



AIRCRAFT MAINTENANCE MANUAL

ADF ANTENNA - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove and install the ADF 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
34-53-02-000-801-A	ADF ANTENNA - REMOVAL	ALL
34-53-02-400-801-A	ADF ANTENNA - INSTALLATION	ALL



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TASK 34-53-02-000-801-A

EFFECTIVITY: ALL

2. ADF ANTENNA - REMOVAL

A. General

- (1) This procedure gives the instructions to remove the ADF antenna(s).

B. References

REFERENCE	DESIGNATION
AMM TASK 25-22-04-000-801-A/400	-

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Plastic Spatula	To remove the sealant	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Upper forward fuselage

I. Preparation

SUBTASK 841-002-A

- (1) On the circuit breaker panel, open the ADF 1 and/or ADF 2 circuit breakers and attach a DO-NOT-CLOSE tag to them.
- (2) From the inside of the aircraft, remove the ceiling panels as follows:
 - (a) On the EMB-135 () aircraft models, remove panel 253ALC to get access to the ADF 1 and/or ADF 2 antenna connectors (AMM TASK 25-22-04-000-801-A/400).
 - (b) On the EMB-145 () aircraft models, remove panel 253CLC (for ADF 1 antenna) and/or 253DLC (for ADF 2 antenna) to get access to the related antenna connector (AMM TASK 25-22-04-000-801-A/400).



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J. Removal ([Figure 401](#)) ([Figure 402](#))

