

## Service Bulletin

April 16, 2007

SEB07-3

### TITLE

MAIN LANDING GEAR ACTUATOR HYDRAULIC LINES INSPECTION

### EFFECTIVITY

<u>Model</u>	<u>Year</u>	<u>Serial Numbers</u>
R182		683
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
FR182	1978	FR18200001 thru FR18200020
FR182	1979	FR18200021 thru FR18200045
FR182	1980	FR18200046 thru FR18200070

### PURPOSE

A report was received of attach screws being installed incorrectly on the main landing gear (MLG) actuator access panel. The incorrectly installed attach screws caused wear and damage to a MLG hydraulic actuator line located under the access panel. This Service Bulletin provides an inspection of the access panel attach screws and the hydraulic lines. Non-compliance with this Service Bulletin could result in possible damage to the MLG hydraulic actuator lines and the potential to lose hydraulic pressure to the MLG actuator.

## COMPLIANCE

Recommended: should be accomplished within the next 100 hours of operation or during the next scheduled 100 hour or annual/12 month type inspection, whichever occurs first.

## APPROVAL

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

For Reims Aviation Airplanes: DGAC approval has not been obtained on technical data in this publication. The affected "F" model and serial number airplanes are included for informational purposes. Cessna considers compliance recommended on "F" model airplanes regardless.

## MAN-HOURS

Approximately 1.6 man-hours for inspection

If necessary, approximately 1.5 man-hours to replace one hydraulic line, and 0.3 man-hour for each additional line replacement

## MATERIAL

The parts below 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>
MS27039-1-09	Screw	1 (if required)	\$	0.27 (PS) ea MQ 100
MS27039-1-12	Screw	5 (if required)	\$	0.11 (PS) ea MQ 100
MS27039-1-14	Screw	2 (if required)	\$	0.17 (PS) ea MQ 100
MS27039-1-16	Screw	10 (if required)	\$	0.24 (PS) ea MQ 100
2280001-2	MLG Hydraulic- Actuator Down Line, Left	1 (if required)	\$	157.00 (S) ea
2280001-11	MLG Hydraulic- Actuator Up Line, Right	1 (if required)	\$	167.00 (S) ea
2280001-12	MLG Hydraulic- Actuator Up Line, Left	1 (if required)	\$	245.00 (S) ea
2280001-35	MLG Hydraulic- Actuator Down Line, Right	1 (if required)	\$	180.00 (S) ea

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

## ACCOMPLISHMENT INSTRUCTIONS

### Change In Weight And Balance

Negligible

## Material Information

The parts below may be necessary:

New P/N	Quantity	Description	Old P/N	Disposition
MS27039-1-09	1	Screw	NAS221-9	Discard
MS27039-1-12	5	Screw	NAS221-12	Discard
MS27039-1-14	2	Screw	NAS221-14	Discard
MS27039-1-16	10	Screw	NAS221-16	Discard
2280001-2	1	MLG Hydraulic-Actuator Down Line, Left	Same	Discard
2280001-11	1	MLG Hydraulic-Actuator Up Line, Right	Same	Discard
2280001-12	1	MLG Hydraulic-Actuator Up Line, Left	Same	Discard
2280001-35	1	MLG Hydraulic-Actuator Down Line, Right	2280001-1	Discard

1. Prepare the airplane for maintenance.
  - A. Make sure that all switches are in the OFF/NORM position.
  - B. Disconnect electrical power from the airplane.
    - (1) Disconnect the airplane battery.
    - (2) Disconnect external electrical power.
  - C. 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. Remove and keep the bolts that attach the rear seats to the airplane, and move the seats away from the 2211042-2 Access Door. (Refer to the Model R182 and R182 Series 1978 thru 1986 Service Manual.)
3. (Refer to Figure 1, Detail A.) Remove the carpet from the area of the 2211042-2 Access Door.
4. (Refer to Figure 1, Detail A.) Remove the 2211042-2 Access Door as follows:
  - A. As you remove each screw, record the location and length of it.

**NOTE:** If an installed screw is more than the length specified in the applicable illustrated parts catalog or in Figure 1, Detail A, there can be damage to the hydraulic lines near to the screw.
  - B. Remove the 2211042-2 Access Door. Keep the screws.
5. Do an inspection of the hydraulic lines.
  - A. (Refer to Figure 1, View A-A and Detail B.) Do an inspection of the 2280001-1 (or 2282001-35) Right MLG Hydraulic-Actuator Down Line, 2280001-12 Left MLG Hydraulic-Actuator Up Line, 2280001-11 Right MLG Hydraulic-Actuator Up Line, and 2280001-2 Left MLG Hydraulic-Actuator Down Line.

