



AIRCRAFT MAINTENANCE MANUAL

LANDING GEAR, NOSE AND MAIN – INSPECTION/CHECK

**ON A/C ALL

TASK 32-00-01-200-801

Fluid Leakage Inspection of the Nose and Main Landing-Gear Shock-Struts

1. General

- A. The maintenance procedure that follows is for the inspection of the nose and main landing-gear for fluid leakage.

2. Job Set-Up Information

Subtask 32-00-01-943-001

A. Tools & Equipment

- (1) None Specified Inspection Light

Subtask 32-00-01-944-001

B. Consumable Materials

- (1) 14-02 Wiper Cloth-White Cotton (Lint Free)

Subtask 32-00-01-946-002

C. Reference Information

REFERENCE	DESIGNATION
TASK 10-11-00-000-801	Disengage the Nose Gear Ground Lock
TASK 10-11-00-000-802	Removal of the MLG Lock Pins
TASK 10-11-00-400-801	Engage the Nose Gear Ground Lock
TASK 10-11-00-400-802	Installation of the MLG Lock Pins
TASK 12-10-32-210-801	Extension Check of the NLG Shock Strut
TASK 12-10-32-210-802	Extension Check of the MLG Shock Strut
TASK 12-10-32-610-801	Servicing of the NLG Shock Strut
TASK 12-10-32-610-802	Servicing of the MLG Shock Strut
TASK 32-11-01-960-802	Replacement of the MLG Seals
TASK 32-21-01-000-802	Removal of the NLG Seals
TASK 32-21-01-400-802	Installation of the NLG Seals

PSM 1-84-2 – MASTER

EFFECTIVITY:

See first effectivity on page 601 of 32-00-01

32-00-01

Page 601
Jan 05/2019



AIRCRAFT MAINTENANCE MANUAL

3. Job Set-Up

Subtask 32-00-01-840-001

WARNING: INSTALL LANDING GEAR GROUND LOCK PINS TO THE MAIN LANDING GEAR.
ENGAGE THE NOSE LANDING GEAR GROUND LOCK.

- A. Engage the nose gear ground lock (Refer to [TASK 10-11-00-400-801](#)).
- B. Install the main landing-gear lock pins (Refer to [TASK 10-11-00-400-802](#)).

4. Procedure

Subtask 32-00-01-200-003

[Refer to Figure 601.](#)

- A. Minor hydraulic fluid leakage at the piston/gland nut on a new, low-time or medium to long term “parked” shock struts is not always indicative of seal failure. Do the inspection the main and the nose shock struts for fluid leakage as follows:

NOTE: The presence of a hydraulic fluid film on the shock strut is normal. The continuous drops are an indication of shock strut leakage.

NOTE: Under warmer temperatures, lubricants and grease used to assemble the shock strut may liquefy and run down the piston. Normally, the lubricant will be clear/colorless (on a white cloth) but it may have a brownish/red tint when mixed with grease.

- (1) Wipe the surface of the piston with a dry/clean cloth to remove all of the fluid from the leak.
- (2) As necessary, do an extension check of the MLG shock strut (Refer to [TASK 12-10-32-210-802](#)) and/or the NLG shock strut (Refer to [TASK 12-10-32-210-801](#)).
- (3) For loaded or unloaded shock struts, wipe the shock strut piston clean to remove all traces of hydraulic fluid.

- (4) Monitor the piston where it meets the outer cylinder for 20 minutes.

NOTE: Make sure that the extension of the piston does not change.

- (5) Make a record of the location and the number of drops during the 20 minutes.

NOTE: Twenty drops of hydraulic fluid is approximately equal to 1.0 cc.

- (6) Wipe the surface of the piston with a dry/clean cloth and remove all signs of hydraulic fluid.

- (7) Monitor the piston where it meets the outer cylinder for 20 minutes.

NOTE: Make sure that the extension of the piston does not change.

- (8) Make a record of the location and the number of drops during the 20 minutes.

NOTE: Twenty drops of hydraulic fluid is approximately equal to 1.0 cc.

- (9) Calculate the average number of drops which came from the seal during the two 20 minute measurement periods.

NOTE: The shock strut is not serviceable if the leakage is more than 5 drops during the 20 minute measurement period.

