MAIN-LANDING-GEAR SHOCK ABSORBER - SERVICING

EFFECTIVITY: ALL

1. General

   A. This section gives the procedure to fill and charge the MLG shock absorber.

   B. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	*DESCRIPTION*	*EFFECTIVITY*
32-10-02-600-801-A ♦	MLG SHOCK ABSORBER - SERVICING	ALL

TASK 32-10-02-600-801-A
EFFECTIVITY: ALL

2. MLG SHOCK ABSORBER - SERVICING

A. General

(1) This procedure is done with the aircraft on the ground. If the aircraft is on jacks, the nitrogen pressure is given on the Figure 302.

(2) This procedure is applicable to LH and RH MLG.

(3) On the servicing chart, the piston height "H" is given in inches and the pressure is given in PSI.

B. References

REFERENCE	*DESIGNATION*
AMM TASK 32-00-01-910-801-A/200	LG SAFETY PIN - INSTALLATION AND REMOVAL

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Hand pump (2000 PSI) equipped with reservoir (see specification of hydraulic fluid in paragraph F)	To fill the shock absorber	
GSE 024	Pressure regulator valve	To charge the shock absorber	
Commercially available	Nitrogen cylinder with 2000 PSI (see specification of nitrogen in paragraph F)	To charge the shock absorber	

E. Auxiliary Items

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Drip pan	To collect the hydraulic fluid discarded	1

F. Consumable Materials

SPECIFICATION (BRAND)	*DESCRIPTION*	*QTY*
MIL-PRF-5606	Hydraulic Fluid as per MIL-PRF-5606 requirements	AR
BB-N-411, Type I, Class I, Grade B	Nitrogen	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	RH and LH MLG
1	Helps the other technician	RH and LH MLG

I. Preparation

SUBTASK 841-002-A

(1) Aircraft on the ground.

CAUTION: THE AIRCRAFT WILL HAVE ROTATIONAL MOVEMENT DURING THIS SERVICING. PAY ATTENTION TO THE AIRCRAFT STRUCTURE ENDS (WING TIP, FUSELAGE NOSE, STABILIZERS, AND FUSELAGE TAIL) DURING THIS MOVEMENT.

(2) Clear from the area below and around the aircraft all equipment that touches the aircraft fuselage, wings, and stabilizers.

(3) Make sure that the emergency parking brake is applied.

NOTE: To prevent hydraulic fluid transference from system 1 to system 2 or vice versa, first apply brakes with the pedals and then pull or release the emergency/parking brake handle.

(4) Make sure that the landing gear safety pins are installed on the RH and LH MLG (AMM TASK 32-00-01-910-801-A/200).

(5) Make sure that the wheel chocks (GSE 012) are installed on the RH and LH Main Landing Gear.

(6) Remove the wheel chocks (GSE 012) from Nose Landing Gear, if they are installed.

(7) On the overhead circuit breaker panel, open the STEER circuit breaker and attach a DO-NOT-CLOSE tag to it (Location tip: DC BUS 2/LDG GEAR/STEER).

J. Service MLG Shock Absorber (FILLING) (Figure 301) (Figure 302) (Figure 303)

SUBTASK 610-002-A

CAUTION: BEFORE YOU START THE SERVICE PROCEDURE, DO A CHECK OF THE POSITION OF THE TRAILING ARM LUG SUPPORT CLAMP. IF YOU DO NOT OBEY THIS PRECAUTION, THE CLAMP MAY TOUCH THE BREAK MANIFOLD WHEN THE SHOCK ABSORBER IS TOTALLY DEFLECTED.

(1) To do a check of the position of the trailing arm lug support clamp do as follow:

(a) Look below the main landing gear to do a check of the distance between clamp (1) and the trailing arm pin (DET. C, Figure 301).

(a) The distance must be 105 - 110 mm (4.13 - 4.15 in).

(b) If the distance is more than 105 - 110 mm (4.13 - 4.15 in), refer to the ELEB CMM 32-10-01, ASSEMBLY AND STORAGE, to set the clamp (1) on its correct position.

CAUTION: THE WHEEL CHOCK MUST BE MOVED AWAY FROM THE FRONT OF THE TIRES OF THE APPLICABLE MLG. IF YOU NOT OBEY THIS PRECAUTION DAMAGE TO THE WHEEL CHOCK CAN OCCUR.

(2) Move away the wheel chocks (GSE 012) from the front of the tires of the applicable MLG about 100 - 150 mm (3.94 - 5.91 in).

