERIAL	PRICE EA.	PART NO.	I.D.	BEARING MATERIAL	PRICE EA.
FMN4	1/4"	Nylon	.	FM1508P	1/2"	Iron	.
FMN5	5/16"	Nylon	.	FM1408P	1/2"	Bronze	.
FMN6	3/8"	Nylon	.	FMN10	5/8"	Nylon	.
FM1406P	3/8"	Bronze	.	FM1510P	5/8"	Iron	.
FMN7	7/16"	Nylon	.	04-01658	5/8"	Bronze	.
FMN8	1/2"	Nylon	.	FMN12	3/4"	Nylon	.
				FM1512P	3/4"	Iron	.

BEARINGS

ROD END MALE THREADED HMX EXTRA CAPACITY SERIES

SPECIFICATIONS:

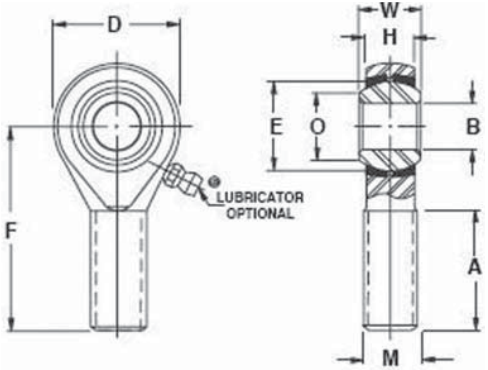
Outer Member: SAE 4130 steel heat treated to 175,000 PSI Cadmium Plated.

Ball: SAE 52100 Steel, Heat Treated, Chrome Plated.

Inserts: Aluminum Bronze

"L" in rod end number designates left hand thread.
Add letter 'M' to dash number for magnafluxed rod ends.
This series is equipped with lubricators as shown.
Add suffix "FG" to indicate flush type lubricator is required.

Example: HMX-4FG. Additional costs will apply.
Note: See Pg 150 for Aurora Equivalents to Heim HM & HF Series.



Rod End Number	Equiv Sphero Number	DIMENSIONS											Maximum Static Load in Lbs. approx		Approx. Weight in Lbs.	Price Ea.
		Bore	Ball Width	Housing Width	Ball Flat Dia.	Head Dia.	Length to Cntr of Ball	Over-All Length	Other Dimensions							
		B	W	H	O	D	F	G	A	N		M	Radial	Axial		
		+0.0015 -0.0005	+0.000 -0.005	+0.005 -0.005		+0.010 -0.010	+0.010 -0.010	+0.010 -0.010	Min.	Drill Dia.	Ball Dia.	Class 3A				
HMX-4G	ARE 4-20	.2500	.375	.281	.355	.750	1.560	1.937	1.000	#33	33/64	5/16"-24	3,260	1,710	.06	.
HMXL-4G	AREL-20									.113		UNF				.
HMX-5G	ARE- 5-20	.3125	.437	.344	.447	.875	1.375	2.312	1.250	#21	5/8	3/8"-24	4,920	2,376	.09	.
												UNF				.
HMX-6G	ARE 6-20	.3750	.500	.406	.517	1.000	1.375	2.438	1.250	#21	23/32	7/16"-20	7,240	2,946	.13	.
HMX-7G	ARE 7-20	.4375	.562	.437	.586	1.125	1.812	2.688	1.375	#21	13/16	1/2"-20	7,620	3,367	.18	.
HMXL-7G	AREL 7-20									.159		UNF				.
HMX-8G	ARE 8-20	.5000	.625	.500	.698	1.312	1.562	3.094	1.500	#3	15/16	5/8"-18	11,920	4,074	.30	.
HMXL-8G	AREL 8-20									.213		UNF				.



HME SERIES

SPECIFICATIONS:

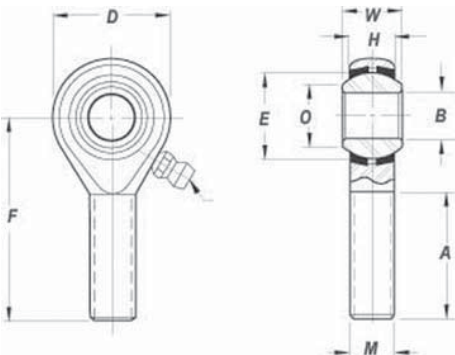
Outer Member: Carbon steel-protective coated for corrosion resistance.

Ball: Carbon steel-heat treated, chrome plated.

Inserts: Aluminum.

Liner: Self lubricating UNIFLON.

"L" in rod end number designates left hand thread.
"R" in part number indicates woven uniflon. Example: HMR-3.
*Uniflon® — The Heim Universal Corporation's trademark for teflon® lined rod ends and spherical bearings.



Part No.	Thread Type	SEE DIAGRAM ABOVE									Price
		B	W	H	D	F	A	Thread Size	E	O	
HME-3M	Right Hand	.1900	.312	.250	.625	1.250	.750	.1900-32	.437	.306	-
HMLE-3M	Left Hand	.1900	.312	.250	.625	1.25	.750	.1900-32	.437	.306	-
HME-4M	Right Hand	.2500	.375	.281	.750	1.562	1.000	.2500-28	.515	.353	.
HMLE-4M	Left Hand	.2500	.375	.281	.750	1.562	1.000	.2500-28	.515	.353	-
HME-5M	Right Hand	.3125	.437	.344	.875	1.875	1.250	.3125-24	.625	.447	-
HMLE-5M	Left Hand	.3125	.437	.344	.875	1.875	1.250	.3125-24	.625	.447	.
HME-6M	Right Hand	.3750	.500	406	1.000	1.938	1.250	.3750-24	.718	.516	-
HMLE-6M	Left Hand	.3750	.500	406	1.000	1.938	1.250	.3750-24	.718	.516	-
HME-7M	Right Hand	.4375	.562	.437	1.125	2.125	1.375	.4375-20	.812	.586	-
HMLE-7M	Left Hand	.4375	.562	.437	1.125	2.125	1.375	.4375-20	.812	.586	-
HME-8M	Right Hand	.5000	.625	.500	1.312	2.438	1.500	.5000-20	.937	.698	-
HMLE-8M	Left Hand	.5000	.625	.500	1.312	2.438	1.500	.5000-20	.937	.698	-

BEARINGS

ROD ENDS FEMALE THREADED (F & HF SERIES)

SPECIFICATIONS:

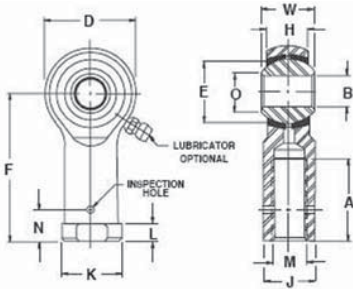
Outer Member: Aircraft Quality Steel, Cadmium Plated.

Ball: SAE 52100 Steel.

Inserts: Naval Bronze

"L" in rod end number designates left hand thread. Add suffix "G" to indicate lubricator is required. Example: F35-14G. Add suffix "FG" to indicate flush type lubricator is required. Example: HF-4FG. Add \$3.00 to price for lubricator (G) (FG).

Note: Standard Bearings Furnished Without Inspection Hole. If Hole Needed, Add "M" to P/N & At Higher Cost.



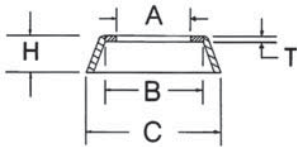
PN	Bore	Ball Width	Housing Width	Head Dia.	Length to ctr. of ball	Thread Length	Thread Size	Ball Diameter	Ball Flat Diameter	Other Dimensions			Max Rad. Load	Wgt.	Price
	B	W	H	D	F	A	M	E	O	K	N	L			
	+0.015 -0.005	+0.000 -0.005	+0.005 -0.005	+0.010 -0.010	+0.010 -0.010	+0.062 -0.031	UNF-3B	REF	REF	+0.010 -0.010	+0.020 -0.020	+0.010 -0.010			
FL34-14M	.1900	.437	.328	.750	1.375	.750	2500-28	.515	.273	.468	.312	.187	2850	.06	.
F347-14M	.1900	.437	.328	.750	1.062	.437	2500-28	.515	.273	.375	-	-	2850	.05	.
F34-16M	.1900	.500	.375	.812	1.375	.750	2500-28	.593	.321	.468	.312	.187	2750	.08	.
F35-14M	.1900	.437	.328	.750	1.375	.750	3125-24	.515	.0273	.500	.406	.187	2850	.07	.
FL35-14M	.1900	.437	.328	.750	1.375	.750	3125-24	.515	.273	.500	.406	.187	2850	.07	.
F44-14M	.2500	.437	.304	.812	1.375	.750	2500-28	.562	.354	.468	.312	.187	2850	.07	.
FL44-14M	.2500	.437	.304	.812	1.375	.750	2500-28	.562	.354	.468	.312	.187	2850	.07	.
F45-19M	.250	.593	.438	.938	1.469	.750	3125-24	.687	.347	.500	.406	.187	3700	.11	.
HF-3M	.1900	.312	.250	.625	1.062	.562	1.900-32	.437	.306	.406	-	.187	1850	.03	.
HFL-3M	.1900	.312	.250	.625	1.062	.562	1.900-32	.437	.306	.406	-	.187	1850	.03	.
HF-4M	.2500	.35	.281	.750	1.312	.750	2500-28	.515	.353	.468	-	.187	2700	.05	.
HFL-4M	.2500	.35	.281	.750	1.312	.750	2500-28	.515	.353	.468	-	.187	2700	.05	.
HF-5M	.3125	.437	.344	.875	1.375	.750	3125-24	.625	.447	.500	-	.187	3350	.08	.
HFL-5M	.3125	.437	.344	.875	1.375	.750	3125-24	.625	.447	.500	-	.187	3350	.08	.

*F34-14 Dimensionally the same as Fafnir REPB3N. **F35-14 Dimensionally the same as Fafnir REPB3N2

SEALS-IT ROD END SEALS

Protect the spherical bearing of rod ends. This patented design features a neoprene rubber seal bonded directly to an aircraft quality washer. The seal encapsulates the bearing and flexes accordingly with any change in angularity. This provides unprecedented protection from dirt and other types of contamination which may severely shorten the life of these important components.

The rubber is engineered for wide range of temperature variation and is impervious to gasoline, oils, and most other common fluids. The steel washer is plated for protection from corrosion.



Size	A	B	C	H	T	Part No.	Price
3/16	.200	.326	.442	.096	.020	05-01434	---
1/4	.257	.375	.565	.125	.025	05-2500	.
5/16	.325	.450	.710	.200	.047	05-3125	.
3/8	.386	.525	.775	.220	.047	05-3750	.
7/16	.445	.610	.910	.250	.047	05-4375	.
1/2	.515	.710	1.125	.250	.047	05-5001	.
5/8	.638	.900	1.250	.250	.047	05-6250	.
3/4	.763	1.00	1.375	.375	.047	05-7500	.

BEARINGS

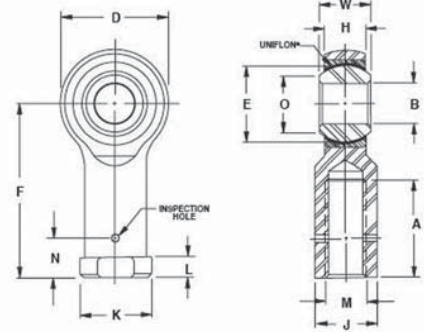
UNIFLON LINED



HFE M SERIES

SPECIFICATIONS:
 Outer Member: Carbon steel, magnetic particle inspected, with protective coating for corrosion resistance.
 Ball: 52100 Alloy steel, heat treated, chrome plated.
 Race: Aluminum.
 Liner: Self lubricating UNIFLON.

The letter "L" indicates Left Hand thread.



Rod End No.	Dimensions														Max. Static Radial Load (lbs.)	Approx. Wt. (lbs.)	Price Each
	Bore	Ball Width	Housing Width	Ball Flat Dia.	Head Dia.	Length to ctr. of ball	Overall Length	Other Dimensions									
	B	W	H	O	D	F	G	A	K	J	N	L	M				
HFE-3M														10-32 UNF			
HFLE-3M	.1900	.312	.250	.306	.625	1.062	1.375	.562	.406	.312	.312	.187	.437		865	.03	
HFE-4M														1/4"-28 UNF			
HFLE-4M	.2500	.375	.281	.355	.750	1.312	1.687	.750	.468	.375	.312	.187	.515		1,550	.05	
HFE-5M														5/16"-24 UNF			
HFLE-5M	.3125	.437	.344	.447	.875	1.375	1.812	.750	.500	.437	.406	.187	.625		2,080	.08	---
HFE-6M														3/8"-24 UNF			
HFLE-6M	.3750	.500	.406	.517	1.000	1.625	2.125	.937	.687	.562	.469	.250	.718		2,950	.12	
HFE-7M														7/16"-20 UNF			---
HFLE-7M	.4375	.562	.437	.586	1.125	1.812	2.375	1.062	.750	.625	.531	.250	.812		3,160	.17	---
HFE-8M														1/2"-20 UNF			
HFLE-8M	.5000	.625	.500	.698	1.312	2.125	2.781	1.187	.875	.750	.594	.250	.937		4,925	.26	---

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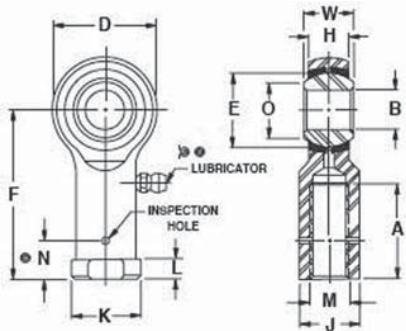
ROD ENDS FEMALE THREADED

HFX EXTRA CAPACITY SERIES

SPECIFICATIONS:
 Outer Member: SAE 4130 steel heat treated to 175,000 PSI Cadmium Plated.
 Ball: SAE 52100 Steel, Heat Treated, Chrome Plated.
 Inserts: Aluminum Bronze.

"L" in rod end number designates left hand thread.
 All rod ends in this series are magnafluxed, and are stamped with the letter "M".
 This series is equipped with lubricators as shown.
 Add suffix "FG" to indicate flush type lubricator is required. Example: HFX-4FG.

Lubricator (G) (FG) available with minimum qty. required. Please Call for Pricing.



Rod End No.	Dimensions														Max. Static Radial Load (lbs.)		Approx. Weight (Lbs.)	Price Each
	Bore	Ball Width	Housing Width	Ball Flat Dia.	Head Dia.	Length to ctr. of ball	Overall Length	Other Dimensions										
	B	W	H	O	D	F	G	A	K	J	N	L	M	w/ lubricator	w/o lubricator			
HFX-4G	.2500	.375	.281	.355	.750	1.312	1.687	.750	.468	.375	.312	.187	.515	1/4"-28	3,260	6,680	.06	
HFX-5G	.3125	.437	.344	.447	.875	1.375	1.812	.750	.500	.437	.406	.187	5/8	5/16"-24 UNF	4,920	8,410	.08	
HFXL-5G																		---
HFXL-6G	.3750	.500	.406	.517	1.000	1.625	2.125	.937	.687	.562	.469	.250	23/32 UNF	3/8"-24	7,240	11,160	.14	---
HFX-7G	.4375	.562	.437	.586	1.125	1.812	2.375	1.062	.750	.625	.531	.250	13/16	7/16"-20 UNF	7,620	13,660	.18	---
HFXL-7G																		
HFX-8G	.5000	.625	.500	.698	1.312	2.125	2.781	1.187	.875	.750	.594	.250	15/16	1/2"-20	11,920	19,340	.29	
HFXL-8G														UNC				---

BEARINGS

SPHERICAL BEARINGS SERIES LS, LSS, LHA



SPECIFICATIONS:

LS SERIES

Outer Member: Carbon Steel, with protective coating for corrosion resistance on all surfaces exposed after installation.

Ball: SAE 52100 Steel, Heat Treated.

Inserts: Brass.

LSS SERIES

Outer Member: 4130 or 4340 Alloy steel, heat treated, with protective coating for corrosion resistance on all surfaces exposed after installation.

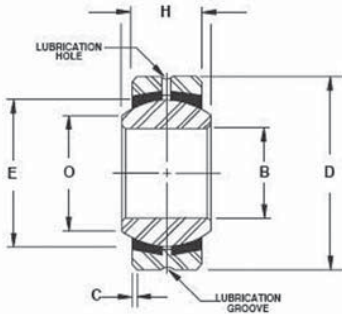
Ball: 52100 Alloy steel, heat treated, chrome plated.

Inserts: Copper alloy

LHA SERIES

Outer Member: 4130 or 4340 Alloy steel, heat treated, with protective coating for corrosion resistance on all surfaces exposed after installation.

Ball: 52100 Alloy steel, heat treated, chrome plated.



AP

Spherical Bearing No.	Dimensions							Max Static Radial load In Pounds Approx.	Approx. Weight in Pounds	Price Each
	Bore	Outside Diam.	Ball Width	Housing Width	Chamfer	Ball Diameter	Ball Flat Diameter			
	B +.0000 -.0005	D +.0000 -.0005	W +.000 -.005	H +.000 -.005	C +.000 -.005	E REF	O REF			
LS-3	.1900	.6250	.281	.187	.016	.406	.293	2960	.02	.
LS-4	.2500	.7500	.375	.281	.016	.515	.354	5245	.04	.
LS-5	.3125	.8750	.437	.313	.016	.625	.447	6550	.05	.
LS-6	.3750	1.0000	.500	.375	.016	.718	.517	8605	.08	.
LS-8	.5000	1.3125	.687	.531	.044	.937	.637	15600	.18	.
LSS-2	.1650	.4687	.250	.187	.235	.020	11/32	2,000	.01	---
LSS-3	.1900	.5625	.281	.218	.020	.406	.293	2750	.02	.
LSS-4	.2500	.6562	.343	.250	.022	.500	.364	4200	.02	.
LSS-5	.3125	.7500	.375	.281	.022	.562	.419	5800	.03	.
LSS-6	.3750	.8125	.406	.312	.032	.625	.475	7150	.04	.
LSS-8	.5000	1.000	.500	.390	.032	.781	.600	11200	.07	.
LHA-2	.1650	.4687	.250	.187	.020	.343	.235	4400	.01	.
LHA-3	.1900	.5625	.281	.218	.020	.406	.293	6480	.02	.
LHA-4	.2500	.6562	.343	.250	.022	.500	.364	10000	.02	.
LHA-6	.3750	.8125	.406	.312	.032	.625	.475	18750	.04	.
LHA-8	.5000	1.000	.500	.390	.600	.032	25/32	26,900	.07	---

The allowable static axial loads are one-fourth of radial loads given above.

AURORA BEARINGS



AURORA BEARINGS

In 1971 Aurora Bearing Company entered the rod end and spherical bearing market and soon became a major force in the rod end industry. Over the years, Aurora Bearing has retained its original business philosophy of furnishing a quality product at competitive prices and with service much faster than the competition. Aurora offers a complete line of standard and spherical bearings. In addition, special bearings can be designed and manufactured on request. Listed below are many of the most popular Heim bearing part numbers and the equivalent Aurora Bearing part number. On many of these items, the Aurora bearing offers substantial savings and faster delivery time. Unlisted Aurora bearings, quantity discounts and complete Aurora Bearing Company brochure available on request.

SPECIFICATIONS:

- Body** - Low carbon steel, cadmium or zinc plated at manufacturer's option, dichromate treated.
No. 16 series standard body is 4130 steel, not heat treated.
- Race** - Low carbon steel, cadmium or zinc plated (manufacturer's option), chromate treated.
- Ball** - Allow steel, heat treated, hard chrome plated.

The above specifications apply to most but not all Aurora bearings.

Note: Bearings not furnished standard with grease fittings are available with grease fittings.
Add suffix "Z" and \$2.10 to price.

Note: There is a \$25.00 certificate fee applied to any Aurora Bearing order under \$250.00.

AURORA EQUIVALENTS TO HEIM HM & HF SERIES

MALE		
Aurora P/N	Heim P/N	Price Each
MM-2	HM-2	.
MB-2	HML-2	.
MM-3	HM-3	.
MB-3	HML-3	.
MM-4	HM-4	.
MB-4	HML-4	.
MM-5	HM-5	.
MB-5	HML-5	.
MM-6	HM-6	.
MB-6	HML-6	.
MM-7	HM-7	.
MB-7	HML-7	.
MM-8	HM-8	.
MB-8	HML-8	.

FEMALE		
Aurora P/N	Heim P/N	Price Each
MW-2	HF-2	.
MG-2	HFL-2	.
MW-3	HF-3	.
MG-3	----	.
MW-4	HF-4	.
MG-4	HFL-4	.
MW-5	HF-5	.
MG-5	HFL-5	.
MW-6	HF-6	.
MG-6	HFL-6	.
MW-7	HF-7	.
MG-7	HFL-7	.
MW-8	HF-8	.
MG-8	HFL-8	.

AP

AURORA EQUIVALENTS TO HEIM HMX & HFX SERIES

MALE		
Aurora P/N	Heim P/N	Price Each
XAM-4Z	HMX-4G	.
XAB-4Z	HMXL-4G	.
XAM-5Z	HMX-5G	.
XAB-5Z	----	.
XAM-6Z	HMX-6G	.
XAB-6Z	HMXL-6G	.
XAM-7Z	HMX-7G	.
XAB-7Z	HMXL-7G	.
XAM-8Z	HMX-8G	.
XAB-8Z	HMXL-8G	.

FEMALE		
Aurora P/N	Heim P/N	Price Each
AW-4Z	HFX-4G	.
AG-4Z	HFXL-4G	.
AW-5Z	HFX-5G	.
AG-5Z	HFXL-5G	.
AW-6Z	----	.
AG-6Z	HFXL-6G	.
AW-7Z	HFX-7G	.
AG-7Z	HFXL-7G	.
AW-8Z	HFX-8G	.
AG-8Z	HFXL-8G	.

AURORA EQUIVALENTS TO HEIM HMR & HFR SERIES

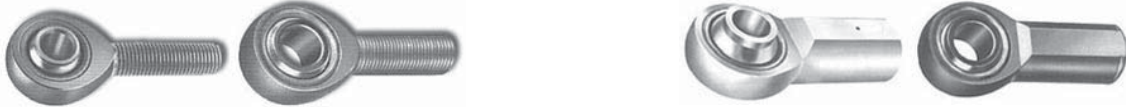
MALE		
Aurora P/N	Heim P/N	Price Each
MM-3T	HMR-3	.
MB-3T	HMRL-3	.
MM-4T	HMR-4	.
MB-4T	HMRL-4	.
MM-5T	HMR-5	.
MB-5T	HMRL-5	.
MM-6T	HMR-6	.
MB-6T	HMRL-6	.
MM-7T	HMR-7	.
MB-7T	HMRL-7	.
MM-8T	HMR-8	.
MB-8T	HMRL-8	.

FEMALE		
Aurora P/N	Heim P/N	Price Each
MW-3T	HFR-3	.
MG-3T	HFRL-3	.
MW-4T	HFR-4	.
MG-4T	HFRL-4	.
MW-5T	HFR-5	.
MW-6T	HFR-6	.
MG-6T	HFRL-6	.
MW-7T	HFR-7	.
MG-7T	HFRL-7	.
MW-8T	HFR-8	.
MG-8T	HFRL-8	.

Refer to HEIM Bearing Chart On Previous Pages for Dimensions on Aurora Bearings.

AURORA BEARINGS

AURORA EQUIVALENTS TO HEIM M, ML, MD, F, & FL SERIES



MALE			FEMALE		
Aurora P/N	Aurora Price	Heim P/N	Aurora P/N	Aurora Price	Heim P/N
GMM-3M-470		M34-14M	GMW-3M-470		F35-14M
GMB-3M-470		ML34-14M	GMG-3M-470		FL34-14M
GMM-3M-570		MD35-14M	GMW-3M-471		F347-14M
GMB-3M-570		MDL35-14M	GMG-3M-471		FL347-14M
GMM-3M-670		MD36-14M	GMW-3M-480		F35-14M
GMB-3M-670		MDL36-14M	GMG-3M-480	---	FL35-14M
GMM-3M-680		MD36-16M	GMW-4M-470		F44-14M
GMB-3M-680		MDL36-16M	GMG-4M-470	---	FL44-14M
GMM-4M-470		M44-14M	GMW-4M-595		F45-19M
GMB-4M-470		ML44-14M			
GMM-4M-675		MD46-15M			
GMM-4M-680		MD46-16M			
GMB-4M-680		MDL46-16M			

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AURORA EQUIVALENTS TO HEIM HFE & HME SERIES

MALE			FEMALE		
Aurora P/N	Heim P/N	Aurora Price	Aurora P/N	Heim P/N	Aurora Price
MW-3TM-125	HFE-3		MM-3TM-125	HME-3	
MG-3TM-125	HFLE-3		MB-3TM-125	HMLE-3	
MW-4TM-125	HFE-4		MM-4TM-125	HME-4	
MG-4TM-125	HFEL-4		MB-4TM-125	HMLE-4	
MW-5TM-125	HFE-5		MM-5TM-125	HME-5	
MG-5TM-125	HFLE-5		MB-5TM-125	HMLE-5	



AURORA EQUIVALENTS TO HEIM LS, LHA, & LSS SERIES

LCOM Series Large Size Spherical Bearings			COM Series Spherical Bearings			COM-KH Series Spherical Bearings		
Aurora P/N	Heim P/N	Price	Aurora P/N	Heim P/N	Price	Aurora P/N	Heim P/N	Price
LCOM-3	LS-3		COM-3	LSS-3		COM-3KH	LHA-3	---
LCOM-4	LS-4		COM-5	LSS-5		COM-4KH	LHA-4	
LCOM-5	LS-5		COM-6	LSS-6		COM-5KH	LHA-5	
LCOM-6	LS-6		COM-7	LSS-7	---	COM-6KH	LHA-6	
LCOM-7	LS-7		COM-9	LSS-9		COM-7KH	LHA-7	
LCOM-8	LS-8		COM-14	LSS-14		COM-8KH	LHA-8	
			COM-16	LSS-16		COM-9KH	LHA-9	
						COM-10KH	LHA-10	
						COM-12KH	LHA-12	
						COM-14KH	LHA-14	
						COM-16KH	LHA-16	



AURORA CM-S & CB-S MALE ROD ENDS WITH STUDS

Rod End no.		Dimension in inches										Price Each
Right Hand	Left Hand	H Ref.	A ± .015	D Ref.	C +.062 - .031	L ± .015	N ± .010	M Ref.	Thread UNF-3A	a° Misalign Angle		
CM-3S*	CB-3S*	.234	1.250	.625	.750	1.000	.500	.437	10-32	50		
CM-4S*	CB-4S*	.250	1.562	.750	1.000	1.031	.562	.500	1/4-28	50		
CM-5S*	CB-5S*	.312	1.875	.875	1.250	1.219	.687	.593	5/16-24	50		
CM-6S	CB-6S	.359	1.938	1.000	1.250	1.562	.906	.812	3/8-24	50		
CM-7S	CB-7S	.406	2.125	1.125	1.375	1.750	1.062	.937	7/16-20	50		
CM-8S	CB-8S	.453	2.438	1.312	1.500	2.000	1.125	1.000	1/2-20	50		
CM-10S	CB-10S	.484	2.625	1.500	1.625	2.500	1.500	1.375	5/8-18	50		
CM-12S	CB-12S	.593	2.875	1.750	1.750	3.000	1.812	1.625	3/4-16	50		

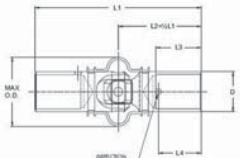
* Grease fittings not available on these sizes. Units are supplied without grease fittings.

BEARINGS – UNIVERSAL JOINTS

MS20271 UNIVERSAL JOINTS

Built to conform with and exceed all requirements stipulated in Spec. MIL-J-6193A. High axial and torsional strengths, high strength-weight ratio, no replacement during anticipated service life of aircraft on most installations, permanent lubrication.

Part No.	Nominal Size (In.)	Price Ea
MS20271-B6	3/8	
MS20271-B8	1/2	
MS20271-B10	5/8	
MS20271-B12	3/4	
MS20271-B14	7/8	



Dash #	+.000, -.002 (+.000, -.051) Outside Dia.		+/- .015 (+/- .381) Overall Length		+.031, -.000 (-.787, -.000) Bore Depth		+.004, -.025 (+.102, -.025) Bore Dia.		+/- .015 (+/- .381) Insp. Hole Loc.		Max Dia. (+.102, -.025) Cover Dia.		Weight Max		Price
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg.	
B6	.372	9.45	2.0	50.80	.500	12.70	.250	6.35	.437	11.10	.781	19.84	.07	.032	
B8	.495	12.57	2.625	66.67	.625	15.88	.375	9.52	.562	14.27	1.031	26.19	.09	.041	
B10	.620	15.75	2.750	69.85	.750	19.05	.500	12.70	.687	17.45	1.156	29.36	.18	.082	
B12	.745	18.92	3.187	80.95	.875	22.22	.625	15.88	.812	20.62	1.437	36.50	.24	.109	
B14	.870	22.10	3.625	92.07	1.00	25.40	.750	19.05	.937	23.80	1.562	39.67	.35	.159	

*Five hour test at 15° angle.

TORSIONAL OVERLOADS

AXIAL OVERLOADS



Temporary torsional overloads as great as 80% of rated ultimate have been handled by these universal joints without harmful binding.

Temporary axial overloads ranging up to 150% in excess of rated ultimates have been imposed without binding. These characteristics insure high safety factors under the most difficult operating conditions.

H-9426 BALL JOINT

* Hex: 1/2 Inch * Thread: 5/16-18 * Ball: 10 mm
P/N 06-00675.....



BALL JOINT ASSEMBLIES COMMERCIAL

Ball Joint Style	Female End	Male End	Part No.	Price
Is similar to AN276-6 but no longer tapered	1/4-28	1/4-28	05-07300	
Commercial	10-32	1/4-28	05-07400	
Commercial	10-32	10-32	05-07500	
Commercial	1/4-28	1/4-28	05-07600	

GEARS, CHAINS, SPROCKETS AND BEARINGS



BOSTON GEAR PRODUCTS

STEEL SPROCKETS - These sprockets have many applications in a control system. Hub type.

Part No.	Chain No. of Size	Teeth	Price
05-03441	1/4"	12	
25B15	1/4"	15	
05-03442	1/4"	20	
35B14	3/8"	14	

BUSHINGS - As used on the Solitaire Sailplane.

Bushing Part No.	Price
FF520-10	
FF620	

ROLLER CHAIN - These chains fit above sprockets.

1/4" Chain - 10 Ft.	P/N 05-29325	
3/8" Chain - 10 Ft.	P/N 05-29335	
Extra Links - S25	P/N 05-29300	
Extra Links - S35	P/N 05-29350	
FB-35-1.....Flange Bearing	G-481-G Gear	
FB-35-2.....Flange Bearing	G-481Y-P Pinion	
FB-1012-4.....Flange Bearing	NF-14-6-8 Bearing	
FB-1013-8.....Flange Bearing	NF-16-8-9 Bearing	
FB-1620-10.....Flange Bearing		
FB-46-2.....Flange Bearing		

COMPLETE LINE OF BOSTON GEAR PRODUCTS AVAILABLE

BRONZE BUSHINGS SS-610-8

Cast Bronze bearings fit a wide range of applications.
Key Benefits:
High Strength, Excellent Machinability
P/N 04-01937.....



ASSORTED SPRINGS

Spring	Part No.	Application	Spring Type	Length	Price Each
Century Spring #186-C	01-27200	VariEze	Tension	2"	
Rudder Return Spring	01-27300	"	Tension	4 1/2"	
Landing Brake	01-27600	VE/Long-EZ	Tension	10"	
Tension Spring*	01-37500	"	Tension	30"	
Landing Brake	01-27900	Cozy	Tension	12 1/2"	

SINTERED BRONZE OIL IMPREGNATED BEARINGS PLAIN BEARINGS

Part Number	Hole ID	Hole OD	Length	Price
05-01977	3/16	5/16	3/4"	
05-01976	1/4	3/8	1"	
05-01974	1/2	3/4	3/4"	
05-01975	1/2	3/4	3/4"	
05-01979	9/16	3/4	1"	
05-01978	5/8	3/4	1"	
05-01891	3/4	7/8	1"	

FLANGE BEARINGS

Part Number	Hole ID	Hole OD	Length	Flange OD	Flange Thickness	Price
05-01949	1/4	3/8	1/4"	15/32	1/16	
05-01947	1/2	5/8	1/2"	7/8	1/16	
05-01946	1/2	5/8	1"	7/8	1/16	
05-01948	1/2	3/4	1"	15/16	1/8	
05-01951	5/8	3/4	1/2"	1	3/32	
04-01638	5/8	3/4	1"	1	3/32	
05-01950	3/4	7/8	3/4	1-1/8	1/8	
05-01945	1	1-1/4	3/4	1-5/8	1/8	

SINGLE-ROW TAPERED ROLLER BEARINGS



The most basic and widely used tapered bearing, the single-row type consists of the cone assembly and the cup. It is usually fitted as one of an opposing pair. During equipment assembly, single-row bearings can be set to the required clearance (endplay) or preload condition to optimize performance. Single-row tapered roller bearings have positive roller alignment that ensures true rolling motion and generates a "seating force" that pushes the roller against the cone large rib. This seating force prevents the rollers from skewing off apex, thereby keeping them positively aligned and located against the cone large rib.
P/N 05-29749.....

BELLCRANK BEARINGS



Part No.	Bore	Flange Dia.	Race Width	Price Each
BC4W10* (AN218-4)	1/4"	1-5/8"	5/8"	
BC5W11	5/16"	1-11/16"	5/8"	

*Military P/N AN218P4 / MS20218-1

All bearings inspected per MIL-I45208A. 100% traceable. Currently installed on new and rebuilt certified aircraft. Prepacked with lubricant conforming to MIL-G-23827

AP

THROTTLES – CONTROLS

ACS CONTROLS

The ACS line of controls was manufactured by Aircraft Spruce and Specialty Company from 1980 to 1985. As of June, 1985 the controls have been manufactured by ACS Products Company in Lake Havasu City, Arizona. The manufacturing and inspection procedures have been approved by the FAA and original equipment manufacturers. The following engineering data will aid in properly identifying the control most suited to each individual requirement. Also shown are some available options for the controls such as plastic protective covering and steel sleeves for clamping the control to the aircraft structure.

The ACS A-790 vernier control and the A-800 friction lock control have been approved by the FAA for installation in the Cessna 150, 152, & 172 series aircraft.

ENGINEERING DATA

Control Model No.	Control Type	Stroke at 0 Routing	Decrease in Stroke per 360° of Bend	Control Model No.	Control Type	Stroke at 0° Routing	Decrease in Stroke per 360° of Bend
A-700	Button Lock (Wire End)	4.00**	0.50"	A810	Friction Lock (1/4-28)	3.50"	0.35"
A-730	Glide Free (Wire End)	4.00**	0.50"	A920	Push-Pull (10-32)	3.37"	0.35"
A-740	Ratchet (Wire End)	4.00**	0.50"	A930	Push-Pull (1/4-28)	3.37"	0.35"
A-750	Vernier (10-32)	3.37**	0.35"	A970	Vernier (1/4-28)	3.50"	0.35"
A-790	Vernier (Wire End)	4.00**	0.35"	A1550	Push-Pull (10-32) with Bulkhead Fittings	3.37"	0.35"
A-800	Friction Lock (10-32)	3.37**	0.35"				

*Length of exposed wire. **Recommended minimum bending radius for all controls is 5" (never less than 3")

PLASTIC COVERING ON CONTROL CASING

All ACS controls can be supplied with a black Polyolefin (PO) protective cover. Price of the PO cover carries a base price of \$3.00 plus the length of control in ft. multiplied by 1.50 for lengths to 10 ft. For lengths over 10 ft., use \$3.00 base price plus \$1.90/ft. for PO cover plus a 425 set-up fee. Example: Cost of PO cover on 5 ft. control is \$3.00 plus 5 x 1.40 = \$10.00. Cost of PO cover on 15 ft. control is \$3.00 plus 15 x 1.90 = \$31.50.

STEEL SLEEVES ON CONTROL CASING

Cadmium plated 2" long steel sleeves can be added to the casing to provide clamping points for securing the control to the aircraft structure. Specify sleeve location (measurement taken from under the panel nut to mid-point of sleeve). Sleeves are normally swaged to the casing but will be left unswaged when specified. Add \$7.50 for installation of sleeves on A730 & A740 controls. **Price/Sleeve \$4.00**

THREADED STEEL SLEEVES ON CONTROL CASING

Threaded steel sleeves ("bulkhead" fittings) can be added to the casing to provide secure clamping of the control where it passes through a bulkhead. The cadmium plated sleeves are 2" long, with 1-1/2" length of 7/16-20 threads. Specify sleeve location (measurement taken from under the panel nut to mid-point of sleeve). Sleeves are normally swaged to the casing but will be left unswaged when specified. Add \$7.50 for installation of sleeves on A730 & A740 controls. **Price/Sleeve \$6.00**

HOW TO ORDER CONTROLS

STOCK CONTROLS - All stock controls are identified by a part number as shown in the descriptions of the controls. To order a stock control, specify control type, knob color, length to nearest 1/8" (measured as described in text), and any added features such as PO cover on flexible casing or steel sleeves centered at specified distances from panel nut (lengths of stock controls are in whole-foot increments and only lengths listed are stocked). Include 7-digit part number as shown in text.

SPECIAL-LENGTH CONTROLS - If you require a special-length control, specify control type, knob color, length to nearest 1/8" and any added features such as PO cover, etc. Special-length controls carry a set-up charge in addition to the cost of the control (calculated as described in the texts).

CUSTOM CONTROLS - If you do not find the type of control you require in this catalog, send a detailed sketch with dimensions, or the old control as a sample, to Aircraft Spruce & Specialty Co., 225 Airport Circle, Corona, CA 92880-2527 (1-800-824-1930). Custom controls are priced like similar stock controls but with a \$35 set-up and engineering charge added, plus costs for any special parts which must be fabricated for the control.

VERNIER CONTROLS

Vernier controls assure smooth operation - cannot creep. For coarse adjustment, depress center button and push or pull. For fine adjustment, turn knob. Smooth acting at all temperatures. Casing is made of tightly wound galvanized steel wire. Inner shaft is stainless steel cable (Models A-750 and A-970) or stainless steel wire (Model A-790). Low-friction operation is provided by an internal extruded Teflon liner. Controls have 1-1/4" dia. plastic knob with 3/4" dia. aluminum release button. A protective black PVC cover is available as an option on controls. Choice of knob color - black, red or blue (FAA Color Code: Black - Throttle, Red - Mixture, Blue - Prop), and knob design (see below).



Throttle Control
(Black) (FAA Color) Or White



Mixture Control
(Red)



Prop Control
(Blue)

The FAA has recently adopted a standard configuration for cockpit control knobs in production aircraft type-certificated after August 11, 1986. The red mixture knob is to have six raised ridges whereas the blue prop control is to have the opposite profile with six grooves. The black throttle control knob is to have a smooth profile. The different knob contours assure positive identification by touch.

Aircraft Spruce is proud to offer the ACS line of vernier controls with the new style FAA knobs at no extra charge. The throttles will be furnished with the smooth black knob, the mixture controls with the contoured red knob and the prop controls with the contoured blue knob. Look to Aircraft Spruce & Specialty Company for a complete selection of original installation or replacement controls at tremendous savings.

REPLACEMENT PARTS FOR ACS CONTROLS



ACS large Control Cable Grommet made of black synthetic rubber. P/N 05-02633.....

ACS Rubber Grommets N-549-A (Small) P/N 05-02634.....



ACS Large Black Knob A-663-A for the A-800 controls. 05-03416.....

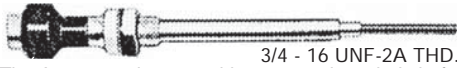


Replacement ball bearings for A790 Controls P/N 05-07700

Replacement ball bearings for A700/A-1840 Controls P/N 05-02618

NOTE: The Grommets (rubber boots) fit all ACS 10-32 threaded end controls, such as: A-750, A-800, A-770, A-1860, A-920, A-1550, A-1750, A-950, and A-1760.

THROTTLES – CONTROLS



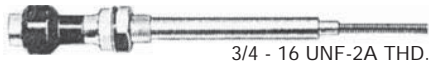
A-750 VERNIER CONTROL
(10-32 THREADED END)

3/4 - 16 UNF-2A THD.

The A-750 vernier control has 10-32 threaded shaft for use with ball point or threaded terminal. Unique ball-socket construction permits the threaded end to swivel 8° in any direction. Casing has Teflon inner liner for low friction and heat resistance in high-temperature areas such as engine compartments. Features stainless steel end fittings, swivel, and end rod. Furnished with FAA-style knobs (Black, Red & Blue). Travel: 3-3/8". Wt. 1 lb. (4'). Stocked in the following lengths (measurement taken from under panel nut to end of threaded shaft with knob pushed in). Order by Part No.

Knob Color	Length					
	3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8 Ft.
Black	05-07736	05-07748	05-07760	05-07772	05-07784	05-07796
Red	05-07836	05-07848	05-07860	05-07872	05-07884	05-07896
Blue	05-07936	05-07948	05-07960	05-07972	05-07984	05-07996
Price						

SPECIAL LENGTH CONTROLS - Use price of next longest control in chart (by foot) plus \$20.00 set-up charge for controls under 10 feet, \$40.00 for controls 10 feet and over. For controls longer than shown in chart, also add \$1.45 per foot for each foot over the longest length. Measure length from under panel nut to end of control with knob pushed in. Allow 2-3 weeks for special length controls. **Glasair Prop Control A-750 Blue 80" long**P/N 05-07980



A-790 VERNIER CONTROL
(SOLID-WIRE END)

3/4 - 16 UNF-2A THD.

The A-790 vernier control has a .078" dia. stainless steel wire core. Both the wire and Teflon lined flexible casing may be shortened as required. The Teflon liner provides low friction with heat resistance in high temperature areas such as engine compartments. Furnished with FAA-style knobs (Black, Red & Blue). Max. travel: 3-3/8". Stocked in the following lengths (measurement taken from under the panel nut to end of wire with knob pushed in). Order by Part Number.

Knob Color	Length					
	3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8 Ft.
Black	05-08036	05-08048	05-08060	05-08072	05-08084	05-08096
Red	05-08136	05-08148	05-08160	05-08172	05-08184	05-08196
Blue	05-08236	05-08248	05-08260	05-08272	05-08284	05-08296
Price						

SPECIAL LENGTH CONTROLS - Use price of next longest control in chart (by foot) plus \$20.00 set-up charge for controls under 10 feet, \$40.00 for controls 10 feet and over. For controls longer than shown in chart, also add \$1.45 per foot for each foot over the longest length. Measure length from under panel nut to end of control with knob pushed in. Allow 2-3 weeks for special length controls. Replacement Ball Bearing for A-790 ControlsP/N 05-07700



A-970 VERNIER CONTROL
(1/4-28 THREADED END)

The A-970 vernier control is similar to the Model A-750 described above but with 1/4-28 threaded end (non-swiveling). Casing has Teflon inner liner for low friction and heat resistance in high-temperature areas such as engine compartments. Features stainless steel end fittings, swivel, and end rod. Furnished with FAA-style knobs (Black, Red & Blue). Travel: 3-3/8". Stocked in following lengths (measurement taken from under panel nut to end of threaded shaft with knob pushed in). Order by Part Number.

Knob Color	Length					
	3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8 Ft.
Black	05-08336	05-08348	05-08360	05-08372	05-08384	05-08396
Red	05-08436	05-08448	05-08460	05-08472	05-08484	05-08496
Blue	05-08536	05-08548	05-08560	05-08572	05-08584	05-08596
Price						

SPECIAL LENGTH CONTROLS - Use price of next longest control in chart (by foot) plus \$20.00 set-up charge for controls under 10 feet, \$40.00 for controls 10 feet and over. For controls longer than shown in chart, also add \$1.45 per foot for each foot over the longest length. Measure length from under panel nut to end of control with knob pushed in. Allow 2-3 weeks for special length controls.



A-800 FRICTION LOCK CONTROL
(10-32 THREADED END)

The A-800 friction lock control provides positive locking at any power setting by turning the chrome collet locking nut. Unique ball-socket construction permits 10-32 threaded end to swivel 8° in any direction. Casing has Teflon liner for low friction and heat resistance in high-temperature areas such as engine compartments. Travel: 3-3/8". The 1-1/4" dia. solid knob is available in black or blue (blue knob has smooth profile, not FAA style). Stocked in following lengths (measurement taken from under panel nut to end of threaded shaft with knob pushed in). Order by Part No.

Knob Color	Length					
	3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8 Ft.
Black	05-08636	05-08648	05-08660	05-08672	05-08684	05-08696
Blue	05-08836	05-08848	05-08860	05-08872	05-08884	05-08896
Price						

SPECIAL LENGTH CONTROLS - Use price of next longest control in chart (by foot) plus \$20.00 set-up charge for controls under 10 feet, \$40.00 for controls 10 feet and over. For controls longer than shown in chart, also add \$1.45 per foot for each foot over the longest length. Measure length from under panel nut to end of control with knob pushed in. Allow 2-3 weeks for special length controls.

A-800 VANS CONTROL CABLE FOR RV AIRCRAFT

Specify knob color (black, blue, red), overall length of control (from under panel nut to end of control) and stroke (2-1/4", 2-1/2"). For controls over 72" long, add \$1.50 per foot. For custom stroke (2-3/8", 2-3/4", 3-1/2") add \$45 to cost of control. P/N 05-01436.....

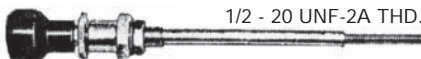


A-810 FRICTION LOCK CONTROL
(1/4-28 THREADED END)

The A-810 friction lock control is similar to the A-800 control but with 1/4-28 threaded end (non-swiveling). With Teflon liner. Travel: 3-3/8". Knob styles and length measurement same as for A-800. Stocked in the following lengths. Order by Part Number.

Knob Color	Length					
	3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8 Ft.
Black	05-09236	05-09248	05-09260	05-09272	05-09284	05-09296
Blue	05-09336	05-09348	05-09360	05-09372	05-09384	05-09396
Price						

SPECIAL LENGTH CONTROLS - Use price of next longest control in chart (by foot) plus \$20.00 set-up charge for controls under 10 feet, \$40.00 for controls 10 feet and over. For controls longer than shown in chart, also add \$1.45 per foot for each foot over the longest length. Measure length from under panel nut to end of control with knob pushed in. Allow 2-3 weeks for special length controls.



A-820 FRICTION LOCK CONTROL
(SOLID-WIRE END)

1/2 - 20 UNF-2A THD.

The A820 friction lock control is similar to the A-800 control but with a solid wire end like the A-790 control above. With Teflon liner. Travel: 3-3/8". Knob styles and measurements same as for A-800.

Knob Color	Length					
	3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8 Ft.
Black	05-09436	05-09448	05-09460	05-09472	05-09484	05-09496
Blue	05-09536	05-09548	05-09560	05-09572	05-09584	05-09596
Price						

SPECIAL LENGTH CONTROLS - Use price of next longest control in chart (by foot) plus \$20.00 set-up charge for controls under 10 feet, \$40.00 for controls 10 feet and over. For controls longer than shown in chart, also add \$1.45 per foot for each foot over the longest length. Measure length from under panel nut to end of control with knob pushed in. Allow 2-3 weeks for special length controls.

FAA APPROVED A-790 CONTROLS

The A-790-12 vernier mixture control. A790-12 is 53" long. Note: For Special Length Controls over 25 ft. Long, Add Extra \$15.00 to set-up fee. P/N A-790-12

AP

THROTTLES – CONTROLS

A-700 BUTTON LOCK DASH CONTROL (7/16-20 UNF-2A THREADS / SOLID WIRE END)



Provides a 10-lb. locking force for light and medium service applications. Black or Red anodized aluminum knob with aluminum release button. Has .062" dia. stainless steel wire core in flexible metal casing. May be shortened as req. Max. travel 3-1/2". Order by Part No.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-13172	05-13184	05-13196	05-13120
Red	05-13272	05-13284	05-13296	05-13220
Price				

Replacement Ball Bearing for A-700/A-1840 Controls
P/N 05-02618

A-770 BUTTON LOCK DASH CONTROL (10-32 THREADED END)



Same as A-700 control above except has 10-32 threaded end, with .078" dia. stainless steel inner cable and Teflon-lined flexible casing. Order by part number.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-16172	05-16184	05-16196	05-16120
Red	05-16272	05-16284	05-16296	05-16220
Price				

A-780 BUTTON LOCK DASH CONTROL (1/4-28 THREADED END)



Same as A-700 control above except has 1/4-28 threaded end, with .078" dia. stainless steel inner cable and Teflon-lined flexible casing. Order by part number.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-16372	05-16384	05-16396	05-16320
Red	05-16472	05-16484	05-16496	05-16420
Price				

A-1860 T-HANDLE BUTTON LOCK DASH CONTROL (10-32 THREADED END)



Same as A-770 control above except has black powder-coated aluminum T-handle with aluminum release button. Order by part number.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-16672	05-16684	05-16696	05-16620
Price				

A-1840 T-HANDLE BUTTON LOCK DASH CONTROL (SOLID WIRE END)



Same as A-700 control above except has black powder-coated aluminum T-handle with aluminum release button. Order by part number.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-13572	05-13584	05-13596	05-13520
Price				

EXTENSIONS FOR THREADED CONTROLS



Use these stainless steel extensions for moderate length adjustments to stock length controls. Stocked with 1 male & 1 female threaded end. The extensions provide the required increase in control length when threaded approximately half way onto the control. Furnished in 2", 3", 4", 5" and 6" lengths. All extensions have 10-32 threads. To order, add -2, -3, -4, or -5 to

Dash number for length. P/N 10376...../ea

A-1870 T-HANDLE BUTTON LOCK DASH CONTROL (1/4 - 28 THREADED END)



Same as A-780 control above except has black powder-coated aluminum T-handle with aluminum release button. Order by part number.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-16872	05-16884	05-16896	05-16820
Price				

A-730 GLIDE FREE CONTROL (SOLID WIRE END)



Simple design for push-pull operation with low friction characteristics. Has .050" dia. stainless steel wire core in flexible metal casing with polyethylene liner. May be shortened as required. Max. travel 3-1/2". Available with black or red plastic knob. Order by Part No.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-13672	05-13684	05-13696	05-13620
Red	05-13772	05-13784	05-13796	05-13720
Price				

A-1770 T-HANDLE GLIDE FREE CONTROL (SOLID WIRE END)



Same as A-730 above except with black powder coated aluminum T-handle. Order by part number.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-13872	05-13884	05-13896	05-13820
Price				

A-740 RATCHET CONTROL (SOLID WIRE END)



Ratchet design provides detented positions under vibration conditions. Simple push-pull operation. Has .050" dia. stainless steel wire Core in flexible metal casing with polyethylene liner. May be shortened as required. Max. travel 3-1/2". Available with black or red plastic knob. Order by Part No.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-14072	05-14084	05-14096	05-14020
Red	05-14172	05-14184	05-14196	05-14120
Price				

A-1780 T-HANDLE RATCHET CONTROL (SOLID WIRE END)



Same as A-740 above except with black powder coated aluminum T-handle. Order by part number.

Knob Color	Length			
	6 Ft.	7 Ft.	8 Ft.	10 Ft.
Black	05-14272	05-14284	05-14296	05-14220
Price				

CONTROL END EXAMPLES

SOLID WIRE



SOLID WIRE SPEC END STYLE C



10-32 THREADED END



1/4"-28 THREADED END



THROTTLES – CONTROLS

A-920 PUSH-PULL CONTROL (10-32 THREADED END)



This control has 10-32 threaded ends with 8° swivel & 3-3/8" stroke. It has Teflon casing liner for use in high-temperature areas such as engine compartments, & .078" dia. stainless steel inner cable to minimize backlash. Stocked in the following lengths. Order by Part No.

Control Length	Part No.	Price	Control Length	Part No.	Price
36"	05-12736		96"	05-12796	
48"	05-12748		108"	05-127108	
60"	05-12760		120"	05-127120	
72"	05-12772		132"	05-127132	
84"	05-12784		144"	05-127144	

A-930 PUSH-PULL CONTROL (1/4-28 THREADED END)



This control has 1/4-28 threaded ends (nonswiveling) and 3-1/2" stroke. It has Teflon casing liner for use in high-temperature areas such as engine compartments, and .078" dia. stainless steel inner cable to minimize backlash. Stocked in the following lengths. Order by Part No.

Control Length	Part No.	Price	Control Length	Part No.	Price
36"	05-30036		96"	05-30096	
48"	05-30048		108"	05-30108	
60"	05-30060		120"	05-30120	
72"	05-30072		132"	05-30132	
84"	05-30084		144"	05-30144	

SPECIAL LENGTH CONTROLS – Refer to chart for price of next longest control (by foot), and add a \$20.00 set-up charge for controls up to 10 feet, \$40.00 for controls over 10 feet. For lengths over 144" add \$1.45 for each extra foot or fraction of a foot. Allow 2 - 3 weeks.

A-1550 PUSH-PULL CONTROL (10-32 THREADED END)



This control has same design as A-920 control but with 7/16-20 threaded bulkhead fittings added at each end. Not stocked. Available at base price of \$31.25 + \$1.45 per ft. or fraction of a foot + \$20 set-up charge

A-1750 VERNIER CONTROL (10-32 THREADED END)



A-1750 Vernier Control: features - removable button and facenut and 2" of control panel threads for those difficult mounting applications. (10-32 threaded control rod like the A-750 control.)

Knob Color	Length					
	3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8 Ft.
Black	05-10236	05-10248	05-10260	05-10272	05-10284	05-10296
Red	05-10336	05-10348	05-10360	05-10372	05-10384	05-10396
Blue	05-10436	05-10448	05-10460	05-10472	05-10484	05-10496
Price						

A-1970 VERNIER CONTROL (1/4-28 THREADED END)



A-1970 Vernier Control same features as the A-1750 except it has the A-970 style (1/4 x 28 threaded rod)

Knob Color	Length					
	3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8 Ft.
Black	05-09636	05-09648	05-09660	05-09672	05-09684	05-09696
Red	05-09736	05-09748	05-09760	05-09772	05-09784	05-09796
Blue	05-09836	05-09848	05-09860	05-09872	05-09884	05-09896
Price						

SPECIAL LENGTH CONTROLS – Use price of 10 ft. control plus \$1.45 per ft. or fraction of a foot, plus \$20.00 set-up charge for controls up to 10 feet, \$40.00 for controls over 10 feet. Allow 2 - 3 weeks.

CONTROLS WITH COILED WIRE END – Add \$7.50 to cost. To order, add "C" to part number. Controls with coiled end have only 3" stroke rather than 3-1/2" on standard end controls.

A-950 PUSH-PULL CONTROL (10-32 THREADS / SOLID WIRE END)



Same as A-920 control except one end is .078" dia. stainless steel wire. Special-length controls not required as the wire end can be cut off to desired length. Order by Part No.

Control Length	Part No.	Price	Control Length	Part No.	Price
36"	05-16936		96"	05-16996	
48"	05-16948		108"	05-169108	
60"	05-16960		120"	05-169120	
72"	05-16972		132"	05-169132	
84"	05-16984		144"	05-169144	

A-960 PUSH-PULL CONTROL (1/4-28 THREADS / SOLID WIRE END)



Same as A-930 control except one end is .078" dia. stainless steel wire. Special-length controls not required as the wire end can be cut off to desired length. Order by Part No.

Control Length	Part No.	Price	Control Length	Part No.	Price
36"	05-17036		96"	05-17096	
48"	05-17048		108"	05-170108	
60"	05-17060		120"	05-170120	
72"	05-17072		132"	05-170132	
84"	05-17084		144"	05-170144	

A1600 SERIES POSITIVE LOCK CONTROLS – SINGLE END



These positive-locking controls are available with white, black, or blue knob or T-handle style in black or aluminum. Complete part number with -W for white, -B for black knob, -BU for blue knob, -TB for t-handle black or -TA for T-handle aluminum. Special length controls are available at price for next longer control + \$1.45 per foot + \$20 set-up charge for controls up to 10 feet, \$40.00 for controls over 10 feet.

Control	End	6 Ft.		7 Ft.		8 Ft.		10 Ft.	
		Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
A-1610	.078 Wire	05-17172		05-17184		05-17196		05-17120	
A-1620	10-32 Thread	05-17272		05-17284		05-17296		05-172120	
A-1630	1-1/4-28 Thread	05-17372		05-17384		05-17396		05-17320	

POSITIVE LOCK CONTROLS – DUAL END



These positive-locking dual controls are available with white, black, or blue knob or T-handle style in black or aluminum. Complete part number with -W for white, -B for black knob, -BU for blue knob, -TB for t-handle black or -TA for T-handle aluminum. Special length controls are available for price of next longer control (for longest of the two cables) + \$1.45 per foot + \$20.00 set-up charge for controls up to 10 feet, \$40.00 for controls over 10 feet. Specify exact length of both cables when ordering.

Control	End	6 Ft.		7 Ft.		8 Ft.		10 Ft.	
		Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
A-1640	.078 Wire	05-17472		05-17484		05-17496		05-17420	
A-1650	10-32 Thread	05-17572		05-17584		05-17596		05-17520	
A-1660	1-1/4-28 Thread	05-17672		05-17684		05-17696		05-17620	

A-1760 VERNIER CONTROL (10-32 THREADED END)



A-1760 Vernier Control like a A-750 control except it has a threaded bulkhead fitting in place of the grooved or notched fitting.

Knob Color	Length					
	3 Ft.	4 Ft.	5 Ft.	6 Ft.	7 Ft.	8 Ft.
Black	05-09936	05-09948	05-09960	05-09972	05-09984	05-09996
Red	05-10036	05-10048	05-10060	05-10072	05-10084	05-10096
Blue	05-10136	05-10148	05-10160	05-10172	05-10184	05-10196
Price						

A-1760 VANS RV CUSTOM CONTROL CABLE

Specify knob color (black, blue, red), overall length of control (from under panel nut to end of control) and stroke (2-1/4", 2-1/2"). For controls over 72" long, add \$1.50 per foot. For custom stroke (2-3/8", 2-3/4", 3-1/2") add \$45 to cost of control. P/N 05-01435

AP

THROTTLES – CONTROL ATTACHMENTS

FRICITION THROTTLE

Adjustable friction throttles with same construction as the ACS A-800 friction throttle but with a large (2" dia.) black solid plastic knob. Has 3/16" dia. 10-32 threaded end with 8° swivel. Stocked in the following lengths (measurement taken from under panel nut to end of threaded shaft with knob pushed in). Order by Part No.

Length	Part No.	Price	Length	Part No.	Price
3 Ft.	05-13700		5 Ft.	05-13900	
4 Ft.	05-13800		6 Ft.	05-14000	

SPECIAL LENGTH CONTROLS - Use price of next longest stock length above plus \$20 set-up charge. For lengths over 6 ft. also add \$1.45 per foot. Allow 2-3 weeks.

THROTTLE KNOB - Black solid plastic knob, 2" dia., with 1/4-28 internal threads. P/N05-29100

BUTTON TYPE DASH CONTROL

Button Type Dash Control designed for use with many control system applications. Easily installed. Operates smoothly. All adjustable parts are metal. 7/8" Dural button on 3/16" diameter shaft. Maximum travel is 2". Furnished in 5 ft. and 8 ft. length. May be shortened. Order Inserts separately.



5 Ft. Dash ControlP/N 05-14200

8 Ft. Dash ControlP/N 05-14300

INSERTS ONLY - Round pressure-sensitive labels, 3/4" dia. White lettering on black background. Order by part number. Basic P/N is 05-144-. Last two digits of P/N are as shown in above illustration.

Example: 05-14460 is "Starter" Ea

T-HANDLE DASH CONTROL

T-Handle dash control manufactured of duralumin and brass. Locks positively, will not vibrate loose. One-fourth turn locks it in any position and will hold up to 200 lbs. Standard travel 2-1/2". T-handle is 1-3/4" wide. Can be mounted from front or rear of instrument panel. Complete with wire and casing which may be shortened.

SINGLE WIRE
5 Ft. Control..... P/N 05-15000
8 Ft. Control..... P/N 05-15100
12 Ft. Control..... P/N 05-15200

TWO WIRES - 8 Ft. Control..... P/N 05-15300

THROTTLE CONTROL

McFarlane Aviation offers FAA/PMA approved throttle, propeller, and mixture controls for most single engine Cessna and Piper aircraft. The "pilot friendly" knobs are all compression molded from reinforced phenolic resin. The phenolic knobs are hard and stable. Unlike the soft injection molded knobs, they resist scratching and the effects of sunlight and age. The McFarlane knobs meet the latest F.A.R. require ments for shape, and color. When ordering please provide: Make, Model, and Serial.

P/N 05-02486

EYEBALL FIREWALL ASSEMBLY

A swiveling firewall carry through assembly allows easy installation of cables with oblique entry/exit angles. Assembly includes the eyeball swivel, cable pass through, and line clasper. The eyeball swivels up to 50 degrees and is clamped in place to complete installation. It comes in 0.125, 0.188, 0.218, and 0.260 inch sizes. The hole is easily enlarged for other sizes.

Ball Matl.	Aluminum		Steel		Aluminum	
	Appx. Wt.	0.08 lb.	0.07 lb.	0.10 lb.	Model No.	SE961-B
Hole Size	Part No.	Price	Part No.	Price	Part No.	Price
.125"	05-03440		05-00764		05-00722	
.188"	05-00957		05-00766		05-00723	
.218"	05-01378		05-01381		05-01383	
.240"	05-01379		05-01382		05-01384	
.250"	05-00958		05-00767		05-00724	
.260"	05-00959		05-00768		05-00726	
.375"	05-01380					

ROTAX DUAL CARBURETOR THROTTLE CONTROLS

Allows a neat, clean throttle installation without a clunky splitter box. Supersmooth friction lock, heavy duty 0.062 inch stainless steel inner wires.

Description	Part No.	Price	Description	Part No.	Price
4' Std Knob	05-04385		6' Std Knob	05-04386	
6' Std Knob	05-04387		4' Ball Knob	05-04388	
6' Ball Knob	05-04389		8' Ball Knob	05-04390	

ATTACHING HARDWARE FOR CONTROLS

WIRE GRIP - Is a unique fitting which securely attaches to solid wire end push-pull cables. Uses a "pin vice" gripping action to attach a cable. The 5/8" long 10-32 threaded end will attach a clevis, ball joint, or other hardware for use with mixture controls, carb heat box, cabin air, or other applications, resulting in a clean, professional installation.

For .050 - .060 dia cablesP/N 05-16000

For .078 dia cablesP/N 05-16001

(Use P/N 05-16001 on A790 ACS controls)

AN486 TERMINALS - With 1/4-28 female threads. Fork hole dia. 3/16". AN486-3P has 17/64" fork opening. AN486-4P has 9/64" fork opening.

P/N AN486-3P.....

P/N AN486-4P.....

AN665-21R TERMINAL - Has 10-32 threads and 3/16" dia. fork hole. Furnished with clevis pin, cotter pin and locknut. P/N 05-02500

BOLT TYPE TERMINAL - Special 3/16" dia. bolt with drilled shank. With hex nuts and washers. Use instead of "bug" nutP/N 05-16100

CONTROL HOUSING CLAMPS - AN742 plain loop type clamps to secure housing of throttles, dash controls, Bowden cable, etc. to airframe.

AN742-D3 for 3/16" O.D

AN742-D4 for 1/4" O.D

SLOTTED BRACKET CONTROL MOUNT - Notch of end fitting locks into slot of bracket to secure control. Steel Construction. P/N 10465

CLAMP STYLE CONTROL MOUNT - Protruding "finger" in clamp holds control in position. Two-piece steel clamp and base. P/N 10464

CABLE END "B" NUT - This universal NAP assembly will eliminate bent or smashed push-pull cable ends and get a strong hold at the same time. The cable end lays in a machined channel at the bottom of the screw hole. Tightening the compression screw snugs down on the cable end thus eliminating any potential crimping or smashing of the cable. Eliminates wear, possible cable breakage and enhances smooth push-pull operation. Complete with washers and cotter pin. All stainless steel, computer machined and easy to install.

Part No.	A	B	C	D	Throttle, Wt., .26 oz	P/N 05-16210	/ea.
05-16210	0.70	0.825	1.186	2.41	Mixture, Wt., .29 oz	P/N 05-16230	/ea.
05-16230	0.86	0.825	2.49	2.55	Cabin Heat, Wt., .26 oz	P/N 05-16240	/ea.
05-16240	0.70	0.645	2.49	0.93	Carb Heat	P/N 05-16245	/ea.
05-16245	0.70	0.645	1.86	0.93			

DISCOUNT: LESS 20% ON 25 OR MORE.

CABLE SAFE

A Safe "No-Slip-Grip" for your thru bulkhead cables. This unit prevents your throttle, mixture, choke or any push-pull cable from slipping at the firewall/ bulkhead location. Machined from lightweight aluminum, and final blue anodizing. Installation is simple with a drill and wrench. Once installed, the cable is threaded and the end nut is snugged down on the cable casing for positive encapsulation. Designed specifically for the aircraft industry, these fittings can be installed on virtually any application that requires a solid hold on any cable assembly with a rigid outer case. Thousands of applications: auto, boat, race car, motorhome. Used with 1/4" thru 7/32" diameter cable.

Cable Safe, Wt.: .84 oz.P/N 05-16250

Adapter Bushing for 3/16" Cable Housings...P/N 05-16251

DISCOUNT: LESS 20% ON 25 OR MORE.

CABLE SAFE II - This Fitting is designed for use on coaxial type control cables. It has a two piece design to allow it to be placed over the cable inserted thru the firewall & tightened down, providing a positive lock.

For 1/4" cable housing P/N 05-16252

For 3/8" cable housings..... P/N 05-16253

ADAPTOR - For the cable safe to adapt down to 3/16" diameter cable housings. P/N 05-16251

ONE HOLE EYEBALL ASSEMBLY

Bulkhead carry through assembly with eyeball swivel, cable & line clasp ability. easy installation with one-hole installation. All aluminum construction.

