



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

**(145) FMS (UNIVERSAL) GPS ANTENNA / (135) DUAL FMS GPS ANTENNA - REMOVAL/
INSTALLATION**

EFFECTIVITY: AIRCRAFT WITH FMS UNIVERSAL

1. General

- A. This section gives the procedures to remove and install the GPS Antenna of the FMS.
- 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
34-62-04-000-801-A	DUAL FMS GPS ANTENNA - REMOVAL	AIRCRAFT WITH FMS UNIVERSAL
34-62-04-400-801-A	DUAL FMS GPS ANTENNA - INSTALLATION	AIRCRAFT WITH FMS UNIVERSAL
34-62-04-000-802-A	SINGLE FMS GPS ANTENNA - REMOVAL	AIRCRAFT WITH FMS UNIVERSAL
34-62-04-400-802-A	SINGLE FMS GPS ANTENNA - INSTALLATION	AIRCRAFT WITH FMS UNIVERSAL



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TASK 34-62-04-000-801-A

EFFECTIVITY: AIRCRAFT WITH FMS UNIVERSAL

2. DUAL FMS GPS ANTENNA - REMOVAL

A. General

- (1) This task gives the procedures to remove the FMS GPS Antennas.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-04/100	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
233		On the fuselage top, LH
234		On the fuselage top, RH

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand - Upper Skin Top Fuselage	To get access to the FMS GPS antenna	AR
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	At the fuselage top, in the area above the passenger cabin

I. Preparation

SUBTASK 841-004-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.



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- (2) On the circuit breaker panel, open the FMS 1 and FMS 2 circuit breakers and attach a DO-NOT-CLOSE tag to them.
- (3) Remove the ceiling panel 233ALC to access the FMS GPS1 and/ or FMS GPS2 antennas (AMM MPP 06-41-04/100).

J. Removal

SUBTASK 020-004-A

- (1) (AIRCRAFT WITH ANTENNAS THAT DO NOT HAVE GEL CONDUCTIVE GASKET) To remove the FMS GPS 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 connectors (3) from the FMS GPS antenna (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.

- (b) Use a spatula to remove the sealant from around the fuselage skin hole and the FMS GPS antenna (2), on the inner surface of the fuselage skin hole.
- (c) Use a workstand (external top fuselage) to get access to the FMS GPS antenna (2).
- (d) Use a spatula to remove the sealant from around the FMS GPS antenna (2) and aircraft skin.
- (e) Remove the sealant used as protection of the screws (1).
- (f) Remove the screws (1).

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

- (g) Use a spatula between the baseplate of the FMS GPS antenna (2) and the aircraft skin to make the separation.
- (h) Carefully pull the FMS GPS antenna (2) away from the fuselage.
- (i) Remove the FMS GPS antenna (2).

- (2) (AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET) To remove the FMS GPS 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 connectors (4) from the FMS GPS antenna (2).

