



EMB145 – EMB135

AIRCRAFT
MAINTENANCE MANUAL

MAIN-LANDING-GEAR TRAILING ARM - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove and install the main-landing-gear trailing arm with the main landing gear on the wing.
- B. These procedures are applicable to the LH and RH Main Landing Gear.
- C. 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
32-10-08-000-801-A	TRAILING ARM OF THE MAIN LANDING GEAR - REMOVAL	ALL
32-10-08-400-801-A	TRAILING ARM OF THE MAIN LANDING GEAR - INSTALLATION	ALL



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TASK 32-10-08-000-801-A

EFFECTIVITY: ALL

2. TRAILING ARM OF THE MAIN LANDING GEAR - REMOVAL

A. General

(1) This procedure gives the instructions to remove the trailing arm from the main landing gear.

B. References

REFERENCE	DESIGNATION
AMM TASK 07-10-00-500-801-A/200	-
AMM TASK 32-00-01-910-801-A/200	LG SAFETY PIN - INSTALLATION AND REMOVAL
AMM TASK 32-10-06-000-801-A/400	MAIN DOOR ASSEMBLY OF THE MAIN LANDING GEAR - REMOVAL
AMM TASK 32-10-07-000-801-A/400	AUXILIARY DOOR ASSEMBLY OF THE MAIN LANDING GEAR - REMOVAL
AMM TASK 32-41-03-000-801-A/400	WHEEL SPEED TRANSDUCER - REMOVAL
AMM TASK 32-49-02-000-801-A/400	WHEEL ASSEMBLY OF THE MAIN LANDING GEAR - REMOVAL
AMM TASK 32-49-03-000-801-A/400	BRAKE ASSEMBLY OF THE MAIN LANDING GEAR - REMOVAL
AMM TASK 32-63-01-000-801-A/400	AIR/GROUND (WOW) PROXIMITY SWITCH OF MLG - REMOVAL
SB 145-32-0113	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 003	Jack	To support the trailing arm of the landing gear	

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 or LH MLG
1	Helps the other technician	RH or LH MLG

I. Preparation

SUBTASK 841-002-A

- (1) On the Circuit Breaker Panel, open the ELEC PUMP 1 circuit breaker and attach a DO-NOT-CLOSE tag to it.
- (2) Make sure that the pressure in hydraulic system 1 is fully released.
- (3) Make sure that the safety pins of the landing gears are installed ([AMM TASK 32-00-01-910-801-A/200](#)).
- (4) Remove the MLG main door assembly ([AMM TASK 32-10-06-000-801-A/400](#)).
- (5) Remove the MLG auxiliary door assembly ([AMM TASK 32-10-07-000-801-A/400](#)).
- (6) Lift the aircraft on jacks, until the wheels are off the ground. Refer to AMM TASK 07-10-00-500-801-A/200.
- (7) Put jack GSE 003 under the trailing arm to support it.
- (8) Remove the wheel assemblies ([AMM TASK 32-49-02-000-801-A/400](#)).
- (9) Remove the wheel speed transducer ([AMM TASK 32-41-03-000-801-A/400](#)).
- (10) Remove the brake assemblies ([AMM TASK 32-49-03-000-801-A/400](#)).
- (11) Remove the air ground (WOW) proximity switches of the front and rear main landing gears ([AMM TASK 32-63-01-000-801-A/400](#)).
- (12) Remove the metallic target of the front air/ground (WOW) proximity switch, as follows: (Refer to [Figure 403](#)).
 - (a) Cut and remove the safety wire (42) and wax (40).
 - (b) Unscrew and remove the bolt (41) and washer (43).
 - (c) Remove the target (44).
- (13) Remove the speed-transducer attachment bushings (27) from the wheel axle. For this, release the related attachment bolts from the wheel axle. See [Figure 402](#).
- (14) Remove the adapter (29) and connector (28) from the internal harness of the speed transducer.
- (15) Disconnect the end of the external speed-transducer harness (30) from the trailing arm. For this, remove the nut (31) and pull the harness. See [Figure 402](#).

J. Removal ([Figure 401](#)) ([Figure 403](#)) ([Figure 404](#))

SUBTASK 020-002-A

NOTE: Remove all sealant before the disassembly. Use an acrylic spatula, if necessary.

