

Instructions for Continued Airworthiness
32-23086-24-01
FAA-PMA Part Number MCSTRT-CXX Inner Barrel.

Revisions

Revision	Author	Date	Summary
IR	ETB	07/20/2023	Original Release
A	AKH	03/24/2025	Part Number Updated. Model Eligibility Expanded
B	AKH	07/15/2025	Model Eligibility Expanded

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INTRODUCTION

This document is intended to provide for the continued airworthiness of PMA replacement nose strut inner barrel (P/N MCSTRT-CXX) eligible for installation on certain Cessna 150, 152, 172, 175, 177, 182, 206, 207, 210, and 337 aircraft. The inner barrel is part of the nose strut assembly on these aircraft. For all items not related to the installation of MCSTRT-CXX, refer to the basic airplane model service and parts manuals.

SYSTEM DESCRIPTION

The inner barrel is part of the nose strut assembly on these aircraft. A metering pin and plug assembly is inserted in the inner barrel. The outside of the inner barrel mates against wipers and seals contained within the outer barrel of the nose strut. The bottom of the inner barrel attaches to the nose fork as shown in Figure 1. The inner barrel length and lower hole configuration depends on the aircraft model. The inner barrel is cut to length and has lower holes match drilled to the nose fork on installation as described later in this document. Part number MCSTRT-CXX is shown in Figure 2.

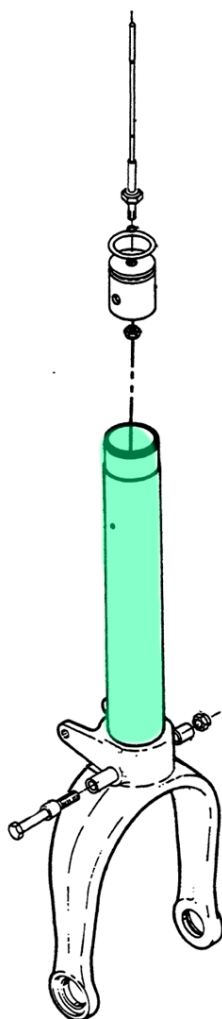


Figure 1: Inner barrel (highlighted green) shown assembled with nose fork

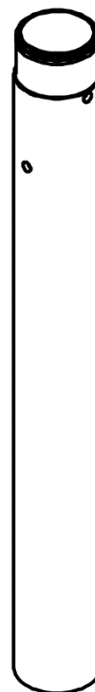


Figure 2: MCSTRT-CXX

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SPECIAL OPERATING INFORMATION

The control and operation of the nose strut does not change with the installation of the MCSTRT-CXX inner barrel; see applicable Cessna Service Manuals for the operational control of this system.

PART REMOVAL, REPLACEMENT, AND SERVICE INFORMATION

The inner barrel is cut to the proper length depending on aircraft model and has lower holes that are match drilled to the nose fork on installation. Installation of MCSTRT-CXX will require a copy of Cessna Service Kit Letter SK150-11C, SK175-9D or SK182-34C, "Replacement of Nose Wheel Fork". Contact Airforms LLC to obtain a copy of the applicable Service Kit Letter if necessary. See Table 1 below for service kit eligibility. If the aircraft model is not listed in Table 1, refer to Table 2 for aircraft model eligibility. Refer to service kit SK15-9D as guidance for replacing the nose strut inner barrel P/N MCSTRT-C00 on the models listed in Table 2.

Table 1: Service Kit Letter Required Depending on Aircraft Model

Article Name	Article Number	Approved Replacement for Article Number	Make Eligibility	Model Eligibility
INNER BARREL	MCSTRT-C13	SK175-9D item 8	Textron Aviation, Inc.	172B, 172C, 172E, 172F, 172G, 172H, 172I, 172K, 172L, 172M, 172N, 172P, 172Q
				F172D, F172E, F172F, F172G, F172H, F172K, F172L, F172M, F172N, F172P
				FP172D
				FR172E, FR172F, FR172G, FR172H, FR172J, FR172K
				P172D
				R172E (T41C)
				R172J
				R172K
				175A, 175B, 175C
				172RG
INNER BARREL	MCSTRT-C07	SK182-34C item 20	Textron Aviation, Inc.	182D
				172, 172A
				175
INNER BARREL	MCSTRT-C06	SK150-11C item 20	Textron Aviation, Inc.	182, 182A, 182B, 182C, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R
				150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, 150L, 150M
				152
				A150K, A150L
				F150F, F150G, F150H, F150J, F150K, F150L
FA150K, FA150L				

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Table 2: Aircraft Eligibility for MCSTRT-C00

Article Name	Article Number	Approved Replacement for Article Number	Make Eligibility	Model Eligibility
INNER BARREL	MCSTRT-C00	P/N 0543006-5	Textron Aviation, Inc.	152, A152, F152, FA152
		Sub Component of P/N 0543043-12		172RG
		Sub Component of P/N 0543043-3		172R, 172S
		Sub Component of P/N 1243626-2		R172E, R172F, R172G, R172H
		Sub Component of P/N 2043000-201		177RG, F177RG
		Sub Component of P/N 2243001-201		T182
		Sub Component of P/N 0543043-12		R182, TR182, FR182
		Sub Component of P/N 0442503-5		182S, 182T
		Sub Component of P/N SK205-3		206, P206, P206A, P206B, P206C, P206D, P206E, U206, U206A, U206B, U206C, U206D, U206E, U206F, U206G, TP206A, TP206B, TP206C, TP206D, TP206E, TU206A, TU206B, TU206C, TU206D, TU206E, TU206F, TU206G
		Sub Component of P/N 0442503-5 & Sub Component of P/N 12343634-1		206H, T206H
		Sub Component of P/N SK205-3 & Sub Component of P/N 1243800-11		207, T207, 207A, T207A
		Sub Component of P/N SK210-23 & Sub Component of P/N SK210-40		210, 210A, 210B, 210C, 210D, 210E, 210F, T210F, 210G, T210G, 210H, T210H, 210J, T210J, 210K, T210K, 210L, T210L, 210M, T210M, 210N, T210N, 210R, T210R, P210N, P210R
		Sub Component of P/N SK205-3		210-5, 210-5A
		Sub Component of P/N 1542010-201		337, 337A, 337B, T337B, 337C, T337C, 337D, T337D