.125 Dia..05-00722

.250 Dia. 05-00724

.188 Dia..05-00723

.260 Dia. 05-00726

THROTTLE QUADRANTS

THROTTLE QUADRANTS FOR RV'S

These quadrants are made from aircraft quality anodized aluminum for long life and corrosion resistance brass friction plates are adjustable to fit individual preferences. Black anodized top plates are machined and engraved on a CNC mill to exacting tolerances for an excellent finish. Side plates are laser cut insuring a perfect fit and feel. All hardware used meets AN standards. Note: All throttle quadrants require a AN665-21R clevis with an AN393-11 clevis pin.

The side mount style quadrants are intended for use in tandem airplanes such as the RV4, RV8, Sterdusters, Baby Great Lakes, One Design, Acro Sport & Sonerai. Center mount style is intended for use in side-by-side aircraft such as RV's, Sonex, Thorp T18 & Pulsars.



3 CONTROL LEVER

Side Mount Curved Top
Model: SMCT3L
Wt: 10 Oz.
7-3/4" H
x 4-3/4" W x 2" D
P/N 05-00698



2 CONTROL LEVER

Side Mount Flat Top
Model: CT82F
Wt: 8 Oz.
7-3/4" H x 4-3/4" W
x 1-1/2" D
P/N 05-00702



3 CONTROL LEVER

Center Mount
Curved Top
Model: CMCT3L
Wt: 12 Oz.
7-3/4" H x 7" W
x 2" D
P/N 05-00701



2 CONTROL LEVER

Center Mount
Curved Top Model:
CMCT2L
Wt: 10 Oz.
7-3/4" H x 7" W
x 2" D
P/N 05-00699



3 CONTROL LEVER

Side Mount Flat Top
Model: CT83F
Wt: 10 Oz.
7-3/4" H
x 4-3/4" W x 2" D
P/N 05-00703



2 CONTROL LEVER

Side Mount
Curved Top
Model: SMCT2L
Wt: 8 Oz.
7-3/4" H x 4-3/4" W
x 1-1/2" D
P/N 05-00697



RV8 REAR QUADRANT

A single lever rear quadrant with an engraved top plate and a short handle for better clearance. 8" x 5-1/4" x 2"
P/N 05-04531

ANDAIR THROTTLE QUADRANTS



The Andair Throttle Quadrant has primarily been designed for the RV range of aircraft. Over several years of flying the RV6, Andair has designed some unique features that give this quadrant its great looks and a solid feel. The handle of the throttle lever is angled to give the best ergonomic position and grip for the right hand, which will fall naturally to take up this position. On top of the handle is the optional flap control switch. This is a key safety feature which allows the pilot to deploy the flaps without taking his or her hand off of the throttle. This gives much greater control on approaches and go arounds. The flap control switch consists of two color coded push to make buttons, one for flaps down and one for flaps up.

Each lever has a small ball race at the lower end and is guided by Teflon® pads at the top to give a feel that is both smooth and accurate. Along the base is a friction nut that can be used to lock all three levers, although this can be overridden with a gentle pressure. The mixture lever has a detent arrangement to positively hold it in the 'cut-off' position.

The mixture lever has a detent arrangement to positively hold it in the 'cut-off' position.

The mixture lever has a detent arrangement to positively hold it in the 'cut-off' position.

Model	Quadrant Includes	Part No.	Price
TQX1	Flap Switches, Propeller Lever, Mixture Lever	05-04481	
TQX2	Propeller Lever, Mixture Lever	05-04482	
TQX3	Flap Switches, Mixture Lever	05-04483	
TQX4	Mixture Lever	05-04484	
TQX5	Flap Switches	05-04485	
TQX6	Quadrant Only	05-04486	
TQX7	Flap Switches, Propeller Lever	05-04487	
TQX8	Propeller Lever	05-04488	

STARFLIGHT THROTTLE QUADRANT



This stylish, precision throttle quadrant was custom designed for Starflight's Lancair Legacy Cockpit though it can be easily incorporated in other aircraft. The throttle quadrant comes with four levers - throttle, propeller, mixture, and a fourth control for ram air, turbocharger, or parking brake. The throttle quadrant is easily reconfigured for 3, 2, or 1 lever for conventional or FA-DEC systems using appropriate sized spacers included. Top quality, all aluminum construction -- even the knobs are machined from aluminum and anodized for correct color. Requires at least 3.5" console width for installation.
P/N 05-04407

HOMEBUILDERS THROTTLE QUADRANTS

These quality quadrants have been in use in a wide variety of experimental and ultralight aircraft for over 25 years. Designed and manufactured to provide years of dependable, precise performance.



Model #1 - This external reversing hook-up quadrant can be used in tandem for dual control. Available with 1, 2, or 3 lever. Weight: 10 oz. Body size: 3.5" x 4".

Single lever quadrant..... P/N 05-15905

Two Lever Quadrant..... P/N 05-15910

Three Lever Quadrant..... P/N 05-15915

Add -F to P/N and \$10 to price for adjustable friction.



Model #2 - This internal non-reversing hook up quadrant is often used on RV-4 and similar homebuilt aircraft. Available in 1, 2, or 3 lever models. Weight: 12 oz. Body Size: 3.5" x 4".

Single lever Quadrant..... P/N 05-15920

Two Lever Quadrant..... P/N 05-15925

Three Lever Quadrant..... P/N 05-15930

Add -F to P/N and \$10 to price for adjustable friction.



Model #3 - This internal reversing hook up quadrant is ideal for a variety of different aircraft models. Available with 1, 2, or 3 lever. Weight: 10 oz. Body size: 3.5" x 4".

Single lever Quadrant..... P/N 05-15935

Two Lever Quadrant..... P/N 05-15940

Three Lever Quadrant..... P/N 05-15945

Add -F to P/N and \$10 to price for adjustable friction.



Model #4 - This popular quadrant was specifically designed for use on RV-3 and RV-4 aircraft and is also applicable to many other homebuilt aircraft. Furnished in two lever model only and furnished with adjustable friction. Weight: 12 oz. Body size: 3.5" x 4".

Two lever Quadrant..... P/N 05-15950



Model #5 - Panel mount quadrant can be an internal reversing or internal non-reversing. Available in S-series only. One, two or three levers. Friction or non-friction. Panel Mount Reversing listed below

Single lever Quadrant..... P/N 05-02436

Two Lever Quadrant..... P/N 05-02437

Three Lever Quadrant..... P/N 05-02438



Model #6 - Twin-engine model: Non-reversing internal or reversing internal unit with a four-arm configuration. L-series only. Friction or non-friction. Twin Engine Reversing Internal listed below. Four lever Quadrant..... P/N 05-02364

Four lever Quadrant w/ Friction..P/N 05-02365

T-BAR HANDLE FOR QUADRANTS

This handle is 3-1/2" long and 1-1/4" round and fits all of the Homebuilders Quadrants above. The arm slot is offset to one side. It is molded urethane and is very durable. Add -1 or -1F (as applicable) to the Part No. and \$25.00 to the price (example: 05-15925-1)

ACS THROTTLE QUADRANTS



Available in two lever designs. The 2-lever control has black plastic "Throttle" knob and red "Mixture" knob. The 3-lever control has blue "Prop" knob in addition to the throttle and mixture knobs. Built-in friction lock. Levers have 2-1/2" travel. Quadrants fit on left or right side of cockpit and can be used in tandem. Complete with aluminized Mylar knob inserts. Ends of throttle and prop levers have 3/16" dia. holes for attachment of push-pull controls with clevis terminals. End of mixture lever has .076" dia. hole to accept solid wire control such as Bowden cable.

Two-Lever Quadrant..... P/N 05-00960

Three-Lever Quadrant (pictured)..... P/N 05-00961

CENTER CONSOLE TURBINE 4 LEVER QUADRANT



Three main levers are chromed with anodized black "Throttle" knob, blue "Prop" knob and red "Fuel" knob.

Also, equipped with red "Emergency FCU" override knob with "Safety pin". Throttle and Fuel levers are designed with Beta stop. These 2 levers pull out and down for fuel idle and fuel cut off. Both of these levers are designed with Beta adjustable CAM Follower bearing movements. Stroke for Throttle, Prop and Fuel is 3-3/8" with 10-32 Rod Ends, Stroke for Emergency FCU override is 2-5/8". All 4 Levers are set up for A-950 push - pull control with 10-32 threads. Throttle, Prop, and Fuel have front facing independent friction locking knobs. Not FAA Approved and for Experimental Use Only. P/N 05-03363

BOWDEN CABLE (SOLID WIRE ENDS)

Spiral-wound galvanized wire casing. Use for push-pull controls of any length. Inside cable dia. .078. Outside casing diameter 7/32".
P/N 05-15500..... / Ft.



BOWDEN CABLE CLAMP

Designed to provide a simple method of anchoring a typical wire wound cable. Used in anchor hole of 7/16" diameter.

For 3/16" Bowden Cable..... P/N 05-15705..... /ea.

For 7/32" Bowden Cable..... P/N 05-03287..... /ea.

AP

BEECHCRAFT ACCESSORIES – CONTROL WHEELS

BEECHCRAFT ACCESSORIES

Designed & built by real-world pilots, manufactured to the highest standards. These products are built for those incomparable Beechcraft. Years of experience and the highest quality materials and construction result in the best products available for Bonanzas & Barons. All have FAA STC/PMA as applicable.

BONANZA/BARON CONTROL YOKE LOCK



Protect your investment with this heat treated lock. It installs quickly and simply (no modification is needed) but cannot be removed without being unlocked. It is a permanent, direct replacement for the original equipment. Complete with the highest quality lock, instructions, and all hardware. P/N 05-00649

Optional clipboard for clearances or notes makes a stable flight center. Spring-loaded, it snaps out of the way in seconds.

Standard.....P/N 05-00650

Deluxe (with Quick Release).....P/N 05-01335

BEECH THROTTLE, MIXTURE, PROP KNOB SET



These high-strength knobs for Bonanzas are a big improvement over old, cracked original equipment and likely the best replacement knobs on the market. Bright color-coded space-age material will not crack or fade and will not get hot like aluminum knobs. P/N 05-00652

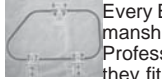
Push buttons only, with new screws P/N 05-00653

WINDOW VENT HINGE & LATCH KIT

For new windows only on Mooney, Piper, Socata, Commander.

P/N 05-01336

BEECH STORM WINDOW HINGE/LATCH KIT



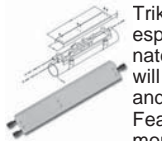
Every Bonanza or Baron pilot will appreciate the quality workmanship in every one of these storm window hinge/latch kits. Professional construction means they work smoothly, and they fit standard factory window holes with no modifications.

Complete hinge/latch kit.....P/N 05-00654

Latch & Stiker only.....P/N 05-00655

Hinges Only.....P/N 05-00656

TRIKSLIDE DUAL THROTTLE MIXER



Trikslide is a dual throttle input-mixer/slider designed especially for trikes and ultralight aircraft. Trikslide eliminates the interaction between two throttle cables. It will mount on any round or square structural member and provides smooth slide action with a full 2" stroke. Features aluminum and delrin construction with universal mounting clamps and a universal control cable connector

which will fit all cable terminations. P/N 05-00782

HOMEBUILDERS CONTROL WHEELS



New lightweight, low cost wheel designed with the home-builder in mind. Approximately same dimensions as above ACS control wheel but weighs only 15 oz. made of cast magnesium. Coated with light gray epoxy paint which can be used as finished or repainted if preferred. Drill blank

mounting post as required.....P/N 246-9

CONTROL YOKE UPGRADES



STYLE SX-100

Now flaking & peeling finish on worn control yokes can be remedied cost effectively by these pilot-installable, semi-flexible, molded grips which are available with push-to-talk button built-into the top of the yoke (not the side). The Model SX-100 grips (pilot & copilot set) and optional, built-in, Model SX-101 plug-in push-to-talk button simply slip-over the thin, "ram's horn" control yokes of Cessna 150, 152, 172, 177, Grumman-American AA-1, AA-5 and early Mooney aircraft. Their thick, padded feel and built-in push-to-talk button add comfort, convenience & value to vintage airplanes. The top-mounted, low profile, miniature push-to-talk button supplied completely wired with plug, jack and coiled cord, is less likely to be pressed by accident, get in

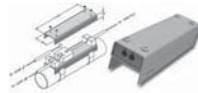
STYLE SX-101 the way or slip out of position than bulky, side-straped, units. Complete your updated yoke configuration with a pair of new model SX-110 center cushions, richly finished in black. Cushions fit neatly over centers of any control yokes.

Model No.	Description (set of 4)	Part No.	Price
SX-100	Molded Grips w/o built-in PTT switch	05-16600	
SX-101	Molded Grips w/1 built-in PTT switch(LH)	05-16630	
SX-101	Molded Grips w/2 PTT switch (L & R)	05-16635	
SX-110	Center Cushions (set of 2)	05-16610	

BEECHCRAFT MAIN GEAR BOLT



This is a replacement for discontinued Main Gear Bolt part number CA101-810089-1. The new part number is CA101-810089-1A. This part has been tested and is superior in tensile strength and fatigue and crack resistance. Eligible for Beechcraft 1900 series aircraft, this is a life limited part that meets all requirements for the full 5 year/10,000 cycle life. The part number and serial number are engraved on the bolt head. P/N 05-04163



DUAL CARBURETOR SPLITTER

Splits a single throttle input into two outputs for dual carburetor installations. Clamp mounting. P/N 05-01823



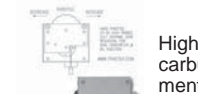
DUAL CARBURETOR SPLITTER WITH OIL INJECTION

Splits a single throttle input into three outputs for dual carburetor installations with oil injection. Clamp mounting. P/N 05-01824



HAND THROTTLE

Medium torque rotation for single carburetors only. 270 degree rotation for fine throttle adjustment. Adjustable friction drag. Clamp mounting - no holes required. Made from weatherproof materials. P/N 05-01825



HAND THROTTLE

High torque, 2.5:1 internal gear reduction. For dual carburetors. 825 degree rotation for fine throttle adjustment. Adjustable friction drag. Clamp mounting - no holes required. Made from weatherproof materials. P/N 05-01826



FOOTPEDAL CABLE CONNECTOR

Convenient foot pedal throttle control. Aluminum/delrin construction with mounting hardware. Universal cable connector--fits all cable terminations. Designed especially for trikes and ultralight aircraft. P/N 05-01827



ACS CONTROL WHEEL A-1310

Designed to be more user friendly than standard control wheels. Mounting position can be raised or lowered one inch by rotating the mounting flange. All parts machined from 6061-T6 billet. The A-1310 Control has cavities for wiring, but does not come prewired or with a mic switch. They can be ordered with a hole drilled for the mic or can be drilled later. Wt: 26 oz. Mounting flange hole sizes: 3/4" or 7/8". Special smaller hole sizes: Add 10.00

3/4" Black Anodized.....P/N 05-02248

3/4" Bare Aluminum.....P/N 05-02279

7/8" Black Anodized.....P/N 05-02282

7/8" Bare Aluminum.....P/N 05-02284

BEECH BONANZA/BARON CONTROL WHEELS



These control wheels are identical in design to the new Beechcraft large ram's horn style wheels. They are powder coated with a highly durable material in the same color as current Raytheon control wheels. Peeling or yellowing that occurs on older Beech wheels has been eliminated by the powder coating process. This control wheel is a direct replacement for the Beech/Raytheon 60-524080-13, 14 (for F33A,

F33C, V35B, A36, and B36TC) and , -17 (for F33A, F33C, A36, B36TC, and 58) control wheels. Can be installed on many other aircraft using FAA form 337 for field approval. FAA Form 8130-3. Hand crafted black leather wrapping is available for these control wheels. Each wheel is individually hand laced and custom fitted to the wheel. We can also hand wrap your existing Beech control wheel in leather. Send your control wheel to Aircraft Spruce in Corona, CA and allow 3 weeks for delivery. An installation kit is required for each control wheel, which includes two thumb plates, a blank face plate, and mounting hardware. A Davtron MB800 digital chronometer installed in the faceplate of the control wheel is also available.



The Basic Control Wheel (P/N 05-00545) now includes a white installation kit. If the black powder-coating option for this installation kit is desired it is an additional \$50.00

Description	Part No.	Price
Basic Control Wheel & White Install Kit	05-00545	
Leather wrapped control wheel install kit	05-00548	
Chronometer with custom faceplate	05-00549	

AP

FUEL TANKS

FUEL WARNING SYSTEM



Float-action sensor in tank activates panel warning light when fuel supply is low. All-PBT unit, impervious to aviation fuel. Use AN 867-4 flange for mounting.

- Sensor.....P/N 6905-400
- Warning Light.....P/N 05-17660
- Bulb(GE-330).....P/N 11-04016

DISCOUNTS: 10% ON 6, 15% ON 12, 20% ON 50

INVERTED PICKUP TUBES



"Flop" tubes for inverted flight are made from Aeroquip 701-6 flexible hose. End fitting swaged onto hose has a 1/4" male pipe thread attached to tank outlet. Available for any of the tanks listed, or others. Specify tank model and tube length. Minimum length available is 9"

- 9"..... P/N 05-20509
- 10".....P/N 05-20510.....
- 11"..... P/N 05-20511
- 12".....P/N 05-20512.....
- 13"..... P/N 05-20513

Add \$1.80 to 13" price for each additional inch.

PICKUP TUBE ADAPTER

Specially machined AN912 fitting for connecting pickup tube to fuel tank.

- For 12" tubes & longer.....P/N 10380
- Specially machined AN912-12D for shorter than 12".....P/N 10380-1.....

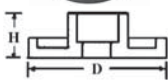
FLOP TUBE ADAPTER WITH SIDE OUTLET



This fitting eliminates the need to put an angle fitting on standard adapter. 1/4" female pipe thread on side and bottom & 1" male pipe or 3/4" male pipe on bottom. Use with AN867-6 or 8. 1" Male Pipe.....P/N 05-20525

3/4" Male Pipe.....P/N 05-20526

ALUMINUM WELDING FLANGES



Part No.	Female Pipe Thread	Dia. "D" In	Height "H" In	Price Each
AN867-1	1/8"	1-1/2	7/16	
AN867-2	1/4"	1-3/4	5/8	
AN867-3	3/8"	1-7/8	5/8	
AN867-4	1/2"	2	3/4	
AN867-6	3/4"	2-1/4	13/16	
AN867-8	1"	2-11/16"	1"	

FINGER STRAINERS



Finger strainers are strainers for fuel tank outlets. Standard size features a brass fitting with 3/8" male pipe thread which fits AN867-3 welding flange, and 1/4" female pipe thread for valve or fuel line fitting. Screen is 16 mesh brass. Large finger strainer has a 3/8"-NPT x 1/2"-M-NPT brass bushing with a T304 stainless steel screen.

- Standard.... P/N 05-17700.....
- Large P/N 05-04445

RAVEN HEADER TANKS



Header tank used for any aerobatic aircraft such as Pitts Specials etc. Comes with mounts to attach to existing tank straps, clamps and weld-in fitting for main tank. 16" x 7" in diameter. Holds approximately 2-1/2 gallons. Weighs 3 lbs.

- P/N 05-00913

RAVEN WING TANKS



Wing tank used to hold extra fuel or smoke oil in top wing of aerobatic biplanes.

- S1-S Wing Tank.....P/N 05-00914
- S1-C Wing Tank.....P/N 05-00915
- Experimental S2, Eagle Wing Tank.....P/N 05-00916

FUEL TANK DRAIN FITTING



This specially designed fuel tank drain fitting minimizes drain flow vortexing that allows water and contaminants to remain in tank no matter how many times the drain cycle is repeated. Threads are 1/8" NPT - brass throughout P/N 05-28900

ULTRALIGHT FUEL TANKS



ULTRALIGHT 12-1A FUEL STRUT TANK

This consists of 1 strut tank, 1 pick-up cap and 1 filler cap. This tank can be mounted right on the strut and allow easy access for filling and to check levels. 4.5 Gallon, tank with cap and fillings

- P/N 05-03065



ULTRALIGHT BVR 2-1K COMPLETE TANK KIT

2 tanks and hardware for Beaver RX550.

- P/N 05-03066



ULTRALIGHT CHI 12-1K COMPLETE TANK KIT

2 tanks with hardware for chinook

- P/N 05-03067

ALUMINUM FUEL TANKS



PITTS SPECIAL FUEL TANK

OPTIONAL TANK INSTALLATIONS

Sight Gauge (Fittings and Tubing) for Pitts or Skybolt Tanks - no installation charge.

- P/N 05-29000

Flop Tube, Low Fuel Level Warning, Flush Filler Cap (specify type) - Add \$5.00 installation charge and cost of unit to price of tank.

ELECTRIC SENDER - Add \$15.00 installation charge and cost of unit to price of tank.

FUEL TANK HOLD DOWN STRAPS

Fabricated from .035 stainless steel. Straps are 1" wide x 36" long. For VariViggen Starduster & others. P/N 05-20400

ANTI-CHAFE CHANNEL FOR FUEL TANK STRAPS

Neoprene rubber extrusions to hold 1" wide metal fuel tank straps.

- #9 Channel P/N 05-01800

Design	Capacity (Gallons)	Main Tank	Part No.	Tank for Inverted Flight	Part No.	Each Wing Tank	Part No.
Acro-Sport II	24				05-18510		
Baby Greatlakes	10		05-03058				
Cougar	23		05-18600				
Cuby	12.5		05-18700				
EAA Bi-Plane	16		05-18800				
Fly Baby	14		05-18900				
Hatz Bi-Plane	18						05-19020
Mustang I	16		05-19100				
Mustang II	27		05-19200				
Pitts Special	19				05-19310		
Pober Pixie	12	(Send Drwg. 05-19400)					05-19420
Skybolt	29				05-19510		05-19520
Smith Miniplane	16		05-19600				
Starduster I	18		05-19700		05-19710		05-19720
Starduster II	26		05-19800		05-19810		05-19820
Tailwind			05-19950				

SEE PRO-SEAL TANK SEALANT AND SLOSHING COMPONENTS IN COVERING SUPPLIES SECTION

CAUTION: Electric sender should not be installed in a tank with flop tube to prevent possible entanglement. Tank should be free of everything but flop tube. Use sight gauge with flop tube. Prices are based on tanks manufactured to the original plans as issued by the designer. Minor modifications such as changes in tank fitting sizes or locations can be made at additional charge. Please submit all pertinent data with respect to desired changes at time of order.

ALLOW 2-3 WEEKS DELIVERY TIME ON ALL TANKS.

CURTIS SUPERIOR VALVE COMPANY

CURTIS DRAIN VALVES

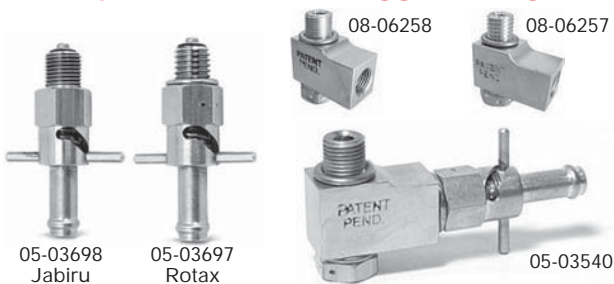
Curtis Superior Valve Co., Inc. Fuel and Oil Drain Valves have been the standard in the industry for over 60 years. Curtis valves are used in OEM applications and in the military aircraft. Most valves are made of high quality brass for resistance to corrosion and rusting, giving them long service life and extended seal life. Most Curtis Valves have a spiral to open and twist to lock for easy fuel sampling and oil draining.



Model Number	Thread Size	Installed Length	Material	Part No.	Price
CCA-1250	1/8" NPT	1.358"	B	05-04045	
CCA-1300	1/4" NPT	1.690"	B	05-04046	
CCA-1350	3/8" NPT	1.920"	B	05-04047	
CCA-1400 Valve*	1/2" NPT	1.685"	B	05-03060	
CCA-1550 Valve*	1/8" NPT	1.052"	B	05-01869	
CCA-1600 Valve*	1/4" NPT	1.340"	B	05-01870	
CCA-1650 Valve*	3/8" NPT	1.510"	B	05-01871	
CCA-1700 Valve*	1/2" NPT	1.685"	B	05-01872	
CCA-3400 Valve*	1/2" I.D. Hose	1.337"	B	05-01935	
CCA-3600	1/4" NPT	1.690"	BC	05-04048	
CCA-4300 Valve*	7/16" 20 NF3	.625"	BC	05-03647	
CCA-4350 Valve*	9/16" 18 UNF3	.635"	BC	05-03648	
CCA-4800	1/4" NPT	1.690"	BC	05-04049	
CCA-4850 Valve*	1/8" NPT	1.052"	BC	05-00686	
CCA-4950	3/8" NPT	1.920"	BC	05-04050	
CCA-5400 Lock Wire Drilled*	7/16" 20 NF3	1.205"	BC	05-04056	
CCA-5800-1 Valve Non-Locking*	7/16" 20 NF3	.620"	BC	05-03651	
CCA-5800-3 Valve Non-Locking*	1/8" NPT	1.205"	BC	05-03694	
CCA-6000	9/16" 18 NF3	1.234"	BC	05-04051	
CCA-7250	3/4" 16 NF3	1.483"	BC	05-04052	
CCA-7450 Valve*	1/8" NPT	1.052"	BC	05-03652	
CCA-7500-1 Flush Valve	3/4" 16 NF3	1.437"	A	05-03653	
CCA-31300	9/16" 18 NF3	1.234"	BC	05-04053	
CCB-36100	3/4" 16 NF3	1.342"	AA	05-04054	
CCA-36150 Valve*	1/8" NPT	1.054"	BC	05-03654	
CCA-36400	6/16" 18 NF3	1.234"	BC	05-04055	
CCA-39000 Valve*	1/4" NPT	1.340"	SS	05-03655	
CCA-39500 Valve*	9/16" 18 UNF3	1.084"	BC	05-03693	
CCA-39550 Valve*	5/8" 18 NF3	1.054"	B	05-01873	
CCA-39560 Valve	5/8" 18 NF3	2.000"	B	05-03656	
CCB-4320 Valve*	7/16" 20 NF3	.835"	BC	05-03657	
CCB-36450AE Flush Valve	3/4" 16 NF3	.755"	AA	05-03658	
CCB-36700 Valve*	1/8" NPT	1.058"	BC	05-03659	
CCB-36750 Valve*	1/8" NPT	1.058"	SS	05-03660	
CCB-37000 Valve*	1/2" NPT	1.685" (Body) .875" (Stem)	B	05-03061	

*=TSO-C76, B= Brass, AA= Aluminium Alodine, A= Aluminum, BC= Brass/Cadmium Plated, SS= Stainless Steel

OIL DRAIN VALVE ASSEMBLIES



Curtis Oil Drain Valves for Jabiru and Rotax			
Description	Application	Part No.	Prices
Curtis Oil Drain Valve - 1/2" - 20 Brass Lockwire Drilled Action-Spiral, Lock Open	Jabiru 2200, 3300	05-03698	
Curtis Oil Drain Valve - 12mm - 1.75mm Brass, Length 1.45" Lock Wire Drilled Action-Spiral, Lock Open	Rotax 912F2, 912F3, 912F4, 914F2, 914F3, 914F4	05-03697	
Curtis 90 Degree Adapter for Jabiru and Rotax			
Jabiru 90 Degree Adapter CCA-2480	Jabiru 2200, 3300	08-06258	
Rotax 90 Degree Adapter Thread Size: 12mm-1.75mm, Internal/External Brass CCA-2470	Rotax 912F2, 912F3, 912F4, 914F2, 914F3, 914F4	08-06257	
Oil Drain Valve Adapter Assembly			
Oil Drain Valve Adapter Assembly	Rotax	05-03539	
Oil Drain Valve Adapter Assembly	Jabiru	05-03540	

CURTIS SUPERIOR REMOVAL TOOLS

Helps with the installation and removal of Curtis flush mounted valves without damage. Eliminates the problem of damage as well as valve torque.

Name	Works with valve:	Part No.	Price
CST-18	CAA-1250, 1550, 4850, 7450, 9950, 36150, CCB-36750	12-02244	
CST-78	CCA-1400, 1700, 39550, 39560, CCB-3700	12-02245	
CST-916	CCA-1300, 1600, 3600, 4800, 4900, 5900, 39000	12-02246	
CST-1116	CCA-1350, 1650, 2440, 2450, 2460, 4320, 4950, 5400, 5800-1	12-02090	

QUICK DRAIN HOSES

A simple push and twist action locks the CCB-39600 Series Quick Drain Hose in place and opens the drain. Fuel / oil flows through 5' of high grade vinyl tubing preventing spillage.

Quick Drain Hose	Connector Color	Used with Valves	Part No.	Price
CCB- 39600-1	Black	CCA-1400, CCA-1700, CCA-39550	05-00138	
CCB- 39600-2	Blue	CCA-1350, CCA-1650, CCA-4950	05-00139	
CCB- 39600-3	Yellow	CCA-1300, CCA-1600, CCA-3400, CCA-3600, CCA-4800, CCA-4900, CCA-39000	05-00141	
CCB- 39600-4	Silver	CCA-4350, CCA-7250, CCA-36400, CCA-36650	05-00142	
CCB- 39600-5	Brass	CCA-1250, CCA-1550, CCA-4300, CCA-4850, CCA-9950, CCB-36750	05-00143	

OIL DRAIN & FUEL VALVE

The following models can be used as both oil and fuel drain valves.

Model Number	Thread Size	Installed Length	Part No.	Price
CCA-1400 Valve*	1/2" NPT	1.685"	05-03060	
CCA-39550 Valve*	5/8" 18 NF3	1.054"	05-01873	
CCA-39560 Valve	5/8" 18 NF3	2.000"	05-03656	
CCB-37000*	1/2" NPT	1.075" (Body) .875" (Stem)	05-03061	

CURTIS FUEL SAMPLER CUP

This fuel sampler cup is designed for use with many popular flush mounted valves used on many of today's production aircraft. Wide bowl allows fuel sampling without fuel dripping onto the hands. Equipped with a Stainless steel pin and crystal clear plastic material P/N 05-17300.....

CURTIS QUICK DRAIN SECURITY SYSTEM

These Curtis Superior Drain Valves are designed to accept a locking device that will prevent tampering and the theft of fuel. They are TSO-C76 approved. The quick drain security system is available in sets of 2, 4, or 6 quick drain valves, and each valve comes with a lock. Included in each set are two master keys and a fuel sampling cup. The dash number on the model numbers below indicates the number of valves and locks included.

Part Number	Contains	Part No.	Price
CCA-39700-2	2 Tank Locking System	05-01239	
CCA-39700-4	4 Tank Locking System	05-01255	
CCA-39700-6	6 Tank Locking System	05-01256	

FUEL DRAIN VALVES

SAF-AIR DRAIN VALVES

SAF-AIR push type fuel drain valves are close tolerance valves of simple design. SAF-AIR valves are manufactured with an o-ring placed on the stem to seal against a flat seat on the body. This design eliminates an area where dirt can gather, thus putting an end to the main cause of fuel drain valve drip. FAA & PMA APPROVED. Models CAV-110 & CAV-110H-4 are popular choices to install on gascolators.



CAV-110H-4 CAV-160H-4 CAV-170H-4 CAV-180H-4
CAV-110 CAV-160 CAV-170 CAV-180
MODEL CAV-110 1/8" NPT - For Cessna 310 tip tanks; Mooney Mark 20 and 20A; all Ercoupe models; Bellanca, Taylorcraft model B; Stinson 108, 108-1, 108-2, 108-3; Voyager model 10 and 10A; Navion; Waco VK series and UPF; & Sea Bee. (See tag for more models.) Fits all standard gascolators.

MODEL CAV-160 1/4" NPT - For Piper models J-3, J-4, PA-11, -12, -14, -25, -16, -17, -18, -20, -22, -23, -15 and -28 Tri-Pacer; Apache; Champion; Aeronca; Cessna T-50 and earlier 120 and 140 models; and Beechcraft AT-11 and C-18S.

MODEL CAV-170 7/16-20 NF-3 - For all Cessna late 140A models, 150, 170, 170A, 170B, 172 and 175.

MODEL CAV-180 3/8-24 NF-3 - For Cessna 180, 182, 185, 190, 195, 205, 210, 310, 310A, 310B, 310C and 336.

CAV-100H-4, CAV-160H-4, CAV-170H-4, CAV-180H-4 - All 4 models come with 1/4" hose end.

Part No.	Thread	Price	Part No.	Thread	Price
CAV-110	1/8" NPT		CAV-170	7/16-20 NF	
CAV-110H4	1/8" NPT		CAV-170H-4	7/16-20 NF	
CAV-160	1/4" NPT		CAV-180	3/8-24 NF	
CAV-160H-4	1/4" NPT		CAV-180H-4	3/8-24 NF	

Replacement Seals

Price Each

MS29513-006 Tip (all models).....
MS29513-011 Seat (CAV-180).....
MS29513-012 Seat (CAV-170).....

SAF-AIR SPECIALTY FUEL DRAIN VALVES



The F75 is used on wing tip tanks or any application where a 3/4"-16 flush mounted fuel drain valve is needed. This aluminum valve is simple and clean to operate, using any standard sampling tube. Just push up on the center of the valve to sample fuel. Our new design allows all the fuel to enter the tube without leakage. This valve is designed for use on Cessna 310 through 441 model airplanes. • The C500 is used on the bladder style wing tanks with a 1/2" diameter nozzle. • The P3750 has a 3/8" NPT thread and is designed for use on those applications. Both valves provide push-to-test or push-and twist features for locking the valve open. Material is 360 brass. • The SA5817-4C is used with a 3/4"-16 bulkhead fitting to mount the valve flush with the outside skin of the plane. A hose is attached to the valve with a 7/16"-20 fitting at the low point of the fuel system. Material is anodized aluminum. • The SA-60S valve is the same as the CAV-160 except it is constructed of 304 stainless steel. Valve can be used in highly corrosive applications such as salt water. • 4350-6L has a 7/16"-20 thread and a long stem that can be cut to length for your application. Material is anodized aluminum.

Part No.	Thread	Price	Part No.	Thread	Price
C500	1/2" Tube		SA-60S	1/4" NPT	
P3750	3/8" NPT		4350-6L	1/2"-20	
F75	3/4-16		SA5817-4C	3/4"-16	

F391 FLUSH DRAIN VALVE



Valve mounts in the sump, the same as original plug, with no projection. Can't be knocked off or opened by particles thrown from propellers. Opens only when operated with sampler cup, rod or wire. Clear cup permits inspection for water or contaminants. FAA approved.

Part No.	Thread Size	Application	Price
F-391-14	1/4" NPT	Aeronca, Beech AT-11, D-18S, Piper PA-11, 12, 18, 20, 22, Apache, champion, Howard	
F-391-18	1/8" NPT	Stinson, Waco VK, UPF, Seabee, Bellanca, T-Craft "B", Navion	
F-391-32	3/8-24	Cessna 180, 182, 195	
F-391-72	7/16-20	Cessna 140, 150, 170, 172, 175	
F-391-82	1/2-20	Cessna Cardinal, 210	

Sampler Cup - Fits all F-391 Valves..... P/N 05-17300.....

SAF-AIR FLUSH-MOUNTED DRAIN VALVES



SAF-AIR designed its line of flush mounted fuel drain valves to be an exact replacement for the Auto Valve F391 line of flush fuel drain valves. Unlike the Auto Valve, SAF AIR valves can be rebuilt. These valves offer a dependable, low-cost solution when a flush mount is needed. FAA & TSO-C76 approved.

P/N	Size	Equiv.	Price	P/N	Size	Equiv.	Price
SA14	1/4 NPT	F391-14		SA72	7/16-20	F391-72	
SA18	1/8 NPT	F391-18		SA82	1/2-20	F391-82	
SA32	3/8-24	F391-32		SA187	1/8 NPT	F391-187	
				SA53S	7/16-20	F391-53	

LOCK OPEN SAF-AIR DRAIN VALVES

Similar to the drain valves above with including the capability of locking in the open position making pre-flight check for contamination and water in the fuel system very easy. Models 1250 & 1250H are popular choices to install on gascolators.

FAA & TSO-C76 APPROVED.



Part No.	Size	Price Ea.	Part No.	Size	Price Ea.
1250	1/8 NPT		1250H	1/8 NPT*	
2500	1/4 NPT		2500H	1/4 NPT*	
3750	3/8-24		3750H	3/8-24*	
4375	7/16-20		4375H	7/16-20*	

*These valves come with 1/4" hose adapter

FUEL DRAIN VALVE KITS FOR CESSNA, PIPER, AND BEECHCRAFT

These high quality fuel drain valve kits are FAA-PMA approved for a wide range of Cessna, Piper, and Beechcraft aircraft. These drain valves prevent drain nipple slippage, require no O-rings, feature corrosion free construction, and use the industry standard 1/8" pipe thread valve. Features: • The valve can be rebuilt • Fuel resistant o-ring - Fluorosilicone • Push to test against the wing surface Specifications: • Material: Valve 360 Brass, Housing Stainless • Finish: Cadmium Plate • Temperature: -100° to +350°F (-73° to +177°C) • O-Rings: M25988-005 • Pressure: 60 PSI max.

Description	Part No.	Price
Kit for Cessna	05-03566	
Kit Beech	05-03567	
Kit Piper	05-03568	

GASCOLATORS – FUEL TESTERS



ACS GASCOLATOR

All-metal gascolator with S.S. screen, 1-7/8" dia. cadmium plated steel bowl w/quick drain. Top is CNC machined from 6061-T6 aluminum. Top casting has 1/4" pipe ports for 3/8" fuel line and one 1/8" pipe port for primer fitting. Wt: 8 oz. May be used with aviation and/ or auto fuel. P/N 10580.....

Replacement Gaskets -

For auto fuel 3/32" thick x 2-1/8" O.D. 10536-1

P/N 06-00441

Replacement Screens -

120 Microns Stainless Steel P/N 10543-1

74 Microns Stainless Steel P/N 05-03436

ACS GASCOLATOR INSTALLATION BRACKET



Versatile bracket of .016 stainless steel accommodates gascolators with either metal or glass bowl. When mounted as illustrated, inlet and outlet connections are on sides. When bracket is inverted, one port of gascolator faces firewall for direct routing of fuel line through firewall. Fits gascolators sold after May 1, 1989..... P/N 10371.....



ACS HIGH PRESSURE GASCOLATOR

New ACS high pressure gascolator. Lighter weight and simpler design than the ACS "classic" gascolator. Bailwire and attaching hardware have been eliminated. Threaded collar secures bowl to top. Tested to 50lbs. Bowl is cadmium plated and top and collar are anodized for corrosion protection. P/N 05-04248

FAA-APPROVED GASCOLATORS

CNC-machined out of 6061 aluminum for longer use. Anodized "O" ring seals for improved sealing capabilities, a bayonet tab locked bowl system. Direct replacement for factory parts. FAA-approved for many Piper, American Champion, Husky, Maule, Taylorcraft, Dynac and Cessna aircraft. Fits in existing Piper mounting brackets. Mounting brackets available for Cessna. Great for homebuilders also. All fittings and drain plugs are for display purposes only and are not included with Gascolator purchase. Aircraft Make and Model, Serial Number and N number required to make sure correct gascolator is ordered. Check the Aircraft Spruce website for aircraft cross-reference list or contact us for gascolator approved for your aircraft.



SA3-00



SA3-00B



SA3-10



SA3-10A

Model	Size	Part No.	Price
SA3-00	1/4 NPT - 3/8" Line - 3 oz.	05-00840	
SA3-00B	1/4 NPT - 3/8" Line - 3 oz.	05-02674	
SA3-10	3/8 NPT - 1/2" Line - 4 oz.	05-02675	
SA3-10A	3/8 NPT - 1/2" Line - 4 oz.	05-00894	
SA3-07	SA3-00 Side Mt. Bracket	05-01027	
SA3-11	SA3-10 Side Mt. Bracket	05-01028	
SA3-07/ SA3-06	Cessna 120/140 Install Kit	05-01029	

USHER GASCOLATOR 4



Can be used on fuel injection systems up to 50 psi. Anodized inside and out to prevent corrosion. Has two 1/4" NPT ports for 3/8" fuel line, a 1/8" primer port, and a 1/8" NPT drain valve port. Mounting bracket not included. Now comes ready to mount to firewall.

GascolatorP/N 05-00632

Replacement Screen.....P/N 05-25972

FUEL FILTERS



For homebuilts. Used on VariEze and various gyrocopters. Rated to 10 PSI. Not recommended for fuel injected systems.

Description	Part No.	Price
1/4" Fuel Filter (Metal)	05-33031	
3/8" Fuel Filter (Plastic)	05-33033	
1/4" Fuel Filter (Plastic)	05-33001	
1/4" Fuel Filter (Glass #804)	804	
3/8" Fuel Filter (Glass #806)	806	

MICRON 10 FUEL FILTER



Length: 4.25" Filter medium: 1.375" dia. 304 pleated SST disk Dia: 2.0" Filter Efficiency: 10 Micron Flow rate: 15.3 gpm Oper. Press: 8,000 PSIG Weight: 5 oz. Drop in pressure: 1.0% Fitting Size: AN6. This filter is washable and reuseable P/N 05-01699.....



GATS JAR FUEL SAMPLER

The incredible GATS Jar allows a pilot to pour the fuel used in the preflight check back into the fuel tank without fear of water contamination. The jar uses a special separator screen that, when coated with avgas, forms a barrier to water and debris, yet allows passage of avgas. The GATS Jar also detects jet fuel in the event of inadvertent fueling of your aircraft with jet fuel. By using the GATS Jar, pilots can help protect the environment by pouring sample fuel back into the tank instead of on the ground. 12 oz. P/N 05-21250

16 oz. P/N 05-04237



SHORT FUEL TESTER

The unique snap-on probe fits all quick-drain valves, stores compactly, and reduces spillage, loss, and probe breakage. The 4" (10.16cm) transparent cylinder has the octane color-coding molded in the side for quick reference. Also includes a chrome-plated screwdriver blade with both a Phillips and a slotted head. 4" P/N 05-00448

6" P/N 05-03386



CURTIS FUEL SAMPLER CUP

This fuel sampler cup is designed for use with many popular fuel drain valves including the F391 drain valves used on many of today's production aircraft. Wide bowl allows fuel sampling without fuel dripping onto the hands. P/N 05-17300

STOW-AWAY FUEL TESTER HOLDER #1 - This handy device is a fabricated metal holder designed especially to hold the Fuel Tester-Screwdriver above. It holds the tester in a spring loaded configuration and can be mounted on the firewall or in the cockpit, for easy access.. P/N 05-17210



ASA AIRCRAFT FUEL TESTING CUP

Protect yourself from fuel contamination by visually checking the fuel for water and debris. Clear cup with a reinforced steel pin that works with most aircraft. Measures 2-1/2" high x 1-3/4" diameter. Lifetime warranty. P/N 13-02353.....

JEPPESEN DELUXE AIRCRAFT FUEL CHECKER

This deluxe version of the popular screwdriver type fuel checker features some great improvements in the product. A removable bronze (3/32" brazing rod) replaces the flimsy plastic stick. Magnified viewing area allows close inspection of contaminants, and 100% of the sample can be seen. A removable splash guard prevents a fuel shower on the user, and the guard stows flat along side when not in use. This tester incorporates a stronger design to resist cracking and breakage. P/N 05-17215.....



GASOHOL TESTER

This compact fuel tester / double tip screwdriver combo measures the presence and percentage of alcohol in gasohol, and tightens errant screws. P/N 05-03439.....

ACS FREE FLOW ONE-WAY CHECK VALVE



Prevents return fuel flow during normal operation but provides by-pass fuel feed in an emergency if the fuel pump fails. Wt. 1 oz., 2-7/8" long. Use with tube fittings for 3/8" dia. fuel line. Anodized for corrosion resistance. P/N 10630

FLOW EZY FUEL FILTER

The Flow Ezy fuel filter features very fine filtration and is approved for use with Ellison Carburetors. This filter has a 25 micron rating and with their strong machined aluminum housings have a pressure rating of 500 psi. Filter elements are of pleated stainless steel wire cloth or cellulose (paper) with a perforated metal support tube inside. Factory model number 61L-03-25-F3. Recommended by Co-Z Development Corp. Dims: 1.25"dia.x 4.75"L Fitting size 3/8" NPT. P/N 05-28905.....

Replacement Element P/N 8504-05

FUEL FILTER



In-line, high-capacity, translucent filter with screen. Has standard 1/4" barb inlet and outlet tubes. P/N 05-01030

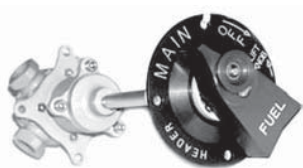
FUEL FILTER



In-tank type. Brass construction with fine-mesh screen. Has standard 1/4" barb inlet and outlet tubes. P/N 05-01031.....

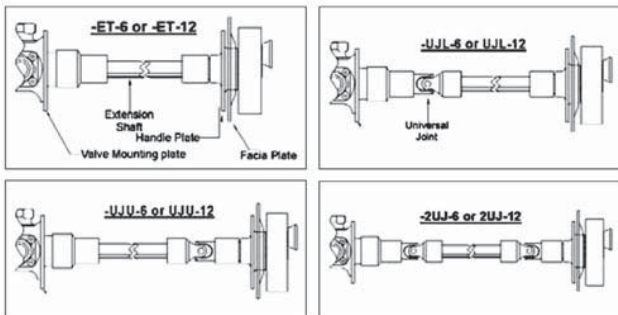
EXTENSION FUEL VALVES - GASCOLATORS

ANDAIR EXTENSION FUEL SELECTORS



For use with any Andair valve. The kit includes everything needed to operate the valve remotely by way of a specially extruded tube. There is no riveting involved, just cut the tube down to length and fit together. To maintain the firm detent at each tank selection, there is a detent cap on the top of the

valve. The special tube then fits into this. Then, so as to maintain the safety feature, where the valve cannot be inadvertently switched off, the button has been moved to the upper section. Like the standard valves, the button must be raised to switch the fuel of. The tube is available 6" or 12" long and 4 extension options are available. The extension must be ordered with the valve. (i.e. an extension cannot be retro fitted to a previously purchased valve).



Option	Size (In.)	Price
ET	6	Call or Email for price and availability
1JU	6	
2JU	6	

Option	Size (In.)	Price
ET	12	Call or Email for price and availability
1JU	12	
2JU	12	

E	Valve Part No.	ET	6	Length of extension tube: 6 = 6" long. 12 = 12" long.
		1JU		
		2UJ	12	

i.e. FS25f5-M or FD20-20-D2-6M

ET: with one universal joint on lower part of valve
UJL: with one universal joint on the upper section of the valve
UJU: with 2 universal joints.

Example:
 E-FS25f5-M-ET-6 = (6" long, 1/2" Left, Main, Right, Off, Straight Ext. Valve)
 E-FS20-20-D2-6M-2UJ-12 = (12" long, 3/8" duplex fuel selector extension with 2 UJs and 12" tube).

SPECIAL ENGRAVING - Andair can offer special engraving for all of the available valves. Please contact the Aircraft Spruce technical department for more information. Here are some examples:



GASCOLATOR MOUNTING BRACKET



from mild steel.

Mount your gascolator solidly on the firewall with this special bulkhead fitting. Simply drill a 5/8" hole through the firewall and a backing plate on the cabin side and rivet the 1-1/2" x 1/8" flange to the firewall. Connect the incoming fuel line to the AN6 male tube fitting on the cabin side. Screw the gascolator onto the 1/4" male pipe thrd. on the engine side. Machined P/N 05-00907

ANDAIR GASCOLATORS



05-29551

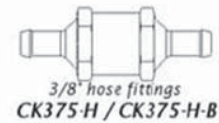
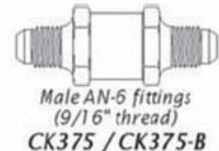
Andair make Gascolators for both 3/8" and 1/2" lines. Both types have a screw locking ring that prevents the bowl from coming off, and a facility for this to be wirelocked. The bowl is internally sealed with an Viton (R) O-ring. A PTFE coated 70 micron Stainless Steel mesh is used as the filter screen. The PTFE coating helps prevent water from passing, by maintaining it as a droplet formation. A large filter area is present and wide passages have been incorporated so that the pressure loss through the Gascolators is kept to an absolute minimum. There is an 1/8 NPT hole on the bottom of the bowl so it can be drained and also one on the top of the body. This one can be used as a pressure tapping or a filtered supply to the primer pump. A selection of fittings can also be used with the GAS375 and the GAS500.

- GAS375M with -6 Male Fittings P/N 05-29551.....
- GAS375F w/ 1/4" NPT Female Fittings ... P/N 05-29552.....
- GAS375B w/ Banjo Fittings..... P/N 05-29553.....
- GAS500F - 3/8" NPT Female Fittings..... P/N 05-00129.....
- GAS500M -has -8 Male Flare Fittings P/N 05-00136.....
- Replacement o-ring for GAS375..... P/N 05-00704.....
- Replacement o-ring for GAS500..... P/N 05-00706.....
- Replacement screen for GAS375 P/N 05-00707.....
- Replacement screen for GAS500 P/N 05-00708.....
- Stainless Steel Drain Valve..... P/N 05-00709.....

ANDAIR CHECK VALVE

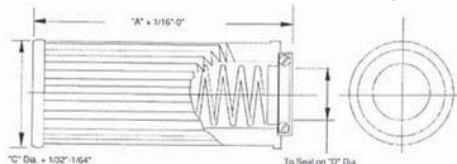


Built from aircraft grade Aluminum and anodized for corrosion protection this lightweight and compact unit is excellent. The check valve is ideal for tank vents and high pressure fuel pump bypass lines. Its extremely light weight internal shuttle operates with the slightest pressure yet the internal O-ring seals allow the unit to be used up to 50 PSI. Other qualities include break out pressure less than 1 PSI, great flow characteristics around shuttle, and bleed allows shuttle to weep off pressure in the event of a blocked line. Features AN-6 (3/8") fitting on bottom. Valve measures 5/16" dia. x 2.75" long.



Model No.	Bleed	End Fittings	Part No.	Price Ea.
CK250	No	7/16-20	05-00713	.
CK250-B	Yes	7/16-20	05-00714	.
CK375	No	9/16-18	05-00716	.
CK375-B	Yes	9/16-18	05-29555	.
CK250-H	No	1/4" hose	05-00717	.
CK250-H-B	Yes	1/4" hose	05-00718	.
CK375-H	No	3/8" hose	05-00719	.
CK375-H-B	Yes	3/8" hose	05-00721	.

PUROLATOR AN6235 SERIES LINE FILTER ELEMENTS



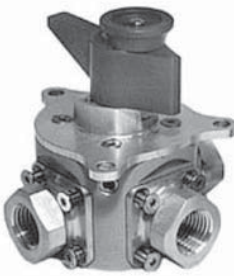
- * MIL-F-5504 Qualified
- * Qualified for use in MS28720 and AN6234 filter assemblies.
- * Operating Temperatures: -65F TO + 275F
- * Element Collapse: 150PSID Minimum.
- * Filtration: 10 Micrometers.
- * Hdraulic O-ring.
- * Media: microleat(c) elements (resin impregnated cellulose)
- * Bubble Test 100%

AN No.	A	C	D	Part No.	Price
AN6235-1A	1.937"/ 1.875"	.859"/ .813'	.375"/ .373"	08-07076	.
AN6235-2A	4.687"/ 4.625"	1.156"/ 1.110"	.625"/ .623"	08-07103	.
AN6235-3A	3.500"/ 3.438"	1.656"/ 1.610"	.875"/ .872"	08-07104	.

AP

FUEL VALVES - DUPLEX VALVES

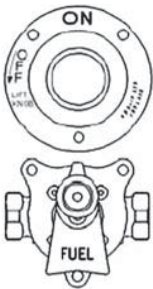
ANDAIR POSITIVE STOP FUEL VALVES



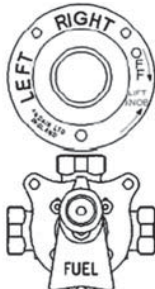
Andair Ltd. of England produce these superb Safety Fuel Selectors. Precision built from aircraft grade materials, with PTFE seals packed against a highly polished ball giving a very smooth action. Designed by an RV builder the Andair valve features a positive stop for the off position. A spring loaded button on the lever must be raised before the lever can be moved to the off position. This eliminates the possibility of turning the fuel off in flight, which is an inherent risk with some other designs. The lever has internal stops and detents on the left and

right positions. The FS20 range has been designed for 3/8" fuel lines and the FS25 range is for use with 1/2" lines. New to the range is the FS20-8 5-way selector valve.

FS20X1-F or FS25x1-F Model 1



FS20X2-F or FS25x2-F Model 2



FS20X3-F or FS25x3-F Model 3



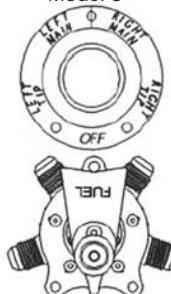
FS20X4-F or FS25x4-F Model 4



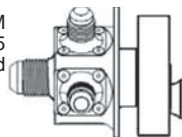
FS20X5-F or FS25x5-F Model 5



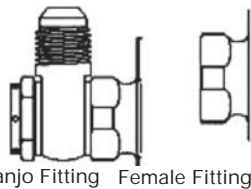
NEW 5-WAY VALVE
FS20x8-F Model 8



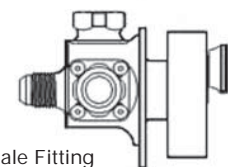
SIDE FITTINGS - The side fittings can either be -M (Male 9/16-18 for the 20 range or 3/4-16 for the 25 range) or -F (Female pipe 1/4 for the 20 range and 3/8 for the 25 range)



Side view, FS20x8-M



Banjo Fitting Female Fitting



Male Fitting

LOWER FITTINGS ON MODELS 3, 4, 5 & 8

The Andair Range of fuel selectors is now available with choice of lower fittings for models 3,4,5 and 8. This fitting can either be -M (Male 9/16-18 for the 20 range or 3/4-16 for the 25 range) or -F (Female pipe 1/4 for the 20 range and 3/8 for the 25 range) or a Banjo fitting. The banjo fitting has a 360° adjustable Male 9/16-18 end for the 20 range or 3/4-16 for the 25 range.

Lower Fittings	Model	Side Fitting	Price Ea.	Lower Fittings	Model	Side Fitting	Price Ea.
--	1, 2		CALL	--	1, 2		CALL
Male or Female	3, 4, 5, 8	Male or Female	CALL	Male or Female	3, 4, 5, 8	Male or Female	CALL
Banjo	3, 4, 5, 8	Female	CALL	Banjo	3, 4, 5, 8	Female	CALL

FS20-20-D2 DUPLEX VALVES



Used to switch the fuel in an application where there is a fuel injected engine that needs flow return. It allows you to pipe surplus fuel to the same tank from which it was drawn. This avoids the worry of overfilling the return tank or having an overly complicated fuel system. Engines that can benefit from this valve are Surburu, Continental, Rotax, and Diesel engines. The FS20-20-D2 has two 3/8" sections where as the new FD25-20-D2 has one 1/2" feed section and on 3/8" return section. The valves can be supplied with either male or female fittings.

FS25-20-D2 DUPLEX VALVES - New to the range is the FS25-20-D2 which has a 1/2" feed ports and 3/8" return ports, for use in larger injected engines.

Model No.	Part No.	Description	Thread	Ports	Price
FS20-20-D2-6M	05-29560	3/8" Feed & Return	1/4" Pipe	Female	
FS20-20-D2-6F	05-29561	3/8" Feed & Return	9/16-18a	Male	
FS20-25-D2-6F	05-29562	1/2" Feed, 3/8" Return	1/4, 3/8" pipe	Female	
FS20-25-D2-6M	05-29563	1/2" Feed, 3/8" Return	9/16-18, 3/4-16	Male	

FS22D2 DUPLEX VALVE



This new duplex valve from Andair has been designed for the use with low flow rate fuel and vapor return systems. An example being the Turbo charged Rotax 912S. Base on the popular FS20x2, the FS22 retains the key features of small size and light weight. The return line valve uses our new style PTFE disc, operated via the main ball valve allowing the return fuel to flow back to the tank from which it was drawn. The FS22 is available in two forms, the FS22-2PD with its 1/8" female pipe fittings pointing downward (see image) or the FS22-2PS (sideways pointing fittings). Both valves include all of the safety features that appear in the full range of Andair Fuel Selectors.

Model No.	Part No.	Description	Thread	Ports	Price
FS22-D2-6F-PS	05-29564	3/8" Feed, 1/8" Return	1/4, 1/8" Pipe	Female	
FS22-D2-6M-PS	05-29566	3/8" Feed, 1/8" Return	9/16-18	Male	
FS22-D2-6F-PD	05-29567	3/8" Feed, 1/8" Return	1/4, 1/8" Pipe	Female	
FS22-D2-6M-PD	05-29568	3/8" Feed, 1/8" Return	9/16-18	Male	

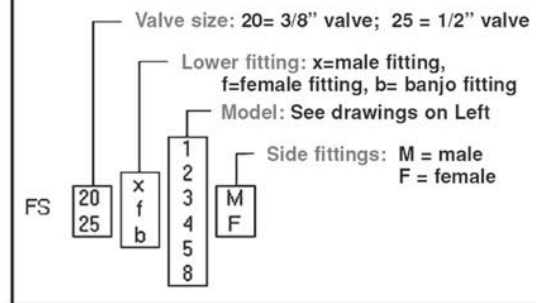
ANDAIR FUEL VALVES

The FS20x4 Fuel Selector is designed for high wing aircraft where it is possible to feed from both tanks simultaneously. Porting for the both position is done internally so there is no need to T the two tanks together. There is a 90 degree action between each tank selection, and the safety feature where the red button on the lever has to be raised to switch off the fuel. On the FS20x4 there

are 3 ports. The lower port is the outlet to the engine and can be Male AN-6, Female 1/4NPT or a Banjo fitting which is a 360degree adjustable fitting with a male AN-6 end. Click here for more information on the fitting options. The inlet, side ports can be any of the 3/8" fittings that Andair supplies and are at the 9 O'clock and 12 O'clock positions when looking at the valve with the brass ball spindle pointing upwards (see image to left). At the 3 O'clock position there is a blanking plate that covers up a PTFE gland that opposes the forces of the other 2 PTFE glands. This cannot be removed. One of the great features of this unit is that when the selector is in the OFF position, there is no cross feed between each tank. So if you have your aeroplane parked on a slope, or if one tank is fuller than the other, no cross-feed will occur.

FS20X4 Male.....	P/N 05-02635.....
FS20X2 Female.....	P/N 05-29505.....
FS20X1 Female.....	P/N 05-29506.....
FS20X3 Female.....	P/N 05-29507.....
FS20X5 Female.....	P/N 05-29509.....
FS20B4-M Banjo Male.....	P/N 05-01419.....
FS20F4 Female.....	P/N 05-01432.....
FS20X4 Male.....	P/N 05-02635.....

PLEASE ORDER USING THE FOLLOWING PART NUMBERS:

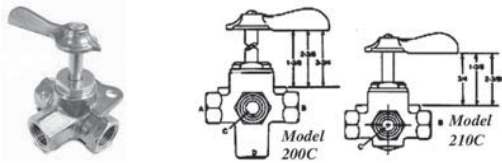


FS20 - 3/8"

FS25 - 1/2"

FUEL VALVES

HOMEBUILDERS SHUT-OFF VALVES



A full-flow plug valve with solid bottom and integral mounting bracket. Brass body and plug. Floating stem with O-ring prevents leakage. Packed with synthetic grease which resists gasoline and solvents. Indicating click on 3-port and 4-port valve (CN models) tells when handle is in full open or closed position. Tested to 30 PSI. Not FAA approved.

Part No.	Model No.	Imperial Equiv.	Valve Type	Pipe Thread	Price
05-02672	210-CL	108HD-04	3-Port*	1/4" Female x 1/4" Female	
05-01032	210-CN	108HD-06	3-Port*	3/8" Female x 3/8" Female	
05-01033	200-CL	114-HD-04	4-Port**	1/4" Female x 1/4" Female	
05-01034	200-CN	114HD-06	4-Port**	3/8" Female x 3/8" Female	

*For 2 tanks. Flow is from either side to branch.
 **For 3 tanks. Flow is from any side to bottom outlet.
 Note: Order valve with 1/4" pipe threads for 3/8" dia. fuel line. Order valve with 3/8" pipe threads for 1/2" dia. fuel line. These pipe thread sizes are the ones normally associated with the indicated tube sizes.

FUEL VALVE LEVER



This lever is a direct replacement for the lever that comes standard with the Home-built Shutoff Valve, part numbers 210-CN, 200-CL and 200 CN. It will also replace the lever that is shipped standard with nearly all of the Vans RV Series aircraft. The appearance is much nicer than the stock lever, it is red in color (the standard color relative to fuel) and needs no hardware other than what is sent with the valve. When mounted according to Van's plans the stock lever actually uses the handles as the pointer. P/N 05-03047

RV FUEL POSITION INDICATOR PLATE



This plate is designed to work with the Van's Series of Aircraft. The Vans kits do not provide the builder with a solution for determining what position the fuel selector is in, therefore leaving the builder to create his or her own solution for this situation. This plate used in combination with RV Fuel Lever clearly labels the valve as the fuel valve and gives the position of the valve. The aesthetics of the cockpit are improved and all labeling is chemically resistant. P/N 05-03661

MINIATURE FUEL VALVES



The lightest (4 oz.) smallest (1.5" long), easiest to operate ball type (not plug) on-off fuel valve available. Light operating force makes it ideal for remote operation. Not FAA approved. Forged brass with 1/4" or 3/8" female pipe ends.

- 1/4" valve P/N 05-23325
- 3/8" valve P/N 05-23330
- 1/2" valve P/N 05-01026

WEATHERHEAD FUEL SHUT-OFF VALVE



These 3-way Weatherhead valves, with 1/4" female pipe ports feature a Delrin-spool design for smooth operation. Handle mounted on 1-1/4" long shaft. Not FAA approved.

- Model No. 6749 3-Port Valve -
Flow is from either side to middle port.
P/N 6749
- Model No. 6747 4-Port Valve -
Flow is from any horizontal port to bottom port.
P/N 6747

ALLEN PREMIUM FUEL SHUT-OFF VALVES



These premium fuel valves are recommended by Rutan Aircraft as the best fuel valves they have seen. They are a direct, bolt-in replacement for Weatherhead and other fuel valves. They turn smoothly and freely with a very positive spring loaded ball detent system which lets you feel the left right and off positions. Manufactured of anodized aluminum. Handle is not furnished with valve. Available in 3 models. Model GS122 valve originally recommended for Long-EZ. Not FAA approved.

	Model 6S122 P/N 05-29500	Model 6S1000 P/N 05-29515	Model 6S1001 P/N 05-29525
Handle	No	No	No
Ports	3	4	3
Ports Configuration	3 x 1/4-18 NPT	MS33649-06	MS33649-06
Handle Positions	4	4	4
Ports Open			
Position 1	All Closed	1 & 4	C & A
Position 2	A & C	2 & 4	C, A & B
Position 3	All Closed	3 & 4	C & B
Position 4	B & C	All Closed	All Closed
Price Each			

SPRL FUEL VALVES



Hi-Tech Seals give easy operation and are suitable for all current fuels. The simplicity promises a long reliable life. The SPRL-V1 is a three/four way fuel selector offering left-off-right and both if required. There are 90° between selections and the absence of a lower fitting reduces the depth required. FEATURES: Ceramic disks have no soft moving/rubbing seals to wear out, unlike other valves but also give an 'indefinite' life with a very smooth light action. The lift and turn selector is instinctive, secure, and easier to use than the complex 'lift button' type. Locking detents avoid accidental movements. Fixings match most installations, and the internal ports prevent cross feeds, unless 'selected to 'Both'. Male AN fittings enable you to plumb straight into the aeroplane system. Alloy construction is anodized for protection; the Viton O ring seals are suitable for all current fuels. For experimental aircraft only. FITTINGS: AN6 or AN8 Male NPT 1/4" or 3/8" Female:

- SPRL 3 way valve P/N 05-04450
- SPRL 4 way valve P/N 05-04451

ACCESSORIES

- AN6 Male Fittings (pk of 3) P/N 05-04452
- AN8 Male Fittings (pk of 3) P/N 05-04453
- NPT 1/4" Female Fittings(pk of 3) P/N 05-04454
- NPT 3/8" Female Fittings (pk of 3) P/N 05-04455

HANDLE FOR ALLEN FUEL VALVES



This aluminum handle is specially machined to fit the Allen fuel valves above. P/N 05-01915.....

EXTENDED HANDLE SHAFT FOR ALLEN FUEL VALVES



This set of fittings are used to make an extended handle shaft for the Allen fuel valves. One of the fittings fits on and clamps to the valve and the other one fits in the handle. The fittings are then welded in a piece of 3/8" x .035 4130 tube. The handle extension can be made as long as desired. P/N 05-01916

J-3 FUEL VALVE



This J-3 fuel valve includes a steel handle for use with the original pushpull shut off control. This valve is a significant improvement over the original brass style fuel valve. The new valve has a stainless steel ball seated in an inert composite seat. This improved design eliminates the stiff operation and leaking around the shaft that the original design was prone to. PMA approved. P/N 05-00848.....

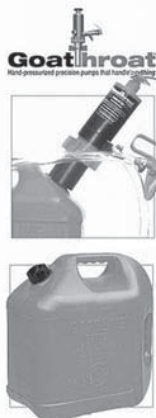
PERFORMANCE FABRICATION FUEL VALVE



This Fuel Valve product was developed for use in high and low pressure fuel systems. The Valve provides a simple plumbing solution in dual pump or multi-cell situations. It is also an excellent choice when used in a redundant pump and/or regulator applications. Although it greatly simplifies plumbing installation, it does not interfere with flow characteristics. It always allows for an open loop thereby eliminating any heat soak issues.
 Fuel Valve Size-6 P/N 05-02527

AP

FUEL SUPPLIES



GOATTHROAT FUEL TRANSFER PUMP

GoatThroat Pumps have been in the industrial market for 15 years. Recently introduced to aviators, these pumps deliver fuel efficiently and directly to the filler downspout with a finger controlled discharge nozzle. Made of chemical grade polypropylene, GoatThroat Pumps can pressurize any container in seconds. Internal pressure relief valve opens at 7 psi, but 2 psi is all you need to deliver fuel safely to your plane. A drip-proof faucet dispenses small amount or gives steady flow. Containers remain upright, so there is no extra handling and little chance for accidental spills. Includes the fitting for a 55 gal. drum. 5 gal. can fitting sold separately.