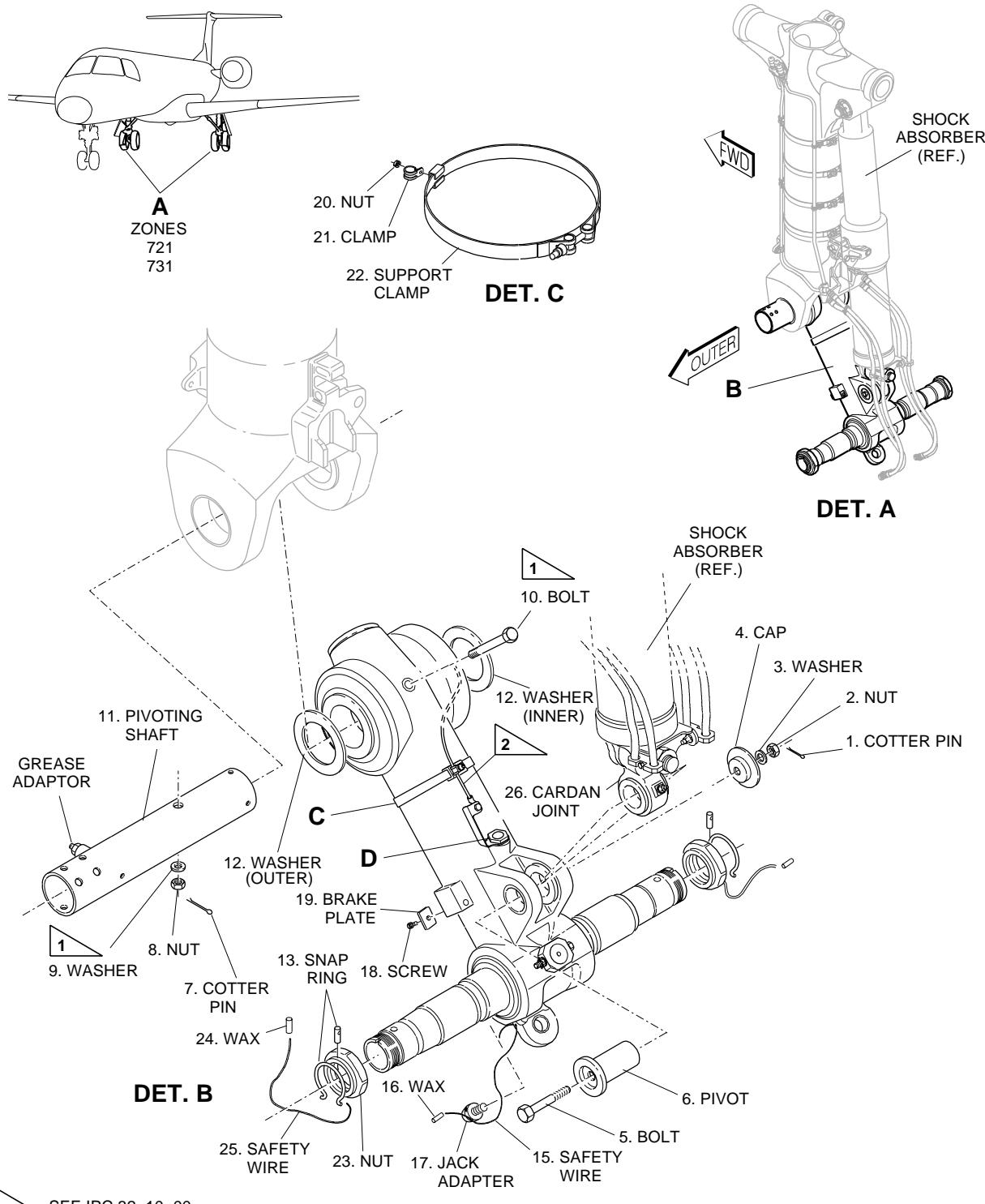
- CAUTION:** • BE CAREFUL WHEN YOU REMOVE THE TRAILING ARM TO PREVENT DAMAGE TO IT.
- MAKE SURE THAT THE TRAILING ARM WILL NOT FALL DURING THE REMOVAL.