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MCSTRT-CXX is intended to replace item 20 as referenced in SK150-11C, item 8 referenced in SK175-9D and item 20 as referenced in SK182-34C. MCSTRT-C00 is intended to replace all other parts or sub components listed in Table 2. Note that MCSTRT-C00 may be used as a replacement part for those models listed in Table 1 as well, but it will need to be cut to length at installation. Replace the existing inner barrel with MCSTRT-CXX as applicable as defined in Table 3 using the following procedure:

1. Follow SK150-11C up through step 12, SK175-9D up through step 11, or SK182-34C up through step 12. This allows the inner barrel to be removed from the nose strut assembly and lower fork. Note that replacement of the nose fork is not necessary.
2. Measure the total length of the original inner barrel. Mark part number MCSTRT-C00 to cut at the same length as the original inner barrel. MCSTRT-C00 is supplied to be longer than required. The overall length of the inner barrel depending on the service kit that is followed is shown in Table 3 for reference. It is acceptable to order pre-cut length parts as applicable or order the full length (P/N MCSTRT-C00, 18.00 inch) barrel and cut to length. If using a precut inner barrel, verify that the length matches the length of the original inner barrel before installing.

Table 3: Inner Barrel Total Length Depending on Service Kit

Service Kit	Inner Barrel Total Length (±0.10 inches)	Applicable Configuration
ANY	18.00 in.	-C00
SK150-11C	16.50 in.	-C06
SK175-9D	14.75 in.	-C13
SK182-34C	16.25 in.	-C07

3. Cut MCSTRT-C00 using a lathe parting tool or similar method.
4. Deburr and clean the cut end, then paint bare metal with primer meeting Federal Specification TT-P-1757. Avoid overspray on any chromed portion of the inner barrel.
5. Press lower end into fork the same distance as the original inner barrel. Ream nose fork for 0.0005 to 0.0025 inch interference fit, if required. Inner barrel may be cooled in a freezer and the nose fork may be heated up to 200°F to facilitate assembly if desired. If the hole in the nose fork is too big and cannot provide a 0.0005 to 0.0025 inch interference fit, the inner barrel cannot be replaced on its own and a new nose fork and inner barrel assembly must be purchased (part number SK150-11, SK175-9, or SK182-34).
6. Install torque link fitting (see SK182-34C item 17) if applicable. Align torque link fitting to nose fork and set to proper height referencing the marks made on the original inner barrel.
7. Match drill holes from each side of nose fork into inner barrel. Match drill holes from torque link fitting (if applicable) to inner barrel. Treat bare holes with primer meeting Federal Specification TT-P-1757.
8. Reinstall metering pin and base plug with hardware to secure the nose fork, inner barrel, and base plug. Ensure parts are clean and properly lubricated with the proper hydraulic fluid.
9. Follow SK150-11C from step 22 onward, SK175-9D from step 20 onward, or SK182-34C from step 22 onward. Modifications to nose fairing should not be required.

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TROUBLESHOOTING

Refer to the applicable Cessna Model Service Manuals for troubleshooting instructions. See listing in Data Section below. The inner barrel is not referenced in all applicable Cessna Illustrated Parts Catalogs. It is often supplied by Cessna assembled with the lower nose fork as part number SK150-11, SK175-9, SK182-34, or other assembly number, depending on the airplane model.

PLACARDS

None applicable.

DATA

All information to support the continued airworthiness of this replacement part is as defined herein and contained in:

- Relevant Cessna Model Service Manuals
 - SK150-11C, Cessna Service Kit, Replacement of Nose Wheel Fork, February 4, 1974.
 - SK175-9D, Cessna Service Kit, Replacement of Nose Wheel Fork, February 17, 1978.
 - SK182-34C, Cessna Service Kit, Replacement of Nose Wheel Fork, October 27, 1971.

INSPECTION

All inspections should continue to be performed as instructed in the Cessna Service Manuals. For the nose strut inner barrel this includes but is not limited to:

- Checking for corrosion, pitting, wear and cleanliness
- Checking for security and attachment to mating parts
- Checking for damage and cracking

RECOMMENDED OVERHAUL PERIODS

No additional overhaul time limitations exist with the use of these parts.

AIRWORTHINESS LIMITATIONS

The Airworthiness Limitations section is FAA approved and specifies maintenance required under Sec. 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved. No additional airworthiness limitations exist.

ASSISTANCE & REVISIONS

ICA revisions shall be made available on the Airforms website, www.airforms.biz. For questions or assistance regarding these Instructions for Continued Airworthiness (ICA), contact Airforms LLC via email or phone. Email: info@airforms.biz Phone: 907-357-8244.