

MAIN-LANDING-GEAR MAIN BRACE STRUT - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove and install the main brace strut of the main landing gear.
- B. These procedures are applicable to the LH and RH Main Landing Gears.
- 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
32-10-03-000-801-A	MAIN BRACE STRUT OF THE MAIN LANDING GEAR - REMOVAL	ALL
32-10-03-400-801-A	MAIN BRACE STRUT OF THE MAIN LANDING GEAR - INSTALLATION	ALL

TASK 32-10-03-000-801-A

EFFECTIVITY: ALL

2. MAIN BRACE STRUT OF THE MAIN LANDING GEAR - REMOVAL

A. General

- (1) This procedure gives the instructions to remove the main brace strut of 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 32-10-04-000-801-A/400	AUXILIARY BRACE STRUT OF THE MAIN LANDING GEAR - REMOVAL
AMM TASK 32-33-08-000-801-A/400	MAIN LANDING GEAR ACTUATOR - REMOVAL
AMM TASK 32-33-09-000-801-A/400	UNLOCKING ACTUATOR OF THE MAIN LANDING GEAR - REMOVAL

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

Not Applicable

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 Main landing gear
1	Helps the other technician	RH or LH Main landing gear

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) Lift the aircraft on jacks (AMM TASK 07-10-00-500-801-A/200).
- (5) Remove the unlocking actuator (AMM TASK 32-33-09-000-801-A/400).
- (6) Remove the MLG actuator (AMM TASK 32-33-08-000-801-A/400).
- (7) Disconnect the lower end of the auxiliary brace strut (AMM TASK 32-10-04-000-801-A/400).

