

## VOR/LOC ANTENNA - REMOVAL/INSTALLATION

*EFFECTIVITY: ALL*

1. General

- A. This section gives the procedures to remove and install the VOR/LOC antennas.
- 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
34-32-03-000-801-A	VOR/LOC ANTENNA - REMOVAL	ALL
34-32-03-400-801-A	VOR/LOC ANTENNA - INSTALLATION	ALL

TASK 34-32-03-000-801-A

EFFECTIVITY: ALL

## 2. VOR/LOC ANTENNA - REMOVAL

### A. General

(1) This procedure gives the instructions to remove the VOR/LOC antennas.

### B. References

REFERENCE	DESIGNATION
AMM MPP 06-42-00/100	-

### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
324	324DL	Vertical stabilizer
325	325KR	Vertical stabilizer

### D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
<a href="#">GSE 036</a>	Platform-hydraulic, aircraft	To get access to the task area	

### E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Polyethylene spatula	To remove the sealant	AR

### F. Consumable Materials

Not Applicable

### G. Expandable Parts

Not Applicable

### H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Vertical stabilizer

### I. Preparation

SUBTASK 841-002-A

**WARNING: MAKE SURE THAT THE AIRCRAFT IS IN A SAFE CONDITION BEFORE YOU DO THE MAINTENANCE PROCEDURES. THIS IS TO PREVENT INJURY TO PERSONS AND/OR DAMAGE TO THE EQUIPMENT.**

(1) Make sure that the aircraft is safe for maintenance.

- (2) On the circuit breaker panel, open the VOR/ILS 1 or VOR/ILS 2 circuit breaker and attach a DO-NOT-CLOSE tag to it.
- (3) Remove access panels 324DL and 325KR (AMM MPP 06-42-00/100).

J. Removal

*SUBTASK 020-002-A*

- (1) Put the hydraulic platform (GSE 036) at the necessary height.
- (2) (AIRCRAFT WITH ANTENNAS THAT DO NOT HAVE GEL CONDUCTIVE GASKET). To remove the VOR/LOC antenna, do as follows: (Figure 401).

**CAUTION:** IDENTIFY THE COAXIAL CONNECTORS TO PREVENT A POSSIBLE INVERSION DURING THE INSTALLATION. INCORRECT CONNECTIONS CAN CAUSE MALFUNCTION OR DAMAGE TO THE COMPONENT.

- (a) Disconnect the coaxial connector (4) from the VOR/LOC antenna (3).

**CAUTION:** BE CAREFUL WHEN YOU USE THE POLYETHYLENE SPATULA TO BREAK THE ANTENNA SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRCRAFT SKIN, THE COAXIAL CABLE, OR THE ANTENNA.

- (b) Use a spatula to remove the sealant from around the fuselage skin hole and the VOR/LOC antenna (3), on the inner surface of the fuselage skin hole.
- (c) Use a spatula to remove the sealant from around the VOR/LOC antenna (3) and from the aircraft skin.
- (d) Remove the screws (2) and washers (1).

**CAUTION:** BE CAREFUL WHEN YOU USE THE POLYETHYLENE SPATULA TO BREAK THE ANTENNA SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRCRAFT SKIN, THE COAXIAL CABLE, OR THE ANTENNA.

- (e) Use a spatula between the baseplate of the VOR/LOC antenna (3) and the aircraft skin to make the separation.
- (f) Carefully pull the VOR/LOC antenna (3) away from the fuselage.
- (g) Remove the VOR/LOC antenna (3).

- (3) (AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET) To remove the VOR/LOC antenna, do as follows: (Figure 402).

**CAUTION:** IDENTIFY THE COAXIAL CONNECTORS TO PREVENT A POSSIBLE INVERSION DURING THE INSTALLATION. INCORRECT CONNECTIONS CAN CAUSE MALFUNCTION OR DAMAGE TO THE COMPONENT.

- (a) Disconnect the coaxial connector (5) from the VOR/LOC antenna (4).

**CAUTION:** BE CAREFUL WHEN YOU USE THE POLYETHYLENE SPATULA TO BREAK THE ANTENNA SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRCRAFT SKIN, THE COAXIAL CABLE, OR THE ANTENNA.

- (b) Use a spatula to remove the sealant from around the fuselage skin hole and the VOR/LOC antenna (4), on the inner surface of the fuselage skin hole.
- (c) Use a spatula to remove the sealant from around the VOR/LOC antenna (4) and from the aircraft skin.
- (d) Remove the screws (3) and washers (2).

