

EMB145 – EMB135

AIRCRAFT  
MAINTENANCE MANUAL

RADIO ALTIMETER ANTENNA - REMOVAL/INSTALLATION

EFFECTIVITY: ACFT MODEL(S) EMB-145

1. General

- A. This section gives the procedures to remove and install the radio altimeter antennas.
- B. These procedures are applicable to radio altimeter antennas I and II.
- C. Tasks sequential numbers -801 are applicable to aircraft PRE-MOD [S.B.145-34-0024](#) (Radio Altimeter Systems 1 and 2 Relocation) and the task sequential numbers -802 are applicable to aircraft POST-MOD S.B. 145-34-0024.
- D. 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
34-31-02-000-801-A	RADIO ALTIMETER ANTENNA - REMOVAL	PRE-MOD. S.B. 145-34-0024
34-31-02-400-801-A	RADIO ALTIMETER ANTENNA - INSTALLATION	PRE-MOD S.B. 145-34-0024
34-31-02-000-802-A	RADIO ALTIMETER ANTENNA - REMOVAL	POST-MOD. S.B. 145-34-0024
34-31-02-400-802-A	RADIO ALTIMETER ANTENNA - INSTALLATION	POST-MOD. S.B. 145-34-0024



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TASK 34-31-02-000-801-A

EFFECTIVITY: PRE-MOD. S.B. 145-34-0024

2. RADIO ALTIMETER ANTENNA - REMOVAL

A. General

- (1) The removal procedure is the same for antennas I and II.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
193	193LL	Wing stub

D. Tools and Equipment

Not Applicable

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	Rear fuselage, on the LH side of the wing stub

I. Preparation

SUBTASK 841-011-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 cockpit ceiling, open the circuit breakers below and attach a DO-NOT-CLOSE tag to them:
  - RA1 (Location Tip: DC BUS1/NAV/RA1).

- RA2 (Location Tip: DC BUS2/NAV/RA2).

(3) Remove access panel 193LL (AMM MPP 06-41-01/100).

**J. Removal**

**SUBTASK 020-011-A**

**EFFECTIVITY: PRE-MOD S.B. 145-34-0024**

- (1) (AIRCRAFT WITH ANTENNAS THAT DO NOT HAVE GEL CONDUCTIVE GASKET). To remove the radio altimeter 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 (1) from the radio altimeter 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 radio altimeter antenna (3), on the inner surface of the fuselage skin hole.

- (c) Use a spatula to remove the sealant from around the radio altimeter antenna (3) and from the aircraft skin.

- (d) Remove the sealant used as a protection of the screws (2).

- (e) Remove the screws (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.

- (f) Use a spatula between the baseplate of the radio altimeter antenna (3) and the aircraft skin to make the separation.

- (g) Carefully pull the radio altimeter antenna (3) away from the fuselage.

- (h) Remove the radio altimeter antenna (3).

- (2) (AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET) To remove the radio altimeter 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 (1) from the radio altimeter 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 radio altimeter antenna (3), on the inner surface of the fuselage skin hole.
- (c) Use a spatula to remove the sealant from around the radio altimeter antenna (3) and from the aircraft skin.
- (d) Remove the sealant used as a protection of the screws (2).
- (e) Remove the screws (2).

