

MAIN WHEEL ASSEMBLY - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove and install the wheel assembly of the main landing gear.
- 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
32-49-02-000-801-A	WHEEL ASSEMBLY OF THE MAIN LAND- ING GEAR - REMOVAL	ALL
32-49-02-400-801-A	WHEEL ASSEMBLY OF THE MAIN LAND- ING GEAR - INSTALLATION	ALL

TASK 32-49-02-000-801-A

EFFECTIVITY: ALL

2. WHEEL ASSEMBLY OF THE MAIN LANDING GEAR - REMOVAL

A. General

(1) This task gives the procedures to remove the wheel of the main landing gear.

B. References

REFERENCE	DESIGNATION
AMM TASK 07-10-00-500-803-A/200	-
AMM TASK 32-10-08-200-801-A/600	MLG WHEEL AXLE - INSPECTION
SB145-32-0030	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 100	Socket Wrench	To remove the wheel nut	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	RH and LH Main Landing Gears
1	Helps the other technician	RH and LH Main Landing Gears

I. Preparation ([Figure 402](#))

SUBTASK 841-002-A

CAUTION: YOU CAN CHANGE THE TIRES WITH THE MAIN DOOR OPEN ONLY IF THE HANDRAIL IS INSTALLED.

NOTE: You can install tires of different brands on the same main landing gear.

- (1) Lift the related wheel of the aircraft with a jack (AMM TASK 07-10-00-500-803-A/200).
- (2) For an outer wheel removal, disconnect the rod ends of the main landing gear doors from the main landing gear. Refer to [Figure 402](#).
 - (a) Remove the old seal of the nuts (3) and (6), if applicable.

- (b) Remove the cotter pins (4) and (5).
- (c) Remove the nuts (3) and (6), washer (2) and bushing (7).
- (d) Remove the bolts (1) and (8).

(3) Apply the parking brake.

J. Removal ([Figure 401](#))

SUBTASK 020-002-A

WARNING: WE RECOMMEND YOU TO ALWAYS DEFLATE THE TIRE BEFORE YOU REMOVE THE WHEEL/TIRE ASSEMBLY. BUT, WHEN YOU MUST REMOVE IT ONLY TO GET ACCESS TO OTHER COMPONENTS, YOU CAN REMOVE THE TIRE INFLATED IF:

- THE TIRE IS NOT DAMAGED
- THE TIRE IS WITH THE CORRECT OPERATION PRESSURE. DO NOT WORK WITH HOT TIRES TO PREVENT INJURY.

- (1) Deflate the tire.
- (2) Remove the bolts (1) and washers (10).
- (3) Remove the hub cap (2).
- (4) For aircraft PRE-MOD [SB145-32-0030](#), remove the gaskets (9) and ring (8). Refer to [Figure 401](#), DET. C.
- (5) For aircraft POST-MOD [SB145-32-0030](#), remove the gasket (9).
- (6) Remove the lockwire (3).
- (7) Remove the locking pin ring (7).
- (8) Remove the wheel nut (4) with socket wrench GSE 100.

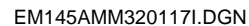
CAUTION: BE CAREFUL WHILE YOU REMOVE THE WHEEL ASSEMBLY. IF THE WHEEL ASSEMBLY DROPS OR RUBS ON THE LANDING GEAR WHEEL AXLE, THE AXLE CHROME-PLATING AND THE WHEEL AXLE BORE CAN BE DAMAGED.

- (9) Remove the wheel assembly (5).
 - (a) If necessary, do a general vision inspection on the MLG wheel axle. Refer to [AMM TASK 32-10-08-200-801-A/600](#).

NOTE: This is an Embraer Optional Task. Refer to SMRD.

- (10) If the removal of the wheel is because of overheating, refer to the instructions in BF Goodrich CMM, Chapter 32-49-02, Special Procedures for Overheated Wheels.
- (11) Remove the spacer (6) to inspect it according to applicable Wheel Assy CMM.

