

- **Solid metal construction**
- **Pilot friendly knobs**
- **Lifetime lubrication**
- **Superior low friction conduit**
- **Custom controls available**

**Metal Construction**

Unlike the controls of our competitors that use plastic, McFarlane control fittings and components are made from stainless steel, plated steel, anodized aluminum, and brass. All critical swage connections are metal for continued dependability. Our Vernier controls feature locking devices that are precision formed and heat treated in all critical wear areas.

**A Superior Conduit System**

McFarlane Aviation's unique conduit has always been the heart of our controls. The conduit is made from carbon steel wire that has been specially formed for increased strength and to give a smooth inside diameter. Two of these specially formed wires are coiled in tandem for increased tensile strength without sacrificing flexibility. A Teflon jacket extruded over the coiled housing provides additional strength and wear resistance to chafing. A virgin Teflon® liner occupies the center of the conduit to reduce friction and ensure reliable operation at all temperature extremes. This system gives our controls good flexibility and smooth low friction operation even when routed with multiple tight bends. The tandem long lay coiling gives our controls good tensile strength and a solid feel under heavy push loads without sacrificing flexibility.

**Knobs Make a Difference**

Our "pilot friendly" knobs are all compression molded from a reinforced phenolic or a reinforced melamine-phenol resin. Unlike the soft injection molded knobs of our competitors, our knobs are hard and thermally stable. They resist scratching and do not deteriorate with age. The McFarlane knobs meet the latest F.A.R. requirements for shape and color.

**Vibration Dampening Features**

The McFarlane metal swivel joints have a unique Viton® rubber vibration dampening sleeve with a spring load system that dampens engine induced vibration in the push rod guide tube and metal swivel joint. Molded Viton® boots are also used on the push rod guides to seal out contaminants. The Viton® rubber withstands the high temperature of the engine environment while resisting degradation from oil and solvents. This system drastically reduces the vibration fretting and wear that leads to premature control failure.

**Special Lubrication**

During assembly, the McFarlane controls have a special lifetime lubrication applied to critical sliding surfaces. This molybdenum disulfide and Teflon® based lubricant with a synthetic grease base has been specially formulated to reduce friction and prevent galling and contamination locking of the control components from -70° F to over 1000° F. This lubricant is available only in McFarlane Aviation controls.

**Consistent Quality**

The assembly of McFarlane engine controls is interrupted many times for inspections of all critical elements to ensure only the highest quality controls are produced. Each inner wire swage, each push rod, each conduit fitting and terminal is inspected by our assembly team. As a further measure of quality, a second inspector also checks each critical detail to make sure only controls of the highest quality pass inspection. Attention is given to every detail at McFarlane Aviation. For instance, we verify the torque required to operate every Vernier control to ensure it operates properly and has that smooth feel our customers have come to expect.

**Tough in any Environment**

The McFarlane controls have had an outstanding performance and reliability record in all environments. Bush pilots like our controls because they work freely at 50° below zero and have been proven in harsh salt-water environments. Temperatures approaching the melting point of the steel components cannot stop the McFarlane controls from functioning. We have tested our controls in the harshest environments to ensure that they will provide a long reliable service life for the most demanding engine installations.

**Time Tested**

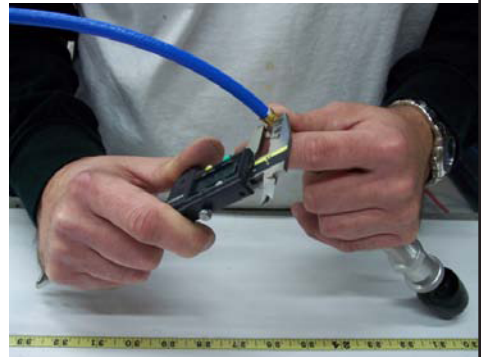
With over 25 years of experience building aircraft engine controls and with thousands of units in airplanes flying on every continent (yes, even Antarctica), McFarlane controls have a proven track record and are universally recognized for their high quality.

**Recommended Service Life**

Due to the criticalness of engine controls and considering their operating environment the maximum recommended in service time for McFarlane engine controls is equal to the maximum time between engine overhauls as recommended by the engine manufacturer.

**Custom Controls**

Custom engine controls can be manufactured for aircraft not listed in the approved application charts. All McFarlane custom control cables are built to customer provided specifications. McFarlane custom engine controls duplicate the original customer supplied controls in regard to length, thread size and pitch, wear sleeve locations, diameter and travel length. McFarlane custom controls are manufactured to the same standards using the same materials, rigorous testing and inspections as our FAA-PMA products; however, custom controls are not FAA-PMA approved.



