



AIRCRAFT MAINTENANCE MANUAL

NOSE WHEEL ASSEMBLY - MAINTENANCE PRACTICES

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to do the check of the static balancing and the standard/ alternate procedures for the balancing of the nose-landing-gear wheel assembly.

The alternate balancing is given to permit the balancing of the nose wheel assembly without further tire removal to install the weight balancing. The operator can decide which procedure is more suitable.

- 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
32-49-05-860-801-A	NOSE-LANDING-GEAR WHEEL ASSEMBLY - CHECK/BALANCING	ALL



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

TASK 32-49-05-860-801-A

EFFECTIVITY: ALL

2. NOSE-LANDING-GEAR WHEEL ASSEMBLY - CHECK/BALANCING

A. General

- (1) This procedures is done with the tire/wheel assembly out of the nose landing gear.
- (2) Do a check of the static balancing and, if necessary, do the balancing procedure when the nose landing gear wheel tire is replaced.
- (3) The wheel balance device must be held on a surface plate correctly leveled, and in an environment with no drafts.

If the static balance stand is not leveled and if there are drafts, the balancing will be incorrect.

B. References

REFERENCE	DESIGNATION
AMM TASK 32-49-04-000-801-A/400	-
AMM TASK 32-49-04-600-801-A/300	NLG WHEEL TIRE - CHECK AND CHARGING
AMM TASK 32-49-05-400-801-A/400	WHEEL ASSEMBLY OF THE NOSE LANDING GEAR - INSTALLATION
BFGoodrich CMM 32-49-04	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 107	Device - Balance Patch Application	To apply balance patch to tire	
GSE 109	Device - Wheel Balance	To do a check of the tire balance	
GSE 023	Device - Tire deflator	To release the nitrogen from tire	

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Chalk	To mark the tire	AR
Commercially available	Sandpaper No. 400	To make the surface rough	AR
Commercially available	Precision scale	To weigh the balance plaster	1
Commercially available	Roller	To install the balance weight	1
Commercially available	Brush	To apply the adhesive cement	1

F. Consumable Materials

<i>SPECIFICATION (BRAND)</i>	<i>DESCRIPTION</i>	<i>QTY</i>
3M	Balance plaster	AR
MIL-PRF 680	Cleaning Solvent	AR
P/N 761 - Technical Rubber Co. Inc.	Adhesive Cement	AR
P/N 1112 - 14,175 g (1/2 OZ) - Technical Rubber Co. Inc.	Balance Weight	AR
P/N 1114 - 28,35 g (1 OZ) - Technical Rubber Co. Inc.	Balance Weight	AR
AMS 2518	Antiseize Compound	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

<i>QTY</i>	<i>FUNCTION</i>	<i>PLACE</i>
1	Does the task	On a bench

I. Preparation
SUBTASK 841-002-A

- (1) Do the check of the pressure and if necessary charge the nose-landing-gear wheel tire ([AMM TASK 32-49-04-600-801-A/300](#)).

J. Check of the Balancing of the Nose Landing Gear Wheel Assembly ([Figure 201](#))
SUBTASK 861-002-A

- (1) Put the axle pin into the wheel hub.
- (2) Put the wheel assembly on the wheel balance device (GSE 109).
- (3) Turn the wheel assembly moderately.
- (4) After the wheel stops, mark the highest point on the tread of the tire with chalk (This is the lightest point on the wheel).
Do the procedure many times to make sure that the lightest point position is correct.
- (5) Apply balance plaster to the lightest point found and turn the wheel assembly until making sure that it stops at random positions.
- (6) Remove the balance plaster and weigh it on a precision scale and take note.
Balance plaster weight shows the degree of unbalance.
- (7) Refer to the table below for the balance plaster value:

Table 201 - STANDARD BALANCING

COMPOSITION (g)	ACTION
Balance plaster 09	No further action is required (Within tolerance).
09 < Balance plaster 27	Refer to SUBTASK 32-49-05-862-001-A00 and do the balance
Balance plaster > 27	Discard the tire