**NOTE:** Although you must examine all of the hydraulic lines that you can see after you remove the 2211042-2 Access Door, you must look closely at the 2280001-1 (or 2282001-35) Right MLG Hydraulic-Actuator Down Line, as it is the line nearest to the screws that install the 2211042-2 Door.

- (1) If no hydraulic lines are damaged and the right MLG hydraulic-actuator down line is the recommended 2280001-35 Right MLG Hydraulic-Actuator Down Line configuration (2280001-35 in Figure 1, Detail B shows the recommended configuration for the hydraulic line), make sure the 2280001-35 part number is legible. If it is not legible, write the part number 2280001-35 on the line with a permanent marker to identify it as the recommended line. Go to Step 9.
  - (2) If one or more of the hydraulic lines are damaged, or if the 2280001-1 Right MLG Hydraulic-Actuator Down Line is not the recommended configuration (2280001-1 in Figure 1, Detail B shows the configuration that is not recommended for the hydraulic line), go to Step 6.
6. If one or more of the hydraulic lines are damaged, or if the 2280001-1 Right MLG Hydraulic-Actuator Down Line is not the recommended configuration (2280001-1 in Figure 1, Detail B shows the configuration that is not recommended for the hydraulic line) replace the hydraulic line(s) as follows:

- A. Use jacks as support for the airplane, but do not lift the airplane up. (Refer to the Model R182 and R182 Series 1978 thru 1986 Service Manual.)

**WARNING: BEFORE YOU DO MAINTENANCE ON THE HYDRAULIC SYSTEM, MAKE SURE THAT YOU BLEED THE HYDRAULIC LINES. IF YOU TRY TO DISCONNECT A HYDRAULIC LINE BEFORE YOU BLEED THE HYDRAULIC SYSTEM, PRESSURE IN THE LINES CAN CAUSE DAMAGE TO EQUIPMENT AND MAINTENANCE PERSONNEL.**

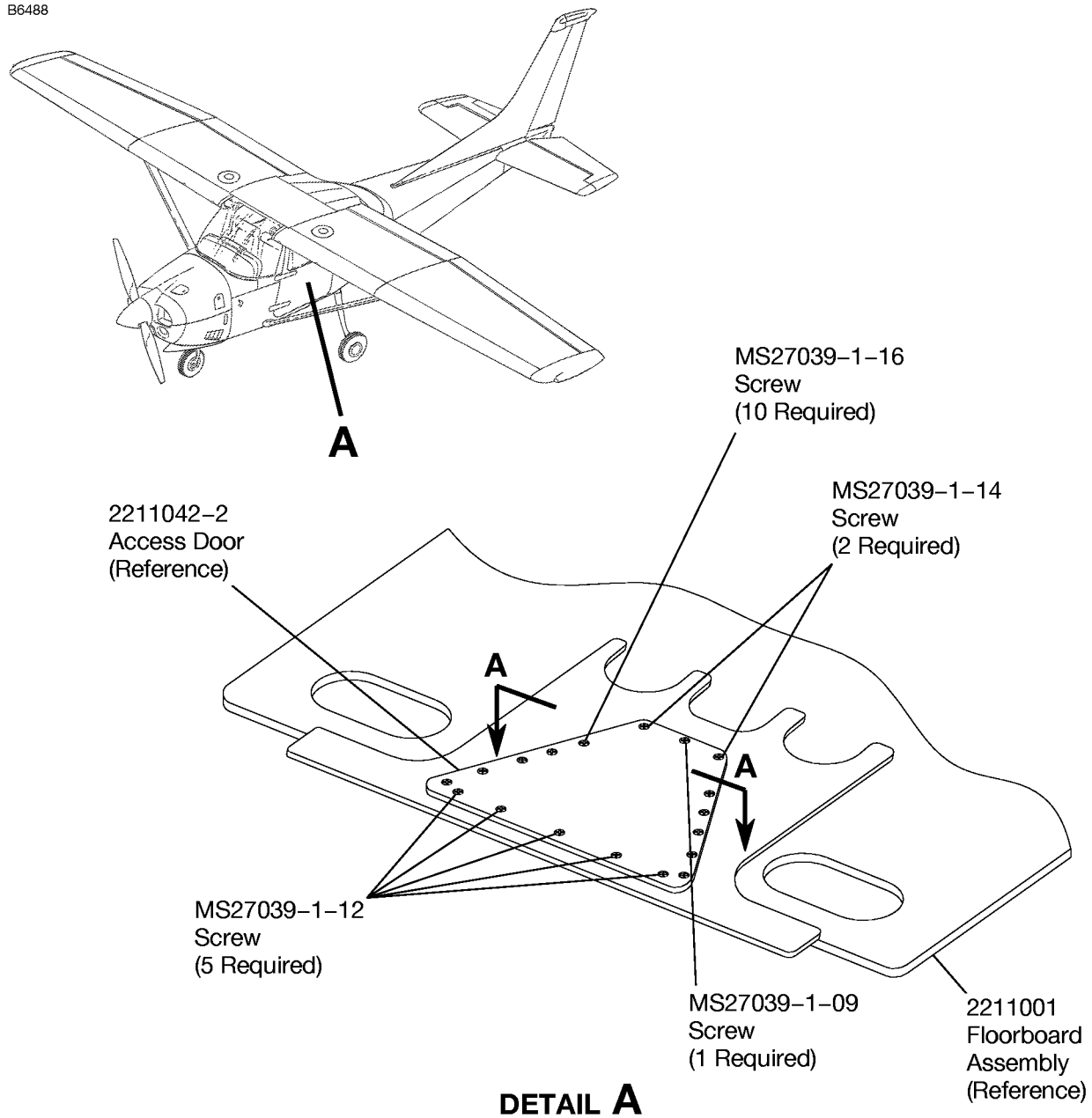
- B. Remove and discard the MLG hydraulic-actuator line that you must replace. (Refer to the Model R182 and R182 Series 1978 thru 1986 Illustrated Parts Catalog.)
- C. Install a new 2282001-35 MLG Right Hydraulic-Actuator Down Line, 2280001-12 Left MLG Hydraulic-Actuator Up Line, 2280001-11 Right MLG Hydraulic-Actuator Up Line, or 2280001-2 Left MLG Hydraulic-Actuator Down Line as necessary. Go to Step 7. (Refer to the Model R182 and R182 Series 1978 thru 1986 Illustrated Parts Catalog.)
7. Do an operational test and a leak check of the landing gear as follows:
- A. Lift the airplane with jacks to a sufficient height to cycle the gears safely. (Refer to the Model R182 and R182 Series 1978 thru 1986 Service Manual.)
- B. Do the servicing of the hydraulic system as necessary. (Refer to the Model R182 and R182 Series 1978 thru 1986 Service Manual.)
- C. Extend and retract the landing gear through four full cycles to make sure of correct operation and do the servicing of the hydraulic system as necessary. (Refer to the Model R182 and R182 Series 1978 thru 1986 Service Manual.)
8. Lower the airplane with the jacks and remove them. (Refer to the Model R182 and R182 Series 1978 thru 1986 Service Manual.)