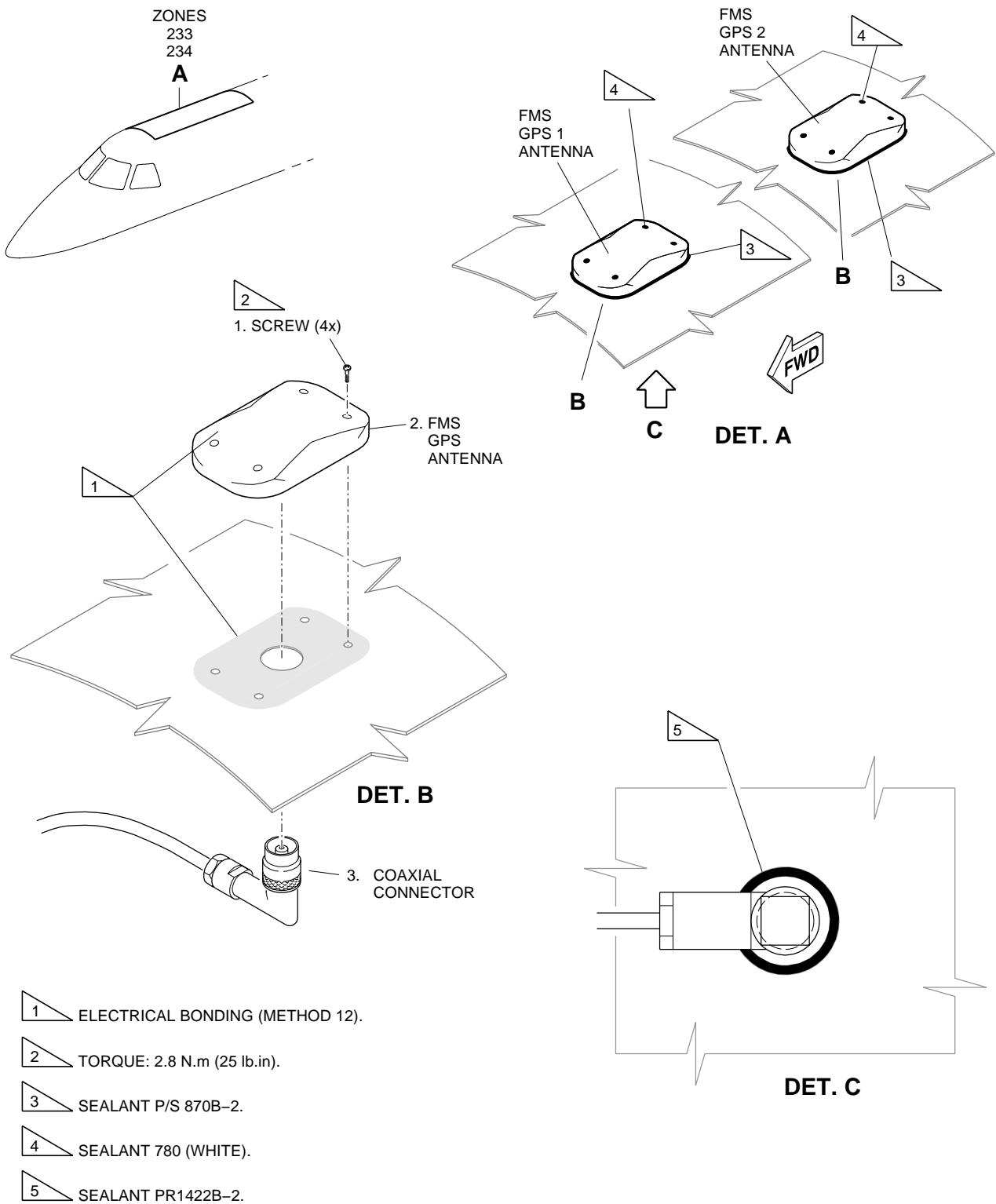
CAUTION: BE CAREFUL WHEN YOU USE THE POLYETHYLENE SPATULA TO BREAK THE ANTENNA SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRCRAFT SKIN, THE COAXIAL CABLE, OR THE ANTENNA.

- (b) Use a spatula to remove the sealant from around the fuselage skin hole and the FMS GPS antenna (2), on the inner surface of the fuselage skin hole.
- (c) Use a workstand (external top fuselage) to get access to the FMS GPS antenna (2).
- (d) Use a spatula to remove the sealant from the contour of the FMS GPS antenna (2) and aircraft skin.
- (e) Remove the sealant used as protection of the screws (1).
- (f) Remove the screws (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.

- (g) Use a spatula between the baseplate of the FMS GPS antenna (2) and the aircraft skin to make the separation.
- (h) Carefully pull the FMS GPS antenna (2) away from the fuselage.
- (i) Remove the FMS GPS antenna (2).
- (j) Remove and discard the gel conductive gasket (3).
- (k) Use a spatula to remove the sealant from around the connector of the FMS GPS antenna (2).

EFFECTIVITY: AIRCRAFT WITH ANTENNAS THAT DO NOT HAVE GEL CONDUCTIVE GASKET
Dual FMS GPS Antenna - Removal/Installation
Figure 401