K. Standard/Alternate Balancing ([Figure 201](#))
SUBTASK 862-002-A
(1) Standard balancing:

- (a) Remove the tire from the wheel hub ([AMM TASK 32-49-04-000-801-A/400](#)).
- (b) Put the tire on the tire balance patch application device, with the lightest point found in the lowest position.
- (c) Set a balance weight with approximately 1 thru 2 grams less than the balance plaster weight to counterbalance the weight of the adhesive cement used.
- (d) With the levers of GSE 107, push the tire sides apart.
- (e) On the tire inside, make the area of the chalk mark rough.
- (f) Fully clean the tire inside, with cleaning solvent.
- (g) Prepare adhesive cement to attach the balance weight.
- (h) With a brush, apply the adhesive cement to the applicable tire inside surface very smoothly.
Let it dry for 6 hours.
- (i) Apply other coat of adhesive cement to the tire inside surface and to the balance weight.
Let it dry for one hour.
- (j) Apply balance weight to the tire inside surface.
- (k) Push the balance weight down with a roller to make bonding easier and remove all air bubbles from between the surfaces.
- (l) Remove the tire from the tire balance patch application device.
- (m) Install the tire on the wheel hub ([AMM TASK 32-49-05-400-801-A/400](#)).
- (n) Do a check of the wheel balancing again to make sure it obeys the tolerance values.

(2) Alternate balancing:

- (a) Multiply the balance plaster weight value found in the step (6) of the paragraph J., by 2.5 and take note thereafter multiply the balance plaster weight value by 3 and take note.

NOTE: • The value of the balancing weight that will be used on either end of the tie bolt (3) must be between the two values found in the step (a) above.

- A balancing weight value nearer to the value found from the multiplication by 3 will probably result in a better balance.

- (b) Refer to BFGoodrich CMM 32-49-04 to set the balancing weight value between the two values found in the step (a) above.

WARNING: FULLY DEFLEATE THE TIRE BEFORE THE TIE BOLT NUTS ARE LOOSENERED.

CAUTION: INCORRECT PRELOAD AND FAILURE OF THE TIE BOLT WILL OCCUR IF THE COUNTERSUNK SIDE OF THE BALANCE WEIGHTS IS NOT AGAINST THE BOLT HEAD OR NUT. REFER TO FIGURE 202.

- (c) Deflate the tire. To do this, use GSE 023.
- (d) Remove the tie bolt nut and washer from the nose wheel where the balance weight will be installed (each one that is aliened with the lightest point in paragraph J.).
- (e) If a second balance weight is necessary in the same location, also remove the washer under the tie bolt head.
- (f) Apply antiseize compound (AMS 2518) to the load surfaces of the balance weights. ([Figure 202](#)).
- (g) Install the balance weight under the nut and, if necessary, also under the bolt head.

NOTE: • When a balance weight is installed under the bolt head, the countersunk side must be pointed to the bolt head. ([Figure 202](#)).