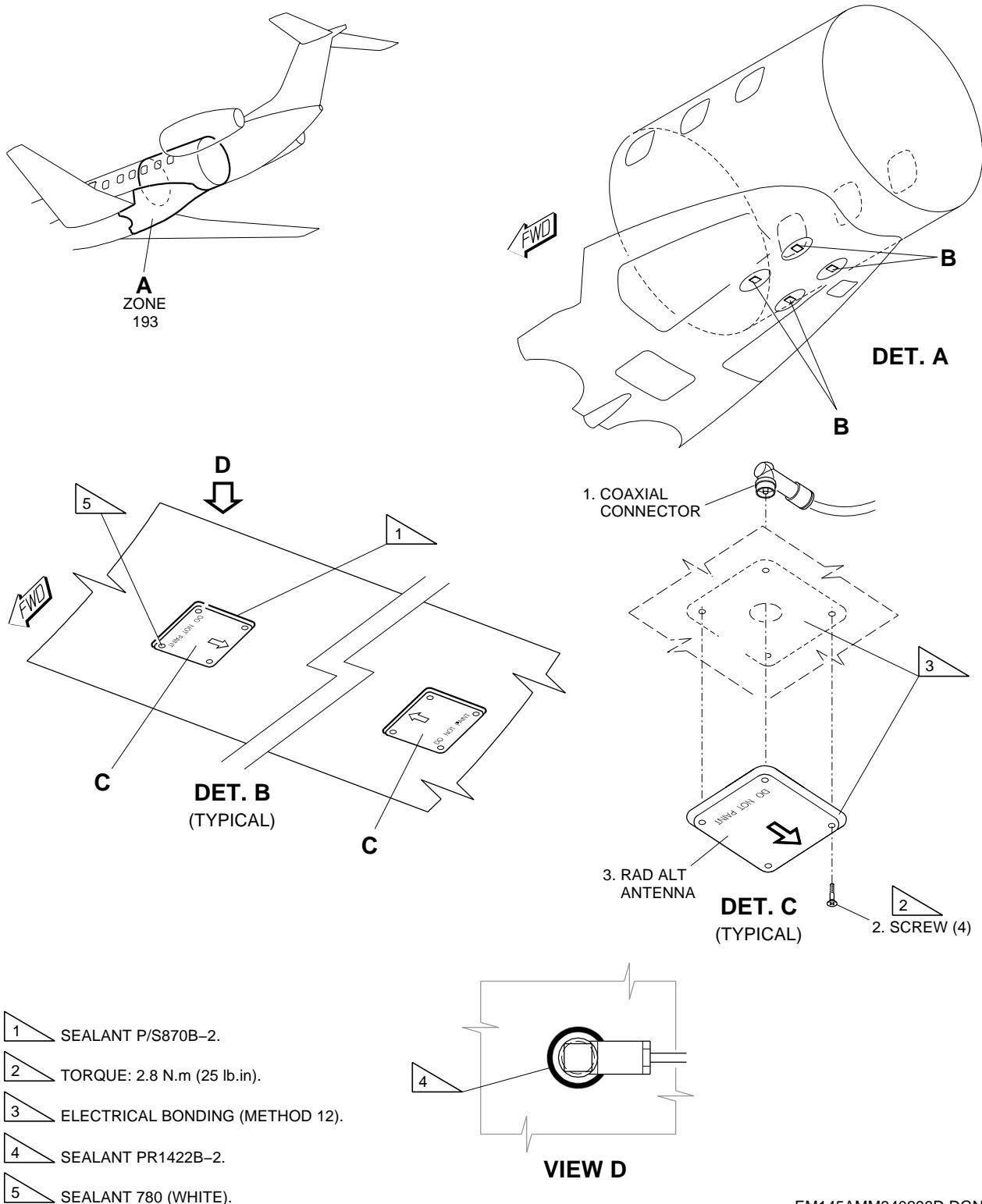
CAUTION: BE CAREFUL WHEN YOU USE THE POLYETHYLENE SPATULA TO BREAK THE ANTENNA SEAL. TOO MUCH FORCE CAN CAUSE DAMAGE TO THE AIRCRAFT SKIN, THE COAXIAL CABLE, OR THE ANTENNA.

- (f) Use a spatula between the baseplate of the radio altimeter antenna (3) and the aircraft skin to make the separation.
- (g) Carefully pull the radio antenna (3) away from the fuselage.
- (h) Remove the radio altimeter antenna (3).
- (i) Remove and discard the gel conductive gasket (4).
- (j) Use a spatula to remove the sealant from around the connector of the radio altimeter antenna (3).

