



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

HF POWER AMPLIFIER - REMOVAL/INSTALLATION

EFFECTIVITY: AIRCRAFT WITH HF SYSTEM

1. General

- A. This section gives the procedures to remove and install the HF Power Amplifier.
- 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
23-11-03-000-801-A	HF POWER AMPLIFIER - REMOVAL	AIRCRAFT WITH HF-230 OR SINGLE KHF-1050 SYSTEM
23-11-03-400-801-A	HF POWER AMPLIFIER - INSTALLATION	AIRCRAFT WITH HF-230 OR SINGLE KHF-1050 SYSTEM
23-11-03-000-802-A	HF POWER AMPLIFIER/COUPLER - RE- MOVAL	AIRCRAFT WITH KHF-950 SYSTEM
23-11-03-400-802-A	HF POWER AMPLIFIER/COUPLER - IN- STALLATION	AIRCRAFT WITH KHF-950 SYSTEM



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TASK 23-11-03-000-801-A

EFFECTIVITY: AIRCRAFT WITH HF-230 OR SINGLE KHF-1050 SYSTEM

2. HF POWER AMPLIFIER - REMOVAL

A. General

- (1) This task gives the procedures to remove the HF Power Amplifier.

B. References

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

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
272	272DR	Rear electronic compartment

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	At the rear electronic compartment

I. Preparation

SUBTASK 841-002-A

EFFECTIVITY: AIRCRAFT WITH HF-230 OR SINGLE KHF-1050 SYSTEM

- (1) On the circuit breaker panel, open the HF circuit breaker and attach a DO-NOT-CLOSE tag to it (Location Tip: DC BUS 2/COMM/HF).
- (2) Open access door 272DR (AMM MPP 06-41-01/100).



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J. Removal (Figure 401) (Figure 402)