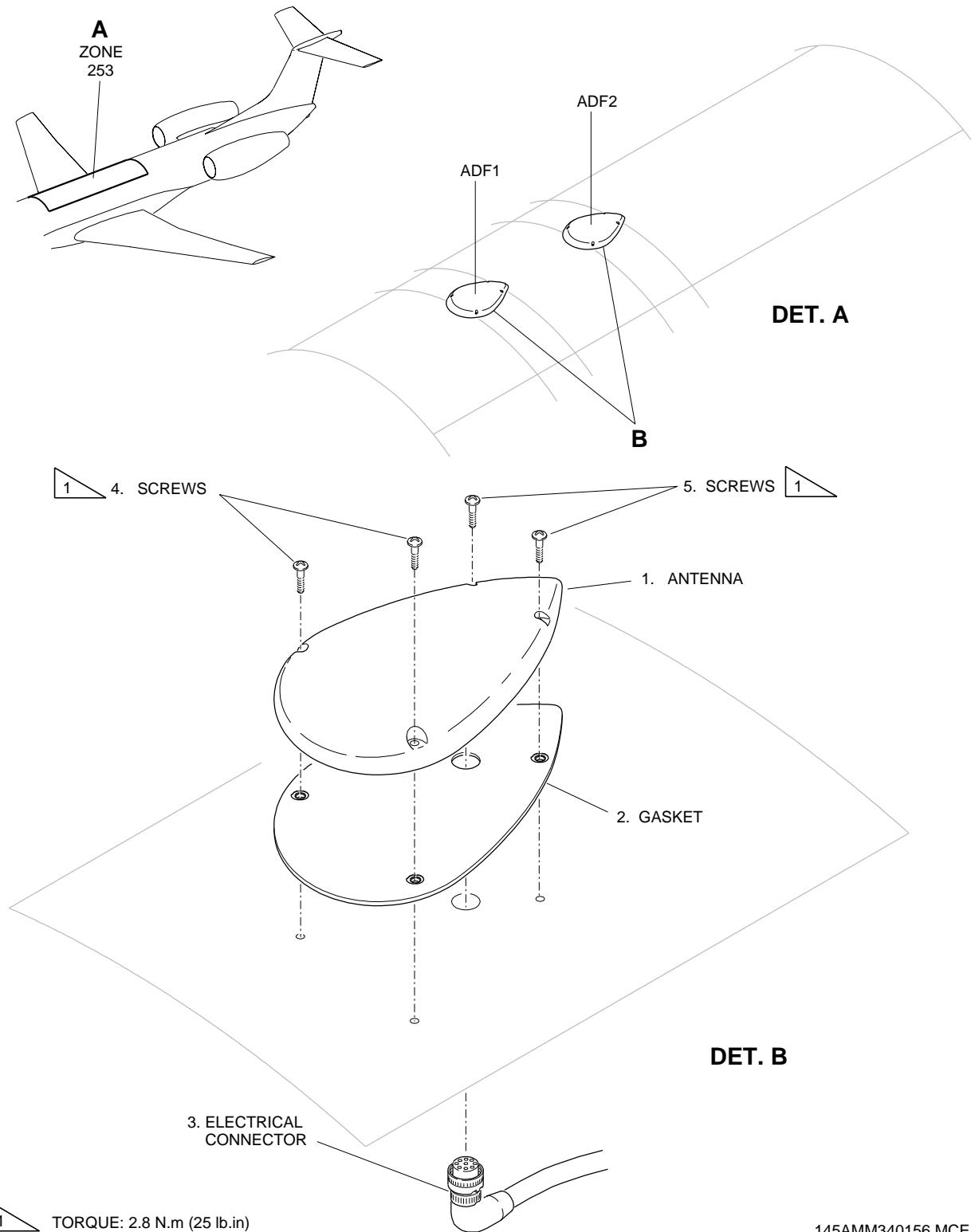
SUBTASK 020-002-A

- (1) For ADF antenna with gasket, do these steps ([Figure 401](#)):
 - (a) From the inside of the aircraft, remove all the sealant from the contour of the antenna connector.
 - (b) Disconnect the electrical connector (3).
 - (c) Remove the screws (4) and (5).
 - (d) Remove all the sealant along the contour of the antenna base. For this, use a plastic spatula.
 - (e) Carefully pull the antenna (1).
 - (f) Remove the antenna (1).
 - (g) Remove the antenna gasket (2).
- (2) For ADF antenna with sealant (Ultra Seal Conductive Antenna Gasket Kit), do these steps ([Figure 402](#)):
 - (a) From the inside of the aircraft, remove all the sealant from the contour of the antenna connector.
 - (b) Disconnect the electrical connector (4).
 - (c) Remove the screws (5) and (6), and the washers (7) and (8).
 - (d) Remove all the sealant from along the contour of the antenna base. For this, use a plastic spatula.
 - (e) Use a plastic spatula to make a lever, and carefully pull the antenna (1).
 - (f) Remove the antenna (1).
 - (g) Remove the sealant (2). For this, use a plastic spatula.