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

Radio Altimeter Antenna - Removal/Installation

Figure 401

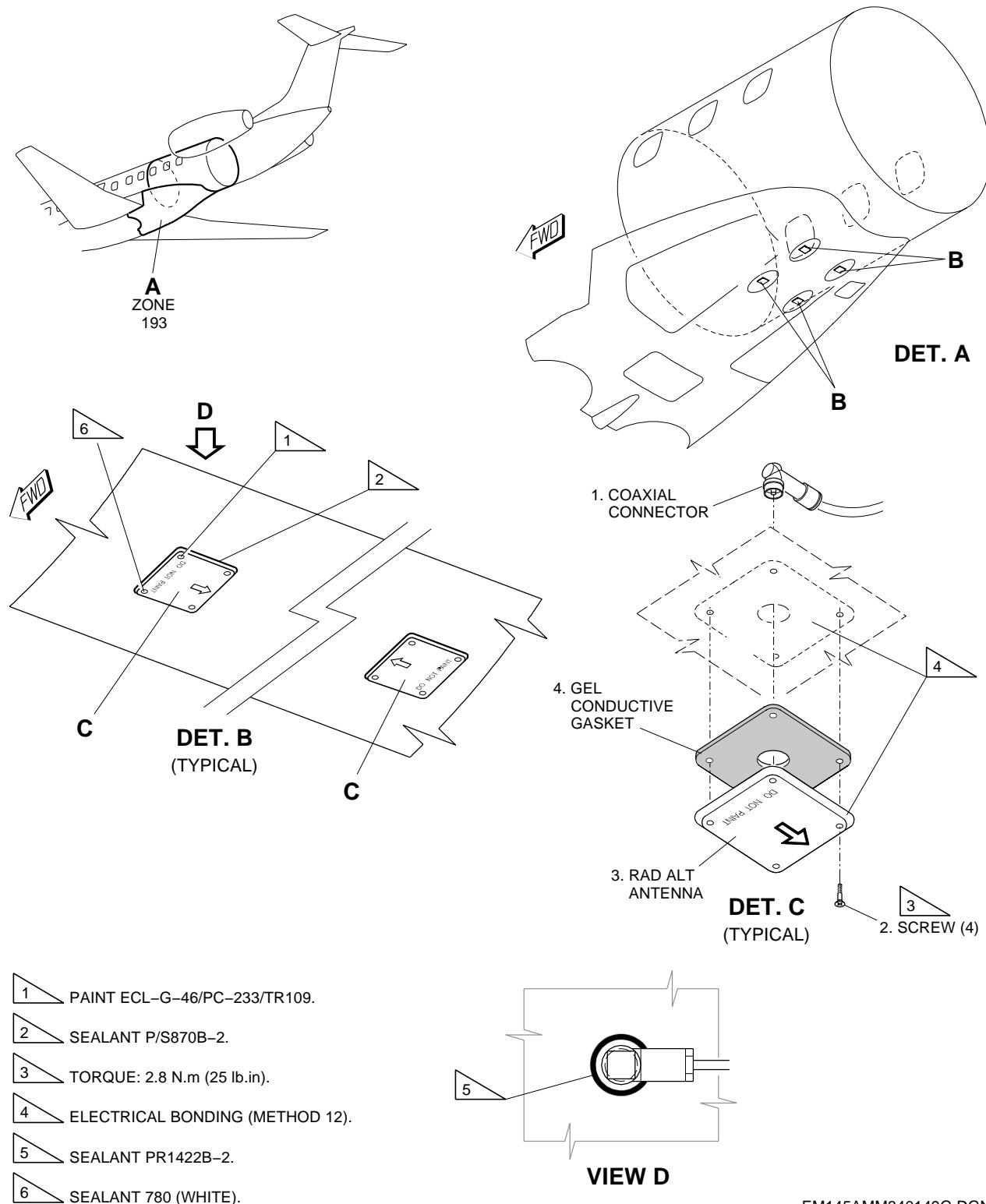


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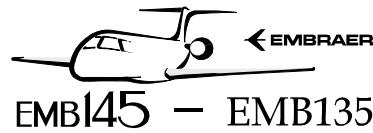
**EFFECTIVITY: AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET**

Radio Altimeter Antenna - Removal/Installation

Figure 402



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TASK 34-31-02-400-801-A

EFFECTIVITY: PRE-MOD S.B. 145-34-0024

3. RADIO ALTIMETER ANTENNA - INSTALLATION

## A. General

(1) The installation procedure is the same for antennas I and II.

## B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
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 34-31-00-700-801-A/500	RADIO ALTIMETER SYSTEM - OPERATIONAL TEST
AMM TASK 34-31-02-000-801-A/400	-
CPM 51-21-06	-
IPC 34-31-02	RADIO ALTIMETER ANTENNA
SRM 51-20-01	-
WM 20-50-00/201	-

## C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
193	193LL	Wing stub

## 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	Clean dry cloth	To clean the antenna base	AR

## 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



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SPECIFICATION (BRAND)	DESCRIPTION	QTY
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
DOW CORNING No. 4 (MIL-S-8660)	Lubricant Compound	AR

## G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
Gel Conductive Gasket	IPC 34-31-02	4

## H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Rear fuselage, on the LH side of the wing stub

## I. Installation

## SUBTASK 420-011-A

- (1) Make sure that the aircraft is in the same configuration as it was at the end of the removal (AMM TASK 34-31-02-000-801-A/400).
- (2) Examine and clean or replace the coaxial connector (1) as required (WM 20-50-00/201).
- (3) (AIRCRAFT WITH ANTENNAS THAT DO NOT HAVE GEL CONDUCTIVE GASKET). To install the radio altimeter 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**).