**Throttle, Mixture and Propeller Controls**

- Solid metal construction
- Pilot friendly knobs
- Lifetime lubrication
- Superior low friction conduit



**Carb Heat and Alt Air Controls**

**Longer life and save up to \$200.00**

- The most commonly replaced controls just got better!
- Special, heavier wire for more fatigue strength and reliability
- Improved friction mechanism
- Reduced vibration wear
- Anti-rotate feature to reduce stress on the inner wire
- High temperature Teflon lined conduit
- Realistic price



Model	Serial Number	Throttle Control	Propeller Control	Mixture Control	Carb Heat or Alt Air Control
PA-18, PA-18"105" (Special)	All			MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-18"125" (Army L-21A)	All			MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-18"135" (Army L-21B)	All			MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-18"150"	All			MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-18A, PA-18A"135",A"150"	All			MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-18AS"125", AS"135", AS"150"	All			MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-18S, PA-18S"105",S"125",S"135"	All			MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-18S "150"	1809001 thru 1809113			MC454-120 5 7 or MC600-72 3	MC454-120 3
PA-18S "150"	18-3771 thru 18-8309025			MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-19, PA19S,L-18C	All			MC600-72	
PA-20, PA-20S	20-01 thru 20-811	MC455-139		MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-20, PA-20S	20-812 thru 20-1121	MC455-139		MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-20, PA-20S	20-1122 and On			MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-20"115", PA-20S"115"	20-01 thru 20-1121	MC455-139		MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-20"115", PA-20S"115"	20-1122 and On			MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-20"135", PA-20S"135"	20-877 thru 20-1121	MC455-139		MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-20"135", PA-20S"135"	20-1122 and On			MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-22	All	MC455-139		MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-22-108	22-8000 and On	MC12693-04		MC454-120 5 7 or MC600-72 3	MC454-120 1
PA-22-135	22-534 thru 22-2377	MC455-139		MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-22-135	22-2379 thru 22-2424	MC455-139		MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-22-135	22-2378, 22-2425 thru 22-3217	MC12693-04		MC454-120 5 7 or MC600-72 3	MC454-120 3
PA-22-135	22-3219 thru 22-3386	MC12693-04		MC454-120 5 7 or MC600-72 3	MC454-120 3
PA-22S-135	22-534 thru 22-2377			MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-22S-135	22-2379 thru 22-2424			MC454-120 5 7 or MC600-72 3	MC454-120 2
PA-22S-135	22-2378, 22-2425 thru 22-3217	MC12693-04		MC454-120 5 7 or MC600-72 3	MC454-120 3
PA-22S-135	22-3219 thru 22-3386	MC12693-04		MC454-120 5 7 or MC600-72 3	MC454-120 3
PA-22-150, PA-22S-150	22-2378, 22-2425 thru 22-7642	MC12693-04		MC454-120 5 7 or MC600-72 3	MC454-120 3
PA-22-160, PA-22S-160	22-5139, 22-5603 thru 22-7642	MC12693-04		MC454-120 5 7 or MC600-72 3	MC454-120 3
PA-24	24-1 thru 24-2969			MC454-120 1 7 or MC600-72 3	
PA-24-250	24-1 thru 24-104			MC454-120 1 7	
PA-24-250	24-105 thru 24-2174		MC455-184	MC454-120 1 7 or MC600-72 3 Carb. Engine Only	
PA-24-250	24-2175 thru 24-2969		MC455-252	MC454-120 1 7 or MC600-72 3 Carb. Engine Only	
PA-24-250	24-2970 thru 24-3687		MC455-252	MC600-72 3 Carb. Engine Only	
PA-24-260	24-3642, 24-4000 thru 24-4803		MC455-252	MC600-72 Carb. Engine Only	
PA-24-260	24-4804 thru 24-5034			MC600-72 Carb. Engine Only	
PA-24-400	26-2 thru 26-148			MC22633-04	
PA-28-140	28-20002 thru 28-21095	MC12693-04		MC600-72	MC63902-003 4
PA-28-140	28-21096 thru 28-24999	MC12693-04		MC600-72	MC63902-016 6
PA-28-140	28-25000 thru 28-25821	MC455-353		MC455-352	MC554-167
PA-28-140	28-25822 thru 28-7425418	MC455-353		MC455-352	MC554-093 1
PA-28-140	28-7425419 thru 28-7725290	MC455-353		MC455-352	MC554-094 1
PA-28-150	28-1 thru 28-2627	MC12693-04		MC600-72	MC63902-003 4
PA-28-150	28-2628 thru 28-4377	MC12693-04		MC600-72	MC63902-016 6
PA-28-151	All	MC455-350		MC455-352	MC554-093 1
PA-28-160	28-1 thru 28-2627	MC12693-04		MC600-72	MC63902-003 4
PA-28-160	28-2628 thru 28-4377	MC12693-04		MC600-72	MC63902-016 6
PA-28S-160	28-1 thru 28-1760			MC600-72	MC63902-003 4
PA-28-161	2816001 thru 2816110 (Less 2816066)	MC455-350		MC455-352	MC554-093 1
PA-28-161	2816111 thru 2816119				MC554-093 1
PA-28-161	2841001 thru 2842999	MC455-350		MC455-352	MC554-093 1
PA-28-161	28-7716002 thru 28-8616057	MC455-350		MC455-352	MC554-093 1
PA-28-180	28-671 thru 28-1760	MC12693-04		MC600-72	MC63902-003 4
PA-28-180	28-1761 thru 28-2627	MC12693-04		MC600-72	MC63902-003 4
PA-28-180	28-2628 thru 28-4377	MC12693-04		MC600-72	MC63902-016 6
PA-28-180	28-4378 thru 28-5152	MC455-333		MC455-332	MC66856-007
PA-28-180	28-5153 thru 28-5398	MC455-350		MC455-352	MC66856-007
PA-28-180	28-5399 and On	MC455-350		MC455-352	MC554-095 1
PA-28R-180	28R-30005 thru 28R-30481	MC455-322	MC455-322	MC455-322	
PA-28R-180	28R-30483 thru 28R-31092	MC455-322	MC455-322	MC455-322	
PA-28R-180	28R-31093 thru 28R-31279	MC455-322	MC455-322	MC455-322	MC554-092 1
PA-28R-180	28R-7130001 thru 28R-7130013	MC455-322	MC455-322	MC455-322	MC554-130 1