EFFECTIVITY: ADF ANTENNA WITH GASKET

ADF Antenna - Removal/Installation

Figure 401

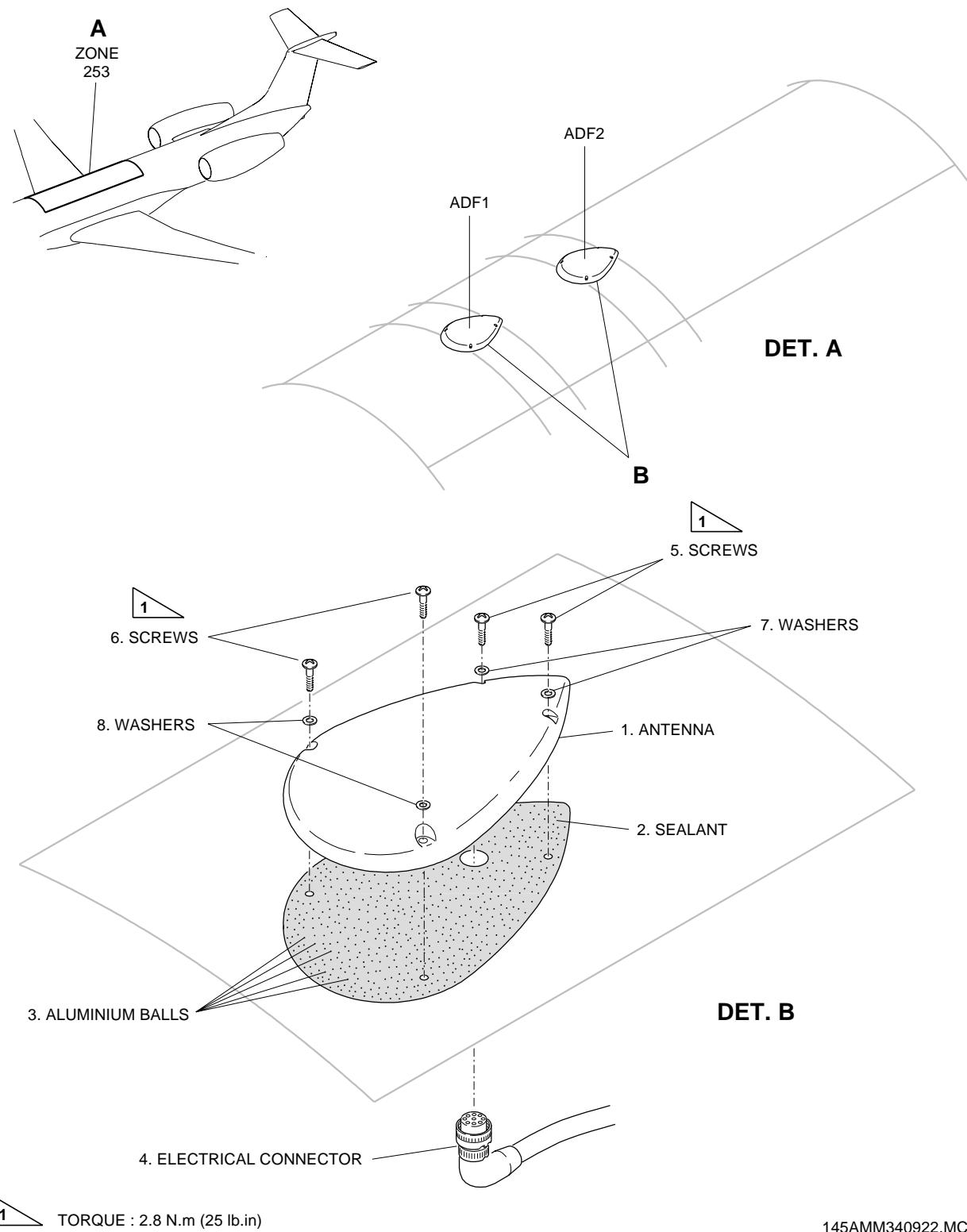


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EFFECTIVITY: ADF ANTENNA WITH SEALANT

ADF Antenna - Removal/Installation

Figure 402



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TASK 34-53-02-400-801-A

EFFECTIVITY: ALL

3. ADF ANTENNA - INSTALLATION

A. General

- (1) This procedure gives the instructions to install the ADF antenna(s).
- (2) It is possible to install the ADF antenna with a gasket or with sealant.

B. References

REFERENCE	DESIGNATION
AMM MPP 20-30-03/200	- MAINTENANCE PRACTICES
AMM TASK 25-22-04-400-801-A/400	-
AMM TASK 34-53-00-700-801-A/500	ADF SYSTEM OPERATIONAL TEST
IPC 34-53-02	ADF ANTENNA

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

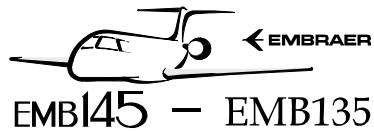
ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Lint-free cloth	To clean the surface	AR
Commercially available	Plastic Spatula	To remove the sealant	1

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
ASTM-D740	Methyl-ethyl-ketone	AR
	Sealant PR1826 B1/4 and PR1826 Adhesion Promoter	AR

G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
Ultra Seal Conductive Antenna Gasket Kit (P/N 145-52664-601) (Only to install ADF antenna with sealant)	IPC 34-53-02	1



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H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Upper forward fuselage

I. Installation (Figure 401) (Figure 402)

SUBTASK 420-002-A

- NOTE:
- Before the application of sealant PR1826 B1/4 it is necessary to apply the PR1826 Adhesion Promoter on the surface where the sealant will be applied. Let the Adhesion Promoter dry for 30 minutes minimum.
 - Sealant PR1826 B1/4 must be applied in less than 8 hours from the application of the adhesion promoter.
 - The curing time of sealant PR1826 B1/4 is 1.5 hours at 25°C (77°F).
 - For more information about sealant PR1826 B1/4, refer to [AMM MPP 20-30-03/200](#).