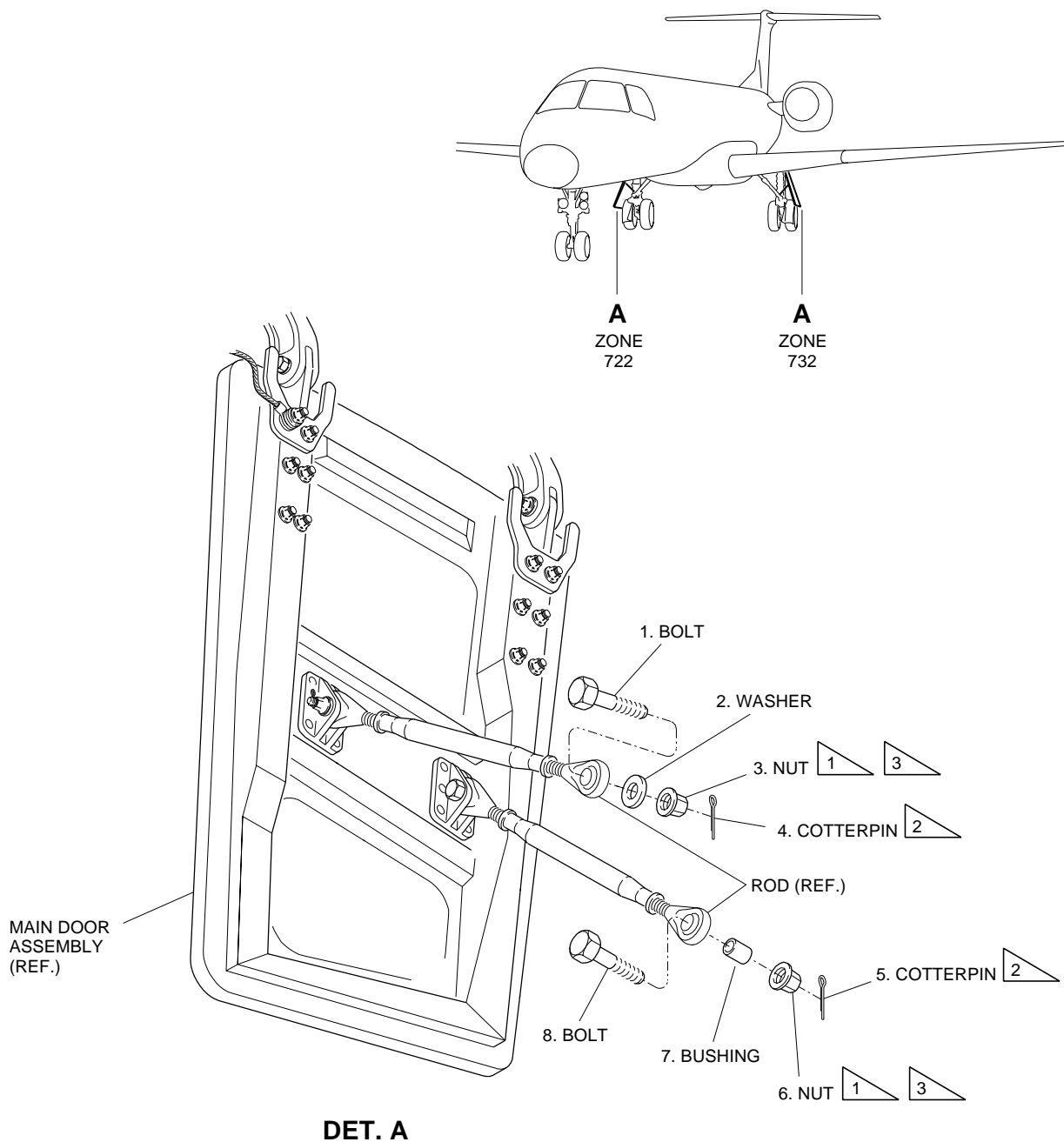
Figure 401



EFFECTIVITY: ALL

Main Door Rod of the Main Landing Gear - Removal/Installation

Figure 402



1 TORQUE: 5.5 TO 6.5 N.m (50 TO 60 lb.in)

2 MS24665-153

3 SEALANT PR1440 B2

EM145AMM320579D.DGN

TASK 32-49-02-400-801-A

EFFECTIVITY: ALL

3. WHEEL ASSEMBLY OF THE MAIN LANDING GEAR - INSTALLATION

A. General

(1) This task gives the procedures to install the wheel assembly of the main landing gear.

B. References

REFERENCE	DESIGNATION
AMM TASK 07-10-00-500-804-A/200	-
AMM TASK 32-10-08-200-801-A/600	MLG WHEEL AXLE - INSPECTION
AMM TASK 32-49-01-600-801-A/300	MLG WHEEL TIRE - CHECK AND CHARGE
AMM TASK 32-49-02-200-801-A/600	MLG WHEEL ASSEMBLY - INSPECTION
AMM TASK 32-49-03-200-801-A/600	BRAKE ASSEMBLY - INSPECTION
AMM TASK 32-49-03-200-803-A/600	BRAKE ASSEMBLY - DETAILED INSPECTION
CMM 32-49-05	-
SB145-32-0030	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 100	Socket Wrench	To tighten the wheel nut	
Commercially available	Torque Wrench (300-2000 lb.in range)	To tighten the wheel nut	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MS20995C32	Lockwire	AR
MIL-PRF-680 Type II or III	Cleaning solvent	AR
Grease SHC 100	Mobil Aviation Grease SHC 100	AR
MIL-S-8802, Type II, Class B2	Sealant PR 1440 B2	AR
MEP 09-075	COR-BAN 27L Corrosion Inhibiting Compound	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	RH and LH Main Landing Gears
1	Helps the other technician	RH and LH Main Landing Gears

I. Preparation (Figure 401)

SUBTASK 841-003-A

NOTE: You can install tires of different brands on the same main landing gear.