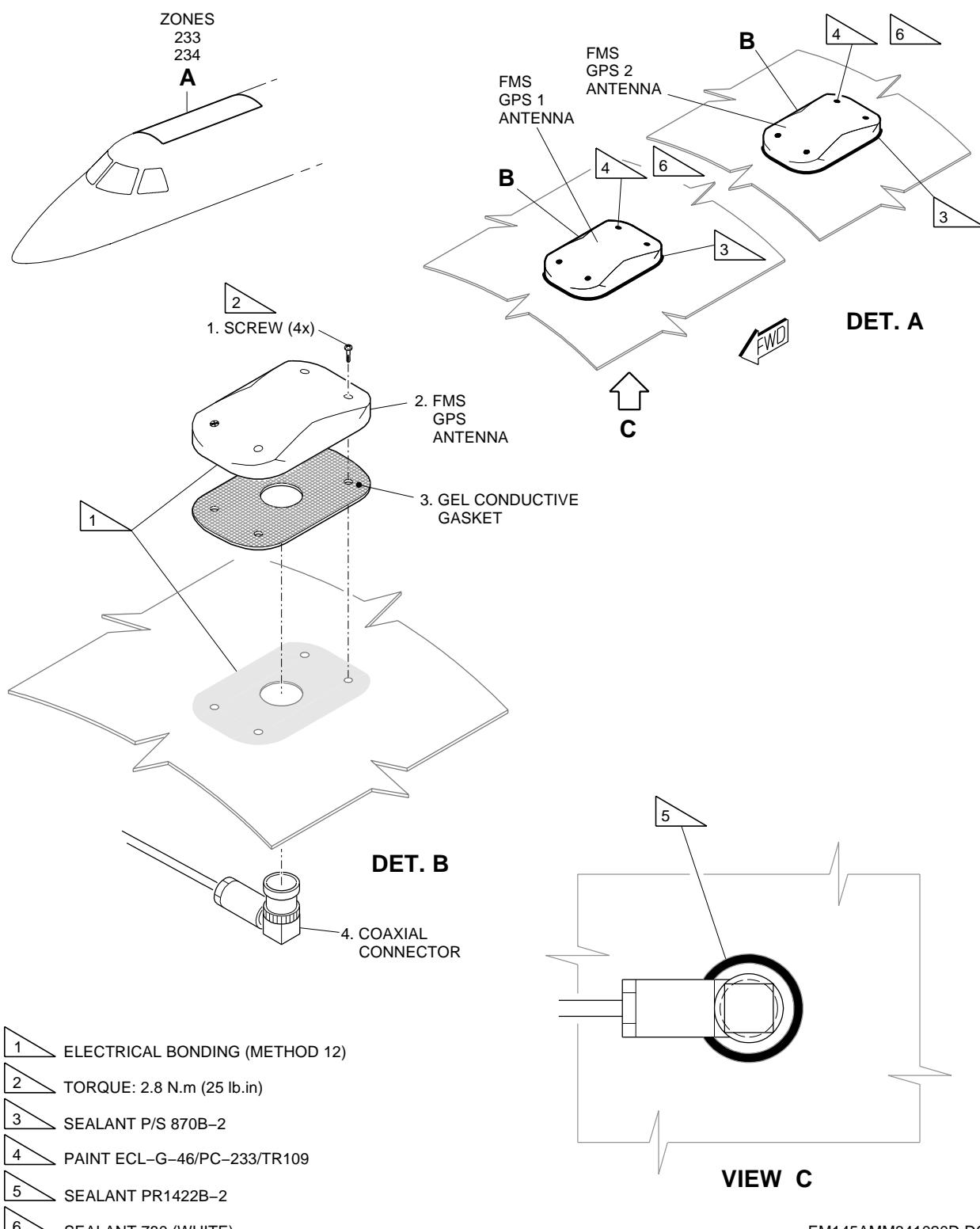


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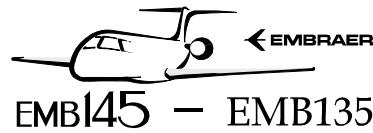
EFFECTIVITY: AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET

Dual FMS GPS Antenna - Removal/Installation

Figure 402



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TASK 34-62-04-400-801-A

EFFECTIVITY: AIRCRAFT WITH FMS UNIVERSAL

3. DUAL FMS GPS ANTENNA - INSTALLATION

A. General

(1) This task gives the procedures to install the FMS GPS Antenna.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-04/100	-
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 34-62-00-700-801-A/500	-
AMM TASK 34-62-04-000-801-A/400	-
CPM 51-21-06	-
IPC 34-62-04	FMS GPS ANTENNA
SRM 51-20-01	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
233		On the fuselage top, LH
234		On the fuselage top, RH

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Torque wrench	To torque	

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Polyethylene spatula	To remove the sealant	AR
Commercially available	Workstand - Upper Skin Top Fuselage	To get access to the FMS GPS antenna	AR
Commercially available	Clean dry cloth	To clean the antenna base	AR