- (1) To install the ADF antenna with a gasket, do these steps (Figure 401):
 - (a) Remove all the old sealant from the upper fuselage skin surface where the ADF antenna is installed. For this, use a plastic spatula.
 - (b) Clean the surface with a cloth wet with methyl-ethyl-ketone solvent, specification ASTM-D740; then rub the surface with a clean lint-free cloth before the solvent evaporates.
 - (c) Install the antenna gasket (2).
 - (d) Put the antenna (1) in position on the skin.
 - (e) Wet the screws (4) and (5) with sealant PR1826 B1/4.
- CAUTION: APPLY THE TORQUE VALUE CORRECTLY. INCORRECT INSTALLATION WILL CAUSE PROBLEMS TO THE AIRCRAFT.

 - (f) NOTE: If you must replace the screws (4) or (5), make sure that the new screws obey the specified length accurately (IPC 34-53-02).
Tighten the screws (4) and (5). Obey a crisscross pattern.
 - (g) Apply sealant PR1826 B1/4 along the contour of the antenna base.
 - (h) Apply the sealant PR1826 B1/4 or sealant RTV 732 to the contour of the antenna connector.
 - (i) From the inside of the aircraft, connect the electrical connector (3) to the antenna (1).
- (2) To install the ADF antenna with sealant (Ultra Seal Conductive Antenna Gasket Kit), do these steps (Figure 402):

- (a) Remove all the old sealant from the upper fuselage skin surface where the ADF antenna is installed. For this, use a plastic spatula.
- (b) Clean the surface with a cloth wet with methyl-ethyl-ketone solvent, specification ASTM-D740; then rub the surface with a clean lint-free cloth before the solvent evaporates.
- (c) Put the antenna (1) in position on the skin and use adhesive tape to mask the area around the antenna.
- (d) Remove the antenna (1).
- (e) On the upper fuselage skin surface, cover the holes of the screws and the connector to prevent leakage of the sealant through them.
- (f) Mix all A and B parts of the Ultra Seal Conductive Antenna Gasket Kit (IPC 34-53-02) for 5 minutes.

NOTE: The Ultra Seal Conductive Antenna Gasket part numbers 540685-3 and 540685-4 are the same product, only the quantity is different.

- (g) Apply the sealant (Ultra Seal Conductive Antenna Gasket Kit) evenly in the area marked in step (c).

NOTE:

- Apply the sealant in less than 40 minutes from the mixture of its parts A and B.
- Do not apply sealant on the covered holes of the screws and the connector.

- (h) Evenly apply the aluminum balls (3) to the sealant (2).
- (i) Remove the protections that cover the holes of the screws and the connector.
- (j) Remove and discard the adhesive tape.
- (k) Put the antenna (1) in position on the skin.
- (l) Wet the screws (5) and (6) with sealant PR1826 B1/4.

CAUTION: APPLY THE TORQUE VALUE CORRECTLY. INCORRECT INSTALLATION WILL CAUSE PROBLEMS TO THE AIRCRAFT.

- (m) NOTE: If you must replace the screws (5) or (6), make sure that the new screws obey the specified length accurately (IPC 34-53-02).
Tighten the screws (5) and (6). Obey a crisscross pattern.
- (n) Remove the unwanted sealant with a plastic spatula.
- (o) Clean the surface with a cloth wet with methyl-ethyl-ketone solvent, specification ASTM-D740; then rub the surface with a clean lint-free cloth before the solvent evaporates.
- (p) Apply sealant PR1826 B1/4 along the contour of the antenna base.



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- (q) Apply the sealant PR1826 B1/4 or sealant RTV 732 to the contour of the antenna connector.
- (r) From the inside of the aircraft, connect the electrical connector (4) to the antenna (1).

J. Follow-on

SUBTASK 842-002-A

- (1) For EMB-135 () aircraft models, install the 253ALC ceiling panel (AMM TASK 25-22-04-400-801-A/400).
- (2) For EMB-145 () aircraft models, install the 253CLC and/or the 253DLC ceiling panels (AMM TASK 25-22-04-400-801-A/400).
- (3) On the circuit breaker panel, close the ADF 1 and/or ADF 2 circuit breakers and remove the DO-NOT-CLOSE tag from them.
- (4) Do the ADF System Operational Test ([AMM TASK 34-53-00-700-801-A/500](#)).

