

TITLE

LANDING GEAR - INSPECTION OF THE NOSE LANDING GEAR STRUT ASSEMBLY INTERNAL ORIFICE ASSEMBLY FOR CORRECT INSTALLATION

EFFECTIVITY

MODEL	SERIAL NUMBERS
680 (Sovereign)	-0001 thru -0349
680+ (Sovereign+)	-0501 thru -0590, -0592, -0593

The equivalent of this service document has been incorporated on production airplanes 680-0594 and On.

REASON

To inspect the nose landing gear internal orifice for correct installation.

DESCRIPTION

This service document provides parts and instructions to inspect the nose landing gear strut assembly internal orifice for correct installation.

COMPLIANCE

RECOMMENDED. This service document should be accomplished one year from the receipt of this service bulletin or at the next scheduled nose landing gear maintenance period or inspection, which ever occurs first.

A service document published by Textron Aviation may be recorded as *completed* in an aircraft log only when the following requirements are satisfied:

- 1) The mechanic must complete all of the instructions in the service document, including the intent therein.
- 2) The mechanic must correctly use and install all applicable parts supplied with the service document kit. Only with written authorization from Textron Aviation can substitute parts or rebuilt parts be used to replace new parts.
- 3) The mechanic or airplane owner must use the technical data in the service document only as approved and published.
- 4) The mechanic or airplane owner must apply the information in the service document only to aircraft serial numbers identified in the *Effectivity* section of the document.
- 5) The mechanic or airplane owner must use maintenance practices that are identified as acceptable standard practices in the aviation industry and governmental regulations.

No individual or corporate organization other than Textron Aviation is authorized to make or apply any changes to a Textron Aviation-issued service document or flight manual supplement without prior written consent from Textron Aviation.

Textron Aviation is not responsible for the quality of maintenance performed to comply with this document, unless the maintenance is accomplished at a Textron Aviation-owned Service Center.

CONSUMABLE MATERIAL

You must use the consumable materials that follow, or their equivalent, to complete this service document.

July 2, 2020

SL680-32-16
Page 1 of 7

Textron Aviation Customer Service, P.O. Box 7706, Wichita, KS 67277, U.S.A. 1-316-517-5800

This document contains technical data and is subject to U.S. export regulations. This information has been exported from the United States in accordance with export administration regulations. Diversion contrary to U.S. law is prohibited. ECCN: 9E991

NAME	NUMBER	MANUFACTURER	USE
Thread Sealant	U064072 (Loctite 277)	Textron Aviation Parts Distribution 7121 Southwest Boulevard Wichita, KS 67215	To seal threads on the nose landing gear assembly internal orifice.
Thread Primer	U467019 (Loctite 7649N)	Textron Aviation Parts Distribution 7121 Southwest Boulevard Wichita, KS 67215	To prime surfaces prior to application of Loctite 277.

TOOLING

NAME	NUMBER	MANUFACTURER	USE
Nose Landing Gear Strut Kit	K-3522	Tronair S. 1740 Eber Road Holland, OH 43528	To assemble the nose landing gear strut

REFERENCES

- Cessna Model 680 Maintenance Manual
- Cessna Model 680 Component Maintenance Manual
- Citation Standard Practices Manual