**WARNING: WHEN YOU INSTALL THE 2211042-2 ACCESS DOOR, MAKE SURE THAT YOU INSTALL THE SCREWS IN THE CORRECT POSITION. THE SCREWS ARE OF DIFFERENT LENGTHS, AND IF YOU DO NOT PUT EACH OF THE SCREWS IN THE CORRECT POSITION, THEY CAN CAUSE DAMAGE TO THE HYDRAULIC LINES BELOW THEM.**

9. (Refer to Figure 1, Detail A.) Install the 2211042-2 Access Door for the actuator-inspection access panel as follows:
- A. If the kept screws are the correct length and they are in good condition, install the 2211042-2 Access Door with the kept screws. Make sure that you install screws of the correct lengths in the positions shown in Figure 1, Detail A.

- B. If the kept screws are not the correct length or they are not in good condition, install the 2211042-2 Access Door with one MS27039-1-09 Screw, five MS27039-1-12 Screws, two MS27039-1-14 Screws, and ten MS27039-1-16 Screws. Make sure that you install the screws in the positions shown in Figure 1, Detail A.
10. With the kept bolts, install the rear seats. (Refer to the Model R182 and R182 Series 1978 thru 1986 Service Manual.)
  11. Install the carpet in the area of the 2211042-2 Access Door, as necessary.
  12. Remove maintenance warning tags and connect the airplane battery.
  13. Make an entry in the airplane logbook that states compliance and method of compliance with this Service Bulletin.

**NOTE:** This information shall be considered an amendment to the Cessna Manufacturer's Service/Maintenance Manual and should be accomplished within the specified time requirement.



MS27039-1 Dash Number	Length in Inches (Grip Plus Thread Length)
-09	0.594
-12	0.781
-14	0.906
-16	1.031

0710R1001  
A0741R1017

Figure 1. MLG Actuator Hydraulic Lines Inspection (Sheet 1)