Fuel Transfer Pump. P/N 05-02196
 Adapter for Blitz 5 gal. Can
 P/N 05-02197
 Adapter for Scepter 5 gal. Can
 P/N 05-03031

AP



FUEL FLOW VALVE

Designed for tank installation, with built-in filter. 90° rotation for ON-OFF. Has standard 1/4" barb outlet tube.

P/N 05-01040



FUEL FLOW VALVE

Designed for tank installation. Similar to above but without built-in filter. 90° rotation for ON-OFF. Has standard 1/4" barb outlet tube.

P/N 05-01041



FUEL FLOW VALVE

Twin-tank fuel selector valve. 3 positions: LEFT-OFF-RIGHT. LEFT and RIGHT positions are 90° either side of OFF. Panel mount.

P/N 05-01042



FUEL FLOW VALVE

Panel mounted fuel on-off.

P/N 05-01043



BANJO FITTING

This can be rotated through 360° then tightened and safety locked. Excellent for applications where space was limited. It can really be described as an adjustable 90° elbow fitting.

P/N 05-29565



FUEL FLOW ELBOW

Bushed 90° tank fitting with standard 1/4" barb outlet. Requires Rubber Bushing FTB01.

P/N 05-01045



QUICK-DISCONNECT FUEL LINE FITTINGS

Complete sets are furnished with both male and female units. Available in both panel mount (left) and in-line (center) styles, with or without internal automatic fuel shut-off. (1/4" tubing).

In-line with shut-off..... P/N 05-01035
 In-line without shut-off..... P/N 05-01036
 Panel mount with shut-off P/N 05-01037
 Panel mount without shut-off. P/N 05-01038



PRIMER BULB

Install between fuel tank and engine. A few squeezes prime your engine for easy starting.

Primer Bulb 1/4" Tube Fit - Sm. (5" x 1-1/4") P/N 05-01046
 Primer Bulb 1/4" Tube Fit - Lg. (7" x 2") P/N 05-03690



PRIMER KIT

Everything you need to add a plunger-type primer system to your aircraft. The kit includes the plunger, a reducer "T" fitting, 1/8" barb "T" fitting, and 10 feet of 1/8" pink urethane fuel line. P/N 05-01047



ACS PRIMER

Formerly manufactured by Gerdes Products, this primer has an anodized, all aluminum body and an engraved aluminum knob. The inlet and outlet ports are located on the back end of the pump and both are 1/8" pipe thread. Overall length is 4" and weight is 3.5 oz. New manufacture.

P/N 05-19920



ESSEX PRIMER

This primer, originally produced by Kohler, is positively leak-proof. Its exceptional priming ability has made it popular with manufacturers of general aviation aircraft. Has 1/8" internal pipe thread inlet and outlet ports. Overall length 3-7/8". Wt. 2.3 oz. New manufacture.

P/N 05-01048

ELECTRIC SOLENOID ENGINE PRIMER VALVE

These new electric solenoids are recommended by Co-Z Development Corp. as ideal electric engine primers for homebuilt aircraft. These normally closed 2-way valves are direct acting and have only two moving parts, a viton plunger and stainless steel spring. Can be installed in any position and are easy to inspect without removing from the line. Pipe size is 1/8" NPT. Orifice dia. 1/8". Wt. 5 oz. #1 port is out, #2 port is in. Will handle max. PSI of 60.

Mounting Bracket - A universal stainless steel mounting bracket for the 1/8" NPT valves may be ordered separately. The mounting bracket can be assembled to the valve body utilizing the body mounting holes

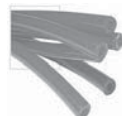
2V Solenoid VLV 20CC02PV4B2A P/N 05-04368
 24V Solenoid VLV 20CC02PV4B2B P/N 05-04369
 Solenoid Mounting Bracket 4K007 P/N 05-04370



FUEL LINE

Polyurethane tubing, translucent blue in color. 1/4" ID. A superior, premium grade of urethane, the optimum material for ultralight fuel line. (Min. order, 4 ft.)

P/N 05-01049 /ft.



PRIMER LINE

Polyurethane tubing, translucent pink in color. 1/8" ID. For primer systems.

P/N 05-01050 /ft.



PULSE LINE

Connects engine pulse outlet to fuel pump pulse inlet.

P/N 05-01063 /ft.



FUEL LINE SPLITTERS/JOINERS

Perfect for feeding from 2 tanks, or for feeding two carburetors from 1 tank. All have standard barbed ends. Made of Delrin.

"T" type, 1/4" P/N 05-01051
 "Y" type, 1/4" P/N 05-01052
 "T" type, 1/8" P/N 05-01053



RUBBER BUSHING

Required for installation of Fuel Flow Elbow described above.

P/N 05-01039

FUEL CAPS



FUEL SELECTOR PLATE FOR LATER CESSNA 170'S & 172'S

This fuel selector plate is billet machined and anodized, with the text engraved on the plate. It is an efficient one piece design which is easy to install and factory guaranteed. FAA/PMA approved.

Cessna 172 - 37 Gals.	P/N 05-00227
Cessna 170 - 37 Gals.	P/N 05-00899
Cessna 172 - 36 Gals.	P/N 05-00901
Cessna 180 - 55 Gals.	P/N 05-00902
Cessna 180 - 60 Gals.	P/N 05-00903
Cessna 180 - 79 Gals.	P/N 05-00904
Cessna 172 - 84 Gals.	P/N 05-00905
Cessna 182 - 55 Gals.	P/N 05-00906

DOW CORNING 3452 VALVE LUBRICANT

Excellent for lubricating valves and slow moving components exposed to harsh chemicals and solvents. resists deterioration by chlorides, solvents, acids and condensate. Dow 3452 is a white, fluorocarbon thickened, fluorosilicone fluid based grease with a temp. range of -20 to 450°F. z.z oz. tube. P/N 09-00333

FUEL-WATER SEPARATOR FUNNELS



Filters out solids down to .005 and provides detection of water in gasoline, diesel, kerosene, or 2 cycle gas/oil mixture. Water is easily detectable as it backs up in the funnel. You can combat these problems by refueling with a funnel fuel filter. This funnel is a heavy-duty fast-flow funnel that works with gasoline, diesel, kerosene, and mixed 2-cycle fuels. The F-15 has dual 74 micron Teflon® coated stainless steel fuel filters developed in conjunction with the Racor Division of the Parker Hannifin Corporation

Filtration Group. Capable of screening contaminants down to 74 microns or .0029". When properly used, this filter will virtually eliminate contaminated fuel going into your tanks. The downspout of the F-15 is the same size as 1" PVC pipe which can then be configured to reach any fuel tank regardless of position of the intake pipe. Has a pour spout on the top side of the funnel so you can easily pour the fuel and contamination captured in the sump into a separate container for easy disposal.

Part No.	Height	Diameter	Flow Rate	Price
05-00026	6.00"	3.5"	2.5 gpm	
05-01054	8.75"	5.5"	3.5 gpm	
05-01055	10.00"	8.5"	5.5 gpm	
05-01371	10.00"	8.5"	12-15 gpm	

MR. FUNNEL FUEL STABILIZER



This product can be used in gas, gasohol, gas/oil mixture, and oxygenated gas. The following is a list of benefits to using the Mr. Funnel Fuel Stabilizer: • Absorbs moisture • Scientific formula prevents fuel from deteriorating • Helps stabilize fuel systems for 1 year when added to fresh fuel • This product helps reduce gum and varnish. • Deposit in fuel systems including fuel injectors and carburetors • Helps clean carburetors and fuel injectors • Helps prevent carburetor and fuel line icing • Helps prevent copper corrosion in alloy carburetors P/N 05-03481

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. • Model 112 (Turquoise) has a 1 pint fluid capacity and a 12 inch 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 a flexible spout, and spout I.D. is 9/16". • Model 428 (Black) has 1-1/2 quart and 13-1/4" long with a flexible spout and 1-1/8" O.D. spout.

Model#112 - Turquoise.....	P/N 12-00374
Model# 415 - Red	P/N 12-00375
Model#428 - Black	P/N 12-00376

AIRCRAFT FUEL CAP OPENER



Using screwdrivers, fingernail files, knife blades, etc. consistently damages fuel caps as well as adjacent painted wing surface during refueling operations. Here is a specially designed cap opener that essentially eliminates cap opening force while also eliminating cap and wing surface damage. Made from injection molded Dupont® Delrin plastic resin, it provides a sturdy yet low friction scratch proof tool. You can customize your cap opener with your (N) Number using standard permanent blue marker felt pen. P/N 05-01834

ACS TWIST-TO LOCK FLUSH FUEL CAP



The ACS Twist-To-Lock Flush Fuel Cap Assy is machined from 6061 aluminum billet. The cap is available in vented and non-vented configurations. The vented cap uses a one-way spring loaded ball valve which allows air to enter the tank but stops fuel from leaking out of the tank. The sealing element for the cap is an easily replaceable Viton "O" ring. The bottom of the cap is secured to the bottom of the ring by a safety chain to prevent loss of the cap during flight. The mounting ring may be welded, riveted, bolted or molded onto the tank.

Complete Set (non-vented)	P/N 10600
Complete Set (vented).....	P/N 10610
Replacement "O" Ring.....	P/N 10609

ACS FLUSH FUEL CAPS



This latest modification of the ACS Flush Fuel Cap (unvented) utilizes a Viton O-Ring as the sealing element between the cap and mounting ring. The Viton O-Ring is compatible with aviation fuels and auto gas. The cap with Viton seal is interchangeable with the old-style cap with rubber gasket. Machined from solid aluminum. Ring may be welded, riveted, bolted or molded to the tank. The bottom of the cap is secured to the bottom of the ring by a safety chain to prevent loss of the cap in flight. Mounting ring flange is 1/8" thick. Ring opening is 2-5/8" dia. Overall dia. 4-3/8". Complete Set (New-Style Cap w/Mounting Ring)

.....	P/N 05-01390
New Style Cap Only	P/N 05-01391
Replacement VitonO-Ring (for New-Style Cap Only)	P/N 05-01392

PIPER PA23 FUEL CAP



Piper PA 23 fuel cap part number CA16097N is an improved version of part number CA16097. This new part uses an improved elastomer with superior fuel resistance. The fuel cap is eligible for PA23 aircraft. P/N 05-04161

FUEL CAP SEAL



Replacement fuel cap seal part number CA38241 has added eligibility for the Cessna Citation 525, 650, 680 and 750 aircraft. It is also approved for Beechcraft aircraft. This seal fits fuel caps with part number 9914106-13. Ideal and inexpensive! Don't pay \$750.00 for a fuel cap when you only need to replace the seal! P/N 05-04162

USHER FLUSH FUEL CAPS



The UD-3 flush fuel cap assembly is an unvented cap similar in design to the #5 style cap. The aluminum mounting ring has a 2" dia. opening and an overall dia. of 3-3/4". It may be riveted, bolted or molded to the tank. It is currently used on many popular homebuilts such as the RV's, Lancair, Velocity & White Lightning. Specify flat or contoured adapter.

UD-3 with Flat Adapter.....	P/N UD-3-F
UD-3 with Contoured Adapter.....	P/N UD-3-C.....
Usher O-Ring 2-325 Large.....	P/N 05-02146.....
Usher O-Ring 2-012 Small.....	P/N 05-02147.....

THERMOS STYLE PRESSURE FUEL CAPS



Pressure fuel caps are recommended for aerobatic installations. These caps are made with Buna-Nitrile gaskets for fuel resistance. These caps are non-vented for gravity fuel systems. It is highly recommended that a #40 (3/32") drill is used to drill a vent hole through the lower base plate and stud assembly using a drill press.

Part No.	Diameter (I.D.)	Height	Price Each
05-18399	1-3/4"	--	
05-18400	2"	1-3/16"	
05-18402	2-1/2"	1-3/16"	

Aluminum weldable adapter neck for use with 2" cap illustrated.
3" Length..... P/N 10367-3

GAS TANK CAP GASKETS

Part No.	Description	Size	Price Ea.
05-18500	Piper	3" OD, 2" ID	
05-18505	Cessna	2-1/4" OD, 1-3/8" ID	

FUEL CAP COVER



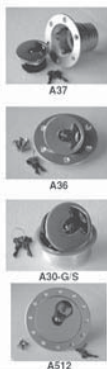
This lightweight, easy to install cover fits over and attaches to the existing cap. When installed, it creates a watertight seal around the filler port. Since the cover is to be installed at the same time as the pitot tube cover and the other factory safety devices, there is no need for expensive STC's or other approvals. The patented sealing and locking features have been in development for two years.

Fuel Cap Cover Cessna	P/N 05-03662
Fuel Cap Cover Early Cessna	P/N 05-03668
Fuel Cap Cover for Piper.....	P/N 05-03669



FUEL CAPS

AERO FUEL CAPS - ALUMINUM



These English fuel caps are used on most of the worlds 'super cars', bikes, and aeroplanes. They are beautifully made in forged and bright anodized aluminum. The high precision and easy to operate mechanism is very secure and non vented. They are designed to keep the fuel in and the water out. The lock is there to ensure that your tank is free from contaminants. Aero caps are used on Cirrus, Diamond, Cessna Corvallis, Lancair kits, Nemesis, Vans, Velocity and many more aircraft.

Cap assemblies come complete with cap, gasket, and flanges as ordered. Two keys come with the locking version. Fixing can be by rivet, bolt, weld or glass in as appropriate. These are flush caps of outstanding quality which are ideal for virtually any homebuilt aircraft. Order the attach ring separately as needed. The 300 Series is 3-3/4" OD opening 1-3/4", 6 hole 3" pcd. C37 fits 2" and 2.25" Hoses.

A512 & A508 CAPS - 3" entry/ 5.5" OD. Feature special surface seal to avoid water/ice ingress. For Avtur Jet and diesel fuels. Glass-in also avail.

Description	P/N	Price ea.
A36L Locking Cap Assy. 6-hole	05-28651	
A36LFF Locking Cap Assy. Glass in	05-28652	
A37L Locking Cap+ Hose Fitting 6 hole	05-28653	
A37LFF Locking Cap Flush Glass in	05-28654	
A36S Non-Locking Assy. 6-hole	05-28656	
A36SFF Non-Locking Flush Glass in	05-28658	
A37S Non-Locking+ Hose Fitting 6-hole	05-28659	
A37SFF Non-Locking Flush Glass in + Hose Fitting	05-28657	
R36 Attach Ring + Screws	05-28661	
A512L 3" Cap. Locking - 12 hole	05-00045	
A508L 3" Cap. Locking - 8 hole	05-04538	
A512FF Locking (Glass-In) Cap	05-02650	

LIGHTWEIGHT DOOR LOCK SETS

Match above fuel cap locks.

P/N 05-28664 ea.

NEWTON FUEL CAP KEYS

- 202 Newton fuel Cap Keys - Fits all Newton Fuel Caps with a 202 lock..... P/N 05-02345.....
- 604 Newton Fuel Cap Keys - Fits all Newton Fuel Caps with a 604 lock..... P/N 05-03437.....
- 605 -Newton Fuel Cap Keys - Fits all Newton Fuel Caps with a 605 lock P/N 05-04540.....
- 606 Newton Fuel Cap Keys - Fits all Newton Fuel Caps with a 606 lock. P/N 05-03388.....
- 607 Newton Fuel Cap Keys - Fits all Newton Fuel Caps with a 607 lock. P/N 05-03389.....
- 608 Newton Fuel Cap Keys - Fits all Newton Fuel Caps with a 608 lock. P/N 05-04541.....
- 609 Newton Fuel Cap Keys - Fits all Newton Fuel Caps with a 609 lock. P/N 05-04542.....

A300 AND A500 FUEL CAP OVERHAUL KITS

Full set of O rings Replacement clip and ss stiffnut. Aero 300 and Aero 500 sizes. Pair of replacement keys fits Aero 300 or Aero 500.

- Newton A300 Fuel Cap O/H Kit..... P/N 05-02218.....
- Newton A500 Fuel Cap O/H Kit..... P/N 05-02219.....
- Newton Spiral Cap O-Ring Kit..... P/N 05-02611.....

Caps for Fuselage and Wing Tanks

For separate fuselage and wing tanks we offer a screw in flange to fit a 2.25" threaded bushing that can be welded or glassed into a tank. This gives a flush fitting outside the skin, avoiding doors and internal spillage. Ideal for all wooden airplanes (e.g. Falco). Good for smoke oil tanks.

A30S-G/S Non-Locking, Threaded	05-28705	
A30L-G/S Locking, Threaded	05-28700	
2.25" Bushing, Weldable	05-01056	

AVMAT AVGAS FUEL MATS

These fuel mats are made for Aviation Laboratories from heavy duty durable synthetic rubber. They are nonstatic and fuel resistant. They are color coded for JET A (Black), and AVGAS (Blue). They are available with center holes or top offset holes. (24" X 16") Part Number: Avmat-Avgas1 (top hole) / Avmat-Avgas2 (center hole) / Avmat-Jet1 (top hole) / Avmat-Jet2 (center hole)

- AVMAT-AVGAS1 (Top Hole)..... 13-03588.....
- AVMAT-AVGAS2 (Center Hole)..... 13-03589.....
- AVMAT-JET1 (Top Hole)..... 13-04925.....
- AVMAT-JET2 (Center Hole)..... 13-04926.....

BAYONET FUEL CAPS AND FILLER NECKS



Locking bayonet type cap with gasket, fastens to filler neck with safety chain. Externally threaded to mate with tank flange. 1.5" dia. filler hole, 2.25" diameter at threaded base, 1-3/8" neck length. Complete with aluminum tank flange designed for welding to aluminum tanks. Inner surface threaded to receive filler neck. Not compatible with auto gas.

- Complete Set with Unvented Cap..... P/N 05-17800.....
- Complete Set with Vented Cap..... P/N 05-17900.....
- Aluminum Tank Flange..... P/N 05-01056.....
- Cap Only (unvented)..... P/N 05-01057.....
- Cap Only (vented)..... P/N 05-01058.....
- Gasket for above Caps..... P/N 05-01059.....
- Filler Neck..... P/N 05-01060.....

RETROFIT FUEL CAPS

Tired of hard to open gas caps and caps which leak? These retrofit gas caps offer easy fingertip action and secure sealing.



GLASAIR FLUSH FITTING CAP replaces the rubber seal Glasair cap (2.5-entry and 2" hole). Lockable. Epoxy/Flox in place. Based on aero 300 series. P/N 05-01004.....

VANS RETROFIT SPRL CAP is a screw action SPRL cap fits existing flange and leaves full aperture opening. Non-locking. The seal relies on existing flange being free of dents and dings. P/N 05-01005.....



VANS RETROFIT AERO 20L CAP - Flush fitting key action cap assembly fits inside existing Vans flange. Easy action and secure seal. P/N 05-01006.....

LIGHTWEIGHT SPRL FUEL CAPS



SPRL-S-GS



SPRL-S

This cap has secure sealing and easy fingertip operation. These caps are made from the highest quality modern engineering plastics with Viton 'o' ring seals (which can be easily replaced if you should ever need to do so.) The mounting ring is anodized aluminum with the flange recessed to give a perfect flush fit whether it is riveted under a metal skin, as in the RV series, or built into a composite structure. This cap is non vented and recommended to keep the fuel in, the water out and in the locking version, other unwanted items out of your tank. Size: 65 mm O.D.; Wt: 80 grams. SPRL caps are used on Europa, Compair, Glasair, lancair, Murphy, OMF, Rocket, velocity, Zenith and many more experimental aircraft.

- Non-Locking cap W/ Flush Flange SPRL-S..... P/N 05-28662.....
- Locking cap W/ Flush Flange SPRL-L..... P/N 05-28663.....
- Cap with Threaded Flange SPRL-G/S..... P/N 05-28666.....
- Locking cap with Threaded Flange..... P/N 05-28667.....
- Backnut to secure threaded flanges to skin (for 2.25" hose) P/N 05-00042.....
- SPrl Fuel Cap O-ring Kit..... P/N 05-02611.....

SHAW AERO FLUSH FUEL CAPS



The 3" #416-51AB flush fuel cap (unvented) and adapter assembly is used by many general aviation manufacturers. Conforms to MIL-C-7244B.

- Stainless steel adapter ring is 5-1/2" O.D. with 3" dia. opening. Aluminum cap is fastened to adapter ring with safety chain. The 2" #428-1 assembly is similar to the 3" size but with a 2" dia. opening.
- 3" Unvented Cap & Flat Adapter Ass'y..... P/N 416-51AB.....
- 2" Unvented Cap Only..... P/N 428-2.....
- O-Ring for 3" Cap..... P/N MS29513-338.....

FUEL TANK SEALANTS – FUEL ADDITIVES



PR-1005-L BUNA-N SLOSH COATING

PR-1005-L is an aircraft integral fuel tank slosh coating designed as a topcoat or barrier coating, cured to resist prolonged exposure to both jet fuel and aviation gas. It has a service temperature range from -100°F (-73°C) to 250°F (121°C), with intermittent excursions up to 275°F (135°C).

PR-1005-L is a one part, synthetic rubber solution. The uncured material is a thin syrup suitable for application by brush, fill-and-drain, dip, or spray. It cures at room temp. by the evaporation of solvent to form a smooth, tough, flexible transparent film having excellent adhesion to common aircraft substrates and polysulfide sealants. Test results are in accordance with MIL-S-4383 specification test methods. Color: Red; Dry time(77°F): 20 mins.; non-toxic.

Pint..... P/N 09-00323

Quart..... P/N 09-00324



PRIST® HI-FASH® HI-FLO™ ANTI-ICING FUEL ADDITIVE

Prist® Hi-Fash® Hi-Flo™ Anti-Icing Fuel Additive: The Original Just Got Better Prist® Hi-Fash® Hi-Flo™ aerosol cans are now available with a redesigned trigger dispensing system that makes them easier and safer to use. The safety trigger gives the user control of additive flow with instant on and off dispensing. Now the trigger dispensing system comes pre-mounted on the can which eliminates leaks at the valve connection. This means less waste, no drips and no spills.

Prist® anti-icing fuel additive comes in a wide range of packaging, making it easy to choose the amount of product and dispensing method for your application. The sizes include: 55-gallon drums, 5-gallon pails, 20-once and 8-ounce aerosol cans.

20 oz. can..... P/N 09-39555.....

Case (24 Cans)..... P/N 09-39554.....

PRIST® HI-FASH® LO-FLO™ ANTI-ICING FUEL ADDITIVE -

Hi-Fash Hi-Flo™ vs. Hi-Fash Lo-Flo™ What's the Difference?

The two products are identical in chemical formula. Hi-Flo additive simply means the can delivers the product at a rate compatible with a 40 to 55 gall per minute fuel nozzle rate. Lo-Flo additive can deliver the product at a rate which is typical of avgas, which is 15 to 20 gallons per minute. Lo-Flo is also used in helicopters, which typically have to be fueled slowly.

8 oz. can..... P/N 09-02048.....

Case (24 Cans)..... P/N 09-02048-1.....



ALCOR TCP CONCENTRATE ELIMINATE SPARK PLUG LEAD FOULING!

Since the introduction of 100LL as the main fuel for low-compression engines, Alcor has been a leader in providing pilots a fuel treatment that eliminates lead before it can cause fouling. A simple one-shot treatment with every fill-up prevents lead build-up on spark plugs and valves. Rely on the one-and only Alcor TCP Fuel Treatment for a cleaner and smoother-running engine! TCP dispenser sold separately. (PN 05-21500) Note: TCP is not to be carried aboard aircraft.

Quart..... P/N 05-21300..... Gallon ..P/N 05-21400.....

Accessories

Funnel Adapter - For use on the former plastic bottles
P/N 05-01832.....

Dispenser - Calibrated for proper dosage of the number of gallons treated for 100LL grade of avgas. (For use on the QT. and Gallon bottles)
P/N 05-21500.....



DECALIN RUNUP FUEL ADDITIVE

Decalin Fuel Additive in a 16 oz bottle, treats up to 320 gallons of fuel. • Scavenges Lead in aviation fuel after combustion to prevent lead oxide buildup on valves but still allows the lead to perform the anti-knock function prior to combustion. • It is an excellent additive for auto conversions, where it reduces buildup on oxygen sensors and plugs. If you have to use 100LL, then this stuff is for you. • Prevents valve seat erosion from valve seat micro welding. It is equivalent to TCP. • Does not contain volatile solvents so it is safe to ship and safe in the cockpit. You can carry it with you for out-of-town airports. • Easy to use graduated measuring and dispensing reservoir built into the bottle. No messy syringes!

• Tested and stable down to 0° F. Decalin is not approved for use in the engines of certified aircraft. **Note: There are no HAZMAT shipping charges on this product**

Decalin Runup Fuel Additive 16OZ..... P/N 05-01406.....

Decalin Runup Fuel Additive Quart..... P/N 05-03412.....

FUEL FRESH



Aircraft sit - Fuel Fresh prevents gasoline from going stale. This process called Autooxidation occurs when oxygen reacts with fuel, thereby forming gum and varnish. Auto gas is particularly susceptible, losing octane performance and flammability, resulting in greater possibility for detonation. Add fuel Fresh and preserve fuel up to 24 months, maintain octane, prevent gum varnish, clean fuel system, and inhibit corrosion.

Quick starts and clean burn are assured. Safe for 2 or 4 cycle engines. Handy measuring bottle. 32 fl.oz. Concentrate (Treats 96 Gal.)

P/N 09-38050.....



JEFFCO FUEL TANK SEALER

Jeffco 9700 is a 100% solids epoxy system which is the highest quality fuel and chemical resistant lining and coating material available. It contains no solvents and no corrosive or carcinogenic substances to assure low toxicity and ease of application.

Provides superior low temp. curing, impact and abrasion resistance, and cures in the presence of moisture or humidity. Brushes on easily.

Sold in 3 gallon kit containing 2 gallons of resin and 1 gallon of hardener. One 3 gallon kit can coat tanks of average size homebuilt. Used extensively on Lancairs and other homebuilts. Shelf life one year.

Note: Jeffco Fuel Sealer 9700 FCR(Part Number:09-42226) is made up of 2 parts. Part A and Part B. They both can be sold separately. Part A is Part number:01-01062 and Part B is part number: 01-01063.3 Gal Kit..... P/N 09-42226

9700A FCR - 5 Gal..... P/N 01-01062.....

9700B FCR - 5 Gal..... P/N 01-01063.....

PRO-SEAL TYPE TANK SEALANTS

Pro-Seal and similar products are two-part polysulfide integral fuel tank and fuselage sealants. They have exceptional strength and jet fuel resistance as well as excellent resistance to oils, solvents, all fuels, and weathering. We offer a Pro-Seal equivalent which is a B-2 type material and meets specification MIL-S-8802E, Type II, Class B-2. These kits are packaged in poly bags with nozzle, plunger and instructions.

Kit A (2-1/2 Oz.) cartridge

2oz. sealant..... P/N 09-38500.....

Kit B (6 Oz.) cartridge

3-1/2 oz. sealant..... P/N 09-38510.....

Discount Schedule: Less 10% on 12 kits, less 15% on 20 kits (may be assorted).

PRO-SEAL HAND-DISPENSING GUN



These hand-operated dispensing guns are ideal for applying Pro-Seal type sealants in small quantities normally used by the home builder. Available in two sizes for the two sizes of Pro-Seal offered above.

2-1/2 oz. Dispensing Gun..... P/N 09-38520..... /ea.

6 oz. Dispensing Gun..... P/N 09-38530..... /ea.

PRO-SEAL AIR-POWERED SEALANT GUN



These air-powered dispensing guns are recommended for applying Pro-Seal type sealants in larger quantities and where positive control of the material being dispensed is critical. The unit's rugged construction makes it ideal for

in-plant production applications that may require full line air pressure. Features include twist lock instant loading, smooth dispensing, non-bleeder application control and positive application control. Lightweight.

2-1/2 Oz. Gun Kit (Gun & Cartridge)..... P/N 09-38540.....

6 Oz. Gun Kit (Gun & Cartridge)..... P/N 09-38550.....

2-1/2 Oz. Gun Only..... P/N 09-38542.....

6 Oz. Gun Only..... P/N 09-38552.....

2-1/2 Oz. Cartridge Only..... P/N 09-38544.....

6 Oz. Cartridge Only..... P/N 09-38555.....

PRO-SEAL FUEL TANK SEALANT

P/S 890 CLASS B

A filleting compound for sealing integral fuel tanks and pressurized cabins. It was especially developed for use over a temperature range of -65°F to +275°F and provides outstanding resistance to aircraft fuels (aviation gasoline or jet fuel) and petroleum base lubricating oils. Cures at room temperature and without shrinkage to form a resilient sealant possessing excellent adhesion to aluminum, magnesium, titanium, steel and numerous other materials.

Pint..... P/N 09-38560.....

Quart..... P/N 09-38565.....

PROSEAL PR-1776M CLASS B LOW WEIGHT FUEL TANK SEALANT



PR-1776M Class B is a low density, high temperature aircraft integral fuel tank sealant. It has a service temperature range from -65°F (-54°C) to 250°F (121°C), with very limited excursions up to 360°F (182°C). This material is designed for fillet sealing of fuel tanks and other aircraft fuselage sealing applications. It offers as much as a twenty percent weight savings, per unit volume, over traditional sealants used for these purposes. The cured sealant maintains excellent elastomeric properties after prolonged exposure to aircraft fuels both jet fuel and aviation gas, and will resist limited contact to diphosphate

ester based hydraulic fluids. PR-1776M Class B is a two-part, manganese dioxide cured Permapol® P-5 modified polysulfide. The uncured material is a low sag, thixotropic paste suitable for application by extrusion gun or spatula. It cures at room temperature to form a resilient sealant having excellent adhesion to common aircraft substrates. Shelf Life: 9 months..... P/N 09-02003.....

AP

CORROSION TREATMENT

ACF-50 ANTI-CORROSION COMPOUND

ACF-50 is a state-of-the-art compound for controlling corrosion on aircraft electrical and avionics systems and airframes. ACF-50 is designed for owners of strut equipped Piper aircraft to comply with new Piper bulletin 5280C requiring lift strut inspection. ACF-50 kills the corrosion process with just one application and will last for 24 months. Microswitches, cannon plugs, and relays will remain corrosion free. Plus, ACF-50 will easily free seized nuts, screws and bolts. ACF-50 is qualified under MIL-C-81309-E, and manufactured under ISO 9000 Certified Processes. Try ACF-50, you will be truly amazed at the results.

13 oz. Spray Can (HAZMAT) P/N 09-44350
 32 oz. Bottle P/N 09-00364
 4 Liter can P/N 09-44345
 20 Liter Pail P/N 09-00437

CORROSION X

Corrosion X is an excellent penetrant, lubricant, and corrosion filter which confirms to Mil-C-81309E and is perfect for extended corrosion protection of airframes. It is also highly effective in protection of all components in the electrical / avionics systems. On existing corrosion, it penetrates oxidation, displaces electrolyte and stops electrolysis. On corrosion free surfaces provides an ultra-thin barrier to guard against moisture intrusion and corrosion attack. Treatment lasts 2 years or more, and Corrosion X is non-toxic. Corrosion X is a highly recommend treatment for extending the life of airframes.

16 oz. Aerosol P/N 09-42220
 16 oz. Trigger spray (can be shipped anywhere non-hazardous, unrestricted) P/N 09-00296
 1 gal./3.8 ltr. P/N 09-44225

CORROSION X PRESSURE SPRAYERS

These pressure sprayers are excellent for applying Corrosion X and require no special training to operate. compact, convenient and easy to use, these sprayers have no moving parts and operates at 80 PSI shop air. At such a low CFM even some inexpensive diaphragm compressors can deliver adequate power. Furnished with instructional video. Available in 3 sizes.

2.5 GALLON TOTE - Required Air Pressure: 80 PSI @ 5 - 6 CFM Capacity: 2.5 gallons Weight: 22lbs Hose: 10' Color: Blue
Basic Unit Includes: 1" cricket wand, 3' x 1/4" 360° wand, 3' superflex wand P/N 09-00373
Complete Unit Includes: 1" cricket wand, 3' x 1/4" 360° wand, 3' superflex wand, 8' x 1/4" 360° wand, 6' x 3/16" 45° fan wand, 5" x 1/8" hook wand P/N 09-00374

5 GALLON HANDI-SPRAY™ - Required Air Pressure: 80 PSI @ 5 - 6 CFM Capacity: 5 gallons Weight: 28lbs Hose: 25' Color: Blue
Basic Unit Includes: 1" cricket wand, 3' x 1/4" 360° wand, 3' superflex wand P/N 09-00371
Complete Unit Includes: 1" cricket wand, 3' x 1/4" 360° wand, 3' superflex wand, 8' x 1/4" 360° wand, 6' x 3/16" 45° fan wand, 5" x 1/8" hook wand P/N 09-00372

BELT PACK - Required Air Pressure: 80 PSI @ 5 - 6 CFM Capacity: 1 quart Weight: 7lbs Hose: 3'
Basic Unit Includes: Pistol belt and holster, 1" cricket, 5" x 1/8" hook wand, 3' superflex P/N 09-00375
Complete Unit Includes: Pistol belt and holster, 1" cricket wand, 3' x 1/4" 360° wand, 3' superflex wand, 8' x 1/4" 360° wand, 6' x 3/16" 45° fan wand, 5" x 1/8" hook wand. P/N 09-00376

ELIMINATOR RUST REMOVAL TOOL

The Eliminator is a small brush which has a narrow tip composed of glass fibers, each smaller than a human hair. The glass fibers combine to produce concentrated scrubbing power of hundreds of pounds per square inch. In less than 1 minute, the Eliminator brush can clean out all surface rust, wax, and dirt so that touch up paint will bond. Comes with 2 extra glass fiber cartridges which are inside the handle. P/N 09-27230
 2 Pack of Refills P/N 12-01630

GREASEXTRA

Has been used and widely recommended by a diverse range of tool and machinery users - from engineers to woodworkers: classic car restorers and yachtsmen, pilots and farmers. Suggested uses include lubrication and protection of machine tools, wheel bearings of boat trailers and launching trolleys, tailwheels of light aircraft, stern tube stuffing box lubrication, light steam plant lubrication and protection. Cycle and motorcycle greasing and protection of chrome plated surfaces during winter months. 8oz Plastic Jar
 P/N 09-02066

PLIOBOND

Pliobond is a viscous, quick-setting adhesive which is highly versatile. Bonds metal, wood, plastic, fabrics, ceramics, glass, vulcanized rubber, paper, leather and concrete. Thin with MEK.
 #PBC-20, 1/2pt BrushTop Can P/N 09-28000
 #PC-220, Pint P/N 09-28100
 #PC-320, Qt. P/N 09-28200

PAR-AL-KETONE

An excellent corrosion inhibitor for use on exterior surfaces of parts that are subject to exposure. Recommended for all control cables. Meets spec. MIL-C-52, Type 1. May be sprayed, dipped, wiped or brushed on. Thin with mineral spirits or use undiluted.

Qt. P/N 09-26800
 Gal. P/N 09-26900

BOESHIELD™ T-9 CORROSION PROTECTANT

Developed this formula for long term protection of aircraft components. Penetrates to fasteners and fixtures, where it displaces moisture, and will even loosen rusted parts. Boeing recommends it for fuselage, wing, and tail structures, engines and cowlings, landing gear and gear wells, control linkages, and avionics. Dries to a clean waxy film. Lubricates and protects all metals for months. Safe on most paints, plastics & vinyls.

12 oz. Aerosol can P/N 09-01623
 4 oz Drip Can P/N 09-00378
 4 oz Spray Can P/N 09-00379
 Gallon Can P/N 09-01622

TUBE SEAL (LINE OIL)

Prevents rust and corrosion inside aircraft tubing structures. Tubeseal is a blend containing a very fine preservative oil (MIL-L-21260) which has a characteristic of climbing the tube wall and spreading over the entire surface to provide lasting protection. Penetrates and reveals very small pin holes in a weld and in time, due to exposure, congeal and seal the hole. 1 quart will treat 2 light aircraft fuselages. Complete instructions on label.

Qt. P/N 03-14000
 Pt. P/N 03-14005

DOW CORNING DC-4 COMPOUND

A grease-like silicone material which provides a moisture proof seal for ignition and electrical systems. More water repellent than waxes. Effective from -70° to 400° F. A low-loss dielectric. Meets spec. MIL-I-8860. 5.3 Oz. Tube P/N 09-27700

ECK CORROSION COATING

ECK® is a coating used to prevent dissimilar metal corrosion of all metals including stainless steel, aluminum, copper, brass, cold rolled steel and black oxide. ECK® prevents corrosion by providing a barrier between dissimilar metals, sealing out moisture and absorbing energy created by a dissimilar metal reaction. Product can be applied by aerosol or liquid on an unpainted or painted surface. Once applied the coating does not need to be reapplied during routine maintenance. ECK® is dielectric and can be used on electrical connections. Size is 3.75 oz.

P/N 09-02138

DOW 730 SOLVENT RESISTANT SEALANT

A one part RTV paste which cures at room temp. to a tough rubbery white solid. Used for bonding, sealing and caulking where resistance to fuels, oils and solvents is required. Excellent on fuel line pipe threads, repairing fuel lines and tanks, bonding components exposed to fuels, oils & solvents. temp. range -85° to 400°F. Stores refrigerated for years.

3 oz. tube P/N 09-00383

DOW SILASTIC RTV

General-purpose single-component silicone rubber. Adheres to metals, glass, paint, ceramics, most plastics, and wood. Cures to a firm silicone rubber in 24 hours at room temperature. Seals windshield glass, windows, repair worn rubber parts.

#732 RTV (Clear), 4.7 Oz. Tube P/N 09-27800
 #732 RTV (White), 4.7 Oz. Tube P/N 09-27810
 #732 RTV (Black), 4.7 Oz. Tube P/N 09-27815
 #736 Red Silicone, 3 Oz. Tube P/N 09-27900

TOOLGUARD VCI

ToolGuard VCI provides non-contact protection for tools and parts in storage by virtue of the state of the art vapour phase technology. ToolGuard VCI is available in packs of 3. Each ToolGuard VCI provides up to 12 months protection in a volume of up to 2 cubic feet. They are designed to protect tools and components in storage cases, toolboxes and tool chests. In large cabinets, distribute several ToolGuard VCI's throughout the cabinets. In traditional wooden toolmakers chests mechanics toolboxes with multiple draws, use one ToolGuard VCI per draw. Large items or components can be protected by placing inside a strong plastic bag into which a ToolGuard VCI has been placed. Until the lid is removed the shelf life of the ToolGuard VCI is infinite. P/N 09-02067

WHIRLWIND PROPELLERS — GOVERNORS



WHIRLWIND PROPS

Whirl Wind has made significant developments in the construction of the carbon composite propeller blades Insuring a strong, light and durable propeller system. The blade twist has been optimized for aerobatic performance, and the wide chord allows for more low-speed thrust and braking on those long down lines.



200C SERIES PROPELLERS

The 200C Series system consists of 2 carbon fiber blades with nickel leading edge erosion shields, aluminum hub and a composite spinner. This propeller is counter-weighted to prevent engine overspeed. This propeller can be flown in rain and off unapproved airstrips.

Performance & Quality. This 200C Series propeller has been designed to maximize the aerobatic performance of your airplane! The exceptional performance is derived from advanced engineering developments, including the use of our latest airfoils. The 200C Series is a two-blade hydraulic constant speed propeller system designed for aircraft using the Lycoming IO-360 engine (180 - 200 hp).

P/N 05-00568.....

400C SERIES PROPELLERS

The new 400C Series system consists of three carbon fiber blades with nickel leading edge erosion shields, aluminum hub and a composite spinner. This propeller is also counter-weighted to prevent engine overspeed. This propeller can be flown in rain and off of unapproved airstrips.

Experience the exceptional performance of the 400C Series propeller system. Like the 200C Series, performance is derived from advanced engineering developments, including the use of our latest airfoils. The 400C Series is a three-blade hydraulic constant speed propeller designed for aircraft using the Lycoming IO-540 engine (260 - 300 hp).

P/N 05-00569.....



SPECIFICATIONS

Prop Model#: 7755/C214	System Wt: 47 lbs (213 Kg)
Engine Type: Lyc. O-360,IO-360	Function: Aerobatic
Engine HP: 180 - 200 hp	Control: Governor P-940
Max RPM: 2700 RPM	Finish: Gray or White
# of Blades: 2	Spinner: Composite 13",14"
Diameter: 77"	

SPECIFICATIONS

Prop Model#: 7855/C415	System Wt: 65 lbs
Engine Type: Lyc. IO-540	Function: Aerobatic
Engine HP: 260 - 300 hp	Control: Governor P-940
Max RPM: 2700 RPM	Finish: Gray or White
# of Blades: 3	Spinner: Composite 14"
Diameter: 78"	

200C SERIES BENEFITS

- * Faster Acceleration
- * Better climb
- * More vertical performance
- * Faster top speed
- * More braking effect
- * Lower polar moment of inertia

400C SERIES BENEFITS

- * Faster Acceleration
- * Better climb
- * More vertical performance
- * Faster top speed
- * More braking effect
- * Lower polar moment of inertia

JIHOSTROJ HYDRAULIC GOVERNORS

Jihostroj Model	Engine Application	Part No.	Price
P-910	Rotax 912 & 914; Oil Pressure to increase pitch	05-00571	.
P-920	Lycoming O-320, IO-360, IO-540 - Standard; Oil Pressure to increase pitch	05-00572	.
P-940	Lycoming O-320, IO-360, IO-540 - Aerobatic; Oil Pressure to decrease pitch	05-00573	.



PROP & SPINNER POLISHING KIT

This kit was developed specifically to maintain the propeller and spinner on prop & spinner in pristine condition. P/N 09-23525.....



PROP PROTRACTOR

Perfect for precision setting of all ground-adjustable props, as well as precision alignment of control surfaces.

P/N 05-31970.....

PROP GUARD



Prop Guard can eliminate constant erosion process that a propeller is exposed to every flight. Prop Guard is a clear laminate installed on the leading edge of the propeller. It resists deterioration from the sun, is transparent for easy inspection, is easy to install (20 minutes), and is FAA approved for all fixed pitch and constant speed metal propellers. Detailed installation sheets make installation simple and effective. FAA Form 337 is not required for use on certificated aircraft. The kit for two-bladed propellers contains 65 inches of material and the kit for three-bladed propellers contains 92 inches of material. Not for use on wood propellers.

- 2 Blade Fixed Pitch Kit..... P/N 05-05330.....
- 3 Blade Constant Pitch Kit..... P/N 05-05335.....



THERM-X HOT PROP PROPELLER DE-ICING KIT

De-icing in under 90 seconds with the push of a button! No Fluids! No Mess! • Therm-X Hot Prop is a complete propeller deicing kit made up of Part 23 certified products (no more scrounging parts to build system) • Available for 2 blade and 3

blade props (currently Continental only, Lycoming to follow) 12V or 24V • 1 year Warranty • Installation documentation • Manufacturer provides support • Weight 4.9 lbs.

- 2 Blade..... P/N 05-03383.....
- 3 Blade..... P/N 05-03384.....

PROPELLERS

POWERFIN COMPOSITE PROPELLERS



Powerfin is the only composite propeller manufacturer in the U.S. to offer a true Clark-Y airfoil which optimizes surface airfoil for thrust. Powerfin also allows for infinite pitch range with any increment. The pitch alignment tool supplied with every Powerfin takes the guesswork out of pitching your prop. Simply set the stop screw, clamp the tool to the hub, and turn the blade to the stop. The process takes less than 10 minutes for a 3 bladed prop. Powerfin features include superior aerodynamics, noise reducing tips, superior composite construction, very strong low profile hub, durable finish, 2 and 3 blade configurations, fits Rotax 75MM bolt pattern, adapters for every bolt pattern, 32" to 72" diameter, leading edge protection, speed set hub and a two year factory warranty against defects. Weight is 6.5 lbs. for 2 bladed Powerfin and 9.0 lbs. for 3 bladed Powerfin. Complete brochure available on request.

General use propeller although specifically designed to run MODEL B significantly smaller diameters than most other props. The B-Model runs very well on a 582/2.58 as a three blade 60" for example, and can out produce our competition even when running much smaller diameters. Maximum possible diameter with this model is 65".



Designed specifically for powered parachutes as a three MODEL C blade 64" on a Rotax 582/2.58, this design works well on Rotax 447 s through Rotax 618 as well as the Hirth engines that fall between 40 and 80 horsepower. This is the propeller being sold as standard equipment on 6 of the top 7 ppc s. Maximum possible diameter with this model is 69".



This is our smallest propeller - designed for MODEL E engines between 15 and 30 horsepower. These narrow blades allow for a maximum possible diameter of 53". Backpack ppc s are the target of this design although the blade has been proven very efficient on many older, fixed wing airplanes with diameter restrictions. This is the ONLY pitch adjustable prop available to backpack units.



This is our largest propeller - designed for larger two-stroke engines that use the higher gear reduction ratios and horsepower up to 115. This prop runs beautifully on a Rotax 503/3.47 as a three blade 66"-70". A two place Kolb can't squeeze any more efficiency out of a 503/3.47 than with our F-model 68" prop. This prop is also the finest prop available for the Rotax 912, 912S, and 914 engines. Maximum possible diameter with this model is 75".



To calculate the cost of a full propeller assembly, take the price for a single blade times the number of blades you need. Then add the cost of the hub you need.

For example: A three blade C-model propeller assembly will include three C-model blades (\$420) and a standard three blade Apex hub (\$195). The total is \$620. All hub assemblies* include mounting hardware, optional lock-nuts for Rotax engines, and a 1/4" dowel pin used for setting the pitch.

The cost of each type of blade is the same regardless of the diameter.

BLADES

Blade Model	Single Blade Cost
B-Model	
C-Model	
E-Model	
F-Model	

*All propeller and hub assemblies include mounting hardware for the Rotax A, B, C, or E box or the Hirth gearbox.

HUB ASSEMBLIES*

Hub Type	For Blade Models	Cost
Special Two Blade Apex	E-Model Blades Only	
Special Three Blade Apex	E-Model Blades Only	
Standard Two Blade Apex	B, C, & F Model Blades	
Standard Three Blade Apex	B, C, & F Model Blades	
Standard Four Blade Apex	B, C, & F Model Blades	
Standard Five Blade Apex	B, C, & F Model Blades	
Rotax 912 Three Blade Apex	B, C, & F Model Blades	
Rotax 912 Four Blade Apex	B, C, & F Model Blades	
Rotax 912 Five Blade Apex	B, C, & F Model Blades	

Shipping a two or three blade propeller assembly is \$20.00. These prices are for all U.S. customers excluding Alaska and Hawaii. Most international orders will ship U.P.S. International - Expedited Service. If you wish a quote on an international order, please supply an address with a postal code so we can quote shipping prices.



PROPS INC. PROPELLERS FOR HOMEBUILTS

Ground Adjustable Propellers by Props Inc. For those who have changes in mind or like the looks of a three blade prop. It has wood blades similar to the Homebuilt line, but with an aluminum hub. Key Benefits: Wide Adjustable Range • Replaceable Blades • Custom Designed

Description	a t r	Price
VW, Jabiru, Subaru	46" - 58" dia.	
Three Blade	Up to 90" dia.	
Four Blade	Up to 90" dia.	

Homebuilt Props by Props Inc. Homebuilt props come with urethane leading edge protection and fiberglassed wrapped tips. Key Benefits: Durable, yet can save tear down cost in the event of a ground strike. • Specifically designed for the use. • Can be modified for fine tuning.

Description	a t r	Price
VW, Jabiru, Subaru	46" - 58" dia.	
Gyrocopter, Airboats Mac, VW, Subaru	48" - 56" dia.	
C-90, O-200, O-235 O-320, O-290, O-360	58" - 60" dia. 60" - 72" dia.	

Specify aircraft type, prop diameter, pitch, bolt pattern, pusher or tractor configuration, and mahogany or birch when ordering any homebuilt propeller. Allow 2-3 weeks for shipment of our custom propellers. Add \$30.00 for 3-blade and \$50.00 for 3 and 4 blade props-packing and shipping. Maple may be substituted for Birch according to availability.

ULTRALIGHT PROPELLERS BY PROPS INC.



These high quality ultralight propellers are available in both birch and mahogany. The birch props are as split-resistant as mahogany but mahogany props with glass coating are 1/3 lighter than the birch. Mahogany props come with a glass coating - it is optional on birch props. Add 35.00 for leading edge protection on birch or mahogany props. Propeller reconditioning available on all ultralight props.

Specify prop dia., pitch, bolt pattern, aircraft and engine type, birch or mahogany, and pusher or tractor configuration.

Allow 2-3 weeks for delivery. Prop drilling included in price. Additional 18.00 for packing and shipping.

Diameter (Specify)	Pitch (Specify)	Price for Plain Prop
36 thru 40	Any (to 36")	
41 thru 48	Any (to 46")	
49 thru 54	Any (to 46")	
55 thru 60	Any (to 46")	
61 thru 66	Any (to 46")	
67 thru 72	Any (to 46")	

Request quotation on prop pitch over 46"



DYNAVIBE PROP BALANCER

DynaVibe is an economical, state-of-the-art dynamic propeller balancer designed specifically for the aircraft industry. DynaVibe displays the magnitude and phase of propeller vibration allowing precise weight adjustments for balanced and smooth engine operation. * Economical - including: • Dynamic Balancer • Accelerometer with 30 ft cable • Optical Pickup and Reflective Tape (Tach) • Carrying Case • No hidden costs or additional items to buy! * Accurate - Reports RPM, Vibration Magnitude * Results - Reduce vibration for a smoother flight, and decrease mechanical wear of engine and instruments

DynaVibe Aircraft Prop BalancerP/N 05-04532
 DynaVibe Aircraft Prop Balancer with NISTP/N 05-04533
 DynaVibe Rotocraft Prop BalancerP/N 05-04534
 DynaVibe Rotocraft Prop Balancer with NIST .P/N 05-04535

BUZZ MASTER PROP BALANCER



This extremely simple and sensitive tool uses the plum-bob and bevel principle to balance props both vertically and horizontally. It can be carried in a small tool box for easy use in the field and balances props accurately for smooth operation. The precision machined hub works with any prop designed with standard 1" center hole. Illustrated instructions included.

P/N 13-17400

PROPELLERS

PRINCE AIRCRAFT COMPANY P-TIP PROPS



WOOD P-TIP PROPELLER - Before the "Carbon Fiber P-TIP Propeller", this had been considered one of the most efficient and lowest noise propellers available; the only wood/carbon fiber anti-vortex droop tipped propeller in the world. This propeller is a wood, fixed pitch propeller that relies on the forward pull of the propeller to automatically provide pitch change proportional to the amount of force being applied to the propeller disk. When a propeller operates at a slower airspeed than its maximum capabilities, it has a proportional pull in relation to the velocity of forward motion, so at takeoff and climbing condition the propeller will have its largest forward pull. Due to the scimitar shape, the tip of the propeller cones forward, as the coning angle changes the propeller will lessen pitch that provides shorter takeoffs and higher rates of climb. As the propeller increases in forward speed the disk pressure is reduced, this forces the propeller to increase pitch and top speed. This change in pitch is approximately four inches from takeoff to cruise. The droop P-TIP is to control the air spillage over the propeller tip that delays the tip vortices which cause drag and turbulence within the propeller arc. A propeller, like a wing, works best when it has unturbulated air over the airfoil sections. The P-TIP delays the vortices, the propeller then has smooth air to provide best thrust and a pronounced reduction in propeller noise.

Additional benefit of the P-TIP design is the volume of air the propeller produces. When air flows through a standard tip propeller design, the airflow at the tip will flow over the propeller tip. As soon as it passes the tip it will tuck down behind the propeller blade giving a cone of air from the propeller smaller than the propeller diameter. For example, a 72" diameter propeller without a P-TIP will give a volume of air from the propeller of approximately 68" of diameter; a P-TIP propeller will provide 72" of air volume. This means that a 68" P-TIP will give the same volume of air as a standard tip 72" propeller. By reducing propeller diameter there is less frontal area or flat plate drag of the aircraft. Higher top speeds are the result without sacrificing takeoff or climb. Your benefit is a lightweight, pitch changing propeller that will give you the best of short takeoff, maximum cruise, and more flying enjoyment in a quieter cockpit.

COMPOSITE P-TIP PROPELLER - Composite P-Tip Props retain the same qualities of the wood P-TIP but are more efficient and durable. Prince uses the reliable time proven wood core of hard maple, then completely encloses the blades in multiple layers of high tensile strength composites. The hardwood core absorbs the dangerous harmonic vibrations and benefits your airframe by smoothing the engine power pulses, and the composite wrapping allows the airfoils sections to be thinner, reducing drag while increasing durability and locks each blade into operating at precise angles. The best working propeller is one that is rigid enough to allow all blades to move alike, thin at the cord section to eliminate as much drag as possible, and strong enough to satisfy the large amounts of stress required during flight. Urea Formaldehyde adhesive meets Military Specifications to insure reliable operation and trouble free flying for the life of the propeller. Propellers are finished in a metal prop gray color, this shade will match nearly every paint scheme, the Durability and Ultrahigh Gloss finish is a two-part Urethane, machine buffed to achieve a propeller that reflects the quality of manufacturing like no other propeller available.

Note: Request Prince Propeller order form at time of order we will fax or mail form to you to complete to insure correct propeller is furnished for you application.

APPLICATION CHART

Aircraft	Engine	HP	Dia./Pitch	Hub Thickness	Price Schedule
Acro Sport	0-320	150	71/48	3.7	F
	Rotax 503	52	68/34	2.1	B
Avid Flyer	Rotax 532	64	71/35	2.1	B
	C-80A	80	66/48	3.25	F
Baby Great Lakes	0-320	150	68/72	3.7	F
	0-320	160	68/74	3.7	F
	0-360	180	68/76	3.7	F
Dragonfly	1834VW	60	52/45	2.75	D
	2100VW	82	52/48	2.75	D
Glasair	0-320	150	68/72	3.7	F
	0-320	160	68/74	3.7	F
	0-360	180	68/76	3.7	F
Glass Goose	0-540	270	69/113	3.7	F
	0-320	150	64/62	3.7	E
	0-320	160	64/64	3.7	E
Kitfox	Rotax 503	46	68/30	2.1	B
	Rotax 912	80	68/47	2.25	B
KR-2	1835 VW	55	52/48	2.75	D
	2100 VW	80	52/50	2.75	D
	Subaru	75	53/68	3.7	D
Lancair	0-200	100	58/68	3.7	E
	0-235	118	58/68	3.7	E
	0-290	140	60/72	3.7	E
	0-320	150	62/72	3.7	E
	0-320	160	62/74	3.7	E
	0-360	180	68/76	3.7	F

LOW HORSE POWER PROPS

(Ultralight Type) Composite Schedule
 P-Tip P-Tip
 A.. Up to 54" **\$8.00... \$12.20**
 B... 55"-110" **\$8.50... \$12.75**
 Call for Quote on all
 Prince Aircraft Propellers.

HIGH HORSEPOWER PROPS

Composite Schedule
 P-Tip P-Tip
 C.. Up to 45"
 D.....46"-55"
 E.....56"-65"
 F..... 66"-110"

MCCAULEY MET-L-PROPS



Original equipment on most Cessna aircraft and popular with owners of many other designs. McCauley has earned an enviable reputation for producing high-performance propellers. Most popular numbers are available from local stock. The Met-L-Prop number designates the model, diameter and pitch. Example: CM7150 is a model CM propeller with a 71 inch diameter and 50 inch pitch. When ordering a new prop which requires a doweled spacer, both spacer and bolt kit are included. Spacers and bolt kits may also be ordered separately. When ordering, specify whether engine has a tapered or flanged crankshaft. Tapered crankshaft requires Kit No.B-4622-6. Flanged crankshaft requires Kit No.B-4622-9. Elliptical tip models 1A90/CF and square tip models 1B90/CM having the same diameter and pitch are directly interchangeable except for CF7538 on Cessna 150G, H, J and K model seaplanes.

Aircraft Model	Engine	Standr Prop	Cruise Prop	Climb Prop	Our Price**
Beech A23-24	Lyc.10-360-A2B,A2D	BFA7762+			
Bellanca 7ECA	Cont. 0-200A	ACM6948+			
Bellanca 7ECA	Lyc. 0-235-C2C	CLM7246+	CLM7250		
Bellanca 7GCA	Lyc. 0-320-A2B	GM7452	GM7455	GM7450	
Cessna120,140	Cont. C-85	CM7148	CM7150	CM7146	
Cessna120,140	Cont. C-90	CM7152	CM7154		
Cessna 150A-F	Cont. 0-200A	MCM6950			
Cessna150G-K	Cont. 0-200A	DCM6948	DCM6950		
Cessna 150L	Cont. 0-200A	OCM6948+			
Cessna 170A,B	Cont. C-145	MDM7655	MDM 7656	MDM7653	
Cessna 172	Cont. 0-300A,B	MDM 7653	MDM7655	MDM7652	
Cessna 172A-H	Cont. 0-300C,D	EM 7653	EM7655	EM7652	
Cessna172I,K,L	Lyc. 0-320E2D	DTM7553+			
Cessna 175	Cont. G0-300A,C	MFC8467			
Cessna 175A,B	Cont. G0-300C,D	MFC8467			
Cessna 177	Lyc. 0-320-E2D	TM7653+			
Cessna 177A	Lyc. 0-360-A2F	FFA7656+			
Great Lakes	Lyc. 0-320-E2A	EGM 7654			
Luscombe 8A	Cont. A-75	CM7447	CM7449		
Piper J3 Cub	Cont. C-85	CM7144	CM7146		
Piper PA-18,18A	Lyc.0-290-D2	GM8241+			
Piper PA-32	Lyc.0-540-F4B5	PFA8266+			

Applications and Prices for some Popular McCauley Props. All Models Available. Prices are the same for all props with the same letter prefix.

MCCAULEY DE-ICE BRUSH CLUSTERS



These McCauley De-Ice Brush Clusters from Rapco are FAA-PMA approved and are applicable to any aircraft using the McCauley style brush blocks. Two clusters per block are required. Brush clusters with dash numbers require one of each dash number per block.

Rapco Part No.	Block No.	Installation	Part No.	Price
RAB40012	C40010	Cessna: T182 TR182 340A 402C 404 414A 421C 425	05-01326	.
RAB40189	C40179	Cessna: T182 TR182 340A 401AB 402C 404 414A 421C 425	05-01327	.
RAB40046	C40055	Cessna: U206G TU206G 210N P210N T210N 210R T210R 310P T310P 310Q T310Q 310R T310R 441	05-01328	.
RAB40193	C40187	Cessna: U206G TU206G 210N T210N 210R P210N T210R T303 441	05-01329	.
RAB40256-1	C40257	Raytheon: F33A V35B A36 B36TC 58 58A 58P 58PA 58TC 58TCA B200 B200C B200CT B200T	05-01330	.
RAB40256-2	C40257	Raytheon: F33A V35B A36 B36TC 58 58A 58P 58PA 58TC 58TCA B200 B200C B200CT B200T	05-01331	.
RAB40371-1	C40363	Raytheon: B200 B200C B200CT A200CT	05-01332	.
RAB40371-2	C40363	Raytheon: B200 B200C B200CT A200CT	05-01333	.
RAB40332	C40331	Fairchild: SA227-AT SA227-AC SA227-BC SA227-CC SA227-DC	05-01334	.

PRINCE AIRCRAFT PROPELLER ORDERING INFORMATION

HOW TO DETERMINE COST

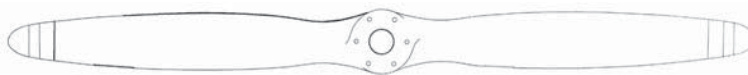
- Select style and price, P-TIP or Composite P-TIP propeller.
- Multiply propeller diameter times price per inch, e.g.: High Horsepower 68" dia. P-TIP propeller, 68 x 13.51 = **\$918.68**, Composite P-TIP 68 x 18.48 = **\$1256.64**
- Add Leading Edge Protectors, if required.

MULTI-BLADE PROPS

Three-Blade..... 2 Blade rate x 3 Four-Blade2 Blade rate x 4
LEADING EDGE PROTECTOR
 Up to 48" diameter **\$61.00** 49" - 110"

SENSENICH PROPELLERS

SENSENICH METAL PROPS



Most popular models of Sensenich metal propellers are available in local stock for immediate shipment. Installation bolt kit is furnished with each propeller. Attaching kit for flange shaft will be packed for all Continental installations unless taper shaft installation is specified. Propellers may be shipped via UPS. Partial List - Request Prices on Unlisted Models. Approximate Shipping Weight 40 Lbs. F.O.B. Corona, CA.

Aircraft Model*	Engine	Standard Prop	Climb Prop	Cruise Prop	Our Price
Aeronca 11AC	Cont. A-65	74CK-0-46			
Beech Model 23	Lyc. O-320 (160 hp)	74DM6-0-60	74DM6-0-56		
Bellanca 7EC, 7FC, 7JC	Cont. C-90	76AK-2-46	76AK-2-44	76AK-2-48	
Cessna 120, 140	Cont. C-85	76AK-2-44	76AK-2-42		
Cessna 150 thru 150K	Cont. O-200	69CK-0-52			
Cessna 152	Lyc. O-235 (110 hp)	72CKS6-0-56	72CKS6-0-54		
Cessna 172 thru 172C	Cont. O-300C, D	74DC-0-56			
Cessna 170	Lyc. O-360 (180hp)	76EM8S5-0-56	76EM8S5-0-54	76EM8S5-0-60	
Cessna 172 Avcon Conv.	Lyc. O-360 (180hp)	76EM8S5-0-56			
Cessna 172, 172A	Lyc. O-360 (180hp)	76EM8 series			
Cessna 177	Lyc. O-360 (180hp)	76EM8 series			
Piper J3C65, L4, Cub	Cont. A-65	74CK-0-46	74CK-0-44		
Piper PA-11, Cub, J4A	Cont. A-65	74CK-0-46	74CK-0-44		
Piper PA-11, PA-18, Cub	Cont. C-90	76AK-2-42		76AK-2-46	
Piper PA-18 Super Cub	Lyc. O-235-C1	76AM6-2-44			
Piper PA-18 Super Cub	Lyc. O-320 (150 hp)	74DM6-0-56	74DM6-0-54	74DM6-0-58	
Piper PA-20 Pacer	Lyc. O-235-C1	76AM6-2-50	76AM6-2-48	76AM6-2-52	
Piper PA-22-108 Colt	Lyc. O-235-C1B	76AM6-2-48		76AM6-2-50	
Piper PA-20, PA-22	Lyc. O-290-D (125 hp)	74DM6-0-56	74DM6-0-54		
Piper PA-22	Lyc. O-320 (150 hp)	74DM6-0-60	74DM6-0-58		
Piper PA-28-140 Cherokee	Lyc. O-320 (150 hp)	74DM6-0-60	74DM6-0-58		
Piper PA-38 Tomahawk	Lyc. O-235 (112 hp)	72CK-0-56			
Piper PA-28 140, 4 Cherokee	Lyc. O-320 (150hp)	74DM6-0-58	74DM6-0-56		
Piper PA-28 150 Cherokee B	Lyc. O-320 (150hp)	74DM6-0-58	74DM6-0-56		
Piper PA-28 151 Warrior	Lyc. O-320 (150hp)	74DM6-0-58			
Piper PA-28 151 Warrior/160	Lyc. O-320 (160hp)	74DM6-0-60			
Piper PA-28 160 Cherokee B	Lyc. O-320 (160hp)	74DM6-0-60			
Piper PA-28 180 Archer	Lyc. O-320 (180hp)	76EM8S5-0-60			
Piper PA-28 180 Cherokee C	Lyc. O-320 (180hp)	76EM8S5-0-60			
Piper 181 Archer II ('78)	Lyc. O-320 (180hp)	76EM8S5-0-62			
Pitts Special S1S and S2	Lyc. 10-360	76EM8-0-56 to -61			
Taylorcraft BC65, BCD12D	Cont. A-65	74CK-0-48	74CK-0-46		
Taylorcraft BC12D85, 485, 19	Cont. C-85	74CK-2-46	74CK-2-44		
Stoddard Hamilton Glasair IITD, FT, RG	Lyc O-320/160hp				
Stoddard Hamilton Glasair IITD, FT, RG	Lyc O-320/160hp				
Stoddard Hamilton Glasair IIITD, FT, RG	Lyc O-320/160hp				
Tri-R (KIS)/116	Lyc O-235-L2C				
Van's RV-3/150, RV-4/150	Lyc O-320/150hp				
Van's RV-3/160, RV-4/160	Lyc O-320/160hp				
Van's RV-6/RV-6A150	Lyc O-320/150hp				
Van's RV-6/RV-6A160	Lyc O-320/160hp				
Zenith CH-2000/116	Lyc O-235 (116hp)	72CK-0-46		72CK-0-48	
Zenith CH-2000A/150	Lyc. O-320 (150hp)	74DM6S5-0-58			

*All models listed are land planes.

SENSENICH FLIGHT PERFORMANCE ALUMINUM PROPS FOR VANS AIRCRAFT

For the Lycoming O-235 (125 HP): 72 CK Series Propeller.....72 CK Series Propeller.....P/N 05-01468.....
 For the Lycoming O-320 (150 or 160 HP): 70 CM Series Propeller.....70 CM Series PropellerP/N 05-01469.....
 For the Lycoming O-360 (180 HP): 72 FM Series Propeller72 FM Series PropellerP/N 05-01470.....

Both Systems Include:

- High Performance Fixed-Pitch Aluminum Propeller
- Aluminum Propeller Extension Included
- 2 yr or 200hr warranty (whichever comes first)
- Personalized service
- Attaching Hardware Included
- A full 2" dia. reduction allowed for repairs
- Propeller system that can be serviced anywhere.

Specify aircraft model, engine, & pitch (standard, climb, or cruise) when ordering. Also available for Murphy Rebel, Elite, Glasair, Thorp T-18, Tri-R, Midget Mustang, & many other homebuilts.

SENSENICH ALUMINUM PROP BOLT KITS

These propeller bolt kits for Sensenich aluminum propellers include the bolts and washers for propeller attachment.