**CAUTION: INSTALL THE ANTENNAS WITH ARROWS HEAD-ON, ONE IN THE RH DIRECTION AND THE OTHER ONE IN THE LH DIRECTION.**

- (c) Put the radio altimeter antenna (3) in installation position.

- (d) Install the screws (2).
- (e) Use a torque wrench to torque the screws (2) to 2.8 N.m. (25 lb.in) in a crisscross pattern.
- (f) Do the bonding test between the connector of the radio altimeter 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 radio altimeter antenna (3), on the skin (SRM 51-20-01).
- (h) Apply sealant 780 (WHITE) on the screw heads until you fully fill the recesses in the antenna body (SRM 51-20-01).
- (i) Apply sealant PR1422 B-2 around the fuselage skin hole and the radio altimeter antenna base, on the inner surface of the fuselage skin (SRM 51-20-01).
- (j) Fill the internal part of the coaxial connector (1) 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.

- (k) Connect the coaxial connector (1) to the radio altimeter antenna (3).
- (4) (AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET). To install the radio altimeter 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 (4).
- (c) Carefully remove the protective release film identified with "ANTENNA SIDE" from the gel conductive gasket (4).
- (d) Carefully align the gel conductive gasket (4) with the screw holes and connector, and install it to the base of the radio altimeter antenna (3).
- (e) Carefully remove the protective release film from the gel conductive gasket (4).
- (f) Carefully remove the protective release film identified with "AIRCRAFT SIDE" from the gel conductive gasket (4).

**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](#)).

**CAUTION: INSTALL THE ANTENNAS WITH ARROWS HEAD-ON, ONE IN THE RH DIRECTION AND THE OTHER ONE IN THE LH DIRECTION.**

- (h) Put the radio altimeter antenna (3) in installation position.
- (i) Install the screws (2).
- (j) Use a torque wrench to torque the screws (2) 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.**

- (k) With a spatula, remove the excess gel of the conductive gel gasket (4) from around the radio altimeter antenna (3) and from the aircraft skin.
- (l) Do the bonding test between the connector of the radio altimeter antenna (3) 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 radio altimeter antenna (3), on the skin (SRM 51-20-01).
- (n) Apply paint ECL-G-46/PC-233/TR109 on the screw (2) heads (CPM 51-21-06).
- (o) Apply sealant 780 (WHITE) on the screw heads until you fully fill the recesses in the antenna body (SRM 51-20-01).
- (p) Apply sealant PR1422 B-2 around the fuselage skin hole and the radio altimeter antenna base, on the inner surface of the fuselage skin (SRM 51-20-01).
- (q) Fill the internal part of the coaxial connector (1) and its mate with Dow Corning No. 4 Lubricant Compound (WM 20-50-00/201).

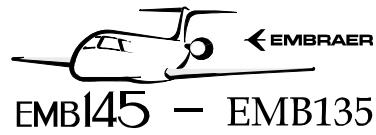
**CAUTION: LOOK AT THE IDENTIFICATION OF THE COAXIAL CONNECTORS TO MAKE SURE THAT YOU MAKE THE CORRECT CONNECTIONS. INCORRECT CONNECTIONS CAN CAUSE MALFUNCTION OF THE SYSTEM OR DAMAGE TO THE COMPONENT.**

- (r) Connect the coaxial connector (1) to the radio altimeter antenna (3).

#### J. Follow-on

##### SUBTASK 842-011-A

- (1) On the cockpit ceiling, close the circuit breakers below and remove the DO-NOT-CLOSE tag to them:
  - RA1 (Location Tip: DC BUS1/NAV/RA1).
  - RA2 (Location Tip: DC BUS2/NAV/RA2).



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- (2) Do the Radio-Altimeter System Operational Test ( [AMM TASK 34-31-00-700-801-A/500](#)).
- (3) Install access panel 193LL (AMM MPP 06-41-01/100).