- (1) Remove the cotter pin (1). Refer to [Figure 401](#).
- (2) Unscrew and remove nut (2), washer (3), cap (4), bolt (5), and pivot (6). Then remove the Cardan joint (26) assembled on the shock absorber. Refer to [Figure 401](#).
- (3) Remove the cotter pin (7), unscrew the nut (8), then remove the washer (9) and bolt (10). Refer to [Figure 401](#).
- (4) Remove the pivoting shaft (11) then remove the washers (12) from the trailing arm. Refer to [Figure 401](#).
- (5) Slowly operate jack GSE 003 to lower the trailing arm.
- (6) Remove the snap ring assembly (13), nut (23), wax (24), and safety wire (25) from the trailing arm axle. Refer to [Figure 401](#).
- (7) Cut and remove the safety wire (15) and wax (16). Refer to [Figure 401](#).
- (8) Unscrew and remove the jack adapter (17). Refer to [Figure 401](#).
- (9) Unscrew and remove the screw (18) and brake plate (19). Refer to [Figure 401](#).
- (10) Unscrew the nut (20) and remove the clamp (21). Refer to [Figure 401](#).
- (11) Unscrew and remove the lug support clamp (22). Refer to [Figure 401](#).
- (12) For aircraft POST-MOD [SB 145-32-0113](#) remove the bonding jumper (11) as follows:
 - (a) Unscrew and remove the clamp of the bonding jumper. Refer to [Figure 404](#).
 - (b) Unscrew and remove the nuts (3), (5) and (12) and bolts (8) and (15). Refer to [Figure 404](#).
 - (c) Remove washers (2), (6), (10) and (13), split-washers (9) and (14), jumper assy (11), contact support (7) and electrical bonding support (1). Refer to [Figure 404](#).
- (13) Cut and remove the safety wire (45) and wax (46). Refer to [Figure 403](#).
- (14) Unscrew and remove the bolt (47). Refer to [Figure 403](#).
- (15) Remove the target cap (48). Refer to [Figure 403](#).