J. Removal (Figure 401) (Figure 403)

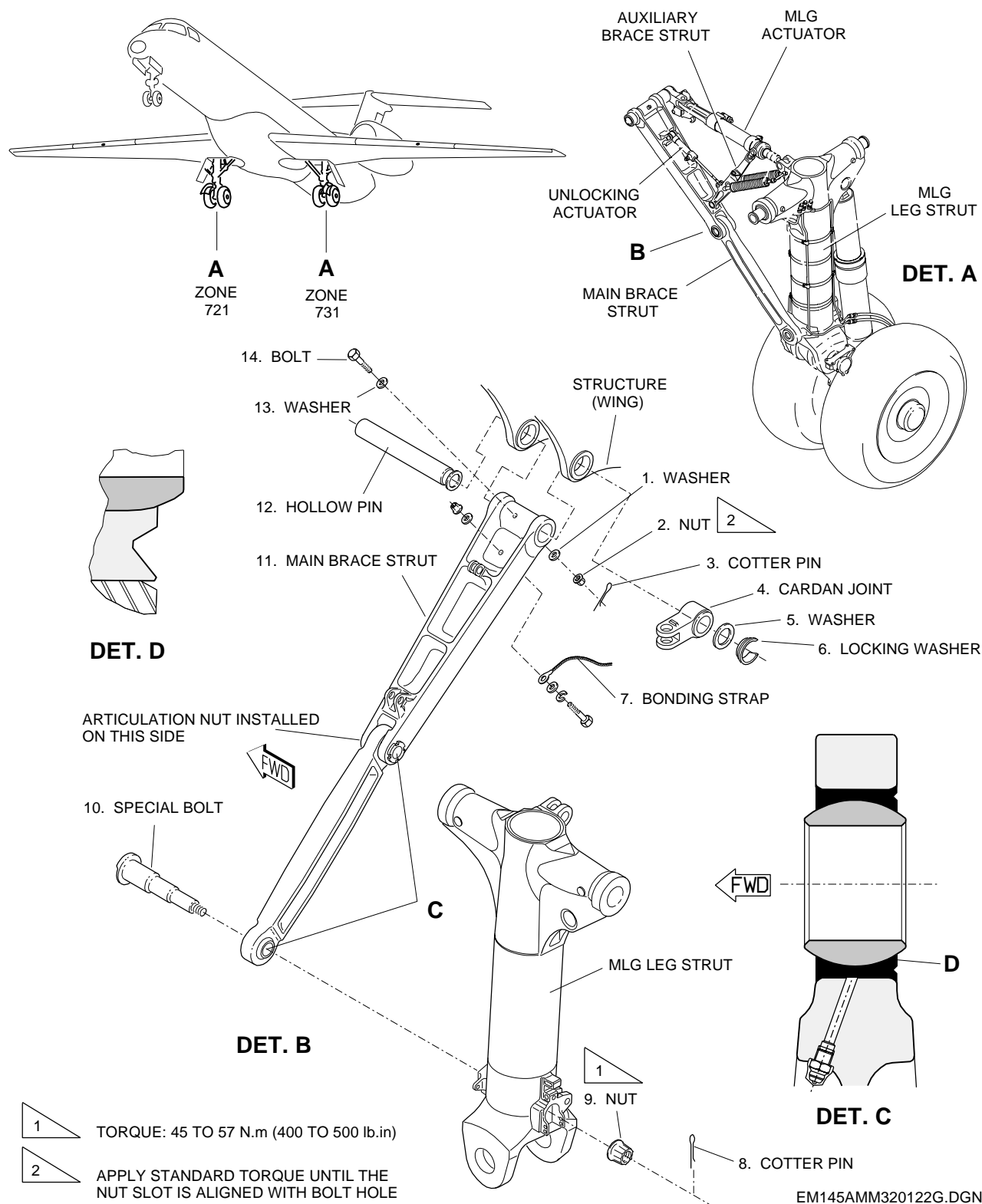
SUBTASK 020-002-A

- (1) Disconnect the end of the bonding strap (7) from the main brace strut (11). For this, remove the nut, washers, and screw.
- (2) Remove the cotter pin (8), nut (9), and special bolt (10) to disconnect the bottom end of the main brace strut (11).
- (3) Remove the locking washer (6), washer (5), and the Cardan joint (4).
- (4) Remove the cotter pin (3), nut (2), washer (1), and bolt (14).
- (5) Remove the hollow pin (12).
- (6) Remove the main brace strut (11).
- (7) Do the steps that follow only if you must remove the main brace-strut bearings or if you will change the Aeroshell 22 grease for Aeroshell 33 grease or vice versa. Refer to Figure 403.
 - (a) Remove the sealant from the contour of the two sides of the main-brace strut bearings.
 - (b) Remove the main brace-strut bearings from their housings.