PUBLICATIONS AFFECTED

None

ACCOMPLISHMENT INSTRUCTIONS

1. Prepare the airplane for maintenance.
 - A. Make sure that the airplane is electrically grounded.
 - B. Make sure that all switches are in the OFF/NORM position.
 - C. Disconnect electrical power from the airplane.
 - (1) Disconnect the airplane battery.
 - (2) Disconnect external electrical power.
 - D. Attach maintenance warning tags to the battery and external power receptacle that have **"DO NOT CONNECT ELECTRICAL POWER - MAINTENANCE IN PROGRESS"** written on them.
2. Put aircraft on jacks. (Refer to Cessna Model 680 Maintenance Manual, Chapter 7, Jacking - Maintenance Practices.)
3. Make sure the nose landing gear strut assembly is hydraulically and pneumatically serviced correctly. (Refer to Cessna Model 680 Maintenance Manual, Chapter 12, Landing Gear Lubrication - Servicing.)
4. Measure the dimension between the flat of the upper barrel and the top of the scraper ring to determine if it is between 9.68 and 9.82 inches (245.87 and 249.42 mm) with nose landing strut fully extended.
 - A. On aircraft where the nose landing gear strut assembly measures between 9.68 and 9.82 inches (245.87 and 249.42 mm), go to Step 4.J.
 - B. On aircraft where the nose landing gear strut assembly measures more than 9.82 inches (249.42 mm), do the steps that follow:
 - (1) Remove the dust cap from the service valve (Schrader Valve) on the nose landing gear strut upper barrel assembly.
 - (2) Bleed the pneumatic pressure from the nose landing gear strut upper barrel assembly. (Refer to Cessna Model 680 Maintenance Manual, Chapter 12, High Pressure Pneumatic Service Valve - Servicing.)

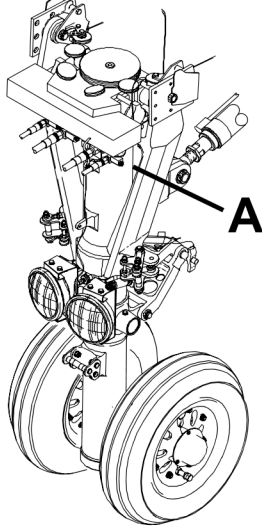
- (3) Open the service valve (Schrader Valve) on the nose landing gear strut lower barrel assembly.
NOTE: A small amount of hydraulic fluid may vent from the service valve of the nose landing gear strut lower barrel assembly.
- (4) Remove the nose landing gear wheel assemblies. (Refer to Cessna Model 680 Maintenance Manual, Chapter 32, Nose Landing Gear Wheel Assembly - Removal/Installation.)
- (5) Using the quick release pin, disconnect the nose landing gear torque links.
- (6) Remove the nose landing gear strut lower barrel assembly. (Refer to Model 680 Component Manual, Chapter 32, Landing Gear - Disassembly.)
- (7) (Refer to Figure 1, Detail A.) Remove the orifice assembly from the nose landing gear upper barrel assembly.
NOTE: If the orifice assembly will not come loose, it is permissible to apply heat not to exceed 300° F (148.88° C) for 20.0 minutes maximum while applying force. If heat exceeds the maximum value and time limit, it will be necessary to replace the orifice assembly.
- (8) Using a MPK wipe and brush, clean the threads of the orifice assembly and upper barrel assembly.
- (9) (See Figure 1, Detail A.) Aircraft -0001 thru -0314, examine the nose landing gear strut S33829-3004 Scraper, S01279 Seal, MS28775-238 O-ring, MS28775-233 O-Ring and the 7337MTE972P4 AGT Ring for damage.
 - (a) If any damage is found on the scraper, seal, O-rings or AGT Ring, replace as necessary.
- (10) (See Figure 1, Detail A.) Aircraft -0315 thru -0349 and -0501 thru -0590, -0592 and -0593, examine the nose landing gear strut S33829-3004 Scraper, 7337FRE964P20 Seal Assembly, MS28775-238 O-Ring and the 7337MTE972P4 AGT Ring for damage.
 - (a) If damage is found on the scraper, seal assembly, O-ring or AGT Ring, replace as necessary.
- (11) Test fit the orifice assembly on the upper barrel assembly until fully engaged on the upper barrel assembly.
NOTE: Make sure resistance cannot be felt between the components during installation. If resistance can be felt during installation of the orifice assembly, clean the orifice assembly and barrel assembly again using a MPK wipe and brush.
- (12) Remove the orifice assembly from the upper barrel assembly.
- (13) (Refer to Figure 2, Sheet 1.) Apply a strip of protective tape around the circumference of the upper barrel to prevent contact with the adhesion promoter.
- (14) Apply U467019 Adhesion Promoter to the threads of the orifice assembly and the lower end of the upper barrel. Make sure the adhesion promoter is applied to threads of the orifice assembly and the upper barrel assembly only.
NOTE: Let the adhesion promoter cure for no less than five minutes.
- (15) (See Figure 2, Sheet 1.) Apply U064072 anaerobic adhesive to the threads of the orifice assembly and the upper barrel at three locations.
NOTE: Each band should be approximately 1.0 inch (25.40 mm) long, spaced 120 degrees apart. Make sure each band completely fills the thread channels it's applied to.
- (16) Install the orifice assembly onto the lower end of the upper barrel assembly by hand. Remove any excess anaerobic adhesive from the orifice and upper barrel assembly.
- (17) Using a orifice wrench from the K-3522 kit, torque the orifice assembly to 50.0 ± 5.0 ft-lbs (67.79 N-m).
NOTE: Allow the anaerobic adhesive to cure for no less than one hour.