SUBTASK 020-002-A

EFFECTIVITY: AIRCRAFT WITH HF-230 OR SINGLE KHF-1050 SYSTEM

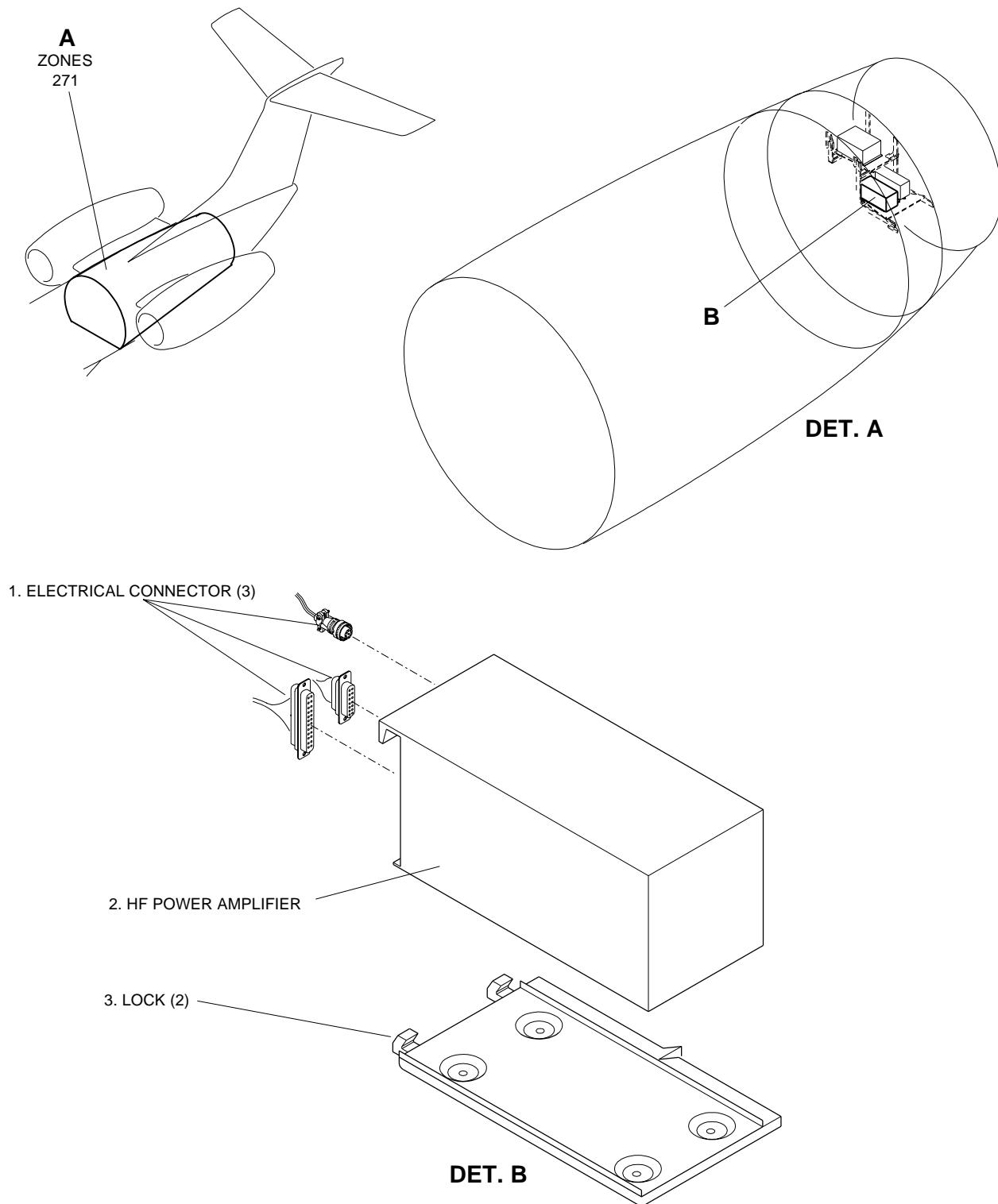
- CAUTION: • DO NOT TOUCH THE ELECTRICAL PINS OF THE CONNECTORS. DAMAGE CAN OCCUR TO THE INTERNAL ESDS COMPONENTS.
- IDENTIFY THE ELECTRICAL CONNECTORS TO PREVENT A POSSIBLE INVERSION DURING THE INSTALLATION. INCORRECT CONNECTIONS CAN CAUSE MAL-FUNCTION OR DAMAGE TO THE COMPONENT.

- (1) Disconnect the electrical connectors (1).
- (2) Install the ESD protective caps on the electrical connectors (1).
- (3) (FOR AIRCRAFT WITH HF-230 SYSTEM) Release the two locks (3) which attach the HF Power Amplifier (2).
- (4) (FOR AIRCRAFT WITH SINGLE KHF-1050 SYSTEM) Release the knurled nuts (3) which attach the HF Power Amplifier (2).
- (5) Remove the HF Power Amplifier (2) from the mounting rack.

