

Service Bulletin

February 19, 2001

SEB01-2

TITLE

MAIN LANDING GEAR ACTUATOR INSPECTION

EFFECTIVITY

<u>Model Series</u>	<u>Year</u>	<u>Serial Numbers</u>	
172RG	1980	172RG0001	thru 172RG0570
172RG	1981	172RG0571	thru 172RG0890
172RG		691	
172RG	1982	172RG0891	thru 172RG1099
172RG	1983	172RG1100	thru 172RG1144
172RG	1984	172RG1145	thru 172RG1177
172RG	1985	172RG1178	thru 172RG1191
R182	1978	R18200002	thru R18200583
R182/TR182	1979	R18200584	thru R18201313
R182/TR182		R18200001	
R182/TR182	1980	R18201314	
R182/TR182	1980	R18201316	thru R18201628
R182/TR182	1981	R18201629	thru R18201798
R182/TR182	1982	R18201799	thru R18201928
R182/TR182	1983	R18201929	thru R18201973
R182/TR182	1984	R18201974	thru R18201999
R182/TR182	1985	R18202000	thru R18202031
R182/TR182		R18201315	
R182/TR182	1986	R18202032	thru R18202039
210B	1962	21057841	thru 21058085
210C	1963	21058086	thru 21058139
210C	1963	21058141	thru 21058220
210D	1964	21058221	thru 21058510
210E	1965	21058511	thru 21058715
210F	1966	21058716	thru 21058818
210G	1967	21058819	thru 21058936
210H	1968	21058937	thru 21059061

<u>Model Series</u>	<u>Year</u>	<u>Serial Numbers</u>		
210J	1969	21059062	thru	21059199
210K/T210K	1970	21059200	thru	21059351
210K/T210K	1971	21059352	thru	21059502
210L/T210L	1972	21059503	thru	21059719
210L/T210L	1973	21059720	thru	21060089
210L/T210L	1974	21060090	thru	21060539
210L/T210L	1975	21060540	thru	21061039
210L/T210L	1976	21061040	thru	21061041
210L/T210L	1976	21061043	thru	21061573
210M/T210M	1977	21061574	thru	21062273
210M/T210M	1978	21062274	thru	21062954
210M/T210M	1978	21061042		
210N/T210N	1979	21062955	thru	21063640
210N/T210N	1980	21063641	thru	21064135
210N/T210N	1981	21064136	thru	21064535
210N/T210N	1982	21064536	thru	21064772
210N/T210N	1983	21064773	thru	21064822
210N/T210N	1984	21064823	thru	21064897
210R/T210R	1985	21064898	thru	21064949
210R/T210R	1986	21064950	thru	21065009
T210F	1966	T210-0001	thru	T210-0197
T210G	1967	T210-0198	thru	T210-0307
T210H	1968	T210-0308	thru	T210-0392
T210J	1969	T210-0393	thru	T210-0454
T210J		21058140		
P210N	1978	P21000001	thru	P21000150
P210N	1979	P21000151	thru	P21000385
P210N	1980	P21000386	thru	P21000590
P210N	1981	P21000591	thru	P21000760
P210N	1982	P21000761	thru	P21000811
P210N	1983	P21000812	thru	P21000834
P210R	1985	P21000835	thru	P21000866
P210R	1986	P21000867	thru	P21000874
FR182	1978	FR18200001	thru	FR18200020
FR182	1979	FR18200021	thru	FR18200045
FR182	1980	FR18200046	thru	FR18200070

PURPOSE

To provide notification that an inspection is required of the main landing gear actuators for the presence of cracks. Cracked actuators and actuator bodies shall be replaced. If no cracks are found, the part number 1281000-1, 1281000-2, 9882000-1, 9882000-2, 9882015-1 and 9882015-2 actuators and 1281001-1, 1281001-2 or 1281001-3 actuator bodies shall be modified and subsequently reinspected as specified in this service bulletin; part number 1281000-3, 1281000-4, 9882000-4, 9882000-5 and 9882015-4 actuators and 1281001-4, 1281001-5 or 1281001-6 actuator bodies do not need to be modified but will require subsequent inspection. Non-compliance with this service bulletin could result in failure of the main landing gear actuator.