Eligibility continued on the next page. See notes regarding the Mixture, Carburetor Heat and Alternate Air controls on the next page.

See page 23 for  
Piper rod ends!



# Push-Pull Controls and Accessories Engine Controls - Piper/Van's RV Series



Push Pull Controls and Accessories

Model	Serial Number	Throttle Control	Propeller Control	Mixture Control	Carb Heat or Alt Air Control
PA-28R-180	28R-7130014 thru 28R-7130019	MC455-322	MC455-322	MC455-322	
PA-28S-180	28-671 thru 28-2627			MC600-72	MC63902-003 <b>4</b>
PA-28S-180	28-2628 thru 28-4377			MC600-72	MC63902-016 <b>6</b>
PA-28S-180	28-4378 thru 28-5398				MC66856-007
PA-28S-180	28-5399 thru 28-28-7205234				MC554-095 <b>1</b>
PA-28-181	2843001 thru 2843999			MC455-352	MC554-094 <b>1</b>
PA-28-181	2890001 thru 2890205			MC455-352	MC554-095 <b>1</b>
PA-28-181	2890206 thru 2890231			MC455-352	MC554-094 <b>1</b>
PA-28-181	28-7690001 thru 28-8290174	MC455-350		MC455-352	MC554-095 <b>1</b>
PA-28-181	28-8390001 and On	MC455-350		MC455-352	MC554-095 <b>1</b>
PA-28-201T	28-7921001 thru 28-7921095	MC455-322	MC455-322	MC455-361	MC554-387 <b>1</b>
PA-28R-200	28R-30482, 28R-35001 thru 28R-35225	MC455-322	MC455-322	MC455-322	
PA-28R-200	28R-35226 thru 28R-35830	MC455-322	MC455-322	MC455-322	MC554-092 <b>1</b>
PA-28R-200	28R-7135001 thru 28R-7635545	MC455-322	MC455-322	MC455-322	MC554-130 <b>1</b>
PA-28R-201	2837001 thru 2837061	MC455-322	MC455-322	MC455-322	MC554-130 <b>1</b>
PA-28R-201	2844001 thru 2844999				MC554-130 <b>1</b>
PA-28R-201	28R-7737002 thru 28R-7837317	MC455-322	MC455-322	MC455-322	MC554-130 <b>1</b>
PA-28R-201T	28R-7703002 thru 28R-7803372	MC455-322	MC455-322	MC455-361	MC554-387 <b>1</b>
PA-28R-201T	2803001 thru 2803015	MC455-322	MC455-322	MC455-361	MC554-387 <b>1</b>
PA-28RT-201	28R-7918001 thru 28R-8018116	MC455-322	MC455-322	MC455-322	MC554-130 <b>1</b>
PA-28RT-201	28R-8018117 thru 28R-8118000				MC554-130 <b>1</b>
PA-28RT-201	28R-8118001 and On	MC455-322	MC455-322	MC455-322	MC554-130 <b>1</b>
PA-28RT-201T	2831001 thru 2831038				MC554-387 <b>1</b>
PA-28RT-201T	28R-7931001 thru 28R-8031188	MC455-322	MC455-322	MC455-361	MC554-387 <b>1</b>
PA-28RT-201T	28R-8031189 thru 28R-8131000				MC554-387 <b>1</b>
PA-28RT-201T	28R-8131001 and On	MC455-322	MC455-322	MC455-361	MC554-387 <b>1</b>
PA-28-235	28-10003 thru 28-11038	MC12693-04		MC600-72	
PA-28-235	28-11039	MC12693-04			
PA-28-235	28-11040 thru 28-11252	MC455-333		MC455-332	MC66856-007
PA-28-235	28-11253 thru 28-11393	MC455-333		MC455-332	MC554-094 <b>1</b>
PA-28-235	28-710001 thru 28-7210033	MC455-333		MC455-332	MC554-094 <b>1</b>
PA-28-235	28-7310001 thru 28-7710089	MC455-333	MC455-344	MC455-332	MC554-094 <b>1</b>
PA-28-236	28-11001 thru 2811050				MC554-094 <b>1</b>
PA-28-236	28-7911001 thru 28-8211060	MC455-333	MC455-344	MC455-332	MC554-094 <b>1</b>
PA-28-236	28-8311001 and On	MC455-333	MC455-344	MC455-332	MC554-094 <b>1</b>
PA-32-260	32-451 thru 32-1110				MC63902-021 <b>6</b>
PA-32-260	32-1111 thru 32-1320	MC455-360		MC455-361	MC554-053
PA-32-260	32-7100001 thru 32-7800008	MC455-360		MC455-361	MC554-053
PA-32-300	32-40000 thru 32-40565	MC69530-02	MC65451-04		
PA-32-300	32-40566 thru 32-41018	MC455-358			MC554-051
PA-32-300	32-41019 thru 32-7140000				MC554-051
PA-32-300	32-7140001 thru 32-7940282	MC455-358			MC554-051
PA-32-300	32-7940283 and On				MC554-051
PA-32R-300	All				MC554-051
PA-32RT-300	All				MC554-051
PA-32S-300	32S40566 thru 32S-7240137				MC554-051
PA-32-301	32-8006001 thru 32-8406020	MC455-358			MC554-051
PA-32-301	32-8406021 thru 32-8506000	MC455-358			MC554-051
PA-32-301	32-8506001 and On	MC455-358			MC554-051
PA-32-301FT	All				MC554-051
PA-32-301T	32-8024001 thru 32-8424002	MC455-344		MC455-344	MC553-874
PA-32-301T	32-8524001 and On	MC455-344		MC455-344	
PA-32R-301	3213001 thru 3213103				MC554-051
PA-32R-301	3246001 thru 3246999				MC653-658
PA-32R-301	32R-8013001 thru 32R-8613006				MC554-051
PA-32R-301T	3229001 thru 3229003				MC553-885
PA-32R-301T	3257001 thru 3257999				MC653-658
PA-32R-301T	32R-8029001 thru 32R-8229078	MC455-360		MC455-360	MC553-885
PA-32R-301T	32R-8229079 thru 32R-8329000				MC553-885
PA-32R-301T	32R-8329001 and On	MC455-360		MC455-360	MC553-885
PA-32RT-300T	32R-7787001 thru 32R-7887000				MC554-466
PA-32RT-300T	32R-7887001 thru 32R-7987126	MC455-360		MC455-360	MC554-466
PA-38-112	All				MC554-511 <b>1</b>