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TASK 34-31-02-000-802-A

EFFECTIVITY: POST-MOD. S.B. 145-34-0024

4. RADIO ALTIMETER ANTENNA - REMOVAL

A. General

- (1) This task gives the procedures to remove radio-altimeter antennas 1 or 2.

B. References

REFERENCE	DESIGNATION
AMM TASK 53-01-02-000-802-A/400	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
141		Area below passenger cabin floor
171		Area below passenger cabin floor

D. Tools and Equipment

Not Applicable

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	Center fuselage II (for RA1) or Rear fuselage I (for RA2)

I. Preparation

SUBTASK 841-012-B

**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 cockpit ceiling, open the circuit breakers below and attach a DO-NOT-CLOSE tag to them:

- RA1 (Location Tip: DC BUS1/NAV/RA1).
- (AIRCRAFT WITH TWO RADIO ALTIMETERS INSTALLED) RA2 (Location Tip: DC BUS2/NAV/RA2).
- Remove floor panels 241BF and 241DF (for RA1) or 271BF (for RA2) to get access to the antenna connector (AMM TASK 53-01-02-000-802-A/400).

#### J. Removal

##### *SUBTASK 020-012-B*

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

- (a) Disconnect the coaxial connector (1) from the radio altimeter 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 radio altimeter antenna (3), on the inner surface of the fuselage skin hole.

- (c) Use a spatula to remove the sealant from around the radio altimeter antenna (3) and from the aircraft skin.

- (d) Remove the sealant used as a protection of the screws (2).

- (e) Remove the screws (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.

- (f) Use a spatula between the baseplate of the radio altimeter antenna (3) and the aircraft skin to make the separation.

- (g) Carefully pull the radio altimeter antenna (3) away from the fuselage.

- (h) Remove the radio altimeter antenna (3).

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

**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 (1) from the radio altimeter 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 radio altimeter antenna (3), on the inner surface of the fuselage skin hole.

**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.

- (c) Use a spatula to remove the sealant from around the radio altimeter antenna (3) and from the aircraft skin.
- (d) Remove the sealant used as a protection of the screws (2).
- (e) Remove the screws (2).

