NOSE WHEEL TIRE - SERVICING

EFFECTIVITY: ALL

1. General

   A. This section gives the procedure to do a check of the pressure of the nose landing gear (NLG) wheel tire and calibrate it.

   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*
32-49-04-600-801-A ♦	NLG WHEEL TIRE - CHECK AND CHARGING	ALL

TASK 32-49-04-600-801-A
EFFECTIVITY: ALL

2. NLG WHEEL TIRE - CHECK AND CHARGING

A. General

(1) To do the check of the pressure of the tire, use only pressure gauges with a good precision.

(2) For aircraft equipped with wheel pressure gauge, the check of the pressure can also be done with other external gauge, but do not use the wheel pressure gauge as a reference during inflation of the tire.

(3) Incorrect pressure decreases the life of the tire and puts the aircraft safety at risk.

(4) Use the correct equipment to inflate the tire.

(5) Install the relief valve to the pressure line as a safety device.

B. References

REFERENCE	*DESIGNATION*
AMM TASK 32-49-04-600-801-A/300	NLG WHEEL TIRE - CHECK AND CHARGING
SB 145-00-0032	-
SB 145-32-0093	-
SB145-00-0028	-
SB145-00-0032	-
SB145-32-0030	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
GSE 026	Pressure gauge	To examine the pressure	
GSE 027	Pressure regulator valve with pressure gauges	To inflate the tire	
GSE 028	Nitrogen Service Regulator	To regulate the pressure supplied to the system	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	*DESCRIPTION*	*QTY*
Spec. 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	NLG
1	Helps the other technician	NLG

I. Check of NLG Tire Inflation Pressure (Figure 301)

SUBTASK 610-002-A

(1) Remove the cap (1) from the valve (2).

CAUTION:
- DO NOT BLEED AIR FROM A HOT TIRE TO MAKE THE PRESSURE COME TO THE CORRECT LIMITS BECAUSE, AT AMBIENT TEMPERATURE, THE PRESSURE WILL BE LESS THAN THE CORRECT OPERATIONAL PRESSURE.
- EXAMINE THE PRESSURE ONLY WHEN THE TIRE IS COLD.

(2) Do the check of the service pressure:

NOTE: There is no technical objection to the use of temperature-compensated pressure gauge to do the pressure check of a hot tire. But such equipment must give measurements equivalent to the cold tire pressure given in the AMM. Before the use of a temperature-compensated pressure gauge, refer to the Manufacturer's instructions applicable to the equipment.

1. For aircraft not equipped with a wheel pressure gauge, connect the pressure gauge (3) to the valve (2). Refer to table 301.

2. For aircraft equipped with wheel pressure gauge, the check of the pressure can also be done with other external gauge. Refer to table 301.

Table 301 - NLG WHEEL TIRE PRESSURE

AIRCRAFT VERSION	NOSE TIRE DIMENSION	NOSE TIRE PRESSURE (Loaded) [1]
EMB-145STD	19.5x6.75-8 8PR	82 +4/-0 psi
	19.5x6.75-8 10PR	
EMB-145ER	19.5x6.75-8 8PR	
	19.5x6.75-8 10PR	
EMB-145EU	19.5x6.75-8 8PR	
	19.5x6.75-8 10PR	
EMB-145EP	19.5x6.75-8 8PR	
	19.5x6.75-8 10PR	
EMB-145LR (PRE MOD SB145-32-0030 or PRE-MOD SB 145-32-0093)	19.5x6.75-8 8PR	
EMB-145LR (POST MOD SB145-32-0030 or POST-MOD SB 145-32-0093)	19.5x6.75-8 10PR	
EMB-145LR (PRE MOD SB145-00-0032 or PRE-MOD SB 145-32-0093)	19.5x6.75-8 8 PR or 10PR	82 +4/-0 psi
EMB-145LR (POST MOD SB145-00-0032 or POST-MOD SB 145-32-0093)	19.5x6.75-8 10PR	104 ± 3 psi
EMB-135 ER (PRE-MOD. SB145-00-0028)	19.5x6.75-8 8PR	84 ± 2 psi
	19.5x6.75-8 10PR	
EMB-135 ER (POST-MOD. SB145-00-0028)	19.5x6.75-8 8PR	
	19.5x6.75-8 10PR	
EMB-135LR	19.5x6.75-8 8PR	84 ± 2 psi
	19.5x6.75-8 10PR	
EMB-135KE (ERJ-140ER)	19.5x6.75-8 8PR	
	19.5x6.75-8 10PR	
EMB-135KL (ERJ-140LR)	19.5x6.75-8 8PR	
	19.5x6.75-8 10PR	
EMB-135BJ	19.5x6.75-8 8PR	
	19.5x6.75-8 10PR	
EMB-145LU	19.5x6.75-8 8PR	
	19.5x6.75-8 10PR	
EMB-145MK	19.5x6.75-8 8PR	
	19.5x6.75-8 10PR	
EMB-145MP	19.5x6.75-8 8PR	
	19.5x6.75-8 10PR	

[1] For unloaded inflation pressure, these values must be decreased by four percent (4%) to get the equivalent loaded inflation pressure.