- (18) Install the nose landing gear strut lower barrel assembly. (Refer to Model 680 Component Manual, Chapter 32, Landing Gear - Assembly.)
 - (19) Install the nose landing gear wheel assemblies. (Refer to Cessna Model 680 Maintenance Manual, Chapter 32, Nose Landing Gear Wheel Assembly - Removal/Installation.)
 - (20) Using the quick release pin, connect the nose landing gear torque links.
 - (21) Service the nose landing gear strut. (Refer to Cessna Model 680 Maintenance Manual, Chapter 12, Landing Gear Lubrication - Servicing.)
 - (22) Measure the dimension between the flat of the upper barrel and the top of the scraper ring to determine if it is between 9.68 and 9.82 inches (245.87 and 249.42 mm) with nose landing gear strut fully extended.
 - (a) On aircraft where the nose landing gear strut measures between 9.68 and 9.82 inches (245.87 and 249.42 mm) with nose landing gear strut fully extended, go to Step 4.J.
 - (b) On aircraft where the nose landing gear strut does not measure between 9.68 and 9.82 inches (245.87 and 249.42 mm) with nose landing gear strut fully extended, make sure the nose landing gear strut is serviced correctly. (Refer to Cessna Model 680 Maintenance Manual, Chapter 12, Landing Gear Lubrication - Servicing.)
 - 1 If the nose landing gear strut is correctly serviced and still does not measure between 9.68 and 9.82 inches (245.87 and 249.42 mm), contact Team 680 Customer Support Engineering.
- C. Connect external electrical power to the aircraft.
 - D. Connect external hydraulic power to the aircraft.
 - E. Adjust the external hydraulic power unit to 3000 psi (20,684 kPa) at 6.0 gallons-per-minute (22.7 liters-per-minute).
 - F. Aircraft -0001 thru -0500, do the Indicator Check Test (Aircraft -0001 thru -0500). (Refer to Cessna Model 680 Maintenance Manual, Chapter 32, Landing Gear - Adjustment/Test.)
 - G. Aircraft -0501 thru -0590, -0592 and -0593, do the Indicator Check Test (Aircraft -0501 and On), (Refer to Cessna Model 680 Maintenance Manual, Chapter 32, Landing Gear - Adjustment/Test.)
 - H. Disconnect external hydraulic power to the aircraft.
 - I. Disconnect external electrical power to the aircraft.
 - J. Remove aircraft from jacks. (Refer to Cessna Model 680 Maintenance Manual, Chapter 7, Jacking - Maintenance Practices.)
5. Remove the maintenance warning tags and connect the airplane battery.
 6. Make an entry in the airplane logbook that states compliance and method of compliance with this service document.

NOTE: Textron Aviation recommends that compliance with all service documents is reported to a maintenance tracking system provider.

