

Landing Gear and Nose Wheel Steering Parts

McFarlane's FAA-PMA Australian Nose Strut Seal Kit Solves the Problem!

Don't waste your time with substandard seals, nothing compares!!

NEW
& Improved!

- Double edge ("X" style) seal that will not twist and leak!
- Solves the continuous leak and re-service problems with the Cessna nose strut.
- Go years without servicing!

P/N MCSK172-1F

- FAA-PMA direct replacement for Cessna P/N SK172-1F.
- Also includes AN901-5A gasket.
- Improved lock rings are made of 304 stainless steel for better corrosion resistance.
- Components also available separately.

Aircraft	MCSK172-1F Contains		
	Qty	P/N	Description
All 150, 152, 172, 175 and 177RG series	1	AN901-5A	Gasket
182E-T, A182J,K,L,N	1	MC0841200-19	Lock Ring
F182P,Q, FR182, R182, TR182, T182, T182T	1	MC0841200-25	Lock Ring
210-5A (205A)	1	MCS1628-329	Backup Ring
206, 207 series	2	MCS2418-1	Scraper Ring
210B-R, P210N, R, T210F-R	1	MS28775-010	O-ring
T303	1	MS28775-221	O-ring
337 series	1	MS28775-225	O-ring
	1	MS28775-228	O-ring
	1	1100	Square Seal

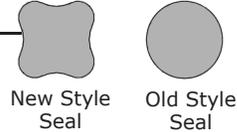
Note: P/N NSS-KT-2 does not contain the improved square ("X" style) O-ring. Adding this improved part is pending FAA-PMA approval.

NSS-KT-2		
Qty	P/N	Description
1	AN901-5A	Gasket
1	MC0841200-19	Lock Ring
1	MC0841200-25	Lock Ring
2	MS28782-32	Packing Retainer
1	MCS2418-1	Scraper Ring
1	MS28775-010	O-ring
1	MS28775-221	O-ring
1	MS28775-225	O-ring
1	MS28775-228	O-ring
1	MS28775-329	O-ring

Aircraft	Qty	P/N	Description
182, 182A,B,C,D	1	MS28775-010	O-ring
210-5 (205)	1	MS28775-221	O-ring
210, 210A	1	MS28775-225	O-ring
310, 310B,C,D,F,G,H,I,J,J-1,K,L,N,P,Q	1	MS28775-228	O-ring
320, 320-1, 320A,B,C,D,E,F	1	MS28775-329	O-ring
336	1		



Seal Cross Section:



Maintenance Tip:

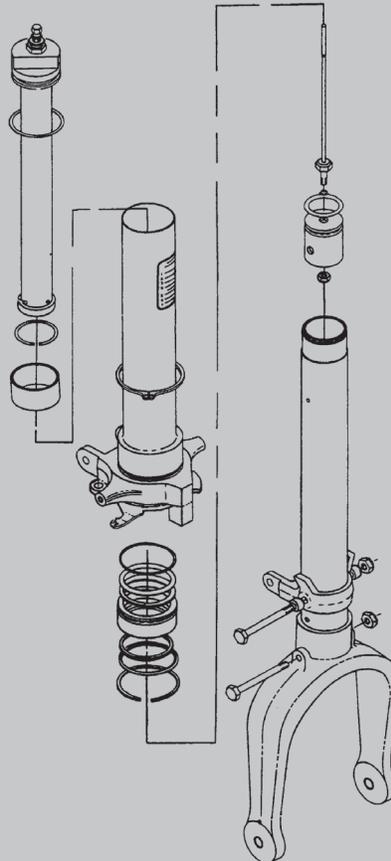
Wipe the chrome strut down with Stoddard solvent (mineral spirits) periodically to soften and remove any dried oil film, dirt, dust and bugs.

Why Does My Cessna Nose Strut Keep Leaking Down?

By Dave McFarlane

Cessna Nose strut "leak down" has plagued Cessna owners for the last 65 years. Why is it that a month after you reseal the nose strut you find the strut down again or just low and showing signs of a little MIL-5606 on the pretty chrome? It always happens on Sunday when no one is around to help you service it. You service it up the next week only to have it do it again next month. After several strut reseals most people just resign to servicing it often and consider it part of owning a Cessna. Piper and Beech struts do not leak down or need to be resealed often and they are high pressure!

With a strong belief that everything that goes wrong on an airplane has a reason that can be explained by physics, we did some research. It was observed that the low time leaking O-ring that was removed always showed signs of being slightly twisted and otherwise like new. Further experiments and close evaluations proved that the O-ring would twist from friction caused by an oxidized hydraulic fluid film on the chrome strut. You probably have noticed how MIL-5606 hydraulic fluid tends to dry and get sticky after it is exposed to air. Add a little runway dust to the back side of the strut and it really gets sticky. The low operating pressures of the Cessna strut does not put a lot of holding pressure to stabilize the sealing O-ring. It was observed that the sticky film on the chrome strut can grab and adhere to the O-ring during a normal strut action cycle. If the sticky film is not evenly dispersed on the strut, the O-ring is rolled a little on the filmy side only. This uneven rolling action puts a slight twist in the O-ring. This slight twist can break the normal seal between the strut and the



O-ring allowing a slow unpredictable leak.

It seemed logical that if you lowered the friction on the O-ring surface you could eliminate the problem. A hunt was on for a low friction O-ring that would resist being rolled and would have good durability. After many experiments with Teflon® coated and other specialty O-rings only partial success was achieved. They either were not as durable or the sealing characteristics were not as good as the standard rubber O-ring.

A break finally came at Airventure Oshkosh when Tony Brand of Horsham Aviation Services located in Horsham, Victoria, Australia came by and explained how they solved the problem. They had observed the same twisting of the strut O-ring and went on to explain how they replaced the round O-ring with a square ("X" style) O-ring that can not rotate. The standard backup rings were simply reversed to match the square sides of the new style O-ring. The "X" O-rings have the same material as the standard ones. Brilliant! Why didn't we think of that!? We rushed home and changed all the O-ring seals in five of the airplanes on the field. One of them was our 152 trainer that takes a lot of abuse. We were going to find out if those innovative Aussies knew what they were talking about. Sure enough, that was almost five years ago and we have never had to service the nose strut (not even with air) on any of the aircraft with the square O-rings! My hat goes off to the boys from Down Under for saving the industry thousands of man hours every year and making the Cessna fleet more reliable! Thank you!

Our FAA-PMA seal kit, P/N MCSK172-1F now includes the square ("X" style) O-ring and instructions for reversing the back up rings.