EFFECTIVITY: ALL

Main Brace Strut of the Main Landing Gear - Removal/Installation

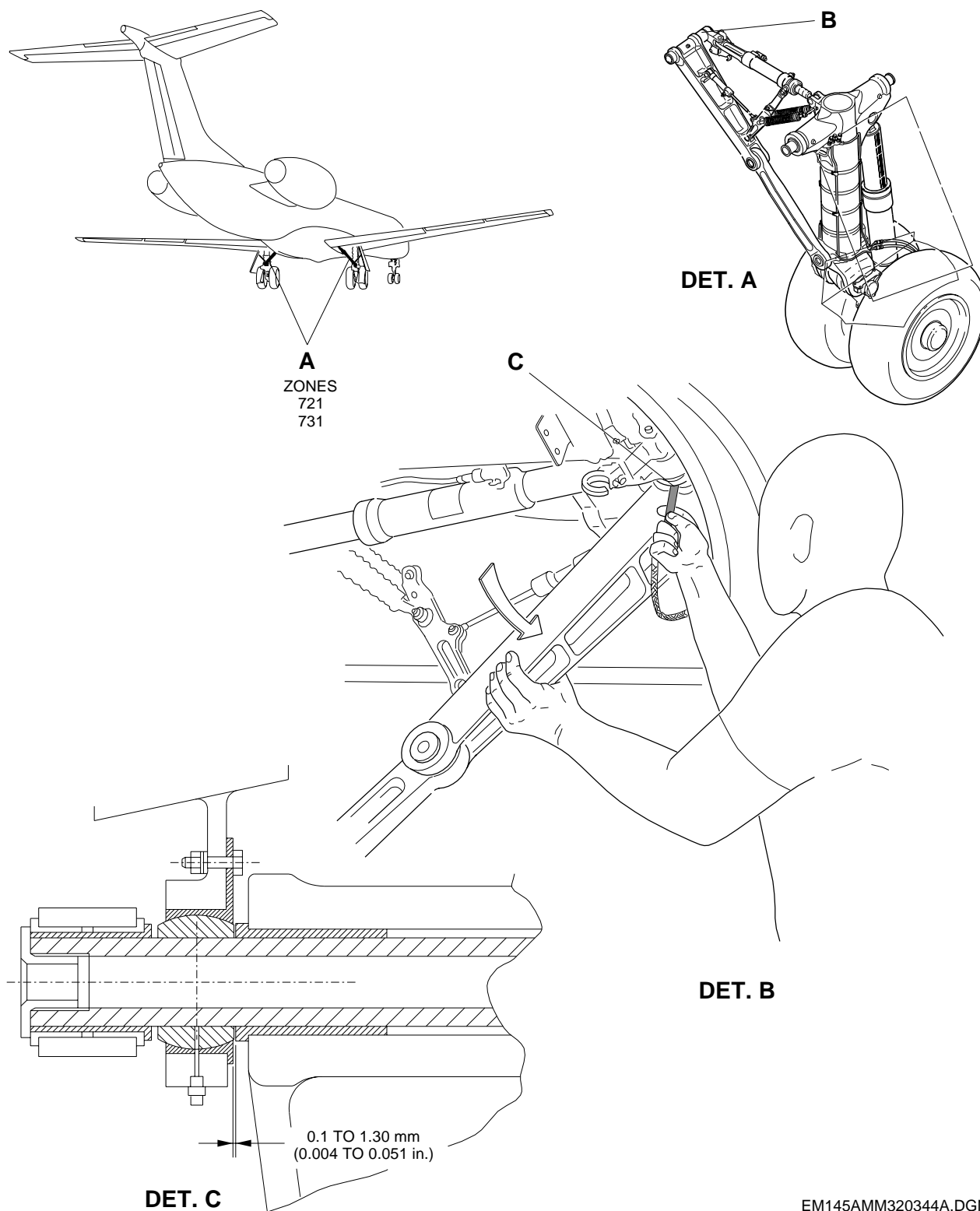
Figure 401



EFFECTIVITY: ALL

Main Brace Strut of the Main Landing Gear - Clearance Check

Figure 402

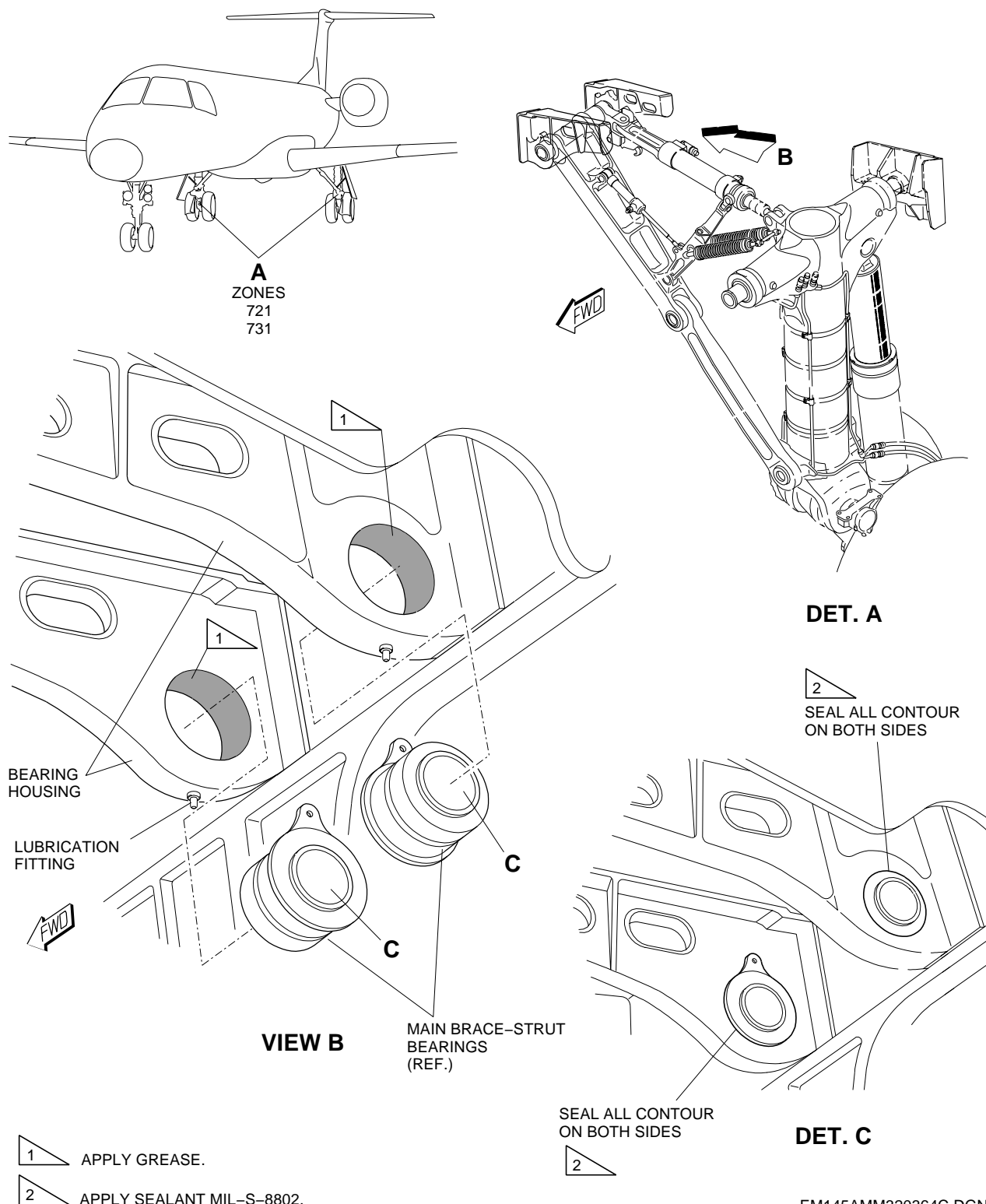


EM145AMM320344A.DGN

EFFECTIVITY: ALL

Main Brace Strut of the Main Landing Gear - Protection

Figure 403



EM145AMM320364C.DGN

TASK 32-10-03-400-801-A

EFFECTIVITY: ALL

3. MAIN BRACE STRUT OF THE MAIN LANDING GEAR - INSTALLATION

A. General

(1) This procedure gives the instructions to install the main brace strut 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 32-10-04-000-801-A/400	AUXILIARY BRACE STRUT OF THE MAIN LANDING GEAR - REMOVAL
AMM TASK 32-30-00-700-801-A/500	EXTENSION AND RETRACTION SYSTEM - OPERATIONAL CHECK
AMM TASK 32-33-08-000-801-A/400	MAIN LANDING GEAR ACTUATOR - REMOVAL
AMM TASK 32-33-09-000-801-A/400	UNLOCKING ACTUATOR OF THE MAIN LANDING GEAR - REMOVAL
AMM TASK 32-34-00-600-801-A/300	MLG AND NLG - LUBRICATION
AMM TASK 32-34-00-700-801-A/500	LG EMERGENCY EXTENSION - OPERATIONAL AND FUNCTIONAL CHECKS

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Torque wrench (0 - 1000 lb.in range)	To tighten the nut that attaches the lower end of the main brace strut	
Commercially available	Feeler gage	To measure the clearance between the main brace strut and support at the wing structure	

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Rubber Gloves Resistant to Phosphate Ester-Base Fluids	For protection of the hands	2
Commercially available	Rubber Goggles Resistant to Phosphate Ester-Base Fluids	Protection for the eyes	2