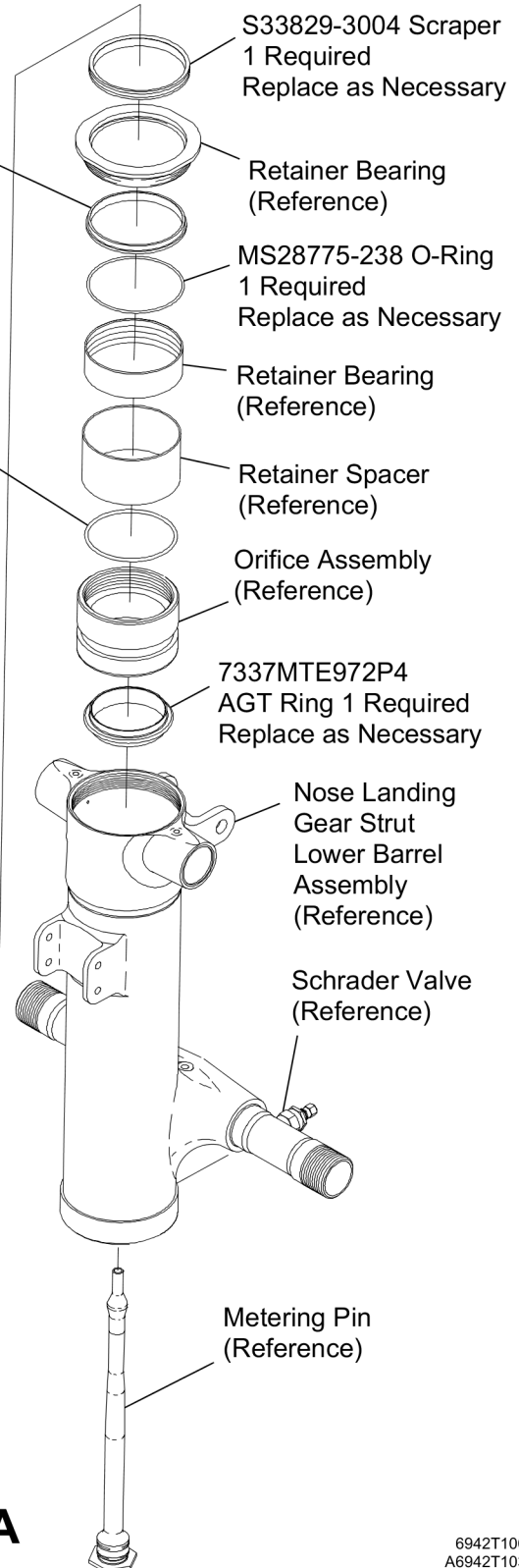
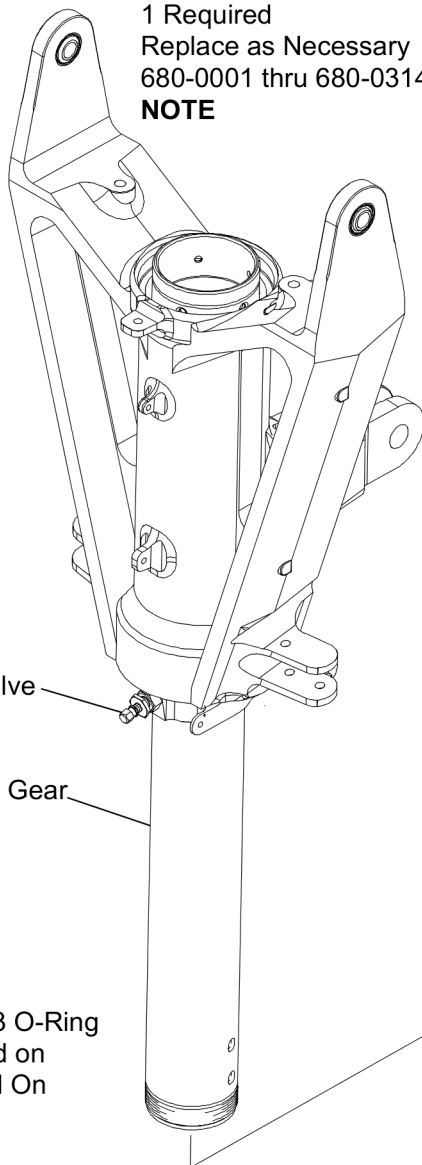
- Complete a record of compliance. (Maintenance Transaction Report, Log Book Entry, or other record of compliance.)
- Put a copy of the completed record of compliance in the airplane logbook.
- Send a copy of the completed record of compliance to the maintenance tracking system provider used.