EFFECTIVITY: AIRCRAFT WITH HF-230 SYSTEM

HF Power Amplifier - Removal/Installation

Figure 401

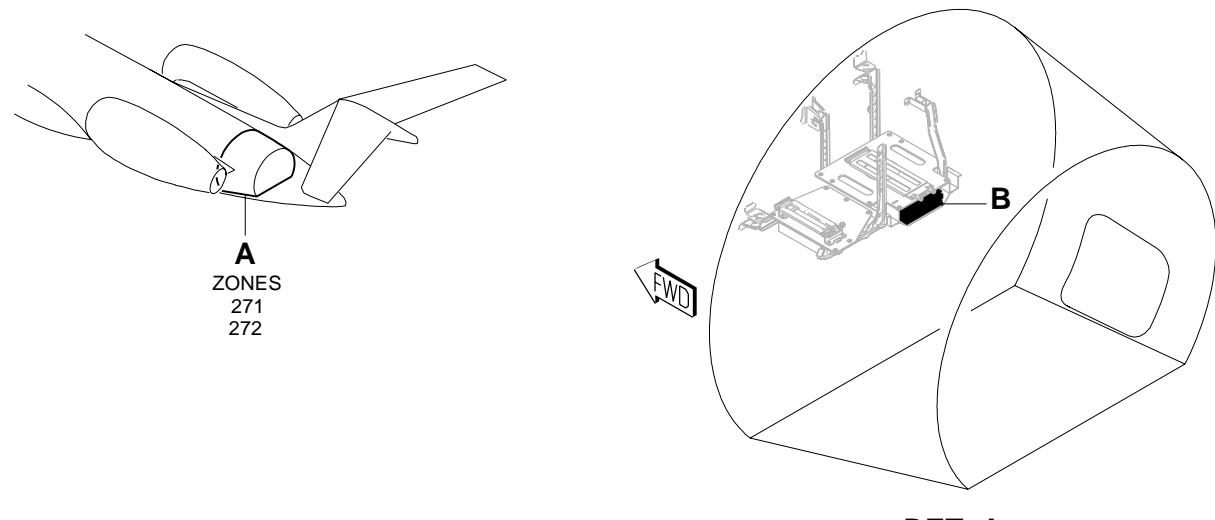


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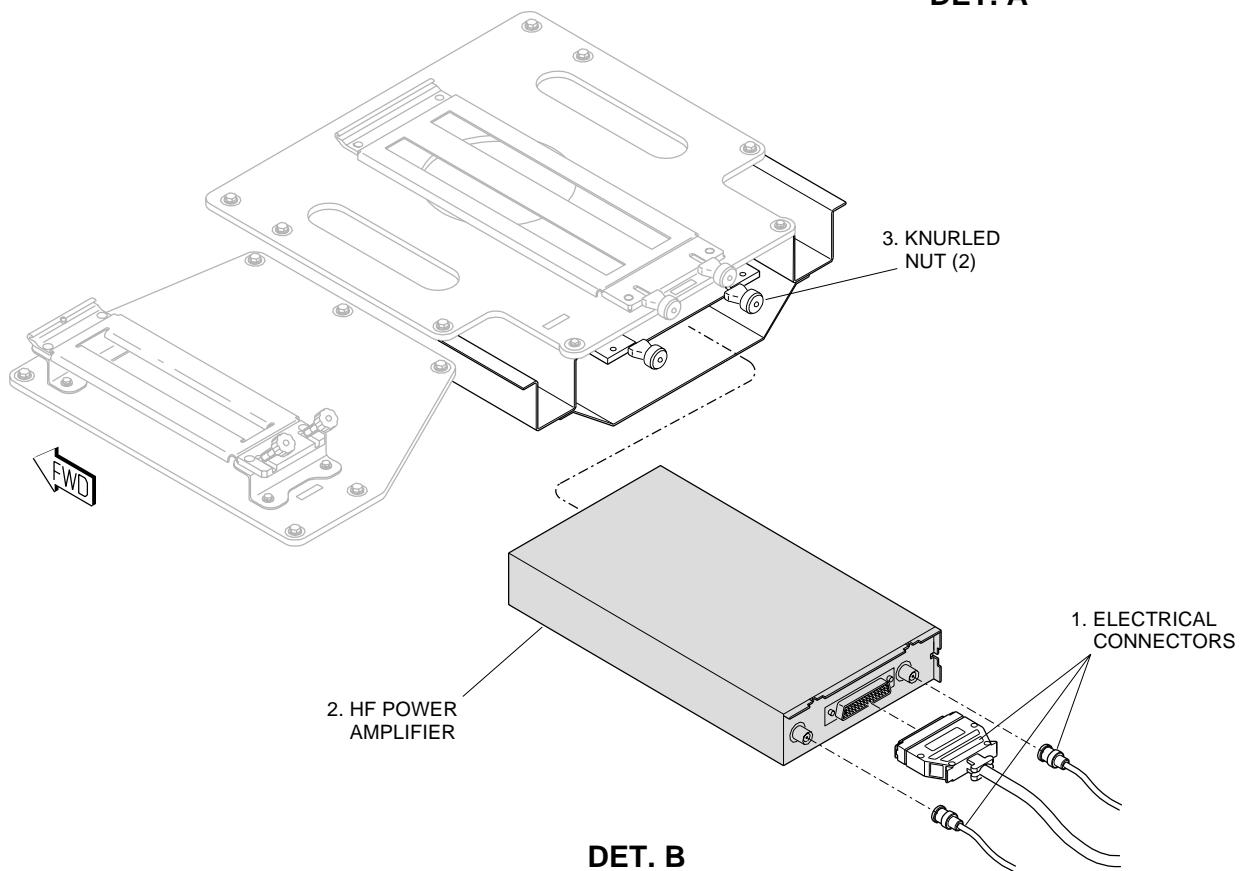
EFFECTIVITY: AIRCRAFT WITH SINGLE KHF-1050 SYSTEM