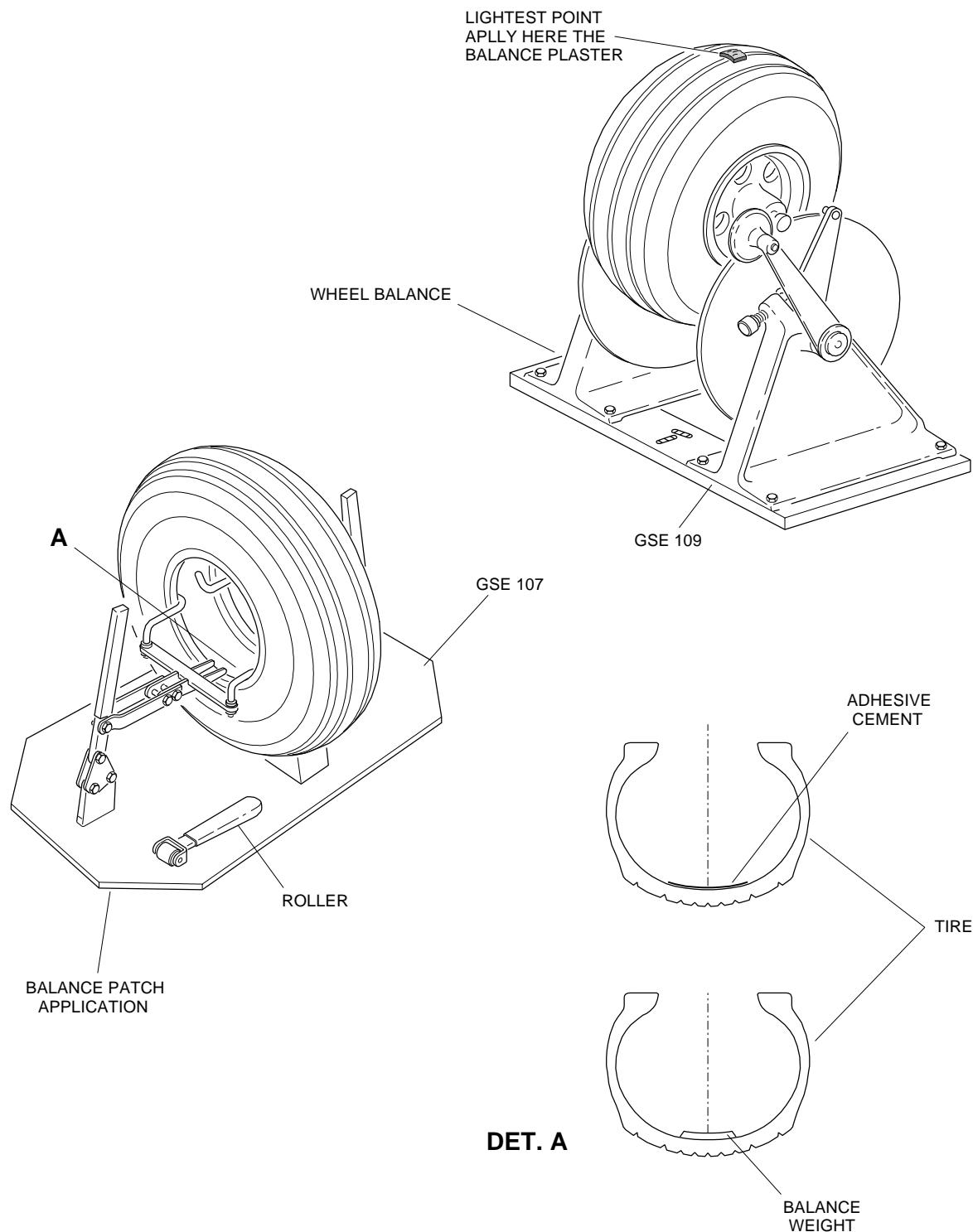
- A balance weight is used in the location of the washer. Only one balance weight can replace each washer.

- (h) Torque the nuts as referred to in BFGoodrich CMM 32-49-04.
- (i) Inflate the tire and do the check of the pressure ([AMM TASK 32-49-04-600-801-A/300](#)).
- (j) Do a check of the wheel balancing again to make sure it obeys the tolerance values in according of table 201.