Propeller Application	Bolt Kit Part No.	Price	Propeller Application	Bolt Kit Part No.	Price
69CK	AN6H-37AS		76AK	AN6H-32AS	
72CK	AN6H-37AS		76AM6	AN6H-33AS	
74CK	AN6H-32AS		76EM8	AN8H-46AS	

PROPELLER BUSHINGS



SENSENICH A-437 For installations with Continental taper shaft. 5/8" O.D. x 3/8" I.D. x 1/2" Long.
 Set of 6P/N 05-01127.....

MCCAULEY A-1170 5/8" O.D. x 3/8" I.D. x 11/16" Long.
 Set of 6P/N 05-01128.....

SENSENICH PROPELLER FOR CESSNA 172'S

This propeller is STC's for Cessna 172's I thru P using Lycoming O-320 series engines. It is available in pitches of 56 to 60 and no spinner change is required. Features a full 2 inch diameter reduction. Model 74DM7S14-0-56-60 (Specify pitch).....

PROPELLERS

SENENICH WOOD PROPS



Original equipment on Piper, Aeronca, Taylorcraft, Cessna, Ercoupe, Fairchild, and others. Metal tipping and high lacquer finish. Bolts and mounting plates not included. 18 lbs. each. FAA approved for certificated aircraft. Also excellent for experimental aircraft. Aircraft Spruce is an authorized Sensenich factory distributor. *Props w/asterisk are most commonly used props & are normally in stock for immediate shipment.

STANDARD PROP

Aircraft Models	Engine	Std. Prop	Part No.	Price	Climb Prop	Part No.	Price
Aeronca 7AC, 11AC, 11ACS	Cont. A65	W72CK-42	05-W72CK-42	.	W72CK-40	05-00583	.
Cessna 120, 140	Cont. C85	W74FK-45	05-01808	.	W74FK-44	05-01809	.
Commonwealth 185	Cont. C85	W74FK-44	05-01809	.			
Luscombe 8A	Cont. A65/C65	W76CK-42	05-01810	.	W76CK-40	05-01821	.
Piper J-3, J-4A, PA-11, A-17	Cont. A65/C65	W72CK-42	05-W72CK-42	.	W72CK-40	05-00583	.
Piper J-3 (Duster)	Cont. A75	W70DK-40	05-01811	.			
Piper J-4E	Cont. A75	W70DK-42	05-01812	.			
Piper J-4F, PA-15	Lyc. O-145B	W70L -36	05-01813	.			
PA-14, PA16, PA-18, PA-20	Lyc. O-235C1	W74FM-49	05-01814	.	W74FM-47	05-01819	.
PA-20, PA-22 125,135	Lyc. O-290D/D2	W74FM-54	05-01815	.			
PA-18, PA18A	Lyc. O-290D/D2	W74FM-49	05-01814	.	W74FM-47	05-01819	.
T-Craft BC65, BC1265	Cont. A65	W72CK-42*	05-W72CK-42	.			
L2, D65, DC065							
T-craft BC12D	Cont. A65	W72CK-42	05-W72CK-42	.	W72CK-40	05-00583	.
BC12D1							
Stinson 10, HW75	Cont. A70	W70DK-40	05-01811	.			

AP

AIRBOAT AND LOW HORSEPOWER PROPELLERS



We carry the complete Arrowprop Propeller Co. line of props used on airboats, ice sleds, hovercraft, bowfishing, air drives, and wind machines. These props are for use with engines such as Briggs & Stratton, Rotax, Cuyuna, Tecumseh, Hirth, Yamaha, Kawasaki, Onan, Wisconsin, Kohler, Honda, and others.

The props are available in diameters from 26" to 48" and with 2, 3, 4, 5, 6, or 8 blades. All propellers have a 1-3/4" prop hub except for 48" prop which have 2" hubs. CALL WITH YOUR REQUIREMENTS AND REQUEST QUOTATION.

TENNESSEE PROPELLERS



Each Tennessee propeller is solidly built by skilled craftsmen from the finest selection of hardwoods. The laminated propeller is carefully assembled, carved, balanced and finished. Standard Rotax hub bolt pattern (others available on request). When ordering, please tell us: 1. Engine type and displacement 2. Left hand or right hand drive 3. Pusher or tractor configuration 4. Gear or belt drive, and reduction ratio 5. Prop diameter and pitch. Direction of prop rotation is determined by viewing rotation of prop from behind the aircraft. Left hand rotation is counter-clockwise, right hand rotation is clockwise. If you're not sure about prop size, give us a call.

Description	Part No.	Price	Description	Part No.	Price
36" Prop 1.5" Hub	TP36		36" Prop 2" Hub	TP362	
42" Prop 1.5" Hub	TP42		42" Prop 1.5" Hub	TP42	
44" Prop 1.5" Hub	TP44		44" Prop 2" Hub	TP442	
48" Prop 1.5" Hub	TP48		48" Prop 2" Hub	TP482	
50" Prop 1.5" Hub	TP50		50" Prop 2" Hub	TP502	
52" Prop 1.5" Hub	TP52		52" Prop 2" Hub	TP522	
54" Prop 1.5" Hub	TP54		54" Prop 2" Hub	TP542	
58" Prop 1.5" Hub	TP58		60" Prop 1.5" Hub	TP60	
60" Prop 2" Hub	TP602		64" Prop 2" Hub	TP642	
66" Prop 2" Hub	TP662		68" Prop 2" Hub	TP682	
70" Prop 2" Hub	TP702		74" Prop 2" Hub	TP742	

ARROWPROP ULTRALIGHT PROPELLERS



Propeller	Hub Thickness			
Diameter	1-5/8"	1-3/4"	2"	2-1/4"
Stock No.	05-313--	05-314--	05-315--	05-316--
30"	---	---	---	---
36"	---	---	---	---
38"	---	---	---	---
40"	---	---	---	---
44"	---	---	---	---
46"	---	---	---	---
48"	---	---	---	---
50"	---	---	---	---
52"	---	---	---	---
54"	---	---	---	---
56"	---	---	---	---
58"	---	---	---	---
60"	---	---	---	---
62"	---	---	---	---
64"	---	---	---	---

Order by P/N. Use basic P/N at top of column, and complete P/N with prop diameter.

When ordering please give the following:

- Specify clockwise or counter-clockwise rotation
- Specify pusher or tractor type.
- Give center hole size.
- Give bolt circle diameter
- Give number of bolt holes and sizes.
- Specify Aircraft model or prop pitch. For inyl Leading Edge Add Additional. For Polyester Leading Edge Add Additional.

PROPELLERS

WARP RIVE A VANCE COMPOSITE PROPELLERS

Warp Drive's Advanced Composite Carbon Fiber propeller has a structural strength near that of metal propellers. Because of the stiffness achieved by using carbon fibers, the prop will do very little coning (bending forward) under power. Proper fiber placement allows the prop to flex torsionally for maximum cruise efficiency. The strongly fixed position of the blades along with optimum torsional performance translates into more thrust than conventional propellers.

The interior structure of this new propeller is all carbon fiber - no fiberglass, no foam, no filler - an all carbon fiber matrix combined with top quality hybrid epoxies. Carbon fiber is one of the strongest building materials available. When properly engineered, carbon fiber can achieve the strength and stiffness of a metal part, as demonstrated by its wide range of industrial and aerospace uses.

WARP DRIVE PROPELLER BLADE TYPES

All propellers and blade types are available with Stainless Steel Leading Edge protection as an option at additional cost.

- STANDARD ADVANCED COMPOSITE CARBON FIBER BLADES**
The Standard Carbon Fiber Blades can be used on Rotax, Arrow, VW and similar engines.
- HIGH HORSE POWER ADVANCED COMPOSITE CARBON FIBER BLADES**
The Carbon Fiber HP Blades will be required for use on Lycoming, Continental and some auto conversion engines.

WARP DRIVE HUBS

Warp Drive offers two types of hubs of our propellers. First is our Standard Hub. This is an assembly of anodized aluminum plates and composite clamping blocks. It accommodates standard and custom hub bolt patterns of up to 3 1/8".

The second type of hub is the HP Hub. This hub consists of two halves machined from solid aluminum. It is the same weight as the standard hub assembly and can accommodate Rotax, Arrow, VW, SAE I Continental, SAE II Lycoming and custom bolt patterns.

STANDARD CARBON FIBER PROPELLER

- 2-Blade Std Carbon Fiber Propeller..... 05-31920.....
- 3-Blade Std Carbon Fiber Propeller..... 05-31925.....
- 4-Blade Std Carbon Fiber Propeller..... 05-31930.....
- Replacement Std Carbon Fiber Blade..... 05-31935.....

WITH HP HUB

- 05-31940.....
- 05-31945.....

HIGH HORSE POWER CARBON FIBER PROP WITH HP HUB

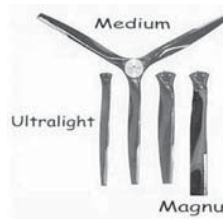
- 2-Blade Carbon Fiber H/P w/HP Hub..... 05-31950.....
- 3-Blade Carbon Fiber HP w/HP Hub..... 05-31955.....
- Replacement Carbon Fiber HP..... 05-31960.....
- Mounting Hardware (Rotax)..... 05-31965.....
- Protractor..... 05-31970.....
- Non-Standard Hub Pattern..... 05-31975.....
- Spinner (Rotax Pattern)..... 05-31980.....
- "HP" Hub (purchased separately)..... 05-31985.....

ORDERING A PROPELLER

We request all applicable information below when you are ordering:

- Name, Address, Phone Number(s)
- Vehicle - type, make, model, cruise speed, tractor/pusher,
- Engine - make, horse power,
- Reduction Drive - type, ratio. If there is no reduction drive, (State Prop RPM)
- Hub Requirements - A) Bolt circle dia, B) Number of bolts, C) Bolt dims, D) Center hole dims, E) Drive lug dimensions (if applicable),
- Propeller Description-rotation, diameter, structural limitation of diameter manufacturer's suggested prop description, no. of blades, tractor or pusher.

QUICK ADJUST SYSTEM IVOPROPS



The Quick Adjust System Ivoprops allow you to adjust the pitch on the ground in a matter of seconds by turning the screw adjustor in the center of the prop. The supercams are welded on the end of the torsional rods. Each supercam fits into the groove in the screw adjustor. Turning the screw adjustor causes each cam to rotate and turn the torsional rod and thereby twist the blade therefore changing the pitch. Specify aircraft and engine make and model, and propeller diameter. * Ultralight Ivoprop (3.5" cord, 48" to 72" diameter) is for engines up to 100 hp. * Medium Ivoprop (4.5" cord, 52" to 74" diameter) is for engines around 100HP. * Magnum Ivoprop (5.5" cord, 58" to 76" diameter) is a high-horsepower version for engines up to 700 HP.

* Magnum Paddle Ivoprop (5.5" constant cord, 58" to 84" diameter" is for high-horsepower air boats and bush planes.

- Ultralight 2-Blade Ivoprop..... P/N 05-33220.....
- Ultralight 3-Blade Ivoprop..... P/N 05-33225.....
- Ultralight 6-Blade Ivoprop..... P/N 05-33235.....
- Medium 2-Blade Ivoprop..... P/N 05-00692.....
- Medium 3-Blade Ivoprop..... P/N 05-00693.....
- Magnum 2-Blade Ivoprop..... P/N 05-33240.....
- Magnum 3-Blade Ivoprop..... P/N 05-33250.....
- Magnum 6-Blade Ivoprop..... P/N 05-33260.....

IN-FLIGHT ADJUSTABLE PITCH IVOPROPS



The In-Flight Adjustable Pitch Ivoprop allows the pilot to change the propeller pitch in flight through a toggle switch mounted in the cockpit. Pressing the toggle switch one way sends an electric current through the graphite brushes to the slip rings and finally to an electric motor. Torque from the electric motor is channeled to a planetary gear drive which turns the lead screw. Torsional rods transmit movement from the center of the prop to the outside section of the blades,

causing the blade to twist therefore changing pitch. Total time for the full range of adjustment is about 5 seconds. Mounts directly to any Rotax gear box (B or C0 and can be adapted to VW, Subaru, Hirth, Arrow and smaller Lycoming and Continental engines. Older model Ivoprop ground adjustable props can be converted to the In Flight System with the Retrofit Kit. In Flight adjustable hub comes assembled with complete instructions. Weight of 3 blade 72" In Flight Adjustable Prop including all required parts (furnished) is 9 lbs. Specify aircraft and engine make and model, and propeller diameter (48" to 76"). Standard Ivoprop is for engines up to 100 hp. Medium Ivoprop is for engines around 100HP (52"-74" prop dia.). Magnum Ivoprops are a high-horsepower version with wider blades and a bigger hub for engines up to 700 HP (56"-76" prop. dia.).

- Standard 2-Blade Ivoprop Kit..... P/N 05-33205.....
- Standard 3-Blade Ivoprop Kit..... P/N 05-33210.....
- Standard Retrofit Kit for Ground Adjustable Ivoprops..... P/N 05-33215.....
- Medium 2-Blade Ivoprop..... P/N 05-00694.....
- Medium 3-Blade Ivoprop..... P/N 05-00695.....
- Medium Retrofit Kit for Ground Adjustable Ivoprops..... P/N 05-00696.....
- Magnum 2-Blade Ivoprop Kit..... P/N 05-33270.....
- Magnum 3-Blade Ivoprop Kit..... P/N 05-33280.....
- Magnum 6-Blade Ivoprop Kit..... P/N 05-33290.....
- Magnum Retrofit Kit for Ground Adjustable Ivoprops..... P/N 05-33295.....



CONSTANT SPEED ELECTRONIC GOVERNOR

- Converts In-Flight Adjustable Ivoprop into the constant speed propeller • Plugs into existing wiring harness • Size: 2" x 4" x 1"
- P/N 05-00601.....

ULTRA-PROP



Select 2, 3, or 4 blade props. Each blade is moulded from a high strength glass-reinforced composite. High efficiency airfoil design means high thrust from a 59" diameter prop. One set of pitch blocks included, additional blocks available in 1° increments. Universal hubs made from high strength composite. Accommodates most popular bolt-mounting patterns. Each prop comes complete with all assembly and mounting hardware, and complete instructions. Black blades and hub are beautifully complemented by high impact polyester spinner. Blades can be trimmed to length, allowing custom prop diameters as small as 48".

r p t o	Part No.	Pr	r p t o	Part No.	Pr
Kit 2 Blade LH	UP102L		Kit 2 Blade RH	UP102R	
Kit 3 Blade LH	UP103L		Kit 3 Blade RH	UP103R	
KIT 4 Blade RH	UP104R				

ACCESSORIES

r p t o	Part No.	Pr	r p t o	Part No.	Pr
Pitch Block Set 9 DG	UP9		Pitch Block Set 10 DG	UP10	
Pitch Block Set 11 DG	UP11		Pitch Block Set 12 DG	UP12	
Pitch Block Set 13 DG	UP13		Pitch Block Set 14 DG	UP14	
Pitch Block Set 15 DG	UP15		Pitch Block Set 16 DG	UP16	
Pitch Block Set 17 DG	UP17		Pitch Block Set18 DG	UP18	
Pitch Block Set 20 DG	UP20		Hardware Pack	UPHDW	
Bolt Sleeve Set	UPSLEEVE		Spinner	UPSPIN	
LH Blade White	UP105P		Blade RH Yellow	UP105T	
Hub half 2 Blade	UP1072		Hub Half 3 Blade	UP1073	
Hub Half 4 Blade	UP1074				

SPINNERS

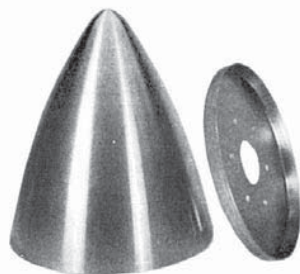
BN-1 BULLET NOSE SPINNER KIT FAA-APPROVED



Designed specifically for fixed pitch wood or metal props installed on horizontal opposed engines with prop hub thickness not exceeding 3-5/8". Kit includes 8" diameter x 12" long spinner dome center hole is 2.68" diameter, two aluminum bulkheads, mounting hardware, templates for trimming dome to fit prop hub and complete installation instructions. Ideal spinner for homebuilts. Wt. 1-3/4 lbs. FAA approved for installation on many certified aircraft such as Aerona, Cessna, Luscombe, Piper, Stinson and Swift. FAA approval list on request.

Complete Kit.....	P/N 10005
Bulkheads Only: Front	P/N 05-02677
Rear	P/N 10004-R.....
Dome Only	P/N 10003

SN-4 SPINNER KIT



Aluminum spinner, 9-7/8" diameter, 11-1/8" long. Center hole is 2-1/4" diameter Spinner dome fabricated from .080" thick aluminum for durability. Wt. 2 lbs. Furnished with mounting hardware and trimming and installation instructions. Used on Q2, Q200 and other homebuilts. To order, see "How To Order Spinner Kits".

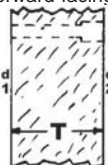
Complete Kit.....	P/N 10303.....
Rear Bulkhead Only	P/N 10302.....
Dome Only	P/N 10301.....
SN-4 Kit (undrilled bulkhead).....	P/N 05-13200
Optional Front Bulkhead (Not Incl.In Kit)	P/N 10304.....

Front Plate available for hub thicknesses of 3-3/8", 3-1/2" and 2-3/4" only.

HOW TO ORDER SPINNER KITS

Please furnish the following information so that we may provide the proper spinner kit for your combination of prop hub thickness, prop bolt and prop bushing diameters, and bolt hole pattern. Add \$40.00 for spinner kits with forward facing flange on bulkheads. A forward facing flange replaces the diameter of the spinner dome.

- Spinner Model
 - Prop Hub Thickness (T)
 - Prop Bolt Dia. (d1)
 - Prop Bolt Bushing Dia.(d2)
 - Specify SAE #1 or SAE #2, SAE #3, or Rotax Pattern
 - Also Available in 6 hole, 4" Bolt circle Diameter.
 - Forward Facing Flange (Yes or No) Additional \$40.00 Fee
- * Note: SAE #1 = 4-3/8" dia.; SAE #2 - 4-3/4" dia.; SAE #3 = 5-1/4" dia.



Rotax o t patt r #1 75mm circle dia. 6 holes 1/4" dia. 1" center hole.

Rotax bolt pattern #2: 100mm circle dia. 6 holes 5/16" 1" center hole.

SPINNER EXTRA HIGH POLISH "CHROME"



We now offer our complete line of aircraft spinners "high polished", which gives them a beautiful chrome-like appearance. If spinner is to be painted this is not necessary, but if it will be bare, add the High Polish option for a bright, shiny look. Add these prices to the price of the standard spinner and specify "high polish".

BN-1	SN-4
AC-1	BN-3
SN-5	

ALL SPINNERS MADE ON STEEL TOOLING

BN-3 SPINNER KIT FOR LYCOMINGS



Aluminum spinner, 12-1/16" diameter, 13-1/4" long. Center hole is 2-5/8" diameter. Designed for installation on homebuilts with Lycoming 0-290, 0-320 and 0-360 engines. Spinner dome and bulkheads fabricated from .080" thick aluminum for durability. BN-3 spinner kits available for props with hub thicknesses of 3-7/16", 3-9/16", 3-3/4", 4-1/4", 4-11/16", 5" and 5-3/8". Wt. 3 lbs. Furnished with predrilled front and rear bulkheads, mounting hardware and trimming and installation instructions. To order, see "How To Order Spinner Kits".

Complete Kit	P/N 10060.....
Rear Bulkhead Only (Large).....	P/N 10031.....
Front Bulkhead Only (Small)	P/N 10051.....
Dome Only.....	P/N 10022.....

STANDARD BN-3 KITS

P/N	Sp	at o	Pr
05-10000	HUB 3-7/16, SAE2, BOLT 3/8, BWII 5/8.....		
05-11000	HUB 3-9/16, SAE2, BOLT 3/8, BWII 5/8.....		
05-03431	HUB 3-9/16, SAE2, BOLT 1/2, RWII 3/4.....		
05-03432	HUB 3-3/8, SAE2, BOLT 3/8 BWII 5/8.....		
05-12000	HUB 3-3/4, SAE2, BOLT 3/8, BWII 5/8.....		
05-13000	HUB 4-1/4, SAE2, BOLT 3/8, BWII 5/8		

NOTE: SAE #1 = 4 3/8", 2 = 4 3/4", 3 = 5 1/4"

ALL OTHER BN-3 SPINNERS ARE SPECIAL ORDER

PROP SPACERS

(6061 Aluminum with Prop Bolt Holes Drilled)

Th	P/N	Pr	Th	P/N	Pr
1/16"	10055-1.....		1/4"	10055-4	
1/8"	10055-2.....		3/8"	10055-5.....	
3/16"	10055-3.....				

Specify SAE and bolt size. All are special order. *Furnished in two pieces: 1/4" and 1/8" thick

BN-2 SPINNER KIT



The BN-2 aluminum spinner kit features a 10" long dome and is 10-3/4" in diameter. It is furnished complete with a rear bulkhead and hardware kit.

BN-2 Spinner kit w/drilled plate.....	P/N 10340.....
BN-2 Dome Only	P/N 10341.....
BN-2 Rear Bulkhead only	P/N 10342.....
BN-2 Spinner kit w/undrilled plate.....	P/N 05-13500

AC-1 SPINNER KIT

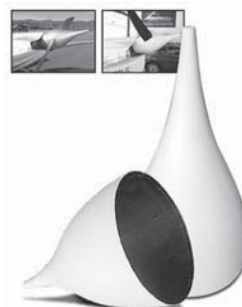


Aluminum spinner 10-1/8" diameter. Length of dome varies from 13-1/2" to 15-1/2", depending on prop hub thickness. Heavy duty construction.

Furnished with predrilled front and rear bulkheads and streamlined fairing for pusher installations. Kits available for hub thicknesses of 3" to 5". For Lycoming 0-235 engines specify SAE #1 (4-3/8" dia.) or SAE #2 (4-3/4" dia.) bolt circle. Wt. 2-3/4 lbs. Furnished with mounting hardware and trimming and installation instructions. To order, see "How To Order Spinner Kits".

Complete Kit	P/N 10105.....
Kit Less Fairing	P/N 10105-1
Front (Large) Bulkhead Only	P/N 10102
Front (Large Heavy Duty) Bulkhead Only.....	P/N 10102HD.....
Rear (Small) Bulkhead Only	P/N 10103
Dome Only	P/N 10101
Fairing Only.....	P/N 10104.....
LG Bulkhead 3/8" Bolt, 5/8" Bushing SAE1	P/N 05-03428.....
LG Bulkhead 3/8" Bolt, 5/8" Bushing SAE2... ..	P/N 05-03429.....

A VANCE COMPOSITE AC-I SPINNER DOME



This new super-light spinner dome weighs about 8oz. which drastically reduces the spinner assembly weight and the need for lead ballast in the nose of pusher-type aircraft. This weight savings, combined with the revolutionary new tapered spinner dome which reduces drag can increase the cruise speed of almost any pusher-type homebuilt. These spinners have been used on a modified VariEze to win several air races. This composite dome uses the AC-1 10102HD aluminum bulkheads and the 10104 fairing.

AC-1 Advanced Composite Dome	P/N 01-28000
AC-1 10102HD Bulkhead.....	P/N 10102HD
AC-1 Fairing.....	P/N 10104



SPINNERS

SKULL CAP SPINNERS

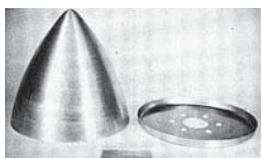


5-inch diameter - For wood or metal props on Cont. A-65 to O-200 engines. Complete with mounting bracket and installation hardware. High-polish finish. Top quality. P/N 10210.....

6-inch diameter - For Lycoming O-235 to O-360 engines and Cessna 170 s. With mounting bracket and installation hardware. High-polish finish. Top quality. P/N 10220.....

Bracket & Hardware Only (Fits Either Spinner) P/N 05-21800.....

SN-5 SPINNER KIT



12" diameter, 11-1/8" long. Similar to a Piper design and adaptable to many homebuilts. Fabricated from .080" aluminum for durability. Furnished with pre-drilled rear bulkhead. Wt. 2 lbs. Mounting hardware and trimming and installation instructions furnished. To order, see "How

to Order Spinner Kits. Optional Front Bulkhead available for 2 1/16 Hub Thickness.

Complete Kit (less Bulkhead).....P/N 10313
Bulkhead Only.....P/N 10312
Dome Only.....P/N 10311
Front Bulkhead.....P/N 10314
SN-5 Kit (Undrilled Plate).....P/N 05-13300
SN-5 Kit HUB 3-7/16" Bolt 1/2", BWII 3/4" SAE2
P/N 05-03433

COMPOSITE SPINNERS FOR PIPERS & CESSNA'S



These new composite materials spinners and bulkheads are FAA/PMA approved and STCs to replace aluminum spinners and bulkheads on the Piper aircraft models listed below. Bulkheads are constructed for maximum strength and resistance to fatigue due to vibration. Pipers metal versions often crack in 200-300 hours, whereas the composite assemblies have been tested over 4000 hours on a PA-28 with no failure. Spinners for twins & all bulkheads are warranted against vibration fatigue for the life of the aircraft by the factory. Includes hardware & O-rings.

P/N 05-00744

Description	Model	PN	Price
Spinner Kit	PA28-140/150/160	05-28350	
Spinner Dome	150A, 150F, 150FA	05-01257	
Spinner Dome	170B, 172, (1956-59)	05-01258	
Spinner Dome	172XP	05-01259	
Spinner Dome	172 Skyhawk (G-)	05-00744	
Spinner Dome	182 P, Skylane	05-00746	
Spinner Dome	177B, 177RG Cardinal	05-00747	
Spinner Dome	210 (all 3 blade McCauley	05-00748	
Spinner Dome	PA-140/150/160 Cherokee	05-00749	
Spinner Dome	PA-24-180/250, PA23-150/160	05-00752	
Spinner Dome	PA-24-180/250, PA23-235/250	05-00753	
Bulkhead	PA30, PA23-250 (Aztec)	05-02659	
Spinner Dome	PA30, PA23-350 (C model & up)	05-02660	
Spinner Dome	PA28-151/161 Warrior	05-02662	
Alt. Bulkhead	PA28-151/161 Warrior	05-02658	
Fwd. Bulkhead	PA28-151/161 Warrior	05-02655	
Spinner	310R, T310, T310R, T310P	05-00754	
Rear Bulkhead	PA28-161 Warrior	05-02663	
Spinner Dome	PA28-161 Warrior	05-02661	
Spinner LH	PA34-200T Seneca II	05-02665	
Spinner RH	PA34-200T Seneca II	05-02666	
Bulkhead	PA34-200T Seneca II	05-02664	
Bulkhead	PA31/-325/-350 Navajo	05-02667	
Bulkhead	PA31/-325/-350 Navajo	05-02668	
Spinner Dome	PA31/-325/-350 Navajo	05-02669	
Spinner Dome	PA31/-325/-350 Navajo	05-02670	
Bulkhead only	PA38-112 Tomahawk	05-02656	
Spinner Dome	PA28-235	05-00756	
Fwd. Bulkhead	PA28-180/181 Cherokee/Archer	05-00757	
Spinner Dome only	PA28-180/181 Cherokee/Archer	65805-00	
Spinner Dome	PA32R-300, PA32-260/300/301,	05-00758	
Fwd. Bulkhead	PA28R-180/200, PA-235	05-00759	
Spinner Dome	PA38-112 Tomahawk	05-00761	
Spinner Dome	PA34-200 Seneca I	05-00762	
Fwd. Bulkhead	PA28-161 Warrior	05-02671	
Spinner Dome	PA34-200 Seneca I	05-00763	

ROTAX PROPELLER SPINNERS



For all props with standard Rotax 75mm bolt pattern. Spinner bulk head is predrilled and installs between prop and gearbox flange. Spinner installs with single bolt.

4" Diameter.....P/N 05-01129
5" Diameter.....P/N 05-01131
6-3/4" Diameter.....P/N 05-01132
7" Diameter.....P/N 05-04447



SN-2 SPINNER KIT

The SN-2 aluminum spinner kit features an 11.5" long dome and 11-5/8" dia. Furnished complete with a rear bulkhead & hardware kit.

SN-2 spinner kit with drilled plates
P/N 10330
SN-2 dome only.....P/N 10331
SN-2 bulkhead only.....P/N 10332

SN-2 spinner kit w/undrilled plates.....P/N 05-13400.....

For spinner kits with drilled plates, please furnish information required for spinners orders as noted on page 179.

UHS FIBERGLASS SPINNERS



UHS spinners are practical, attractive, and flight proven having enhanced the appearance of many different aircraft. The spinners are available in 8", 9", 10", 11", 12" & 14" diameters for various engine and propeller combinations. For GSC, Ivoprop, Warp Drive, and Power Fin propellers using Rotax, Lycoming, Cont. & Mosler engines, spinners are sent cut out and assembled.

For pre-drilled cut-outs we require the following information:

1. Make and size of engine.
2. Make of Propeller.
3. Number of Blades.
4. Size required.

Given adequate information, we can also fabricate spinners for many other propeller-engine combinations. Call with your requirements and we will assess your particular application.

Size	Description	P/N	Price	Size	Description	P/N	Price
8"	UHS Spinner	05-09000	.	12"	UHS Spinner	05-09400	.
9"	UHS Spinner	05-09100	.	14"	UHS Spinner	05-09500	.
10"	UHS Spinner	05-09200	.	11.5"	Spinner Kit	05-09700	.
11"	UHS Spinner	05-09300	.	13.5"	Spinner Kit	05-09800	.

LYCOMING O-290 PROP FLANGE REINFORCING PLATE



Assures maximum support of prop flange on Lycoming O-290 engines. Precision made of 4130 steel, cadmium plated. Easy to install.

For O-290GP/N 05-28600

For O-290D.....P/N 05-28602

PROP HUB FRONT PLATES



Required for wooden propellers. Flange equivalent to Cont. P/N 3991. For use with A-65, C-85 installations or Lyc. O-235 with SAE1 (43/8") bolt pattern.

P/N 10351Cont.....

Flange equivalent to Lyc. P/N 45688, for use with Lyc. O-235 thru O-360 engines with SAE2 Bolt Pattern engines.

P/N 10352 Lyc.....

CRUSH PLATES - LIGHTNING PROTECTION

CRUSH PLATES FOR WOOD PROPS

OD	Thickness	Bolt Circle	Bolt Dia.	Part No.	Price
6"	3/8"	SAE 1 (4.375")	3/8"	05-02464	.
6"	3/8"	SAE 2 (4.75")	3/8"	05-02465	.
7"	3/8"	SAE 2	3/8"	05-02466	.
7"	3/8"	SAE 2	7/16"	05-02467	.
7"	3/8"	SAE 2	1/2"	05-02468	.
7"	1/2"	SAE 2	3/8"	05-02469	.
7"	1/2"	SAE 2	7/16"	05-02470	.
7"	1/2"	SAE	1/2"	05-02471	.

PROP SPACERS

Solid Prop Spacers, 6 thru holes. The prop bolt goes thru the prop and spacer and threads into the engine.

Bolt Diameter	Part No.	Price
PRO SPACER 1.5"x5" ROTAX	05-02472	.
PRO SPACER 2"x5" ROTAX	05-02473	.
PRO SPACER 2.25"x5" ROTAX	05-02474	.
PRO SPACER 3"x5" ROTAX (SPOOL)	05-02475	.
PRO SPACER 4"x5" ROTARY (SPOOL)	05-04418	.

DRIVE LUGS FOR EXTENSIONS



Part No.	Type	O.D.	I.D.	Thread	Price Ea.
05-28310	Threaded	5/8"	---	3/8-24	.
05-04417	Threaded	5/8"	---	7/16-20	.
05-28410	Threaded	3/4"	---	1/2-20	.

PROP EXTENSIONS



Precision machined prop shaft extensions are available from Aircraft Spruce & Specialty Co. Don't settle for lesser quality at advertised "savings". Prop extensions are machined from solid 2024 T-351 aluminum bar, and are supplied with clear anodized finish and stainless steel drive lugs (installed). 7" diameter prop side is recommended for 0-320 engines running wood props, and is required for 0-360 engines (or larger) running wood props. For Cont. 0-200, you may choose 5.5" diam on engine side. If prop is metal, please measure depth of drilled counterbore at all 6 bolt hole positions.

Flange Engine	SAE No.	Bolt Circle	Lug Diameter	Eng. Bolt Dia.
Cont. A-65, A-75, C-85, C-90, 0-200	SAE 1	4-3/8"	5/8"	3/8"
Lycoming 0-235	SAE 1 or 2		5/8"	3/8"
Lycoming 0-290	SAE 2	4-3/4"	5/8"	3/8"
Lycoming 0-320	SAE 2	4-3/4"	5/8"	3/8 or 7/16"
Lycoming 0-360	SAE 2	4-3/4"	3/4"	1/2"
Lycoming O-540	SAE 2	4-3/4"	3/4"	1/2"

PLEASE ORDER USING THE FOLLOWING PART NO.

X - length | **E** - prop side (6 or 7) | **P** - prop bolt (3/8 or 7/16 or 1/2) | **SAE** - thr or non (threaded or non-threaded lugs installed in extension) | **ENGINE** - 1 or 2 | **PROP HUB** - (wood or composite or metal) | **PROP TYPE** - (Fixed Pitch or constant speed)

Example: 4 X 7 - 7/16 E - 3/8P thr - S2 - Lyc 0320 - wood - wood

12 HOLE SOLID PROP EXTENSION WITH THREADED DRIVE LUGS

Length x Dia.	Length x Dia.
1.25"x6"	1.25"x7"
2.25"x6"	2.25"x7"
3"x6"	4"x7"
4"x6"	6"x7"
6"x6"	8"x7"
8"x6"	

PRICES ON PROP EXTENSIONS CAN VARY PER APPLICATION PLEASE CALL AND REQUEST A QUOTE FOR YOUR APPLICATION.

LIGHTNING STRIKE PROTECTION WHY THE NEED FOR LIGHTNING STRIKE PROTECTION

Composite materials are poor conductors. Lightning that stops the aircraft is deadly. That's why aircraft structures are "zoned" for relative conductivity . . . to ensure that lightning passes through the aircraft and continues to the ground. The best way to accomplish this process, at the least cost is with lightweight, fantastically flexible MicroGrid...the conductive laminate of choice.



MICROGRID...THE MATERIAL OF CHOICE

MicroGrid precision expanded strike protection in composite aircraft structures. In fact, MicroGrid is used by Boeing, Embraer, and many other aircraft manufacturers. MicroGrid's single unit structure is superior because it can't unravel like woven wire. Nor is costly material removed as in etching or stamping.

The appropriate gauge and pattern of material is easily adhered to the composite for 200,000 amps of conductivity. Aircraft are easily repaired after a lightning strike by simply sanding away the surface to apply a patch of new MicroGrid. And fantastically flexible MicroGrid easily conforms to a variety of shapes and contours in both manufacture and repair. It can be bent, shaped and laminated with a variety of materials, including those which expand, contract and flex.

SPECIFICATIONS

	Aluminum	Copper
Weight - Lbs./SF	0.016	0.029
Base Metal Thickness	0.004 inch	0.003 inch
LWD	0.080 inch	0.125 inch
Overall Thickness	0.006 inch	0.005 inch
Open Area	68%	77%

ALUMINUM OR COPPER MICROGRID?

Aluminum MicroGrid is ideal for most composite aircraft structure applications and is nearly half the weight of the copper MicroGrid. Copper MicroGrid is recommended for use with carbon fiber structures. Two layers of MicroGrid are recommended over fuel tank applications.

Aluminum MicroGrid (37" wide)..... P/N 05-02631 ft.
Copper MicroGrid (18" wide)..... P/N 05-02632 ft.

AP

SMOKE SYSTEMS

SMOKE SYSTEM KIT MODELS SA-100 SERIES

All of the SA-100 series smoke system oil tanks are the same size (dimensions). Models Differ by oil suction tube design, oil pump mounting location and oil tank configuration.



SA-100 -

- For Level and Non-Continuous inverted, positive G flight.
- Top mounted oil pump.
- All hardware for complete installation.
- Step by step instructions.
- Height (To top of fill cap is) is 15"
- Width (End where oil pump is mounted) is 11"
- Depth (Pump to opposite end of tank) is 8.5"
- Oil tank capacity: 3.5 US Gallons
- Approx. oil used per minute: .8 Us Gallons
- Approx. total run time: 5+ minutes

P/N 05-01438

NOTE: Add 1.5" to base on each side or end for bracket width.

SA-101 -

- For continuous inverted flight.
- Top mounted oil pump.
- All hardware for complete installation.
- Step by step instructions.
- Height (To top of fill cap is) is 15"
- Width (End where oil pump is mounted) is 11"
- Depth (Pump to opposite end of tank) is 8.5"
- Oil tank capacity: 3.5 US Gallons
- Approx. oil used per minute: .8 Us Gallons
- Approx. total run time: 5+ minutes

P/N 05-01439

SA-100H-

- For Level and Non-Continuous inverted, positive G flight.
- Side / End mounted oil pump.
- All hardware for complete installation.
- Step by step instructions.
- Height (To top of fill cap is) is 11"
- Width (End where oil pump is mounted) is 12"
- Depth (Pump to opposite end of tank) is 15"
- Oil tank capacity: 3.5 US Gallons
- Approx. oil used per minute: .8 Us Gallons
- Approx. total run time: 5+ minutes

P/N 05-02889

NOTE: Add 1.5" to base on each side or end for bracket width.

SA-101H-

- For continuous inverted flight.
- Side / End mounted oil pump.
- All hardware for complete installation.
- Height (To top of fill cap is) is 11"
- Width (End where oil pump is mounted) is 12"
- Depth (Pump to opposite end of tank) is 15"
- Oil tank capacity: 3.5 US Gallons
- Approx. oil used per minute: .8 Us Gallons
- Approx. total run time: 5+ minutes

P/N 05-01440

AP



SA-102-

- For Level and Non-Continuous inverted, positive G flight.
- Bracket mounted oil pump end or side.
- All hardware for complete installation.
- Step by step instructions.
- Height (To top of fill cap is) is 13"
- Width (End where oil pump is mounted) is 11"
- Depth (Pump to opposite end of tank) is 13"
- Oil tank capacity: 3.5 US Gallons
- Approx. oil used per minute: .8 Us Gallons
- Approx. total run time: 5+ minutes

P/N 05-01440

NOTE: Add 1.5" to base on each side or end for bracket width.

SA-103-

- For continuous inverted flight.
- Bracket mounted oil pump end or side.
- All hardware for complete installation.
- Step by step instructions.
- Height (To top of fill cap is) is 13"
- Width (End where oil pump is mounted) is 11"
- Depth (Pump to opposite end of tank) is 13"
- Oil tank capacity: 3.5 US Gallons
- Approx. oil used per minute: .8 Us Gallons
- Approx. total run time: 5+ minutes

P/N 05-01441

SMOKE SYSTEM KIT MODELS SA-200 SERIES

Both of the SA-200 series smoke system oil tanks are the same size (dimensions). Models Differ by oil suction tube design.



SA-200-

- For Level and Non-Continuous inverted, positive G flight.
- Any Dimension top.
- Pump can be mounted on top or any side surface.
- Fill cap and any other fittings installed where you want them.
- All hardware included for complete installation.
- Height (To top of fill cap is) is 14"
- Width (End where oil pump is mounted) is 10"
- Depth (Pump to opposite end of tank) is 17.25"
- Oil tank capacity: 5.5 US Gallons
- Approx. oil used per minute: .8 Us Gallons
- Approx. total run time: 7+ minutes

P/N 05-02887

NOTE: Add 1.5" to base on each side or end for bracket width.

SA-201-

- For continuous inverted flight.
- Any Dimension top.
- Pump can be mounted on top or any side surface.
- Fill cap and any other fittings installed where you want them.
- All hardware included for complete installation.
- Height (To top of fill cap is) is 14"
- Width (End where oil pump is mounted) is 10"
- Depth (Pump to opposite end of tank) is 17.25"
- Oil tank capacity: 5.5 US Gallons
- Approx. oil used per minute: .8 Us Gallons
- Approx. total run time: 7+ minutes

P/N 05-02891



SA-201T SMOKE KIT OIL PUMP

This 5.5 Gallon smoke system kit is for continuous inverted flight with oil pump mounted on the top of the oil tank. This particular kit has been installed in the baggage area of a CJ6A, T34A and RV7 to date. Use this kit when height is not an issue. Dimensions: Height (to top of oil pump) 16-1/4", Width (left to right) 13", Depth (end with label) 10"

P/N 05-03398

SA-200T Non-Continuous Inverted flight P/N 05-04479

Note: Add 1.5" at base of tank on sides and ends for bracket width.

ACCESSORIES FOR THE SA-100 & SA-200 SERIES

Accessories	Description	Part No.	Price
All components less the oil tank	Virtually every part you will need to complete your smoke system except the oil tank	05-03366	
Remote switch kit	Operate your system from control stick, yoke or throttle	05-01443	
Second injector kit with initial order	Not Necessary for good smoke, but will make the smoke trail more dense.	05-02890	
Second injector kit post order	Not Necessary for good smoke, but will make the smoke trail more dense.	05-02892	
Converter	24 volt DC to 12 volt DV converter (Yak's CJ's, T34's etc.)	05-02893	
Battery splitter harness	For 24 volt systems that have 2 12 volt batteries linked together to make 24 volts	05-02894	
External Fill Kit	This kit has everything right down to the vinyl letter transfer "Smoke Oil Only" and detailed installation instructions.	05-03595	



SMOKING AIRPLANES.COM HAT

Your headset will fit great with these low profile, unstructured, deluxe, normal dyed cotton and stone washed hats! Features: Embroidered company name and logo Contrasting grey under bill & sweatband Self-fabric sweatband & strap with brass buckle

P/N 05-04480

SEAT BELTS & SHOULDER HARNESSSES

FAA CERTIFIED PERSONAL RESTRAINTS

These are top quality, new manufactured assemblies. They are designed, manufactured, and proof tested to rigid FAA standards. All belts use proven lift to release style Davis metal to metal buckles. Push-to-release buckles are not used due to difficulties in releasing under emergency conditions. Aircraft quality alloys and 2-inch nylon webbing are used throughout. Belts are certified to FAA TSO-C22f.

STYLE NO. 1A SEAT BELT



Most popular metal-to-metal seat belt. This 56" adjustable seat belt offers a heavy-duty combination of an all-nylon 2" wide herringbone webbing and a metal-to-metal "quick release" buckle. Buckle mates with harness adapters (Shoulder Harness Items 3B or 3C) for safety belt/harness set or use belt alone. The end fittings for each side of the lap belt have a .325 in. dia. hole which allows for a fastener/bolt to slide through, depending on the design of the aircraft/aircraft seat is where it attaches.

P/N	Color	Price	P/N	Color	Price
13-00201	Black		13-00205	Royal Blue	
13-00202	Brown		13-00206	Gray	
13-00203	Tan		13-00207	Red	
13-00204	Navy Blue		13-00210	Green	

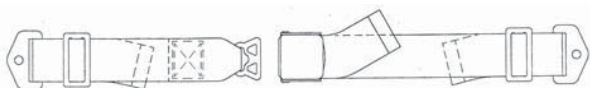
STYLE NO. 1B SEAT BELT



Same as style No. 1A above except with #442868 clip type end fittings. The end fitting hooks have spring loaded clips that allows each side of the lap belt to clip on to an existing fastener or rod. When the clip is closed the effective hole dia. for both these belts is .37 in.

P/N	Color	Price	P/N	Color	Price
13-00301	Black		13-00305	Royal Blue	
13-00302	Brown		13-00306	Gray	
13-00303	Tan		13-00307	Red	
13-00304	Navy Blue		13-00310	Green	

STYLE NO. 2A SEAT BELT



If belts are needed to replace worn ones in an aircraft in which the attachment fittings have been installed and approved, it is customary to install belts with a slide adjustment bar which permits weaving webbing through existing fitting and through bar for secure installation. Drawing shows correct method of lacing the webbing through bar. Belt is 56" long x 2" wide. The end fittings for each side of the lap belt have a .325 in. dia. hole which allows for a fastener/bolt to slide through, depending on the design of the aircraft/aircraft seat is where it attaches.

P/N	Color	Price	P/N	Color	Price
13-00401	Black		13-00405	Royal Blue	
13-00402	Brown		13-00406	Gray	
13-00403	Tan		13-00407	Red	
13-00404	Navy Blue		13-00410	Green	

STYLE NO. 2B SEAT BELT



Same as style No. 2A above except with #442868 clip type end fittings. Standard equipment in White Lightning aircraft. Black only.
P/N 13-19601

SEAT BELT HARDWARE



TRIANGULAR
END FITTING
P/N 13-04101
. Ea.



CLIP TYPE
END FITTING
P/N 442868 (Steel)
. Ea.



SLIDE
ADJUSTER
P/N 442663
. Ea.

STYLE NO. 2C TWO PERSON SEAT BELT

Two Person Seat Belt - Although FAA requires that each person be provided an individual seat belt, some early aircraft were licensed using an extra-long belt in the rear seat to accommodate two people. If it is not possible to modify the aircraft to accept two belts, a two person belt is permissible. Same metal-to-metal belt as illustrated in Figure 1 but rated at 3000 lbs. test. Length 60". Advise if different length is required. Two-person belts with slide bars not acceptable by FAA. The 3" wide belt and 2" wide harness are of heavy-duty nylon webbing.

P/N	Color	Price
13-00501	Black	
13-00502	Brown	
13-00503	Tan	
13-00504	Navy Blue	
13-00505	Royal Blue	
13-00506	Gray	
13-00507	Red	
13-00510	Green	

STYLE NO. 4 - MILITARY STYLE SEAT BELT AND SHOULDER HARNESS COMBINATION



Harness has forged steel belt buckles permitting "one-stroke" release from both belt and harness. Stocked in Black.
Complete Set(Black) P/N 13-01000
Certified Belt Only P/N 13-01100
Harness Only(Black) P/N 13-01200

OTHER COLORS

	Olive Green	Price	Royal Blue	Price	Neutral	Price
Set Kit	13-04105	.	13-04124	.	13-04118	.
Belt	13-04106	.	13-04125	.	13-04119	.
Harness	13-04107	.	13-04126	.	13-04120	.
	Silver Grey	Price	Brown	Price	Navy Blue	Price
Set Kit	13-04108	.	13-04127	.	13-04130	.
Belt	13-04109	.	13-04128	.	13-04131	.
Harness	13-04110	.	13-04129	.	13-04132	.
	Red	Price	Tan	Price		
Set Kit	13-04121	.	13-04133	.		
Belt	13-04122	.	13-04134	.		
Harness	13-04123	.	13-04135	.		

STYLE NO. 5 SEAT BELT/HARNESS SET FOR HOMEBUILTS



Specially designed for the VariEze, this popular combination is also used in the Long-EZ, Quickie, Q2, Cozy, Sea Hawk and several other homebuilts. The belts are made to fit snugly, and the aluminum end fittings save weight. Order two sets for all above aircraft except Quickie which uses one set. Not FAA approved for certificated aircraft.

P/N 13-01300 Set

PIPER SEAT BELT DECAL SETS



This is a beautiful decal set for all the Piper Seat Belt Buckles. The seat belt buckles on Piper's are always being dinged and pitted and nothing looks worse than to have a beautiful interior with ugly belt buckles. With our new decals, the ugly belt buckles become an attraction instead of an eyesore.

Four Place Piper Set P/N 05-02448 Set
Six Place Piper Set P/N 05-02449 Set

NOTE: SEE NEXT PAGE FOR SHOULDER HARNESSSES COMPATIBLE WITH THESE SEAT BELTS.

AP

SEAT BELTS & SHOULDER HARNESSSES

STYLE NO. 3A "Y" SHOULDER HARNESS



PN 13-00601

Harness with stitched-in webbing loops for use with any 2" wide seat belt. Belt simply slides through loops and secures. Harness is "Y" type with one attachment fitting furnished.

Black Only..... P/N 13-00601

See illustration of 3A and 3C harnesses.

STYLE NO. 3B "Y" SHOULDER HARNESS



PN 13-00701

CS-647 Fittings Left & Right (As used on 3B & 3C harnesses) . /set
 Harness with two chrome-plated steel adapters on front webbing extensions which mate with metal-to-metal buckle for safety belt/harness set. Harness is "Y" type with one attachment fitting furnished. Lift buckle to release belt and harness. Order belt separately.

P/N	Color	Price
13-00701	Black	
13-00702	Brown	
13-00703	Tan	
13-00704	Navy Blue	

P/N	Color	Price
13-00705	Royal Blue	
13-00706	Gray	
13-00707	Red	
13-00710	Green	

NOTE: These shoulder harnesses mate with #1 and #2 seat belts on the previous page but the harnesses are not FAA approved for certificated aircraft. Only the seat belts carry FAA approval.

STYLE NO. 3C TWO STRAP SHOULDER HARNESS



Harness with two chrome-plated steel adapters on front webbing extensions which mate with metal-to-metal buckle for safety belt/harness set. Harness has two separate straps with two attachment fittings furnished. Lift buckle to release belt and harness. Order belt separately.

P/N	Color	Price
13-00801	Black	
13-00802	Brown	
13-00803	Tan	
13-00804	Navy Blue	

P/N	Color	Price
13-00805	Royal Blue	
13-00806	Gray	
13-00807	Red	
13-00810	Green	

STYLE 3D "H" TYPE SHOULDER HARNESS



"H" Style Harness

This "H" style harness provides a maximum length between shoulder harness attachment points of 85 inches. This harness is designed for use with standard seat belts as offered in this catalog. Color: Black. "H" style shoulder harness.

P/N 13-00762

AP

FAA APPROVED SEAT BELT/SHOULDER HARNESS SETS CESSNA·BEECH & PIPER·AERONCA·STINSON



13-00901-1

These new manufactured seat belt and shoulder harness combination sets are FAA-STC-PMA approved for installation in the certificated aircraft listed in the chart below. This line of seat belts and shoulder harnesses are of the highest quality and each set includes one belt, one harness, attaching hardware, and installation instructions. The seat belts feature a 3 bar slide, and the shoulder harnesses are "Y" style. These sets are available in a full array of colors to suit the interior of your aircraft. Cessna sets meet requirements of Cessna service bulletin SEB 92-28. FOR FRONT SEAT ONLY!

NOTE: Complete part number with color choice use: -1 (black), -2 (navy), -3 (brown), -4 (royal blue), -5 (red), -6 (tan), -7 (green), or -8 (silver gray). Example: P/N 12-00000-5 is a Cessna 182 belt/harness set in red.

Application	Part No.	Price ea.	Application	Part No.	Price ea.
Cessna 120/140	13-00901		Piper J-3, PA-11 Front	13-00913	
Cessna 150/152	13-00902		Piper J-3, PA-11 Rear	13-00914	
Cessna 170	13-00903		Piper PA-18 Front	13-00921	
Cessna 172	13-00904		Piper PA-18 Rear	13-00922	
Cessna 175A,B,C	13-00905		Piper PA-20	13-00915	
Cessna 180	13-00906		Piper PA-22/22-108	13-00916	
Cessna 182	13-00907		Piper PA-28	13-00917	
Cessna 185	13-00908		Aeronca/Champ Front	13-00918	
Cessna 206	13-00909		Aeronca/Champ Rear	13-00919	
Cessna 207	13-00910		Stinson	13-00920	
Beech 35 Pilot	13-00911				
Beech 35 Co-Pilot	13-00912				

Note: PN 13-00917-6 is for a PA-28 without ceiling vent system. If you have a vent system without modification, it will not work for your airplane.

Piper PA-28 set is furnished as 2 belts/2 harnesses. All others are 1 belt/1 harness.

CHRISTEN 820 AEROBATIC SEAT BELT/HARNESS SYSTEM



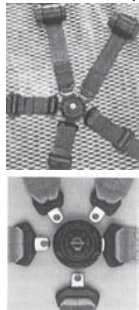
The Christen 820 Seat Belt/Harness System was designed specifically for use in unlimited-class competition aerobatic flying. The System holds the pilot firmly in the aircraft seat during high negative-g maneuvers and supports the body laterally against side forces during tumbling, slipping or knife-edge flight. Although of extremely light-weight design, all components are of the highest aviation quality, and the system is manufactured in full compliance with the requirements of FAA TSO C22f. The basic Christen 820 System consists of a black shoulder harness, lap belt and crotch strap. Also available are a lap pad, a secondary seat belt for back-up safety, and accessory hardware to facilitate installation in a variety of aircraft. The lap belt, crotch strap, and shoulder harness are locked in a single buckle with flush latch which provides positive retention. All belts are released quickly and simultaneously by simply lifting the edge of the buckle latch. Standard end fittings attach to airframe brackets using 5/16 inch bolts (not included). All metal components bright chrome plated. All webbing 2 inches wide, black color. Includes detailed product manual. Meets FAA TSO C22f, 180 lb. Tensile. Maximum extended lengths of belt assemblies from end fitting to connector are: shoulder harness 50 inches, buckle lap belt 30 inches, connector lap belt 32 inches, crotch strap 26 inches. Weight 2.9 lb.

Seat Belt/Harness System.....	P/N 05-01133.....
Lap Pad (Black)	P/N 05-01134.....
Crotch Strap Connector for 7/8" Tubing...	P/N 05-01135.....
Crotch Strap Connector for 1" Tubing	P/N 05-01136.....
Seat Belt Brochure	P/N 05-01137.....

SEAT BELTS SHOULDER HARNESSSES

SCHROTH AVIATION RESTRAINT SYSTEMS

Schroth seat belts offer a unique 3-point restraint and a superior center turn buckle for the 4 and 5 point systems. Schroth restraint systems use specially designed harness webbing which actually stretches at a controlled rate to help reduce G-forces to the occupant. Schroth harnesses feature single point rotary harness buckles. Higher initial release force helps prevent accidental releases. Then as the buckle is rotated, the regressive forces insure the ability to release the buckle when under tension, such as in bail out situations or if the aircraft comes to rest upside down. Schroth harnesses come with micro slip adjusters to allow you to snug the belts down to stay secure during aerobatic flight or turbulence. Schroth restraints are the lightest and most compact systems available, and are manufactured in Germany to TSO C-114 (FAA approved). Available in stock configurations as shown. Request Schroth custom restraint order form for unlisted aircraft.



Ma	Mo	Description	Part No.	Pr		
Grumman	AA1	3-point Left Side	13-00664	Ca		
		3-point Right Side				
		3-point Left Side Inertia Reel	13-06028	Ca		
		3-point Right Side Inertia Reel				
	AA5	3-point Front Left Inertia Reel	13-00666	Ca		
		3-point Front Right Inertia Reel				
		3-point Front Static Left Side	13-00667	Ca		
		3-point Front Static Right Side				
		3-point Rear Static Left Side	13-06036	Ca		
		3-point Rear Static Right Side				
3-point Front Left Inertia Reel with Detachable Swivel	13-06029	Ca				
3-point Front Right Inertia Reel with Detachable Swivel						
Not	Bo t	to x t	atta h	t p o t	th or a	
Moo	201	3-point Left Inertia Reel	13-00670	Ca		
		3-point Right Inertia Reel				

Ma	Mo	Description	Part No.	Pr
Va	RV-6/6A, 7/7A, 9/9A	4-point left side static pull down	13-00671	Ca
		4-point right side static pull down		
		5-point left side static pull up	13-00672	Ca
		5-point right side static pull up		
		4-point left side static pull up	13-06030	Ca
4-point right side static pull up				
Not U Fa tor atta h p o t .				
5-point requires fabrication of an attach point for crotch strap.				
Va	RV-4, 8/8A	4-point front static pull up	13-00673	Ca
		4-point rear static pull up		
		5-point front static pull up	13-00674	Ca
		5-point rear static pull up		
		5-point front static pull down	13-06032	Ca
5-point rear static pull down				
Note: Uses Factory Attach points. 5-point requires fabrication of an attach point or rot h trap				
La ar	320/360	4-point left or right	13-00669	Ca

01-Black, 02-Dark Gray, 03-Light Blue, 04-Brown, 05-Tan, 06-Navy Blue, 09-Burgundy, 10-Pepperdust, 14-Cruiser Gray, 18-Cappuccino, 29-Light gray, 80-Dark Green, 91-Azure Blue, 93-Yellow, 94-Red, 95-Purple

MICROFLIGHT RESTRAINING SYSTEMS



Complete pilot/passenger restraining systems for ultralights and experimentals. Made in the U.S.A., there's no stamped low-grade hardware in these top-quality sets. The webbing has a tensile strength of 6000 psi. These systems are designed for specific aircraft. Find yours in the table below. Some systems will also fit other aircraft not listed in the table. Stock systems are black with silver hardware.

Sp a Or r Opt o a Coor A t o a

Webbing - red, blue, yellow, silver, brown.....
Hardware - gold, black.....
L links (instead of sewn to lap).....

Allow 2 to 4 weeks delivery time.

MATERIALS SPECIFICATIONS

Not Certified, but Manufactured to MIL-1-45208:

AdapterProof-load = 2500 lbs.
Adjuster.....Proof-load = 2000 lbs.
Quick-Release Buckle Assembly.....Proof-load = 2500 lbs.

Not Certified, but Manufactured to MIL-W-4088J:

Webbing.....Tensile Strength = 6000 lbs.

A r r a t T p	Part Nu	r	Pr /Ea.
T-Bird	13-03834		
Tierra	13-03835		
J3 Kitten	13-03836		
X, MXL, I & II	13-03838		
Sprint_Sport	13-03839		
GT-400	13-03841		
GT-500	13-03842		
Phantom I	13-03843		
Kitfox	13-03844		
Avid Flyer	13-03845		
Buckeye Paraplane	13-03846		
Buccaneer	13-03847		
MaxAir	13-03840		
RANS S-12/S-14 (specific)	13-03848		
Renegade (front & rear)	13-03864		
Explorer	13-03849		
Zephyr	13-03850		
Talon	13-03851		
Thundergull	13-03852		
Titan Tornado	13-03853		
Challenger	13-03854		
Hurricane	13-03855		
Spitfire	13-03856		
N-3 Pup	13-03857		
CGS Hawk	13-03858		
UltraPup (front & rear)	13-03859		
Fisher	13-03860		
Weedhopper	13-03837		
Kolb Mark III	13-03861		
Kolb Firestar II (front & rear)	13-03862		
Kolb Firestar II (front only)	13-03863		

HOOKER CUSTOM HARNESSSES

SPORT HARNESS SET

The popular Sport Harness Set from Hooker is ideal for a wide variety of experimental aircraft. The set includes one 1-3/4" military style seat belt, one 1-3/4" military style shoulder harness, one 1-3/4" crotch strap, and one pad set. (For Citabria, Decathlon, Champ, or Scout aircraft please add 25.00 for yoke assembly).

With pad set.....P/N 13-00925.....
Without crotch strap.....P/N 13-00930.....

AEROBATIC HARNESS SET

The Hooker Aerobatic Harness set is very popular with sport and competitive aerobatic pilots. The set includes two 1-3/4" military style seat belt, one 1-3/4" military style shoulder harness, one 1-3/4" crotch strap, and one pad set. (For Citabria, Decathlon, Champ, or Scout aircraft please add 25.00 for yoke assembly).

With one pad set.....P/N 13-00935.....
With stainless ratchet tightener.....P/N 13-00950.....

HOOKER CESSNA FIXED SHOULDER HARNESS KIT (PER SEAT)

This set includes new double adjustable seat belt, shoulder harness, installation kit with necessary hardware, brackets and the STC paperwork. The STC currently covers installation in Cessna models 120, 140, 140A, 150, 152, 170, 172, 175, 180, 182 (except R182 and TR 182), 185, 205, 206, and 210 (through F model). Installation of this set does not require drilling holes in the external skin or the removal of the wings. The installation is accomplished from within the airplane and installation time usually runs 60-90 minutes with the headliner removed. Pads are not included.

P/N 13-00955.....

NOT AVAILABLE IN THE REAR. SPECIFY AIRCRAFT TYPE & COLORS OF WEBBING WHEN ORDERING.

COLORS AVAILABLE (HOOKER)

2" Webbing: Red, Dragon Red, Burgundy, Orange, Air Force Gold, Olive Drab, Sage Green, Baby Blue, Royal Blue, Navy Blue, Tan, Beige, Silver, Gray, Dark Gray, Black

1-3/4" Webbing: Red, Air Force Gold, Kelly Green, Olive Drab, Sage Green, Jade Green, Royal Blue, Navy Blue, Purple, Silver Gray, Dark Gray, Tan, Black

Pad Fabric: Red, Burgundy, Navy Blue, Royal Blue, Lemon Yellow, Air Force Gold, Dark Gray, Olive Drab, Sage Green, Silver Gray, P, Turquoise, Orange, Green, Jade, Lavender, Purple, Tan, Brown, Black Trim: R, Burgundy, Navy Blue, Royal Blue, Lemon Yellow, Air Force Gold, Dark Gray, Olive Drab, Sage Green, Silver Gray, Pink, Turquoise, Orange, Green, Jade, Brown, Lavender, Purple, Tan, Black

SPECIFY WEBBING, (PAD TRIM AND PAD COLORS WHEN APPLICABLE) WHEN ORDERING ALL HOOKER HARNESS PRODUCTS



STC'D SEAT BELTS & SHOULDER HARNESSSES

ALPHA AVIATION RESTRAINT SYSTEMS

Note: FAA/ STC/ PMA Installation kits include complete new TSO-C114 belt assemblies for each pilot position. FAA/ STC/ PMA Installation kits include all hardware to upgrade both pilot positions. OEM quality, AMSAFE Incorporated belt assemblies meeting TSO-C114. Standard colors are black, gray & fawn. For custom colors, please order the color swatches (P/N 05-03146). Belts are sold individually except for the STC d installation kits.



Beechcraft Replacement Rear

BEECHCRAFT STC SHOULDER HARNESS KITS

3 Point Diagonal Systems

- * Complete New Belt Assemblies
 - * Shoulder and Lap Belts for 2 Seats-Pilot & Co-Pilot
 - * All Required Hardware
 - * Instruction Manual
 - * Supplemental Type Certificate
- STC, 3RS-114FS Fixed Restraint, Kit..... P/N 05-03127.....
 STC, 3RS-114IR Inertial Reel, Kit..... P/N 05-03128.....
 Lap Belt P/N 05-03134

BEECHCRAFT APPROVED MODEL GUIDE								
35	H35	36	35-33	95	B95	A56TC	58	
35R	J35	A36	35-A33	95-5	B95A		58A	
A35	K35		35-B33	95-A55	D95A			
B35	M35		35-C33	95-B55				
C35	N35		35-C33A	95-B55A	D55			
D35	P35			95-B55B	D55A			
E35	S35		E33	95-C55				
F35	35		F33A	95-C55A	E55			
G35	35A		F33C		E55A			
	35B				E95			
			F33					
			F33A					
			F33C					
			G33					

AP



CESSNA STC SHOULDER HARNESS KITS

Cessna Shoulder Harness Kits

- * New Belt Assemblies -Shoulder & Lap Belts for Pilot & Co-Pilot
 - * All Required Hardware
 - * Instruction Manual
 - * Supplemental Type Certificate
- STC, C100-114IR, Front Inertial Reel, Kit P/N 05-03131.....
 Cessna STC, C100-114FS,
 Front Fix Strap, Kit..... P/N 05-04193.....

Cessna 100 Model List								
Original Type Certificate #	Aircraft Models							
A-799	170	170A	170B					
3A12	172	172A	172B	172C	172D	172E		
	172F	172G	172H	172I	172K			
	*172F (USAFT41A)			*172H (USAFT41A)				
3A17	175	175A	175B	175C	P172D			
5A6	180	180S	180B	180C	180D	180E		
	180F	180G	180H					
3A13	182	182A	182B	182C	182D	182E		
	182F	182G	182H	185J	182K	182L		
	182M	182N	182P					
3A24	185	185A	185B	185C	185D	185E		
	A185E	A185F						



CESSNA OEM REPLACEMENT BELTS

- * Replace our Existing Shoulder Harnesses
 - * Complete New Belt Assemblies - Shoulder and Lap Belts
- Cessna 100/200 OEM Replacement
 Front, Fixed Strap P/N 05-03132.....
 Cessna 100/200 OEM
 Replacement Inertial Reel, Upgrade P/N 05-03133.....
 Cessna OEM Replacement (all models)
 Rear Lap Belts P/N 05-03134.....



177, 177A NEEDING SHOULDER HARNESS INSTALLATION KIT

- 177B Replacement Belt Assemblies OEM Replacement, 3-Point Restraint Systems
- * Replace our Existing Shoulder Harnesses
 - * Complete New Belt Assemblies - Shoulder and Lap Belts
- Cessna 177/177A Minor Change Kit P/N 05-03135.....



MOONEY SHOULDER HARNESS INSTALLATION

3 Point Diagonal Systems

- * M20, A, B, C, D, E, F, G 3 Point Diagonal Harness Installation
 - * M20J Replacement Seat Belts
 - * Complete New Belt Assemblies - Shoulder and Lap Belts
- 3-Point System "Minor Change Kit" M20 A-G (Includes the Required Hardware for Two Pilot Positions)..... P/N 05-03139.....
 Mooney M20 Inertial Reel Upgrade
 Front Inertial Rear 1 P/N 05-03133.....
 Mooney M20 Replacement
 Front Fixed Strap P/N 05-03132.....
 Mooney Replacement Rear Lap Belt P/N 05-03134.....

PA 23 STC APPROVED MODELS		
PA-23	PA-23-160	PA23-235
PA-23-250	PA-E23-250	
PA28/32 STC APPROVED MODELS		
PA28-140	PA28R-180	PA32-260
PA28-150	PA28R-200	PA-32-300
PA28-160		
PA28-180	PA28S-160	PA32S-300
PA28-235	PA28S-180	



PIPER STC SHOULDER HARNESS KITS

3 Point Diagonal Systems

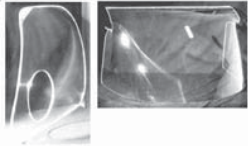
- * Complete New Belt Assemblies
 - * Shoulder and Lap Belts for 2 Seats - Pilot & Co-Pilot
 - * All Required Hardware
 - * Instruction Manual
 - * Supplemental Type Certificate
- STC, PA23-114IR Front Inertial Reel, Kit..... P/N 05-03141.....
 Piper STC, PA28-1141R Front
 Inertial Reel, Kit P/N 05-03143.....
 Piper OEM Replacement Front Fixed Strap P/N 05-03132.....
 Piper Replacement All Model Rear Lap Belt P/N 05-04194.....
 Piper Replacement Rear Lap Belt P/N 05-03134.....
 Piper STC, PA23-114FS Front Fixed Strap, Kit P/N 05-04193.....
 Piper STC, PA28-1141R Front Inertial Reel, Kit P/N 05-03143.....