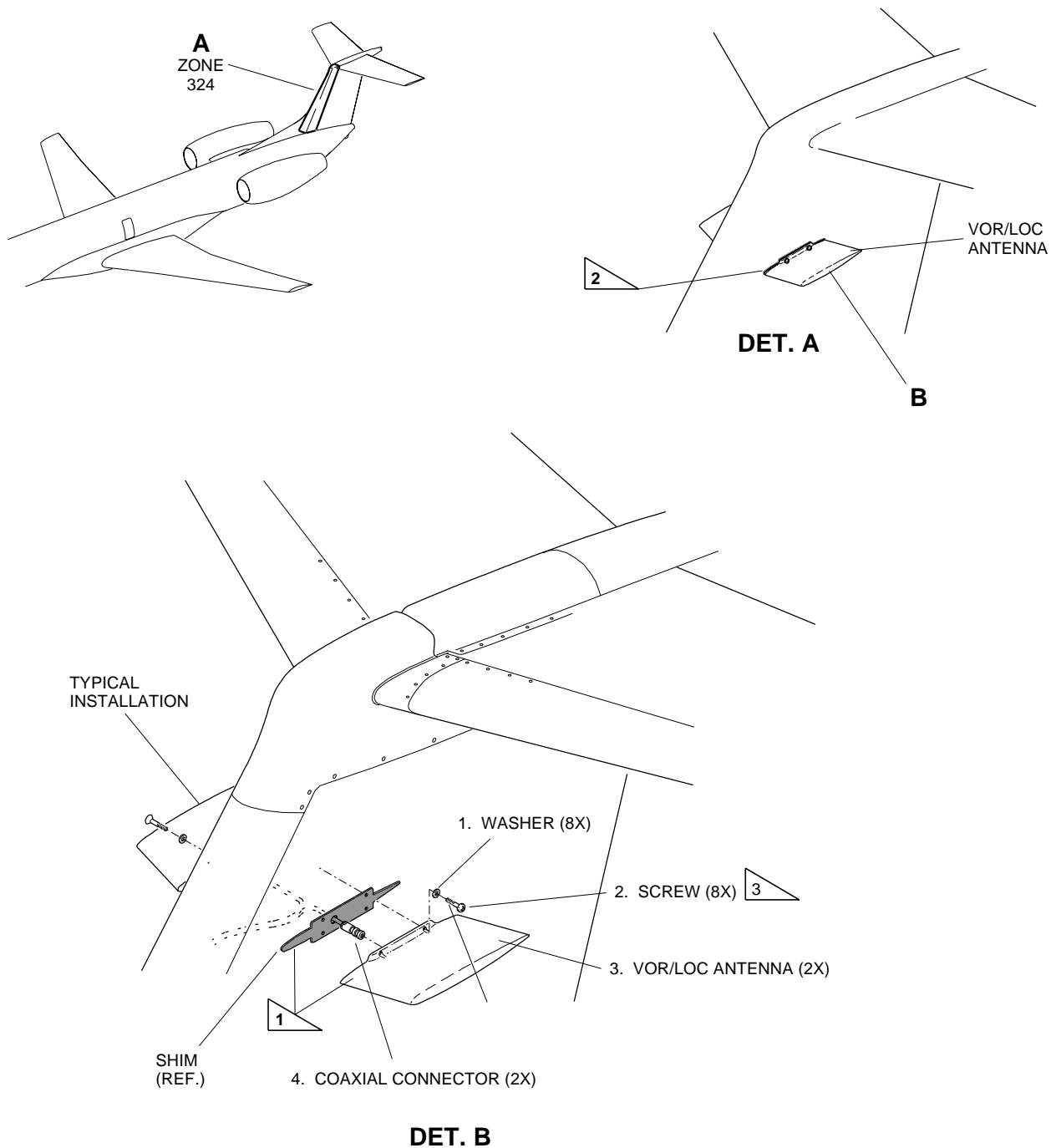
**CAUTION:** BE CAREFUL WHEN YOU USE THE POLYETHYLENE SPATULA TO BREAK THE ANTENNA SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRCRAFT SKIN, THE COAXIAL CABLE, OR THE ANTENNA.

- (e) Use a spatula between the baseplate of the VOR/LOC antenna (4) and the aircraft skin to make the separation.
- (f) Carefully pull the VOR/LOC antenna (4) away from the fuselage.
- (g) Remove the VOR/LOC antenna (4).
- (h) Remove and discard the gel conductive gasket (1).
- (i) Use a spatula to remove the sealant from around the connector of the VOR/LOC antenna (4).