CAUTION: MAKE SURE THAT DIFFERENT FLUIDS DO NOT MIX IN THE SYSTEM. IF YOU NEED TO CHANGE FLUID, FLUSH THE SYSTEM OUT BEFORE YOU FILL IT WITH NEW FLUID. THIS IS BECAUSE, IF YOU MIX DIFFERENT FLUIDS, THE CHARACTERISTICS OF THE FLUIDS CAN CHANGE AND PUT THE PERFORMANCE AND SAFETY OF THE SYSTEM AT RISK.

CAUTION: BEFORE YOU DO THE NEXT STEP, REMOVE ALL EQUIPMENT FROM BELOW THE AIRCRAFT.

(3) Slowly open the filling/charging valve to release the pressure from the MLG shock absorber, until the shock absorber reaches the complete retracted position.

(4) Connect the hand pump to the filling/charging valve of the shock absorber (Figure 302).

CAUTION: THE AIRCRAFT WILL HAVE ROTATIONAL MOVEMENT DURING THIS SERVICING. PAY ATTENTION TO THE AIRCRAFT STRUCTURE ENDS (WING TIP, FUSELAGE NOSE, STABILIZERS, AND FUSELAGE TAIL) DURING THIS MOVEMENT.

(5) Operate the hand pump slowly, to fill the shock absorber with MIL-PRF-5606 hydraulic fluid, until the dimension "H" (DET. A, Figure 303) is 5 to 6 inches.

(6) Close the filling/charging valve.

(7) Disconnect the hand pump from the filling/charging valve.

(8) Connect a hose to the filling/charging valve and open the valve to remove the excess hydraulic fluid from the shock absorber. Collect it in a fluid container and wait until the shock absorber, by the action of the aircraft weight, is at its complete retracted position. Do the operations again from step (3) to step (7), until all air bubbles mixed with the hydraulic fluid are removed.

(9) Close the filling/charging valve.

K. Service MLG Shock Absorber (Charging) (Figure 303)

SUBTASK 610-003-A

(1) Connect the hose of the nitrogen cylinder to the filling/charging valve.

(2) Adjust the pressure regulator valve to zero (0) PSI.

(3) Open the filling/charging valve.

(4) Open the nitrogen cylinder valve.

(5) To increase the pressure of the shock-absorber, open the pressure-regulator valve, until the shock-absorber piston starts its movement.

(6) On the pressure gage, read and record the pressure value.

(7) On the servicing chart, identify the curve that is nearest to the ambient temperature.

CAUTION: THE AIRCRAFT WILL HAVE ROTATIONAL MOVEMENT DURING THIS SERVICING. PAY ATTENTION TO THE AIRCRAFT STRUCTURE ENDS (WING TIP, FUSELAGE NOSE, STABILIZERS, AND FUSELAGE TAIL) DURING THIS MOVEMENT.

(8) With the pressure value found in step (6) and the curve identified in step (7), read on the servicing chart and record the piston height value ("H") applicable to these data.

(9) Continue to fill with nitrogen until the shock absorber piston height is at the value written in step (8). Wait 3 (three) minutes for the stabilization and then see that the piston height is equal to the value written in step (8). If necessary, correct.

(10) Close the filling/charging valve.

(11) Close the nitrogen cylinder valve.

(12) Remove the hose from the filling/charging valve.

(13) Inspect the filling/charging valve for leakage.

L. Follow-on

SUBTASK 842-002-A

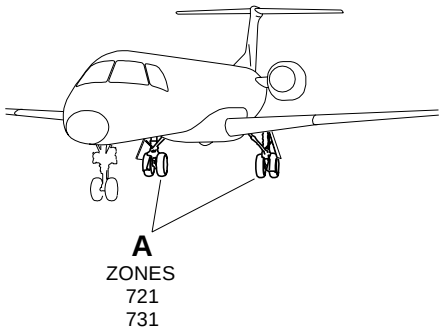
(1) Inspect the height of the other MLG shock absorber. If necessary, do the charging procedure.

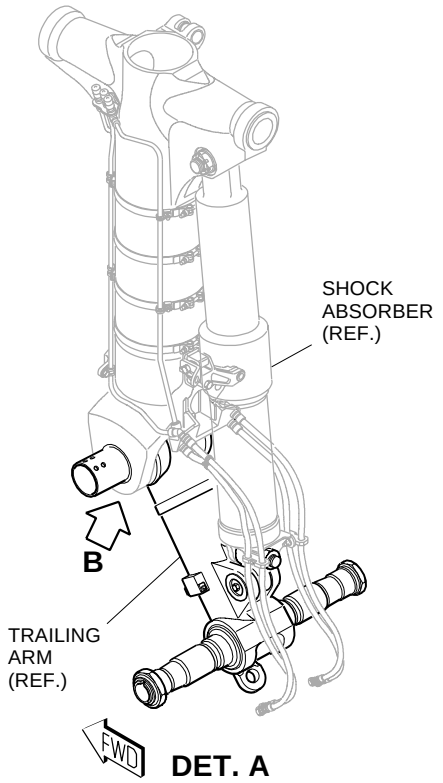
(2) On the overhead circuit breaker panel, close the STEER circuit breaker and remove the DO-NOT-CLOSE tag from it (Location tip: DC BUS 2/LDG GEAR/STEER).