EFFECTIVITY: ALL

Trailing Arm of the Main Landing Gear - Removal/Installation

Figure 401

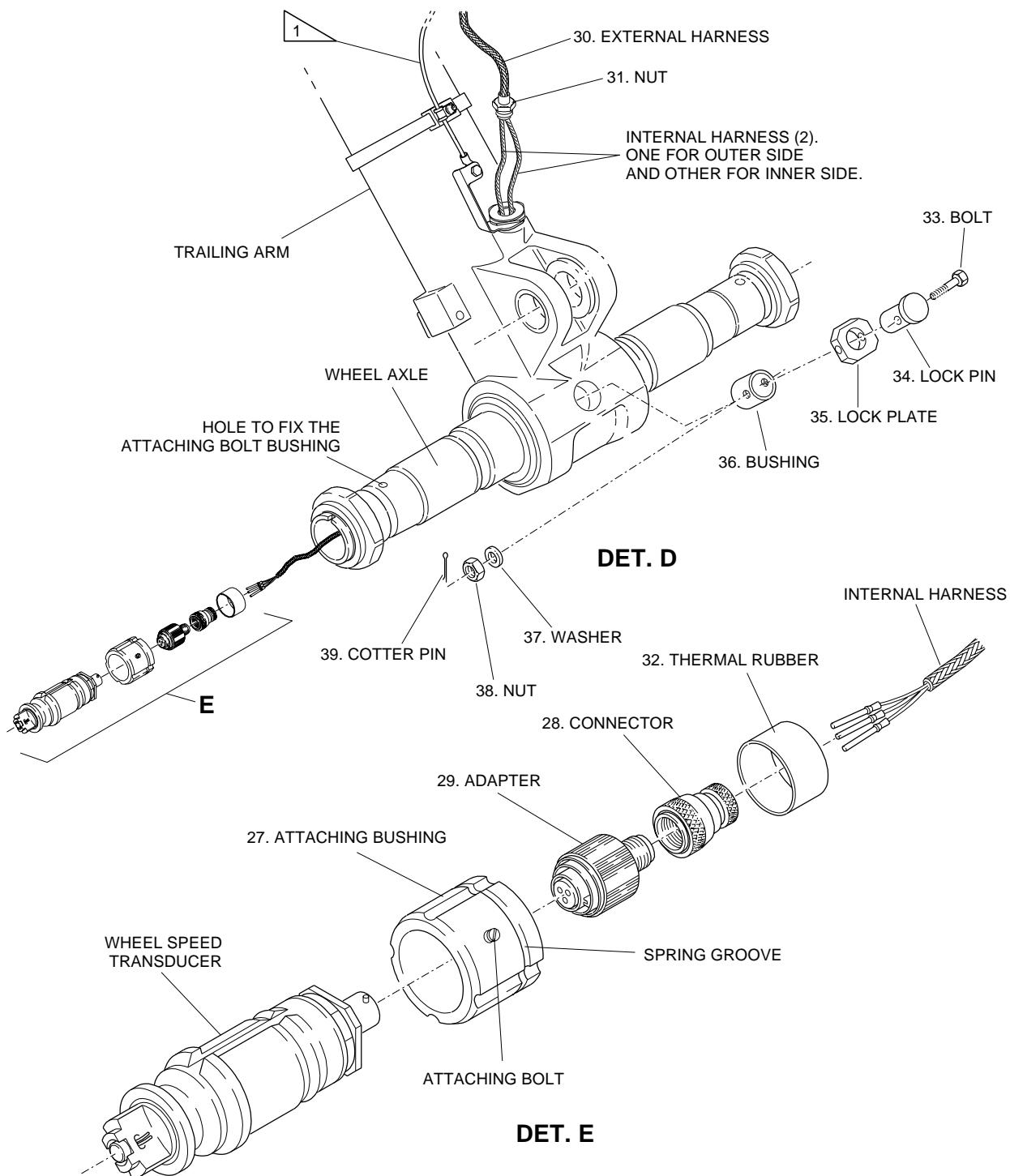


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EFFECTIVITY: ALL

Wheel Speed Transducer of the Trailing Arm - Removal/Installation

Figure 402



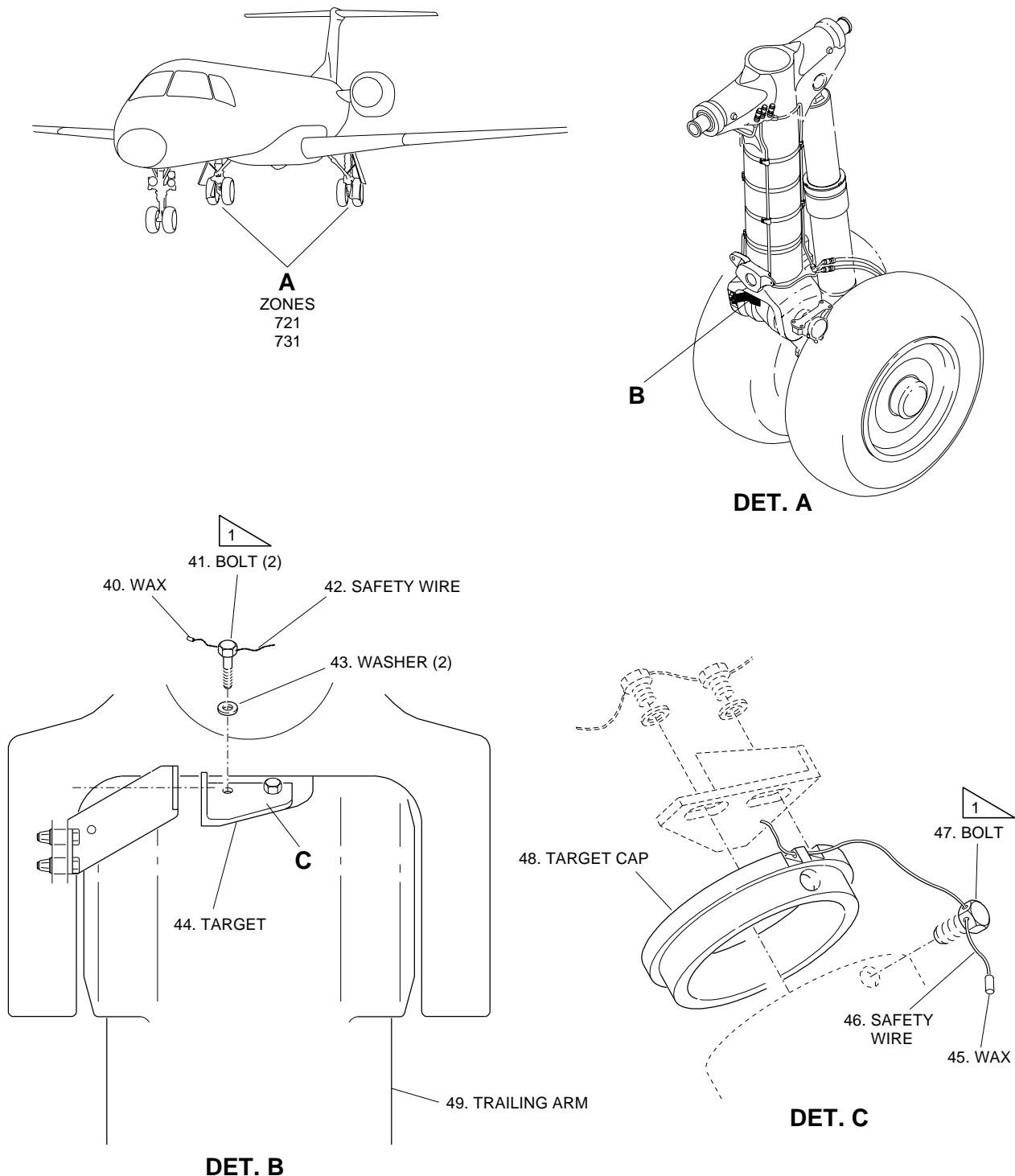
 FOR AIRCRAFT POST-MOD SB 145-32-0113

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EFFECTIVITY: ALL

Air Ground (WOW) Proximity Switch - Metallic Target - Removal/Installation

Figure 403



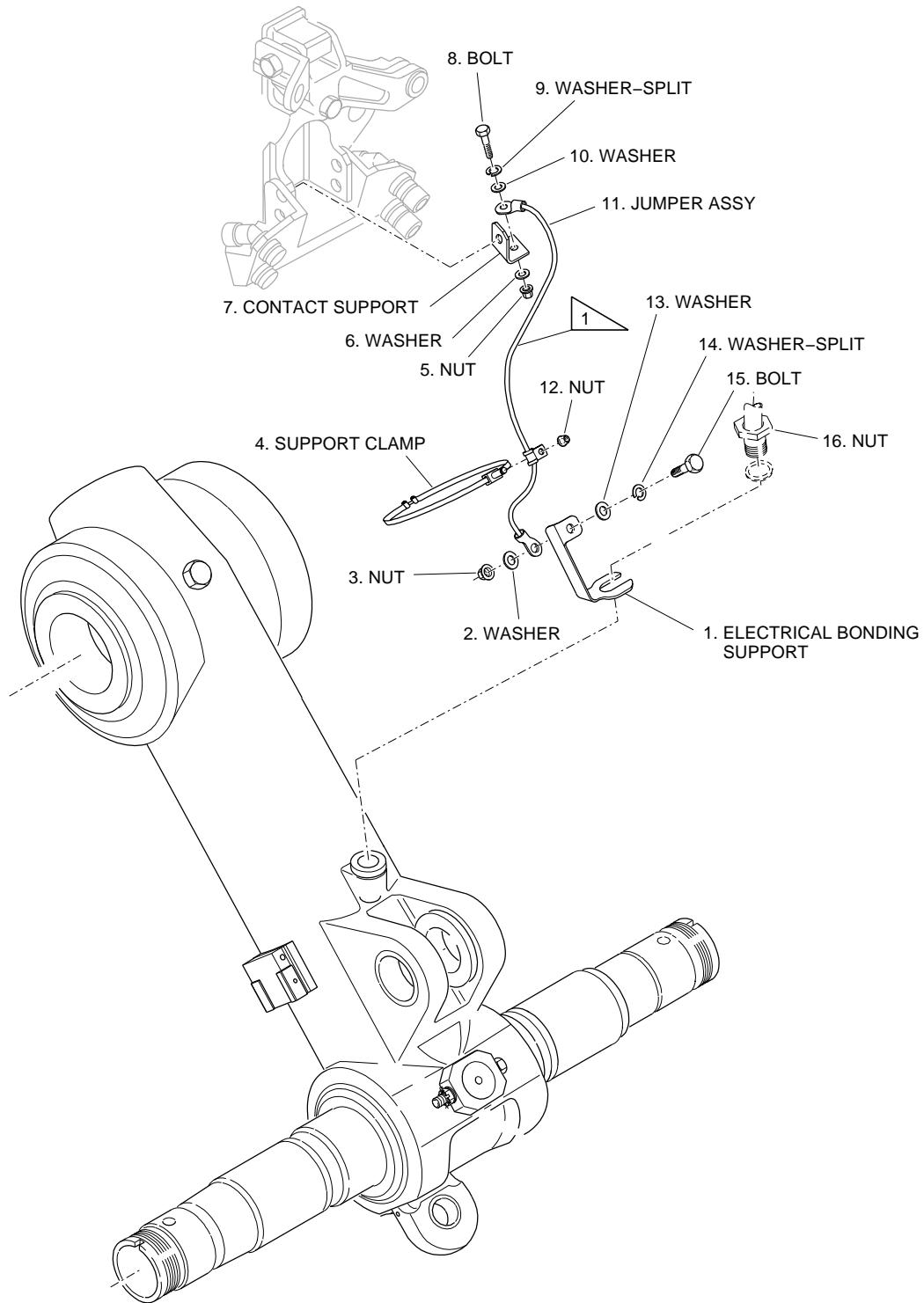
 APPLY SEALANT PR1826B2ALO

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EFFECTIVITY: ALL

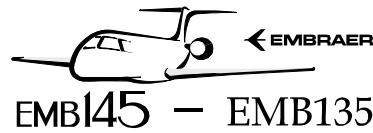
Trailing Arm of the Main Landing Gear / Bonding Jumper Assembly

Figure 404



FOR AIRCRAFT POST-MOD SB 145-32-0113

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TASK 32-10-08-400-801-A

EFFECTIVITY: ALL

3. TRAILING ARM OF THE MAIN LANDING GEAR - INSTALLATION

A. General