EFFECTIVITY: AIRCRAFT WITH ANTENNAS THAT DO NOT HAVE GEL CONDUCTIVE GASKET

VOR/LOC Antenna - Removal/Installation

Figure 401



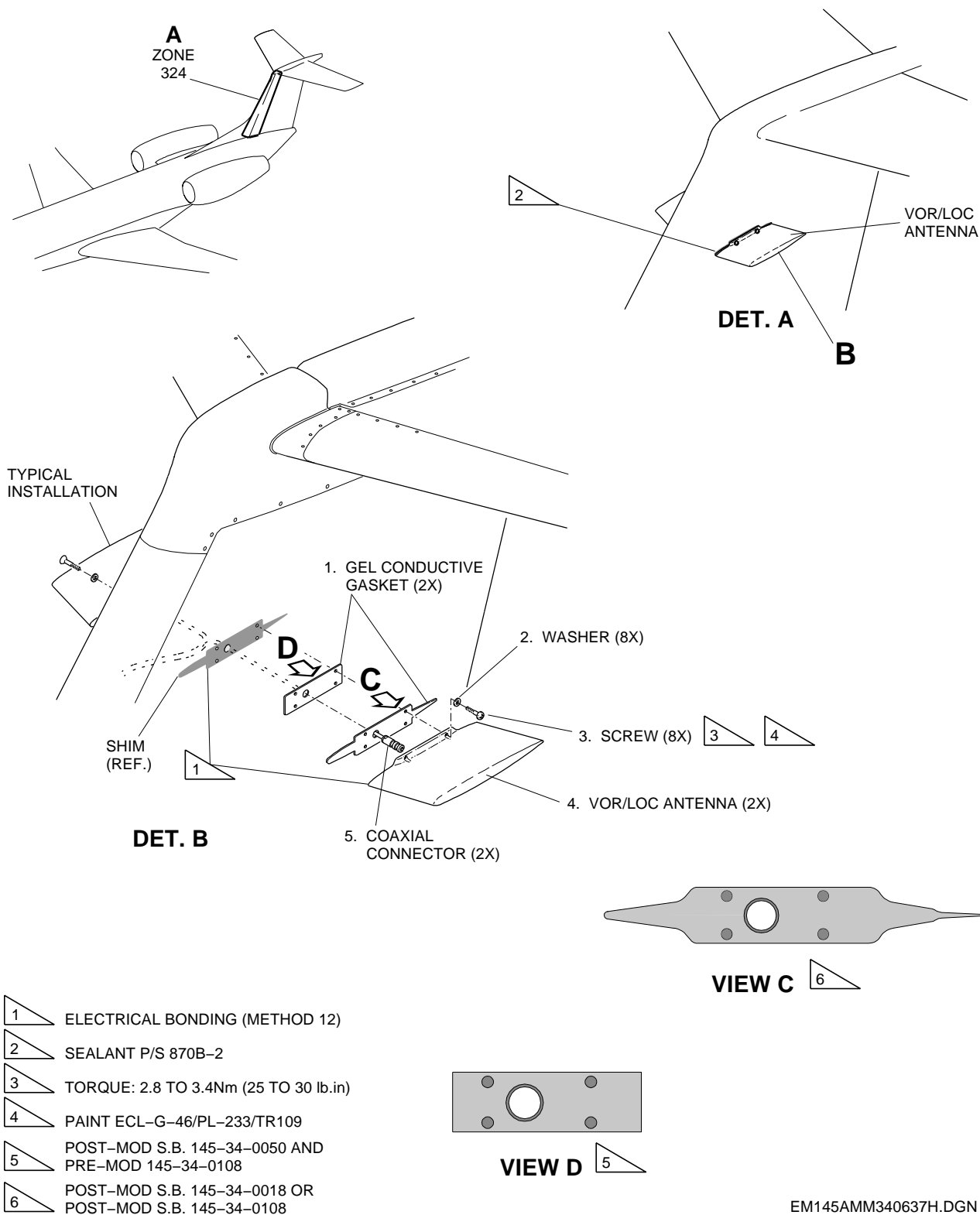
- 1** ELECTRICAL BONDING (METHOD 12)
- 2** SEALANT P/S 870B-2
- 3** TORQUE: 2.8 TO 3.4Nm (25 TO 30 lb.in)

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EFFECTIVITY: AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET

VOR/LOC Antenna - Removal/Installation

Figure 402



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TASK 34-32-03-400-801-A  
EFFECTIVITY: ALL

### 3. VOR/LOC ANTENNA - INSTALLATION

#### A. General

(1) This procedure gives the instructions to install the VOR/LOC antennas.