Commercially available	Soft Lint-Free Cloth	To clean the components	AR

F. Consumable Materials

<i>SPECIFICATION (BRAND)</i>	<i>DESCRIPTION</i>	<i>QTY</i>
MEP 09-075	Corrosion-Inhibiting Compound (COR-BAN 27L)	AR
MIL-PRF-81322	Aeroshell Grease 22	AR
MIL-PRF-23827	Aeroshell Grease 33 (alternative to Aeroshell 22)	AR
MIL-S-8802 type II, Class B	Sealant PR 1440 B2	AR
MEP 13-073	Rhodiasolve E-23	AR
MS24665-134	Cotter pin	1
MS24665-357	Cotter pin	1
MS24665-362	Cotter pin	1

G. Expandable Parts

Not Applicable

H. Persons Recommended

<i>QTY</i>	<i>FUNCTION</i>	<i>PLACE</i>
1	Does the task	RH or LH Main landing gear
1	Helps the other technician	RH or LH Main landing gear

I. Preparation (Figure 401)

SUBTASK 842-002-A

- (1) Before you start the assembly, make sure that the articulation nut and bearing are in the correct position according to flight direction for the aircraft side it will be installed. Refer to Figure 401, DET. B and C.
 - (a) If necessary, invert the articulation nut as follows:
 - 1 Remove and discard cotter-pin (15).
 - 2 Remove the nut (16) and washer (17) from the axle (19).
 - 3 Remove the axle (19) and bushing (18) from the main brace strut (11).
 - 4 Apply corrosion-inhibiting compound (COR-BAN 27L) to the bushing (18) and axle (19).
 - 5 Install the bushing (18) and axle (19) on the main brace strut (11) in the opposite direction that they were removed.
 - 6 Install the washer (17) and nut (16) on the axle (19).
 - 7 Apply a torque of 45 to 57 N.m (400 to 500 lbf.in) to the nut (16).
 - 8 Safety the nut (16) with the cotter-pin (15).
 - 9 Remove the unwanted corrosion-inhibiting compound from the surfaces with a lint-free cloth moist with Rhodiasolve E-23.