NOTE: Loaded inflation pressure means inflation pressure for weight-on-wheel aircraft.
Unloaded inflation pressure means inflation pressure for aircraft on jacks.

(3) If there is a large temperature decrease between the departure and the destination airports, you must adjust the tire pressure for the colder airport before the flight. If the temperature difference is equal to or greater than 25°C (45°F), do this procedure:

(a) Increase the tire pressure 1% for each 3°C (5. 4°F) of temperature difference.

1 E. g.:

Temperature at departure airport = 20°C (68°F)

Temperature at arrival airport = -10°C (14°F)

Temperature difference = 30 °C (54°F)

Increase the tire pressure: (30°C /3 x 1%) = 10% (54°F /5.4 x 1% = 10%)

If the tire pressure is 82 psi, increase the tire pressure: 82 psi + 10% = 90 psi.

(4) If the pressure of one tire is at or near the lower limit of the permitted range, it is recommended that you inflate the tire to an intermediate value in this pressure range to prevent unnecessary removals in subsequent pressure checks. For this, charge as given in item K (AMM TASK 32-49-04-600-801-A/300).

(5) For tire (4) with less than the minimum service pressure, refer to this table:

Table 302 - COLD PRESSURE SETTING

COLD TIRE SERVICE PRESSURE (%)	ACTION
100% to 105% of minimum loaded service pressure	None - normal cold tire operating range
95% to less than 100% of minimum loaded service pressure	Inflate again to specified service pressure
90% to less than 95% of minimum loaded service pressure	Examine tire/wheel assembly for cause of pressure loss. Inflate again and write the occurrence in the applicable document. Remove tire/wheel assembly if pressure loss is more than 5% and occurs again in 24 hours[1]
80% to less than 90% of minimum loaded service pressure	Remove tire/wheel assembly from aircraft[1]
Less than 80% of minimum loaded service pressure	Remove tire/wheel assembly and adjacent tire/wheel assembly from aircraft
Blown fuse plug	If it blows while in service (rolling), scrap the tire and its mate. If it blows while it is static, scrap only the blown tire.

[1] The tire removed because of low inflation pressure must be examined by an authorized retreader to make sure that the casing did not have internal degradation. If it did, discard the tire.

(6) Special Out-Station Procedure for tire (4) (Morning Cold Pressure Check Only). Refer to special parameters for dispatch of the aircraft, as follows:

(a) This procedure is only applicable to EMB-145LR (PRE-MOD SB 145-00-0032 or PRE-MOD SB 145-32-0093) and EMB-135LR versions.

1 Condition 1 - If the service pressure is between 78 psi and 82 psi.

- Action - Reinflate to 86 psi.

2 Condition 2 - If the service pressure is between 74 psi and 78 psi and tire mate is within operating pressure limits.

- Action - Reinflate to 86 psi.

3 Condition 3 - If the service pressure is between 66 psi and 74 psi and tire mate is within operating pressure limits.

- Action 1 - Reinflate tire to 86 psi.
- Action 2 - Remove the inflation source and, if no leaks are detected within 30 minutes, let the aircraft complete a maximum of two scheduled flights.
- Action 3 - After two flights (maximum), remove the underinflated tire, label it "underinflated operation", and remove the mate also.
- Action 4 - Send the two tires to the retreader for inspection.

(b) This procedure is only applicable to EMB-145LR (POST-MOD SB 145-00-0032 or POST-MOD SB 145-32-0093) versions.

1 Condition 1 - If the service pressure is between 96 psi and 102 psi.

- Action - Reinflate to 107 psi.

2 Condition 2 - If the service pressure is between 90 psi and 96 psi and the tire mate is within the operating pressure limits.

- Action - Reinflate to 107 psi.

3 Condition 3 - If the service pressure is between 81 psi and 90 psi and the tire mate is within the operating pressure limits.

- Action 1 - Reinflate tire to 107 psi.
- Action 2 - Remove the inflation source and, if no leaks are detected within 30 minutes, let the aircraft complete a maximum of two scheduled flights.
- Action 3 - After two flights (maximum), remove the underinflated tire, label it "underinflated operation", and remove the mate also.
- Action 4 - Send the two tires to the retreader for inspection.