#### B. References

REFERENCE	DESIGNATION
AMM MPP 06-42-00/100	-
AMM TASK 20-13-21-700-801-A/200	ELECTRICAL BONDING TEST - STANDARD PROCEDURES
AMM TASK 20-13-21-910-801-A/200	TYPES OF ELECTRICAL BONDING AND SURFACE PREPARATION - STANDARD PROCEDURES
AMM TASK 34-32-00-700-801-A/500	VOR/ILS SYSTEM OPERATIONAL TEST
AMM TASK 34-32-03-000-801-A/400	VOR/LOC ANTENNA - REMOVAL
AMM TASK 55-32-02-400-801-A/400	VOR-ANTENNA POLYURETHANE FILM - INSTALLATION
CPM 51-21-06	-
IPC 34-32-05	VOR/LOC ANTENNA
SRM 51-20-01	-
WM 20-50-00/201	-

#### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
324	324DL	Vertical stabilizer
325	325KR	Vertical stabilizer

#### D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 036	Platform-hydraulic, aircraft	To get access to the task area	
Commercially available	Torque wrench	To torque	

#### E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Polyethylene spatula	To remove the sealant	AR
Commercially available	Clean dry cloth	To clean the antenna base	AR

F. Consumable Materials

<i>SPECIFICATION (BRAND)</i>	<i>DESCRIPTION</i>	<i>QTY</i>
ASTM-D-740	Methyl Ethyl Ketone (MEK)	AR
P/S870 B-2 (MIL-PRF-81733)	Type II CL B-2 Polysulfide Aerodynamic Sealant	AR
ECL-G-46/PC-233/TR109 (MEP 10-069)	High Solids Polyurethane White Paint	AR
DOW CORNING No. 4 (MIL-S-8660)	Lubricant Compound	AR

G. Expendable Parts

<i>ITEM</i>	<i>IPC REFERENCE (VENDOR REFERENCE)</i>	<i>QTY</i>
Gel Conductive Gasket	IPC 34-32-05	2

H. Persons Recommended

<i>QTY</i>	<i>FUNCTION</i>	<i>PLACE</i>
1	Does the task	Vertical stabilizer

I. Installation

**SUBTASK 420-002-A**

- (1) Make sure that the aircraft is in the same configuration as it was at the end of the removal task ( [AMM TASK 34-32-03-000-801-A/400](#)).
- (2) If there is not a protection film on the antenna leading edge, install it ([AMM TASK 55-32-02-400-801-A/400](#)).
- (3) Put the hydraulic platform (GSE 036) at the necessary height.
- (4) Examine and clean or replace the coaxial connector as required (WM 20-50-00/201).
- (5) (AIRCRAFT WITH ANTENNAS THAT DO NOT HAVE GEL CONDUCTIVE GASKET). To install the VOR/LOC antenna, do as follows: (Figure 401)

**WARNING: BE CAREFUL WHEN YOU USE THE METHYL ETHYL KETONE (MEK). PUT ON SAFETY GOGGLES, PROTECTIVE GLOVES AND CLOTHING. DO NOT BREATHE THE GAS. DO THE WORK IN AN AREA WHICH HAS A GOOD FLOW OF AIR. THE METHYL ETHYL KETONE (MEK) IS POISONOUS AND HIGHLY FLAMMABLE.**

- (a) With a clean cloth soaked in Methyl Ethyl Ketone (MEK), clean the antenna base surface.

**CAUTION: MAKE SURE THAT THE ELECTRICAL BONDING GIVES A GOOD ELECTRIC CONDUCTIVE PATH. IF NOT, DAMAGE TO THE AIRCRAFT AND TO THE EQUIPMENT CAN OCCUR.**

- (b) Do the bonding procedure, method 12, on the antenna installation surface on the aircraft skin ([AMM TASK 20-13-21-910-801-A/200](#))



- (c) Put the VOR/LOC antenna (3) in installation position.
- (d) Install the screws (2) and washers (1).
- (e) Use a torque wrench to torque the screws (2) to 2.8 to 3.4 N.m. (25 to 30 lb.in) in a crisscross pattern.
- (f) Do the bonding test between the connector of the VOR/LOC antenna (3) and aircraft ground ([AMM TASK 20-13-21-700-801-A/200](#)).
- (g) Apply aerodynamic sealant P/S870 B-2 around the contour of the VOR/LOC antenna (3), on the skin (SRM 51-20-01).
- (h) Fill the internal part of the coaxial connector (4) and its mate with Dow Corning No. 4 Lubricant Compound (WM 20-50-00/201).