A109694



S01279 Seal
 1 Required
 Replace as Necessary
 680-0001 thru 680-0289
 7337FRE964P20 Seal
 Assembly 1 Required
 Replace as necessary
 680-0290 and on

MS28775-233 O-Ring
 1 Required
 Replace as Necessary
 680-0001 thru 680-0314
NOTE



S33829-3004 Scraper
 1 Required
 Replace as Necessary

Retainer Bearing
 (Reference)

MS28775-238 O-Ring
 1 Required
 Replace as Necessary

Retainer Bearing
 (Reference)

Retainer Spacer
 (Reference)

Orifice Assembly
 (Reference)

7337MTE972P4
 AGT Ring 1 Required
 Replace as Necessary

Nose Landing
 Gear Strut
 Lower Barrel
 Assembly
 (Reference)

Schrader Valve
 (Reference)

Metering Pin
 (Reference)

Schrader Valve
 (Reference)

Nose Landing Gear
 Upper Barrel

NOTE: MS28775-233 O-Ring
 is not required on
 680-0315 and On

DETAIL A

6942T1001
 A6942T1034

Figure 1. Nose Landing Gear Shock Strut Orifice Assembly for Correct Installation. (Sheet 1)

A109693

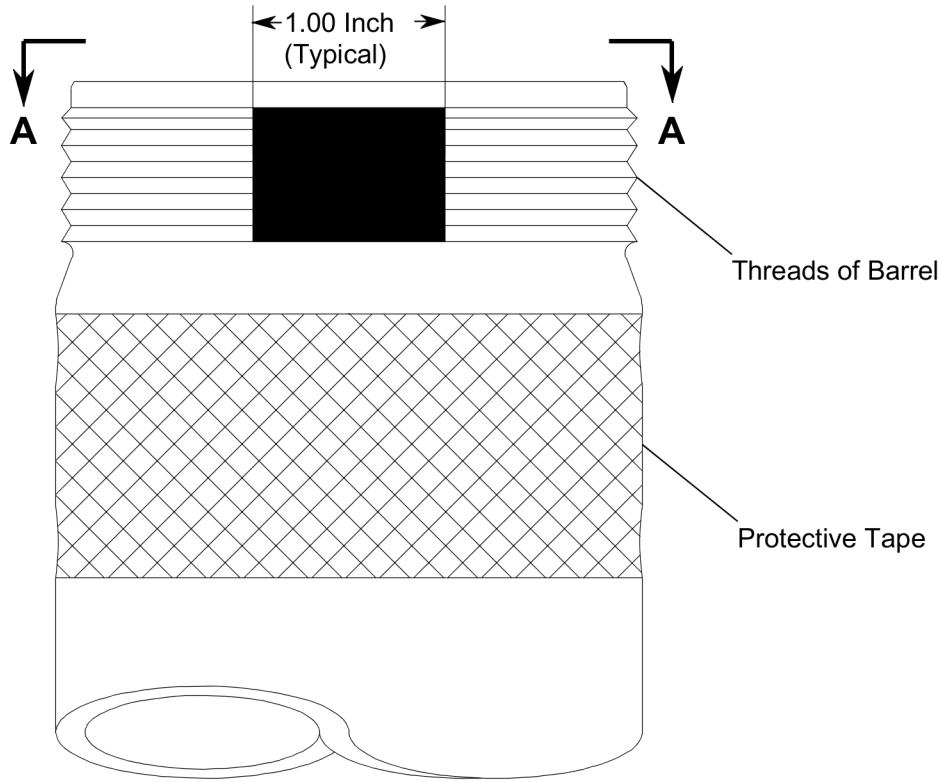