- 1** Knob not included.
  - 2** Knob not included. Order P/N MC471-052
  - 3** Knob not included. Order P/N MC471-060
  - 4** Knob P/N MC471-084 included with control.
  - 5** Knob not included. Order P/N MC471-053
  - 6** Knob P/N MC571-131 included with control.
  - 7** P/N MC454-120 duplicates original control.
  - 8** P/N MC600-72 is a vernier control. Installation is approved as a minor alteration (No STC or Form 337) and may require enlarging the instrument panel mounting hole to 3/4" diameter.
- Additional knob eligibility is on shown on the following pages.

Rod end part numbers and eligibility can be found on the following pages.

## Engine Controls for Van's RV Series Aircraft

- Quick delivery, No long lead times
- High quality and affordable
- Lifetime lubrication
- Non certified, designed for listed aircraft models only
- See page 128 for APS brake discs and linings



Model	Throttle	Venier-Assist Throttle	Mixture	Prop
RV-10	MCRV10-T	MCRV10-TV	MCRV10-M	MCRV10-P
RV-10 W/Aerosport Products Panel	MCRV10-T-A	MCRV10-TV-A	MCRV10-M-A	MCRV10-P-A
RV-12		MCRV12-TV		

Controls designed to work with Van's firewall forward kit. Call for custom installations.