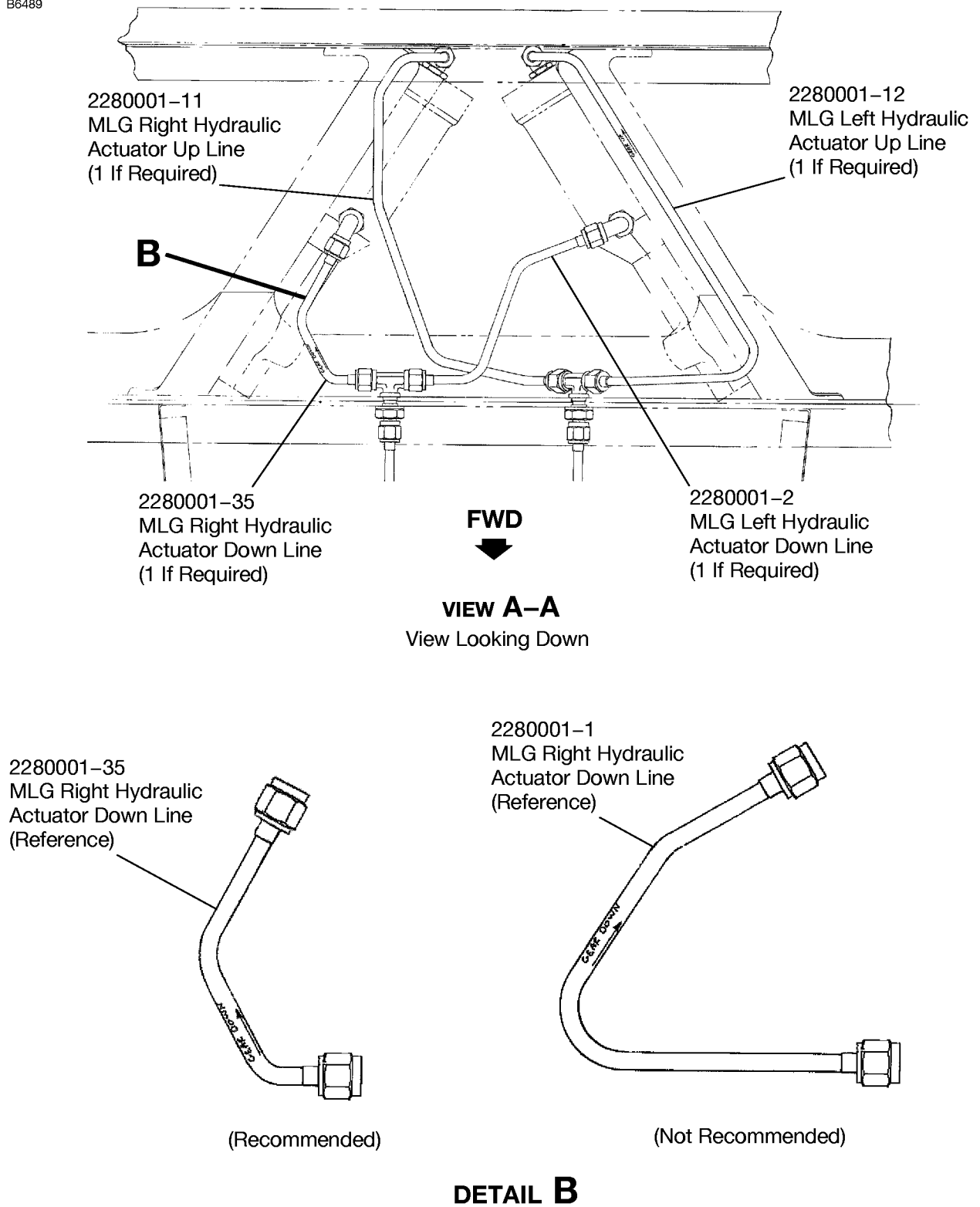


Figure 1. MLG Actuator Hydraulic Lines Inspection (Sheet 2)

## **CREDIT**

Not applicable

## **OWNER NOTIFICATION**

On April 30, 2007 the following Owner Advisory message will be sent to applicable owners of record in SEB07-3A.

Dear Cessna Owner:

This Owner Advisory is to inform you that SEB07-3: Main Landing Gear Actuator Hydraulic Lines Inspection has been issued.

A report was received of attach screws being installed incorrectly on the main landing gear (MLG) actuator access panel. The incorrectly installed attach screws caused wear and damage to a MLG hydraulic actuator line located under the access panel. This Service Bulletin provides an inspection of the access panel attach screws and the hydraulic lines. Non-compliance with this Service Bulletin could result in possible damage to the MLG hydraulic actuator lines and the potential to loose hydraulic pressure to the MLG actuator.

Compliance is recommended: should be accomplished within the next 100 hours of operation or during the next scheduled 100 hour or annual/12 month type inspection, whichever occurs first.

The information contained in the referenced Cessna Service Bulletin shall be considered an amendment to the Cessna Manufacturer's Service/Maintenance Manual and should be accomplished within the specified time requirement.

Please contact a Cessna Single Engine Service Station for detailed information and arrange to have Cessna Service Bulletin SEB07-3 accomplished on your airplane.

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