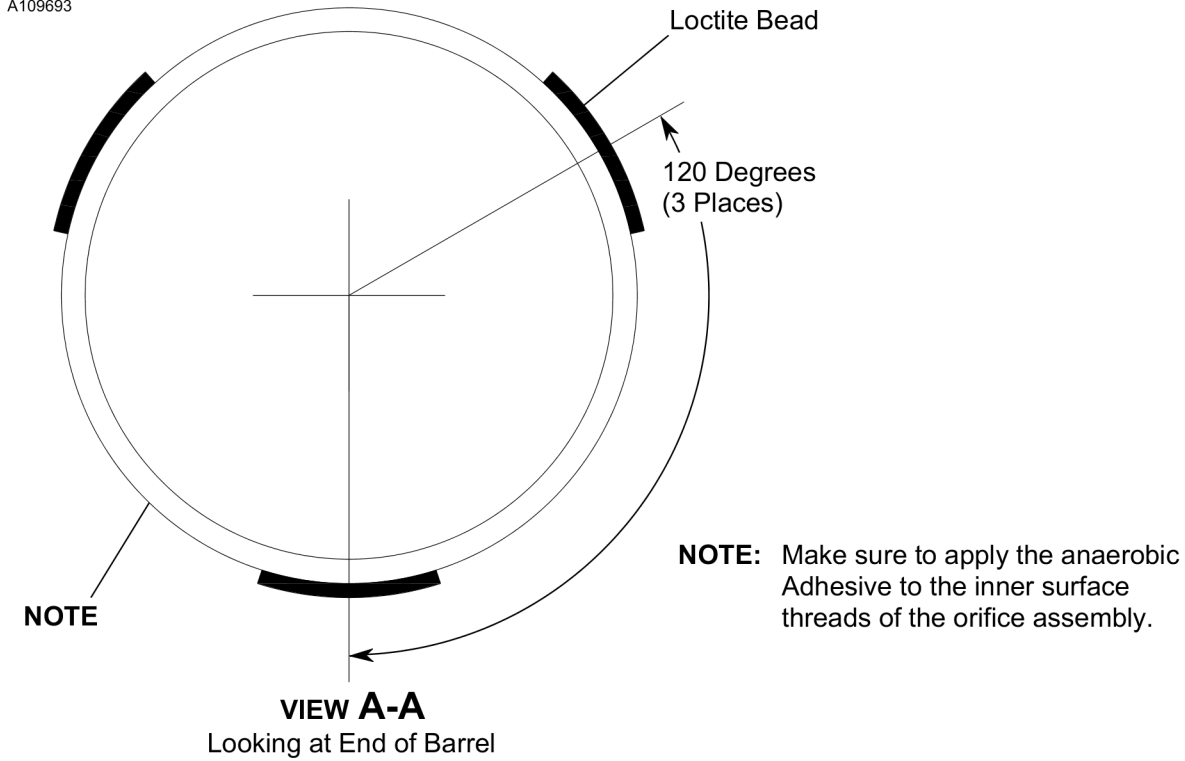


Figure 2. Loctite Promoter and Anaerobic Compound Application Area (Sheet 1)

6942T1046
AA6942T1046

MATERIAL INFORMATION

If necessary, order the parts below. These are only required if the examination of the parts revealed damage.

NEW P/N	QUANTITY	KEY WORD	OLD P/N	INSTRUCTIONS/ DISPOSITION
MS28775-233 (Required for -0001 thru -0314)	1	O-Ring	MS28775-233	Discard
MS28775-238	1	O-Ring	MS28775-238	Discard
S01279 (Required for -0001 thru -0289)	1	Seal	S01279	Discard
S33829-3004	1	Scraper	S33829-3004	Discard
7337FRE964P20 (Required for -0290 thru -0349 and -0501 thru -0590, -0592 and -0593)	1	Seal Assembly	7337FRE964P20	Discard
7337MTE972P4	1	AGT Ring	7337MTE972P4	Discard

* Please contact Textron Aviation Parts Distribution for current cost and availability of parts listed in this service document. Phone at 1-800-835-4000 (Domestic) or 1-316-517-5603 (International). Send email to: parts@txtav.com.