**Cabin Environment Controls for Piper Aircraft**

**Longer life and save up to \$200.00**

- Special, heavier wire for more fatigue strength and reliability
- Improved friction mechanism
- Reduced vibration wear
- Anti-rotate feature to reduce stress on the inner wire
- High temperature Teflon lined conduit
- Realistic price



P/N MC454-120 without knob



P/N MC454-120 with  
P/N MC471-052 Knob



P/N MC454-120 with  
P/N MC471-060 Knob

Aircraft	Serial Number	Cabin Heat Control	Cabin Heat Rear Control	Cold Air Inlet Control	Defrost Control	Parking Brake Control
PA-18, PA-18A, PA-18S	All	MC454-120 2				
PA-18 "105" (Special), PA-18S "105" (Special)	All	MC454-120 2				
PA-18 "125" (Army L-21A), PA-18AS "125", PA-18S "125"	All	MC454-120 2				
PA-18 "135" (Army L-21B), PA-18A "135", PA-18S "135"	18-1 thru 18-2167	MC454-120 2				
PA-18 "135" (Army L-21B), PA-18A "135", PA-18S "135"	18-2168 and On	MC454-120 2		MC454-120 2		
PA-18AS "135", PA-18 "150"	All	MC454-120 1				
PA-18A "150", PA-18AS "150"	All	MC454-120 2		MC454-120 2		
PA-18S "150"	1809001 thru 1809113	MC454-120 3		MC454-120 1		
PA-18S "150"	18-3771 thru 18-8309025	MC454-120 2		MC454-120 2 3		
PA-20, PA-20S	20-1 thru 20-553	MC454-120 2				
PA-20, PA-20S	20-554 thru 20-811	MC454-120 2		MC454-120 2		
PA-20, PA-20S	20-812 and On	MC454-120 2	MC454-120 2	MC454-120 2		
PA-20 "115", PA-20S "115"	All	MC454-120 2				
PA-20 "135", PA-20S "135"	20-877, 20-881, 20-885, 20-888	MC454-120 2		MC454-120 2		
PA-20 "135", PA-20S "135"	20-878 thru 20-880	MC454-120 2	MC454-120 2	MC454-120 2		
PA-20 "135", PA-20S "135"	20-882 thru 20-884	MC454-120 2	MC454-120 2	MC454-120 2		
PA-20 "135", PA-20S "135"	20-886 thru 20-887	MC454-120 2	MC454-120 2	MC454-120 2		
PA-20 "135", PA-20S "135"	20-889 and On	MC454-120 2	MC454-120 2	MC454-120 2		
PA-22	All	MC454-120 2	MC454-120 2	MC454-120 2		MC454-120 2
PA-22-108	All	MC454-120 3	MC454-120 3	MC454-120 3		MC454-120 1
PA-22-135	22-534 thru 22-539, 22-543	MC454-120 2		MC454-120 2		MC454-120 2
PA-22-135	22-540 thru 22-542	MC454-120 2	MC454-120 2	MC454-120 2		MC454-120 2
PA-22-135	22-544 thru 22-2377	MC454-120 2	MC454-120 2	MC454-120 2		MC454-120 2
PA-22-135	2378	MC454-120 3	MC454-120 3	MC454-120 3		MC454-120 1
PA-22-135	22-2379 thru 22-2424	MC454-120 2	MC454-120 2	MC454-120 2		MC454-120 2
PA-22-135	22-2425 and On	MC454-120 3	MC454-120 3	MC454-120 3		MC454-120 1
PA-22S-135	22-534 thru 22-2377 and 22-2379 thru 22-2424	MC454-120 2 4	MC454-120 1	MC454-120 2		
PA-22S-135	22-2378, 22-2424 and On	MC454-120 3 4	MC454-120 3	MC454-120 3		
PA-22-150, PA-22S-150, PA-22-160, PA-22S-160	22-2378, 22-2425 thru 22-5138	MC454-120 3	MC454-120 3	MC454-120 3		MC454-120 3
PA-22-150, PA-22S-150, PA-22-160, PA-22S-160	22-2379 thru 22-2424	MC454-120 2	MC454-120 1	MC454-120 2		MC454-120 2
PA-22-150, PA-22S-150, PA-22-160, PA-22S-160	22-5139, 22-5603 and On	MC454-120 3	MC454-120 3	MC454-120 3		MC454-120 1
PA-22-150, PA-22S-150, PA-22-160, PA-22S-160	22-5140 thru 22-5602	MC454-120 3	MC454-120 3	MC454-120 3		MC454-120 3
PA-24, PA-24-250	24-1 thru 24-2174	MC454-120 1		MC454-120 1	MC454-120 1	MC454-120 1
PA-24, PA-24-250	24-2176 thru 24-2298			MC454-120 1		MC454-120 1

1 Knob not included.

2 Knob not included. Order P/N MC471-052

3 Knob not included. Order P/N MC471-060

4 Quantity 2 each of the Cabin Heat Control is required for this aircraft.

**Additional knob eligibility is on shown on the following page.**

**Swivel Fittings and Studs (Bug Nuts) for Piper Aircraft**

P/N 70371-002 swivel fitting and 70371-003 stud are used to attach to solid wire push-pull controls. They wear out due to vibration.