COLOR SWATCHES

Color swatches for your desired color group are available to be shipped to you via priority mail. When you have chosen your color, you can place your order by phone (1-877-4-SPRUCE) or order online. Then return the color swatches to Aircraft Spruce and we will credit you the \$25.00 charge when you place your order for seatbelts/harnesses. For domestic orders only. International customers, please call for pricing. Custom color belts/harnesses are special order and are non-returnable. Lead time is three weeks for a custom color order.

P/N 05-03146.....

L&P AERO WINDSHIELDS



WINDSHIELDS COMPLETE WINDOW SETS - SKYLIGHTS -LANDING LIGHT LENSES

Replacement glass for over 350 different aircraft models from the oldest to the latest production - both domestic and foreign. Each can be confirmed with serial and model number, year of manufacture, thickness of material and cross-referenced with OEM part number. Manufactured of high optic quality acrylics. Available in clear, green and solar gray tints. For ease of installation, they are trimmed to OEM specifications with instructions furnished. Our manufacturer's quality control systems are approved by both the FAA and the Department of Defense. To assure quick delivery at minimum cost, orders are shipped directly from our manufacturer's warehouse in Pennsylvania or California. Extensive inventories on hand in both locations making shipment possible in 24 hours in most cases. Generally speaking, one-piece windshields require shipment by motor freight, two-piece windshields can be shipped by United Parcel Service. Windshields requiring motor freight shipment on the following list are marked with an asterisk. Attractive Air Freight rates All windshields/windows are special order, they are non-cancelable and non-returnable. Only a few models are listed - over 35 available. Advise complete aircraft model and serial number, Leave the rest to us

FLY COOLER, HEALTHIER AND SMARTER

with U -SG and U -GT tint windshields and windows from LP Aero Plastics
Say so long to sun damage. Blocking the sun's damaging rays benefits you, your passengers and your aircraft. With far less U and IR radiation entering the cabin, occupants are less likely to suffer sun-related skin and eye damage - and they'll enjoy cooler cabin temperatures to boot. **UV-SG Solar Gray and UV-GT Green tints can reduce interior temperatures by as much as 20 degrees.** While you and your passengers bask in greater comfort, you'll also reduce the workload on the air conditioning systems. U and IR radiation can also wreak havoc on avionics and interior components, such as plastic panels and seat materials. That damage is significantly reduced with the U -SG and U -GT tints.

Aircraft	Clear PN	Clear Price	Smoke PN	Smoke Price	Green PN	Green Price	Aircraft	Clear PN	Clear Price	Smoke PN	Smoke Price	Green PN	Green Price
192 Aeronca Citabria 7ECA, 7GC4A, 7GCBC, 7KCAB	192C		192SG		192C		Ercope 415 or G-Bubble	351C		05-02283		05-02285	
Aeronca Chief 11AC, BC, CC	05-02177		05-02229		05-02228		Grumman AA1, AAA-1A, AA-1B Canopy	657C		05-02286		05-02287	
Bellanca iking	05-02188		05-02231		05-02330		Grumman AA5, AA-5A, AA5B	658C		05-02288		05-02289	
Beech Bonanza Lft. 187 thru G-35	250C		05-02227		05-02226		Luscombe 8 Series	400C		400SG		--	--
Beech Bonanza Rt. 187 thru G-35	251C		05-02233		05-02232		Mooney MK20-21, 1959-64 Lft.	100C		05-02292		05-02293	
Beech Bonanza Lft. 250 H-35-35, Baron 55	280C		05-02235		05-02234		Mooney MK20-21, 1959-64 Rt.	101C		05-02294		05-02295	
Beech Bonanza Rt. 250 H-35-35, Baron 55	281C		05-02237		05-02236		Mooney 1965-1969 (4 cabin Windows) Lft.	133C		05-02296		05-02297	
Cessna 120-140 S/N 8001 to 8799	301C		05-02239		05-02238		Mooney 1965-1969 (4 cabin Windows) Rt.	134C		05-02298		05-02299	
Cessna 120-140 S/N 8800 + up	300C		300SG		05-02240		Mooney 1967-1969 (6 cabin Windows 1 pc.)	05-02190		05-02301		05-02302	
Cessna 140A, 150, 152	303C		303SG		303G		Mooney M20J and M20K	05-02192		05-02303		05-02304	
Cessna 170 1948-49 to S/N 18728	310C		05-02242		--	--	Piper J-3	450C		450SG		05-02278	
Cessna 170A S/N 18729 to 20676	306C		05-02243		05-02244		Piper PA-12 Round Top	455C		05-02305		05-02306	
Cessna 172 S/N 47747 to 49544	05-02178		05-02245		05-02246		Piper PA-12 Square Top	456C		456SG		05-02352	
Cessna 170B S/N 20267+up 1952 to 1955	312C		05-02247		312G		Piper PA-15, 16, 17	459C		05-02308		05-02309	
Cessna 172 S/N 28000 to 47746	312C		05-02247		312G		Piper PA-22 Tripecer, 108 Colt, Bubble	463C		463SG		05-02352	
Cessna 172 S/N 49545 to 50572	313C		05-02250		05-02249		Piper PA-23 Apache S/N 1502 + up Rt.	05-02193		05-02310		05-02311	
Cessna 172 S/N 50573 to 72884	345C		345SG		345G		Piper PA-23-250 S/N 27-2000 + up Lft.	421C		05-02312		05-02313	
Cessna 172 S/N 72885 & up	337C		05-02251		337G		Piper PA-23-250 S/N 27-2000 + up Rt.	422C		05-02314		05-02315	
Cessna R172K S/N R2000 to R3199	05-02179		05-02252		05-02179		Piper PA-24 Comanche Lft.	05-02194		05-02316		05-02317	
Cessna 177 177RG	329C		05-02253		05-02254		Piper PA-24 Comanche Rt.	05-02195		05-02320		05-02321	
Cessna 180 S/N 30000 to 31260	309C		05-02255		05-02256		Piper PA-25 Pawnee S/N 1-655	485C		05-02318		05-02319	
Cessna 180 S/N 31261 to 50355	315C		05-02257		05-02258		Piper PA-25 Pawnee S/N 656 + up	486C		05-02322		05-02323	
Cessna 180 S/N 50356 to 51183	316C		316SG		05-02259		Piper PA-28 Cherokee S/N 1 + up Lft. (125)	490C		490SG		490G	
Cessna 182 S/N 33000-51556	315C		05-02257		05-02258		Piper 28 Cherokee S/N 1 + up Rt. (125)	491C		491SG		491G	
Cessna 182 S/N 52556-53598	316C		316SG		05-02259		Piper PA-28 Cherokee (250) Lft.	905C		905SG		05-02324	
Cessna 182 S/N 53599 to 55844	338C		05-02262		05-02261		Piper PA-28 Cherokee (250) Rt.	907C		907SG		05-02325	
Cessna 182 S/N 55845 to 64296	339C		339SG		339G		Piper PA-32-260 S/N 1-7300076 Lft.	492C		05-02326		05-02327	
Cessna 205	325C		05-02263		05-02264		Piper PA-32-260 S/N 1-7300076 Rt.	493C		05-02328		05-02329	
Cessna 206 S/N U206-0001 thru U206-0437	325C		05-02263		05-02264		Piper PA-38-112 Tomahawk S/N 78A0001 to 82A0122	795C		05-02330		05-02331	
Cessna P206 S/N 0001 thru 0160	325C		05-02263		05-02264		Rockwell 112, 114	508C		05-02332		05-02333	
Cessna P206 S/N 0438+up	326C		05-02265		326G		Stinson 108 Lft.	552C		05-02334		05-02335	
Cessna P206 S/N 0161+up	326C		05-02265		326G		Stinson 108 Rt.	553C		05-02336		05-02337	
Cessna 207	05-02180		05-02269		05-02268		T/Craft BC-12d, 1946+up	650C		05-02338		05-02339	
Cessna 210 S/N 57841 to 58220	325C		05-02263		05-02264		T/Craft BC-1940-41, Pre-war BC-65	651C		05-02340		05-02341	----
Cessna 210 S/N 58221 to 58510	05-02182		05-02266		05-02267		Piper PA-28 Cherokee A-28, -140, -150, -160, -180, -235	055C		05-02346		05-02347	
Cessna 210 S/N 58511 to 58715	325C		05-02263		05-02264		Cessna 152, A152, F152, FA152	303/302C		303/302SG		303/302G	
Cessna 210 S/N 58716 to 58818	326C		05-02265		326G		Cessna 152, A152, F152, FA152	312/CMB		05-02353		05-02354	
Cessna 210 S/N 58937 + up	05-02183		05-02271		05-02270		Cessna 170B S/N 20267+up 1952 to 1955	312/CON		05-02359		05-02360	
Cessna 310 S/N 35000 to 35546	05-02184		05-02272		05-02273		Cessna 150, A150, F150, FA150	360C		05-02348		05-02349	
Cessna 310 S/N 35547 to 39299	05-02187		05-02275		05-02274		PA-18, PA-19(L-18C)	464C		05-02356		05-02350	
Cessna 310 S/N 310-0001 to 310 K-0245	05-02187		05-02275		05-02274		PA-20, PA-22	05-02357		462SG		462G	
Cessna 310 S/N Looo1 to 310 0400	05-02185		05-02277		05-02276		Cessna 172, P172, F172	05-02358		05-02351		389G	
Cessna 310 S/N 0401+up	05-02186		05-02280		05-02281								

AP

WINDSHIELDS – CANOPIES

HEAVY THICKNESS WINDSHIELDS

STC Conversions

We now carry these STC Conversion extra thick windshields which are FAA approved for the following aircraft and which install as easily as the standard .250 thick windshields. Available in 3 thicknesses.

Available In Three Thicknesses	Part No.	Thickness	Price
	269.312	.312	
	269.375	.375	
	269.500	.500	

Note: Verify that your serial number is eligible before ordering.

FAA APPROVAL LIST

B h Bo a a F33	B h Bo a a V35B thru V-35B-
s/n CD-1235 – CD 1254	TC
B h Bo a a G33	s/n D9069 and up
s/n CD-1255 – CD 1304	B h Bo a a 36 & A36
B h Bo a a F33A	s/n E-1 and up
s/n CE-290 and up	B h Bo a a A36TC & B36TC
B h Bo a a F33C	s/n EA-1 and up
s/n CJ-26 and up	B h Baro 58 & 58A
B h Bo a a 33 thru E33A	s/n TH-1 and up
s/n CD-1 – CD-1234, CE-1 - CE-289,	B h Baro TC58 & 58TCA
CJ-1 – CJ-25	s/n TK-1 and up
B h Bo a a H35 thru V35A-TC	B h Tra ar 95 thru E95
s/n D4866 – D9068	s/n TD-1 – TD-721

IN IVI UAL WIN OWS

W Mo No.	A r r a t	r p t o	Ea h
231	Aeronca	Left front sliding-forward	
232	7AC	Left front sliding-rearward	
233		Left or Right rear	
234		Right front door	
225	Aeronca	Left or Right front door (sliding)	
226	11AC	Left or Right rear (Door) (sliding)	
227		Left or Right rear	
342	Cessna	Left or Right door	
343	120/140	Left or Right rear	
344		Left or Right skylight	
370	Cessna	Left or Right rear	
374	170	Left or Right door	
362	Cessna	Left or Right rear	
369	180	Left or Right door	
006	J-3	Skylight	
008		Left front triangle	
009		Left pilot sliding	
010		Left rear	
011		Right rear	
012		Right door	
436	PA-12	Left front (sliding)	
437		Left rear	
438		Door	
439		Right rear	
015	PA-16,20	Right door	
016	22	Right rear	
021		Left front stationary	
017		Left front sliding	
019		Left rear door	
465	PA-18	Right door	
466		Right or Left rear	
467		Rear sliding	
468		Front sliding (left)	
469		Left pilot	
020	Late PA-20	Left or Right square (rear)	
021		Left front pilot	
023		pilot-vented	

CESSNA 150/152/172/177/182/210 WINDOWS

Aircraft Spruce stocks replacement windows for Cessna single and twin engine aircraft as well as all windshields and windows manufactured by LP Aero Plastics. Call or email Aircraft Spruce for quotation and specify year, serial number of aircraft and windows required.

Call: 1-877-4SPRUCE

Email: info@aircraftspruce.com

WINDSHIELD INSTALLATION ACCESSORIES

Foam Sealing Tape – 1/4"x1/16" x 100' roll.... P/N 05-99100 /r
Felt – Adhesive-backed 3/32"x1-1/2" P/N 05-99110 /t

CANOPIES FOR HOMEBUILTS

These canopies for homebuilt aircraft are made from the finest quality materials and are available in clear, green or smoke tint. All canopies are shipped via truck or UPS freight collect. Canopies are special order and are non-cancelable and non-returnable.

Specify Clear, Green or Smoke Tint.

A r r a t	Th	Pr
Acroduster I (29" or 34" long)	1/8"	
Acroduster II	1/8"	
Acrosport (29" or 34" long)	1/8"	
Barracuda	3/16"	
Berkut	1/8"	
Cassutt Standard (flat wrap)	1/8"	
Cozy Mark I Canopy	1/8"	
Cozy Mark I Window Set	1/8"	
Cozy Canopy	1/8"	
Cozy Window Set	1/8"	
EAA Biplane (single seat) (29" or 34" long)	1/8"	
E-Racer	3/16"	
Emeraude	3/16"	
GP-4	3/16"	
KR-1	.080	
KR-2	1/8"	
KR-2 (Super Canopy)	1/8"	
Long-E	1/8"	
Moni/monerai	.080	
Mustang II	3/16"	
Osprey II Standard Canopy w/o rear windows	1/8"	
Osprey II Bubble Canopy w/rear windows	1/8"	
Osprey II Rear Window set	1/8"	
Pitts S-1 (bubble style, not factory Pitts)	1/8"	
uickie (1)	.080	
uickie 2 (2)	3/16"	
R -3	1/8"	
R -4	1/8"	
Skybolt (rear seat) (29" or 34" long)	1/8"	
Skybolt (full canopy)	1/8"	
Sonerai I	1/8"	
Sonerai II	1/8"	
Sonerai II (extra visibility "big" canopy)	1/8"	
Starduster I	1/8"	
Starduster II	1/8"	
Starduster II (rear seat only)	1/8"	
T-18 Windshield	3/16"	
P-1	1/8"	
P-2	1/8"	
ari-Eze	1/8"	

Request quote on unlisted models. We can furnish CUSTOM CANOPIES from 3 view drawings. Send detailed sketch or print for quotation.

TO S CANOPIES



These optically perfect canopies are the very best quality available. They are superior in quality and less expensive than other sources. The Cozy and AeroCanard canopies include the windows, and the Berkut includes front and rear canopy. Prices include crating, and freight averages \$70 to \$100.

A r r a t	C a r P/N	Pr	T t P/N	Pr
AeroCanard	05-01145	.	05-01146	.
Berkut	05-01147	.	05-01148	.
Cozy III	05-01149	.	05-01151	.
Cozy Mark IV	05-00437	.	05-00438	.
ERacer	05-01152	.	05-01153	.
Long EZ	05-00439	.	05-00440	.
Varieze	05-01154	.	05-01155	.
Christian Eagle	05-01156	.	05-01157	.
Harmon Rocket	05-01158	.	05-01159	.
KR2S	05-01160	.	05-01161	.
Osprey	05-01162	.	05-01163	.
RV-3	05-01164	.	05-01165	.
RV-4	05-01166	.	05-01167	.
RV-8	05-01168	.	05-01169	.

ASHBY AIRCRAFT GLARESHIELDS – BRS



ASHBY AIRCRAFT GLARESHIELDS

Produced from 100 fiberglass that is hand-laminated to form a one-piece structure. They are manufactured out of fire retardant resin that meets Federal Aviation Regulations (FAR) parts 23 and 25. Prevent sun from reflecting in your instruments, allowing you to read them clearly. It will also protect sensitive instruments from heat and is impervious to damage from the sun's rays. Molded with a rich leather texture, which is pleasing to the eye, and has a semi-gloss black finish. On most models it fits flush with the windshield, and extending 3" past the front of the panel. A reinforced lip for mounting optional lights to illuminate the instrument panel, which also serves as hand-holds when entering and exiting the cockpit, or when adjusting your seats. There is also space for switches and annunciator lights.

CESSNA

For Model	Glareshield		w/ 12V Lights		w/24V Lights	
	Part No/	Price	Part No/	Price	Part No/	Price
120, 140, 150 (thru F. 1959-1966), 150G thru L (1967-1977), 152 (1978-1986)	05-03871	.	05-03908	.	05-03945	.
170, 170A (1948-1951), 172 (1956-1958)	05-03872	.	05-03909	.	05-03946	.
170B, 1952-1956	05-03873	.	05-03910	.	05-03947	.
172A thru D (1960-1963), 175 (all)	05-03874	.	05-03911	.	05-03948	.
172 959 only	05-03876	.	05-03913	.	05-03950	.
172E thru N, 172P, 172Q, 172XP, 172RG 1974-1986 (all)	05-03875	.	05-03912	.	05-03949	.
180A thru H, 182 thru D, 185 thru E, F Models Prior to 1974	05-03877	.	05-03914	.	05-03951	.
180J, 185 (1974-1986)	05-03878	.	05-03915	.	05-03952	.
182 (1962-1963)	05-03879	.	05-03916	.	05-03953	.
182 1964-1965 (Early Slight Radius on Top.)	05-03880	.	05-03917	.	05-03954	.
182 (1969-1974)	05-03881	.	05-03920	.	05-03957	.
182 (1975 only)	05-03884	.	05-03921	.	05-03958	.
205 (1963-1965 early)	05-03885	.	05-03922	.	05-03959	.
182 (1976-1986)	05-03886	.	05-03923	.	05-03960	.
182R, 210 (1963-1965 early)	05-03887	.	05-03924	.	05-03961	.
206 1965 (Late) -1967 Not avail. for 1968-1969, 210 1965 (Late) -1967 Not avail. for 1968-1969.	05-03888	.	05-03925	.	05-03962	.
206 (1970-1986), 210 (1970-1986)	05-03889	.	05-03926	.	05-03963	.
210 (1960-1961)	05-03890	.	05-03927	.	05-03964	.
210 (1962 only)	05-03891	.	05-03928	.	05-03965	.
XP210	05-04096	.	05-04097	.	05-04098	.
336 (all), 337 (all)	05-03892	.	05-03929	.	05-03966	.

PIPER

For Model	Glareshield		w/ 12V Lights		w/24V Lights	
	Part No/	Price	Part No/	Price	Part No/	Price
PA-23 (1956-1963)	05-03893	.	05-03930	.	05-03967	.
PA-24, PA24-250, 260, 400, PA-30 (all)	05-03894	.	05-03931	.	05-03969	.
PA-28-140, 150, 151, 160, 161, 181, 201T, 235, 236, PA-28S-160, 180, PA-28R-180, 200, 201, 201T, PA-28RT-201, 201T, PA-44-180, 180T	05-03895	.	05-03932	.	05-03970	.

PIPER CONT.

For Model	Glareshield		w/ 12V Lights		w/24V Lights	
	Part No/	Price	Part No/	Price	Part No/	Price
PA-28 (1964-1967), PA-28-150, 160, 180, 235 (Large Hump over Radio Stack)	05-03896	.	05-03933	.	05-03971	.
PA-32-260, 300, 301, 301T, 301FT, 301XTC, PA-32S-300, PA-32R-300, 301T, 301(SP), 301(HP), PA-32RT-300, 300T	05-03897	.	05-03934	.	05-03972	.
PA-34-200, 200T, 220T	05-03898	.	05-03935	.	05-03973	.
PA-38 (all)						

BEECHCRAFT

For Model	Glareshield		w/ 12V Lights		w/24V Lights	
	Part No/	Price	Part No/	Price	Part No/	Price
BE-23	05-04093	.	05-04094	.	05-04095	.
BE-33 1947-1961, BE-35 1947-1961	05-03899	.	05-03936	.	05-03974	.
BE-33 1962-1971, BE-35 1962-1971, BE-55 1962-1971, BE-95 1962-1971	05-03901	.	05-03938	.	05-03975	.
Same as above with Plenum	05-03902	.	05-03939	.	05-03976	.
Same as 05-03901 with insert	05-04196	.	---	---	---	---
BE-33 1962-1971, BE-35 1962-1971, BE-55 1962-1971, BE-95 1962-1971	05-03903	.	05-03940	.	05-03977	.
BE-33 1972-1983, BE-35 1972-1983, BE-36 1971-1983, BE-58 1971-1983	05-03905	.	05-03942	.	05-03979	.
BE-33 1962-1983, BE-35 1962-1983	05-03904	.	05-03941	.	05-03978	.
Same as above with Plenum	05-03906	.	05-03943	.	05-03980	.

MOONEY

For Model	Glareshield		w/ 12V Lights		w/24V Lights	
	Part No/	Price	Part No/	Price	Part No/	Price
201 (1977-1983)	05-03907	.	05-03944	.	05-03981	.

LIGHTS

PMA Approved Panel Rope Lights, 12 or 24 volts DC, 18" or 34" Long. Illuminates instruments with 8 or 12 2000+ hour bulbs, respectively.

Lights	Part No.	Price
12 volts, 8 Bulbs, 18"	05-03998	.
24 volts, 8 Bulbs, 18"	05-03999	.
12 volts, 12 Bulbs, 34"	05-03994	.
24 volts, 12 Bulbs, 34"	05-03995	.

WINDLOCK



Designed to attach to an aircraft's controls inside the cockpit. The non-ridged mechanism keeps tension on the Elevators, holding them in the full down position, which normally prevents the aircraft from leaving the ground, regardless of wind direction. This position also allows moisture to drain from inside the control surface, helping to prevent corrosion.

P/N 05-04044

BALLISTIC PARACHUTES FOR ULTRALIGHTS AND KIT PLANES



CANISTER - The BRS Canister is waterproof when the original factory seal remains intact, making it the perfect design for exterior installations. With a six year repack schedule and versatile mounting hardware, it is one of the most popular systems.

SOFTPACK - The BRS Softpack is best suited for aircraft manufacturers that require a ballistic parachute mounted inside their aircraft. When mounted internally, this system also has a six year repack schedule..

VLS - Built specifically for aircraft with limited interior space, the LS (Critical Launch System) installs on top of the wing or fuselage. Upward firing works well with pusher designed aircraft.

BRS-6 System	Maximum Weight (lbs./kg)	Max. Deploy Speed (mph/km/h)	System Weight (lbs./kg)	Dimension L x W x D	Part Number	Price
600 Canister	600/272	138/222	22/10	8 x 7 round	13-04071	.
600 Softpack	600/272	138/222	18/9	10 x 10 x 5.5	13-04072	.
600 LS	600/272	138/222	23/11	18 x 11.5 x 7.5	13-04073	.
800 Canister	800/363	138/222	23/11	21.5 x 7 round	13-04075	.
800 Softpack HD	800/363	138/222	19/10	10 x 11 x 5.5	13-04076	.
800 LS	800/363	138/222	25/12	18 x 11.5 x 5.5	13-04077	.
1050 Canister	1,050/475	138/222	28/13	21.5 x 7 round	13-32445	.
1050 Softpack HD	1,050/475	138/222	24/11	10 x 11 x 5.5	13-32446	.
1050 LS	1,050/475	138/222	29/13	18 x 11 x 5.5	13-32445-LS	.
1350 Softpack LSA	1,350/612	138/222	29/13	15 x 10.5 x 6	13-04079	.
1350 LS	1,350/612	138/222	34/15	18 x 11.5 x 5.5	13-04080	.
1350 High Speed	1,350/612	184/296	33/15	-	13-04081	.
1600 Softpack HD	1,600/726	138/222	35/16	20 x 8.5 x 9	13-04082	.

WINDSHIELDS – VORTEX GENERATOR KITS



CEE BAILEY AIRCRAFT PLASTICS

Cee Bailey's Aircraft Plastics has been producing superior replacement windows and windshields for light aircraft since 1955. These windshields are custom built to fit your aircraft's serial number. This handcrafting insures a perfect, distortion-free windshield, trimmed and ground to fit your aircraft with little or no modification. Optical qualities, contour, shape and fit are exceptional. All windshields and windows are FAA/PMA approved. Cee Bailey warrants its products against defective materials and workmanship. Most windows and windshields are available in clear, green, and solar grey. Prices are for clear. Add 15% to prices for green or grey tints. When ordering, specify model number, year, and serial number of the aircraft.

Ma /Mo	Pr	Ma /Mo	Pr	Ma /Mo	Pr
Aero Commander 2pc w/s Left		172 (S/N50573 to 72884)		Piper J-3 Cub	
500, 520, 560, 680 Right		180, 182 (S/N52556 to 53598)		PA-12 square top (late model)	
Aero Commander 100 Darter-Lark		182 (S/N 53599 to 55844)		PA-12 square top (early model)	
Voltaire 10 or Voltaire 10A		182 (S/N 55845 to 64296)		PA-15/16/17/22 108 colt bubble	
Aeronca Citabria		205, 206, U206, P206		Apache 23 (S/N 1502 & up) RorL	
Aeronca Chief		207		Pawnee 25 (S/N 656 & up)	
Beechcraft Musketeer, Sundowner, Sierra, Sport (.125)		210 (S/N 58716 to 58818)		Cherokee PA-28 (.125) RorL	
Musketeer, Sundowner, Sierra, Sport (.187)		Ercoupe - Fournair (bubble type w/s)		Cherokee PA-28 (.250) RorL	
Bonanza 33/35, 2pc w/s (per side)		Grumman - AA1, AA1A, AA1B		Stinson HW-75 2pc	
Bonanza 33/35/36/55/58/95 1pc w/s (must check s/n carefully)		Grumman Canopy-AA1, AA1A, AA1B		Stinson Voyager 108, 108-1/2/3 2pc w/s	
Bellanca Cruisemaster models 14-19, 14-19-2, 14-19-3		Luscombe 8 series		Taylorcraft BC-12D, 1946 & up	
Viking, Super Viking 14-19-3A, 17-30 17-30A, 17-31A, 17-31ATC		Mooney M20, M20a/b/c/d/e prior to 1965 (2pc w/s)		Taylorcraft B 1940-41	
Cessna 120-140 (S/N 8800 & up) 140A, 150, 152		Mark 21, M20c, Super 21, M20e, Master M20d, Executive 21 M20f, after 1965		Yak 52 Windshield (4 sections) *all windows available canopy, side windows, center fixed, aft siding, rear fixed	
152		Ranger M20c, Chaparral M20e, Executive M20f, Statesman M20g		Yak CJ69 (*all windows available canopy, fwd sliding, center fixed, aft siding, rear fixed)	
		Navion A/B/D/E/F Std. or flush type (2pc w/s)			
		Navion Rangemaster G&H 2pc w/s			

AP



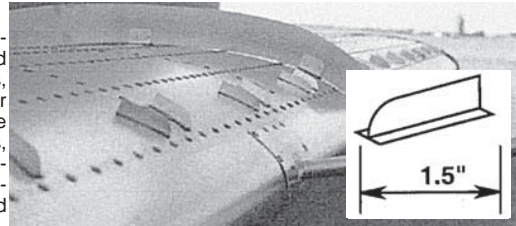
RV WINDSHIELD FAIRING

- * A one-piece fiberglass fairing for Van's Aircraft RV6, RV7, RV9 series aircraft (Slider option)
- * Designed with generous overlap areas to fit any installation
- * Built from 4-layers of 8.8oz cloth and epoxy resin. Fully primed and ready for trimming/installation
- * Save 25+ hours and lots of mess versus the traditional build-up method
- * Large box is 30"x30"x28", but just 8lbs.

P/N 05-03664

MICRO VORTEX GENERATOR KITS

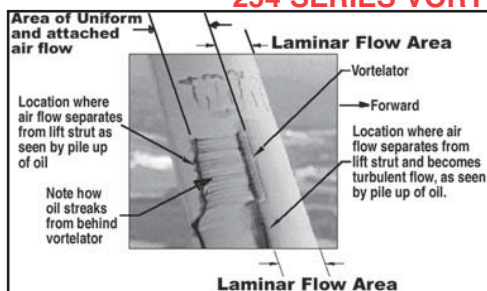
Micro Vortex Generators from Micro Aerodynamics, Inc. are available for a wide range of aircraft and can reduce stall speed, improve aileron response, improve cross wind control, and reduce landing and takeoff roll. The kits consist of vortex generators mounted on the wings, the horizontal stabilizer, and the vertical stabilizer. The generators are manufactured under FAA/PMA from 6063T6 aluminum and are curved to fit the contour of the wing. Included in the kits are installation tools, detailed drawings and instructions, templates for positioning VG's, spares, Loctite Depend adhesive and all the materials needed for the easy one-day installation. When ordering, specify aircraft, serial number, N number, paint name and number (additional \$150 to match), make and model, and any modifications to aircraft. Generic VG kit used on LongEZ, RV-4/6/8, Rans, Murphy Rebel and others. Specify Aircraft make and model.



Ma /Mo	Part No.	Pr	Ma /Mo	Part No.	Pr
CESSNA TWINS 310G thru 310Q	05-00602		Bonanza 33, 36, A36, A36TC, B36TC	05-00630	
310R & T310R (ZFW & GWL - 180 lbs)	05-00604		Beechcraft Debonair 33	05-04392	
320B/C/D/E/F	05-00605		Hawker Beechcraft G36 Bonanza	05-04192	
310I & 310J	05-04258		PIPER TWINS		
336 & 337	05-04404		Aztec PA-23-250	05-00633	
340A, 340, 335 (GWL 300 lbs)	05-00606		Geronimo PA-23-180	05-00634	
401, 401A, 401B	05-00607		Twin Comanche PA-30, PA-39	05-00635	
402, 402A, 402B	05-00608		Seneca II (ZFWI - 168 lbs)	05-04472	
402C (ZFW & GWL - 360 lbs)	05-00609		Seneca I, III, IV, V	05-04398	
411, 411A	05-00610		Seminole PA-44-180, PA-44-180T	05-00636	
414	05-00611		PIPER SINGLE		
414A, 414AW (ZFW & GWL - 350 lbs)	05-00613		J-3/PA-11	05-00640	
421, 421A	05-00614		PA-12/PA-18	05-00639	
421B & 421C (GWL - 129 lbs)	05-00615		PA-15, PA-16, PA-17	05-04399	
CESSNA SINGLES			PA-22, PA-20	05-00641	
120, 140 Series	05-04393		PA-24 Comanche	05-04401	
150, 152 (all models)	05-04394		PA-28 All Models	05-00642	
170 "Rag Wing"	05-04189		PA-32 Cherokee Six, Lance (except T-Tail)	05-00939	
170A, 170B	05-00616		PA-32 Saratoga	05-00938	
172, 175 Series	05-00618		MOONEY		
177, 177A, 177B, 177RG, F177RG	05-04397		M20, M20A, M20B, M20C, M20D, M20E, M20F, M20G, M20J, M20K, M20L, M20M, M20R, M20S	05-04402	
180, 185 Series	05-00617		ROCKWELL COMMANDER		
180, 185 Vertical Tail Upgrade	05-04396		112, 112TC, 112TCA, 114, 114A, 114B, 114TC, 115TC	05-00646	
182 Series	05-04469		LAKE		
205, 206, 207 Series	05-00619		LA-4, LA-4A, LA-4P LA-4-200, Model 250	05-00647	
210 (all models)	05-04470		AMERICAN CHAMPION		
BEECHCRAFT TWIN			Aeronca Champ, Scout Citabria: 7AC, 7ACA, 7BCM, 7CCM, 7DC, 7EC, 7ECA, 7FC, 7GC, 7GCA, 7GCAA, 7GCB, 7GCBC, 7HC, 7JC, 7KC, 7KCA, 8KCA, 8GCBC	05-00644	
Baron 55 A/B/C/D/E	05-00621		Aeronca Chief: 11AC, S11AC, 11BC, S11BC, 11CC, S11CC	05-04473	
Baron 58, 58A	05-00623		Aeronca Sedan: 15AC, S15AC	05-04190	
Hawker Beechcraft G58 Baron	05-04471		AVIAT Husky A-1, A-1A, A-1B	05-00643	
Baron 58TC, 58P	05-00624		MAULE M-4, M-5, M-6, M-7 MT-7, MX-7, MXT-7, M-8	05-00645	
Baron 55 Upgrade kit (w/older VG system)	05-00625		STINSON 108, 108-1, 108-2, 108-3, 108-5	05-04403	
Duke 60, A60, B60	05-00626		TAYLORCRAFT Taylorcraft Series	05-01208	
Twin Bonanza	05-00627		AGRICULTURAL Air Tractor, Ayres Thrush, Brave, Cessna 188, Dromader, Weatherly	05-00648	
Travel Air	05-00628		KIT PLANES RV, Murphy Rebel, Long EZ	05-00001	
BEECH SINGLES					
Musketeer, Sierra, Sundowner	05-04391				
Bonanza 35 Series	05-00629				

VORTELATOR KITS

254 SERIES VORTELATOR KITS FOR HOMEBUILT AIRCRAFT



Aircraft Development has developed a vortelator kit that can increase your homebuilt aircraft speed by 4 to 7.5 mph. This is accomplished by placing vortelators at certain critical locations which will cause the boundary layer to stay attached to flying surfaces for a greater distance, and to keep the boundary layer thinner. The net result of these two actions is that it reduces both the profile drag and skin friction drag components of the parasite drag. Another way to think of it is that the wake behind the aircraft will be smaller, thus requiring less horsepower to propel the aircraft through the air. Behind the vortelator mini vortices are created as can be seen by the lines of oil that form behind the vortelator. These mini vortices sweep the oil to a point in between the mini vortices, and that's how the oil lines are formed. Whenever one sees these characteristic oil lines forming behind the vortelator one knows the vortelator is working. The vortelator allows the air flow to stay attached to the lift strut for approximately 80% of the lift strut's chord. In the area where there is no vortelator, the air flow separates from the lift strut and becomes turbulent, at approximately 40% of the lift strut's chord, as can be seen from the pile up of oil at the 40% chord position. At the 40% chord position the lift strut is 2.01" thick, and at the 80% chord position the lift strut is 1.18" thick. That means the turbulent wake coming off the lift strut is only 59% as thick with the vortelator attached as without the vortelator attached. That also means with a narrower wake less horsepower is required to propel the lift strut through the air.

Kit Number	Description or Effect of Installing Vortelator Kit
254-AD	Delineates a procedure for determining where vortelators should be placed on an aircraft, for increased speed, by visualizing surface air flow through simple flight tests at straight and level flight at cruising speed. This kit is ideal for those aircraft models that do not have enough aircraft out in the field for Aircraft Development to economically warrant the time and expense of developing kits for.
254-RV3 254-RV4 254-RV6/6A 254-RV7/7A 254-RV8/8A	The vortelating of the airframes of these R aircraft will give about a 4 to 5 MPH increase in speed and a decrease in the stalling of about 2 MPH. The vortelating of the propellers of these aircraft is more random in nature. From flight tests the increase in speed can be from 2 to 4 MPH depending on the propeller used.
254-LANCAIR	The vortelating of the airframes of the Lancair 235, 320, 360 aircraft will give about a 4 to 5 MPH increase in speed. The vortelating of propellers of these aircraft is more random in nature. From flight tests the increase in speed can be from 2 to 4 MPH depending on the propeller used.
254-T18	The vortelating of the airframes of the T-18 aircraft will give about a 4 to 5 MPH increase in speed. The vortelating of propellers of the aircraft is more random in nature. From flight tests the increase in speed can be from 2 to 4 MPH depending on the propeller used.

Description	Part No.	Price
ORTELATOR TEST KIT 254-AD	05-00851	
ORTELATOR R 3 KIT 254-R 3	05-00852	
ORTELATOR R 4 KIT 254-R 4	05-00853	
ORTELATOR R 6/6A KIT	05-00854	

Description	Part No.	Price
ORTELATOR R 7/7A KIT	05-00855	
ORTELATOR R 8/8A KIT	05-00856	
ORTELATOR KIT FOR LANCAIR	05-00857	
ORTELATOR KIT FOR T18 254-T18	05-00858	

246-100 CESSNA VORTELATOR KIT - Can increase Cessna speeds by up to 6 MPH. This kit is FAA approved for the following Cessna aircraft: 140A, All models of 150, All models of A150, All models of 152, 170 A&B, All models of 172 (USAF T-41A), P172D, R172E (USAF T-41B) and (USAF T-41C and D), R172F (USAF T-41D), R172G (USAF T-41 C and D), R172H (USAF T-41D), R172J, R172K known as 172XP, 172RG, All models of 175, All models of 180, All models of 182, R182, T182, TR182, All models of 185, A185E, A185F, All models of 205, All models of 206, All models of P206, All models of U206, All models of TP206, All models of TU206, All models of 305 known as L-19.P/N 08-00731



FLY TO USE LESS FUEL - a booklet which explains the working speeds of the aircraft such as, most flight time per gallon of fuel, most miles per gallon of fuel, steepest climb etc. It also explains these working speeds of the aircraft in simple to understand graphics, no complicated mathematical formulas used. There is no need to do a time consuming flight test program to determine the working speeds of your aircraft. This booklet gives simple multiplication factors, based on cruising speed, to determine the working speeds for your homebuilt aircraft. Fly To Use Less Fuel booklet.....P/N 08-00732

PROPELLER VORTELATOR KITS FOR ULTRALIGHT, HOMEBUILT AND CERTIFIED AIRCRAFT

Fly Faster and Use Less Gas - Capable of increasing your aircraft speed by 2 to 4 mph and your RPM by 20 to 50 RPM. That's if you have a fixed pitch propeller. If you have a constant speed propeller, for a given RPM and manifold pressure the propeller will be at a slightly larger pitch giving you more speed. This is accomplished by placing vortelators at certain critical locations on the propeller's most inefficient highest air drag areas. The vortelators will cause the boundary layer to stay attached to the propeller surface for a greater distance, and to keep the boundary layer thinner. The net result of these two actions is that it reduces both the profile drag and skin friction drag components of the parasite drag. The vortelator allows the air flow to stay attached to the lift strut for approximately 80% of the lift strut's chord. In the area where there is no vortelator, the air flow separates from the lift strut and becomes turbulent, at approximately 40% of the lift strut's chord, as can be seen from the pile up of oil at the 40% chord position. At the 40% chord position the lift strut is 2.01" thick, and at the 80% chord position the lift strut is 1.18" thick. That means the turbulent wake coming off the lift strut is only 59% as thick with the vortelator attached as without the vortelator attached.

259-100 Propeller Vortelator Kit for Ultralight Aircraft - The propeller vortelator kit will increase the RPM's by 20 to 50, increase airspeed by 2 to 4 MPH and also works on constant speed propellers. It is compatible with and will restore prop guard's efficiency loss. P/N 05-01465

259-200 Propeller Vortelator Kit for Homebuilt Aircraft - The propeller vortelator kit will increase the RPM's by 20 to 50, increase airspeed by 2 to 4 MPH and also works on constant speed propellers. It is compatible with and will restore prop guard's efficiency loss. P/N 05-01466

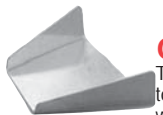
260-100 Propeller Vortelator Kit for Certified Aircraft - The propeller vortelator kit will increase the RPM's by 20 to 50, increase airspeed by 2 to 4 MPH and also works on constant speed props. It is compatible and will restore prop guard's efficiency loss. The FAA has given permission for an A&P mechanic to install this kit and does not require the installation to be performed by an approved propeller repair station. P/N 05-01467

VORTEX GENERATOR STOL KIT

There are many advantages to this vortex generator STOL kit for homebuilt aircraft: 1) increased lift, 2) slower stall speed by 4 to 6 MPH, 3) shorter landing distances, 4) shorter takeoff distances, 5) higher angle of climb, 6) tighter turns, 7) gentler stalls, 8) better aileron authority at slow speed, 9) aircraft is more controllable at slow speed, 10) in general increased total performance and safety. The kit comes with clearly written installations instructions that allow you to determine where on the aircraft, especially on the wings, to install the vortex generators based on empirical data to get the benefits described above.

Kit No.	Description of Vortex Generator Kit	No. of VG's	Part No.	Price
261-AD1	Deluxe Generic Vortex Generator STOL Kit for Homebuilt Aircraft	150	05-01776	
261-AD2	Generic Vortex Generator STOL Kit for Homebuilt Aircraft	65	05-01780	
261-R 1	Vortex Generator STOL Kit for the R -3 Aircraft	65	05-01777	
261-R 1	Vortex Generator STOL Kit for the R -4 Aircraft			
261-R 1	Vortex Generator STOL Kit for the R -6/6A Aircraft			
261-R 1	Vortex Generator STOL Kit for the R -7/7A Aircraft			
261-R 1	Vortex Generator STOL Kit for the R -8/8A Aircraft			

VORTEX GENERATORS – AIR VENTS



HALL BROTHERS VORTEX GENERATORS FOR HOMEBUILTS

These Vortex Generators can be temporarily attached to the wing with tape for testing without harming the wing surface and then moved or attached permanently. This temporary attachment capability allows the pilot to prove out their effectiveness before permanent attachment. The design also gives a generous surface area for bonding. The Vortex Generators are made from .025" 6061-T6 aluminum for maximum durability. Hall Brothers Vortex Generators are not just used for lowering the stall speed. The stall characteristics are normally improved as well as aileron response. Some pilots have reported an increase in the rate of climb of their airplane. Many pilots say that the overall "feel" and handling of their airplane has improved throughout its speed range. The Hall Brothers Vortex Generator Kit includes enough Vortex Generators for a typical homebuilt wing (46 pairs) and stabilizer (16 pairs), tape for temporary attachment, adhesive for permanent attachment and instructions.

P/N 05-01480

VORTEX GENERATORS FOR CESSNA AIRCRAFT



Manufactured under our FAA PMA from aircraft grade aluminum and are anodized to a mil-spec, ready to accept paint before installation. Included in each kit are installation tools, computer cut templates, detailed illustrated drawings and instructions, and Loctite Depend Adhesive for installing the vortex generators on your airplane.

Description	Part No.	Price
Cessna 310I/310J	05-04258	
Cessna 402B	05-04259	
Cessna 421C	05-04261	
Cessna (T)210 SER	05-04264	
Cessna P210N	05-04265	
Cessna P210R	05-04266	

STOL SPEED VORTEX GENERATORS



Stol speed Vortex Generators are streamlined for less drag and better appearance than other Vortex Generators. Stol speed Vortex Generators have no sharp points and are flexible, so it's easier to wash or cover the wings. The special 3M adhesive is removable without damaging aircraft paint. Stol speed Vortex Generators have a very slim rounded fin to give them good flexibility, and a rounded, tapered base that flows into the wing surface. In clear material they're almost invisible.

80 (Enough for the tail)..... P/N 05-04458

120 (Enough for the main wing plus spares) .. P/N 05-04457

ALUMINUM EYEBALL AIR VENTS



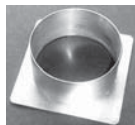
VIEW 1

VIEW 2

Aluminum airline style "eyeball" air vent swivels to direct air where needed. Knurled collar of outlet rotates to control air volume. Mounts in 1-7/8" dia. hole.

P/N 05-04065.....

EYEBALL AIR VENT ADAPTER



The extension on the back of these aluminum eyeball air vents is very narrow and allows little room to attach SCAT ducting. This adapter enables the user to attach 2" diameter SCAT ducting to the back of the vent using a stainless steel clamp.

P/N 05-04067.....

EYEBALL SWIVEL VENT



Front

Back

P/N 05-00779

This high quality, economical swivel air vent is made from 2024T351 aluminum and is available anodized black or grey. Diameter of the flange is 2.75" and the vent is designed to attach with a standard 2" air duct flange. The vent hole of this eyeball swivel vent is 7/8". The knurled collar on the vent swivels 60° to adjust air volume and direct air flow as desired. The vent features 4 mounting holes (1/8" dia.) which are spaced 2-3/8" apart or a mounting plate with a thickness of .71". Made in USA Eyeball Swivel Vent - Black..... P/N 05-00779

Eyeball Swivel Vent - Grey..... P/N 05-00787

PLASTIC EYEBALL AIR VENTS

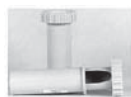


Gray..... P/N 05-04082

Black..... P/N 05-04079

White.... P/N 13-01943

Beige..... P/N 05-04081



VENTUBE FOR CESSNAS

The ventube is a plastic unit that consists of an exterior tube and a lockable interior tube with a cap. Air flow control is accomplished by extending or retracting the interior tube. The ventube enhances pilot and passenger comfort, allows reliable closure of the air vent, controls vent direction and flow, and reduces air vent noise and leakage. FAA approved for Cessna 120, 140, 150, 152, 170, 172, 175, 180, 182, 185, 190, 195, 205, 206, 207, 210-210F, and 305. Detailed instructions, STC, FAA Form 337, etc. are enclosed with each pair.

P/N 05-04091..... /pr.

AIRFLOW ENHANCEMENT KIT



Improves the cabin airflow in General Aviation aircraft, specifically Cessnas. Combined with ventubes they enhance the pilot and passengers comfort (cooling & heating), allow reliable closure of the inlet air vents, control cabin air direction, increase cabin air flow, and reduce inlet air noise and leakage. The kit consists of two cabin exit vents, CE, to allow the cabin air to exit into the aft fuselage and the fuselage exit vent, FE, in the modified inspection plate, to allow the cabin air to exit the fuselage of the aircraft.

P/N 05-04080

THE COMPLETE AIRFLOW KIT

The Kit includes:

- ventubes (pair) - controls air flow into the cabin.
- Cabin Exit vents - allows air to exit to fuselage.
- Fuselage Exit vent - allows air to exit the aircraft.

P/N 13-03577

VISTA-VENTS



Knob adjustment permits complete control of cabin air. Mounts at four points in 2-1/2" dia. hole.

P/N 13-03500

CABIN AIR VENTILATOR



Aluminum 90° elbow type. Knurled collar rotates to control air volume. Mounts to a 2 1/2" dia. flange. For 1 1/4" id scat ducting. Also good for cabin heat vents.

P/N 05-04075

"WHISPERFLO" VENTILATORS



Large molded plastic vent with 40° swivel. Thumb operated closure controls degree of opening. Mounts in 2-1/2" dia. hole. Large orifice (1-3/4") provides maximum cooling. Mounting in floor of aircraft assures full cabin ventilation.

Use with CAT-11 ducting. Black..... P/N 05-04073

Ivory..... P/N 05-04071

ULTIMATE VENTILATOR



The Ultimate ventilator is machined from aluminum block and comes with holes tapped for 4-40 screws. 1.75" disk articulates out into airstream and does not leak when closed. Very popular with T-18 & R builders. P/N 05-04090

SNAP VENTS



Adjustable plastic ventilators for use as fresh air intakes or air exhausts. Easily installed in plastic windshield or metal cowling. Two sizes:

MODEL A-2-100 Mounts in a 2" dia. opening. Can be turned to provide any degree of ventilation. The "Off" position is with the opening downward. P/N 05-01178

MODEL CC3251 Mounts in 31/4" dia. opening. Rotates to provide any degree of ventilation. Retracts to a closed position nearly flush with the mounting surface. P/N 05-01179

MODEL F325A Large tabs on lower flange and tapered profile make this vent ideal for higher airspeeds. Mounts in 3-1/4" opening in plastic windshield or metal cowling. P/N 05-04088

MODEL F318 Tapered in profile in back provides a more direct flow of air. Mounted in 3-3/16" opening in plastic windshields or metal cowling. P/N 05-04089

CESSNA 210 FRESH AIR VENT SYSTEM



This fresh air vent system replaces the forward cabin vent. It features durable Wemac air vents which deliver full/partial closure, directional control, and positive shut-off. Focused air control improves cabin comfort. All metal construction. Completely replaces the old style, plastic overhead fresh air vents in most Cessna 210 aircraft. Includes the forward center, and aft systems, or purchase the systems separately. STC approved.

Full system..... P/N 05-04092

Pilot & Co-Pilot..... P/N 05-04083

Center vents (total of 2 units)..... P/N 05-04085

Rear vents (total of 2 units)..... P/N 05-04087

NACA INLETS - AIR VENTS

DEFROSTER/AIR VENT



This one piece hard plastic air vent is totally self contained. A standard 1-1/2" scat duct easily slides onto the angled attach point and a simple squeeze of your fingers and it is locked on securely. It easily attaches to any glare shield or side panel totally hidden with 632 machine screws or tap screws if you choose. These vents pass FAR 23.853 flammability testing. They can be easily painted or better yet dyed with ritz dye to the color of your choice. An STC is pending for installation in Grumman AA5 Series Aircraft. A special locking feature allows variable adjustment of air flow with a simple sliding of the bar. No need to design an attaching air box for this unit - attach to the panel - slide on the hose - squeeze the attach hose clamp - and you are done. Furnished as a left hand and right hand unit set. P/N 05-02450.....

LARGE ROUND FLANGE EYEBALL VENT



This The round flange version of our large square-flange eyeball vent. Fits in a 2-3/4" hole, and has a 3" outside flange diameter.

- w/ 2" Scat Adptr., Aluminum..... P/N 05-04064
- w/ 2" Scat Adptr., Black..... P/N 05-04066
- w/ Plenum Nut, Aluminum..... P/N 05-04414
- w/ Plenum Nut, Black..... P/N 05-04415

STEINAIR AV125B EYEBALL VENT



These are the highest quality vents that money can buy. For example, the Black vents are 100 anodized aluminum. These black vents don't require a "Plastic Flange" because of metal to metal contact. These high quality vents have a nylon/delrin bushing encapsulated between the eyeball and the flange to protect the aluminum. With these vents you simply cut a hole, install the vent and tighten the plenum or retaining nut behind it and hook up the tubing. The vents include everything needed for install. On the small vents you can just directly attach a 2" scat tube to the vent - and on the large vents they have 2" plenums. These will come with a "BAC" part number on them, but that's because they are normally for the cockpits of fighters.

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Description	PN	Price
1 1/4" Aluminum Eyeball Vent - (Air outlet size). Anodized BLACK. OD is 2" and allows for direct connection of a 2" scat tube. A 125B	05-04061	.
1 1/4" Aluminum Eyeball Vent - (Air outlet size). Anodized CLEAR. OD is 2" and allows for direct connection of a 2" scat tube. A 125C	05-04063	.
1 3/4" Aluminum Eyeball Vent - (Air outlet size). Anodized BLACK. OD is 2 3/4" (hole size required for mounting). INCLUDES 2" Plenum Cup. A 1625B	05-04084	.
1 3/4" Aluminum Eyeball Vent - (Air outlet size). Anodized CLEAR. OD is 2 3/4" (hole size required for mounting). INCLUDES 2" Plenum Cup. A 1625C	05-04086	.



NACA INLETS

#1 Part No.	#2 Model No.	#3 0° Axes or air flow	#4 90° Axes total w length	#5 Outlet Size Openings	#6 Price
05-00859	904 MI	11.75"	8.25"	4"	
05-00862	001 HE	7.75"	4"	2.5"	
05-00863	903 DA-A	7.5"	3.125"	2.5"	
05-00864	903 DA-B	7.5"	4"	2.5"	
05-00865	007 JO	5.75"	2.75"	2"	
05-00866	902 MA-A	5.5"	2.5"	2"	
05-00867	902 MA-B	6.5"	3.5"	2.5"	
05-02485	009 MU-B	3"	2.75"	N/A	
05-04249	009 MU-A	6.5"	3.5"	N/A	

Column #1 - Indicates our part number. Order using our part number.
 Column #2 - Indicates Model No. and whether the outlet is at 0° or 90° to inlet, e.g. 904 MI is at 90° to the inlet, while 007 JO is at 0°
 Column #3 - Length of opening along airflow axes.
 Column #4 - Maximum width of aft opening at 90° to airflow.
 Column #5 - The size of the outlet for the purpose of hose or duct connecting information.
 Column #6 - Price of the NACA inlet.

COWLING/HOOD SCOOPS INLET/EXIT

SCOOPS



BLI-16.9A..... 05-04306..... BLI-16.9B..... 05-04308.....



BLI-24.1A 05-04305 BLI-24.1B 05-04304.....

AVEOAIR™ - BALL VENTS



AveoAir Ball vents are machined from 2024 aluminum alloy, and these lightweight vents are anodized in your choice of 5 color finishes. Installation is simple with the 2-piece design, no screws are required as they are simple thread together to hold securely. ONL A EO ENTS come with a choice of 3 rear standard SCAT tube coupler diameters so you can optimize your air flow. Choose from 1.5", 1.75" or 2.0" diameters (38 mm, 44 mm, 50 mm).

1.5 Inch		1.75 Inch		2.0 Inch	
Black	05-04198	Black	05-04459	Black	05-04464
Silver	05-04199	Silver	05-04460	Silver	05-04465
Green	05-04201	Green	05-04461	Green	05-04466
Blue	05-04202	Blue	05-04462	Blue	05-04467
Gold	05-04203	Gold	05-04463	Gold	05-04468

ROUND ALUMINUM EYEBALL AIR VENT (SMALL)



Small round-flange eyeball vent. Made from aircraft-grade 6061-T6 aluminum and hard anodized, it weighs just 3 oz. and mounts in a 2" round hole. Outside flange diameter is 2-1/4", and has 25 degrees of freedom from the vent centerline. The vent is secured with a mounting ring that will accept a 1-1/2" or 2" scat hose OR a plenum mounting nut. This vent has an opening of 1.2" which is larger than competitive vents that mount in the same size hole.

- w/ 1-1/2" Scat Adptr., Aluminum..... P/N 05-04410
- w/ 1-1/2" Scat Adptr., Black..... P/N 05-04411
- w/ 2" Scat Adptr., Aluminum..... P/N 05-01903
- w/ 2" Scat Adptr., Black..... P/N 05-01904
- w/ Plenum Nut, Aluminum..... P/N 05-04412
- w/ Plenum Nut, Black..... P/N 05-04413

3275 LARGE SQUARE EYEBALL AIR VENTS



Large square-flange eyeball vent. Made from aircraft-grade 6061-T6 aluminum and hard anodized, it weighs just 5 oz. and mounts in a 2-3/4" hole. The mounting flange is 3" square with a 2-1/2" mounting hole pattern, and has 25 degrees of freedom from the vent centerline (50 more than in our first generation vents.) This is a direct replacement for the "whisperflo" black plastic vents. Flows 30% more air and eliminates 99% of the leakage associated with the plastic vents when closed. Aluminum... P/N 05-04068 Black... P/N 05-04070

22167 SMALL SQUARE FLANGED EYEBALL VENT



Small square-flange eyeball vent. Made from aircraft-grade 6061-T6 aluminum and hard anodized, it weighs just 3 oz. Mounting flange is 2.20" square, with a hole mounting pattern of 1.70". Vent adjustment is 25 degrees of freedom from the vent centerline, and has an opening of 1.2" which is much larger than vents typical of this size. Aluminum..... P/N 05-01905

DEFROST VENT ASSEMBLY



Defrost vents designed to fit in AA series Grumman airplanes and can also be used in Experimentals. They will fit the original hole pattern on the Grumman's, but the area where the scat tube is attached has been changed to a full round 1 1/2 dia. These parts have passed FAA burn tests. A sliding piece can be adjusted to vary the amount of air being used to defrost. The mounting area is 2 1/4 x 3 3/4, with six 6-32 attaching screws, not provided. Comes as a pair. P/N 05-04062

ACTIVENT ACV-100 COCKPIT VENTILATOR



The ACV-100 Solar Powered Cockpit ventilator installs in place of the normal can type vent while the aircraft is parked. The system consist of a ballbearing fan assembly and a weatherized solar panel. An 8ft cord allows use with the panel on the glare shield or outside the aircraft when an outsidecover is used. The system provides a minimum of 7CFM airflow through the cabin per vent. The airflow reduces the heat caused by direct as well as radiant heating increasing the life of avionics and exteriors. The fan is a ball bearing design with a 10,000 hr design life. The fan mount & tube are made from aircraft grade aluminum. The Solar Panel is injection molded acrylic with an integral lens system. Standard..... P/N 05-04072

For Cessnas with ventubes..... P/N 05-04074

KOOL SCOOP VENTS



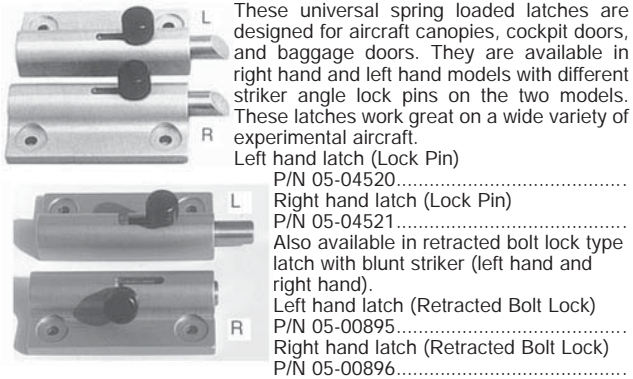
Very popular with Piper owners who need quick, high volume ventilation during ground operations on hot days. Kool Scoop is very easy to mount - simply peel off the adhesive backing sealer and stick it in place on the side window. It will fit any side window vent that does not have a thick frame. Made of top quality plexiglass. Really "scoops" the air from the outside to keep the pilot and passengers comfortable. Window frame not included. Left hand (Pilot Side)..... P/N 05-04076

Right hand (Co-Pilot Side)..... P/N 05-04078

AP

DOOR LATCHES-CANOPY LOCK-FLAP ACTUATOR

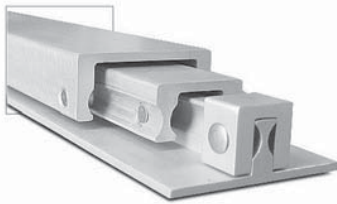
UNIVERSAL SPRING LOADED LATCHES



These universal spring loaded latches are designed for aircraft canopies, cockpit doors, and baggage doors. They are available in right hand and left hand models with different striker angle lock pins on the two models. These latches work great on a wide variety of experimental aircraft.

- Left hand latch (Lock Pin)
P/N 05-04520.....
- Right hand latch (Lock Pin)
P/N 05-04521.....
- Also available in retracted bolt lock type latch with blunt striker (left hand and right hand).
- Left hand latch (Retracted Bolt Lock)
P/N 05-00895.....
- Right hand latch (Retracted Bolt Lock)
P/N 05-00896.....

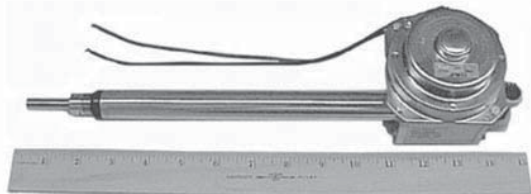
SLIDING CANOPY RAILS



2 heavy-duty channels of 2014T6 anodized aluminum provide smooth sliding tracks for canopy installations. Length 23" fully retracted, 45" fully extended. 22" travel. Wt:3.5 lbs./pair. Used on Pazmany 1 & 2, Skybolts & others. Instructions for installing these rails in the Pazmany PL-2 are available for 50 from Pazmany Aircraft Corp.,

P.O. Box 80051, San Diego, CA 92138. These instructions are a useful reference for installing channels in any homebuilt aircraft.
P/N 03-49300/pr.

FLAP LINEAR ACTUATOR AS USED ON LANCAIR ES, LANCAIR 300 & 360



The FL1 (FL1-24) ACTUATOR offers a unique standard of performance, durability and reliability. The compact design incorporates wellproven part, like the high efficiency ball screw, a sturdy gear box assembly and fitted with compact high quality DC motor. DC motors are available in both 12 & 24 volt. All to give the best performance with unsurpassed operational life. The actuator is self-locking within the dynamic load range. The actuator is manufactured with the capacity of 1500 N maximum dynamic load and 2200 N is static. The stroke is 150 mm and with speed of 10-15 mm per second.

- 12 volt actuator..... P/N 05-66223
- 24 volt actuator..... P/N 05-66224

The FL2 LIMIT SWITCH and CONTROLLING UNIT makes it possible to set the actuator for the desired stroke length. It also protects the actuator from running against the mechanical end stops, thereby avoiding damage. It is durable and can be used in most environments. It includes the aluminum profile tube, in which is mounted the protection tube of the actuator. Two limit switch units are attached to the profile tube and can be adjusted to any position. The magnet rod is attached to the end of the adjustment tube and runs in a groove in the profile tube. When the magnet, which is attached to the free end of the rod, approaches the switch unit, the latter is activated. The switches are connected to the control unit, from which the relays disconnect the power to the motor. Dimensions: Overall Length: 210 mm, Extended 360 mm. Width: 86 mm, Motor Diameter: 140mm. P/N 05-66225

FL1A CLEVIS ATTACHMENT – Galvanized clevis head and journal fitting with a quick coupling. It allows simple and rapid attachment of actuator
P/N 05-66226

EXPERIMENTAL AIRCRAFT DOOR LATCH



3D view Opening from Exterior Interior view Open Position
This door latch was originally designed for a gull wing door with linkage rods extending both forward and aft, however it can be adapted to virtually any style door with appropriately designed linkage rods. The linkage rods are not included.

- Features:
- Identically keyed locks for set
 - Armrest flush mount interior handle
 - Spring loaded, flush mount exterior handle
 - Spring ball detent for positive open/ closed stop action
- Specifications:
- Made from 2024-T3 aluminum
 - Each latch weighs approx. 10 ounces
 - Dimensions for applicability pictured below
 - Driver travel approx. 1.25" forward and aft
- For linkage rods the following aluminum is recommended: 1/4" x 1/2"
- 2024T3 P/N 03-00104
 - Left Hand Door Latch..... P/N 05-01415
 - Right Hand Door Latch..... P/N 05-01416
 - Set of Left/Right Latches..... P/N 05-01420

RV SLIDING CANOPY LOCK



Lock your RV with confidence. Finally, a lock for your sliding canopy that installs in minutes. Tools required are one 1/4" drill bit and a drill. All you have to do is drill a hole, deburr and start using your lock. No more worries about having your avionics or your personables in someone elses aircraft.
P/N 05-01414

THE GAS SPRING



The gas spring is a self-contained counterbalance unit consisting of a piston and piston rod in a hermetically closed cylinder. The cylinder is factory-loaded with an inert gas at a given pressure. The outward force generated is continuous and linear at 45 lbs. Ideal for a canopy closure on homebuilts, as designed for George Meads Adventure. Stroke 3.15".
P/N 05-01177

DOOR STEWARD



The DOOR STEWARD is an STC & FAA-PMA approved modification that greatly improves and replaces easily broken, malfunctioning mechanical type door stop or restraints

that become ineffectual with repeated usage. Pilots enjoy the fact that the DOOR STEWARD gently opens and firmly holds the door open. The DOOR STEWARD consist of modern inert gas spring - with necessary brackets. It is easy to install with virtually no maintenance. Developed out of frustration and observation of pilots and passengers who were repeatedly nagged by door whips in windy situation.

- The DOOR STEWARD™ can be used with or without most existing door restraints.
- With the DOORSTEWART™ the door will stay open when needed.
- No more flopping open and closed in gust of wind or sudden door movement caused by prop wash of aircraft taxiing nearby.
- The cost is usually much less that REPAIRING the OEM Door Restraints.
- Great for float equipped aircraft when water taxiing.
- FAA approved for Single Engine Cessnas from 170 series through 210 series except Cessna 177 and P210.

Description	Part No.	Price
Door Steward Left & Right Hand Kit (Cessna 177)	05-00922	
Door Steward Beechcraft	05-03574	
Door Steward Cessna 206	05-03575	

FIBERGLASS PARTS – COWLING KITS

RAVEN FIBERGLASS PARTS

Raven Fiberglass parts are made to very high standards with reinforcing where necessary.

UPPER WING CABANE FAIRING FOR PITTS S-1



Will fit S-1 and any aircraft with similar symmetrical wing.
P/N 05-00908.....

WHEEL FAIRINGS



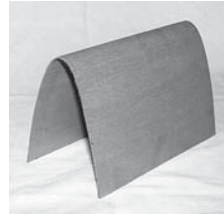
Fit a spring type gear and only come with mounting brackets and inside covers (doors). They also feature plates behind the wheel so they can't fill up with debris.
P/N 05-00912

SINGLE PIECE PIPER TYPE NOSE BOWL

With reinforcing rib around the perimeter has a starter bump as well. Used on Pitts and similar aircraft.

P/N 05-00909.....

WOODEN LEADING EDGES



Can be used on Pitts, Eagle, Skybolt etc. Preformed leading edge to replace metal leading edge. Adds strength to stock or modified wings. Set comes with all 5 pcs. to glue directly to the wings.

For S-1P/N 05-00918

For Experimental S-2, Eagle, Skybolt
P/N 05-00919

TWO PIECE PIPER TYPE NOSE BOWL



With reinforcing rib around the perimeter, meant for 14" spinner and has starter bump as well. Used on Pitts and similar aircraft.

P/N 05-00911

SPADES



Spades used on aerobatic aircraft like Pitts Special. Comes with arm and plate
P/N 05-00917

AP

2024T3 MOUNTING STRIPS

Mounting Strips are aluminum firewall support strips used on R kits to mount the receptacles.



Description	Alclad Strip	Part No.	Price
2024T3 Mounting Strip 2.5x36 .050	2	04-01993	.
2024T3 Mounting Strip 2.5x36 .050	4	04-01992	.
2024T3 Mounting Strip 2.5x36 .050	6	04-01991	.

VANS RV COWLING MOUNT KITS



ans R 4,6,7,8,9, 10 s, Lancairs, and other kit planes. The Skybolt design adds functionality and appearance to any cowling. The "Hinge" is the perfect design for a pop-rivet aircraft. A Skybolt Cloc Kit is the perfect design for a true investment in pride.