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F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
ASTM-D-740	Methyl Ethyl Ketone (MEK)	AR
780(WHITE) (ASTM-C-920)	Type II Class A White Silicone, Sealant	AR
P/S870 B-2 (MIL-PRF-81733)	Type II CL B-2 Polysulfide Aerodynamic Sealant	AR
PR1422 B-2 (AMS-S-8802)	Type I CL B2 Polysulfide Sealant	AR
ECL-G-46/PC-233/TR109 (MEP 10-069)	High Solids Polyurethane White Paint	AR

G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
Gel Conductive Gasket	IPC 34-62-04	2

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	At the fuselage top, in the area above the passenger cabin

I. Installation

SUBTASK 420-004-A

- (1) Make sure that the aircraft is in the same configuration as it was at the end of the removal task (AMM TASK 34-62-04-000-801-A/400).
- (2) Use a workstand (external top fuselage) to get access to the installation position of the FMS GPS antenna (2).
- (3) (AIRCRAFT WITH ANTENNAS THAT DO NOT HAVE GEL CONDUCTIVE GASKET)
To install the FMS GPS 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 FMS GPS antenna (2) in its installation position.

- (d) Install the screws (1).
- (e) Use a torque wrench to torque the screws (1) to 2.8 N.m (25 lb.in) in a crisscross pattern.
- (f) Do the bonding test between the connector of the FMS GPS antenna (2) 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 FMS GPS antenna (2), on the skin (SRM 51-20-01).
- (h) Apply sealant 780 (WHITE) on the screw heads until you fully fill the recesses on the antenna body (SRM 51-20-01).
- (i) Apply sealant PR1422 B-2 around the fuselage skin hole and the FMS GPS antenna base, on the inner surface of the fuselage skin (SRM 51-20-01).

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.

- (j) Connect the coaxial connector (3) to the FMS GPS antenna (2).
- (4) (AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET) To install the FMS GPS antenna (2), 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 identified with "ANTENNA SIDE" from the gel conductive gasket (3).
- (c) Carefully align the gel conductive gasket (3) with the screw holes and connector, and install it to the base of the FMS GPS antenna (2).
- (d) Carefully remove the protective release film identified with "AIRCRAFT SIDE" from the gel conductive gasket (3).

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.

- (e) Do the bonding procedure, method 12, on the antenna installation surface on the aircraft skin ([AMM TASK 20-13-21-910-801-A/200](#))
- (f) Put the FMS GPS antenna (2) in its installation position.
- (g) Install the screws (1).



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- (h) Use a torque wrench to torque the screws (1) to 2.8 N.m (25 lb.in) in a crisscross pattern.

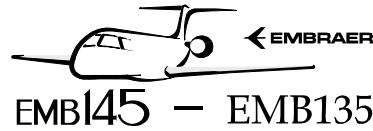
CAUTION: BE CAREFUL WHEN YOU USE THE POLYETHYLENE SPATULA TO BREAK THE ANTENNA SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRCRAFT SKIN, THE COAXIAL CABLE, OR THE ANTENNA.

- (i) If necessary, with a spatula, remove the excess gel of the conductive gel gasket (3) from around the FMS GPS antenna (2) and from the aircraft skin.
- (j) Do the bonding test between the connector of the FMS GPS antenna (2) and aircraft ground ([AMM TASK 20-13-21-700-801-A/200](#)).
- (k) Apply aerodynamic sealant P/S870 B-2 around the contour of the FMS GPS antenna (2), on the skin (SRM 51-20-01).
- (l) Apply paint ECL-G-46/PC-233/TR109 on the screw heads (CPM 51-21-06).
- (m) Apply sealant 780 (WHITE) on the screw heads until you fully fill the recesses in the antenna body (SRM 51-20-01).
- (n) Apply sealant PR1422 B-2 around the fuselage skin hole and the FMS GPS antenna base, on the inner surface of the fuselage skin (SRM 51-20-01).
- (o) Connect the coaxial connector (4) to the FMS GPS antenna (2).

J. Follow-on

SUBTASK 842-004-A

- (1) Remove all tools, equipment and unwanted materials from the work area.
- (2) Install the ceiling panel (AMM MPP 06-41-04/100).
- (3) On the circuit breaker panel, close the FMS 1 and FMS 2 circuit breakers and remove the DO-NOT-CLOSE tag from them.
- (4) Do the Dual FMS GPS System Operational Test (AMM TASK 34-62-00-700-801-A/500).