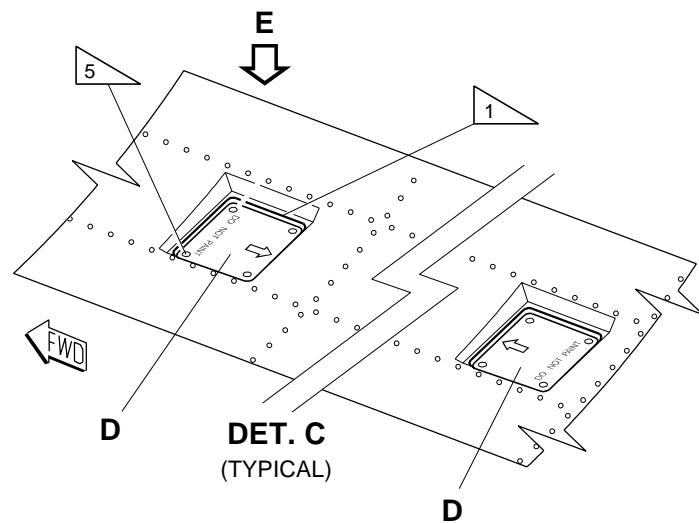
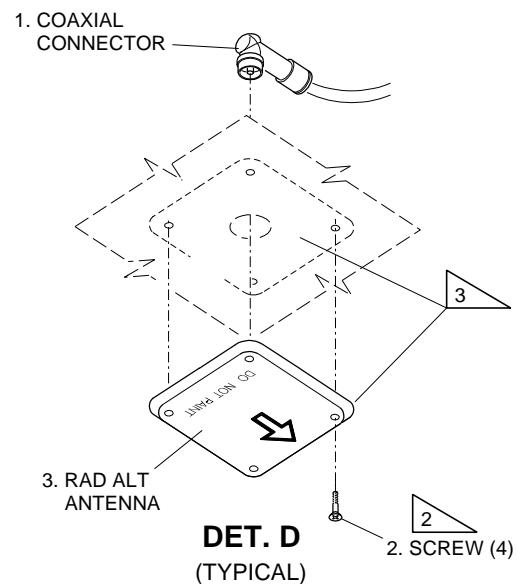
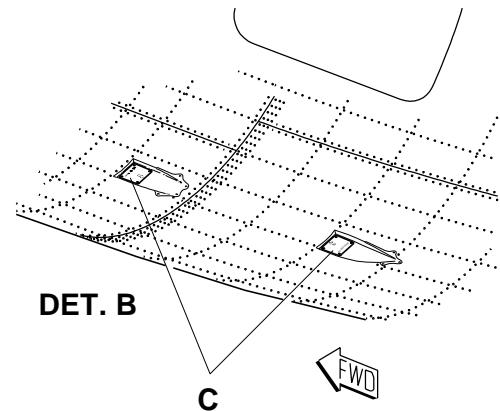
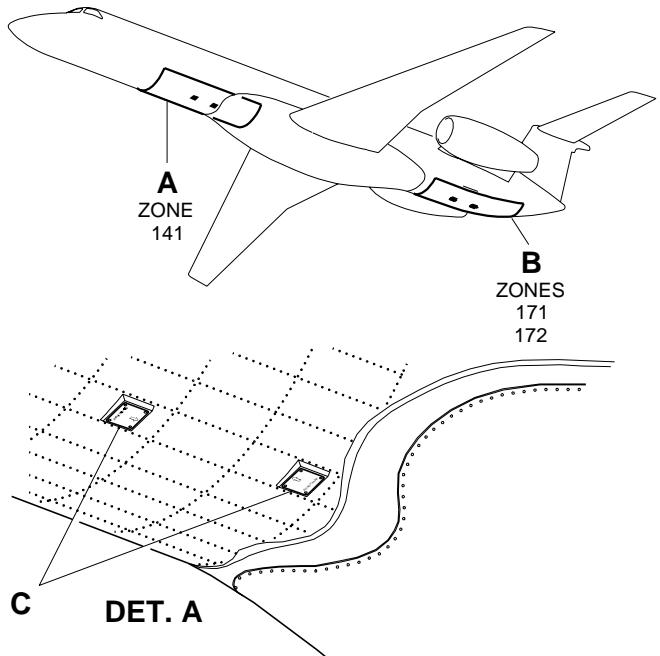
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- (f) Use a spatula between the baseplate of the radio altimeter antenna (3) and the aircraft skin to make the separation.
- (g) Carefully pull the radio antenna (3) away from the fuselage.
- (h) Remove the radio altimeter antenna (3).
- (i) Remove and discard the gel conductive gasket (4).
- (j) Use a spatula to remove the sealant from around the connector of the radio altimeter antenna (3).

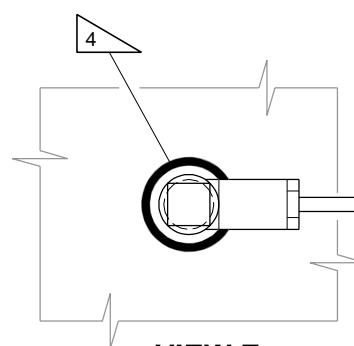
**EFFECTIVITY: AIRCRAFT WITH ANTENNAS THAT DO NOT HAVE GEL CONDUCTIVE GASKET**

Radio Altimeter Antenna - Removal/Installation

Figure 403



- 1** SEALANT P/S870B-2.
- 2** TORQUE: 2.8 N.m (25 lb.in).
- 3** ELECTRICAL BONDING (METHOD 12).
- 4** SEALANT PR1422B-2.
- 5** SEALANT 780 (WHITE).