SkyBolt RV Tool Kit - Needed for installation..... P/N 04-01990

PART NUMBER	AIRCRAFT	DESCRIPTION	PRICE
04-00399	ans R 4 - Complete Kit	Collared Slotted 33 Fasteners	.
04-00403	ans R 4 - Complete Kit	Phillips	.
04-00405	ans R 4 - Firewall Kit	Collared Slotted 15 Fasteners	.
04-00406	ans R 4 - Firewall Kit	Phillips	.
04-00407	ans R 4 - Side Kit	Collared Slotted 18 Fasteners	.
04-00408	ans R 4 - Side Kit	Phillips	.
04-00409	ans R 8 - Complete Kit	Collared Slotted 46 Fasteners	.
04-00410	ans R 8 - Complete Kit	Phillips	.
04-00411	ans R 8 - Firewall Kit	Collared Slotted 26 Fasteners	.
04-00412	ans R 8 - Firewall Kit	Phillips	.
04-00413	ans R 8 - Side Kit	Collared Slotted 20 Fasteners	.
04-00415	ans R 8 - Side Kit	Phillips	.
04-00417	ans R 6,7,910 - Complete Kit	Collard Slotted 48 Fasteners	.
04-00418	ans R 6,7,910 - Complete Kit	Phillips	.
04-00419	ans R 6,7,910 - Firewall Kit	Collard Slotted 26 Fasteners	.
04-00420	ans R 6,7,910 - Firewall Kit	Phillips	.
04-00421	ans R 6,7,910 - Side Kit	Collard Slotted 20 Fasteners	.
04-00422	ans R 6,7,910 - Side Kit	Phillips	.
04-00423	Lancair - Complete Kit	Collared Slotted 57 Fasteners	.
04-00424	Lancair - Complete Kit	Phillips	.
04-00425	Lancair - Firewall Kit	Collared Slotted 37 Fasteners	.
04-00427	Lancair - Firewall Kit	Phillips	.
04-00429	Lancair - Side Kit	Collared Slotted 20 Fasteners	.
04-00430	Lancair - Side Kit	Phillips	.

FIBERGLASS COWLINGS

All parts are aircraft quality, hand layed for uniform thickness and light weight. Items are finished with grey primer gel coat which minimizes sanding and eliminates the need for primer paint.

Note: Light sanding is required to remove mold release wax residue from surface of all fiberglass items prior to painting.



MC-1A NOSE COWL

Styled after the Piper Comanche, this cowl can be used on just about any homebuilt or powered by the Lycoming engine. It is made in two parts, allowing the easy removal of the cowl without having to remove the prop. Used on the following airplanes: Starduster I and II, Playboy, EAA Bipe, Jodel D-11, Tailwind, Tempete & the Skybolt. Measures 35" wide by 21" high. Will accommodate a spinner approx. 12" in dia.

P/N 05-01186

MC-1B NOSE COWL

Similar in shape and dimensions as the MC-1A cowl except, it is manufactured as a one piece unit for those who prefer a cleaner front end. The MC-1B is a few inches larger than the MC-1A.

P/N 05-01181

MC-2 NOSE COWL

This design can be used with most any Continental or Lycoming engine. Used on the original Smith Miniplane but has been installed on the Pitts, EAA Bipe, Playboy, Flybaby & Baby Great Lakes. Measures 35" wide by 19.5" high. Face of center opening 8-1/2" O.D.

P/N 05-01182

MC-3A NOSE COWL

Suitable for just about any Lycoming powered aircraft, this cowl comes equipped with a bump that conceals the starter motor. It is the standard Pitts Special cowl but has been installed on these aircraft: Mong, Miniplane, Playboy, Emerald, Playmate, Baby Ace, Junior Ace, EAA Bipe, Baby Great Lakes, Skyhopper and the Falconar F-11 & 12 series. Measures 35-1/2" wide and 22-1/2" high. Center opening 8-1/2" dia.

P/N 05-01183

MC-3B NOSE COWL

Same shape and size as used on the Piper PA-14. Can be used on the same aircraft as listed for the MC-3A design. For builders not wishing to use an electrical system and is seen on most Pitts Specials built for competitive aerobatics. 35" wide x 21" high. Center opening 9-1/4" dia.

P/N 05-01184

MC-10 NOSE COWL

For installation on Tailwind or Cougar. Used with 4" prop extension. Shape rounds out the boxy appearance of the standard design. Size: 35" w x 22.5" h. Has been installed on Starduster I and various Lycoming powered homebuilts. Face of center opening 11-3/4" O.D.

P/N 05-01185

MC-3C NOSE COWL

Identical to the MC-3B, but, has an opening for an oil cooler. Measures 35" wide by 21" high.

P/N 05-01186

MC-4 NOSE COWL

This nose cowl was designed for the T-18 pressure cowl system. A 4-inch prop extension is required and it is generally used with the MC-5 Bottom Cowl. Measures 36" wide by 20" high. Face of center opening 12-1/2" O.D.

P/N 05-00551

MC-7 NOSE COWL

Originally made for the Thorp T-18, this cowl has been used on several other types. The starter ring is enclosed when used with the Lycoming. Makes a nice front end on the CA-61 & CA-65. Measures 35"W by 19.5" high. Face of center opening 13-3/8" O.D.

P/N 05-01176

FLUSH LATCH

The Hartwell H-5000-2 is a unique spring-loaded, trigger action latch for cowl and access doors. Made of corrosion resistant steel. Rivet or spot weld to structure.

P/N 05-01881

Surplus H-5100-2 Latches.

P/N 05-01113



TOP VIEW BOTTOM VIEW

DZUS COWL LATCHES

These Dzus "over the center" type latches are used extensively on cowl doors and other applications on aircraft such as Cessna, Piper, Grumman, and many homebuilts. Available in 2 styles as shown.

MODEL #1



This latch provides 700 lbs. ultimate strength and 100 lbs. working strength. Pull up ability is 0.6 inch. Mounting holes will accept .156 in. diameter rivets or #6 round head screws. Material is steel, zinc plated with yellow chromate finish. Order strikes separately.

Part No.	Description Dimensions (closed)	Price Ea.
05-01187	Model 1 latch	
05-01188	Strike	
05-01189	Strike	

MODEL #2



This latch provides 220 lbs. ultimate strength and 45 lbs. working strength. Pull up ability is .2 inch. Mounting holes will accept .156 in. diameter rivets or #6 round head screws. Material is steel, zinc plated with yellow chromate finish. Order strikes separately.

Part No.	Description Dimensions (closed)	Price Ea.
05-01190	Model 2 latch	
05-04183	Strike	
05-04184	Strike	

BONANZA NOSE GEAR BRACE



These PMA approved replacements for the Nose Gear Brace are used in early Bonanzas. Most of these aircraft have severely corroded nose gear braces as a result of lightning holes that allow moisture to enter and collect in the bottom of the housing. Even dry country aircraft are found to have corrosion. This is because many of these aircraft have been repainted and paint remover has entered the housing and is reactivated when water enters the housing during aircraft washing. Applicability: Model 35 D-1 thru D6561 Model 33 CD-1 thru CD-370 Old unit (core) must be returned. FEATURES: FAA/PMA Approved direct replacement part. • One piece aluminum stronger than OEM part. • Durable corrosion resistant white powder coated finish. • Weight increase of 4.56 lbs. beneficial for aft CG aircraft. • Completely improved design eliminates potential for any corrosion. • Upper and lower bronze bushings included. • Grease fittings included.

P/N 05-02463

FIBERGLASS COMPONENTS



MC-6 NOSE CHEEKS

From the latest design of John Thorp, this is a 2 piece cowl used on the T-18. Can be adapted to most homebuilts where the builder wishes to use cheeks. They have been installed on the Midget Mustang as well as the Miniplane. Makes a fine nose section.
P/N 05-01213

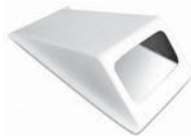
MT-1 WING TIPS

Manufactured from the original T-18 plans and come ready to slip over the ends of the wing. Nav. lights are normally installed by notching the leading edge corner of these fairings and installing Plexiglass.
P/N 05-01214



MC-5 BELLY PAN

Designed to work in conjunction with the MC4 Nose Cowl. This is the most popular combination being used today and it gives your T-18 all the compound curves and beauty it deserves. P/N 05-00025



CARBURETOR INTAKE SCOOP

Carburetor intake scoop with 4-1/4" x 8" rectangular opening.
P/N 05-22500



HEAD REST

Originally designed for the Smith Miniplane but can be used on other biplanes.
P/N 05-22100

BABY GREAT LAKES COWL



Fiberglass Cowl set fits Baby Great Lakes, Super Baby Great Lakes, and Buddy Great Lakes. Top and Bottom Cowl halves sold separately.

Dimensions:
33"x29"x9-1/2" (PN 05-02883)
33"x33"x19" (PN 05-02884)



Top Nose Cowl
P/N 05-02883.....

Bottom Nose Cowl
P/N 05-02884.....

BUDDY BABY GREAT LAKES SEAT



This fiberglass seat was designed to fit the Baby Great Lakes aircraft and is recommended by the designer.
Dimension: 26"x30"x19"
P/N 05-02885

GEL-COATED FIBERGLASS WHEEL PANTS



Keep gravel, mud, dew and grass out of your prop, off your wings and off your face with these easy-to repair fiberglass reinforced polyester wheel pants. Supplied in gel-coated finish, they have a small seam along the top edge, easily removed by sanding, if desired. Sorry, no mounting hardware is included. Easy to cut and customize. White, red

Wheel Pant Dimensions					
Size	Width	Height	Length	Opening	Weight
4"	5	9	22	4.4X12	1
5"	7	9	23	5.5X13.75	1.3
6"	8	9	28	8X15.75	11.5

Description	Part No.	Price
Wheel Pant 4" Primed	WP4P	.
Wheel Pant 4" Red	WP4R	.
Wheel Pant 4" White	WP4W	.
Wheel Pant 5" Primed	WP5P	.
Wheel Pant 5" Red	WP5R	.
Wheel Pant 5" White	WP5W	.
Wheel Pant 6" Red	WP6R	.
Wheel Pant 6" White	WP6W	.



BUCKET SEATS

For Starduster or Skybolt. Flat Gray finish, 18" wide. Can be upholstered or used plain. Contoured bottom for parachute. These are not chopped glass seats. Hand layed up for extreme lightness. Wt. 3 lbs. 10 oz.
Note: This oversized item ships in a 21 x 21 x 21 box with a dimensional weight of 48 lbs. (56 lbs internationally)
P/N 05-22600



TURTLE DECK

Fits the Acroduster or Skybolt. With flat mounting pad to accommodate a HF antenna. Approx. Height 19" at front, 13" at back. Overall length, approximately 57".
P/N 05-22200.....

HOERNER DESIGN WING TIPS

These wing tips are constructed of hand laid-up fiberglass which is extremely strong, has great impact strength, and is resistant to chemicals. The Hoerner design of these wing tips reduce the vortex that emanates from the trailing edge of the wing tip thereby reducing drag on the aircraft, leaving more energy available for lift and speed. Stall speed is decreased and lateral stability is improved. You will see increased cruise speed, more positive aileron control, increased rate of climb, decreased take-off distance, and improved appearance with these tips. All STC and approval data is furnished.



Cherokee Straight Wing Tips
PA-28 140 thru 200R models.
P/N 05-90000



Cherokee Taper Wing Tips
PA-28 151 thru 236 models
P/N 05-91000



Cessna Wing Tips
140A, 150, 170B, 172, 175, 180, 182,185,210 (pre 1974 models only)
P/N 05-94000



Comanche Wing Tips
All singles and PA-30 twins.
P/N 05-92000



Cherokee Stabilator Tips
PA-28 taper and straight wings
P/N 05-93000



Bonanza Wing Tips
35 series thru P models
P/N 05-95000

Other Products:		
DESCRIPTION	PART NO.	PRICE
Aztec & Apache Wing Tips (PA-23 all models)	05-96000	.pr
Apache Dorsal Fin (PA-23 150&160)	05-97000	.pr
Beech Wing Tips	05-00769	/pr
Piper Tailcone (PA-28 & PA-32)	05-98000	Call for Price
Piper Dorsal Fin (PA-28 & PA-32)	05-99000	Call for Price
Cherokee Taper Wing Tips C/W Replacement	05-02599	.pr
Cherokee Dorsal Fin Fwd.	05-02601	.
Cherokee Dorsal Fin Aft.	05-02602	.
Cherokee Tail Cone Upper	05-02603	.
Cherokee Tail Cone Lower	05-02604	.
Cessna Wing Tips	05-02605	.pr
Aztec/Apache Tip Tanks Hoerner Style	05-02606	/pr
Apache Windshied	05-02607	.
Seneca Wing Tips	05-02608	.
Seneca Stabilator Tips	05-02609	/pr

WHEEL FAIRINGS

All wheel fairings furnished with reinforcing bulkheads for added stability and cleanliness.



MF-1A - 5:00 X 5 fairing that is small and compact. The same shape and size as the early model Cessna 150 & measures 26" long by 7" wide. Has been used on the CA-61, Tailwind, T-18, Baby Ace, Cougar, or any homebuilt that requires this size.
P/N 05-01215 **Pair**



MF-2 - 5:00 X 5 teardrop style as used on the later model Cessna 150. Measuring 36" by 7", it has been installed on Tailwinds, Smyth Sidewinder, Cougar or any wheel this size.
Overall size: 35"L x 7-1/2"W
Opening Size: 7.5"W x 151/2"L
P/N 05-01216 **Pair**



MF-3 - 5:00 X 5 with the long, narrow profile. A standard on Pitts Specials, Acro Sport, T-18, Cassutt & Midget Mustang. Truly a universal shape.
Overall size: 39"L x 7.5"W
Opening Size: 4-3/4"W x 101/2"L
P/N 05-01217 **Pair**



MF-4 - 5:00 X 5 Thorp T-18 fairing. This style was one of our original developments specifically for the T-18 and has proven to be very popular. Like all other listed pants, it will fit any wheel this size.
Overall size: 31.5"L x 7-1/2"W
Opening Size: 14.75"W x 7"L
P/N 05-01218 **Pair**



MF-5 - 6:00 X 6 wheel fairing in the same shape as the J-3 Cub but, scaled down to fit this size wheel. Popular on the bi-planes, Spezio and the parasols. Gives a very classic look to your airplane.
Overall size: 30"L x 9-1/2"W
Opening Size: 7-1/2"W x 18-1/2"L
P/N 05-01219 **Pair**



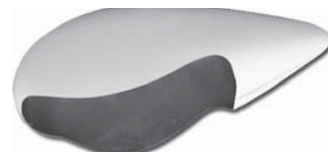
MF-6 - 6:00 X 6 fairing styled after the late model Cessna 172 and is used on just about any designed aircraft. Measure 42" by 8" and are very pretty.
Overall size: 44"L x 8-1/4"W
Opening Size: 8-1/4"W x 23-1/4"L
P/N 05-01220 **Pair**



MF-7 - 6:00 X 6. Same size and shape as the Piper Cherokee fairings. A standard on the Stardusters, Skybolt and used on many other designs.
Overall size: 37"L x 8"W
Opening Size: 13-1/2"W x 7"L
P/N 05-01221 **Pair**



MF-8 - 5:00 X 5 pant. Almost the same dimension as the MF-3 however, has more of a point on the tip. Also popular on the Pitts, Cassutt, T-18 and Midget Mustang.
Overall size: 37-1/2"L x 8"W
Opening Size: 14-3/4"W x 6"L
P/N 05-01222 **Pair**



MF-9 - 8:00 X 4. J-3 Cub design for any bi-plane or parasol using the larger size wheels.
Overall size: 29"L x 101/2"W
Opening Size: 8-1/4"W x 10"L
P/N 05-01223 **Pair**



MF-10 - 7:00 X 6. For aircraft using the larger wheels and also for the Stinson or Funk. Much lighter than the factory originals.
Overall size: 31"L x 11"W
Opening Size: 19"L x 10"W
P/N 05-01224 **Pair**



MF-11 - 6:00 X 6 wheel fairings. Same size and shape as used on the Tripacer, Pacer or Colt. More streamlined design than the MF-9. A nice installation on the Super Cub w/ 8.00 x 4 wheels.
Overall size: 43"L x 9-1/2"W
Opening Size: 9.5"W x 18.5"L
P/N 05-01225 **Pair**



MF-12 - 5:00 X 5 RACING FAIRINGS. Fits the Witt, Cassutt, Owl or any Formula One, Formula or Bi-plane using this size wheel. Race proven.
Overall size: 40"L x 7-1/2"W
Opening Size: 4.5"W x 10-3/4"L
P/N 05-01226 **Pair**

AP

WHEEL PANT COVERS



Stop tow-bar wheel pant scuffing. & Avoid costly wheel pant repainting. Available in standard black, navy or burgundy. Fits models: Cessna 172 182 206 Cherokee

- Made from heavy-duty vinyl
- Padded backing
- Attaches quickly using Velcro(tm)
- Stores easily
- Personalization available

Cover Navy P/N 05-03048
Cover Black P/N 05-03049
Cover Burgundy P/N 05-03050

PA28/PA32 REFINED SPEED PANTS



FAA approved Laminar Flow Speed Pants will add up to 10.5 mph over bare wheels and up to 8 mph over stock wheel pants for all Piper PA-28 and PA-32 aircraft models. A special pressure recovery design improves rate of climb with most installations.

At 10 pounds, these second generation Speed Pants are lighter and up to 5 times stronger than conventional Piper wheel pants. They are made of three layers of hand-laid, 10 ounce fiberglass which is oven cured with a high strength resin. Additional layers of cloth are applied to stress areas. A removable panel allows easy access to brakes. Wing to wheel fairing improve the aesthetics of the main gear.

P/N 05-03627

CESSNA PARTS

(FAA/PMA APPROVED)



CESSNA COWL FLAP RIGHT AND LEFT

These cowl flaps feature a replaceable stainless steel hinge that may be removed and replaced using screws. The specific model applicability for these cowl flaps are the C-180C, D, E, F, G, H, J and 180K the 182B, C and D 185, 185A, B,C,D, 185E, A185E and A185F. FAA Approved.
Left..... P/N 05-03393
Right..... P/N 05-03394



HORIZONTAL STABILIZER ADJUSTING SCREW AND BARREL FOR C-180, 185 AND C-182 THRU C-182D

Screw..... P/N 05-07000
Barrel..... P/N 05-07005



HORIZONTAL STABILIZER ADJUSTING CAM

Cam..... P/N 05-07010



STABILIZER TRIM SCREW BOOT

FOR C-180, C-185, AND C-182 THRU C-182D

Boot..... P/N 05-07015



CESSNA 120/140 FUEL VALVE KIT

This valve has a very smooth action with positive detents. Like the original valve, it has positions for left-on, right-on and both-off. Unlike the original, it is not prone to sticking or binding. It does not require periodic seal replacement or lubrication. This PMA replacement valve will mount almost identically to the original OEM valve. It uses the same tank selector plate and the same mounting hardware as the original. This valve is sold in a kit that includes the handle and installation instructions. The handle has no "pointer." This is in compliance with AD47-43-02..... P/N 05-03407



C-120, C-140 LIFT STRUT ROD ENDS

Front Rod End..... P/N 05-07020
Rear Rod End..... P/N 05-07025



C-172 OIL DOOR

Applicable on the following models:
(172, 172A, B, C, D, E, F, G, H, I, J, K, L, M, N, P, Q)
P/N 05-07030



C-180, 182, & 185 SERIES COWL OIL DOOR

Applicable on the following models: For 180—180G,
182—182G & 185—185C
P/N 05-07035



CESSNA AILERON HINGE

For all C-150, 152, 170A, 170B, 172, 180,
182 & 185 P/N 05-07040



CESSNA STYLE TAIL SKID

This easy-to-install tail skid is designed to save the tail feathers on most single engine Cessna's. Made from 4130 aircraft steel, this tail skid fits Cessna 150, 152, 172, 177, and 182.
P/N 13-17010



EXHAUST CUFF FOR CESSNA 206, 210 AND 340

The problem * The exhaust pipe creates parasitic drag within the slip stream * Non-laminar flow conditions occur at the opening of the cowl * Aircraft esthetics are affected by the protrusion of the pipe. The exhaust cuff solution eliminates non-laminar airflow about the exhaust port * Reduces cylinder head temperatures * Cruise performance increased * Enhances the esthetics of the aircraft
Cessna Exhaust Cuff 206 & 210 P/N 05-04474
Cessna Exhaust Cuff 340..... P/N 05-04475

C-170 TAILWHEEL SPRINGS



Tailwheel Spring Assembly..... P/N 06-15000
Main Leaf Only..... P/N 06-15100

C-120/140 TAILWHEEL SPRING SETS (LATER CESSNA SPRING SET SHOWN)



Early 120-140 (single bend, originally on SN 8001-14026)
P/N 05-07055
120-140 (SN 14027 and up) P/N 06-14800
120-140 main leaf only (SN 8001-14026) P/N 05-07065
120-140 main leaf only (SN 14072 & up) P/N 06-14900



RUDDER BELLCRANK FOR C-120, 140 & 170

P/N 05-07075



WING FABRIC CLIP FOR C-120/140/170

P/N 09-19900



RUDDER & ELEVATOR SKINS FOR C-180/185, & 182-182D / FAA-PMA

ELEVATOR KIT:
Top/Bottom Right & Left P/N
P/N 05-02673
RUDDER (for all C-180, 185, 182-182B):
Right hand..... P/N 05-07090
Left hand..... P/N 05-07095



ALL METAL COWLING PARTS FOR 120-140

1946 Cowling Items
Lower Cowl Skin, Left P/N 05-07165
Lower Cowl Skin, Right P/N 05-07170
Nose Cowl Only P/N 05-07175



C-120/140 COWL GRILLS

Left Hand Cowl Grill
P/N 05-07180
Right Hand Cowl Grill
P/N 05-07185

Also approved for 170, 170A and 170B through S/N 25372



C-120/140 ENGINE MOUNT ASSEMBLY

120-140..... P/N 05-07190
140A..... P/N 05-07195



FLAP TRACK WEAR GAGE

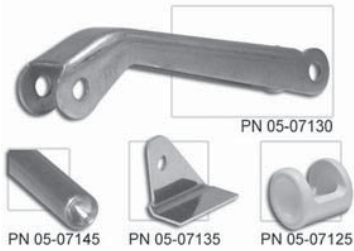
McFarlane Aviation Products has developed a new tool to determine Flap track wear. McFarlane developed this tool to positively indicate when the flap track is worn beyond service limits. Flap Track Wear Gage Use to determine if a Cessna flap track is worn beyond service limits. Flap Track Wear Gage Instructions: Run the gage plug along each slot in each flap track while verifying that the gage will not enter the slot. Reposition the flaps as required to gage the entire length of each slot. If the gage enters a slot at any point the track is worn beyond service limits. The diameter of the gage is .6035 inches (diameter tolerance +.000/-0.002) Periodically verify the gage diameter by measuring the gage diameter with a calibrated micrometer.
P/N 05-02145

AP

CESSNA PARTS

(FAA/PMA APPROVED)

LEVER TYPE WINDOW LATCHES & COMPONENT PARTS



Latch Assembly Applicable on:
120, 140, 140A, 170, 170A,
170B, (SN 20267 thru 25372)
P/N 05-07100

Latch Assembly Applicable on:
170B (SN 25373 & on),
172, 175, 180 & 182
P/N 05-07105

COMPONENT PARTS

Arm (for -2 assy.)(U0413362-8)	P/N 05-07110
Arm (for -3 assy.)(U0413362-9)	P/N 05-07115
Bracket (U0413362-13)	P/N 05-07120
Knob (U0413359)	P/N 05-07125
Extension Arm (U0413362-12)	P/N 05-07130
Angle (left side)(U0413362-10)	P/N 05-07135
Angle (right side)(U0413362-11)	P/N 05-07140
Pin (U0413362-14)	P/N 05-07145
Pin (U0413362-16)	P/N 05-07150
Pin (U0413362-15)	P/N 05-07155
Spacer (U0413362-7)	P/N 05-07160
Washer (2 req'd)	P/N AN960-10
Washer (2 req'd)	P/N AN960-10L
Screw	P/N THA4-6

AP

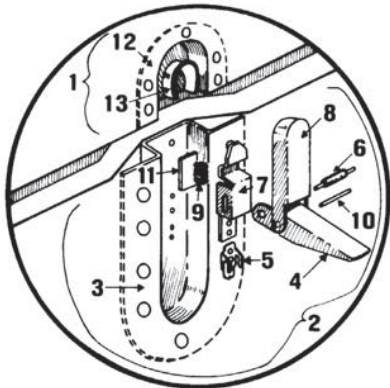
CABIN ENTRY STEP FOR CESSNA AIRCRAFT



Cabin Entry Step for Cessna Aircraft.
Applicable to:

170, 170A, B - 18000 thru 27169	
180, 180A, B, C, D, E, F - 30000 thru 18051312	
185, 185A, B, C, D, E, A185E* - 1850001 thru 1851300	
* Partial model eligibility	
aLeft Cabin Access	P/N 05-04176
Right Cabin Access	P/N 05-04177

COWL LATCHES AND DETAILS FOR 120-140 AND 170 SERIES



HOOK & LEVER ASSEMBLIES

1) Hook Assembly	P/N 05-07200
2) Lever Assembly	P/N 05-07205

DETAIL PARTS

3) Recess	P/N 05-07210
4) Lever	P/N 05-07215
5) Clip	P/N 05-07220
6) Pin	P/N 05-07225
7) Housing	P/N 05-07230
8) Hook	P/N 05-07235
9) Spring	P/N 05-07240
10) Pin	P/N 05-07245
11) Shim	P/N 05-07250
12) Recess	P/N 05-07255
13) Hook	P/N 05-07260

AILERON HINGE FOR CESSNA



FAA - PMA APPROVED AS0523816-1
P/N 05-00048

150 SPINNER ASS'Y (THROUGH CESSNA 150 MODEL K ONLY)



PN 05-09030

Spinner Dome P/N 05-09030	
Front Plate (original Cessna)	P/N 05-09035
Rear Plate	P/N 05-09040
170B & 172 1956 thru 1959 SPINNER ASS'Y.	
Spinner Bulkhead	P/N 05-07265
Spinner Dome	P/N 05-07270
Spinner Assembly ...	P/N 05-07275
172 SPINNER (Early Models)	
Spinner Dome (all aluminum to replace plastic)	P/N 05-09045
Front Plate	P/N 05-09050
Rear Plate	P/N 05-09055
172 spinner (Late Models) (For 172, I, K, L, M, N, P, & Q)	
Dome** (FAA/PMA)	P/N 05-07280
Front Plate* (FAA/PMA)	P/N 05-07285
Back Plate* (original Cessna part)	P/N 05-07290

*Check SN for applicability **Dome also approved on 172G & H

CESSNA 182 ALUMINUM SPINNERS

These aluminum spinners and spinner support spacers are FAA approved for installation on several models of Cessna 182 series aircraft using McCauley two blade constant speed propellers. The Spinner Dome replaces original Cessna p/n 0752637K200, 0752637-5 and 0752637-11. The Spinner Spacer replaces original Cessna p/n 0752620-1 and 0752620-3. The Spinner Dome is approved on the Cessna 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q and the 182R. The Spinner Support Spacer is approved on Cessna Models 180H, 180J, 180K, A185E, A185F, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, 210-5 (205), 210-5A (205A), 206, U206, P206 and the U206A.

Spinner Dome U0752637K200	05-01901
Spinner Sport Spacer U0752620-3	05-01902

CESSNA TRIM CONTROL CHAINS

We carry FAA-PMA approved replacement trim control chains for Cessna 120 through 210 series aircraft. Call the Cessna/Piper parts specialist at Aircraft Spruce (1-877-4-SPRUCE) for assistance in determining the correct chain for your aircraft.

Model No.	Part No.	Price Ea.
ASS2294-25	05-00289	
ASS2295-25-185	05-00291	
ASS2295-25-249	05-00292	
ASS2295-25-321	05-00293	
ASS2295-25-43	05-00294	
ASS2295-25-47	05-00295	
ASS2295-25-61	05-00296	
ASS2295-25-63	05-00297	
ASS2295-25-67	05-00298	
ASS2295-25-70	05-00299	
ASS2295-25-71	05-00301	
ASS2295A25-111	05-00302	
ASS2295P25-113	05-00303	
ASS2295P25-155	05-00304	
ASS2295P25-159	05-00305	
ASS2295P25-185	05-00306	
ASS2295P25-321	05-00307	
ASS2295P25-47	05-00308	
ASS2295P25-55	05-00309	
ASS2295P25-59	05-00311	
ASS2295P25-63	05-00312	
AS2295P25-67	05-00313	
ASS2295P25-69	05-00314	
ASS2295P25-71	05-00315	
AS0432138-2	05-00316	

CESSNA WHEEL PANT MOUNTING PLATES

These FAA-PMA approved mounting plates are anodized for improved corrosion resistance and will save over \$100 compared to factory mounting plates. Approved with partial eligibility for the Cessna 150, 152, and 172. Verify approval for your aircraft with Aircraft Spruce prior to ordering.

Cessna P/N	Our P/N	Price Each
0441225-1 (Left)	05-01497	
0441225-2 (Right)	05-01498	
0441220-1 (Left)	05-01499	
0441220-2 (Right)	05-01501	

CESSNA PARTS

Aircraft Spruce and Specialty stocks a large inventory of Cessna replacement parts. Some of the most commonly required parts are listed on this page. If you require Cessna parts not listed here, please provide us with the Cessna part numbers and we will provide you with a prompt quotation. All of the parts listed here are authentic Cessna factory parts and all carry our low price guarantee. Please verify that the parts are correct for your Cessna model/year by referring to the applicable Cessna parts manual prior to ordering.

Call for Prices on Unlisted Cessna Parts

Part No.	Description	Price	Part No.	Description	Price	Part No.	Description	Price
S1258-1	Sump		0713348-1	Stall Horn		0556010-200	Adapter Assy.	
SK172-1F	Strut Kit		S2488-1	Stall Horn Reed		1232040-5	Boot	
S1093-1	Flap Buttons		0756009-8	Gasket		79C1	Drain Valve	
NAS75-3-009	Bushing		0851559-1	Washer		S2485-1	Drain Valve	
NAS77-3-23	Bushing		0756010-6	Plunger		S1577A1	Contacto	
NAS77-8-88	Bushing		0756011-1	Standpipe		S1579A2	Contacto	
MS25171-1	Nipple		S1450-6B14-010	Washer		S1580A1	Contacto	
MS25171-2	Nipple		S1597-1-37.5	Belt V		S1588-1	Gasket	
C156003-0101	Fuel Cap		B3-5-1	Filter Vac		S1588-2	Gasket	
C592001-0201	Static Wick		S1921-1	Clamp		0750143-2	Deflector	
B100142-1	Fuel Cap Gasket		U10C062-262M	Clamp		0750143-3	Bracket	
S1991A1	Contacto		B40012	Brush		0851559-2	Washer	
S2020-2	Drain Valve		A2748	Seal	---	S1915-1	Capacitor	
S2106-2	Drain Valve		A2749	Seal Wiper		S1915-2	Capacitor	
S2160-1	Switch		MS25253-1	Switch		S1994-1-1	Switch	
S2237-3	Seat Belt Bushing		1234665-10	Tab		S2334-3	CHT Probe	
S2416-1-31.0	Alt Belt		S1906-1	Switch		S1258-1	Sump	
0400213-6	Compass Placards		S1906-2	Switch		S3010-1	Switch	
0413613-1-279	Panel Nut		S1230-17	Control		S1104-3	Rod End	
0511242-1	Seat Stop		S1230-19	Control		S1105-4	Rod End	
1220114-1	Spacer		RD0015H1600JBL	Rheostat		C592001-0201	Wick	
1243030-5	Shim		0441139-6	Shim		C592001-0203	Wick	
1243030-6	Shim		0541111-2	Shim		S1704-1	Roller	
1243030-7	Shim		0441157-2	Shim		1714000-22	Washer	
1250860-29201	Clamp		0441157-1	Shim		16165	Wick	
1298119-4	Exhaust Spring		1250405-1	Nut		KM610-64	Latch	
1414104-54	Bushing		MS29513-338	O-Ring		B3-11-1	Gasket	
1513174-3	Grey Panel Nut		AN6235-2A	Filter Hyd		S1477-3	Nut	
1513174-5	Black Panel Nut		AN6235-3A	Element		S1477-08	Nut Clip	
1555014-2	Clamp Half		1250922-200	Adapter		NH1000897-30	Clamp	
0523919	Bushing		1250922-201	Adapter		NH1000897-40	Clamp	
0523920	Roller		1250922-202	Adapter	---	NH1000897-50	Clamp	
0523921	Roller		0750142-1	Gasket		NH1000897-60	Coupling	
0541139	Plug		0756009-1	Fuel Filter		DGR3	ACU	
9910306-1	Westgate Gasket		0741623-4	Tread		DGR6	Regulator	
0711001-59	Hinge Pin		0441157-3	Shim				

AP

CESSNA COWLING MOUNTS - FIREWALL



The Skybolt SK2003 is the FAA TSO-C148 approved direct replacement for the common CESSNA /LORD J7444 firewall platemounts.

SK2003 -14 Southco™ Fasteners • SK2003-24 Camloc™ or CLoc™ 2000 Series Fasteners • SK2003-36

Camloc™ or CLoc™ 4000 Series Fasteners

The newly improved SK2003 offers greater flex for cowlings with cumbersome alignment issues. Combined with the SK2003-AW alignment washer, the SK2003 can be easily positioned to align with the existing cowlings holes. This allows the cowlings fasteners to lock properly and effortlessly, removing the stress that is a common problem in original part failures. Fasteners not included.

Orig. Mfg. Part No.	New Part No.	Aircraft	Part No.	Price
J7444-14	SK2003-14	67-On C150, 67-86 C172, 71-78 C177	08-00663	
J7444-24	SK2003-24	73-86 C182	08-00664	
J7444-36or-42	SK2003-14	96-On C172	08-00665	

15% discount on 10 or more

CONVERT OLDER SOUTHCO COWLINGS TO HEAVY DUTY SKYLOC SK40S5 FASTENERS

Now easier than ever to install. No drilling of airframe required. All kits utilize new SK2003 cushioned shock mounts complete instructions with photographs. All paperwork included for logbook entry.

Aircraft	Kit	Convert all fasteners to:	Part No.	Price
C150 (67-On)	SK203C150P4	Firewall to SK40S5 Stainless / Sides to SK26S51 Stainless	08-00666	
C172 (67-81)	SK203C172P4	Firewall to SK40S5 Stainless / Sides to SK40S5 Stainless	08-00667	
C172 (82-86)	SK203C172PQ4	Firewall to SK40S5 Stainless / Sides to SK40S5 Stainless	08-00671	
C177 (All)	SK203C177P4	Firewall to SK40S5 Stainless / Sides to SK40S5 Stainless	08-00668	
C182 (73-86)	SK203C182P4	Firewall to SK40S5 Stainless / Sides-replace 40S5 with SK40S5 Stainless	08-00669	

Partial Kit list – Call for early screw cowlings conversion kit and non-listed aircraft. Special tooling required – #4P3/T26 tool set

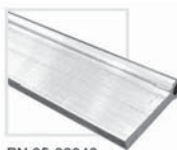
Note: In addition to normal hand tools, Unibit 1 and Unibit 3 stepdrills required.

ALIGNMENT CAM WASHER SK2003-AW - Now easier than ever to align cowlings and fasteners. For all SK2003/J7444 (2 required per mount)
P/N 08-00670.....



INTER-CYLINDER BAFFLE

Intercylinder Baffles for Teledyne Six Cylinder Engines. Replaces Cessna Part Number 0750135-1 and 0851833-1
P/N 05-02362



FLAP TRAILING EDGE BULB

Improved fit and appearance. Form fitting, Trailing Edge Bulb for Cessna Flaps. (Cut on bevel to avoid crimping Flap Trailing Edge.) STC/PMA Approved. For application please call or visit our website.
79.5" length..... P/N 05-00046.....
116" length..... P/N 05-00047.....

PN 05-00046

MC600 SERIES UNIVERSAL SOLID WIRE VERNIER MIXTURE CONTROL



FAA-PMA approved for use as a minor alteration part on the following aircraft:

- Cessna • Raytheon • Maule
- Cessna/Reims • Mooney • Univair (Stinson)
- Piper
- Easily field approved for other applications

- Trim to exact length P/N 05-01254



THROTTLE CONTROL

Fittings and components are made from anodized aluminum, stainless steel, and brass. All critical swage connections are metal to metal for continued dependability. Vernier locking devices are precision formed and heat treated in critical wear areas. P/N 05-02209.....

CESSNA CONTROLS



FAA-PMA APPROVED CONTROLS FOR CESSNAS THROTTLES – PROP – MIXTURE – COWL FLAP

Throttle, Propeller, Mixture, and Cowl Flap controls are available for most Cessna single engine aircraft from the Cessna 120 through the 210 series. These FAA-PMA controls are ultra-smooth, flexible with no stretch, arctic tested to -50°F, and tested to 250,000 cycles. They feature brass body assembly, teflon lined conduit, stainless steel ends, viton dust boots, aluminum friction lock, and a high quality phenolic knob (throttle, mixture, and prop).

See pages 154-157 for ACS Controls at substantial savings (Not FAA approved.)

Propeller Controls				
Model	Serial Number	P/N	Our P/N	Price
177B*	17701371 thru 17702539	C299506-0105	05-00177	
177RG*	177RG0001 thru 177RG1051	C299506-0105	05-00177	
F177RG*	F177RG0001 thru F177RG0160	C299506-0105	05-00177	
180A,B,C,D,E,F,G	30000 thru 18051445	S1223-4	05-00209	
180H*, J	18051876 thru 18052770	C299506-0103	05-00268	
182,A,B,C,D	33000 thru 18253598	S1223-4	05-00209	
182E,F,G	18253599 thru 18255844	S1223-3	05-00208	
182H,J,K	18255845 thru 18258505	S1223-6	05-00211	
182L,M,N,P	18258506 thru 18265175	C299506-0102	05-00267	
FR182P	F18200001 thru F18200025	C299506-0102	05-00267	
182Q,R	18265176 thru 18268615	9862067-3	05-01734	
A185E*	185-1301 thru 18502007	C299506-0103	05-00268	
A185E*	18502026 and 18502027	C299506-0103	05-00268	
A185E*,F	18502008 thru 18502025	C299506-0201	05-00178	
A185E*,F	18502028 thru 18503153	C299506-0201	05-00178	
A188B*	18800833 thru 18802745	S2149-2	05-00228	
A188B*	18802746 thru 18803856	C299508-0302	05-00187	
T188C	T18803297T thru T18803422T	C299508-0304	05-00191	
U206, U206A,B	U206-0276 thru U206-0914	S1223-4	05-00209	
TU206A,B	U206-0276 thru U206-0914	S1223-4	05-00209	
P206, P206A,B	P2060001 thru P2060419	S1223-4	05-00209	
U206C,D,E,F	U2060915 thru U20603521	C299506-0101	05-00266	
TU206C,D,E,F	U2060915 thru U20603521	C299506-0101	05-00266	
P206C,D,E	P206-0420 thru P20600647	C299506-0101	05-00266	
U206G, TU206G	U20603522 thru U20607020	9862067-1	05-00241	
207A, T207A	20700363 thru 20700788	9862067-12	05-00242	
210E,F,G	21058511 thru 21058936	S1223-4	05-00209	
T210F,G	T2100001 thru T2100307	S1223-4	05-00209	
210H,J,K,L	21058937 thru 21061573	C299506-0101	05-00266	
T210H,J,K,L	T2100308 thru T2100454	C299506-0101	05-00266	
210M,N,T210M,N	21061574 thru 21064897	9862067-1	05-00241	
P210N	P21000001 thru P21000834	9862067-1	05-00241	

*Denotes partial model eligibility

Mixture Controls				
Model	Serial Number	P/N	Our P/N	Price
R172E,F,G,H,J,K	R1722000 thru R1723454	9862066-6	05-00239	
185A,B,C,D,E	185-0238 thru 185-1599	C299507-0201	05-00181	
A185E,F*	18501600 thru 18502007	C299507-0201	05-00181	
A185E,F*	18502026 and 18502027	C299507-0201	05-00181	
A185F*	18502008 thru 18502025	C299507-0401	05-00183	
A185F*	18502028 thru 18503153	C299507-0401	05-00183	
188,188A	1880001 thru 1880572	S1220-13	05-00195	
A188	18800573 thru 18800832	S1220-13	05-00195	
188B, A188B*	1880833 thru 18802745	C299507-0301	05-00182	
A188B*	18802746 thru 18803856	C299508-0401	05-00189	
T188C	T18803297T thru T18803422T	C299508-0402	05-00191	
205, 205A	205-0001 thru 205-0577	S1220-3	05-00196	
206	206-0001 thru 206-0275	S1220-3	05-00196	
U206, U206A,B	U206-0276 thru U206-0914	S1220-3	05-00196	
P206, P206A,B	P206-0001 thru P206-0419	S1220-3	05-00196	
U206C,D,E,F	U206-0915 thru U20603521	C299507-0101	05-00179	
TU206C,D,E,F	U206-0915 thru U20603521	C299507-0101	05-00179	
P206C,D,E	P206-0420 thru P20600647	C299507-0101	05-00179	
U206G, TU206G	U20603522 thru U20607020	9862066-1	05-00237	
207, T207	20700001 thru 20700362	S1220-12A	05-00194	
207A, T207A	20700363 thru 20700788	9862066-5	05-00238	
210B,C,D,E,F,G	21057841 thru 21058936	S1220-3	05-00196	
T210F,G	T210-0001 thru T210-0307	S1220-3	05-00196	
210K,L, T210K,L	21059200 thru 21061573	C299507-0101	05-00179	
210M,N, T210M,N	21061574 thru 21064897	9862066-1	05-00239	
P210N	P21000001 thru P21000834	9862066-1	05-00239	
182S	18280001 - 18280944	C565-548-042	05-00994	
182T	18280945 - On	C565-548-042	05-00994	

CESSNAS COWL FLAP CONTROLS

Model	Serial Number	Location	P/N	Our P/N	Price	Location	P/N	Our P/N	Price
R172K	R1722000 thru R1723454	1 per A/C	S1391-26	05-00222		----	-----	----	-----
FR172K	FR17200591 thru FR17200675	1 per A/C	S1391-26	05-00222		----	-----	----	-----
177B	17701371 thru 17702752	Left	S1391-25	05-00221		Right	S1391-26	05-00221	
177RG	177RG0001 thru 177RG1366	Left	S1391-27	05-00223		Right	S1391-27	05-00223	
180D,E	18050912 thru 18051183	Left	S1245-1	05-00217		Right	S1245-1	05-00217	
180F	18051184 thru 18051312	Left	S1245-1	05-00217		Right	S1245-2	05-00218	
180G	18051313 thru 18051445	Left	S1245-3	05-00219		Right	S1245-2	05-00218	
180H,J	18051446 thru 18052770	Left	S1572-1	----	----	Right	S1245-2	05-00218	
180K	18052771 thru 18053203	Left	9860074-3	05-00232		Right	9860074-4	05-00233	
182D	18253008 thru 18253598	Left	S1245-1	05-00217		Right	S1245-1	05-00217	
182E,F,G,H,J,K,L,M,N,P,Q,R	18253599 thru 18268615	Left	9860058-3	05-00229		Right	9860058-4	05-00231	
T182	18267716 thru 18268541	Left	9860075-3	05-00234		Right	9860075-4	05-00235	
R182/TR182	R18200002 thru R18202041	Left	9860075-3	05-00234		Right	9860075-4	05-00235	
182S, 182T	18280001 and On	Left	580-703-024	05-01736		Right	580-703-025	05-01737	
T182T	T18208001 and On	Left	580-703-024	05-01736		Right	580-703-025	05-01737	
185, 185A,B,C	185-0001 thru 185-0776	Left	S1245-3	05-00219		Right	S1245-2	05-00218	
185D,E, A185E, A185F*	185-0777 thru 18503153	Left	S1572-1	----	----	Right	S1245-2	05-00218	
A185F*	185603154 thru 18504448	Left	9860074-3	05-00232		Right	9860074-4	05-00233	
205, 205A	205-0001 thru 205-0577	Left	S1244-5	05-00216		Right	S1244-31	05-00214	
206, U206	206-0001 thru 206-0275	Left	S1244-5	05-00216		Right	S1244-31	05-00214	
U206A,B,C,D,E,F*	U206-0276 thru U20602199	Left	S1244-5	05-00216		Right	S1244-31	05-00214	
P206, P206A,B,C,D,E	P206-0001 thru P20600647	Left	S1244-5	05-00216		Right	S1244-31	05-00214	
TP206A*	P206-0161 thru P206-0274	Left	S1244-5	05-00216		Right	S1244-31	05-00214	
TU206A*	U206-0438 thru U206-0617	Left	S1244-5	05-00216		Right	S1244-31	05-00214	
TP206A*,B,C,D,E	P206-0275 thru P20600647	Left	S1244-32	05-00215		Right	S1244-31	05-00214	
TU206A*,B,C,D,E,F,G	U206-0618 thru U20607020	Left	S1244-32	05-00215		Right	S1244-31	05-00214	
U206F*,G	U20602200 thru U20607020	Left	S1244-32	05-00215		Right	S1244-31	05-00214	
206H	20608001 and On	Left	580-703-026	05-01738		Right	580-703-027	05-01739	
T206H	T20608001 and On	Left	580-703-026	05-01738		Right	580-703-027	05-01739	
207, 207A, T207, T207A	20700001 thru 20700788	Left	S1244-29	05-00212		Right	S1244-30	05-00213	
210, 210A	57001 thru 21057840	Left	1213040-1	05-00224		Right	1213040-2	05-00225	
210B,C,D,E,F,G,H,J,K*	21057841 thru 21059240	Left	S1244-5	05-00216		Right	S1244-31	05-00214	
T210F	T210-0001 thru T210-0197	Left	S1244-5	05-00216		Right	S1244-31	05-00214	
210K*,L,M,N	21059241 thru 21064897	Left	S1244-32	05-00215		Right	S1244-31	05-00214	
T210G,H,J,K,L,M,N	T210-0198 thru 21064897	Left	S1244-32	05-00215		Right	S1244-31	05-00214	
P210N*	P21000001 thru P21000834	Left	S1244-32	05-00215		Right	S1244-31	05-00214	

*Denotes partial model eligibility

FLAP SKINS – AILERON SKINS

UPPER RIGHT-HAND AND LEFT-HAND FLAP AILERON



- * Better and costs less!
- * No pre-drilled holes to misalign
- * Precisely formed and trimmed
- * Plastic coated on both sides for better protection during handling (remove before installation)
- * Direct replacement - No STC required

FLAP SKIN KIT COMPONENTS

Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-FLP1	Flap skin kit	05-04164	.
1 ea	MC0426901-10	Flap Upper RH	05-03371	.
1 ea	MC0426901-11	Flap Upper LH	05-03372	.
1 ea	MC0426901-6	Flap Lower LH	05-03369	.
1 ea	MC0426901-7	Flap Lower RH	05-03370	.

Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-FLP2	Flap skin kit	05-04169	.
1 ea	MC0523901-4	Flap Upper LH	05-04113	.
1 ea	MC0523901-5	Flap Upper RH	05-04114	.
1 ea	MC0523901-6	Flap Lower LH	05-04115	.
1 ea	MC0523901-7	Flap Lower RH	05-04116	.

Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-FLP3	Flap skin kit	05-04170	.
2 ea	MC0523901-201	Flap Upper LH RH	05-04125	.
1 ea	MC0523901-6	Flap Upper LH	05-04115	.
1 ea	MC0523901-7	Flap Lower RH	05-04116	.

Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-FLP4	Flap skin kit	05-04171	.
1 ea	MC0523901-21	Flap Upper LH	05-04119	.
1 ea	MC0523901-22	Flap Upper RH	05-04120	.
1 ea	MC0523901-19	Flap Lower LH	05-04117	.
1 ea	MC0523901-20	Flap Lower RH	05-04118	.

Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-FLP5	Flap skin kit	05-04172	.
1 ea	MC0523901-25	Flap Upper LH	05-04121	.
1 ea	MC0523901-26	Flap Upper RH	05-04122	.
1 ea	MC0523901-27	Flap Lower LH	05-04123	.
1 ea	MC0523901-28	Flap Lower RH	05-04124	.

Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-FLP6	Flap skin kit	05-04173	.
1 ea	MC0523901-25	Flap Upper Inbd LH	05-04121	.
1 ea	MC1220100-20	Flap Upper Inbd RH	05-04135	.
1 ea	MC1220100-5	Flap Upper Otbd LH	05-04132	.
1 ea	MC1220100-6	Flap Upper Otbd RH	05-04133	.
1 ea	MC1220100-27	Flap Lower Inbd LH	05-04123	.
1 ea	MC1220100-18	Flap Lower Otbd RH	05-04134	.
1 ea	MC1220100-3	Flap Lower Otbd LH	05-04130	.
1 ea	MC1220100-4	Flap Lower Otbd RH	05-04131	.

Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-FLP7	Flap skin kit	05-04173	.
1 ea	MC0523901-25	Flap Upper Inbd LH	05-04121	.
1 ea	MC1220100-26	Flap Upper Inbd RH	05-04122	.
1 ea	MC1220100-5	Flap Upper Otbd LH	05-04132	.
1 ea	MC1220100-6	Flap Upper Otbd RH	05-04133	.
1 ea	MC1220100-27	Flap Lower Inbd LH	05-04123	.
1 ea	MC1220100-28	Flap Lower Inbd RH	05-04124	.

FLAP SKIN KIT COMPONENTS CONT.

Qty	MFG P/N	Description	P/N	Price
1 ea	MC1220100-3	Flap Lower Otbd LH	05-04130	.
1 ea	MC1220100-4	Flap Lower Otbd RH	05-04131	.

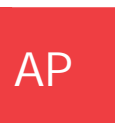
Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-FLP8	Flap skin kit	05-04175	.
1 ea	MC1220100-33	Flap Upper Inbd LH	05-04133	.
1 ea	MC1220100-34	Flap Upper Inbd RH	05-04134	.
1 ea	MC1220100-5	Flap Upper Otbd LH	05-04132	.
1 ea	MC1220100-6	Flap Upper Otbd RH	05-04133	.
1 ea	MC1220100-35	Flap Lower Inbd LH	05-04138	.
1 ea	MC1220100-36	Flap Lower Inbd RH	05-04139	.
1 ea	MC1220100-3	Flap Lower Otbd LH	05-04130	.
1 ea	MC1220100-4	Flap Lower Otbd RH	05-04131	.

AILERON SKIN KIT COMPONENTS

Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-AIL1	Skin Kit	05-04140	.
1 ea	MC0523800-6	Aileron Upper Inbd LH	05-03373	.
1 ea	MC0523800-7	Aileron Upper Inbd RH	05-03374	.
1 ea	MC0523800-8	Aileron Upper Otbd LH	05-03375	.
1 ea	MC0523800-9	Aileron Upper Otbd RH	05-03376	.
1 ea	MC0523800-10	Aileron Lower Inbd LH	05-03377	.
1 ea	MC0523800-11	Aileron Lower Inbd RH	05-03378	.
1 ea	MC0523800-12	Aileron Lower Otbd LH	05-03379	.
1 ea	MC0523800-13	Aileron Lower Otbd RH	05-03380	.

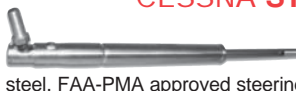
Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-AIL2	Skin Kit	05-04141	.
1 ea	MC1624001-5	Aileron Upper Inbd LH	05-04145	.
1 ea	MC1624001-6	Aileron Upper Inbd RH	05-04146	.
1 ea	MC1624001-9	Aileron Upper Otbd LH	05-04149	.
1 ea	MC1624001-10	Aileron Upper Otbd RH	05-04150	.
1 ea	MC1624001-3	Aileron Lower Inbd LH	05-04143	.
1 ea	MC1624001-4	Aileron Lower Inbd RH	05-04144	.
1 ea	MC1624001-7	Aileron Lower Otbd LH	05-04147	.
1 ea	MC1624001-8	Aileron Lower Otbd R	05-04148	.

Qty	MFG P/N	Description	P/N	Price
KIT	SKN-KT-AIL3	Skin Kit	05-04142	.
1 ea	MC1220085-11	Aileron Upper LH	05-04126	.
1 ea	MC1220085-12	Aileron Upper RH	05-04127	.
1 ea	MC1220085-13	Aileron Upper LH	05-04128	.
1 ea	MC1220085-14	Aileron Upper RH	05-04129	.



REPLACEMENT CESSNA PARTS

CESSNA STEERING RODS



These Cessna Steering Rods are better than the originals. Replace old, weak steering rods with these stainless steel, FAA-PMA approved steering rods and save up to \$100 each.

Cessna Series	Serial Number	Part Number	Replaces Cessna P/N	Price Each
150	ALL	05-00273	0543022-3; L	
152	ALL	05-00274	0543022-4; R	
172,172A	28000 to 17247746	05-00275	0543022-1; L	
		05-00276	0543022-2; R	
172B,C	17247747 to 17249544	05-00589	0743008-1; L	
		05-00590	0743008-2; R	
172D, E, F, G, H, I, K, L, M, R172K	17247747 to 17249544 R1722000 to R1723454	05-00275	0543022-1; L	
F172D, E, F, G, H, K, L, M, N, P FP172 ER172E, F, G, H, J, K	F1720001 to F17202254 FP1720001 to FP1720003 FR1720001 to FP17200675	05-00276	0543022-2; R	
175,175A/B/C	55001 to 17557119	05-00589	0743008-1; L	
		05-00590	0743008-2; R	
182,182A/B/C/D	33000 to 53007 18253008 to 18253598	05-00589	0743008-1; L	
		05-00590	0743008-2; R	

NOSE GEAR TORQUE LINK REPAIR KIT FOR CESSNA AIRCRAFT



This convenient kit includes all commonly replaced torque link parts. * FAA approved and certified standard hardware * Fits most single engine Cessna aircraft Please visit our website for kit components. P/N 05-04427

CESSNA STEERING ROD BOOTS



Keep the exhaust and cold out of the cabin with these Kevlar/Fiberglass FAA/PMA approved Steering Rod Boots. These will last much longer & are less expensive than original Cessna boots.

FAA/PMA approved Steering Rod Boot application chart for Cessna Model Series 150, 152, 172, 175, and 182 Aircraft.

Model	Serial No.	Part No.	Price/
150 150A,B,C,D,E, F,G,H,I,K,L,M A150K, L, M F150F,G,H,I,K,L,M FA150K, L FRA150L,M	17001 - 59018 15059019 - 15079405 A1500001 - A1500734 F1500001 - F15001428 FA1500001 - F1500120 FRA1500121 - FRA1500336	05-00277	
152 A152 F152 EA152	15279406 - 15286033 A1520735 - A1521049 F15201429 - F15201980 FA1520337 - FA1520425	05-00277	
172 172A,B,C,D,E,F, G,H,I,K,L,M,N,P F172D,E,F,G,H, K,L,M,N,P FP172 ER172E,F,G,H,J,K	28000 - 46754 46755 - 17276673 F1720001 - F17202254 FP1720001 - FP1720003 FR1720001 - FR17200675	05-00279	
175 175A, B, C	55001 - 56238 56239 - 17557119	05-00279	
182 182A, B, C, D	33000 - 53007 18253008 - 18253598	05-00279	

INTAKE HEAT SHIELD DEFLECTOR



This part replaces Cessna part number 0750121. This intake Heat Shield Deflector is vibration dampened to prevent cracking! It is made of polished stainless steel for better heat control. FAA approved.

P/N 05-02361

Eligibility List	
Aircraft Models	Serial Numbers
175*, A,B,C P172	56083 thru 17557118 P17257120 thru P17257188
180, A,B,C,D,E,F,G,H,J,K	30000 thru 18053203
182, A,B,C,D,E,F,G,H,I,K,L,M,N,P,Q,R F182P,Q	33000 thru 18268615 F18200001 thru F18200169
A182J,K,L,M,N T182	A182-0001 thru A182-0148 18267716 thru 18268615
185, A,B,C,D,E/A185E,F 185, A/B/A188, A,B T188C	185-0001 thru 18504448 188-0001 thru 18803968T T18803297T thru T18803968T
205,A 206	205-0001 thru 205-0577 206-0001 thru 206-0275
U206, A,B,C,D,E,F,G P206, A,B,C,D,E, TP206A,B,C,D,E TU206A,B,C,D,E,F,G 207, A/T207, A	U206-0276 thru U20607020 P206-0001 thru P20600647 U206-0438 thru U20607020 20700001 thru 20700788
210, A,B,C,D,E,F,G,H,I,K,L,M,N,R/ T210K, LM, N, R P210N, R T210G, H, J	57001 thru 21065009 P21000001 thru P21000874 T210-0198 thru T210-0454

CESSNA BRASS SHIM TORQUE LINK

FAA-PMA APPROVED - Eliminates undampened torque link motion to prevent shimmy.



Part No.	Cessna Part No.	Thickness	Price ea
05-00429	S1450-6B14-010	.010"	
05-00430	S1450-6B14-007	.007"	
05-00431	S1450-6B14-005	.005"	

CESSNA FUEL SCREEN STANDPIPE

This FAA-PMA approved stainless steel Cessna Fuel Screen Standpipe is the last one you will need to buy. Improved design eliminates corrosion pits and stripped threads. 1963 and on.

P/N AS0756011-1

CESSNA FUEL QUANTITY TRANSMITTERS

These fuel quantity transmitters are direct replacements for the fuel quantity transmitter installed by the manufacturer when the aircraft was new. This saves hundreds of dollars in labor and kits and eliminates replacement of fuel quantity gages and wiring when not required. These fuel quantity transmitters are engineered to be compatible with the original fuel quantity gage and wiring which uses time proven technology and reliability. Our fuel quantity transmitter gaskets are made from dupont viton. Viton is the premier elastomer of the aerospace industry, offering flexibility and fuel resistance at all temperature extremes. Viton gaskets will not dry out or shrink like cork gaskets and do not harden with age like gaskets made from other elastomers. Our screw/seal assemblies have been engineered to eliminate chronic problems associated with fuel quantity transmitter hardware. Hex drive head screws made from stainless steel eliminate the corrosion process. The hex drive promotes ease of installation and eliminates the necessity for destructive down pressure during transmitter screw removal and installation. The stainless steel viton seal used on the hex drive screw provides a modern solution to leak prevention not available with the originally installed cork washer.

Part No.	Description	Price Ea.
AS0426517-1	Fuel Transmitter	
AS0523557-1	Fuel Transmitter	
AS0726110-1	Fuel Transmitter	
ASS1588-1	Gasket (Viton Fuel Trans.)	
ASS1588-2	Gasket (Viton Fuel Trans.)	
ASS35010R10	Screw/Seal Fuel Trans.	
ASS35010R14	Screw/Seal Fuel Trans.	

FUEL SELECTOR PLATE FOR CESSNAS



Before



After

This new fuel selector plate is billet machined and anodized, with the text engraved on the plate. It is an efficient one piece design which is easy to install & factory guaranteed. FAA-PMA approved.

Cessna 172 - 37 Gals.	P/N 05-00227
Cessna 170 - 37 Gals.	P/N 05-00899
Cessna 172 - 36 Gals.	P/N 05-00901
Cessna 180 - 55 Gals.	P/N 05-00902
Cessna 180 - 60 Gals.	P/N 05-00903
Cessna 180 - 79 Gals.	P/N 05-00904
Cessna 172 - 84 Gals.	P/N 05-00905
Cessna 182 - 55 Gals.	P/N 05-00906

CESSNA OIL ACCESS DOORS

This oil access door is equivalent to Cessna P/N 0752000-56 and fits Cessna 180s through 210s. More affordable than other replacement doors!!! Applicable to: 180-180G S/N 30000-18051445, 182-182G S/N 33000-18255844, 185-185C S/N 185-0001-185-0776, 205-205A S/N 205-0001-205-0577, 206-U206 S/N 206-0001-U206-0437, P206 S/N P206-0001-P206-0160, 210-210E S/N 210-57001-21058715 P/N 05-00451

SEAT RAIL WEAR GAUGE FOR CESSNA AIRCRAFT

For checking seat rail wear limits as per FAA A.D. 87-20-03, Effective 09/24-/1990 Seat Rail Directive The gauge is to be used for inspection of the Cessna seat rail wear. This gauge is designed to measure the actual radius wear near the seat stop holes. Notice the different sized steps in each corner. P/N 05-04428

REPLACEMENT CESSNA PARTS

CESSNA SEAT RAILS, ROLLERS, WASHERS, & BUSHINGS

These FAA-PMA replacement seat parts were developed to assist in complying with the parts replacement requirements of A.D. 87-20-03. This A.D. requires the periodic inspection and replacement of seat components of the entire Cessna light aircraft fleet. Our Parts are direct replacements for the wear related seat components. These seat parts are superior to the O.E.M. parts in many ways. Our rollers are fabricated from molydisulfide filled nylons for improved strength and self lubrication. All rollers are fully machined from extruded stock for finer surface finishes and higher strength. Our wear washers are tougher with far better wear and aging resistance. Seat rails were carefully engineered with small improvements for added strength, longer life, and easier installation without any sacrifice of full interchangeability with the O.E.M. parts.

SEAT RAILS

ROLLERS

Description	Part No.	Price Ea.	Description	Part No.	Price Ea.
AS0410219-1	05-00327	.	AS0711693-4	05-00380	.
AS0410219-2	05-00328	.	AS0711693-6	05-00381	.
AS0410230-2	05-00329	.	AS0711693-7	05-00382	.
AS0410230-3	05-00341	.	AS0711693-8	05-00383	.
AS0410235-1	05-00342	.	AS0711693-9	05-00384	.
AS0410235-2	05-00343	.	AS1210025-2	05-00385	.
AS0410235-6	05-00344	.	AS1210025-3	05-00386	.
AS0411545-1	05-00345	.	AS1210408-1	05-00387	.
AS0411545-2	05-00346	.	AS1210408-12	05-00388	.
AS0411545-3	05-00347	.	AS1210408-14	05-00389	.
AS0411545-4	05-00348	.	AS1210408-15	05-00390	.
AS0511000-14	05-00331	.	AS1210408-16	05-00391	.
AS0511000-15	05-00332	.	AS1210408-17	05-00392	.
AS0511000-64	05-00333	.	AS1210408-18	05-00393	.
AS0511000-68	05-00334	.	AS1210408-21	05-00394	.
AS0511000-69	05-00335	.	AS1210408-22	05-00395	.
AS0511000-70	05-00336	.	AS1210408-23	05-00396	.
AS0511240-10	05-00337	.	AS1210408-24	05-00397	.
AS0511240-11	05-00338	.	AS1210408-4	05-00398	.
AS0511240-12	05-00339	.	AS1210408-5	05-00399	.
AS0511240-14	05-00349	.	AS1210408-6	05-00401	.
AS0511240-15	05-00351	.	AS1210408-8	05-00402	.
AS0511240-2	05-00352	.	AS1210408-9	05-00403	.
AS0511240-3	05-00353	.	AS1210520-11	05-00404	.
AS0511240-4	05-00354	.	AS1210520-12	05-00405	.
AS0511240-5	05-00355	.	AS1210520-15	05-00406	.
AS0511240-6	05-00356	.	AS1210520-16	05-00407	.
AS0511240-7	05-00357	.	AS1210520-2	05-00408	.
AS0511240-8	05-00358	.	AS1210520-3	05-00409	.
AS0511240-9	05-00359	.	AS1210520-4	05-00410	.
AS0511243-4	05-00362	.	AS1210520-9	05-00411	.
AS0511243-5	05-00363	.	AS1211514-1	05-00412	.
AS0511243-6	05-00364	.	AS1211514-2	05-00413	.
AS0511293-1	05-00365	.	AS2414002-1	05-00414	.
AS0511293-2	05-00366	.	AS2414002-2	05-00415	.
AS0511293-3	05-00367	.	ASS1551-1	05-00420	.
AS0511293-4	05-00368	.	ASS1554-1	05-00421	.
AS0611134-2	05-00369	.	ASS1704-1	05-00423	.
AS0611134-3	05-00370	.	AS1714000-22	05-00419	.
AS0710618-1	05-00371	.	AS1714000-41	05-00422	.
AS0710618-4	05-00372	.	AS0311310	05-00325	.
AS0710618-5	05-00373	.	AS0311586	05-00326	.
AS0710618-6	05-00374	.	AS0311715-3	05-00416	.
AS0710658-2	05-00375	.	AS0311715-4	05-00417	.
AS0711693-1	05-00376	.	AS43DD1-9	05-00432	.
AS0711693-10	05-00377	.	AS1613423-3	05-00418	.
AS0711693-11	05-00378	.	AS1414104-54	05-00424	.
AS0711693-2	05-00379	.			

SEAT KIT COMPONENTS (1 SEAT)

Kit No.	Description	Qty.	Part No.	Price
05-00425	Full articulating seat (2 crank handles).	Washers	AS1714000-22	
		Rollers	ASS1704-1	
		Bushings	AS1414104-54	
05-00427	Standard seat (1 or no crank handles).	Washers	ASS1554-1	
		Rollers	ASS1551-1	
		Bushings	AS1414104-54	
05-00428	1946-1962 and all 150-152	Rollers	AS0311310	
		Bushings	AS0311586	

For Cessna Roller Kit 141410-212 use:
 • (1) Roller (P/N ASS155-1)
 • (1) Bushing (P/N AS1414104-54)
 • (2) Washers (P/N ASS1554-1)
 These parts are generally used on the standard seats

For Cessna Roller Kit 1714000K200 use:
 • (1) Roller (P/N ASS1704-1)
 • (1) Bushing (P/N AS1414104-54)
 • (2) Washers (P/N AS1714000-22)
 These parts are generally used on the in-line adjustable seats

FAA-PMA Application chart for replacement parts for Cessna seats.		
Description	Part No.	Model Series Eligible
AS0311310 roller	05-00325	150, 152, 170, 172, 175, 180, 182, 185, 195, 210
AS0311586 bushing	05-00326	
ASS1554-1 washer	05-00421	
AS1714000-22 washer	05-00419	
AS1714000-41 washer	05-00422	
AS1414104-22 bushing	05-00323	172, 180, 182, 185, 188, 205, 206, 207, 210
ASS1704-1 roller	05-00423	
ASS1551-1 roller	05-00420	

CESSNA FLAP ROLLER KITS



Flap attachment kits are available for Cessna aircraft from Cessna 150 thru T210. Each kit contains FAA-PMA replacement rollers, bushings, and spacers for the flap attachment of one airplane. Our ASS1450-5N12-050 shims are stainless steel for better corrosion resistance. Individual FAA-PMA components are available on request.