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TASK 34-62-04-000-802-A

EFFECTIVITY: AIRCRAFT WITH FMS UNIVERSAL

4. SINGLE FMS GPS ANTENNA - REMOVAL

A. General

- (1) This task gives the procedures to remove the FMS GPS Antenna.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-04/100	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
233		On the fuselage top, LH
234		On the fuselage top, RH

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand - Upper Skin Top Fuselage	To get access to the FMS GPS antenna	AR
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	At the fuselage top, in the area above the passenger cabin

I. Preparation

SUBTASK 841-005-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 FMS 1 circuit breaker and attach a DO-NOT-CLOSE tag to it.
- (3) Remove the ceiling panel 233ALC to access the FMS GPS antenna (AMM MPP 06-41-04/100).

J. Removal

SUBTASK 020-005-A

- (1) (AIRCRAFT WITH ANTENNAS THAT DO NOT HAVE GEL CONDUCTIVE GASKET) To remove the FMS GPS antenna, do as follows: ([Figure 403](#))

- (a) Disconnect the coaxial connector (3) from the FMS GPS antenna (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.

- (b) Use a spatula to remove the sealant from around the fuselage skin hole and the FMS GPS antenna (2), on the inner surface of the fuselage skin hole.
 - (c) Use a workstand (external top fuselage) to get access to the FMS GPS antenna (2).
 - (d) Use a spatula to remove the sealant from around the FMS GPS antenna (2) and aircraft skin.
 - (e) Remove the sealant used as protection of the screws (1).
 - (f) Remove the screws (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.

- (g) Use a spatula between the baseplate of the FMS GPS antenna (2) and the aircraft skin to make the separation.
 - (h) Carefully pull the FMS GPS antenna (2) away from the fuselage.
 - (i) Remove the FMS GPS antenna (2).

- (2) (AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET) To remove the FMS GPS antenna, do as follows: ([Figure 404](#))

- (a) Disconnect the coaxial connector (4) from the FMS GPS antenna (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.

- (b) Use a spatula to remove the sealant from around the fuselage skin hole and the FMS GPS antenna (2), on the inner surface of the fuselage skin hole.

- (c) Use a workstand (external top fuselage) to get access to the FMS GPS antenna (2).
- (d) Use a spatula to remove the sealant from the contour of the FMS GPS antenna (2) and aircraft skin.
- (e) Remove the sealant used as protection of the screws (1).
- (f) Remove the screws (1).