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

SUBTASK 420-002-A

CAUTION: Before you start the assembly, make sure that the bearings and articulation nut are in the correct position in the brace strut. Refer to Figure 401, DET. B and C.

- (1) Do steps (a) thru (g) only if you must remove the main brace strut bearings or if you will change the Aeroshell 22 grease for Aeroshell 33 grease or vice versa. If not, go to step (2).

- (a) Use a dry lint-free cloth to remove the remaining grease from the main brace strut bearings and bearing housing.

WARNING: BE CAREFUL WHEN YOU USE SOLVENTS BECAUSE THEY ARE HEALTH AND FIRE HAZARD. USE SAFETY GOGGLES AND PROTECTIVE CLOTHING. DO NOT BREATHE THE SOLVENT GASES AND WORK IN A WELL VENTILATED AREA.

- (b) With a cloth soaked in Rhodiasolve E-23, clean the remaining grease from the related area as necessary.

CAUTION: AEROSHELL GREASE 22 MUST NOT BE MIXED WITH AEROSHELL GREASE 33. IF YOU DO NOT OBEY THIS PRECAUTION, THE MIXTURE CAN CAUSE DAMAGE TO THE COMPONENTS.

- (c) After cleaning, apply Aeroshell Grease 22 to the inner surface of the bearing housing. Refer to Figure 403.

NOTE: You can use alternative grease Aeroshell 33.

- (d) Record the grease used in the applicable document.

- (e) Install the main brace strut bearings in their housings.

- (f) Fill the bearing with the same grease through the lubrication fitting at the bottom of the bearing housing until the grease comes out from the bearing.

- (g) Apply sealant PR 1440 B2 along the contour of the two sides of the main brace strut bearings. Refer to (Figure 403).

- (2) Put the main brace strut (11) in position between the MLG leg strut and the support at the wing structure.

- (3) Apply corrosion-inhibiting compound (COR-BAN 27L) to the hollow pin (12) and install it to attach the top end of the main brace strut (11) to the support at the wing structure.

- (4) Align the hole of the main brace strut (11) and the hole of the hollow pin (12) and install the bolt (14) (with corrosion-inhibiting compound - COR-BAN 27L), washer (1), and nut (2).

- (5) Put the cardan joint (4) on the hollow pin (12) with corrosion-inhibiting compound (COR-BAN 27L) and install the washer (5) and locking washer (6).

- (6) Put the bottom end of the main brace strut (11) on the MLG leg and install the special bolt (10) (with corrosion-inhibiting compound - COR-BAN 27L), and nut (9).

- Apply a torque of 45 to 57 N.m (400 to 500 lb.in) to the nut (9).
- (7) Install the cotter pins (3) and (8).
 - (8) Do a check of the clearance between the bearings and bushing surface of the main brace strut (see (Figure 402) as follows:
 - (a) Manually push the main brace strut forward.
 - (b) Use the feeler gage to measure the clearance. Refer to (Figure 402).
 - (c) The clearance must be between 0.1 and 1.30 mm (0.004 and 0.051 in).
 - (9) Apply sealant PR 1440 B2 to the locking washer (6) and nut (9).

K. Follow-on

SUBTASK 843-002-A

- (1) Install the MLG actuator ([AMM TASK 32-33-08-000-801-A/400](#)).
- (2) Connect the lower end of the auxiliary brace strut ([AMM TASK 32-10-04-000-801-A/400](#)).
- (3) Install the unlocking actuator ([AMM TASK 32-33-09-000-801-A/400](#)).
- (4) Connect the bonding strap end to the main brace strut ([AMM TASK 20-13-21-910-801-A/200](#)).
- (5) Lubricate the main brace strut ([AMM TASK 32-34-00-600-801-A/300](#)) with the same grease as in the installation.
- (6) On the Circuit Breaker Panel, close the ELEC PUMP 1 circuit breaker and remove the DO-NOT-CLOSE tag from it.
- (7) Energize the aircraft.
- (8) Remove the safety pins from the landing gears.
- (9) Retract and extend the landing gear ([AMM TASK 32-30-00-700-801-A/500](#)).
- (10) Do the functional check of the landing gear free-fall system ([AMM TASK 32-34-00-700-801-A/500](#)).
- (11) Lower the aircraft and remove the jacks ([AMM TASK 07-10-00-500-802-A/200](#)).