COMPLIANCE

Mandatory; shall be accomplished as follows:

For part number 1281000-1, 1281000-2, 9882000-1, 9882000-2, 9882015-1 and 9882015-2 actuators and 1281001-1, 1281001-2 or 1281001-3 actuator bodies.

- A. Initial Inspection and Rework for actuators/bodies exceeding 3,000 hours total time in service: shall be accomplished during the next scheduled airframe inspection not to exceed 100 hours of operation.
- B. Subsequent Inspections shall be accomplished every 500 hours thereafter.

For part number 1281000-3, 1281000-4, 9882000-4, 9882000-5 and 9882015-4 actuators and 1281001-4, 1281001-5 or 1281001-6 actuator bodies.

- A. Initial Inspection for actuators/bodies exceeding 3,000 hours total time in service: shall be accomplished during the next scheduled airframe inspection not to exceed 100 hours of operation. NOTE: Rework of actuators/bodies is not required.
- B. Subsequent Inspections shall be accomplished every 500 hours thereafter.

APPROVAL

FAA approval has been obtained on technical data in this publication that affects airplane type design.

For Reims Aviation airplanes: DGAC approval has been obtained on technical data in this publication that affects airplane type design.

MAN-HOURS

Approximately 8.0 man-hours per actuator for inspection.

MATERIAL

The following are available from Cessna Parts Distribution through an appropriate Cessna Service Station for the suggested list price shown.

<u>Part Number</u>	<u>Description</u>	<u>Qty/Airplane</u>	<u>Price</u>
1281000-3	Actuator, Left	SEE NOTE 1	\$ 8,463.00 (A) ea.
1281000-4	Actuator, Right	SEE NOTE 1	\$ 8,467.00 (A) ea.
9882000-4	Actuator, Left	SEE NOTE 2	\$ 7,055.00 (A) ea.
9882000-5	Actuator, Right	SEE NOTE 2	\$ 7,052.00 (A) ea.
9882015-4	Actuator, Left or Right	SEE NOTE 3	\$ 7,052.00 (A) ea.
1281001-4	Actuator Body	SEE NOTE 2	\$ 5,690.00 (A) ea.
1281001-5	Actuator Body	SEE NOTE 4	\$ 5,690.00 (A) ea.
1281001-6	Actuator Body	SEE NOTE 5	\$ 5,690.00 (A) ea.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

NOTE 1: Applicable to airplane serial numbers 21059200 thru 2105955

NOTE 2: Applicable to airplane serial numbers 21059551 thru 21064135 and P21000001 thru P2100150

NOTE 3: Applicable to airplane serial numbers 172RG0001 thru 172RG1191, R18200001 thru R18202039, FR18200001 thru FR18200070, 21064136 thru 21065009 and P21000151 thru P21000874

NOTE 4: Applicable to airplane serial numbers R18200001 thru R18200476, FR18200001 thru FR18200010, 21059200 thru 2105955, 21064136 thru 21065009 and P21000151 thru P21000874

NOTE 5: Applicable to airplane serial numbers 172RG0001 thru 172RG1191, R18200477 thru R18202039 and FR18200011 thru FR18200070

ACCOMPLISHMENT INSTRUCTIONS

Main Landing Gear Actuator Inspection Instructions are attached.

NOTE: This information shall be considered an amendment to the Cessna Manufacturer's Service/Maintenance Manual or Instructions for continued airworthiness, and must be accomplished for ongoing airworthiness compliance as required per FAR43.13.

CREDIT

Not applicable

OWNER NOTIFICATION

On February 19, 2001 the following Owner Advisory message will be sent to applicable owners of record in SEB01-2A.

Dear Cessna Owner:

This letter is to provide notification that an inspection is required of the main landing gear actuators on your airplane for the presence of cracks. Cracked actuators and actuator bodies shall be replaced. If no cracks are found, the part number 1281000-1, 1281000-2, 9882000-1, 9882000-2, 9882015-1 and 9882015-2 actuators and 1281001-1, 1281001-2 or 1281001-3 actuator bodies shall be modified and subsequently reinspected as specified in Service Bulletin SEB01-2. Part number 12810000-3, 1281000-4, 9882000-4, 9882000-5 and 9882015-4 actuators and 1281001-4, 1281001-5 or 1281001-6 actuator bodies do not need to be modified but will require subsequent inspection. Non-compliance with Service Bulletin SEB01-2 could result in failure of the main landing gear actuator.