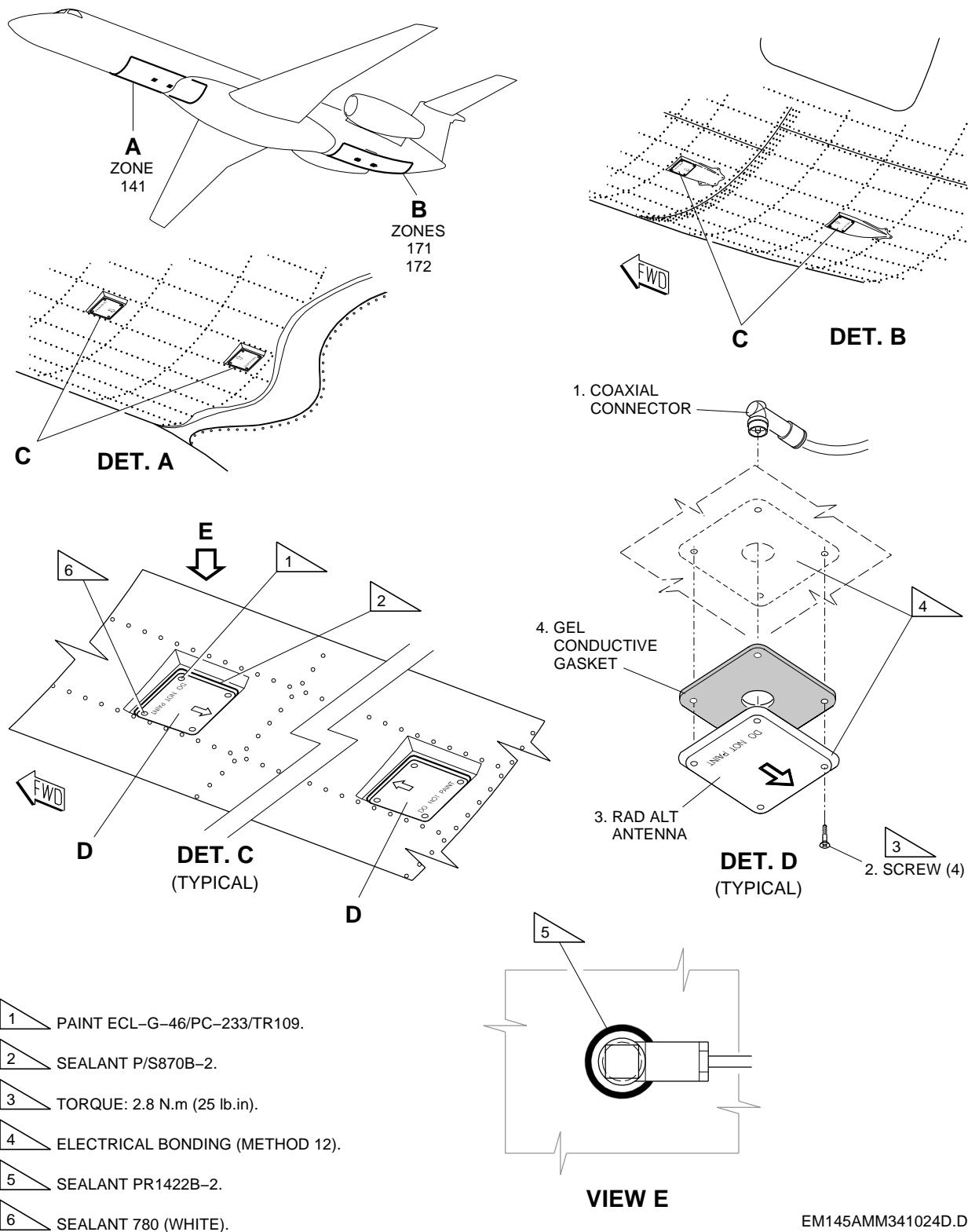


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**EFFECTIVITY: AIRCRAFT WITH ANTENNAS THAT HAVE GEL CONDUCTIVE GASKET**

Radio Altimeter Antenna - Removal/Installation

Figure 404



**VIEW E**

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**TASK 34-31-02-400-802-A**
*EFFECTIVITY: POST-MOD. S.B. 145-34-0024*
**5. RADIO ALTIMETER ANTENNA - INSTALLATION**
**A. General**

(1) This task gives the procedures to install radio altimeter antenna 1 or 2.

**B. References**

<i>REFERENCE</i>	<i>DESIGNATION</i>
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 34-31-00-700-801-A/500	RADIO ALTIMETER SYSTEM - OPERATIONAL TEST
AMM TASK 34-31-02-000-801-A/400	-
AMM TASK 53-01-02-400-802-A/400	-
CPM 51-21-06	-
IPC 34-31-02	RADIO ALTIMETER ANTENNA
SRM 51-20-01	-
WM 20-50-00/201	-

**C. Zones and Accesses**

<i>ZONE</i>	<i>PANEL/DOOR</i>	<i>LOCATION</i>
141		Area below passenger cabin floor
171		Area below passenger cabin floor

**D. Tools and Equipment**

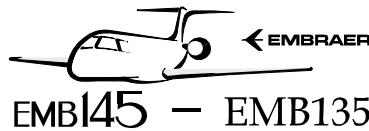
<i>ITEM</i>	<i>DESCRIPTION</i>	<i>PURPOSE</i>	<i>QTY</i>
Commercially available	Torque wrench	To torque	