Model	Serial No.	Year	Kit No.	Part No.	Kit Price
150	17001-15071128	59-69	FLP-KT-1	05-00317	
150	15071129 & on	70-77	FLP-KT-2	05-00318	
152	15279406 - 15285564	78-80	FLP-KT-2	05-00318	
152	15285565 & on	81 & on	FLP-KT-3	05-00319	
F152	F15201429-F15201908	78-80	FLP-KT-2	05-00318	
F152	F15201909 & on	81 & on	FLP-KT-3	05-00319	
A152	A1520735-A1521014	78-80	FLP-KT-2	05-00318	
A152	A1521015 & on	81 & on	FLP-KT-3	05-00319	
FA152	FA1520337-FA1520387	78-80	FLP-KT-2	05-00318	
FA152	FA1520388 & on	81 & on	FLP-KT-3	05-00319	
170B	ALL	52-54	FLP-KT-1	05-00317	
172	28000-17249544	55-62	FLP-KT-1	05-00317	
172	17249545-17274009	63-80	FLP-KT-2	05-00318	
172	17274010 & on	81 & on	FLP-KT-3	05-00319	
177	ALL	68-78	FLP-KT-4	05-00321	
175	ALL	58-62	FLP-KT-1	05-00317	
180	ALL	53-82	FLP-KT-1	05-00317	
182	33000-18253598	56-62	FLP-KT-1	05-00317	
182	18253599 & on	63 & on	FLP-KT-3	05-00319	
185	ALL	61-82	FLP-KT-1	05-00317	
188	ALL	66-84	FLP-KT-3	05-00319	
205	ALL	63-64	FLP-KT-1	05-00317	
206	2060001-20601568	64-70	FLP-KT-4	05-00321	
206	U20601569 & on	71-86	FLP-KT-5	05-00322	
207	ALL	69-84	FLP-KT-4	05-00321	
210	57001-21058220	60-63	FLP-KT-1	05-00317	
210	21058221-21058818	64-66	FLP-KT-6	05-00322	
210	21058819 & on	80 & on	FLP-KT-7	05-00324	
T210	T2100001-T2100197	64-66	FLP-KT-6	05-00323	

ASS14503510-032 Wear washer kit (8 req/kit) .P/N 05-00587 ea.



CESSNA WHEEL P/N MOUNTING PLATES FAA-PMA APPROVED

Model	Year	Serial No.	Left Hand	Price	Right Hand	Price
150	74-86	15074851 & on	05-00433		05-00434	
A150	74-86	A1500430 & on	05-00433		05-00434	
F50	74-86	F15001014 & on	05-00433		05-00434	
FA150	74-86	FA1500212 & on	05-00433		05-00434	
152	78-86	ALL	05-00433		05-00434	
172	75-86	17263459 & on	05-00433		05-00436	
F172	75-86	F17201235 & on	05-00433		05-00436	

SEAT STOP KITS FOR CESSNAS

These seat stops and related hardware are available in convenient kits for your aircraft. Call for the correct kit part no. for your Cessna aircraft. Seat stop kit #1 (1 ea. AS0713074-1, 1 ea. MS24665-132-1, 1 ea. MS20392-1C21) P/N 05-00580
 Seat stop kit #2 (1 ea. AS0511242-1, 1 ea. MS35265-41) P/N 05-00581
 Seat stop kit #3 (1 ea. AS0713074-1, 1 ea. MS24665-132, 1 ea. MS20392-1C21, 2 ea. NAS43DD1-9) P/N 05-00582



SAF-T-STOP

Saf-T-Stop is an auxiliary seat stop mechanism approved by the FAA for use with Cessna seat track A. D. #87-20-03. Installs easily, sliding over seat track. Approved for: Cessna 150, 152, 172, R172, 175, 180, 182, 185, 190, 205, 206, 207, 210, 303, 337. Not a seat lock, Saf-T-Stop is designed to restrict rearward motion if the seat lock fails. P/N 13-18510



CESSNA SEAT RAIL TEMPLATES

These template blanks are used to transfer holes from the old seat rail to the new seat rail when replacing Cessna seat rails. These templates are economical and convenient to use. One per seat rail is required. For seat rail series AS511240, AS511243, and AS24114002 use SRTEM2. All other seat rail series can use SRTEM1. NOTE: Models 150-152 do not require templates as the screw holes are predrilled. Model 177 cardinal seat rails require (2) SRTEM1 templates per rail. * Dimensions: * SRTEM1-1.5" x 38" x .025" * SRTEM2-2.25" x 30" x .025"
 SRTEM1 P/N 05-00449
 SRTEM2 P/N 05-00450



CESSNA SPACERS

Spacer sleeve: made of aluminum alloy 2024 overall
 P/N 06-00639

AP

REPLACEMENT PARTS FOR CESSNA

SEAT RAILS FOR CESSNA AIRCRAFT



McFarlane seat rails have only pilot holes drilled in the rail base allowing the installer to exactly match

the aircraft floor rivet pattern. McFarlane discovered while installing and developing our replacement seat rails that the seat rail attachment hole pattern was not consistent from aircraft to aircraft. Even small inconsistencies in the hole locations in the aircraft floor make installation of new seat rails very difficult. For this reason, all McFarlane seat rails have only a few smaller pilot attachment holes drilled at the factory. This allows the installer to precisely locate the attachment holes to match the holes in the aircraft floor. All special sized or machined attachment holes are factory machined to finish dimensions. It is necessary to install all required fasteners when seat rails are installed.

After studying countless worn and failed seat rails McFarlane's rails were designed with 15% more metal in critical areas. The result is more crack resistant, durability, strength and longer life.

Installation Tip: The aircraft floor is subject to corrosion from moisture under the seat rails, be sure to remove and treat any corrosion before installing the new seat rails.

Description	Part No.	Price	Description	Part No.	Price
AS0411545-2	05-00346		AS0511293-3	05-00367	
AS0411545-1	05-00345		AS0511293-4	05-00368	
AS0411545-3	05-00347		AS0511293-2	05-00366	
AS0411545-4	05-00348		AS0511240-4	05-00354	
AS0410219-2	05-00328		AS0511240-2	05-00352	
AS0410219-1	05-00327		AS0511240-3	05-00353	
AS0410230-2	05-00329		AS0511240-6	05-00356	
AS0410230-3	05-00341		AS0511240-7	05-00357	
AS0410235-6	05-00344		AS0511240-8	05-00358	
AS0410235-1	05-00342		AS0511240-9	05-00359	
AS0410235-2	05-00343		AS0511243-4	05-00362	
AS0511000-14	05-00331		AS0511243-5	05-00363	
AS0511000-15	05-00332		AS0511243-6	05-00364	
AS0511293-1	05-00365		AS2414002-1	05-00414	
			AS2414002-2	05-00415	

RUDDER PEDALS FOR CESSNA AIRCRAFT

COMPLETELY NEW RUDDER PEDAL -



- * Less money and longer life!
- * Bronze bushings at the pivot points resist wear and vibration for longer pedal life.
- * Precision cast heat treated aluminum alloy

* Power coat finish for durability and corrosion protection.
 * FAA-PMA direct replacement for Cessna (Part #1460320-1)
 Model AP2000-01 PN 05-04165.....

RE-BUSHED RUDDER PEDAL -

Model Numbers: 0760678-1, 0760678-2 and 1460320-1
 * FAA approved repair for magnesium rudder pedals.
 * Worn and elongated pedal holes are reamed and fitted with bushings for a longer life
 * Bronze bushings resist vibration and corrosion wear longer than the magnesium casting.
 * Fits most single engine Cessnas from 1963-1981, except for model 188

Model 0760678-1-R.....PN 05-04166 Core
 Model 0760678-2-R.....PN 05-04167 Core
 Model 1460320-1-R.....PN 05-04168 Core

Exchange your pedals before they are worn beyond repairable limits!
 Max Large Hole Diameter - 0-0.405 inches
 Max Small Hole Diameter < 0.275 inches
 Receive Full Core Credit
 Max Large Hole Diameter - 0.405 - 0.465 inches
 Max Small Hole Diameter < 0.275 inches
 Receive 50% Core Credit
 Pedals worn beyond these limits are not eligible for core credit. Re-bushed pedals may be returned for core credit but must follow the same criteria.

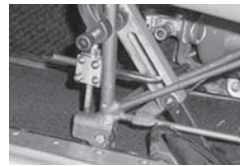
150/152 SEAT RAIL SCREW KIT SR150-SCREW-KIT



This is screw kit specifically for the Cessna 150/152 seat rails. This #10 Structural Screw Kit contains all screws and nuts required to install four seat rails.

- Kit Contains:
 40 MS27039-1-08 Screw 10-32 x .511
 2 MS27039-1-09 Screw 10-32 x .594
 2 MS27039-1-17 Screw 10-32 x 1.094
 40 MS21044N3 Nut, Nylon Lock

P/N 05-04107.....



UNIVERSAL SAFETY-FOOT

Having your seat slide backwards on take-off or landing is a moment of terror not soon forgotten. We are pleased to announce the new generation universal safety-foot, secondary seat stop, for both pilot and co-pilot seats.

The universal safety-foot prevents this from happening when the pins are not engaged in the seat rails.

The new universal safety-foot meets the requirements of the mandatory compliance, cessna issued, owned advisory SEBO7-5A dated 05/14/2007. This advisory requires all early model single engine Cessna's to have a secondary seat lock installed within 24 month from date of advisory.

The universal safety-foot was issued a "NO HAZARD INSTALLATION APPROVAL" by the FAA on 04/27/2006.

This approval allows the installation of the universal safety-foot by the owner/operator.

Due to the simple and unique design, the universal safety-foot can be installed in approximately 45 minutes, and in most cases, the seat do not have to be removed for the installation.

The universal safety-foot comes with clearly written instructions supplemented by installation pictures. P/N 05-04104.....

FUEL STRAINER KIT FOR CESSNA AIRCRAFT

FUEL STRAINER SEAL KIT. - Kit contains: Gasket and 3 O-Rings Approved for Cessna models: 180H*, J, K
 P/N 05-01705.....

FS-KT-2 FUEL BOWL KIT (FAA-PMA) - Kit contains: 1 MC0756009-8 Gasket 1 MC0756008-1 Fuel bowl 1 MCM83248/1-010 O-ring 1 MCM83248/1-111 O-ring 1 MCM83248/1-138 O-ring 1 MC0756015-1 Washer 1 MCS1573-3 Nut
 P/N 05-04425.....

FS-KT-3 FUEL STRAINER REBUILD KITS - Kit contains: (1) FS-KT-1 Gasket kit (1) MC0756008-1 Fuel bowl (1) MC0756015-1 Washer (1) MCS1573-3 Nut (1) MC0756010-11 Plunger (1) MC0756011-1 Standpipe (2) MCS145027 A7-032 Washer (1) 0756012-1 Spring
 P/N 05-04426.....

FUEL STRAINER PLUNGER - MC0756010-11 * Special electro polished shaft for longer o-ring life.
 * McFarlane's blue Viton rubber tip will outlast the original in any fuel!
 P/N 05-04424.....

FUEL STRAINER ASSEMBLY - Kit contains: Gasket Kit, Fuel Bowl, 2Washers, Nut, Plunger, Standpipe, Spring, and Top Assembly. Approved for Cessna models: 182H*, J, K, L, M, N, P, Q, R
 P/N 05-04111.....

FUEL STRAINER AND CABLE KIT - Kit contains: Gasket Kit, Fuel Bowl, 2 Washers, Nut, Plunger, Standpipe, Spring, Top Assembly, Filter, and Strainer Drain Cable Approved for Cessna models: F182P, Q
 P/N 05-04112.....

FUEL STRAINER PARTS FOR CESSNA AIRCRAFT



FUEL STRAINER BOWL - Engineered to last! Manufactured using improved materials for added strength and gold anodized for corrosion resistance. Computer machined (not die cast).
 P/N 05-01704.....



FUEL STRAINER STANDPIPE - The last one you will buy! Stainless steel, No more corrosion pits or stripped threads, Costs less!
 P/N 05-00281.....

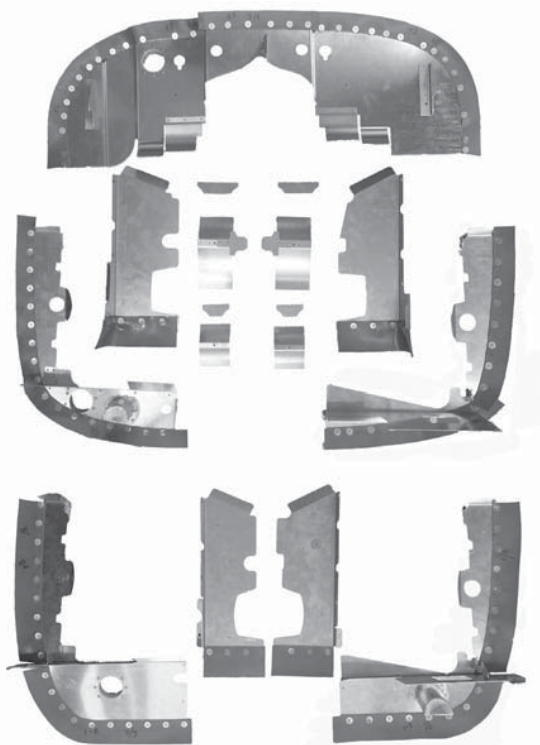


CESSNA MOTOR MOUNT BLOCK LOCK WASHER

The already improved motor mount lock washer is now even better. One side is embossed with a surface texture for improved locking strength and to make sure the washer does not slip while tightening. This helps prevent the lock tab from deforming or shearing during installation. It also helps keep the lock tab centered in the lock hole to minimize slack instead of allowing it to rotate to one side during installation. Features: * Up to four times the locking power for less! * FAA approved using stronger material than the original, allowing the standard washer to be eliminated. * Designed with six tabs instead of two. * Easier to use! * Cessna 180, 182, 185, 188, 205, 206, 207, 210, 310, 320, 411, and 414 model aircraft
 P/N 05-01742.....

AP

CESSNA ENGINE BAFFLES



150 BAFFLES

Baffle Number	Part No.	Price
AF0455000-4	05-03078	
AF0450502-22	05-03079	
AF0455000-11	05-03080	
AF0450502-23	05-03081	
AF0450502-42	05-01482	
AF0450502-16	05-01483	
AF0450322-2	05-01484	
AF0455001-2	05-01485	
AF0450210	05-01486	
AF0450209 Seal	05-01487	
AF0450171	05-01488	
AF0450502-19	05-01489	
AF0450322-3	05-01490	
AF5001-3	05-01491	
150 Baffle Set	05-03270	

152 BAFFLES

Baffle Number	Part No.	Price
AF0455012-7	05-03099	
AF0455012-10	05-03101	
AF0455012-11	05-03102	
AF0455006-5	05-03103	
AF0455018-21	05-03106	
AF0455013-171	05-03107	
AF0455018-27	05-03108	
AF0455018-25	05-03109	
AF0455018-19	05-03110	
AF0455018-22	05-03111	
AF0455021-1	05-03112	
AF0455007-1	05-03113	
AF0455015-1	05-03114	
AF0455015-2	05-03115	
AF0455013-23	05-03116	
AF0455013-17	05-03117	
AF0455013-19	05-03118	
AF0455013-14	05-03119	
AF0455012-1	05-03120	
152 Baffle Set	05-03273	

170B, 172 EARLY MODEL BAFFLES

Baffle Number	Part No.	Price
AF0550163	05-01492	
AF0550164-8	05-01493	
AF0450322-3	05-01494	
AF0550164-10	05-01495	

170B, 172 EARLY MODEL BAFFLES Cont.

AF0450209	05-01496	
AF0550165-2	05-01505	
AF0550111-7	05-01506	
AF0450210	05-01507	
AF0550164-7	05-01508	
AF0450322-2	05-01509	
AF0450171	05-01510	
AF0550164-11	05-01511	
AF0550165-6	05-01512	
AF0550117	05-01508	
AF0550111-4	05-03062	
170B, 172 Early Model Baffle Set	05-03266	

172 I, K, L BAFFLES

Baffle Number	Part No.	Price
AF0555206-1	05-03082	
AF0555204-1	05-03083	
AF0555203-1	05-03084	
AF0555199-2	05-03085	
AF0555199-1	05-03087	
AF0555205-1	05-03088	
AF0555202-1	05-03089	
AF0555207-1	05-03090	
172 I, K, L Baffle Set	05-03271	

172M BAFFLES

Baffle Number	Part No.	Price
AF0555206-12	05-03091	
AF0555204-5	05-03092	
AF0555211-7	05-03094	
AF0555216-202	05-03095	
AF0555212-1	05-03096	
AF0555217-1	05-03097	
AF0555213-5	05-03038	
AF0555214-7	05-03041	
172M Baffle Set	05-03272	

172N BAFFLES

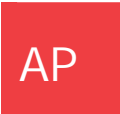
Baffle Number	Part No.	Price
AF0555298-3	05-03121	
AF0555233-1	05-03122	
AF0555235-1	05-03123	
AF055524-1	05-03124	
AF0555259-1	05-03125	
AF0555213-5	05-03038	
AF0555250-9	05-03039	
AF0555214-7	05-03041	
AF0555259-14	05-03043	
172N Baffle Set	05-03274	

172P BAFFLES

Baffle Number	Part No.	Price
AF0555309-1	05-03035	
AF0555318-1	05-03037	
AF0555213-5	05-03038	
AF0555250-9	05-03039	
AF0555211-9	05-03040	
AF0555214-7	05-03041	
AF0555307-1	05-03042	
AF0555259-14	05-03043	
AF0555215-4	05-03126	
172P Baffle Set	05-03275	

172R BAFFLES

Baffle Number	Part No.	Price
AF1557147-17	05-03238	
AF1557173-1	05-03239	
AF055271-1	05-03240	
AF1557147-15	05-03241	
AF1457018-22	05-03242	
AF1457018-18	05-03243	
AF1457012-1	05-03244	
AF0555272K201	05-03245	
AF1557012-10	05-03246	
AF1557011-3	05-03247	
AF1557011-4	05-03248	
AF1557012-11	05-03249	
AF1457146-12	05-03250	
AF1457119-1	05-03251	
AF1557140-6	05-03252	
AF1557101-11	05-03253	
AF0555228-4	05-03254	
AF0555228-2	05-03255	
AF0555228-6	05-03256	



CESSNA ENGINE BAFFLES

172R Baffles Cont.

AF0555228-5.....	05-03257.....	
AF0555228-3.....	05-03258.....	
AF1557101-13.....	05-03259.....	
AF1557146-11.....	05-03260.....	
AF0555272K200.....	05-03261.....	
AF1557012-14.....	05-03262.....	
AF1557012-11.....	05-03263.....	
AF1557101-11.....	05-03264.....	
AF1557149-7.....	05-03265.....	
172R Baffle Set.....	05-03286.....	

177 BAFFLES

Baffle Number	Part No.	Price
AF1755004-1.....	05-03147.....	
AF1755007-1.....	05-03148.....	
AF1755009-1.....	05-03149.....	
AF1755005-2.....	05-03150.....	
AF1755010-1.....	05-03151.....	
AF1755005-1.....	05-03152.....	
AF1755008-1.....	05-03153.....	
AF1755003-1.....	05-03154.....	
177 Baffle Set.....	05-03279.....	

180-182 BAFFLES

Baffle Number	Part No.	Price
AF0750128-20.....	05-01528.....	
AF0750128-19.....	05-01530.....	
AF0750128-21.....	05-01531.....	
AF0750128-23.....	05-01532.....	
AF0750128-22.....	05-01533.....	
AF0750128.....	05-01550.....	
AF0750117-30.....	05-01552.....	
AF0750135-4.....	05-01561.....	
AF0750135-1.....	05-01563.....	
AF0851700-96.....	05-01574.....	
AF0750135-3.....	05-01585.....	
180-182 Baffle Set.....	05-03278.....	

180 SERIES OIL COOLER BAFFLES

Baffle Number	Part No.	Price
AF075052-1.....	05-01541.....	
AF0755050-10.....	05-01542.....	
AF0755050-11.....	05-01543.....	
AF0750148-1.....	05-01544.....	
AF0755002-3.....	05-01546.....	
AF0755002-31.....	05-01547.....	
AF0750152-3.....	05-01590.....	
AF0750152-2.....	05-01592.....	

182 LATE MODEL BAFFLES

Baffle Number	Part No.	Price
AF0755001-39.....	05-03155.....	
AF0755004-6.....	05-03156.....	
AF07550404-4.....	05-03157.....	
AF0755040-2.....	05-03158.....	
AF0755004-9.....	05-03159.....	
AF0755004-2.....	05-03160.....	
AF0755004-3.....	05-03161.....	
AF0755040-3.....	05-03162.....	
AF0755007-1.....	05-03163.....	
AF0755040-1.....	05-03164.....	
AF1250961-5.....	05-03165.....	
AF1250961-6.....	05-03166.....	
AF1250961-7.....	05-03167.....	
AF0755005-9.....	05-03168.....	
AF0750135-4.....	05-01561.....	
AF0750135-1.....	05-01563.....	
AF0750135-3.....	05-01585.....	
182 Late Model Baffle Set.....	05-03277.....	

182 LATE MODEL OIL COOLER BAFFLES

Baffle Number	Part No.	Price
AF0755011-1.....	05-03169.....	
AF0755001-30.....	05-03170.....	
AF0755012-2.....	05-03171.....	
AF0750152-1.....	05-03172.....	
AF0755010-1.....	05-03173.....	
AF0755001-24.....	05-03174.....	
AF0755009-1.....	05-03175.....	
AF0750152-2.....	05-01592.....	

185 BAFFLES

Baffle Number	Part No.	Price
AF0750128-66.....	05-01427.....	
AF0750128-97.....	05-01529.....	
AF0750128-19.....	05-01530.....	

185 Baffles Cont.

AF0750128-21.....	05-01531.....	
AF0750128-23.....	05-01532.....	
AF0851700-96.....	05-01574.....	
AF0750117-31.....	05-01582.....	
AF07501282-2.....	05-01592.....	
AF0750135-4.....	05-01561.....	
AF0750135-3.....	05-03177.....	
AF0750117-30.....	05-01552.....	
AF1250134-2.....	05-03179.....	
AF0755050-15.....	05-03180.....	
AF0755002-2.....	05-03181.....	
AF050128-76.....	05-03182.....	
185 Baffle Set.....	05-03276.....	

C-200 EARLY MODEL OIL COOLER BAFFLES

Baffle Number	Part No.	Price
AF0750152-3.....	05-01554.....	
AF0750152-2.....	05-01556.....	

206 EARLY MODEL BAFFLES

Baffle Number	Part No.	Price
AF0750135-4.....	05-01561.....	
AF0750135-1.....	05-01563.....	
AF0750117-31.....	05-01582.....	
AF1250105-1.....	05-03183.....	
AF1250100-18.....	05-03418.....	
AF1250100-8.....	05-03185.....	
AF0851700-96.....	05-01538.....	
AF1250135-3.....	05-03187.....	
AF1250137-1.....	05-03188.....	
AF1250927-1.....	05-03190.....	
AF1250100-15.....	05-03191.....	
AF1250100-41.....	05-03192.....	
AF1250100-12.....	05-03193.....	
AF1250105-2.....	05-03194.....	
206 Early Model Baffle Set.....	05-03280.....	

206 LATE MODEL BAFFLES

Baffle Number	Part No.	Price
AF1255008-22.....	05-01560.....	
AF0750135-4.....	05-01561.....	
AF750135-1.....	05-01563.....	
AF1255032-4.....	05-01572.....	
AF0851700-96.....	05-01574.....	
AF1255032-2.....	05-01575.....	
AF1255025-1.....	05-01576.....	
AF1255010-10.....	05-01577.....	
AF1255028-1.....	05-01578.....	
AF1255011-5.....	05-01579.....	
AF1255008-12.....	05-01580.....	
AF1255008-20.....	05-01581.....	
AF0750117-31.....	05-01582.....	
AF1255032-3.....	05-01584.....	
AF0750135-3.....	05-01585.....	
AF1255032-1.....	05-01587.....	
AF1255009-8.....	05-01588.....	
AF1250966-1.....	05-01589.....	
AF0750152-3.....	05-01590.....	
AF1255011-51.....	05-03232.....	
AF1255020-1.....	05-03233.....	
AF1250134-2.....	05-03234.....	
AF1255026-1.....	05-03235.....	
AF1250966-3.....	05-03236.....	
AF1250961-5.....	05-03237.....	
206 Late Model Baffle Set.....	05-03285.....	

207 EARLY MODEL BAFFLES

Baffle Number	Part No.	Price
AF0750135-3.....	05-01540.....	
AF0750135-4.....	05-01561.....	
AF0750135-1.....	05-01563.....	
AF0851700-96.....	05-01574.....	
AF0750117-31.....	05-01582.....	
AF1250105-2.....	05-03195.....	
AF1250100-12.....	05-03196.....	
AF1250100-41.....	05-03197.....	
AF1250100-15.....	05-03198.....	
AF1250927-1.....	05-03199.....	
AF1250137-1.....	05-03201.....	
AF1250135-3.....	05-03202.....	
AF1250100-8.....	05-03203.....	
AF1250100-18.....	05-03418.....	
AF1250105-1.....	05-03205.....	
207 Early Model Baffle Set.....	05-03281.....	

All baffles are bare 6061-T6 aluminum unless the powder coating option is chosen. The powder coating finish is a black and grey hammertone.

AP

CESSNA INTERCYLINDER BAFFLES

CESSNA ENGINE BAFFLES CONT.

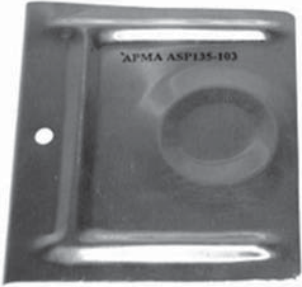
210 EARLY MODEL BAFFLES

Baffle Number	Part No.	Price
AF0750135-4	05-01561	
AF0750135-1	05-01563	
AF0851700-96	05-01574	
AF0750117-31	05-01582	
AF0750135-3	05-01585	
AF1250105-1	05-03068	
AF1250719-1	05-03069	
AF1250100-23	05-03070	
AF1250100-8	05-03071	
AF1250135-3	05-03072	
AF1250100-15	05-03073	
AF1250100-41	05-03075	
AF1250100-12	05-03076	
AF1250105-2	05-03077	
210 Early Model Baffle Set	05-03269	


206, 207, 210 TURBO EARLY MODEL BAFFLES


Baffle Number	Part No.	Price
AF0750117-31	05-01534	
AF0851700-96	05-01538	
AF0750152-3	05-01590	
AF1250105-1	05-03206	
AF1250829-12	05-03207	
AF1250881-7	05-03208	
AF1250135-3	05-03209	
AF1250829-11	05-03210	
AF1250105-2	05-03211	
AF1250829-13	05-03212	
AF1250870	05-03213	
AF1250828-1	05-03214	
AF1250828-2	05-03215	
AF1250868-1	05-03216	
206,207,210 Turbo Baffle Set	05-03282	


INTERCYLINDER BAFFLES FOR TELEDYNE SIX CYLINDER ENGINES

Ref. No.	Replaces Cessna P/N	Model	Serial Number	Qty Per A/C		
ASP135-103	750135-3	180,A,B,C,D,E	32151 thru 18051183	2		
		180F,G,H,J,K,L	18051184 thru 18053203	3		
		182E	33000 thru 18254423	2		
		182F,G,H,J,K,L,M,N,P*	18254424 thru 18262465	1		
		182P*,Q,R	18262466 thru 18268615	2		
		188,A,B	188-0001 thru 18802348	2		
		A188,A,B	188-0001 thru 18803968T	2		
		T188C	T18803297T thru T18803968T	2		
		205,A	205-0001 thru 205-0577	1		
		206	206-0001 thru 206-0275	2		
		U206,A,B,C,D,E,F,G	U206-0276 thru U20607020	2		
		P206,A,B,C,D,E	P206-0001 thru P20600647	2		
		207,A	20700001 thru 20700788	2		
		210,A,B,C,D,E,F,G,H,J,K,L,M,N,R	57001 thru 21065009	2		
		310,B,C,D,E,F,G,H,I,J,K,L,N	35000 thru 310N0198	2		
		320,A,B,C	320-0001 thru 320C0073	2		
		P/N 05-02135				

AP

Ref. No.	Replaces Cessna P/N	Model	Serial Number	Qty Per A/C		
ASP135-104	0750135-4, 0750135-8	180*	32151 thru 32661	2		
		180A,B,C,D,E	32662 thru 18051183	1		
		180F,G,H,I,K	18051184 thru 18053203	2		
		182	33060 thru 33482	2		
		182A,B,C,D,E,F,G,H,J,K,L,M,N,P*	33483 thru 18262465	1		
		182P*,Q,R	18262466 thru 18268615	2		
		188,A,B	188-0001 thru 18802348	2		
		A188,A,B	188-0001 thru 18803968T	2		
		T188C	T18803297T thru T18803968T	2		
		205,A	205-0001 thru 205-0577	2		
		206	206-0001 thru 206-0275	2		
		U206,A,B,C,D,E,F,G	U206-0276 thru U20607020	2		
		P206,A,B,C,D,E	P206-0001 thru P20600647	2		
		207,A	20700001 thru 20700788	2		
		210,A,B,C,D,E,F,G,H,J,K,L,M,N,R	57001 thru 21065009	2		
		310,B,C,D,E,F,G,H,I,J,K,L,N	35000 thru 310N0198	2		
		P/N 05-02136				

Ref. No.	Replaces Cessna P/N	Model	Serial Number	Qty Per A/C		
ASP834-101	0851834-1	310P,Q,R/T310,P,Q,R	310P0001 thru 310R2140	6		
		320D,E,F	320D0001 thru 320F0045	6		
		335	335-0001 thru 335-0065	6		
		340,A	340-0001 thru 340A1817	6		
		401,A,B	401-0001 thru 401B0300	6		
		402,A,B,C	402-0001 and On	6		
		414,A	414-0001 and On	6		
		P/N 05-02137				

Ref. No.	Replaces Cessna P/N	Model	Serial Number	Qty Per A/C		
ASP834-102	0851834-2	310P,Q,R/T310,P,Q,R	310P0001 thru 310R2140	2		
		320D,E,F	320D0001 thru 320F0045	2		
		335	335-0001 thru 335-0065	2		
		340,A	340-0001 thru 340A1817	2		
		401,A,B	401-0001 thru 401B0300	2		
		402,A,B,C	402-0001 and On	2		
		414,A	414-0001 and On	2		
		P/N 05-02138				

CESSNA FIBERGLASS REPLACEMENT PARTS

CESSNA 105/152

What Makes These Composite Parts Such An Excellent Value?

- * Stronger than factory originals with no weight increase.
- * Easily repaired with locally available fiberglass kits if ever damaged.
- * Exact replacements of original equipment means easy installation.
- * Money back guarantee if not completely satisfied!




STRUT CUFFS

Here's an unbeatable item for renovating your Cessna; a set of replacement strut cuffs. Order just one cuff to replace a damaged original, or get a set of four for a complete replacement.

Photo	Description	Part No.	Price
	150/152 Strut Cuff Upper RH (SA-0522150-4)	05-03703	.
	150/152 Strut Cuff Upper LH (SA-0522150-3)	05-03702	.
	150/152 Strut Cuff Lower RH (SA-0421002-2)	05-03701	.
----	150/152 Strut Cuff Lower LH (SA-0421002-1)	05-03699	.
	150/152 Aerobat Strut Cuff Upper RH (SA-0421002-3)	05-03706	.
	150/152 Aerobat Strut Cuff Upper LH (SA-0421002-4)	05-03707	.
	150/152 Aerobat Strut Cuff Lower RH (SA-0522150-6)	05-03704	.
	150/152 Aerobat Strut Cuff Lower LH (SA-0522150-7)	05-03705	.

ELEVATORS & STABILIZERS



Here are some of our most popular items. These tips take a good deal of stress in just normal flying circumstances. They're also frequent victims of ramp rash. The original plastic simply can't stand up to the task as well as fiberglass replacements from Stene Aviation. Plus, if these parts ever do withstand damage, they're easily repaired with readily available fiberglass repair kits from your local automotive parts store.

Photo	Description	Part No.	Price
	150 Horizontal Stabilizer Tip 1959-'63 (SA-0430004-6)	05-03710	.
	150/152 Horizontal Stabilizer Tip 1964&on (SA-0430004-11)	05-03711	.
	150/152 Elevator Tips (left/right) 1964&on (SA-0430004-10)	05-03709	.
----	150/152 Elevator Tips (left/right) 1959-'63 (SA-0430004-5)	05-03708	.

GEAR LEG AND BRAKE FAIRINGS

These are excellent items for replacing worn plastic originals. Your fiberglass replacements will be more durable with an improved finish over the original plastics.

Photo

Photo	Description	Part No.	Price
	150/152 Upper Gear Leg 1971&on RH (SA-0441217-14)	05-03731	.
	150/152 Upper Gear Leg 1971&on LH (SA-0441217-15)	05-03732	.
----	150/152 Right Brake Fairing 1974&on (SA-0441227-2)	05-03734	.
----	150/152 Left Brake Fairing 1974&on (SA-0441227-1)	05-03733	.




RUDDER & VERTICAL FIN CAPS

These parts are a snap to replace on most planes. Please note, indicate if you have a straight tail or a swept tail. It is also important to let us know if your fin cap needs to accommodate a strobe or beacon, and if so, if the light is front-mounted or center-mounted.

Photo	Description	Part No.	Price
	150 Vertical Fin Cap 1964-1965 (SA-0430004-9)	05-03713	.
	150 Vertical Fin Cap (no beacon) 1966-'74 (SA-0431013-3)	05-03715	.
----	150 Vertical Fin Cap (small beacon) 1966-'74 (SA-0431017-1)	05-03714	.
	150/152 Vertical Fin Cap (small beacon) 1975&on (SA-0430011-1)	05-03716	.
----	150 Rudder Top 1959-1963 (SA-0430004-2)	05-03717	.
----	150 Rudder Top 1964-1965 (SA-0430004-8)	05-03718	.
	150/152 Rudder Top 1966-1974 (SA-0431013-1)	05-03719	.
	150 Rudder Top 1975&on (SA-0430011-2)	05-03720	.
----	150 Rudder Bottom 1959-1965 (SA-0430004-1)	05-03721	.
	150 Rudder Bottom 1966&on (SA-0431005-1)	05-03722	.




WING & DORSAL TIPS

Wing tips are a common victim of hanger and ramp rash. Maybe you thought the plane was going to clear those doors as you wheeled it back into the hanger...the first indication that you were wrong was that grating sound as the wing-tip met metal. Here's the solution: replacement fiberglass wing-tips from Stene Aviation.

Photo	Description	Part No.	Price
	150/152 Wing-Tip (small droop) LH (SA-0523565-29)	05-03726	.
	150/152 Wing-Tip (small droop) RH (SA-0523565-30)	05-03727	.
----	150/152 Std. Small Wing Tip (SA-0430008-3)	05-03725	.
	150 Dorsal Fin 1959-'65 (SA-0430004-4)	05-03723	.
----	150/152 Dorsal Tip 1966&on (SA-0431024-1)	05-03724	.

WHEEL PANTS

Replace your original plastic wheel pants with high quality and durable fiberglass replacements. All wheel pants come with a 2" access plug for checking tire pressure. Original hardware is required for mounting.

Photo	Description	Part No.	Price
	150/152 Wheel Pant 1971-'74 RH (SA-0541223-16)	05-03728	.
	150/152 Wheel Pant 1971-'74 LH (SA-0541223-17)	05-03729	.
	150/152 Nose Wheel Pant 1974&on (SA-0543079-3)	05-03730	.

AP

CESSNA FIBERGLASS REPLACEMENT PARTS

CESSNA 170/172/175





ELEVATORS & STABILIZERS

Here are some of our most popular items. These tips take a good deal of stress in just normal flying circumstances. They're also frequent victims of ramp rash. The original high impact plastic simply can't stand up to the task as well as fiberglass replacements from Stene Aviation. Plus, if these parts ever do withstand damage, they're easily repaired with readily available fiberglass repair kits from your local automotive parts store.

Photo	Description	Part No.	Price
----	170/172/175 Stabilator Tip (All) (SA-0532001-93)	05-03744	.
	172/175 Horizontal Tip Straight Tail (SA-0532001-61)	05-03743	.
	172 Elevator Tip 1963&on LH (SA-0532001-94)	05-03742	.
	172 Elevator Tip 1963&on RH (SA-0532001-100)	05-03741	.
	172/175 Elevator Tip Straight Tail (SA-0532001-62)	05-03740	.





STRUT CUFFS

Here's an unbeatable item for renovating your Cessna; a set of replacement strut cuffs. Order just one cuff to replace a damaged original, or get a set of four for a complete replacement.

Photo	Description	Part No.	Price
	172 Strut Cuff Upper 1973&on RH (SA-0523047-2)	05-03739	.
	172 Strut Cuff Upper 1973&on LH (SA-0523047-1)	05-03738	.
	172 Strut Cuff Lower (all models) RH (SA-0522150-2)	05-03736	.
	172 Strut Cuff Lower (all models) LH (SA-0522150-1)	05-03735	.




GEAR LEG AND BRAKE FAIRINGS

These are excellent items for replacing worn plastic originals. Your fiberglass replacements will be more durable with an improved finish over the original plastics.

Photo	Description	Part No.	Price
	172 Upper Gear Leg 1971&on RH (SA-1741005-240)	05-03767	.
	172 Upper Gear Leg 1971&on LH (SA-1741005-239)	05-03766	.
	172 Brake Fairing 1974&on RH (SA-0541224-1)	05-03768	.
	172 Brake Fairing 1974&on LH (SA-0541224-2)	05-03769	.






WHEEL PANTS

Replace your original plastic wheel pants with high quality and durable fiberglass replacements. All wheel pants come with a 2" access plug for checking tire pressure. Original hardware is required for mounting.

Photo	Description	Part No.	Price
	172 Wheel Pant 1974&on RH (SA-0541223-16)	05-03728	.
	172 Wheel Pant 1974&on LH (SA-0541223-17)	05-03729	.
	172 Nose Wheel Pant 1974&on (SA-0543079-3)	05-03730	.








RUDDER & VERTICAL FIN CAPS

These parts are a snap to replace on most planes. Please note, indicate if you have a straight tail or a swept tail. It is also important to let us know if your fin cap needs to accommodate a strobe or beacon, and if so, if the light is front-mounted or center-mounted.

Photo	Description	Part No.	Price
----	172 Vertical Fin (no beacon) 1956-'59 (SA-0531001-36)	05-03745	.
----	172 Vertical Fin (large beacon) 1956-'59 (SA-0531004-3)	05-03746	.
	172 Vertical Fin (no beacon) 1960-'68 (SA-0531006-33)	05-03747	.
----	172 Vertical Fin (small beacon) 1960-'68 (SA-0533009-1)	05-03752	.
	172 Vertical Fin (small beacon) 1960-'68 (SA-0531009-1)	05-03748	.
----	172 Vertical Fin (small beacon) 1969-'75 (SA-0531013-1)	05-03749	.
----	172 Rudder Top 1976-'85 (SA-0531006-112)	05-03753	.
----	172 Rudder Top 1997&on (SA-0533155-2)	05-03754	.
	172 Vertical Fin (small beacon) 1976&on (SA-0531003-1)	05-03750	.
	172 Rudder Top 1960-'68 (SA-0531006-34)	05-03751	.
	172 Rudder Bottom 1960-'68 (SA-0531006-35)	05-03756	.
----	172/175 Rudder Bottom Straight Tail (SA-0531104)	05-03755	.
----	172 Rudder Bottom 1969-'80 (SA-0531006-80)	05-03757	.

WING & DORSAL TIPS

Wing tips are a common victim of hanger and ramp rash. Maybe you thought the plane was going to clear those doors as you wheeled it back into the hanger...the first indication that you were wrong was that grating sound as the wing tip met metal. Here's the solution: replacement fiberglass wing tips from Stene Aviation.

Photo	Description	Part No.	Price
	172 Wing Tip (small droop) 1968-'72 LH (SA-0523565-29)	05-03726	.
	172 Wing Tip (small droop) 1968-'72 RH (SA-0523565-30)	05-03727	.
	172 Wing Tip (small droop) 1973&on LH (SA-0723200-5)	05-03762	.
	172 Wing Tip (small droop) 1973&on RH (SA-0723200-6)	05-03764	.
	172 Mid-Dorsal (SA-0531012-2)	05-03759	.
	172 Dorsal Tip 1972&on (SA-0531020-1)	05-03760	.
	Cable Covers (SA-0530011-2)	05-03770	.

AP

CESSNA FIBERGLASS REPLACEMENT PARTS

CESSNA 177/180/185/188

CESSNA FIBERGLASS REPLACEMENT PARTS FOR 177

What Makes These Composite Parts Such An Excellent Value?

- * Stronger than factory originals with no weight increase.
- * Easily repaired with locally available fiberglass kits if ever damaged.
- * Exact replacements of original equipment means easy installation.
- * Money back guarantee if not completely satisfied!

STABILATOR TIPS







Here are some of our most popular items. These tips take a good deal of stress in just normal flying circumstances. They're also frequent victims of ramp rash. The original plastic simply can't stand up to the task as well as fiberglass replacements from Stene Aviation. Plus, if these parts ever do withstand damage, they're easily repaired with readily available fiberglass repair kits from your local automotive parts store.

Photo	Description	Part No.	Price
----	177 Stabilator Tip (All) (SA-1732024-1)	05-03744	.

RUDDER & VERTICAL TOPS

Photo	Description	Part No.	Price
----	177 Rudder Top (All) (SA-1733009-2)	05-03841	.
----	177 Vertical Top (All) (SA-1731009-4)	05-03840	.

GEAR LEG FAIRINGS

Photo	Description	Part No.	Price
	177 Upper Gear Leg (All) RH (SA-1741005-44)	05-03846	.
	177 Upper Gear Leg (All) LH (SA-1741005-43)	05-03845	.
	177 Brake Fairings 1972-'74 RH (SA-0741634-14)	05-03848	.
	177 Brake Fairings 1972-'74 LH (SA-0741634-13)	05-03847	.
	177 Brake Fairings 1975&on RH (SA-0741641-10)	05-03849	.
	177 Brake Fairings 1975&on LH (SA-0741641-11)	05-03850	.

WHEEL PANTS


Replace your original plastic wheel pants with high quality and durable fiberglass replacements. All wheel pants come with a 2" access plug for checking tire pressure. Original hardware is required for mounting.

Photo	Description	Part No.	Price
	177 Wheel Pant 1975&on RH (SA-0541223-16)	05-03728	.
	177 Wheel Pant 1975&on LH (SA-0541223-17)	05-03729	.
	177 Nose Wheel Pant 1975&on (SA-0543079-3)	05-03730	.

CESSNA FIBERGLASS REPLACEMENT PARTS FOR 180/185

ELEVATORS & STABILIZERS



Here are some of our most popular items. These tips take a good deal of stress in just normal flying circumstances. They're also frequent victims of ramp rash. The original plastic simply can't stand up to the task as well as fiberglass replacements from Stene Aviation. Plus, if these parts ever do withstand damage, they're easily repaired with readily available fiberglass repair kits from your local automotive parts store.

Photo	Description	Part No.	Price
	180&185(all) Horizontal Tip (SA-0732613-1)	05-03779	.

180/185 CONT.


STRUT CUFFS

Here's an unbeatable item for renovating your Cessna; a set of replacement strut cuffs. Order just one cuff to replace a damaged original, or get a set of four for a complete replacement.

Photo	Description	Part No.	Price
	180 Strut Cuff Upper RH (SA-0723605-4)	05-03774	.
	180 Strut Cuff Upper LH (SA-0723605-3)	05-03773	.
----	180 Strut Cuff Lower RH (SA-0723605-2)	05-03772	.
----	180 Strut Cuff Lower LH (SA-0723605-1)	05-03771	.



RUDDER & VERTICAL FIN CAPS

These parts are a snap to replace on most planes. Please note, indicate if you have a straight tail or a swept tail. It is also important to let us know if your fin cap needs to accommodate a strobe or beacon, and if so, if the light is front-mounted or center-mounted.

Photo	Description	Part No.	Price
----	180 (all) Vertical Fin (no beacon) (SA-0731000-200)	05-03781	.
----	180 (all) Vertical Fin (small beacon) (SA-0731019-1)	05-03782	.
----	180 (large tail)/185 (all) Vertical Fin (sm. beacon) (SA-0731019-2)	05-03787	.
----	185 Vertical Fin (no beacon) (SA-0742025-1)	05-03788	.
----	180 (all) Vertical Fin (large beacon) (SA-0700031-2)	05-03789	.
	185 (all) Vertical Fin (large beacon) (SA-0731015-1)	05-03790	.





GEAR LEG AND BRAKE FAIRINGS

These are excellent items for replacing worn plastic originals. Your fiberglass replacements will be more durable with an improved finish over the original plastics.

Photo	Description	Part No.	Price
	180/185 & oversize Brake Fairing RH (SA-0741059-2)	05-03804	.
	180/185 & oversize Brake Fairing LH (SA-0741059-1)	05-03805	.

WING & DORSAL TIPS

Wing tips are a common victim of hanger and ramp rash. Maybe you thought the plane was going to clear those doors as you wheeled it back into the hanger...the first indication that you were wrong was that grating sound as the wing tip met metal. Here's the solution: replacement fiberglass wing tips from Stene Aviation.

Photo	Description	Part No.	Price
----	180 Wing Tip (straight tip)- 1955-'67 (SA-0723615-200)	05-03797	.
	180/185 Wing Tip (small droop) 1969-'72 LH (SA-0523565-29)	05-03726	.
	180/185 Wing Tip (small droop) 1969-'72 RH (SA-0523565-30)	05-03727	.
----	180/185 Large Wing Tip 1962-'69 LH (SA-1223000-7)	05-03795	.
----	180/185 Large Wing Tip 1962-'69 RH (SA-1223000-8)	05-03796	.
	180/185 Wing Tip (small droop) 1973&on LH (SA-0723200-5)	05-03762	.
	180/185 Wing Tip (small droop) 1973&on RH (SA-0723200-6)	05-03761	.

CESSNA FIBERGLASS REPLACEMENT PARTS

CESSNA 182

What Makes These Composite Parts Such An Excellent Value?

- * Stronger than factory originals with no weight increase.
- * Easily repaired with locally available fiberglass kits if ever damaged.
- * Exact replacements of original equipment means easy installation.
- * Money back guarantee if not completely satisfied!

ELEVATORS & STABILIZERS

Here are some of our most popular items. These tips take a good deal of stress in just normal flying circumstances. They're also frequent victims of ramp rash. The original plastic simply can't stand up to the task as well as fiberglass replacements from Stene Aviation. Plus, if these parts ever do withstand damage, they're easily repaired with readily available fiberglass repair kits from you local automotive parts store.

Photo	Description	Part No.	Price
	182 Elevator Tip 1965&on LH (SA-1234608-3)	05-03777	.
	182 Elevator Tip 1965&on RH (SA-1234608-4)	05-03778	.
	182 Horizontal Tip 1956-'59 (SA-0732613-1)	05-03779	.
	182 Horizontal Tip 1965&on (SA-1232604-1)	05-03780	.

STRUT CUFFS

Here's an unbeatable item for renovating your Cessna; a set of replacement strut cuffs. Order just one cuff to replace a damaged original, or get a set of four for a complete replacement.

Photo	Description	Part No.	Price
	182 Strut Cuff Upper RH (SA-0723605-4)	05-03774	.
	182 Strut Cuff Upper LH (SA-0723605-3)	05-03773	.
	182 Strut Cuff Lower 1962&on RH (SA-0723612-4)	05-03776	.
	182 Strut Cuff Lower 1962&on LH (SA-0723612-3)	05-03775	.

RUDDER & VERTICAL FIN CAPS

These parts are a snap to replace on most planes. Please note, indicate if you have a straight tail or a swept tail. It is also important to let us know if your fin cap needs to accommodate a strobe or beacon, and if so, if the light is front-mounted or center-mounted.

Photo	Description	Part No.	Price
	182 Vertical Fin (small beacon) 1960-'66 and 1976&on (SA-1231064-1)	05-03784	.
	182 Vertical Fin (small beacon) 1967-'75 (SA-0731606-3)	05-03785	.
----	182 Rudder Top 1960-'66 and 1976&on (SA-0731606-9)	05-03793	.
	182 Rudder Top 1967-'75 (SA-0731606-6)	05-03792	.

TAILCONE

Replace your wore and cracked tailcone with a stronger than factory original fiberglass tailcone from Stene Aviation.

Photo	Description	Part No.	Price
	182 TailCone 1962&on (SA-1212010-15)	05-03794	.

GEAR LEG AND BRAKE FAIRINGS

These are excellent items for replacing worn plastic originals. Your fiberglass replacements will be more durable with an improved finish over the original plastics.

Photo	Description	Part No.	Price
	182 Upper Gear Leg 1972-'75 RH (SA-1741005-200)	05-03799	.
	182 Upper Gear Leg 1972-'75 LH (SA-1741005-201)	05-03801	.
----	182 Upper Gear Leg 1976&on RH (SA-1741052-200)	05-03802	.
	182 Upper Gear Leg 1976&on LH (SA-1741052-201)	05-03803	.
	182 Brake Fairing 1972-'74 RH (SA-0741634-18)	05-03806	.
	182 Brake Fairing 1972-'74 LH (SA-0741634-19)	05-03807	.
----	182 Brake Fairing 1975-'78 RH (SA-0741634-10)	05-03808	.
	182 Brake Fairing 1975-'78 LH (SA-0741634-11)	05-03809	.

WING & DORSAL TIPS

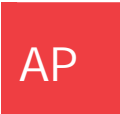
Wing tips are a common victim of hanger and ramp rash. Maybe you thought the plane was going to clear those doors as you wheeled it back into the hanger...the first indication that you were wrong was that grating sound as the wing tip met metal. Here's the solution: replacement fiberglass wing tips from Stene Aviation.

Photo	Description	Part No.	Price
	182 Wing Tip (small droop) 1969-'72 LH (SA-0523565-29)	05-03726	.
	182 Wing Tip (small droop) 1969-'72 RH (SA-0523565-30)	05-03727	.
	182 Wing Tip (small droop) 1973&on LH (SA-0723200-5)	05-03762	.
	182 Wing Tip (small droop) 1973&on RH (SA-0723200-6)	05-03764	.
----	182 Wing Tip (straight tip)-1955-'67 (SA-0723615-200)	05-03797	.

WHEEL PANTS

Replace your original plastic wheel pants with high quality and durable fiberglass replacements. All wheel pants come with a 2" access plug for checking tire pressure. Original hardware is required for mounting.

Photo	Description	Part No.	Price
	182 Wheel Pant 1975&on RH (SA-0541223-16)	05-03728	.
	182 Wheel Pant 1975&on LH (SA-0541223-17)	05-03729	.
	182 Nose Wheel Pant 1975&on (SA-0543079-3)	05-03730	.



CESSNA FIBERGLASS REPLACEMENT PARTS





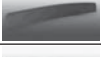


CESSNA 205/206/207/210

What Makes These Composite Parts Such An Excellent Value?

- * Stronger than factory originals with no weight increase.
- * Easily repaired with locally available fiberglass kits if ever damaged.
- * Exact replacements of original equipment means easy installation.
- * Money back guarantee if not completely satisfied!





ELEVATORS & STABILIZERS

Here are some of our most popular items. These tips take a good deal of stress in just normal flying circumstances. They're also frequent victims of ramp rash. The original plastic simply can't stand up to the task as well as fiberglass replacements from Stene Aviation. Plus, if these parts ever do withstand damage, they're easily repaired with readily available fiberglass repair kits from you local automotive parts store.

Image	Description	Part No.	Price
	206/207 Elevator Tips 1965-'67 LH (SA-1234608-3)	05-03777	.
	206/207 Elevator Tips 1965-'67 RH (SA-1234608-4)	05-03778	.
	206/207 Horizontal Tip 1967 & on (SA-1232012-1)	05-03833	.
	206/207 Horizontal Tip 1965-1967 (SA-1232604-1)	05-03780	.
	210 (1967 & on) Elevator Tips LH(SA-1234640-1 left hand)	05-03831	.
	210 (1967 & on) Elevator Tips RH (SA-1234640-2 right hand)	05-03832	.
	210 (1967 & on) Horizontal Tip (SA-1232012-1)	05-03833	.




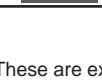
STRUT CUFFS

Here's an unbeatable item for renovating your Cessna; a set of replacement strut cuffs. Order just one cuff to replace a damaged original, or get a set of four for a complete replacement.

Image	Description	Part No.	Price
----	210 Strut Cuff Upper Right 1960-'63(SA-1227002-4)	05-03817	.
----	210 Strut Cuff Upper Left 1960-'63(SA-1227002-5)	05-03818	.
----	206/207 Strut Cuff Upper Right 1964-'71(SA-1227002-10)	05-03821	.
----	206/207 Strut Cuff Upper Left 1964-'71(SA-1227002-11)	05-03822	.
----	206/207 Strut Cuff Upper Right 1972&on(SA-1227005-6)	05-03826	.
----	206/207 Strut Cuff Upper Left 1972&on(SA-1227005-5)	05-03825	.
----	210 Strut Cuff Lower Right 1960&'61(SA-1227002-2)	05-03815	.
----	210 Strut Cuff Lower Right 1962&'63(SA-1227402-6)	05-03820	.
----	210 Strut Cuff Lower Left 1962&'63(SA-1227402-5)	05-03819	.
----	205 Strut Cuff Lower Right 1963&'64(SA-1227401-4)	05-03829	.
----	205 Strut Cuff Lower Left 1963&'64(SA-1227401-5)	05-03830	.
	206 Strut Cuff Lower Right 1964-'71(SA-1227402-4)	05-03824	.
----	206 Strut Cuff Lower Left 1964-'71(SA-1227402-3)	05-03823	.
	206/207 Strut Cuff Lower Right 1972&on(SA-1227010-2)	05-03828	.
	206/207 Strut Cuff Lower Left 1972&on(SA-1227010-1)	05-03827	.
	210 Strut Cuff Upper 1960-'63 RH(SA-1227002-4)	05-03817	.
	210 Strut Cuff Upper 1960-'63 LH(SA-1227002-5)	05-03818	.
----	210 Strut Cuff Lower 1960&'61 RH(SA-1227002-2)	05-03815	.




RUDDER & VERTICAL FIN CAPS

These parts are a snap to replace on most planes. Please note, indicate if you have a straight tail or a swept tail. It is also important to let us know if your fin cap needs to accommodate a strobe or beacon, and if so, if the light is front-mounted or center-mounted.

Image	Description	Part No.	Price
	205/206/207 Vertical Fin (small beacon) 1964-'67 and 1976&on (SA-1231064-3)	05-03786	.
	206/207 Vertical Fin (small beacon) 1967-'75 (SA-0731606-3)	05-03785	.
	206/207 Rudder Top 1967-'75 (SA-0731606-6)	05-03792	.
	205/206/207 Rudder Top 1964-'66 and 1976&on (SA-0731606-9)	05-03793	.





GEAR LEG AND BRAKE FAIRINGS

These are excellent items for replacing worn plastic originals. Your fiberglass replacements will be more durable with an improved finish over the original plastics.

Image	Description	Part No.	Price
----	207 Right Upper Gear Leg 1969&on(SA-1241217-2)	05-03813	.
	207 Left Upper Gear Leg 1969&on(SA-1241217-1)	05-03812	.
	206 Right Brake Fairing (Heavy Duty)(SA-1241232-2)	05-03837	.
	206 Left Brake Fairing (Heavy Duty) (SA-1241232-1)	05-03836	.

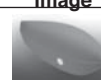


WING TIPS

Wing tips are a common victim of hanger and ramp rash. Maybe you thought the plane was going to clear those doors as you wheeled it back into the hanger...the first indication that you were wrong was that grating sound as the wing tip met metal. Here's the solution: replacement fiberglass wing tips from Stene Aviation.

Image	Description	Part No.	Price
	206 Wing Tip (small droop) 1969-'72 LH (SA-0523565-29)	05-03726	.
	207 Wing Tip (small droop) 1969&on LH (SA-0523565-29)	05-03726	.
	206 Wing Tip (small droop) 1973&on LH (SA-0723200-5)	05-03762	.
	206 Wing Tip (small droop) 1973&on RH(SA-0723200-6)	05-03764	.
----	210 Wing Tip 1971&on LH(SA-1221111-203)	05-03835	.
----	210 Wing Tip 1971&on RH(SA-1221111-202)	05-03834	.

WHEEL PANTS

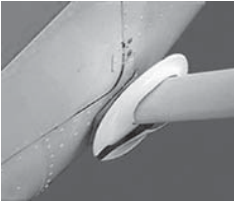
Replace your original plastic wheel pants with high quality and durable fiberglass replacements. All wheel pants come with a 2" access plug for checking tire pressure. Original hardware is required for mounting.

Image	Description	Part No.	Price
	206 Wheel Pant 1975&on RH (SA-0541223-16)	05-03728	.
	206 Wheel Pant 1975&on LH (SA-0541223-17)	05-03729	.
	206 Nose Wheel Pant 1975&on (SA-0543079-3)	05-03730	.

AP

CESSNA LIFT STRUT FAIRINGS

CESSNA LIFT STRUT FAIRINGS



These fairing kits consist of four wing strut fairings that slip over the lift struts. These fairings are better than those manufactured by Cessna because they are made of fiberglass rather than a royalite type material, that bends and cracks after a short time on the aircraft. Fiberglass has the following advantages over a royalite type material, it is approximately 6 times stronger and 12 times stiffer, it resists ultra violet light and weathers better, and it keeps its chemical composition intact much longer. With all these advantages, these will probably be the last lift strut fairings that will ever have to be installed on the aircraft. And even should these fairings be damaged through some unforeseen circumstances, being made of fiberglass, they will be easily repairable. These fairings are all split so they slip over the lift strut thus eliminating the need to disconnect the lift strut to install the fairing. With the average price of these lift strut fairings, it is the same as getting a 75% discount off equivalent Cessna lift strut fairings. We recommend, as with all plastics, they be painted for better UV protection. These kits are FAA STC'd and manufactured under a FAA/PMA authority.

Top Number is Aircraft Spruce Part Number. Second number is the Cessna part number.

CESSNA MODELS	RH WING	LH WING	RH FUSELAGE	LH FUSELAGE	KIT
150 and 152	05-01557 0522150-4	05-01558 0522150-3	05-01564 0421002-2-791	05-01565 0421002-1-791	05-01598
170A & B	05-01557 0522150-4	05-01558 0522150-3	05-01559 0522150-2	05-01562 0522150-1	05-01599
172 to 172L	05-01557 0522150-4	05-01558 0522150-3	05-01559 0522150-2	05-01562 0522150-1	05-01599
172M to 172S & SP P172D, 172RG, R172K (172XP)	05-01583 0523047-2	05-01586 0523047-1	05-01559 0522150-2	05-01562 0522150-1	05-01601
175	05-01557 0522150-4	05-01558 0522150-3	05-01559 0522150-2	05-01562 0522150-1	05-01599
180	05-01566 0723605-4-791	05-01567 0723605-3-791	05-01568 0723605-2-791	05-02489 0723605-1-791	05-01602
182 to 182D	05-01566 0723605-4-791	05-01567 0723605-3-791	05-01568 0723605-2-791	05-02489 0723605-1-791	05-01602
182E to 182S R182, T182, TR182	05-01566 0723605-4-791	05-01567 0723605-3-791	05-01569 0723612-4-791	05-01570 0723612-3-791	05-01603
185 to 185E A185E, A185F	05-01566 0723605-4-791	05-01567 0723605-3-791	05-01568 0723605-2-791	05-02489 0723605-1-791	05-01602
205 , 205A	05-01571 1227002-10-791	05-01573 1227002-11-791	Not Available	Not Available	Not Available
206, P206, TP206, U206, TU206, all to E	05-01571 1227002-10-791	05-01573 1227002-11-791	05-01594 1227402-4-791	05-01595 1227402-3-791	05-01604
U206F, TU206F, all to SN 206-02200 to 1986	Not Available	Not Available	05-01596 1227010-2	05-01597 1227010-1	Not Available
U206, TU206, from SN U206-2576 to 1986	05-01591 1227005-6	05-01593 1227005-5	05-01596 1227010-2	05-01597 1227010-1	05-01605
207, 207A, T207, T207A, From S/N 207-00255 to 1984	05-01591 127005-6	05-01593 127005-5	05-01596 1227010-2	05-01597 1227010-1	05-01605
207, 207A, T207, T207A From S/N 207-00001 to 1984	Not Available	Not Available	05-01596 1227010-2	05-01597 1227010-1	Not Available
210F to K, T210F to K S/N 21058716/58818 & T21001/0197	05-01571 1227002-10-791	05-01573 1227002-11-791	05-01594 1227402-4-791	05-01595 1227402-3-791	05-01604

AP



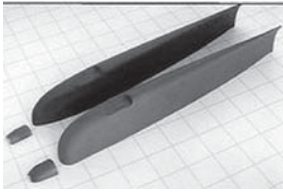
CESSNA LANDING GEAR STRUT FAIRINGS

These fuselage landing gear strut fairings that slip over the landing gear struts are better than those manufactured by Cessna because they are made of fiberglass rather than a royalite type material, that bends and cracks after a short time on the aircraft. Fiberglass has the following advantages over a royalite type material, it is approximately six times stronger and 12 times stiffer, it resists ultra violet light and weathers better, and it keeps its chemical composition intact much longer. With all these advantages these will probably be the last landing gear strut fairings that will ever have to be installed on the aircraft. And even should these fairings be damaged through some unforeseen circumstances, being made of fiberglass, they will be easily repairable. They are all split so they slip over the landing gear strut. These kits are manufactured under a FAA PMA authority. Top line is Cessna part number. Middle line is Aircraft Spruce part number. Bottom line is price.

advantages these will probably be the last landing gear strut fairings that will ever have to be installed on the aircraft. And even should these fairings be damaged through some unforeseen circumstances, being made of fiberglass, they will be easily repairable. They are all split so they slip over the landing gear strut. These kits are manufactured under a FAA PMA authority. Top line is Cessna part number. Middle line is Aircraft Spruce part number. Bottom line is price.

Cessna Model	LH Fuselage	RH Fuselage
150L, 150M, A150L, A150M, 152, A152	0441217-215 PN 05-03495	0441217-214 PN 05-03501
172L thru 172R, R172K (172XP), 172SP	1741005-239 PN 05-03496	1741005-240 PN 05-03502 \$130.00
182P S/N18260826 to 18263475 AND 182P S/N18263476 to 18264295	1741005-201 PN 05-03497	1741005-200 PN 05-03503
182P From S/N18264296, 182Q, 182R, 182S, T182R	0741052-201 PN 05-03499	0741052-200 PN 05-03505

CESSNA WING TIPS - EMPENNAGE TIPS



CESSNA WING TIPS

These wing tip kits consist of a left and right hand drooped fiberglass wing tip. These wing tips are better than those manufactured by Cessna because they are made of fiberglass rather than a royalite type material, that bends and cracks after a short time on the aircraft. The superior epoxy rather than polyester fiberglass is used. Epoxy fiberglass has major advantages over a royalite type material; It is approximately six times stronger and twelve times stiffer, it resists ultraviolet light and weathers better, and it keeps its chemical composition intact much longer. With all these advantages, they will probably be the last wingtips that will ever have to be installed on the aircraft. Should these wing tips be damaged through some unforeseen circumstances, they are easily repairable due to their fiberglass construction. These kits are FAA STC'd and manufactured under a FAA PMA authority. The STC allows you to install these

modern drooped wing tips, even if your aircraft was not originally manufactured with this newer, more aerodynamically efficient wingtip. *Does not include the Plate lens. Plate lens must be purchased separately. **Kits includes the left hand wing tip, right hand wing tip, hardware, and the plate lens

Cessna Models	Kit No.**	Price Per Kit
All 150, A150, 152, A152, 170A & B, P172, 175, 205 & L19, 172, 180, 185 for model year up through 1972.182, 206 for model year up through 1971, 207 from 1970 and up	05-01526 (219-100)	
172, R172K(172XP), 172RG, 180, 185 for model year 1973 and up, 182, 206 for model year 1972 and up.	05-01545 (219-200)	



EMPENNAGE TIPS

All parts made of fiberglass and FAA/PMA approved. Top line is Aircraft Spruce part number, middle line is Cessna part number. Bottom line is price.

Cessna Models	Tip Vertical Fin	Tip Upper Rudder	Tip Lower Rudder
150F and up, A150, 152, A152			05-01518 0431005-1-791
150F to 150L, A150K, A150L No Beacon	05-01519 0431013-3-791		
150M and up, A150M and up, 152, A152	05-01520 0430011-1	05-01521 0430011-2	
172K and up, 172RG, R172K(172XP)			05-01522 0531006-80-791
172 1976 and up, 172RG, R172K(172XP)		05-01523 0531006-112	
172A to 172I No Beacon	05-01524 0531006-33-791	05-03508 053100634-791	

Cessna Models	Tip Horizontal Fin L/H	Tip Horizontal Fin R/H	Tip Elev. L/H	Tip Elev. R/H
150D, and up, A150, 152, A152	05-01513 0430004-11-791	05-01513 0430004-11-791	05-01514 0430004-10-791	05-01514 0430004-10-791
172D and up, P172, R172K (172XP) 172RG	05-01515 0532001-93-791	05-01515 0532001-93-791	05-01517 0532001-94-791	05-01516 0532001-100-791

CESSNA FLAP GAP-SPEED KIT

Cessna flap gap speed kit consists of a gap seal on the lower flap gap that is an extension of the lower wing skin from the rear spar to the leading edge of the flap. The seal eliminate a high drag area plus reduce the amount of air leaking from the high pressure underside of the wing to the low pressure top side of the wing. The reduction in air leakage allows the wing to fly at a lower angle of attack for the same amount of lift, thus reducing drag. Please note Aircraft Development does not recommend installing a flap gap kit on those aircraft with wet wings because of the difficulty of resealing the wings to a gas leak free condition. This flap gap-kit is FAA STC'd and manufactured under a FAA PMA authority. Also available is a hardware kit 114H containing enough hardware to install the flap gap kit.