(1) This task gives the instructions to install the trailing arm of the main landing gear.

B. References

REFERENCE	DESIGNATION
AMM TASK 07-10-00-500-802-A/200	-
AMM TASK 20-13-21-910-801-A/200	TYPES OF ELECTRICAL BONDING AND SURFACE PREPARATION - STANDARD PROCEDURES
AMM TASK 32-00-01-910-801-A/200	LG SAFETY PIN - INSTALLATION AND REMOVAL
AMM TASK 32-10-06-400-801-A/400	MAIN DOOR ASSEMBLY OF THE MAIN LANDING GEAR - INSTALLATION
AMM TASK 32-10-07-400-801-A/400	AUXILIARY DOOR ASSEMBLY OF THE MAIN LANDING GEAR - INSTALLATION
AMM TASK 32-30-00-700-801-A/500	EXTENSION AND RETRACTION SYSTEM - OPERATIONAL CHECK
AMM TASK 32-41-03-400-801-A/400	WHEEL SPEED TRANSDUCER - INSTALLATION
AMM TASK 32-49-02-400-801-A/400	WHEEL ASSEMBLY OF THE MAIN LANDING GEAR - INSTALLATION
AMM TASK 32-49-03-400-801-A/400	BRAKE ASSEMBLY OF THE MAIN LANDING GEAR - INSTALLATION
AMM TASK 32-63-01-400-801-A/400	AIR/GROUND (WOW) PROXIMITY SWITCH OF MLG - INSTALLATION
AMM TASK 32-63-05-700-802-A/500	PROXIMITY SWITCH (SENSOR) - FUNCTIONAL CHECK - ALTERNATIVE PROCEDURE
IPC 32-10-08	MAIN LANDING GEAR TRAILING ARM
SB 145-32-0113	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 204	Tool, Positioning	To install the trailing arm shim	

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Cloth, Lint-Free	To clean	01



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F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MS24665-134	Cotter pin	1
MS24665-285	Cotter pin	1
MEP 09-075	Corrosion Inhibitive Compound COR-BAN 27L	AR
SAE AMS 3277, Type I, Class B2	Sealant PR1826B2ALO	AR
MIL-S-8802 type II, Class B2	Sealant	AR
MIL-L-87177	Lektro-Tech Super Corr-B-12350	AR
ASTM-D-740	Methyl-Ethyl-Ketone (MEK)	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

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

I. Preparation (Figure 402)

SUBTASK 841-003-A

- (1) Apply corrosion inhibitive compound COR-BAN 27L to the interface of the trailing arm bushing with the leg structure.

NOTE: Be careful when you operate GSE 003 to install the trailing arm.

- (2) Use jack GSE 003 to hold the trailing arm.