EFFECTIVITY: ALL

Nose-Landing-Gear Wheel Assembly - Check/Balancing

Figure 201

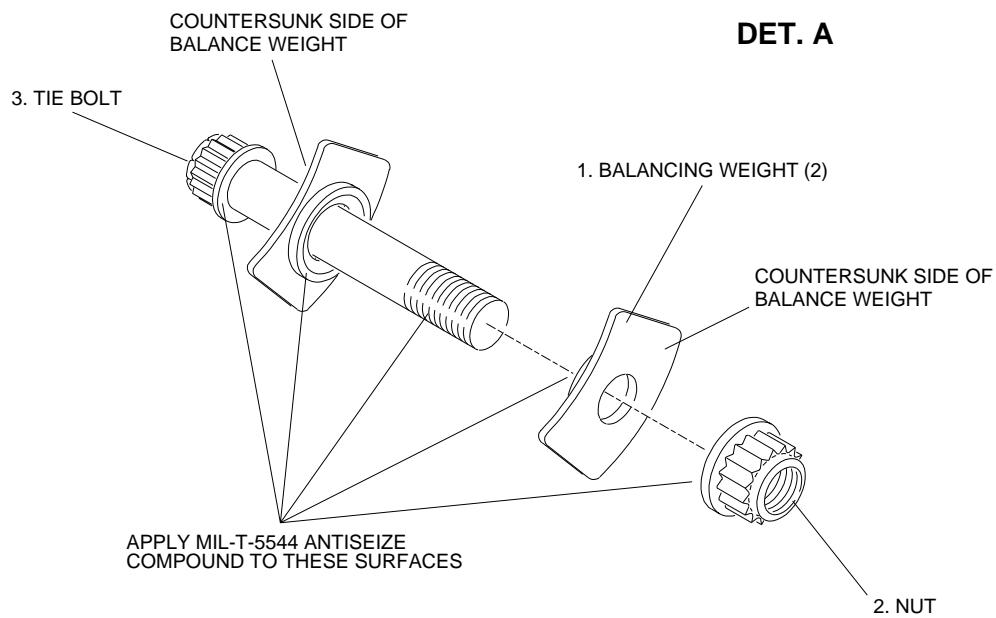
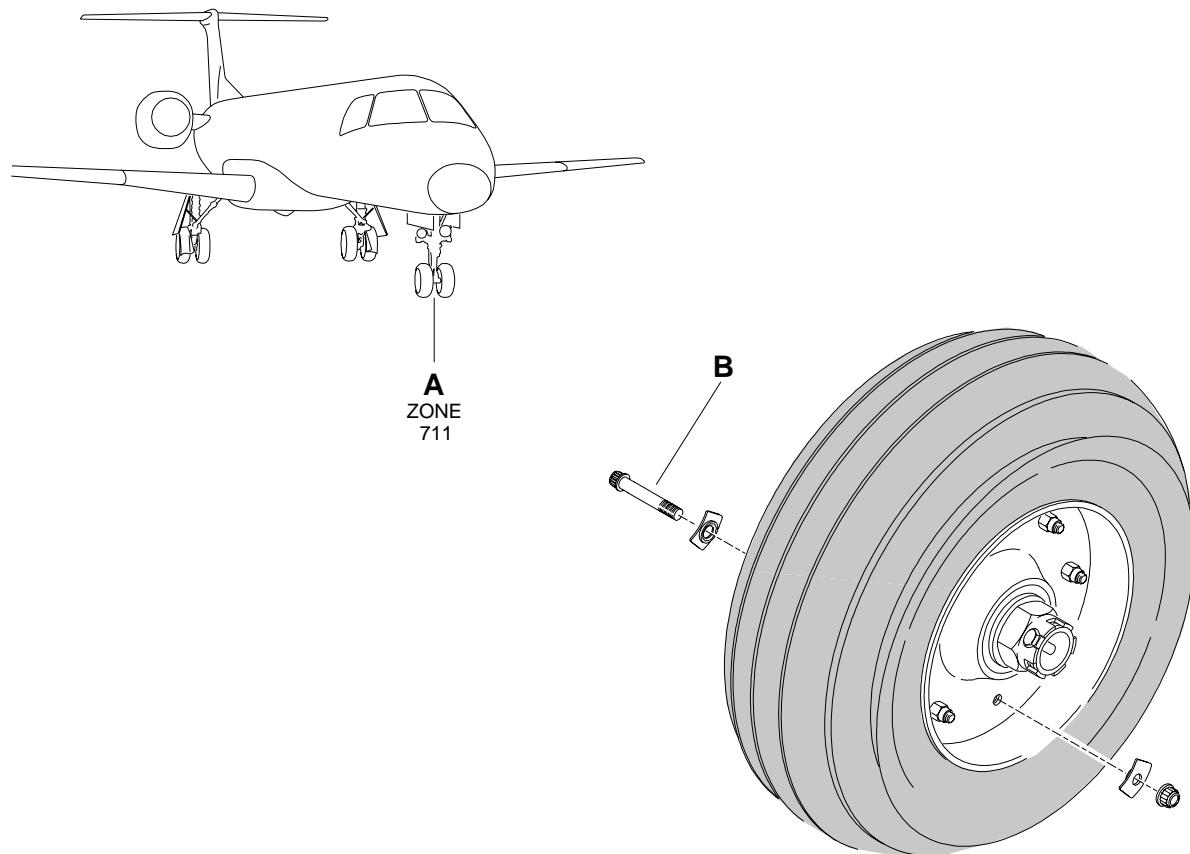


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EFFECTIVITY: ALL

Nose-Landing-Gear Wheel Assembly - Check/Balancing

Figure 202



145AMM320238.MCE A