Compliance is mandatory; shall be accomplished as follows:

For part number 1281000-1, 1281000-2, 9882000-1, 9882000-2, 9882015-1 and 9882015-2 actuators and 1281001-1, 1281001-2 or 1281001-3 actuator bodies.

- A. Initial Inspection and Rework for actuators/bodies exceeding 3,000 hours total time in service: shall be accomplished during the next scheduled airframe inspection not to exceed 100 hours of operation.
- B. Subsequent Inspections shall be accomplished every 500 hours thereafter.

For part number 1281000-3, 1281000-4, 9882000-4, 9882000-5 and 9882015-4 actuators and 1281001-4, 1281001-5 or 1281001-6 actuator bodies.

- A. Initial Inspection for actuators/bodies exceeding 3,000 hours total time in service: shall be accomplished during the next scheduled airframe inspection not to exceed 100 hours of operation. NOTE: Rework of actuators/bodies is not required.
- B. Subsequent Inspections shall be accomplished every 500 hours thereafter.

The information contained in the referenced Cessna Service Bulletin shall be considered an amendment to the Cessna Manufacturer's Service/Maintenance Manual or Instructions for continued airworthiness, and must be accomplished for ongoing airworthiness compliance as required per FAR43.13.

Please contact a Cessna Single Engine Service Station for detailed information and make arrangements to have Service Bulletin SEB01-2 accomplished on your airplane.

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ACCOMPLISHMENT INSTRUCTIONS

Single Engine



SEB01-2

TITLE MAIN LANDING GEAR ACTUATOR INSPECTION

EFFECTIVITY:

MODEL SERIES

SERIAL NUMBERS

172RG	172RG0001	thru	172RG1191
172RG	691		
R182	R18200001	thru	R18202039
210/T210	21057841	thru	21065009
T210	T210-0001	thru	T210-0454
P210	P21000001	thru	P21000874
FR182	FR18200001	thru	FR18200070

DESCRIPTION

The following instructions explain how to check for the presence of cracks in an area of the Main Landing Gear Actuators, and how to polish that same area if no cracks are found.

APPROVAL

FAA approval has been obtained on technical data in this publication that affects airplane type design.

For Reims Aviation airplanes: DGAC approval has been obtained on technical data in this publication that affects airplane type design.

REFERENCE

SEB01-2

CHANGE IN WEIGHT AND BALANCE

None

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To obtain satisfactory results, procedures specified in this publication must be accomplished in accordance with accepted methods and prevailing government regulations. Cessna Aircraft Company cannot be responsible for the quality of work performed in accomplishing the requirements of this publication.

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ACCOMPLISHMENT INSTRUCTIONS

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MATERIAL INFORMATION

PART NUMBER	QUANTITY	DESCRIPTION
*ZL-22	As Required	Penetrant
*ZP-9	As Required	Developer
*ZC-7	As Required	Cleaner
*ZB-23A	1	Portable Black Light
*8X to 10X	1	Magnifying Glass

* Product of: Magnaflux Corporation
7300 W. Lawrence Avenue
Chicago, IL 60656

* or equivalent inspection material, per QPL-25135 and MIL SPEC MIL-I-25135.

New packings and O-rings are required for re-assembly of main landing gear actuators. Refer to applicable Parts Catalog for part number information.

ACCOMPLISHMENT INSTRUCTIONS

1. Inspect Main Landing Gear Actuators.

- A. Jack the airplane. (Refer to applicable Service Manual.)
- B. (Refer to applicable Service Manual.) Remove and disassemble Main Landing Gear Actuator.
- C. (Refer to Figure 1.) Perform a fluorescent penetrant inspection in location indicated by Figure 1 on both sides of each main landing gear actuator body.
 - (1) Clean each actuator in inspection areas with ZC-7 Cleaner using a lint free cloth.
 - (2) Apply ZL-22 Penetrant to the areas previously cleaned, and allow penetrant to remain on these areas for thirty minutes.
 - (3) Clean the penetrant from the actuator using a clean, lint free cloth dampened with ZC-7 cleaner. The inspection area is considered clean with an absence of background fluorescences.
 - (4) Mix ZP-9 Developer per the manufacturer's instruction on the container and apply a thin coat to the inspection area. Allow 15 minutes for developing time.
 - (5) Examine the areas under black light. An 8X to 10X magnifying glass should be used in the examination as some cracks are difficult to see with the naked eye.
- D. If a crack or cracks are detected, the actuator or actuator body must be replaced.
- E. If no cracks are detected on part number 1281000-1, 1281000-2, 9882000-1, 9882000-2, 9882015-1 or 9882015-2 Actuator Assemblies and 1281001-1, 1281001-2 or 1281001-3 Actuator Bodies, proceed to Step 2.
- F. If no cracks are detected on part number 1281000-3, 1281000-4, 9882000-4, 9882000-5 or 9882015-4 Actuator Assemblies and 1281001-4, 1281001-5 or 1281001-6 Actuator Bodies, proceed to Step 3.