J. Installation (Figure 401) (Figure 402) (Figure 403) (Figure 404)

SUBTASK 420-002-A

- (1) Apply corrosion inhibitive compound COR-BAN 27L to the faying surfaces of the target cap (48). Refer to (Figure 403).
- (2) Install target cap (48) with its attachment hole aligned with the hole on the trailing arm (49). Refer to (Figure 403).
- (3) Install bolt (47) wet with corrosion inhibitive compound COR-BAN 27L. Refer to (Figure 403).
- (4) Apply a torque of 3 to 5 Nm (27 to 44 lbf in) to the bolt (47). Refer to (Figure 403).
- (5) Install the safety wire (45) and wax (46). Refer to (Figure 403).
- (6) Apply sealant PR1826B2ALO to the bolt head (47).

NOTE: Sealant P/S 870B-2 or sealant AC-665 B-2 can be used as alternatives to sealant PR1826B2ALO. A layer of varnish 683-3-2/X-310A must be applied to these alternative sealants 24 hours after the application.

- (7) Put the trailing arm assembly and leg structure assembly in position.
- (8) Install the outer shim (12) wet with corrosion inhibitive compound COR-BAN 27L. Refer to (Figure 401).
- (9) With the pivoting shaft (11) partially installed, install inner shim (12) wet with corrosion inhibitive compound COR-BAN 27L. For this, use GSE 204. Refer to (Figure 401)
- (10) Align the hole of the pivoting shaft (11) with the hole on the trailing arm. Refer to (Figure 401)
- (11) Attach the bolt (10), washer (9), and nut (8). Refer to (Figure 401)
- (12) Apply a torque of 1.5 to 11.3 Nm (13 to 100 lbf in) to the nut (8) and install the cotter pin (7).

NOTE: Make sure that the trailing arm is free to move.

- (13) Install the lug support clamp (22), clamp (21), and nut (20). Refer to (Figure 401).
- (14) For aircraft POST-MOD [SB 145-32-0113](#) refer to IPC 32-10-08 to identify if bonding jumper is applicable and install the bonding jumper (11) as follows:
 - (a) Install the clamp of the bonding jumper. Refer to (Figure 401).
 - (b) Do the bonding procedures, method 7 ([AMM TASK 20-13-21-910-801-A/200](#)).
 - (c) Apply corrosion inhibitive compound COR-BAN 27L to the nuts (3), (5) and (12), washers (2), (6), (10) and (13), split-washers (9) and (14) and bolts (8) and (15). Refer to (Figure 404).
 - (d) Install the jumper assembly (11), nuts (3), (5) and (12), washers (2), (6), (10) and (13), split-washers (9) and (14) and bolts (8) and (15) to the contact support (7) and electrical bonding support (1). Refer to (Figure 404).
 - (e) Apply a torque of 3 to 5 Nm (27 to 44 lbf in) to the nuts (3) and (5). Refer to (Figure 404).
 - (f) Apply a torque of 2.3 to 2.8 Nm (20 to 25 lbf in) to the nut (12). Refer to (Figure 404).
 - (g) Clean the excess of corrosion inhibitive compound COR-BAN 27L with a lint-free cloth moist with MEK.
 - (h) Apply a continuous string of sealant PR1826B2ALO to the head of each bolt (8) and (15), washers (2), (6), (10) and (13), split-washers (9) and (14) and nuts (3) and (5). Refer to (Figure 404).

NOTE: Sealant P/S 870B-2 or sealant AC-665 B-2 can be used as alternatives to sealant PR1826B2ALO. A layer of varnish 683-3-2/X-310A must be applied to these alternative sealants 24 hours after the application.

- (15) Apply corrosion inhibitive compound COR-BAN 27L to the axle (6) and cap (4).
- (16) Install on the trailing arm assembly (14) the Cardan joint (26) assembled to the shock absorber.
- (17) Install the axle (6) and attach it with bolt (5), cap (4), washer (3), and nut (2).
- (18) Apply a torque of 5 to 6.5 Nm (44 to 57 lbf in) to the nut (2) and install the cotter pin (1).
- (19) Install the nuts (23), snap ring (13), safety wire (25), and wax (24).
- (20) Apply corrosion inhibitive compound COR-BAN 27L to the jack adapter (17) and install it on the trailing arm (14).
- (21) Apply a torque of 25 to 30 Nm (222 to 265 lbf in) to the jack adapter (17).
- (22) Install safety wire (15) and wax (16).
- (23) Before you install the brake plate, do a check on the trailing arm PN. Refer to IPC 32-10-08 to the correct brake plate PN.