- (1) Clean the wheel axle with MIL-PRF-680 Type II or III cleaning solvent and install the spacer (6).
- (2) Examine the drive clip for the attachment to the hub cap and for the correct gap. If necessary, you can adjust the drive clip gap (only once) and then replace the drive clip as soon as possible. Refer to Figure 602 of [AMM TASK 32-49-02-200-801-A/600](#).
- (3) Examine the drive clip and discard it if it is cracked, broken, or bent out of its initial shape.

CAUTION: USE ONLY MOBIL AVIATION GREASE SHC100. DO NOT MIX DIFFERENT BRANDS OF GREASE.

- (4) Make sure that the bearings of the wheel assembly (5) are lubricated. Refer to CMM 32-49-05.
- (5) Do an inspection on the brake wear indicator. Refer to [AMM TASK 32-49-03-200-801-A/600](#).
- (6) Do an inspection on the brake assembly. Refer to [AMM TASK 32-49-03-200-803-A/600](#)

J. Installation (Figure 401)

SUBTASK 420-002-A

CAUTION: BE CAREFUL WHILE YOU INSTALL THE WHEEL ASSEMBLY. IF THE WHEEL ASSEMBLY DROPS OR RUBS ON THE LANDING GEAR WHEEL AXLE, THE AXLE CHROME-PLATING AND THE WHEEL AXLE BORE CAN BE DAMAGED.

- (1) Apply a thin layer of Mobil SHC 100 grease to the threads and chrome-plating area of the wheel axle.
 - (a) If necessary, do a general vision inspection on the MLG wheel axle. Refer to [AMM TASK 32-10-08-200-801-A/600](#).

NOTE: This is an Embraer Optional Task. Refer to SMRD.

- (2) Put the wheel assembly (5) on the wheel axle and pull it to touch the spacer (6).
- (3) Make sure that the tire valve is on the outer side.
- (4) Release the parking brake.