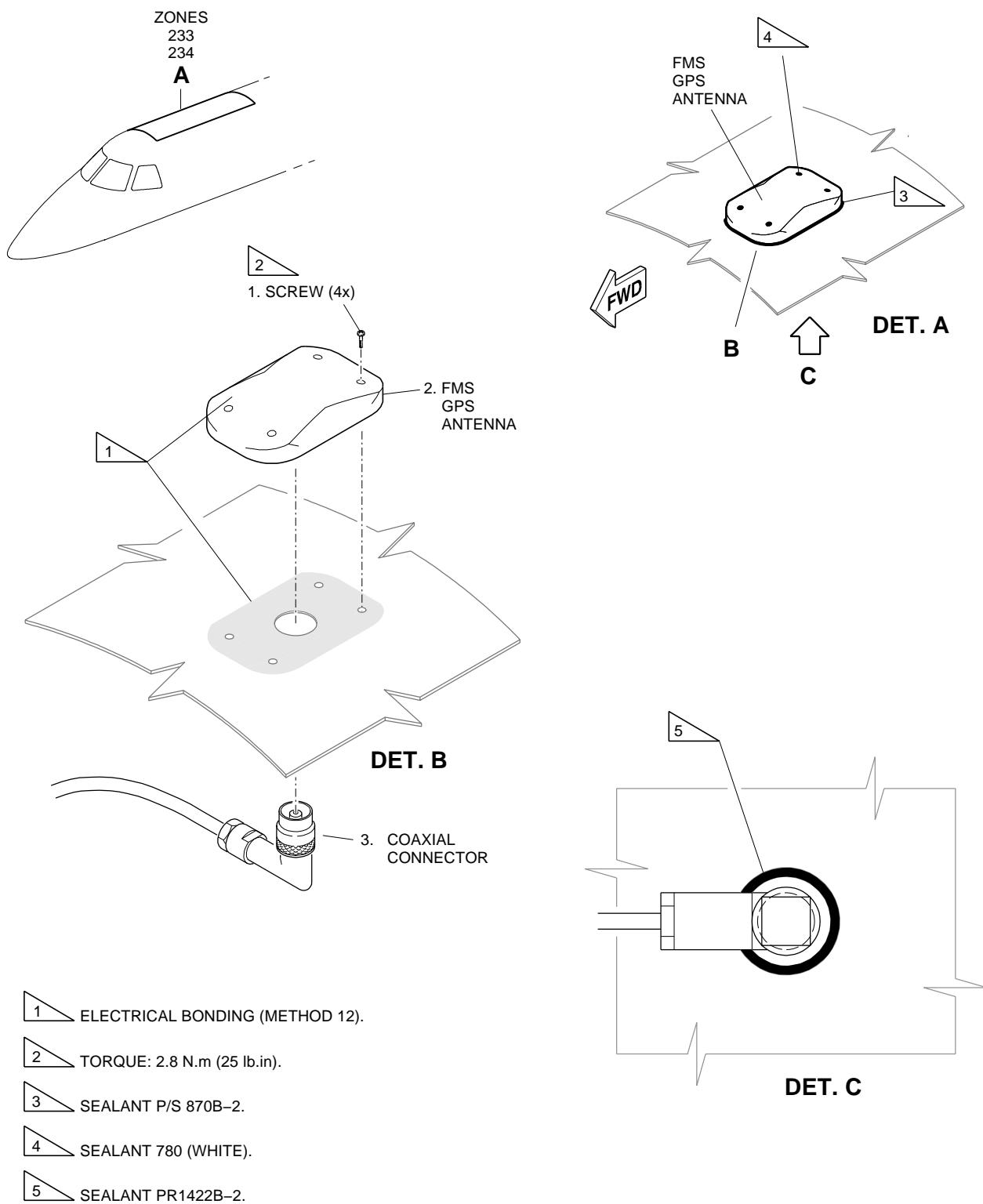
CAUTION: BE CAREFUL WHEN YOU USE THE POLYETHYLENE SPATULA TO BREAK THE ANTENNA SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRCRAFT SKIN, THE COAXIAL CABLE, OR THE ANTENNA.

- (g) Use a spatula between the baseplate of the FMS GPS antenna (2) and the aircraft skin to make the separation.
- (h) Carefully pull the FMS GPS antenna (2) away from the fuselage.
- (i) Remove the FMS GPS antenna (2).
- (j) Remove and discard the gel conductive gasket (3).
- (k) Use a spatula to remove the sealant from around the connector of the FMS GPS antenna (2).