There are two FAA-PMA replacement options. The PMA Products CA70371-002 swivel fitting and CA70371-003 stud, or the Univair U70371-000 swivel assembly.

The U70371-000 replaces Piper P/Ns 70371-000 or 70371-800. These are service kits that include the -002 fitting, the -003 stud as well as an AN320-3 castle shear nut, MS24665-132 cotter pin, and two special sized Piper specific washers.



P/N CA70371-002 and  
P/N CA70371-003  
Swivel Fitting and Stud

P/N U70371-000  
Swivel Assembly

Part Number	Description	Eligible Models
CA70371-002 CA70371-003	Swivel Fitting Stud	PA18, PA18-150, PA22, PA23-150, 160, 235, 250, PA24-180, 250, 260, 400, PA25-150, 235, 260, PA28-140, 150, 151, 160, 161, 180, 181, 201T, 235, 236, PA28R-180, 200, 201, 201T, PA28RT-201, 201T, PA30, PA39, PA31-300, 310, 325, 350, PA31-350, T1020, PA31T, 1, 2, PA31P, 350, PA32-260, 300, 301, 301T, PA32R-300, 301, 301T, PA32RT, PA34-200, 200T, 220T, PA36-285, 300, 375, PA38, PA42, PA42-720, 1000, PA44-180, PA46, PA46-310P, 350P
U70371-000	Swivel Fitting Assy.	PA20, PA20S, PA20-135, PA20S-135, PA22-135, PA22S-135, PA22-150, PA22S-150, PA22-160, PA22S-160, PA22-108, PA23, PA23-160

## Control Knobs for Piper Aircraft

**Give your panel an upgrade -  
replace old discolored knobs!**

- "Original" look
- Superior quality
- 10-32 thread



Part Number	Knob Type	Alternate Air (Chrome)	Cabin Heat (Chrome)	Cabin Heat (Black)	Cabin Heat (Ivory)	Cabin Heat (Rear)	Cabin Heat (Ivory)	Carburetor Heat (Ivory)	Carburetor Heat (Black)	Decal (Chrome)	Carburetor Heat (Black)	Cold Air (Black)	Cold Air Inlet (Ivory)	Cold Air Inlet (Chrome)	Defrost (Black)	Mixture Control (Ivory)	Parking Brake (Red)	Parking Brake (Black)	Parking Brake (Ivory)	
MC571-131																				
MC571-131																				
MC471-060																				
MC471-052																				
MC471-060																				
MC471-052																				
MC471-052																				
MC471-060																				
MC471-084																				
6289																				
MC571-131																				
MC471-060																				
MC471-052																				
MC571-131																				
MC471-060																				
MC471-052																				
MC471-131																				
MC471-060																				

Aircraft	Serial Number	MC571-131	MC471-060	MC471-052	MC471-052	MC471-060	MC471-084	MC571-131	MC471-060	MC471-052	MC571-131	MC471-060	MC471-052	MC471-131	MC471-060	MC471-052	MC471-131	MC471-060	MC471-052	MC471-131
PA-18, PA-18A, PA-18S	All																			
PA-18 "105" (Special), PA-18S "105"	All																			
PA-18 "125" (Army L-21A), PA-18AS "125", PA18S "125"	All																			
PA-18 "135" (Army L-21B), PA-18A "135", PA-18S "135"	18-1 thru 18-2167																			
PA-18AS "135"	18-1 thru 18-2167																			
PA-18 "135" (Army L-21B), PA-18A "135", PA-18S "135"	18-2168 thru 18-7632																			
PA-18AS "135"	18-2168 thru 18-7632																			
PA-18A "150", PA-18AS "150"	All																			
PA-18S "150"	1809001 thru 1809113																			
PA-18S "150"	18-3771 thru 18-8309025																			
PA-20, PA-20S	20-1 thru 20-553																			
PA-20, PA-20S	20-554 thru 20-811																			
PA-20, PA-20S	20-812 and On																			
PA-20 "115", PA-20S "115"	All																			
PA-20 "135", PA-20S "135"	All																			
PA-22	All																			
PA-22-108	All																			
PA-22-135	22-534 thru 22-539																			
PA-22-135	22-540 thru 22-542																			
PA-22-135	22-543																			
PA-22-135	22-544 thru 22-2377																			
PA-22-135	22-2378																			
PA-22-135	22-2379 thru 22-2424																			
PA-22-135	22-2425 and On																			
PA-22S-135	22-534 thru 22-2377 and 22-2379 thru 22-2424																			
PA-22S-135	22-2378, 22-2425 and On																			
PA-22-150, PA-22S-150, PA-22-160, PA-22S-160	22-2378																			
PA-22-150, PA-22S-150, PA-22-160, PA-22S-160	22-2379 thru 22-2424																			
PA-22-150, PA-22S-150, PA-22-160, PA-22S-160	22-2425 thru 22-5138																			
PA-22-150, PA-22S-150, PA-22-160, PA-22S-160	22-5139																			
PA-22-150, PA-22S-150, PA-22-160, PA-22S-160	22-5140 thru 22-5602																			
PA-22-150, PA-22S-150, PA-22-160, PA-22S-160	22-5603 and On																			
PA-25-235	All																			
PA-25-260	All																			
PA-28-140	28-20002 thru 28-21095																			
PA-28-140	28-21096 thru 28-24999																			
PA-28-150, PA-28-160	28-0001 thru 28-2627																			
PA-28-150, PA-28-160	28-2628 thru 28-4377																			
PA-28S-160	28-1 thru 28-1760																			
PA-28-180, PA-28S-180	28-671 thru 28-2627																			
PA-28-180	28-2628 thru 28-4277																			
PA-28-180	28-4278 thru 28-4377																			
PA-28S-180	28-671 thru 28-2627																			
PA-28S-180	28-2628 thru 28-4377																			
PA-28-235	28-10003 thru 28-10675																			
PA-28-235	28-10676 thru 28-11039																			
PA-32-260	32-1 thru 32-1110																			
PA-32-300	32-40000 thru 32-40565																			
PA-32-300S	32S-15 thru 32S-40565																			