(3) Install the wheel chocks (GSE 012) on the Nose Landing Gear, if applicable.

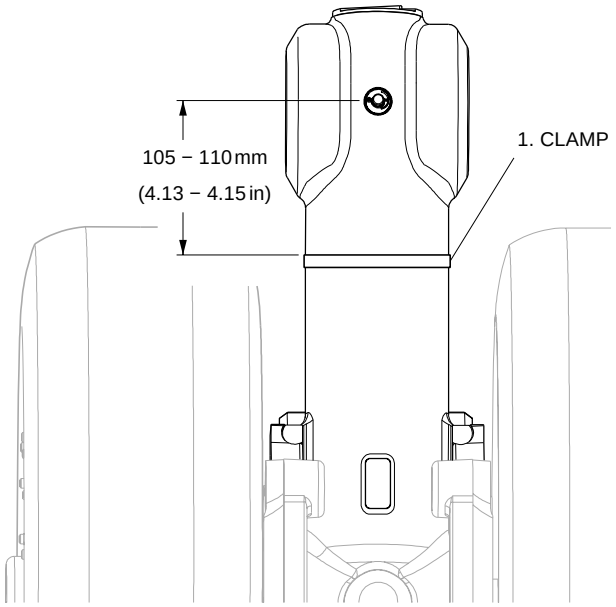
EFFECTIVITY: ALL

MLG Trailing Arm Clamp Position
Figure 301

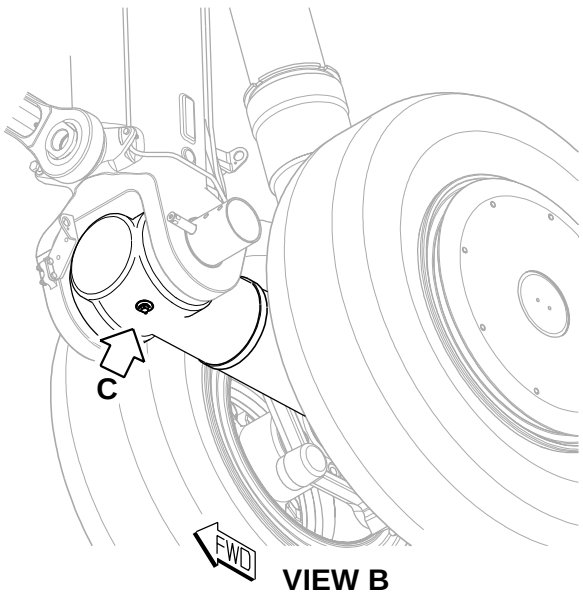




DET. A



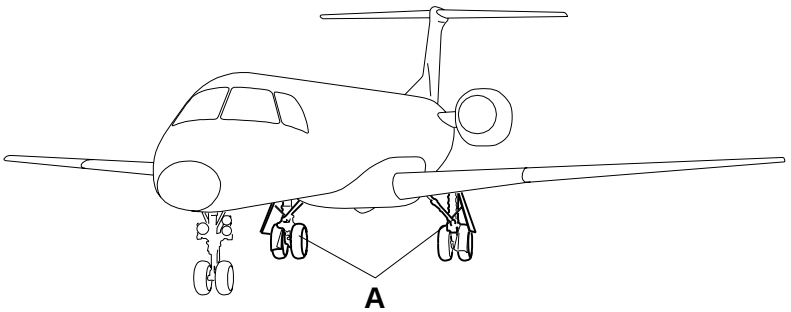
VIEW C



VIEW B
(TYPICAL)