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

Single FMS GPS Antenna - Removal/Installation

Figure 403

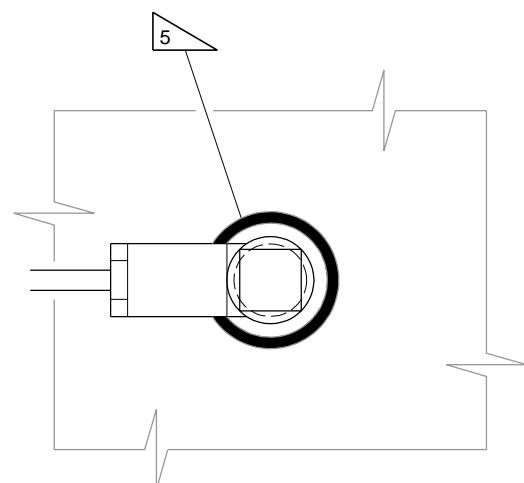
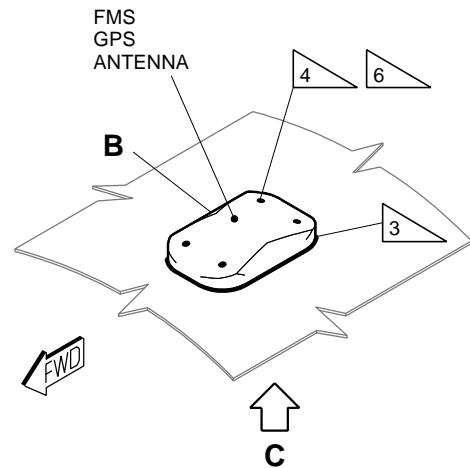
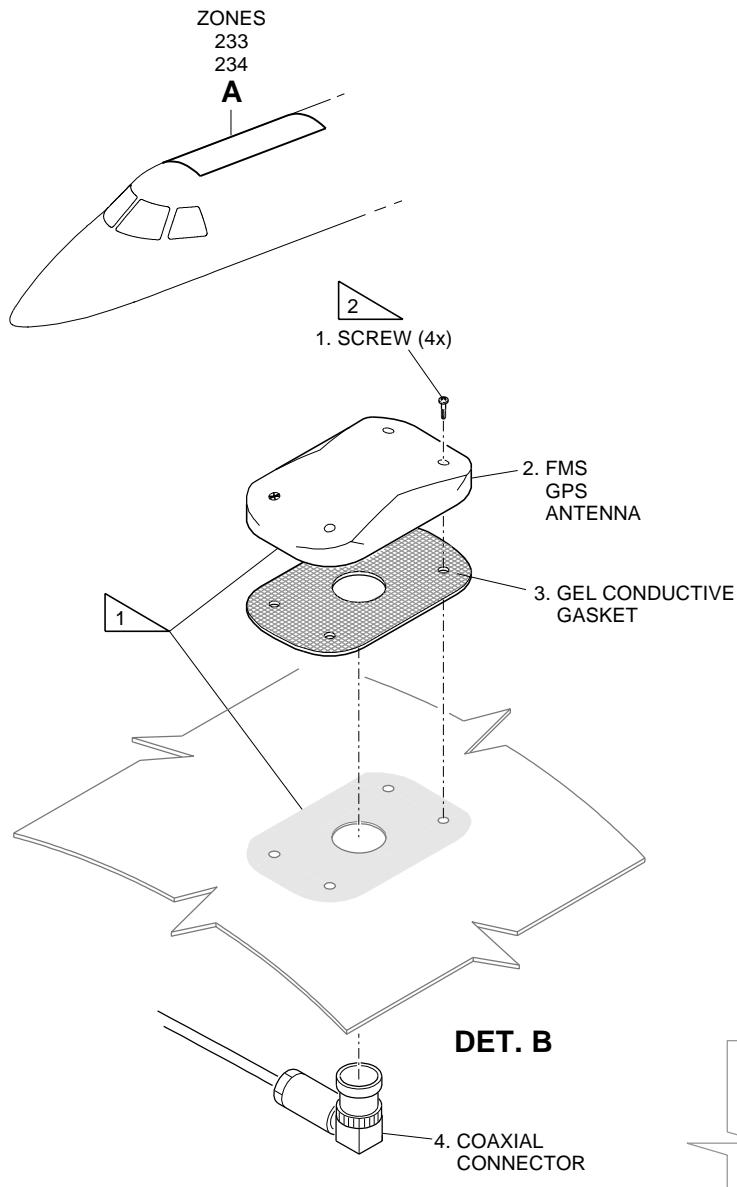


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EFFECTIVITY: AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET

Single FMS GPS Antenna - Removal/Installation

Figure 404



- 1 ELECTRICAL BONDING (METHOD 12)
- 2 TORQUE: 2.8 N.m (25 lb.in)
- 3 SEALANT P/S 870B-2
- 4 PAINT ECL-G-46/PC-233/TR109
- 5 SEALANT PR1422B-2
- 6 SEALANT 780 (WHITE)

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TASK 34-62-04-400-802-A

EFFECTIVITY: AIRCRAFT WITH FMS UNIVERSAL

5. SINGLE FMS GPS ANTENNA - INSTALLATION

A. General

- (1) This task gives the procedures to install the FMS GPS Antenna.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-04/100	-
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 34-62-00-700-802-A/500	SINGLE FMS - OPERATIONAL TEST
AMM TASK 34-62-04-000-802-A/400	SINGLE FMS GPS ANTENNA - REMOVAL
CPM 51-21-06	-
IPC 34-62-04	FMS GPS ANTENNA
SRM 51-20-01	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
233		On the fuselage top, LH
234		On the fuselage top, RH