■ Quantity 2 each of knob Cabin Heat (Ivory) is required for these aircraft.



P/N MC471-084  
With P/N 6289 Carb Heat Decal  
(Decal sold separately)



P/N MC471-052



P/N MC471-053



P/N MC471-060



P/N MC571-131

Push Pull Controls and Accessories



## Rod Ends for Piper Aircraft

Model	Part Number	Description/Application			
PA-18/18A, PA-18-105/125/135/150 & PA-18A-125/135/150 S/N's 18-1 thru 18-8309025 and PA18-150 S/N's 1809001 thru 1809113	CA452-335A	Wing panel assembly, uncovered			
PA-22 & PA-22-108/135/150/160	CA452-335A	Wing panel assembly, nose wheel			
PA-23-150/160 PA 23-235/PA23-250 / PA 23-250	CA452-335A	Nose gear, main gear			
PA-24-180/250/260/400	CA452-412	Landing gear retraction system, flap control mechanism, control surfaces			
PA-28-140/150/160/180/235/R-180/200	CA452-334A	Steering push rod & shimmy dampener, main gear bearing, control system			
	CA452-335A	Bungee assembly, nose wheel, landing gear door			
	CA452-336A	Flap control, nose gear assembly			
	CA452-368	Main gear			
	CA452-584	Landing gear door			
PA-28-151/161 S/N 715001 thru 28-7715314, 28-7716001 thru 28-8616057 & 2816001 thru 2816119	CA452-860A	Shimmy dampener			
	CA452-334A	Nose gear			
	CA452-335A	Nose gear, control system, flap control			
PA-28-161 S/N 2841001 thru 2841365	CA452-334A	Nose gear			
PA-28-161 S/N 2842001 & up	CA452-335A	Control system, flap control			
	CA452-336A	Flap control			
PA-28-181 S/N 28-7690001 thru 28-8690056 & 2890001 thru 2890231	CA452-334A	Nose gear			
	CA452-335A	Control system			
	CA452-336A	Flap control			
PA-28-181 S/N 2843001 & up	CA452-334A	Nose landing gear, main landing gear			
	CA452-335A	Landing gear door, control system, flap control			
	CA452-336A	Flap control			
PA-28R-201/201T S/N 28R-773700, 2837001 thru 2837061, 28R7703002 thru 28R-7803372 & 2803001 thru 2803015	CA452-584	Landing gear door			
	CA452-334A	Nose landing gear			
	CA452-335A	Landing gear door, control system, flap control			
	CA452-336A	Flap control			
	CA452-368	Main landing gear			
PA-28R-201 S/N 2844001 & up	CA452-334A	Nose landing gear			
	CA452-335A	Landing gear door, control system, flap control			
	CA452-336A	Flap control			
PA-28RT-201/201T	CA452-334A	Nose landing gear			
PA-30/39	CA452-335A	Landing gear door			
PA-31P	CA452-412	Landing gear retraction system, flap control mechanism			
	CA452-335A	Cabin door step			
PA-31P-350	CA452-412	Cabin door latch, nose landing gear, nose gear steering,			
	CA452-335A	Cabin door step			
PA-31-300/325, PA-31-350, PA-31-350T1020	CA452-412	Cabin door latch, nose landing gear, nose gear steering, elevator trim			
	CA452-412	Nose landing gear, nose gear steering mechanism			
PA-31T/T1/T2	CA452-335A	Cabin door step, engine control			
	CA452-412	Cabin door latch, nose landing gear			
PA-31T3	CA452-860A	Cabin door snubber			
	CA452-335A	Engine controls			
	CA452-412	Nose landing gear, nose gear steering			
PA-32-260/300/R-300	CA452-334A	Nose gear, main gear, control system			
	CA452-335A	Landing gear door, flap control			
	CA452-368	Main gear			
	CA452-584	Landing gear door			
	CA452-860A	Nose gear			
PA-32-301/301T	CA452-334A	Nose gear			
	CA452-335A	Aileron control, flap control			
	CA452-336A	Aileron control, flap control			
	CA452-860A	Nose gear			
PA-32-301 XTC	CA452-334A	Nose gear			
PA-32-301FT	CA452-335A	Aileron control, flap control			