Cessna Models	Flap Gap Kit No.	Price	Hardware Kit No.	Price
170B, 172, 172A, 172B, 172C, 172D, 172E, 172F, (USAF T-41A) 172G, 172H, (USAF T-41A), 172I, 172K, 172L, 172M, 172N, 172P, 172Q, 175, 175A, 175B, 175C, P172D, R172E (USAF T-41B), (USAF T-41C & D), R172F (USAF T-41D), R172G (USAF T-41C or D), R172H (USAF T-41D), R172J, R172K Known as 172XP, 172RG, 180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K, 182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, R182, T182, T182R, TR182, 185, 185A, 185B, 185C, 185D, 185E, A185E, A185F, 210-5 (205), 210-5A (205A), 210, 210A, 210B, 210C	05-01620 (114-100)		05-01621 (114H)	
150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, A150K, 150L, A150L, 150M, A150M, 152, A152	05-01622 (114-200)		05-01621 (114H)	

115-100 CESSNA AILERON GAP KIT

Cessna aileron gap kit consists of gap seals on the lower and upper aileron gaps that is an extension of the lower and upper wing skin from the rear spar to the leading edge of the aileron. The seals eliminate a high drag area plus reduce the amount of air leaking from the high pressure underside of the wing to the low pressure top side of the wing. The reduction in air leakage allows the wing to fly at a lower angle of attack for the same amount of lift, thus reducing drag. This aileron gap-speed kit is FAA STC'd and manufactured under a FAA PMA authority. Also available is a hardware kit 115H containing enough rivets to install the aileron gap kit.

Cessna Models	Aileron Gap Kit No.	Price	Hardware Kit	Price
150, A150, 152, A152, 170B, 172, 175, 180, 182, 185, 205, 210 through 210C	05-01623 (115-100)		05-01624 (115H)	

PIPER PARTS

(FAA/PMA APPROVED)

PIPER NOSE COWLING (ALL METAL)



PA 20-22



PA 18

J-3 & PA-11

Description	P/N	Price
PA-11, For cowls using screws	05-07295	
PA-11, For cowls using Lion fasteners	05-07305	
J-3 Eyebrow baffle LH	05-00061	
J-3 Eyebrow baffle RH	05-00062	
Front piece for Top cowl	05-00063	
Top cowl for J-3	05-00064	
Bottom cowl for Continental powered J-3	05-00065	
Front piece for bottom cowl	05-00066	
Fuselage cowl	05-00067	
Top cowl for PA-11	05-00068	
Bottom cowl for PA-11	05-00069	
Side cowl for PA-11LH	05-00071	
Side cowl for PA-11 RH	05-00072	

PA-12

Bottom cowl	05-00078	
Top cowl	05-00079	
Fuselage cowl	05-00081	
Left side cowl	05-00082	
Right side cowl	05-00083	

PA-12 & 14

Nose cowl for all serial numbers	05-07310	
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PA-18 (95 HP)

PA-18, For cowls using screws	05-07295	
PA-18, For cowls using Lion fasteners	05-07305	
Left side cowl, used w/shielded ignition lead	05-00073	
Right side cowl, used w/shielded ignition lead	05-00074	
Top cowl	05-00075	
Bottom cowl	05-00076	
Bottom cowl, installed w/machine screws	05-00077	

PA-18 - 105, 125, 135, 150 HP

Fuselage cowl, S/N 2168-5938,105,125,135HP	05-00089	
Fuselage cowl, S/N 5939-8019, 135, 150 HP	05-00091	
Fuselage cowl, S/N 8020 and up, 150 HP	05-00092	
PA-18-105 thru 125 HP, no starter hole	05-07315	
PA-18-105 thru 125 HP, with starter hole	05-07320	
PA-18-135 & 150 HP, w/starter hole & oil scoop	05-07325	
PA-18-135 & 150 HP, w/oil scoop, no starter hole	05-07330	
Top cowl, 105 HP	05-00093	
Top cowl, 125, 135, 150 HP	05-00094	
Left side cowl, 105 HP	05-00095	
Right side cowl, 105 HP	05-00096	
Left side cowl, 125, 135, 150 HP	05-00097	
Right side cowl, 125, 135, 150 HP	05-00098	
Lower cowl ass'y, 135 HP, S/N 3014 thru 4617	05-00099	
Lower cowl ass'y, 150 HP, S/N 3771 thru 6963	05-00101	
Lower cowl ass'y, 150 HP, S/N 6964 and up	05-00102	

PA-20 & PA-22

PA-22-108, S/N 8000 & up, w/o oil scoop	05-07345	
PA-20 Nose cowl, 115 HP	05-07335	
PA-22 Nose cowl, S/N 1 thru 533	05-07335	
PA-20 Nose cowl, 135 HP	05-07340	
PA-20 Bottom cowl, 125 HP	05-00049	
PA-20 Bottom cowl, 135 HP	05-00051	
PA-22 Bottom cowl, 125 HP, S/N 1 - 353	05-00052	
PA-22 Bottom cowl, 125 HP, S/N 354 - 533	05-00053	
PA-22 Bottom cowl, 125 HP, S/N 534 - 1759	05-00054	
PA-22 Bottom cowl,135-160HP,S/N 1760-7630	05-00055	
PA-22(Colt) Bottom cowl, 108HP,S/N 8000 & up	05-00056	
PA-22 Left side cowl	05-00057	
PA-22 Right side cowl	05-00058	
PA-20/22 Top center cowl	05-00059	
PA-25 Pawnee Nose cowl, 150 HP	05-07340	

ONE PIECE STAMPED ALUMINUM RIBS (STC APPROVED)



These durable ribs are direct replacements for the original style "Truss" type ribs originally used by Piper. These ribs are designed for the various modes of Piper including J-3 and PA-18 with metal spars. The ribs listed are the more commonly requested ribs for this series.

Description	Part No.	Replaces	Price
Nose Rib	05-07365	12662-002	
Nose Rib, Tip L/H	05-07370	16192-000	
Nose Rib, Tip R/H	05-07375	16192-001	
Full Rib	05-07380	13052-002	
Full Butt Rib, L/H	05-07385	10634-000	
Full Butt Rib, R/H	05-07390	10634-008	
Full Tank Bay Rib, L/H	05-07395	10653-000	
Full Tank Bay Rib, R/H	05-07405	10653-006	
Full I.B. Ail. Bay, L/H	05-07410	13042-000	
Full I.B. Ail. Bay, R/H	05-07415	13042-001	
Full O.B. Ail. Bay, L/H	05-07420	12902-000	
Full O.B. Ail. Bay, R/H	05-07425	12902-001	
3/4 Rib	05-07430	13022-002	
3/4 Butt Rib, L/H	05-07435	10634-005	
3/4 Butt Rib, R/H	05-07440	10634-007	
3/4 Tank Bay Rib	05-02397	10635-002	

STABILIZER LINER TUBE



Link Assembly Liner Tube (upper tube in picture)
(80132-11) P/N 05-07450

Rear Liner Tube (lower tube in picture)
(80132-10) P/N 05-07455



WING NAVIGATION LIGHT BRACKET

For use with Grimes Model "E" Type Light or equivalent..... P/N 05-07460

ENGINE MOUNTS

J-3 Continental Mount	P/N 05-00873
PA-11 Mount	P/N 05-00874



STABILIZER YOKE & ADJUSTMENT SCREW

Yoke P/N 05-07465

Adjustment Screw P/N 05-07470



J-3, PA-11, PA-18

Left Gear, uncovered P/N 05-07350

Right Gear, uncovered P/N 05-07355

PIPER PA28/32/34 GLARESHIELDS



These beautiful new Glareshields are designed for the Piper models PA28, PA32 and PA34. The new Glareshield is made of FAA approved temperature stable Lexan covered with sound proofing foam and a new non-glare vinyl that looks like leather. With a 3 inch eyebrow over the instrument panel, it not only adds beauty to your plane but also improves forward visibility. The new Glareshield is easy to install and comes with

all hardware and detailed instructions.

(PIPER PA28) P/N 05-02221

(PIPER PA32 & 34) P/N 05-02222

(PIPER C MODEL) P/N 05-02223



PIPER HEATER TEMPERATURE CONTROL LOCK

For years Piper PA28 and PA32 owners have been plagued with a Heater Temperature Control that will not stay positioned. With cold weather upon us, this situation can make winter flying very uncomfortable. This Heater Temperature Control Lock that can be installed in minutes and provides a positive adjustable lock for the Heater Control Lever..... P/N 08-04939

AP

PIPER THROTTLE CONTROLS

Throttle Controls					Mixture Controls				
Model	Serial Number	P/N	Our P/N	Price	Model	Serial No.	P/N	Our P/N	Price
PA20,PA20S,PA20-115	20-1 thru 20-933	455-139	05-01743		PA-18,PA-18S,PA-18"105"	All	600-72	05-01254	
PA20S-115,PA20-135	20-934 thru 20-1121	455-139	05-01743		PA18S"105",PA-18A,PA-18"125"	All	600-72	05-01254	
PA20S-135	20-934 thru 20-1121	455-139	05-01743		PA-18S"125",PA-18AS"125"	All	600-72	05-01254	
PA22 (125hp)	22-1 thru 22-533	455-139	05-01743		PA-18"135", PA-18S"135"	All	600-72	05-01254	
PA22-135	22-534 thru 22-2377	455-139	05-01743		PA-18A"135",PA-18AS"135"	All	600-72	05-01254	
PA22-135	22-2379 thru 22-2424	455-139	05-01743		L-21A, L-21B, PA-18"150"	All	600-72	05-01254	
PA22-135,PA22S-135	22-2378, 22-2425 thru 22-3217	12693-04	05-02209		PA-18A"150", PA-18S"150"	All	600-72	05-01254	
PA22-135,PA22S-135	22-3219 thru 22-3386	12693-04	05-02209		PA-18AS"150"	All	600-72	05-01254	
PA22-150,PA22S-150	22-2378, 22-2425 thru 22-7642	12693-04	05-02209		PA-19, PA-19S, L-18C	All	600-72	05-01254	
PA22-160,PA22S-160	22-5139, 22-5603 thru 22-7642	12693-04	05-02209		PA-20, PA-20S, PA-20-115	All	600-72	05-01254	
PA22-108	22-8000 and On	12693-04	05-02209		PA-20S-115,PA-20-135,PA-20S-135	All	600-72	05-01254	
PA28-140	28-20002 thru 28-24999	12693-04	05-02209		PA-22, PA-22-108, PA-22-135	All	600-72	05-01254	
PA28-140	28-25000 thru 28-26956	455-353			PA-22S-135, PA-22-150, PA-22S-150	All	600-72	05-01254	
PA28-140	28-7125001 thru 28-7725290	455-353			PA-22-160, PA-22S-160	All	600-72	05-01254	
PA28-150	28-1 thru 28-4377	12693-04	05-02209		PA-24-180	All	600-72	05-01254	
PA28-151	28-7415001 thru 28-7715314	455-350	05-01745		PA-24-250	All	600-72	05-01254	
PA28-160	28-1 thru 28-4377	12693-04	05-02209		PA-24-260	All with Carbureted Engine	600-72	05-01254	
PA28-161	28-7716002 thru 28-8616057	455-350	05-01745		PA24-400	26-2 thru 26-148	22633-04	05-01757	
PA28-161	2816001 thru 2816110 (Less 2816066)	455-350	05-01745		PA-28-140	28-20002 thru 28-24999	600-72	05-01254	
PA28-161 Cadet	2841001 and On	455-350	05-01745		PA-28-150, PA-28-160	28-1 thru 28-4377	600-72	05-01254	
PA28-180	28-671 thru 28-4377	12693-04	05-02209		PA-28S-160	28-1 thru 28-1760	600-72	05-01254	
PA28-180	28-4378 thru 28-5152	455-333	05-01746		PA-28-180, PA-28S-180	28-671 thru 28-4377	600-72	05-01254	
PA28-180	28-5153 thru 28-5869	455-350	05-01745		PA-28-235	28-10003 thru 28-11038	600-72	05-01254	
PA28-180	28-7105001 thru 28-7505261	455-350	05-01745		PA28-140	28-25000 thru 28-26956	455-352	05-01755	
PA28R-180	28R-30005 thru 28R-30481	455-322	05-01747		PA28-140	28-7125001 thru 28-7725290	455-352	05-01755	
PA28R-180	28R-30483 thru 28R-31279	455-322	05-01747		PA28-151	28-7415001 thru 28-7715314	455-352	05-01755	
PA28R-180	28R-7130001 thru 28R-7130019	455-322	05-01747		PA28-161	28-7716002 thru 28-8616057	455-352	05-01755	
PA28-181	28-7690001 thru 28-8290174	455-350	05-01745		PA28-161	2816001 thru 2816110 (Less 2816066)	455-352	05-01755	
PA28-181	28-8390001 and On	455-350	05-01745		PA28-161 Cadet	2841001 and On	455-352	05-01755	
PA28-201T	28-7921001 thru 28-7921095	455-322	05-01747		PA28-180	28-4378 thru 28-5152	455-332	05-02212	
PA28R-200	28R-30482,28R-35001 thru 28R-35830	455-322	05-01747		PA28-180	28-5153 thru 28-5869	455-352	05-01755	
PA28R-200	28R-7135001 thru 28R-7635545	455-322	05-01747		PA28-180	28-7105001 thru 28-7505261	455-352	05-01755	
PA28R-201	28R-7737002 thru 28R-7837317	455-322	05-01747		PA28-180	28R-30005 thru 28R-30481	455-322	05-01747	
PA28R-201	2837001 thru 2837061	455-322	05-01747		PA28R-180	28R-30483 thru 28R-31279	455-322	05-01755	
PA28R-201T	28R-7703002 thru 28R-7803372	455-322	05-01747		PA28R-180	28R-7130001 thru 28R-7130019	455-322	05-01755	
PA28R-201T	2803001 thru 2803015	455-322	05-01747		PA28-181	28-7690001 thru 28-8290174	455-352	05-01755	
PA28RT-201	28R-7918001 thru 28R-8018116	455-322	05-01747		PA28-181	28-8390001 and On	455-352	05-01755	
PA28RT-201	28R-8118001 and On	455-322	05-01747		PA28-181	28-7921001 thru 28-7921095	455-322	05-02213	
PA28RT-201T	28R-7931001 thru 28R-8031188	455-322	05-01747		PA28R-200	28R-30482,28R-35001 thru 28R-35830	455-322	05-01755	
PA28RT-201T	28R-8131001 and On	455-322	05-01747		PA28R-200	28R-7135001 thru 28R-7635545	455-322	05-01755	
PA28-235	28-10003 thru 28-11039	12693-04	05-02209		PA28R-201	28R-7737002 thru 28R-7837317	455-322	05-01755	
PA28-235	28-11040 thru 28-11393	455-333	05-01746		PA28R-201	2837001 thru 2837061	455-322	05-01755	
PA28-235	28-7110001 thru 28-7210033	455-333	05-01746		PA28R-201T	28R-7703002 thru 28R-7803372	455-361	05-02213	
PA28-235	28-7310001 thru 28-7710089	455-333	05-01746		PA28R-201T	2803001 thru 2803015	455-361	05-02213	
PA28-236	28-7911001 thru 28-8211060	455-333	05-01746		PA28RT-201	28R-7918001 thru 28R-8018116	455-322	05-01757	
PA28-236	28-8311001 and On	455-333	05-01746		PA28RT-201	28R-8118001 and On	455-322	05-01757	
PA32-260	32-1111 thru 32-1320	455-360	05-01748		PA28RT-201T	28R-7931001 thru 28R-8031188	455-361	05-02213	
PA32-260	32-7100001 thru 32-7800008	455-360	05-01748		PA28RT-201T	28R-8131001 and On	455-361	05-02213	
PA32-300	32-40000 thru 32-40565	69530-02			PA28-235	28-11040 thru 28-11393	455-332	05-02212	
PA32-300	32-40566 thru 32-41018	455-358	05-01749		PA28-235	28-7110001 thru 28-7210033	455-332	05-02212	
PA32-300	32-7140001 thru 32-7940282	455-358	05-01749		PA28-235	28-7310001 thru 28-7710089	455-332	05-02212	
PA32-301	32-8006001 thru 32-8406020	455-358	05-01749		PA28-236	28-7911001 thru 28-8211060	455-332	05-02212	
PA32-301	32-8506001 and On	455-358	05-01749		PA28-236	28-8311001 and On	455-332	05-02212	
PA32-301T	32-8024001 thru 32-8424002	455-344	05-01750		PA28-236	28-811001 and On	455-332	05-02212	
PA32-301T	32-8524001 and On	455-344	05-01750		PA32-260	32-1111 thru 32-1320	455-361	05-02213	
PA32R-301T	32R-8029001 thru 32R-8229078	455-360	05-01748		PA32-260	32-7100001 thru 32-7800008	455-361	05-02213	
PA32R-301T	32R-8329001 and On	455-360	05-01748		PA32-301T	32-8024001 thru 32-8424002	455-344	05-01750	
PA32RT-300T	32R-7887001 thru 32R-7987146	455-360	05-01748		PA32-301T	32-8524001 and On	455-344	05-01750	
					PA32R-301T	32R-8029001 thru 32R-8229078	455-360	05-01748	
					PA32R-301T	32R-8329001 and On	455-360	05-01748	
					PA32RT-300T	32R-7887001 thru 32R-7987146	455-360	05-01748	

AP

Prop Controls					Throttle Control for Bellanca Viking Aircraft P/N S191783-18				
Model	Serial Number	P/N	Our P/N	Price	Model	Serial Number	P/N	Our P/N	Price
PA24-250	24-105 thru 24-2174	455-184	05-02214		17-30A	30263 & On, and aircraft w/S/N prefix: "75"			05-01763
PA24-250	24-2176 thru 24-2298	455-184	05-02214		17-31A	73-32-128 & On, and aircraft w/ S/N prefix "75-"			05-01763
PA24-250	24-2175, 24-2299 thru 24-3687	455-252	05-02215		17-31ATC	73-31067 & On, and aircraft w/S/N prefix "75-"			05-01763
PA24-260	24-3642, 24-4000 thru 24-4782	455-252	05-02215						
PA24-260	24-4784 thru 24-4803	455-252	05-02215						
PA28R-180	28R-30005 thru 28R-30481	455-322	05-01747						
PA28R-180	28R-30483 thru 28R-31279	455-322	05-01747						
PA28R-180	28R-7130001 thru 28R-7130019	455-322	05-01747						
PA28-201T	28-7921001 thru 28-7921095	455-322	05-01747						
PA28R-200	28R-30482	455-322	05-01747						
PA28R-200	28R-35001 thru 28R-35830	455-322	05-01747						
PA28R-200	28R-7135001 thru 28R-7635545	455-322	05-01747						
PA28R-201	28R-7737002 thru 28R-7837317	455-322	05-01747						
PA28R-201	2837001 thru 2837061	455-322	05-01747						
PA28R-201T	28R-7703002 thru 28R-7803372	455-322	05-01747						
PA28R-201T	2803001 thru 2803015	455-322	05-01747						
PA28RT-201	28R-7918001 thru 28R-8018116	455-322	05-01747						
PA28RT-201	28R-8118001 and On	455-322	05-01747						
PA28RT-201T	28R-7931001 thru 28R-8031188	455-322	05-01747						
PA28RT-201T	28R-8131001 and On	455-322	05-01747						
PA28-235	28-7310001 thru 28-7710089	455-344	05-01750						
PA28-236	28-7911001 thru 28-8211060	455-344	05-01750						
PA28-236	28-8311001 and On	455-344	05-01750						
PA32-300	32-40000 thru 32-40565	65451-04	05-02216						

Throttle Controls for Grumman Aircraft				
Model	Serial Number	P/N	Our P/N	Price
AA-1	AA1-0433 and On	507005-1		05-01760
AA-1A	AA1A-0001 and On	507005-1		05-01760
AA-1B	AA1B-0001 and On	507005-1		05-01760
AA-1C	AA1B-0601	507005-1		05-01760
AA-1C	AA1C-0001 and On	507005-1		05-01760
AA-5	AA5-0001 and On	507005-2		05-01761
AA-5A	AA5A-0283 and On	507005-2		05-01761
AA-5B	AA5B-0001 and On	507005-3		05-01762

FAA-PMA Approved Throttle Controls for aircraft manufactured by Grumman American, Gulfstream Aerospace Corp. or Tiger Aircraft LLC. McFarlane Aviation has developed a longer conduit terminal that allows extra clearance between the swivel joint and the air filter box at the clamp location.

PIPER PARTS

(FAA/PMA APPROVED)

SPINNER ASSEMBLIES & COMPONENTS



Short Spinner Assembly for Piper Models PA-12, PA-16, PA-18, PA-20 & PA-22 with O-235 or O-290 engines with AM series Sensenich propellers.

Spinner Dome	P/N 05-07670
Front Plate	P/N 05-07675
Back Plate	P/N 05-07680
Complete Assembly	P/N 05-07685
PA-25 Spinner Components	
Assembly for Fixed Pitch Propellers serial numbers 2986-3691	
Dome Only	P/N 05-07690
Back Plate	P/N 05-07695
Front Plate	P/N 05-07705
Complete Assembly	P/N 05-07710
Spinner Components for 235 hp. with FA8452 McCauley Propeller.	
Dome Only	P/N 05-07715
Back Plate	P/N 05-07720
Front Plate	P/N 05-07725
Spinner Assembly for PA-18/18A, 150 hp.	
Spinner Dome	P/N 05-07730
Front Plate	P/N 05-07735



Back Plate P/N 05-07740.....
Complete Assembly P/N 05-07745.....

RIB KITS FOR PIPERS

Description	P/N	Price
J3 RIB KIT (LH)	05-02373	.
J3 RIB KIT (RH)	05-02374	.
PA18-150 RIB KIT (LH)	05-02375	.
PA18-150 RIB KIT (RH)	05-02376	.

INDIVIDUAL RIBS FOR PIPERS J-3

Piper#	Our P/N	Description	Price	# Per Wing
10742-002	05-02407	Tip Rib, LH #13	.	1
10742-003	05-02394	Tip Rib, RH #13	.	1
12662-002	05-02389	Nose Rib	.	10
12902-000	05-02387	Outboard Aileron Bay Rib, LH #12	.	1
12902-001	05-02393	Outboard Aileron Bay Rib, RH #12	.	1
13022-002	05-02386	3/4 Rib, #10 and #11	.	2
13022-002	05-02383	3/4 Rib, LH or RH #7	.	1
13022-002	05-02384	3/4 Rib, LH or RH #8	.	1
13022-005	05-02382	3/4 Rib, LH or RH #6	.	1
13022-006	05-02385	3/4 Rib, #9 at strut point	.	1
13042-000	05-02381	Inboard Aileron Bay Rib, LH #5	.	1
13042-001	05-02392	Inboard Aileron Bay Rib, RH #5	.	1
13052-002	05-02379	Full Rib, LH or RH #2	.	1
13052-002	05-02380	Full Rib, #3 and #4	.	2
13052-004	05-02378	Butt Rib, LH #1	.	1
13052-004	05-02391	Butt Rib, RH #1	.	1
15712-000	05-02390	Nose Rib at strut point	.	1
16192-000	05-02377	Tip Nose Rib, LH	.	1
16192-001	05-02395	Tip Nose Rib, RH	.	1

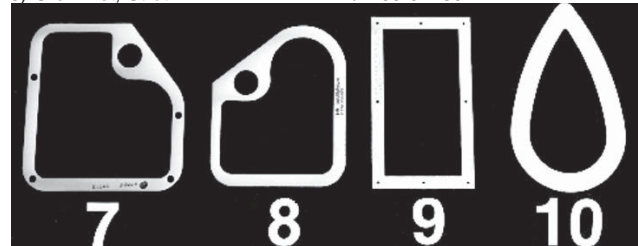
PA-18 150 HP.

Piper#	Our P/N	Description	Price	# Per Wing
10634-005	05-02396	Butt Rib, LH #1	.	1
10634-007	05-02404	Butt Rib, RH #1	.	1
10635-002	05-02397	Tank Bay Rib, #2 and #3	.	2
10653-002	05-02398	3/4 Rib, LH #4	.	1
10653-005	05-02405	3/4 Rib, RH #4	.	1
10742-002	05-02388	Tip Rib, LH #16	.	1
10742-003	05-02394	Tip Rib, RH #16	.	1
12662-002	05-02389	Nose Rib	.	10
12902-000	05-02387	Outboard Aileron Bay Rib, LH #15	.	1
12902-001	05-02393	Outboard Aileron Bay Rib, RH #15	.	1
13022-002	05-02386	3/4 Rib, #10, #13 and #14	.	3
13022-009	05-02385	3/4 Rib, LH or RH, #11	.	1
13022-010	05-02403	3/4 Rib, LH or RH, #8	.	1
13022-011	05-02386	3/4 Rib, LH or RH, #9 and #12	.	2
13042-002	05-02402	3/4 Rib, LH #7	.	1
13042-003	05-02407	3/4 Rib, RH #7	.	1
13052-007	05-02399	3/4 Rib, LH or RH, #5	.	1
13052-009	05-02406	3/4 Rib, RH #6	.	1
13052-010	05-02401	3/4 Rib, LH #6	.	1
15712-000	05-02390	Nose Rib at strut point	.	1
16192-000	05-02377	Tip Nose Rib, LH	.	1
16192-001	05-02393	Tip Nose Rib, RH	.	1

COMMON PIPER GROMMETS

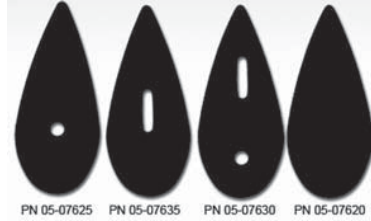


- 1) Grommet, Tail P/N 05-07750.....
- 2) Grommet P/N 05-07755.....
- 3) Grommet P/N 05-07765.....
- 4) Grommet P/N 05-07770.....
- 5) Grommet, Inspection Plate (original Piper type: 80122-49) P/N 05-07775.....
- 6) Grommet, Strut..... P/N 05-07780.....



- 7) Grommet, Tail (used on PA-25 and later PA-18's) P/N 05-07785.....
- 8) Grommet, Tail P/N 05-07790.....
- 9) Grommet, Cover..... P/N 05-07795.....
- 10) Grommet, Pulley Cover..... P/N 05-07800.....

PIPER FABRIC REINFORCEMENTS



Model	Deminsion	Part No.	Price
U60863-005	2"W x 4-1/2"L	05-07625	
U60863-003	2"W x 4-1/2"L	05-07635	
U60863-002	2"W x 4-1/2"L	05-07630	
U60481-000	2"W x 4-1/2"L	05-07620	
U60863-009	2"W x 2-1/2"L	05-07640	



J-3 FUEL VALVE

This J-3 fuel valve includes a steel handle for use with the original pushpull shut off control. This valve is a significant improvement over the original brass style fuel valve. The new valve has a stainless steel ball seated in an inert composite seat. This improved design eliminates the stiff operation and leaking around the shaft that the original design was prone to. PMA approved. P/N 05-00848.....



J-3/PA-11 THROTTLE CONTROL

FAA approved replacement throttle control.

P/N 05-03397.....

FLEXIBLE RUBBER BRAKE LINE



From brake master cylinder to copper lines on gear vee.

P/N 05-07530.....



OIL PRESSURE HOSE

P/N 05-07360.....



WING TIP BOWS

Preformed wooden wing tip bows for use in all Piper Aircraft Models J-3 to PA-22. It is recommended to soak the wing tip bows in water before

installation to avoid breakage.

P/N 02-18500/ea.

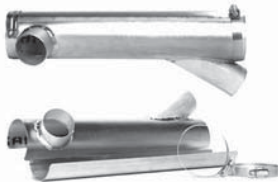
Note: Wing tip bows can be shipped via UPS with an oversized package rate equal to the 30 Lb. rate.

AP

PIPER PARTS

HEAVY DUTY MUFFLER

Heavy Duty Muffler STC/PMA
P/N 05-03475



PRE-HEAT SHROUD PA-18

Pre-heat shroud PA-18 STC/PMA
P/N 05-03457

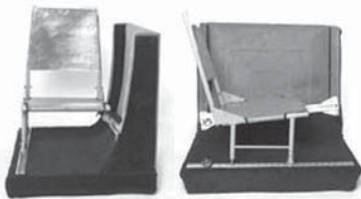


HEADER TANKS

Front: 05-03468 Rear: 05-03469 PA-18, PA-19 STC
Heater Tanks - Front ...05-03468

AP

FOLDING JUMP SEATS



Folding Jump Seats - 170, 172, 172S, 175, 180, 180K, 182, 182R, 185, A185F STC/PMA

Description	Part No.	Price
Folding Jump Seats - Right hand Pair	05-03470	
Folding Jump Seats left Hand Pair	05-03472	
Description	Part No.	Price
Folding Jump Seat Right Hand Single	05-03471	
Folding Jump Seats Left Hand Single	05-03473	



FOLDING FRONT SEAT KIT

Folding Front Seat Kit STC
P/N 05-03474



SEAT TRACK TIE DOWN

Seat Track Tie Downs - Aircraft equipped with Cessna or McFarlane Seat rails.
P/N 05-03467

BUSHING WITH RETAINING RING FOR PIPER AIRCRAFT



COWL BUSHING R-RING MC69790-00 - Material that outlasts the original nylon or glass filled teflon materials. Used on most Piper Cherokee models. Includes the retaining ring (snap ring). P/N 05-01764

COWL PLATE ASSEMBLY MC69791-000 - Stainless steel mounting plate with MC69790-00 teflon glass bushing and MC484-840 retaining ring. Upper cowl retaining part for most Piper Cherokee models.
P/N 05-04476

with MC69790-00 teflon glass bushing and MC484-840 retaining ring. Upper cowl retaining part for most Piper Cherokee models.
P/N 05-04476

VENTED FUEL CAPS

Vented Fuel Caps J3 thru PA-22 STC .
P/N 05-03459



180HP FUEL CAP

180 Fuel Cap PA-12 thru PA-18 with 180HP Engine.
P/N 05-03458



UNDER SEAT BATTERY RACK

Under Seat Battery Rack PA 18 STC
P/N 05-03460



REFUELING STEPS

Refueling Steps J3 thru PA-22 STC P/N 05-03462



MAIN LANDING GEAR LONG STEP

Main landing gear Long Step J3 thru PA-19 STC
P/N 05-03461



WELD ON AIRCRAFT FLOAT FITTINGS

Weld on aircraft float fittings PA-12, -14, PN 05-03476 PA-18 PN 05-03477 STC



Float Fittings PA-12/14
P/N 05-03476

Float Fittings PA-18
P/N 05-03477

MAIN LANDING GEAR SAFETY CABLES



Main Landing Gear Safety Cables (All STC) Standard Gear J-3, PA-11, PA-18, PA-19..... PN 05-03463

3" Extension Gear..... PN 05-03464

Standard Gear PA-12, PA-14..... PN 05-03465

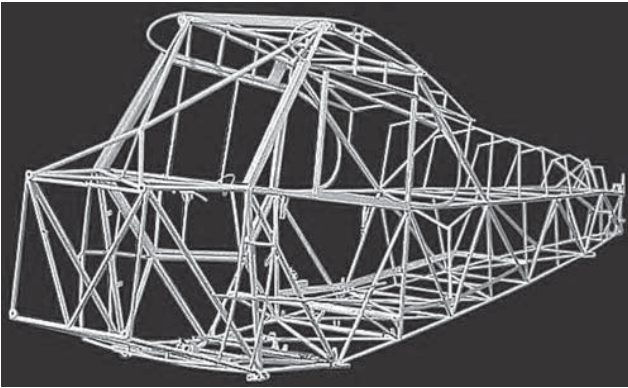
3" Extended Gear PA-12, PA-14..... PN 05-03466

AILERON HINGE FOR PIPER

Piper Eligibility PA-28-140,-150, -160, -180, -235; PA-28R-180,-200,-201,-201T; PA-28-181, -236, -201T; PA-28-181,-236, -201T; PA-32-260, -300; PA-32R-300; PA-32-RT-300, -300T; PA-34-200
P/N 05-04197



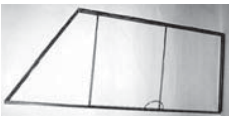
PIPER SUPERCUB PARTS



COMPLETE SUPERCUB FUSELAGE

Replacement fuselage for the PA 18 Super Cub incorporating the latest improvements and mods. The fuselage tubes and fittings are all 4130 steel and the standard mods are: "X" reinforcement in the top deck, extended baggage with "dog leg" bulkhead reversed, standard baggage area increased to 180 lbs. capacity, removable rear seat bar, reinforcement sleeves under stabilizer attach bracket, modernized tabs and attach brackets. Completely FAA approved under PMA and STC. Excellent workmanship.

P/N 05-00466.....



PA18 UPPER DOOR

Constructed using all square tubing. FAA approved.
P/N 05-00459



PA18 LOWER DOOR

Latching mechanism greatly improved over original. Utilizes push rods instead of wires. Powder coated.
P/N 05-00460



PA18 STABILIZER

Bushings installed, powder coated and ready to cover. FAA-PMA approved.
P/N 05-00461



PA18 ELEVATOR

Bushings installed, powder coated and ready to cover. FAA-PMA approved.
P/N 05-00462



PA18 RUDDER

Bushings installed, powder coated and ready to cover. FAA-PMA approved.
P/N 05-00463



PA18 VERTICAL FIN

Bushings installed, powder coated and ready to cover. FAA-PMA approved.

P/N 05-00464

\$10 crate charge for all items above



PA18 TAILPOST

Bushings installed, powder coated and ready to cover. FAA-PMA approved.

P/N 05-00465



FLAP HINGE-OUTBOARD

For fabric wing piper models, powder coated. FAA-PMA approved.

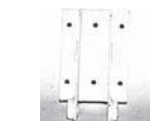
P/N 05-00480



PA 18 FUSELAGE HANDLE

Oversized lifting handle can be used with winter gloves, 8" long with 2" clearance. Weld on, FAA-PMA approved.

P/N 05-00477



AILERON HINGE

For fabric wing piper models. Powder coated. FAA-PMA approved.

P/N 05-00478

PA-18 8.5' SPAR BLANK

P/N 05-03596

SEALED LIFETIME STRUTS WITH HEAVY DUTY FORKS



FAA-PMA - complies with all A.D.'s - high strength struts will not fail under wind or snow loads. \$20 CRATE CHARGE FOR LIFT STRUTS

Description	Part Number	Price
PA 18 Front Lift Strut	05-00485	.
PA 18 Heavy Duty Rear Lift Strut	05-00486	.
PA 12-14 Front Lift Strut	05-00487	.
PA 12-14 High Strength Rear Lift Strut	05-00488	.
PA18 Rear Lift Strut	05-03868	.



PA18 ARCHES FOR FABRIC FORMERS

Complete set of 6 "turtle deck" arches precut to correct size, weld on as is. FAA-PMA
P/N 04-00469 per set .



PA 18 WING FITTINGS

Weld on, FAA-PMA approved.

Front left side.....P/N 05-00470

Front right sideP/N 05-00471

Rear left sideP/N 05-00472

Rear right sideP/N 05-00473



PA 18 REAR GEAR FITTING

Weld on, FAA-PMA approved.

Left side.....P/N 05-00474

Right sideP/N 05-00475



PA 18 FRONT GEAR FITTING

Weld on, FAA-PMA approved. Fits right or left side.

P/N 05-00476



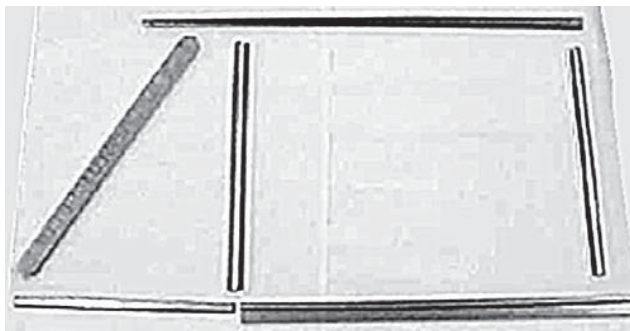
WELD-ON FLOAT FITTING

Weld-on float fitting for all models Piper Super Cub, PA18. FAA approved by STC. Weighs less than similar fittings. \$475.00 for a pair.

P/N 05-02529.....

AP

PIPER SUPERCUB PARTS



FRONT LOWER WINDOW CHANNEL

Left Side FAA-PMA..... P/N 05-00491

AFT LOWER WINDOW CHANNEL

Left Side FAA-PMA..... P/N 05-00492.....

FRONT WINDOW CHANNEL

Left Side FAA-PMA..... P/N 05-00493.....

UPPER WINDOW FORMER

Left Side FAA-PMA..... P/N 05-00494.....

FORWARD VERTICAL WINDOW CHANNEL

Left Side FAA-PMA..... P/N 05-00495.....

AFT VERTICAL WINDOW CHANNEL

Left Side FAA-PMA..... P/N 05-00496.....

ADDITIONAL FAA-PMA PARTS FOR PA18 SUPERCUB

Description	Part No.	Price
Lower Stabilizer brace wire attach.	05-00509	.
Piper hinge - half	05-00510	.
Interior tab	05-00511	.
Pulley bracket	05-00512	.
Pulley bracket	05-00513	.
Forward elevator pulley half	05-00514	.
Flap lever hinge - weld on fuselage or seat	05-00516	.
Flap pulley bracket	05-00517	.
Shock strut	05-00518	.
Trim cable pulley bracket	05-00519	.
fuel selector bracket	05-00520	.
Tailspring bracket	05-00521	.
Tailspring mount pad - forward	05-00522	.
Aileron pulley bracket	05-00523	.
Floorboard tabs	05-00524	.
Floorboard tabs	05-00525	.
Cabane Vee	05-00526	.
Elevator horn	05-00530	.
Rudder horn	05-00531	.
RH rudder pedal assy.	05-00532	.
LH rudder pedal assy.	05-00533	.
RH brake pedal assy.	05-00534	.
LH brake pedal assy.	05-00535	.
3/8 Piper "U" channel - 4' lengths	05-00537	.
5/8 barrel assy. - weld in lift strut ends	05-00538	.
Elevator ribs - full set for one	05-00539	.
Exhaust stack front - PA18 150 hp	05-00542	.
Exhaust stack rear - PA18 150 hp	05-00543	.
Muffler assy. - PA18 150 hp	05-00544	.



PA18 LANDING GEAR

Specify right or left side.
 1 1/4 axle, heavy duty; FAA-PMA
 P/N 05-00489

1 1/2 axle, heavy duty; FAA-PMA
 P/N 05-00490

EXTENDED LANDING GEAR AVAILABLE - CALL FOR QUOTE!



REAR TORQUE TUBE SUPPORT & BEARING

Weld on; FAA-PMA..... P/N 05-00497.....



FRONT TORQUE TUBE SUPPORT & BEARING

Weld on; FAA-PMA..... P/N 05-00498



REAR STABILIZER ATTACH BRACKET

Tack welded; FAA-PMA P/N 05-00499



HEAVY DUTY 5/8 LIFT STRUT FORK

Rolled threads, stainless, heat treated.
 P/N 05-00501



TOP DECK SUPERSTRUCTURE

P/N 05-00502



JACK SCREW TOWER

P/N 05-00503



MUFFLER BAIL U452-093

Muffler Bail Welded inside muffler out let to guard against Flame Tube failure and obstruction of exhaust outlet.
 P/N 05-02150



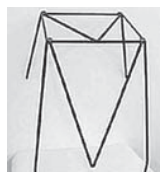
TAIL REPAIR SECTION - 4'

Without Jack screw tower.

P/N 05-00504

With Jack screw tower

P/N 05-00505



FIREWALL BULKHEAD REPAIR SECTION

P/N 05-00506

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LUSCOMBE PARTS

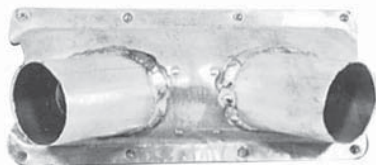
(FAA/PMA APPROVED)

LUSCOMBE 8E & 8F EXHAUST STACKS



Left Hand Exhaust Stack.....P/N 05-07805
 Right Hand Exhaust StackP/N 05-07810.....

LUSCOMBE CABIN HEAT SHROUD



8E & 8F AND 8A-2pc Stacks P/N 05-07820.....

CARBURETOR & CABIN HEAT SHROUD

For Luscombe 8A..... P/N 05-08115.....

RUDDER & ELEVATOR HINGE PIN & BRACKET



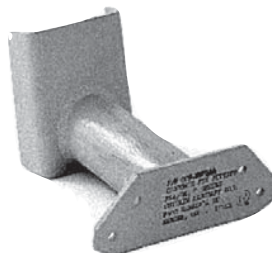
Hinge Pin.....P/N 05-07825
 Hinge Pin BracketP/N 05-07830.....

GAS CAP & LANDING LIGHT LENS



Luscombe Gas CapP/N 05-07835
 Landing Light Lens.....P/N 05-07840
 Landing Light Lens.....P/N 05-07845.....

VERTICAL FIN FRONT ATTACH



Fitting P/N 05-07985.....
Note: This fitting is welded 4130 steel and complies with all provisions of A.D. 79-25-05. This fitting is required only on those Luscombes with the "round tip" vertical stabilizer.

TAILWHEEL LEAF SPRINGS



Complete AssemblyP/N 06-14600
 Main Leaf OnlyP/N 06-14700.....



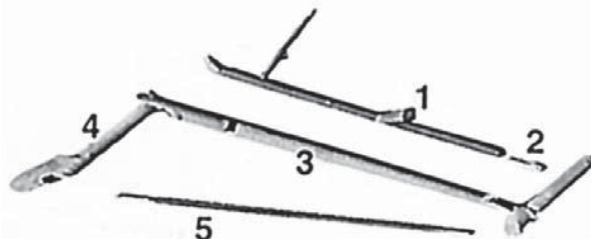
ALL-ALUMINUM LANDING GEAR FAIRING FOR STANDARD GEAR

Left P/N 05-07865
 Right..... P/N 05-07870.....

For Silflex Gear

Left P/N 05-07875
 Right..... P/N 05-07880.....

FAA/PMA LANDING GEAR PARTS (FOR STANDARD GEARS)



Left Hand Jack Strut (1) P/N 05-07885
 Right Hand Jack Strut (1)..... P/N 05-07890
 Fork End (S-9) (2) P/N 05-07895
 Left Hand Lower Leg (3) P/N 05-07900
 Right Hand Lower Leg (3)..... P/N 05-07905
 Left Hand Upper Arm (4)..... P/N 05-07910
 Right Hand Upper Arm (4) P/N 05-07915
 Tie Rod without fittings, 36 1/4" long (5) P/N 05-07920
 Left Hand Jack Strut (Silflex)..... P/N 05-07930
 Right Hand Gear Fairing P/N 05-07935.....

FAA/PMA WING PARTS

Left hand aileron..... P/N 05-00452
 Right hand aileron P/N 05-00453
 Left hand lift strut (metal wing)..... P/N 05-00454
 Right hand lift strut (metal wing) P/N 05-00455
 Carry-thru spar (front or rear)..... P/N 05-00456.....

FAA/PMA TAIL SECTION PARTS

Fin, square tip..... P/N 05-07940
 Rudder, square tip..... P/N 05-07945
 Rudder Horn for square tip rudder P/N 05-07950
 Tailwheel Leaf Spring Assembly P/N 06-14600
 Main Leaf only P/N 06-14700
 Rudder & Elevator Hinge Pin..... P/N 05-07970
 Rudder & Elevator Hinge Pin Bracket P/N 05-07975.....

AP

LUSCOMBE PARTS

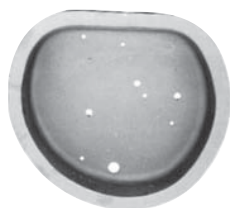
(FAA/PMA APPROVED)

ALL ALUMINUM COWLING



- Nose Cowl P/N 05-07990.....
- Bottom Cowl P/N 05-07995.....
- Top Cowl P/N 05-08000.....
- L/H Cowl P/N 05-08005.....
- R/H Cowl P/N 05-08010.....

Note: Cowling is trimmed oversize requiring a finish trim for each individual airplane.



FIREWALL DISHPAN

Used on Luscombe with an electrical system.

P/N 05-08015.....



FIREWALL TO ENGINE MOUNT RUBBER BUSHING

6 ea. required per aircraft.

P/N 05-08020.....



LUSCOMBE ENGINE MOUNT

For all Continental powered Luscombe, A-65 thru C-90

P/N 05-08025.....



MANUALS

- 8A Owner's Manual P/N 13-00230.....
- 8E Owner's Manual P/N 13-00235.....
- 8 Series Master Parts List, illustrated P/N 13-00240.....
- Service Manual, early fabric wings P/N 13-00245.....

BLANK INSTRUMENT PANEL



P/N 05-08030.....

CONTROL CABLES (GALVANIZED)



- Brake Cable Assembly P/N 05-08035.....
- Elevator Cable, SN 1-4199 P/N 05-08040.....
- Elevator Cable, SN 4200 and up P/N 05-08045.....
- Left Hand Rudder Cable P/N 05-08050.....
- Right Hand Rudder Cable P/N 05-08055.....
- Stick to Aileron Cable P/N 05-08065.....
- Left Hand or Right Hand Aileron Balance Cable. 16 ft., 7/8 in. P/N 05-08070.....
- Left Hand or Right Hand Aileron Balance Cable. 15 ft., 10-3/4 in. P/N 05-08075.....
- Forward Trim Cable P/N 05-08080.....
- Aft Trim Cable Assembly (2 req'd) P/N 05-08085.....

8A EXHAUST COMPONENTS FITS ALL A-65 CONTINENTAL ENGINES



- Rear Crossover P/N 05-08090.....
- Left Hand Stack P/N 05-08095.....
- Right Hand Stack P/N 05-08100.....
- Exhaust Clamp P/N 05-08105.....
- Complete Assembly (includes 2 exhaust clamps) P/N 05-08110.....

LUSCOMBE 8A CARBURETOR & CABIN HEAT SHROUD



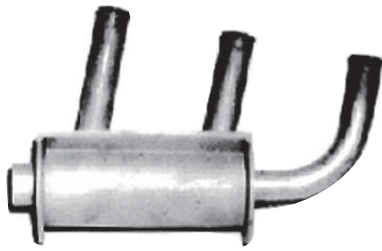
Fits on U8627-5 Stack..... P/N 05-08115.....

AP

STINSON PARTS

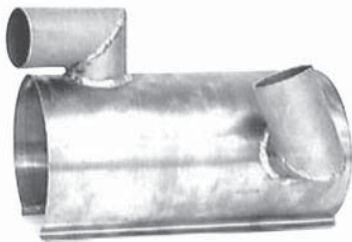
(TYPE CERTIFICATE APPROVED)

EXHAUST SYSTEM



- Muffler
 - SN 1-3109..... P/N 05-08120.....
 - SN 3110 and up..... P/N 05-08125.....
- Perforated Tube
 - SN 1-3109..... P/N 05-08130.....
- Perforated Tube
 - SN 3110 and up..... P/N 05-08135.....
- Tailpipe, Left Hand
 - SN 112-3109..... P/N 05-08140.....
 - SN 3110 and up..... P/N 05-08145.....
- Tailpipe, Right Hand
 - SN 112-3109..... P/N 05-08150.....
 - SN 3110 and up..... P/N 05-08155.....

HEAT SHROUDS



- Carb. Heat Shroud P/N 05-08165.....
- Cabin Heat Shroud, For SN 744 & up P/N 05-08170.....
- Shroud Clip..... P/N 05-08175.....

COMPLETE SPINNER ASSEMBLIES

READY FOR INSTALLATION FOR STINSON WITH WOOD OR METAL PROPELLERS.



- Wood Propeller Spinner Assembly P/N 05-08180.....
- Metal Propeller Spinner Assembly P/N 05-08185.....

CUFF AIR INDUCT

- For 108, 108-1, 108-2, 150 hp. (SN 1-2249)
 - P/N 05-08190.....
- For 108-2, 108-3, 165 hp. (SN 1-2249)
 - P/N 05-08195.....

FUEL GAUGE & SENDER

DIRECT REPLACEMENT FOR ORIGINAL AC GAUGE AND SENDER

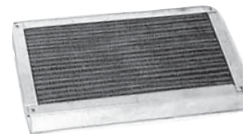


- Gauge..... P/N 05-08200.....
- Sender..... P/N 05-08205.....



RUDDER ARM

- P/N 05-08210.....



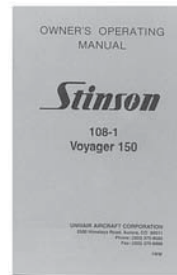
CARBURETOR AIR FILTER

For Franklin 150-165 hp. Stinson 108 Series..... P/N 05-08215.....

- Leading Edge Slat for all 108 Series..... P/N 05-08220.....
- Leading Light Lens..... P/N 05-08225.....

STINSON MANUALS

- 108 Series Parts Catalog
 - P/N 05-08230.....
- General Service Manual
 - P/N 05-08235.....
- Service Bulletins and Letters
 - P/N 05-08240.....
- Stinson Specs, ADs and STCs
 - P/N 05-08245.....
- 108 CAA Operating Limits
 - P/N 05-08250.....
- 108-1 CAA Operating Limits
 - P/N 05-08255.....
- 108-2 CAA Operating Limits
 - P/N 05-08265.....
- 108-3 CAA Operating Limits P/N 05-08270.....
- 108-1 Owner's Manual P/N 05-08275.....
- 108-2 Owner's Manual P/N 05-08280.....
- 108-3 Owner's Manual P/N 05-08285.....
- 108-1 Seaplane Operating Limits..... P/N 05-08290.....
- 108-2 Seaplane Operating Limits..... P/N 05-08295.....
- 108-3 Seaplane Operating Limits..... P/N 05-08300.....
- 108 Ski-Plane Supplement..... P/N 05-08305.....
- 108-1 Ski-Plane Supplement..... P/N 05-08310.....
- Appendix A Supplement..... P/N 05-08315.....
- Stinson Story of Aircraft Progress P/N 05-08320.....
- Stinson Time-Speed-Distance Computer..... P/N 05-08325.....
- Stinson Computer Instructions P/N 05-08330.....

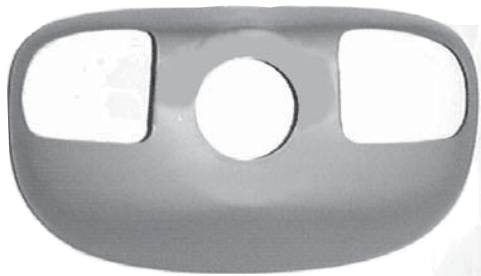


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STINSON PARTS

(TYPE CERTIFICATE APPROVED)

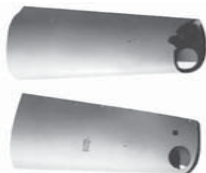
ALUMINUM NOSE COWL



Applicable to 108 through 108-3 series Stinsons.

- Nose Cowl P/N 05-08335
- Bottom Cowl P/N 05-00086
- Left side Cowl P/N 05-00087
- Right side Cowl..... P/N 05-00088

AP



LANDING GEAR FAIRINGS

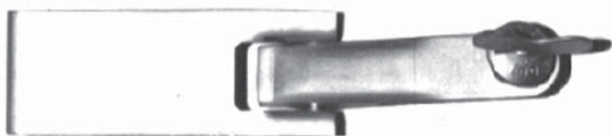
- Left Fairing P/N 05-08340
- Right Fairing P/N 05-08345



FUSELAGE TO LANDING GEAR FILLETS

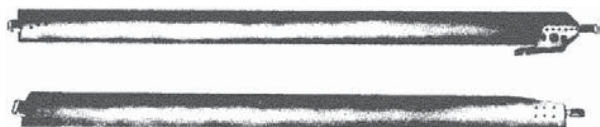
- Left P/N 05-08350
- Right P/N 05-08355

ENGINE COWL LEVER ASSEMBLY



- Cowl Fastener Assembly..... P/N 05-08365
- Cowl Fastener Pin P/N 05-08370
- Cowl Fastener Receptacle P/N 05-08375
- Receptacle Cup P/N 05-08380

WING LIFT STRUTS



- Front Strut P/N 05-08385
- Rear Strut..... P/N 05-08390



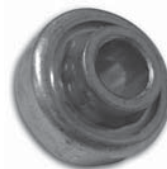
LANDING LIGHT LENS

- P/N 05-08225

PITOT TUBE



- P/N 05-08395



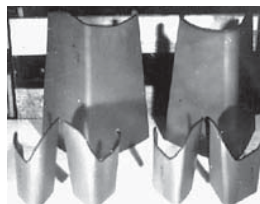
CONTROL SURFACE BEARING

- P/N 05-08400

CONTROL CABLES

Description	No. Req'd	P/N	Price
Aileron Idler Cable.....	2.....	P/N 05-08405	
Aileron Control Cable	2.....	P/N 05-08410	
Flap Control Cable	2.....	P/N 05-08415	
Rudder Cable—1946, 1947.....	2.....	P/N 05-08420	
Rudder Cable, 1948	2.....	P/N 05-08425	
Aileron Idler Cable (in fuselage).....	1.....	P/N 05-08430	
Control Column Cable, Left Half	1.....	P/N 05-08435	
Control Column Cable, Right Half	1.....	P/N 05-08440	
“Up” Elevator Cable.....	1.....	P/N 05-08445	
“Down” Elevator Cable	1.....	P/N 05-08450	
Upper Flap Control Cable (in fuselage)	1.....	P/N 05-08455.....	
Elevator Tab Control Cable, SN 1 thru 2249	1.....	P/N 05-08465.....	
Elevator Tab Control Cable, SN 2250 and up	1.....	P/N 05-08470.....	
Rudder Trim Cable, SN 2250 and up	2.....	P/N 05-08475.....	
Rudder Trim Driver Cable, SN 2250 and up	1.....	P/N 05-08480.....	

STRUT FILLETS



- Rear Lift Strut Upper Fillet
- Left P/N 05-08485..... ea.
- Right P/N 05-08490..... ea.
- Forward Lift Strut Upper Fillet
- Left P/N 05-08495..... ea.
- Right P/N 05-08500..... ea.
- Lift Strut, Lower Fillet, left.
- P/N 05-08505..... ea.
- Lift Strut, Lower Fillet, right
- P/N 05-08510..... ea.

AERONCA – CHAMPION – CITABRIA PARTS

(FAA/PMA APPROVED)

WING LIFT STRUTS NEW, IMPROVED STEEL STRUTS—SEALED AND OILED TO PREVENT INTERNAL CORROSION.

(Except Decathlon aluminum front struts)



7AC Front Strut	P/N 05-08515
7AC Rear Strut	P/N 05-08520
11AC Front Strut	P/N 05-08525
11AC Rear Strut	P/N 05-08530
Citabria Front Strut	P/N 05-08535
Citabria Rear Strut	P/N 05-08540
Decathlon Front Strut, Left	P/N 05-08545
Decathlon Front Strut, Right	P/N 05-08550
Decathlon Rear Strut	P/N 05-08555
Scout Front Strut	P/N 05-08565
Scout Rear Strut	P/N 05-08570

WING LIFT STRUT FORK

P/N 05-08575



7AC CONTROL CABLES (GALVANIZED STEEL)

Short Aileron Cable (2 req'd)	P/N 05-08580
Rudder Cable, Long (2 req'd)	P/N 05-08585
Rudder Cable, Short (2 req'd)	P/N 05-08590
Aileron Control Cable (4 req'd)	P/N 05-08595
Brake Cable and Housing Assembly (2 req'd), (PMA App.)	P/N 05-08600
Brake Cable Only (2 req'd)	P/N 05-08605
Down Elevator Cable (1 req'd)	P/N 05-08610
Aeronca Cown Elevator Cable	P/N 05-08615
Trim Cable (2 req'd)	P/N 05-08620
Up Elevator Cable (1 req'd)	P/N 05-08625

CITABRIA AIR INDUCTION TUBE

P/N 05-08630



CITABRIA FUEL GAUGE COVER

P/N 05-08635



TAILBRACE WIRE LUG

P/N 05-08640



EXHAUST SYSTEM FOR 7AC / 11AC

LH Stack	P/N 05-08705
RH Stack	P/N 05-08710
Heat Muff	P/N 05-08715



CITABRIA FUEL VENT DEFLECTOR

P/N 05-08655



STAINLESS STEEL TAILBRACE WIRE

7AC, 7EC, 7FC—UPPER & LOWER

Citabria, Decathlon, Scout—Lower	
1. Wire Only	P/N 05-08665
3. Assembly	P/N 05-08670
Citabria, Decathlon, Scout—Upper	
2. Wire Only	P/N 05-08675
4. Assembly	P/N 05-08680



ALL ALUMINUM COWLING

Nose Cowl	P/N 05-08685
Fuselage Cowl (7AC only)	P/N 05-08690
Top Cowl	P/N 05-08695
Bottom Cowl	P/N 05-08700



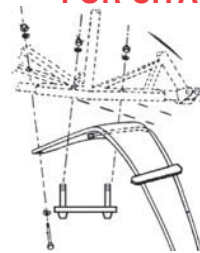
LANDING GEAR U-BOLTS

Citabria/Decathlon	P/N 05-08645
Scout (new style)	P/N 05-08650



(Hardware required—see below)

LANDING GEAR ATTACH HARDWARE FOR CITABRIA, DECATHLON, SCOUT



For Citabria and Decathlon	
Nut (6 required)	P/N 05-08720
Bolt (2 required)	P/N 05-08725
Cupped Washer (2 req.)	P/N 05-08730
Washer (6 required)	P/N 05-08735

For Scout	
Nut (6 required)	P/N 05-08720
Bolt (2 required)	P/N 05-08745
Cupped Washer (2 req.)	P/N 05-08730
Washer (6 required)	P/N 05-08735

OLEO SHOCK STRUT

Fits 7ECA, 7GCAA and 7GCBC:



with High Energy Taxi Spring	P/N 05-08740
with Standard Spring	P/N 05-08750
Fits 7AC and 11AC	P/N 05-08755
7AC and 11AC Spring Only	P/N 05-08760

LANDING GEAR OLEO CASE FRAME

Oleo Case Frame (Uncovered)	
7AC & 11AC Series ..	P/N 05-08765
Early Citabria	P/N 05-08770



TAILWHEEL LEAF SPRINGS – COMPLETE SETS

Citabria/Decathlon (short)	
P/N 05-08780	
Scout (long)	P/N 05-08785



LANDING GEAR AXLE ASS'Y. FOR AERONCA & CITABRIA

Early Citabria Axle Strut	P/N 05-08790
Aeronca Axle Strut	P/N 05-08795



AP

ERCOUPE – FORNEY – ALON – MOONEY PARTS

(TYPE CERTIFICATE APPROVED)



ALL ALUMINUM COWLING

NOSE COWL ASSEMBLIES

With no cold air intake hole
P/N 05-08800.....
With cold air intake hole
P/N 05-08805.....

SIDE COWL ASSEMBLIES

DZUS Fasteners..... P/N 05-08810
CAMLOC Fasteners..... P/N 05-08815

BOTTOM COWLS

P/N 05-08820

SPARK PLUG FAIRINGS



Mooney Fairing (top in photo, approx. 17 inches long)
P/N 05-08825

Ercoupe Fairing (bottom in photo, approx. 14-3/4 inches long)
P/N 05-08830



ERCOUPE ENGINE MOUNT

P/N 05-08835.....



FILLER NECK GROMMET

P/N 05-08840



NOSE GEAR STEERING BALL

This is the original type steering ball as used on Ercoupe, Forney and Alon.

P/N 05-08845



IMPROVED STEERING JOINT BALL KIT

This kit consists of rod-end bearing and all necessary hardware. It is FAA approved for all Ercoupe, Forney, Alon and M-10. For use with the part number 52035 push-rod that has the male threaded stud. (Steering Collar not included)

P/N 05-08905

Push Rod..... P/N 05-08910

EXHAUST SYSTEM FOR ERCOUCPE 415 SERIES & EARLY FORNEY



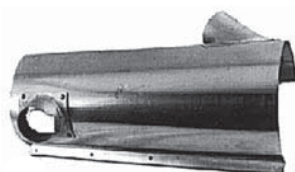
Left Hand Stack (stainless)
P/N 05-08920

Right Hand Stack (Stainless)
P/N 05-08930

Muffler..... P/N 05-08935.....

Carburetor Heat Shroud
P/N 05-08940

Cabin Heat Shroud
P/N 05-08945



CABIN HEAT SHROUD ASSEMBLY FOR ALL ERCOUCPE MODELS AFTER 1945

P/N 05-08945



ERCOUCPE WINDOW WELTS

Two required per plane. (Priced each).
P/N 05-08950



LANDING GEAR SHOCK PADS

This material has superior weathering qualities. This unaffected by hydraulic fluid and has greater resistance to static load.

Pads (8 required per plane)
P/N 05-08850.....

Washer (SN 813 and up) (14 required per plane)
P/N 05-08855.....

6 GALLON FUSELAGE TANKS



For Ercoupe, welded alum., SN 2623 & up
P/N 05-08865.....

For Forney, Alon
P/N 05-08870.....

For M-10
P/N 05-08875.....

WELDED 9-GALLON WING TANK



For Forney, Alon and M-10 Models with gauge in left hand tank.

Left Hand Tank (48147)
P/N 05-08885

Right Hand Tank
P/N 05-08890



CARBURETOR HEAT SHROUD FOR ALL ERCOUCPE MODELS

P/N 05-08895.....

BLANK INSTRUMENT PANEL



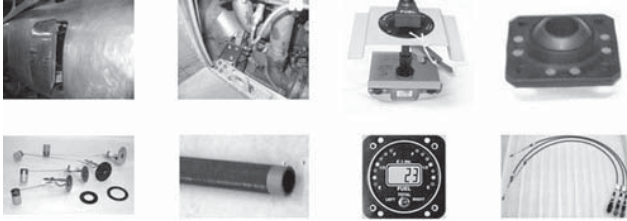
Lay out your instrument and radio arrangement using this blank Ercoupe Panel which has locating holes only for the two control columns. FAA field approval required..... P/N 05-08900.....

AP

NAVION – TAYLORCRAFT PARTS

(FAA/PMA APPROVED)

NAVION PARTS



Aircraft Spruce is a factory authorized distributor for these Navion parts manufactured under FAA/PMA approval. These parts are eligible for installation on all Navion models unless otherwise noted.

Description	Navion P/N	Part No.	Price
Navion Fuel Level Transmitter Gasket (6 hole)	145-48237	05-01299	.
Fuel Selector Valve Main-off	147-30013-201	05-04271	.
Fuel Selector Valve Main-Auxoff	147-30013-202	05-04272	.
Fuel Selector Valve Left-Main-RGT-O	147-30013-203	05-04273	.
Digital fuel qty gauge Main	147-40002-1001	05-04274	.
Digital fuel qty gauge MN/AUX	147-40002-1002	05-04275	.
Digital fuel qty gauge L/R	147-40002-1003	05-04276	.
Fuel level Transmitter 5 hole	173-70010-20	05-04277	.
Fuel level Transmitter 6 hole	173-70010-10	05-04278	.
Fuel level Transmitter AUX TNK	145-51071-4	05-04279	.
Fuel level Transmitter TIP TNK	161.30015.67	05-04280	.
Flush Fuel Cap	147-30012-150	05-04281	.
Gear Switches Main - Nose	147-40002-10	05-04282	.
Mixture Cable-Vernier	205-30001-1002	05-04283	.
Propeller Cable-Vernier	205-30001-1003	05-04284	.
Baggage Door	--	05-04285	.
Overhead Panel	147-40002-136-1	05-04286	.
Cable Roller Assembly Set of 4	145-52301-3	05-04287	.
Primary Monitor - CHT, EGT, and more	147-40002-1007	05-04288	.
Pilot & Co-Pilot Sholder Restraints	173-53001	05-04289	.
Nose Gear Seal Kits	145-S145-34102-900	05-04290	.
Main Gear Seal Kit	145S33102-900	05-04291	.
Aft. Equipment rack	147-40005	05-04292	.
Texas Patch LH	161-31023-1	05-04293	.
Texas Patch RH	161-31023-2	05-04294	.
Canopy Felt with Inst Letter 28	--	05-04295	.
Heated Pitot Tube Mast	161-51002-11	05-04296	.
Sloped Windshield	162-31801	05-04297	.
Fuel Valve Left/Right/Off FMA PMA C120 AND C140	SHA200F202-120	05-04298	.
Fuel Valve Left/Right/Both/off FMA PMA C120 AND C140	SHA200F204-140	05-04299	.

(FAA/PMA APPROVED)

TAYLORCRAFT ENGINE MOUNT

For 65 hp. Continental P/N 05-08955.....
For 85 hp. Continental P/N 05-08960.....



TAYLORCRAFT EXHAUST SYSTEM

For all 65 hp. Continental engines in B series through BC 12 series.
P/N 05-08965.....



TAYLORCRAFT B, BC, & LIFT STRUTS (OILED AND SEALED)



TaylorCraft Front Lift Strut..... P/N 05-08970.....
TaylorCraft Rear strut..... P/N 05-08975.....

Note: all post WWII will not work on a Taylor A/C F/L2M

TAYLORCRAFT LEADING EDGE SKINS



Outboard Leading Edge (54 1/4") P/N 05-08980.....
Center Leading Edge (57 1/4")..... P/N 05-08985.....
Inboard Leading Edge (64") P/N 05-08990.....

Note: all post WWII will not work on a Taylor A/C F/L2M

TAYLORCRAFT HEAT SHROUD

P/N 05-08995



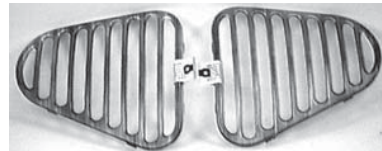
TAYLORCRAFT ALUMINUM NOSE COWL

Applicable to B series and BC12D Continental powered Taylorcraft (cowl grills not included)

P/N 05-09005.....



TAYLORCRAFT NOSE COWL GRILLS



Stamped aluminum grills with natural aluminum finish. For all standard Taylorcraft nose cowls.

Left Grill P/N 05-09010.....
Right Grill..... P/N 05-09015.....

TAYLORCRAFT TAILWHEEL SPRING SET

P/N 05-09020.....



AP