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Torque wrench	To torque	

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Polyethylene spatula	To remove the sealant	AR
Commercially available	Workstand - Upper Skin Top Fuselage	To get access to the FMS GPS antenna	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
780(WHITE) (ASTM-C-920)	Type II Class A White Silicone, Sealant	AR
P/S870 B-2 (MIL-PRF-81733)	Type II CL B-2 Polysulfide Aerodynamic Sealant	AR
PR1422 B-2 (AMS-S-8802)	Type I CL B2 Polysulfide Sealant	AR
ECL-G-46/PC-233/TR109 (MEP 10-069)	High Solids Polyurethane White Paint	AR

G. Expendable Parts

<i>ITEM</i>	<i>IPC REFERENCE (VENDOR REFERENCE)</i>	<i>QTY</i>
Gel Conductive Gasket	IPC 34-62-04	1

H. Persons Recommended

<i>QTY</i>	<i>FUNCTION</i>	<i>PLACE</i>
1	Does the task	At the fuselage top, in the area above the passenger cabin

I. Installation

SUBTASK 420-005-A

- (1) Make sure that the aircraft is in the same configuration as it was at the end of the removal task ([AMM TASK 34-62-04-000-802-A/400](#)).
- (2) Use a workstand (external top fuselage) to get access to the installation position of the FMS GPS antenna (2).
- (3) (AIRCRAFT WITH ANTENNAS THAT DO NOT HAVE GEL CONDUCTIVE GASKET) To install the FMS GPS antenna, do as follows: (Figure 403)

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 FMS GPS antenna (2) in its installation position.

- (d) Install the screws (1).
- (e) Use a torque wrench to torque the screws (1) to 2.8 N.m (25 lb.in) in a crisscross pattern.
- (f) Do the bonding test between the connector of the FMS GPS antenna (2) 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 FMS GPS antenna (2), on the skin (SRM 51-20-01).
- (h) Apply sealant 780 (WHITE) on the screw heads until you fully fill the recesses on the antenna body (SRM 51-20-01).
- (i) Apply sealant PR1422 B-2 around the fuselage skin hole and the FMS GPS antenna base, on the inner surface of the fuselage skin (SRM 51-20-01).

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.

- (j) Connect the coaxial connector (3) to the FMS GPS antenna (2).
- (4) (AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET) To install the FMS GPS antenna (2), do as follows: (Figure 404)

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 identified with "ANTENNA SIDE" from the gel conductive gasket (3).
- (c) Carefully align the gel conductive gasket (3) with the screw holes and connector, and install it to the base of the FMS GPS antenna (2).
- (d) Carefully remove the protective release film identified with "AIRCRAFT SIDE" from the gel conductive gasket (3).

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.

- (e) Do the bonding procedure, method 12, on the antenna installation surface on the aircraft skin ([AMM TASK 20-13-21-910-801-A/200](#))
- (f) Put the FMS GPS antenna (2) in its installation position.
- (g) Install the screws (1).

- (h) Use a torque wrench to torque the screws (1) to 2.8 N.m (25 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.

- (i) If necessary, with a spatula, remove the excess gel of the conductive gel gasket (3) from around the FMS GPS antenna (2) and from the aircraft skin.
- (j) Do the bonding test between the connector of the FMS GPS antenna (2) and aircraft ground ([AMM TASK 20-13-21-700-801-A/200](#)).
- (k) Apply aerodynamic sealant P/S870 B-2 around the contour of the FMS GPS antenna (2), on the skin (SRM 51-20-01).
- (l) Apply paint ECL-G-46/PC-233/TR109 on the screw heads (CPM 51-21-06).
- (m) Apply sealant 780 (WHITE) on the screw heads until you fully fill the recesses in the antenna body (SRM 51-20-01).
- (n) Apply sealant PR1422 B-2 around the fuselage skin hole and the FMS GPS antenna base, on the inner surface of the fuselage skin (SRM 51-20-01).

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.

- (o) Connect the coaxial connector (4) to the FMS GPS antenna (2).

J. Follow-on

SUBTASK 842-005-A

- (1) Remove all tools, equipment and unwanted materials from the work area.
- (2) Install the ceiling panel (AMM MPP 06-41-04/100).
- (3) On the circuit breaker panel, close the FMS 1 circuit breaker and remove the DO-NOT-CLOSE tag from it.
- (4) Do the Single FMS GPS System Operational Test ([AMM TASK 34-62-00-700-802-A/500](#)).