ACCOMPLISHMENT INSTRUCTIONS

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2. Polish edge of hole intersection of main landing gear actuator.
 - A. (Refer to Figure 1.) Using fine grit emery cloth (600 grit), or equivalent, polish edge of hole intersection as shown in Figure 1.
 - (1) Smooth continuous edge of saddle-shaped oval hole where 1.00 inch diameter bore transitions 2.28 inch diameter bore, so that no sharp edges or tool marks can be felt by finger tip.
 - (2) Smooth circumference of 2.28 inch diameter bore and step so that no sharp edges or tool marks can be felt by finger tip.
 - (3) Flush actuator body with solvent to remove any metal shavings, fluorescent penetrant solution or other foreign matter.
3. (Refer to applicable Service Manual.) Assemble and install Main Landing Gear Actuator.

NOTE: Ensure new seals are installed in actuators per Service Manual instructions.
4. Perform an operational and leak check of the landing gear system, rig as required. (Refer to applicable Service Manual.)
5. Remove the airplane from jacks. (Refer to applicable Service Manual.)
6. Make an entry in the airplane logbook stating compliance and method of compliance with this Service Bulletin, and if applicable, when the next scheduled inspection is due.

ACCOMPLISHMENT INSTRUCTIONS

SEB01-2

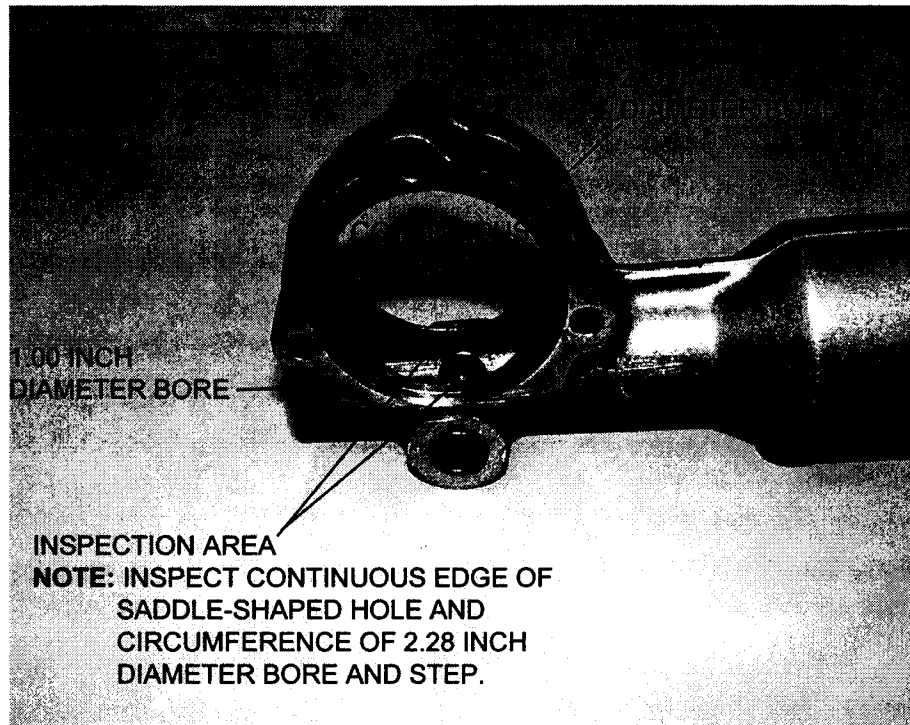


FIGURE 1. MAIN LANDING GEAR ACTUATOR INSPECTION