**E. Auxiliary Items**

<i>ITEM</i>	<i>DESCRIPTION</i>	<i>PURPOSE</i>	<i>QTY</i>
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



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(Continued)

SPECIFICATION (BRAND)	DESCRIPTION	QTY
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
DOW CORNING No. 4 (MIL-S-8660)	Lubricant Compound	AR

## G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
Gel Conductive Gasket	IPC 34-31-02	2 (AIR-CRAFT WITH ONE RADIO ALTIMETER IN-STAL-LED)
Gel Conductive Gasket	IPC 34-31-02	4 (AIR-CRAFT WITH TWO RADIO ALTIMETERS IN-STAL-LED)

## H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Center fuselage II (for RA1) or Rear fuselage I (for RA2)

## I. Installation

## SUBTASK 420-012-B

- (1) Make sure that the aircraft is in the same configuration as it was at the end of the removal (AMM TASK 34-31-02-000-801-A/400).
- (2) Examine and clean or replace the coaxial connector (1) as required (WM 20-50-00/201).
- (3) (AIRCRAFT WITH ANTENNAS THAT DO NOT HAVE GEL CONDUCTIVE GASKET). To install the radio altimeter 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](#)).

**CAUTION: INSTALL THE ANTENNAS WITH ARROWS HEAD ON, ONE IN THE FLIGHT DIRECTION AND THE OTHER ONE OPPOSITE TO THE FLIGHT DIRECTION.**

- (c) Put the radio altimeter antenna (3) in installation position.

- (d) Install the screws (2).

- (e) Use a torque wrench to torque the screws (2) to 2.8 N.m. (25 lb.in) in a crisscross pattern.

- (f) Do the bonding test between the connector of the radio altimeter 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 radio altimeter antenna (3), on the skin (SRM 51-20-01).

- (h) Apply sealant 780 (WHITE) on the screw heads until you fully fill the recesses in the antenna body (SRM 51-20-01).

- (i) Apply sealant PR1422 B-2 around the fuselage skin hole and the radio altimeter antenna base, on the inner surface of the fuselage skin (SRM 51-20-01).

- (j) Fill the internal part of the coaxial connector (1) 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.**

- (k) Connect the coaxial connector (1) to the radio altimeter antenna (3).

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

**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](#)).

**CAUTION: INSTALL THE ANTENNAS WITH ARROWS HEAD ON, ONE IN THE FLIGHT DIRECTION AND THE OTHER ONE OPPOSITE TO THE FLIGHT DIRECTION.**

- (h) Put the radio altimeter antenna (3) in installation position.
- (i) Install the screws (2).
- (j) Use a torque wrench to torque the screws (2) 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.**

- (k) With a spatula, remove the excess gel of the conductive gel gasket (4) from around the radio altimeter antenna (3) and from the aircraft skin.
- (l) Do the bonding test between the connector of the radio altimeter antenna (3) 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 radio altimeter antenna (3), on the skin (SRM 51-20-01).
- (n) Apply paint ECL-G-46/PC-233/TR109 on the screw (2) heads (CPM 51-21-06).

- (o) Apply sealant 780 (WHITE) on the screw heads until you fully fill the recesses in the antenna body (SRM 51-20-01).
- (p) Apply sealant PR1422 B-2 around the fuselage skin hole and the radio altimeter antenna base, on the inner surface of the fuselage skin (SRM 51-20-01).
- (q) Fill the internal part of the coaxial connector (1) 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.

- (r) Connect the coaxial connector (1) to the radio altimeter antenna (3).

**J. Follow-on**

**SUBTASK 842-012-B**

- (1) Install floor panels 241BF and 241DF or 271BF (AMM TASK 53-01-02-400-802-A/400).
- (2) On the cockpit ceiling, close the circuit breakers below and remove the DO-NOT-CLOSE tag from them:
  - RA1 (Location Tip: DC BUS1/NAV/RA1).
  - (AIRCRAFT WITH TWO RADIO ALTIMETERS INSTALLED) RA2 (Location Tip: DC BUS2/NAV/RA2).
- (3) Do the Radio-Altimeter System Operational Test ( [AMM TASK 34-31-00-700-801-A/500](#)).