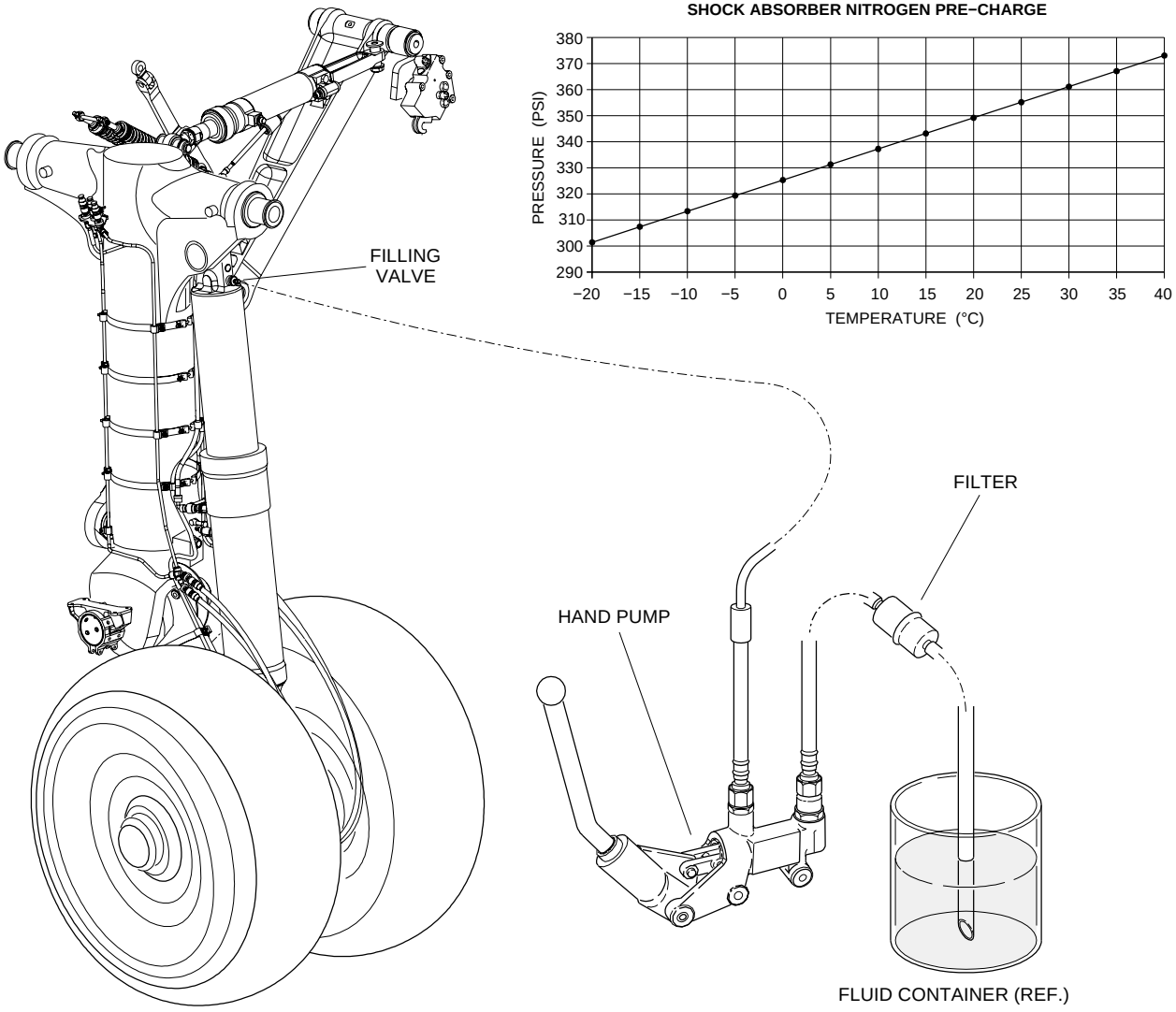
EM145AMM320661B.DGN

EFFECTIVITY: ALL
MLG Shock Absorber - Filling
Figure 302



A

ZONES
721
731

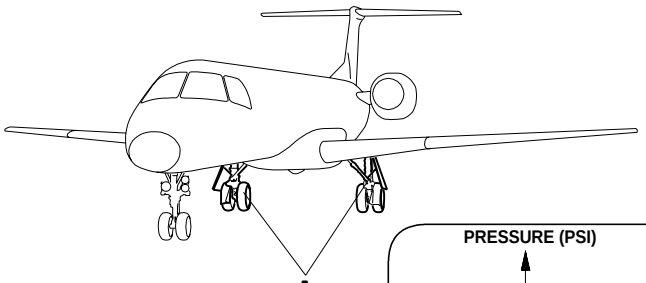


DET. A