J. Preparation

SUBTASK 841-002-A

(1) Adjust the outlet pressure of the nitrogen cylinder with 25% more than the nominal pressure of the tire given in Table 301.

NOTE: • After you adjust the pressure in the regulator, inflate the tire progressively not to supply more pressure than the correct nominal pressure value. Then do the applicable adjustments: inflate or deflate the tires, as necessary.

• This adjustment makes the tire servicing procedure quicker.

K. Charge (Figure 302)

SUBTASK 610-003-A

CAUTION: INFLATE THE TIRE WITH NITROGEN ONLY WHEN THE TIRE IS COLD.

(1) Remove the cap (1) from the valve (2).

(2) Connect the hose (3) to the valve (2).

WARNING: • **BEFORE THE SUBSEQUENT STEP, MAKE SURE THAT THE AREA IN FRONT OF THE TIRE IS CLEAR TO PREVENT POSSIBLE INJURY TO PERSONS DURING THE CHARGING OF THE TIRE (REFER TO THE FIGURE).**

• **NEVER USE THE WHEEL PRESSURE GAUGE AS A REFERENCE DURING AN INFLATION OF THE TIRE.**

(3) Inflate the tire (4) and monitor the pressure with the pressure gauge (GSE 027 and GSE 028). Refer to Figure 302.

(4) Disconnect the hose (3) from the valve (2).

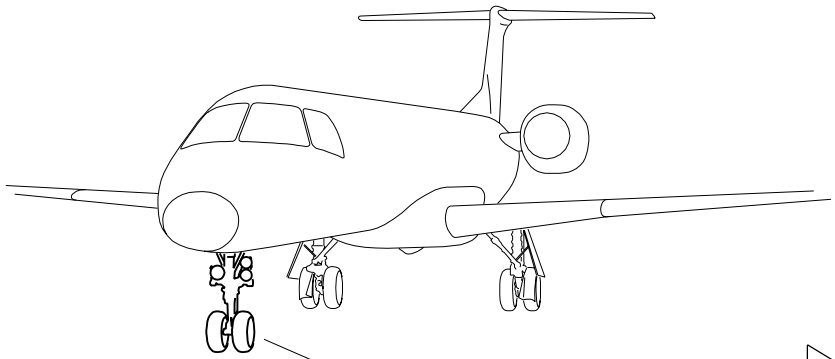
(5) Examine the valve (2) for leakage.

(6) Install the cap (1) to the valve (2).

EFFECTIVITY: ALL

NLG Wheel Tire - Check

Figure 301



A
ZONE
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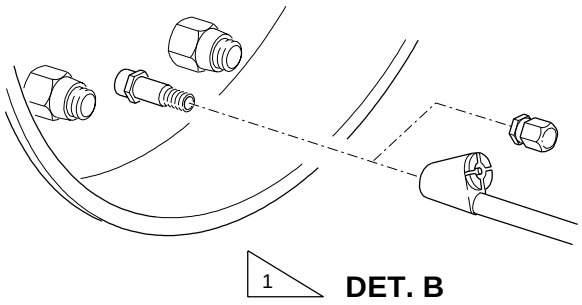
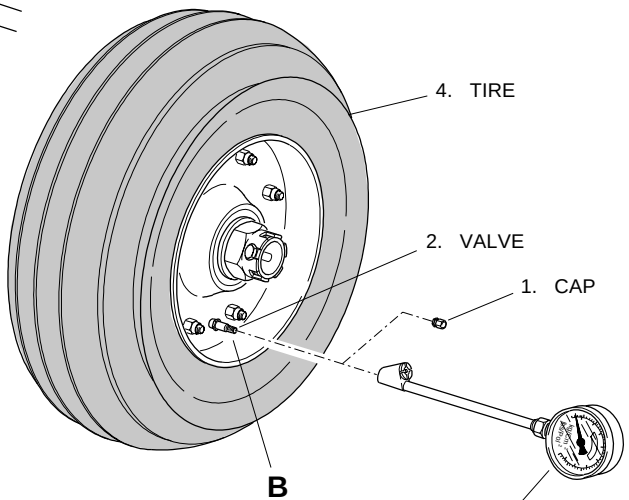
1 AIRCRAFT NOT EQUIPPED WITH WHEEL PRESSURE GAUGE