Based on availability and lead times, parts may require advanced scheduling.

TITLE

LANDING GEAR - INSPECTION OF THE NOSE LANDING GEAR SHOCK STRUT ASSEMBLY INTERNAL ORIFICE ASSEMBLY FOR CORRECT INSTALLATION

TO:

Cessna Model 680 Aircraft Owner

Cessna Model 680+ Aircraft Owner

REASON

To inspect the nose landing gear internal orifice for correct installation.

COMPLIANCE

RECOMMENDED. This service document should be accomplished one year from the receipt of this service bulletin or at the next scheduled nose landing gear maintenance period or inspection, which ever occurs first.

LABOR HOURS

WORK PHASE	LABOR-HOURS
Inspection	3.0
Modification	8.0

MATERIAL AVAILABILITY

If necessary, order the parts below to complete this service document. These are only required if the examination of the parts revealed damage.

PART NUMBER	AVAILABILITY	COST
MS28775-233 (Required for -0001 thru -0314)	*	*
MS28775-238	*	*
S01279 (Required for -0001 thru -0289)	*	*
S33829-3004	*	*
7337FRE964P20 Required for -0290 thru -0349 and -0501 thru -0590, -0592 and -0593	*	*
7337MTE972P4	*	*

* Please contact Textron Aviation Parts Distribution for current cost and availability of parts listed in this service document. Phone at 1-800-835-4000 (Domestic) or 1-316-517-5603 (International). Send email to: parts@txtav.com.

Based on availability and lead times, parts may require advanced scheduling.

July 2, 2020

SL680-32-16
Page 1 of 2

Textron Aviation Customer Service, P.O. Box 7706, Wichita, KS 67277, U.S.A. 1-316-517-5800

This document contains technical data and is subject to U.S. export regulations. This information has been exported from the United States in accordance with export administration regulations. Diversion contrary to U.S. law is prohibited. ECCN: 9E991

WARRANTY

This service document is *recommended*. Eligible airplanes may qualify for parts and labor coverage to the extent noted in the *Labor Hours* and *Material Availability* sections of this document.

Eligibility: Airplanes identified within the serial number effectivity of this service document must have active Airframe warranty coverage on the original issue date of this document and the coverage must be active on the day the work is accomplished.

Parts Coverage: Textron Aviation-owned and Textron Aviation-authorized Service Facilities, operators, or other maintenance facilities may submit a claim for the parts required to accomplish this service document as defined in the *Material Availability* section of this document.

Labor Coverage: Textron Aviation-owned and Textron Aviation-authorized Service Facilities rated to perform maintenance on the specific model of Cessna Aircraft may submit a claim for the labor necessary to accomplish this service document as defined in the *Labor Hours* section of this document.

Credit Application: After this service document has been accomplished, a claim must be submitted to Textron Aviation within 30 days of the service document completion. Claims for compliance of this service document are to be filed as a W4 type claim.

Please submit your claim form online at ww2.txtav.com/Parts or email the completed Textron Aviation Claim Form to warranty@txtav.com. If submitted on-line a Return Authorization will be provided. If a paper claim is submitted your claim will be entered into the system and a Return Authorization will be sent to you.

The Return Authorization must accompany any required return parts (see *Material Availability*), to the point of purchase.

Parts to be returned to Textron Aviation Parts Distribution should be forwarded to:

Textron Aviation Parts Distribution
Warranty Administration
285 South Greenwich Road
Bldg B89, Docks 1-4
Wichita, KS 67206
USA

Expiration: July 31, 2022 (after this date the owner/operator assumes the responsibility for compliance costs)

Textron Aviation reserves the right to void continued airplane warranty coverage for the parts affected by this service document until the service document is accomplished.

NOTE: As a convenience, service documents are now available online to all our customers through a simple, free-of-charge registration process. If you would like to sign up, please visit the Customer Access link at www.txtavsupport.com to register.