AIRCRAFT MAINTENANCE MANUAL

- (10) If there is no leakage, do as follows:
- Return the shock strut to service and continue to monitor the shock strut for signs of leakage.
NOTE: If you think the hydraulic fluid level is low, service the shock strut with oil and nitrogen (Refer to [TASK 12-10-32-610-801](#) and/ or [TASK 12-10-32-610-802](#)) within 5 flight cycles.
 - If shock strut leakage is found on subsequent landings, do the leakage check again.
- (11) If the leakage is equal to or less than 5 drops (Ref. Paragraph (9)), do as follows:
- Return the shock strut to service and continue to monitor the shock strut for signs of leakage.
NOTE: If during the three and six days checks there is no leakage, repeat Paragraph (10) above.
 - After three days, do as follows:
 - Do an extension check of the MLG shock strut (Refer to [TASK 12-10-32-210-802](#)) and/or the NLG shock strut (Refer to [TASK 12-10-32-210-801](#)).
 - If necessary, inflate the shock strut with nitrogen (Refer to [TASK 12-10-32-610-801](#) and/ or [TASK 12-10-32-610-802](#)) to meet the requirements of the airspring curve on the servicing nameplate ('X' dimension).
 - After six days, do as follows:
 - Discharge the shock strut.
 - Service the shock strut with oil and nitrogen (Refer to [TASK 12-10-32-610-801](#) and/ or [TASK 12-10-32-610-802](#)).
 - Do the leakage check again.
 - Do the after three day and the after 6 day checks again until you replace the shock strut seals.
NOTE: You must replace the seals within 500 flight hours.
 - If the shock strut leakage continues or the leakage increases, do the leakage check again.
- (12) The shock strut is not serviceable if the leakage is more than 5 drops (Ref. Paragraph (9)).
- As necessary, replace the shock strut seals (Refer to [TASK 32-11-01-960-802](#) or [TASK 32-21-01-000-802](#) and [TASK 32-21-01-400-802](#)).
 - For the Main Landing Gear:
Before the shock strut disassembly, the shock strut shall be serviced with oil to determine a volume of the oil that had been lost. If the volume of the lost oil is over 10 cubic inches the over-stop tube shall be replaced within the next 2A-Check. (Refer to [TASK 12-10-32-610-801](#) and/ or [TASK 12-10-32-610-802](#))
NOTE: To do the shock strut seal replacement, a onetime Ferry Flight is permitted to reposition the aircraft to a maintenance base.



AIRCRAFT MAINTENANCE MANUAL

5. Close Out

Subtask 32-00-01-840-002

- A. If necessary, disengage the nose gear ground lock (Refer to [TASK 10-11-00-000-801](#)).
- B. If necessary, remove the main landing-gear lock pins (Refer to [TASK 10-11-00-000-802](#)).

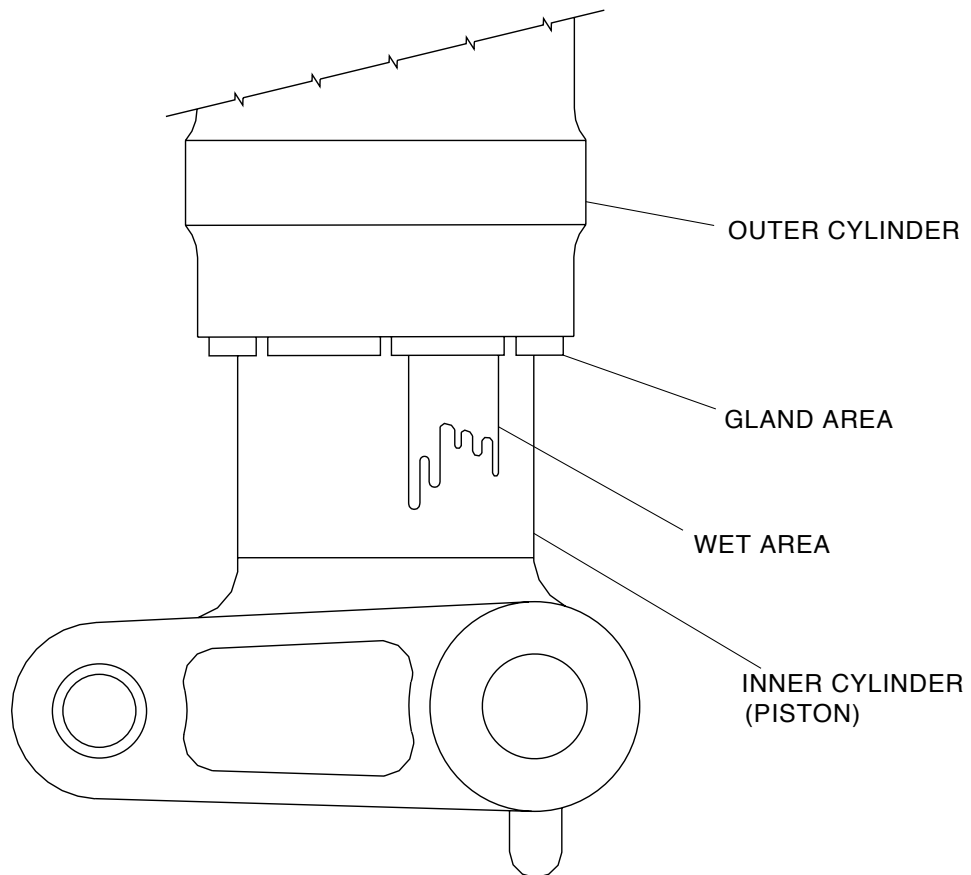
Subtask 32-00-01-941-002

- C. Remove all tools, equipment, and unwanted materials from the work area.
- D. Dispose of all contaminated materials and hydraulic fluid according to your Local Government Health and Safety Regulations.

Subtask 32-00-01-752-001

- E. This task contains maintenance requirements that you must do before the specified limits. These requirements are given in the Procedure section of this task.

AIRCRAFT MAINTENANCE MANUAL



ma289a01.dg

Fluid Leakage Inspection of the Nose and Main Landing Gear Shock Struts
Figure 601