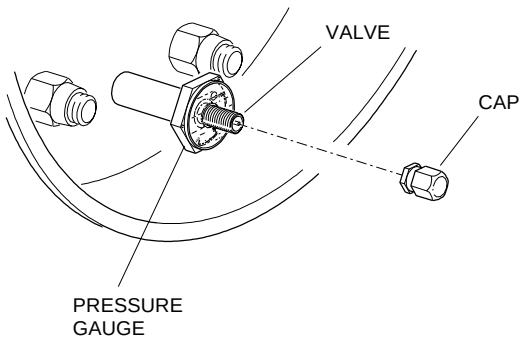
2 AIRCRAFT EQUIPPED WITH WHEEL PRESSURE GAUGE



1 **DET. B**



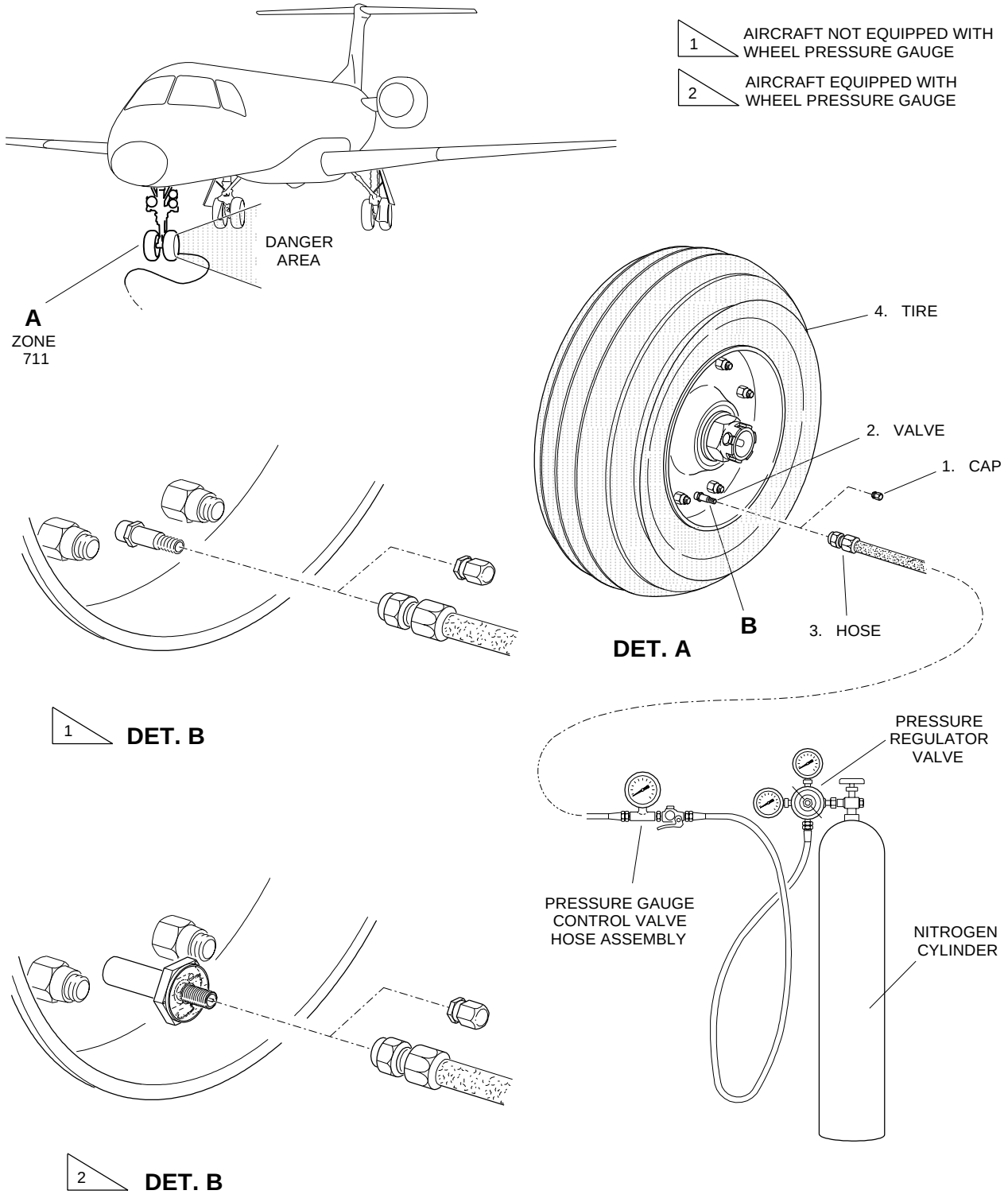
DET. A



2 **DET. B**

EM145AMM320684A.DGN

EFFECTIVITY: ALL
NLG Wheel Tire - Charging
Figure 302



EM145AMM320685A.DGN