**CAUTION:** LOOK AT THE IDENTIFICATION OF THE COAXIAL CONNECTORS TO MAKE SURE THAT YOU MAKE THE CORRECT CONNECTIONS. INCORRECT CONNECTIONS CAN CAUSE MALFUNCTION OF THE SYSTEM OR DAMAGE TO THE COMPONENT.

- (i) Connect the coaxial connector (4) to the VOR/LOC antenna (3).
- (6) (AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET). To install the VOR/LOC antenna, do as follows: (Figure 402)

**WARNING: BE CAREFUL WHEN YOU USE THE METHYL ETHYL KETONE (MEK). PUT ON SAFETY GOGGLES, PROTECTIVE GLOVES AND CLOTHING. DO NOT BREATHE THE GAS. DO THE WORK IN AN AREA WHICH HAS A GOOD FLOW OF AIR. THE METHYL ETHYL KETONE (MEK) IS POISONOUS AND HIGHLY FLAMMABLE.**

- (a) With a clean cloth soaked in Methyl Ethyl Ketone (MEK), clean the antenna base surface.
- (b) Carefully remove the protective release film from the gel conductive gasket (1).
- (c) Carefully remove the protective release film identified with "ANTENNA SIDE" from the gel conductive gasket (1).
- (d) Carefully align the gel conductive gasket (1) with the screw holes and connector, and install it to the base of the VOR/LOC antenna (4).
- (e) Carefully remove the other protective release film from the gel conductive gasket (1).
- (f) Carefully remove the protective release film identified with "AIRCRAFT SIDE" from the gel conductive gasket (1).

**CAUTION:** MAKE SURE THAT THE ELECTRICAL BONDING GIVES A GOOD ELECTRIC CONDUCTIVE PATH. IF NOT, DAMAGE TO THE AIRCRAFT AND TO THE EQUIPMENT CAN OCCUR.

- (g) Do the bonding procedure, method 12, on the antenna installation surface on the aircraft skin ([AMM TASK 20-13-21-910-801-A/200](#))

- (h) Put the VOR/LOC antenna (4) in installation position.
- (i) Install the screws (3) and washers (2).
- (j) Use a torque wrench to torque the screws (3) to 2.8 to 3.4 N.m. (25 to 30 lb.in) in a crisscross pattern.

**CAUTION:** BE CAREFUL WHEN YOU USE THE POLYETHYLENE SPATULA TO BREAK THE ANTENNA SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRCRAFT SKIN, THE COAXIAL CABLE, OR THE ANTENNA.

- (k) If necessary, with a spatula, remove the excess gel of the conductive gel gasket (1) from around the VOR/LOC antenna (4) and from the aircraft skin.
- (l) Do the bonding test between the connector of the VOR/LOC antenna (4) and aircraft ground ([AMM TASK 20-13-21-700-801-A/200](#)).
- (m) Apply aerodynamic sealant P/S870 B-2 around the contour of the VOR/LOC antenna (4), on the skin (SRM 51-20-01).
- (n) Apply paint ECL-G-46/PC-233/TR109 on the screw (3) heads (CPM 51-21-06).
- (o) Fill the internal part of the coaxial connector (5) and its mate with Dow Corning No. 4 Lubricant Compound (WM 20-50-00/201).

**CAUTION:** LOOK AT THE IDENTIFICATION OF THE COAXIAL CONNECTORS TO MAKE SURE THAT YOU MAKE THE CORRECT CONNECTIONS. INCORRECT CONNECTIONS CAN CAUSE MALFUNCTION OF THE SYSTEM OR DAMAGE TO THE COMPONENT.

- (p) Connect the coaxial connector (5) to the VOR/LOC antenna (4).

**J. Follow-on**

**SUBTASK 842-002-A**

- (1) On the circuit breaker panel, close the VOR/ILS 1 or VOR/ILS 2 circuit breaker and remove the DO-NOT-CLOSE tag from it.
- (2) Do the VOR/ILS System Operational Test ( [AMM TASK 34-32-00-700-801-A/500](#)).
- (3) Install access panels 324DL and 325KR (AMM MPP 06-42-00/100).
- (4) Remove all tools, equipment and unwanted materials from the work area.