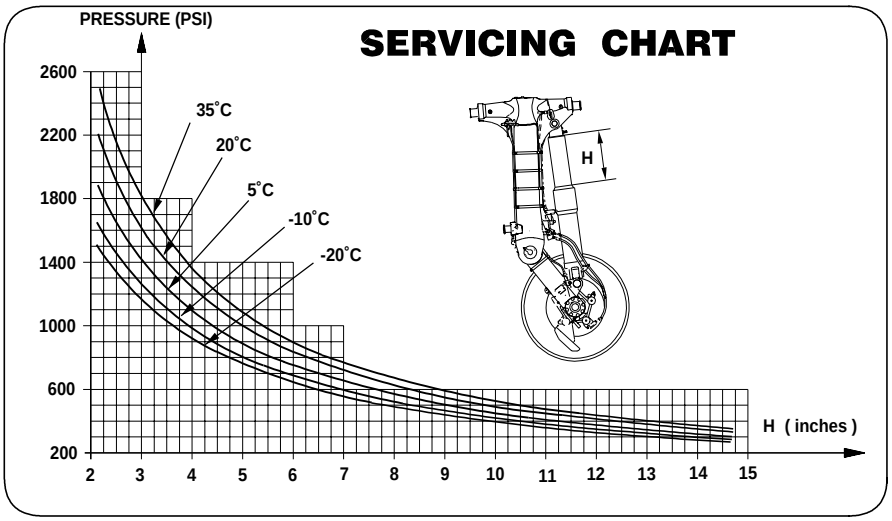
EM145AMM320229C.DGN

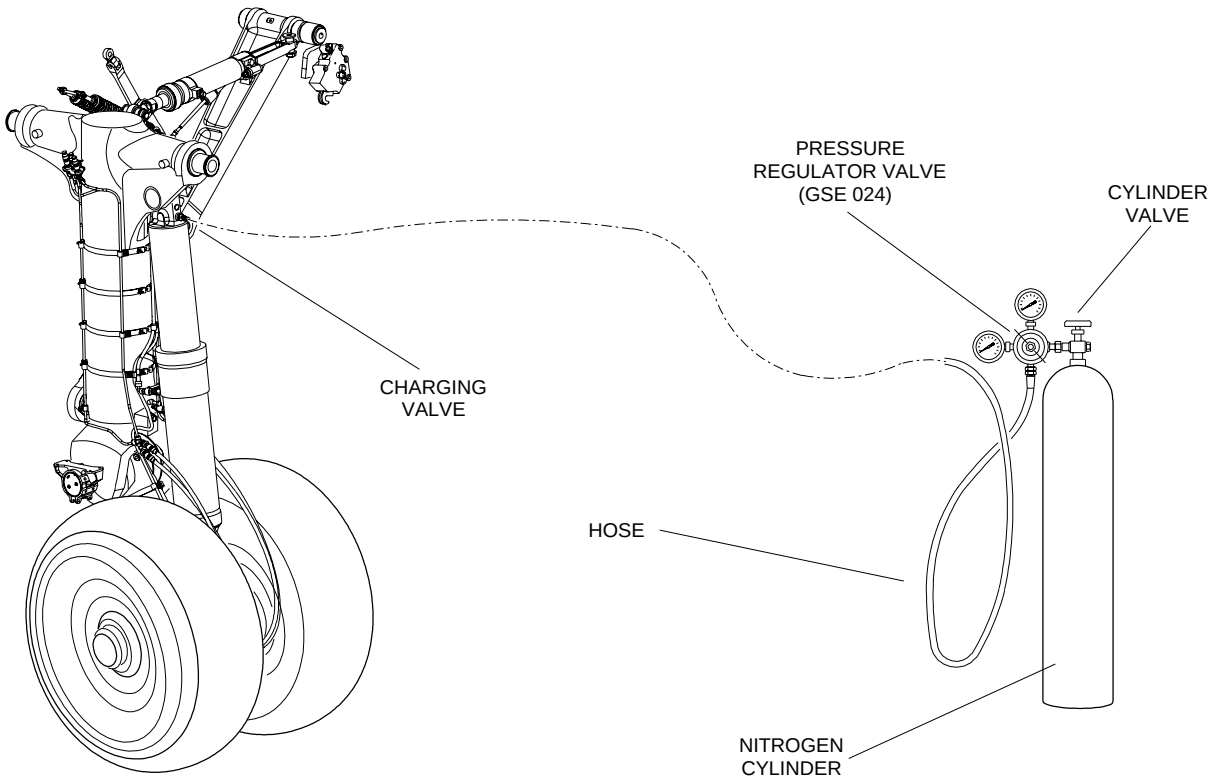
EFFECTIVITY: ALL

MLG Shock Absorber - Charging
Figure 303



A
ZONES
721
731





DET. A

145AMM320230.MCE B