	CA452-336A	Aileron control			
	CA452-860A	Nose gear			
PA-32R-301/301T S/N 32R-8013001 thru 32R-8613005, 321001 thru 3213103, 32R-8029001 thru 32R-8629006 & 3229001 thru 3229003	CA452-334A	Nose gear, main gear			
	CA452-335A	Landing gear door, aileron control, flap control			
	CA452-336A	Aileron control, flap control			
	CA452-368	Main gear			
PA-32R-301/301T S/N 3246001 & up & 3257001 & up	CA452-334A	Main gear			
	CA452-335A	Landing gear door, aileron control, flap control			
	CA452-336A	Aileron control, flap control			
	CA452-368	Main gear			
PA-34-200	CA452-334A	Nose gear, aileron control, rudder trim, hydraulic system			
	CA452-335A	Nose & main gear door actuation, flap control			
	CA452-336A	Flap control			
	CA452-368	Main gear			
PA-34-200T	CA452-334A	Air conditioning, Condenser & scoop, nose gear, hydraulic system rudder trim			
	CA452-335A	Nose & main gear door actuation			
	CA452-336A	Flap control			
	CA452-368	Main gear			
	CA452-584	Aileron assembly, nose & main gear actuation			
PA-34-220T S/N 34-8133001 thru 34-8633031, 3433001 & up, & 3448001 & up, PA-34-220T S/N 3447001 thru 3447029, & 3449001 & up	CA452-334A	Nose gear, rudder trim hydraulic system, air conditioning, condenser & scoop			
	CA452-335A	Nose & main gear door actuation, aileron control, flap control			
	CA452-336A	Flap control			
PA-34RT-300/300T	CA452-334A	Nose gear, main gear, control system			
	CA452-335A	Landing gear door, flap control			
	CA452-336A	Flap control			
	CA452-368	Main gear			
PA-36-285/300/375	CA452-584	Landing gear door			
PA-42/PA42-720	CA452-584	Elevator & elevator trim control			
PA-42-1000	CA452-335A	Cabin door step, engine controls			
PA-44-180/180T S/N 44-7995001 thru 44-8207020 & 4495001 thru 4495013	CA452-412	Cabin door latch, nose landing gear, nose gear steering, elevator control			
	CA452-334A	Nose landing gear, main gear			
	CA452-335A	Landing gear door, aileron control, flap control			
	CA452-336A	Aileron control, flap control			
PA-44-180 S/N4496001 & up	CA452-584	Landing gear door			
PA-46-310P/350P S/N 46-8408001 thru 46-8608067, 4608001 thru 4608140 & 4622001 thru 4622000	CA452-334A	Nose gear, nose & main gear door, actuation			
	CA452-335A	Nose & main gear door actuation			
	CA452-412	Flap drive - electrical			
	CA452-860A	Flap drive - electrical, flap drive & hydraulic			
PA-46-350P S/N 4636001 & up	CA452-334A	Nose gear, nose & main gear door actuation			
	CA452-335A	Main gear			
	CA452-412	Flap Drive-Mechanical			
PA-46R-350T S/N 4692001 & up	CA452-860A	Flap Drive-Mechanical			
	CA452-334A	Nose gear, nose gear door actuation			
PA-46-500TP S/N 4697002,4697340,4697399 & up with G1000	CA452-335A	Main gear door actuation			
	CA452-412	Flap Drive-Mechanical			
	CA452-860A	Flap Drive-Mechanical			
	CA452-334A	Nose gear, nose & main gear door actuation			
PA-46-500TP S/N4697001 & up without G1000	CA452-335A	Nose & main gear door actuation			
	CA452-412	Flap Drive-Mechanical			
	CA452-860A	Flap Drive-Mechanical			
	CA452-334A	Nose gear, nose & main gear door actuation			
			Piper Rod End Dimensions		
			Part Number	Eye	Thread
			CA452-334A	0.19	1/4-28 External
			CA452-335A	0.19	1/4-28 Internal
			CA452-336A	0.19	1/4-28 Internal
			CA452-368	0.50	1/2-20 Internal
			CA452-412	0.25	5/16-24 External
			CA452-860A	0.25	1/4-28 External
			CA452-584	0.19	Spherical