CAUTION: BEFORE YOU INSTALL THE NUT (4), MAKE SURE THAT THE OUTER SEAL OF THE WHEEL BEARING IS IN THE CORRECT POSITION IN RELATION TO THE LANDING GEAR AXLE. IF THE OUTER SEAL IS IN AN INCORRECT POSITION, IT CAN CAUSE FALSE TORQUE AND DAMAGE TO THE LANDING GEAR.

- (5) Install the wheel nut (4) and turn it manually to touch the wheel assembly (5).
- (6) Tighten the wheel nut (4) with socket wrench GSE 100 to a torque of 134.1 to 149.1 N.m (1187 to 1319 lb.in). The wheel assembly (5) must turn in the same direction as that in which the wheel nut (4) is tightened.

NOTE: This procedure will remove possible gaps.

- (7) Loosen the torque on the wheel nut (4) to zero.
- (8) Apply a torque of 67.1 to 74.6 N.m (593 to 660 lb.in) on the wheel nut (4), in only one continuous turn. The wheel assembly (5) must turn in the same direction as that in which the wheel nut (4) is tightened.

CAUTION: BEND THE LOCKWIRE END TO PREVENT INJURY TO THE HANDS AND NOT TO PERMIT THE WIRE TO CATCH ON MOVING PARTS.

- (9) Install the locking pin ring (7) and safety it with lockwire (3). If necessary, continue to tighten the wheel nut (4) to align the holes for the installation of the locking pin (7).
- (10) Make sure that you can turn the wheel manually and freely on the wheel axle.
- (11) Examine the gasket (9) and discard it if it is cracked, distorted, or has other type of damage.
- (12) For aircraft PRE-MOD [SB145-32-0030](#), install the ring (8) with the gaskets (9) and hub cap (2) in position on the wheel assembly (5). Refer to (Figure 401), DET. C.

NOTE: Before the installation of the hub cap (2), make sure that the wheel speed transducer turns freely when you move it manually.

- (13) For aircraft POST-MOD [SB145-32-0030](#), put the gasket (9) and hub cap (2) in position on the wheel assembly (5).

NOTE: Make sure that the wheel speed transducer is correctly attached to the drive clip of the hub cap (2).

- (14) Do an inspection on the clip of the hub cap ([AMM TASK 32-49-02-200-801-A/600](#)).
- (15) Install the washers (10) and bolts (1).

K. Follow-on (Figure 402)

SUBTASK 842-002-A

- (1) Connect the rod ends of the main landing-gear doors to the main landing-gear. Refer to (Figure 402).

WARNING: BE CAREFUL WHEN YOU USE THE COR-BAN 27L CORROSION-INHIBITING COMPOUND. PUT ON SAFETY GOGGLES AND PROTECTIVE CLOTHING. DO NOT BREATHE THE GAS OR DUST. DO THE WORK IN AN AREA WHICH HAS A GOOD FLOW OF AIR. COR-BAN 27L IS POISONOUS AND HIGHLY FLAMMABLE.

- (a) Apply COR-BAN 27L to the bolts (1) and (8).
 - (b) Install the bolts (1) and (8), washer (2) and bushing (7).
 - (c) Instal the nuts (3) and (6) and torque them with 5.5 to 6.5 N.m (50 to 60 lb.in).
 - (d) Install the cotter pins (4) and (5).
- (2) Apply sealant PR 1440 B2 to the bolts (1) and (8) and to the nuts (3) and (6).
- NOTE:** If it is not possible to apply the sealant immediately, the aircraft can be flown without this sealant until the next scheduled maintenance stop. Then the bolt and nuts must be cleaned, dried, and sealed.
- (3) Do a check of the tire operational pressure. Refer to [AMM TASK 32-49-01-600-801-A/300](#).
 - (4) Lower the wheel and remove the jack (AMM TASK 07-10-00-500-804-A/200).