NOTE: There is a correlation between brake plate PN and trailing arm PN.
- (24) Apply corrosion inhibitive compound COR-BAN 27L to the bolt (18) and install it with the brake plate (19) on the trailing arm.
- (25) Apply a torque of 3 to 5 Nm (27 to 44 lbf in) to the bolt(18).

K. Follow-on

SUBTASK 842-002-A

- (1) Apply corrosion inhibitive compound COR-BAN 27L to the external face of the attachment bushing (27) and install them on the wheel axle with the spring groove at the inboard position.
- (2) Tighten the attachment bolt of each attachment bushing (27). Refer to (Figure 402)
- (3) Remove the cotter pin (39), nut (38), washer (37), bolt (33), lock pin (34), lock plate (35), and bushing (36) if necessary.

 This access was used to help in the internal harnesses installation.
- (4) Put the internal harness of the speed transducer into the trailing arm through the hole (DET. D - (Figure 401), and do the separation of the two wheel axle harness as follows:

Table 401

SIDE	CONNECTOR
INBOARD	P1052
OUTBOARD	P1051

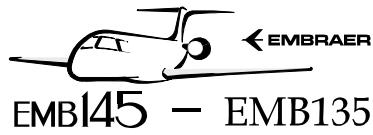
- (5) Install the bushing (36), lock plate (35), lock pin (34), bolt (33), washer (37), nut (38), and cotter pin (35).
- (6) Apply sealant MIL-S-8802 to the bolt (33), lock plate (35), and lock pin (34).

- (7) Install the harness pins on connector (28) as follows:

Table 402

WIRE COLOR/ASPECT	PIN
BLUE and WHITE (-22BL)	A
WHITE and THICK (-22WH)	B
WHITE and THIN (-24SH)	C

- (8) Do a check of the pins, for continuity.
- (9) Seal the adapter with thermal rubber (32).
- (10) Install the connector (28) on the adapter (29).
- (11) Install the external harness (30) on the trailing arm. For this, install the nut (31) and safety it.
- (12) Install the metallic target of the front air/ground (WOW) proximity switch as follows (refer to (Figure 403)):
- (a) Install the target (44).
 - (b) Install the washer (43) and bolt (41) with corrosion inhibitive compound COR-BAN 27L.
 - (c) Apply a torque of 3 to 5 Nm (27 to 44 lbf in) to the bolt (41).
 - (d) Install the safety wire (42) and wax (40).
 - (e) Apply sealant PR1826B2ALO to the bolt head (41).
- NOTE: Sealant P/S 870B-2 or sealant AC-665 B-2 can be used as alternatives to sealant PR1826B2ALO. A layer of varnish 683-3-2/X-310A must be applied to these alternative sealants, 24 hours after the application.
- (f) For the adjustment procedures, refer to [AMM TASK 32-63-05-700-802-A/500](#).
- (13) Install the front and rear air/ground (WOW) proximity switches of the MLG ([AMM TASK 32-63-01-400-801-A/400](#)).
- NOTE: Before the installation of the connector, apply Lektro-Tech Super Corr-B-12350 to the plug connector, to prevent corrosion and to clean the contacts.
- (14) Install the brake assembly ([AMM TASK 32-49-03-400-801-A/400](#)).
- (15) Install the wheel speed transducer ([AMM TASK 32-41-03-400-801-A/400](#)).
- (16) Install the wheel assembly ([AMM TASK 32-49-02-400-801-A/400](#)).
- (17) Remove jack GSE 003.
- (18) Install the MLG auxiliary door assembly ([AMM TASK 32-10-07-400-801-A/400](#)).
- (19) Install the MLG main door assembly ([AMM TASK 32-10-06-400-801-A/400](#)).



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- (20) Remove the safety pins from the main landing gear ([AMM TASK 32-00-01-910-801-A/200](#)).
- (21) On the circuit breaker panel, close the ELEC PUMP 1 circuit breaker and remove the DO-NOT-CLOSE tag.
- (22) Do an operational check on the landing gear ([AMM TASK 32-30-00-700-801-A/500](#)).
- (23) Lower the aircraft and remove the jacks (AMM TASK 07-10-00-500-802-A/200).