HF Power Amplifier (KPA-1052 Model) - Removal/Installation

Figure 402



DET. A



DET. B

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TASK 23-11-03-400-801-A

EFFECTIVITY: AIRCRAFT WITH HF-230 OR SINGLE KHF-1050 SYSTEM

3. HF POWER AMPLIFIER - INSTALLATION

A. General

- (1) This task gives the procedures to install the HF Power Amplifier.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM TASK 23-11-00-700-801-A/500	HF SYSTEM - FUNCTIONAL TEST

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
272	272DR	Rear electronic compartment

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	At the rear electronic compartment

I. Installation (Figure 401) (Figure 402)

SUBTASK 420-002-A

EFFECTIVITY: AIRCRAFT WITH HF-230 OR SINGLE KHF-1050 SYSTEM

- (1) Install the HF Power Amplifier (2) on the mounting rack.
- (2) (FOR AIRCRAFT WITH HF-230 SYSTEM) Tighten the two locks (3) which attach the HF Power Amplifier (2) to the mounting rack.
- (3) (FOR AIRCRAFT WITH KHF-1050 SYSTEM) Tighten the knurled nuts (3) which attach the HF power amplifier (2) to the mounting rack.

CAUTION: DO NOT TOUCH THE ELECTRICAL PINS OF THE CONNECTORS. DAMAGE CAN OCCUR TO THE INTERNAL ESDS COMPONENTS.

- (4) Remove the ESD protective caps from the electrical connectors (1).



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

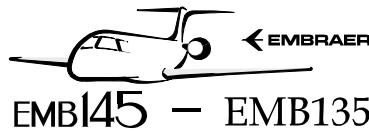
- (5) Connect the electrical connectors (1).

J. Follow-on

SUBTASK 842-002-A

EFFECTIVITY: AIRCRAFT WITH HF-230 OR SINGLE KHF-1050 SYSTEM

- (1) On the circuit breaker panel, close the HF circuit breaker and remove the DO-NOT-CLOSE tags from it (Location Tip: DC BUS 2/COMM/HF).
- (2) Do an operational test of the HF Transceiver system ([AMM TASK 23-11-00-700-801-A/500](#)).
- (3) Close access door 272DR (AMM MPP 06-41-01/100).



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TASK 23-11-03-000-802-A

EFFECTIVITY: AIRCRAFT WITH KHF-950 SYSTEM

4. HF POWER AMPLIFIER/COUPLER - REMOVAL

A. General

- (1) This task gives the procedures to remove the HF Power Amplifier/Coupler.
- (2) To do this task, refer to the figure of HF Power Amplifier/Coupler KAC-952

B. References

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

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
272	272DR	Rear electronic compartment

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Wrench	To remove the nut that attach the ground strap to the HF Power Amplifier/Coupler	

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	At the rear electronic compartment

I. Preparation

SUBTASK 841-003-A

EFFECTIVITY: AIRCRAFT WITH KHF-950 SYSTEM

- (1) On the circuit breaker panel, open the HF circuit breaker and attach a DO-NOT-CLOSE tag to it (Location Tip: DC BUS 2/COMM/HF).
- (2) Open access door 272DR (AMM MPP 06-41-01/100).



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J. Removal

SUBTASK 020-003-A

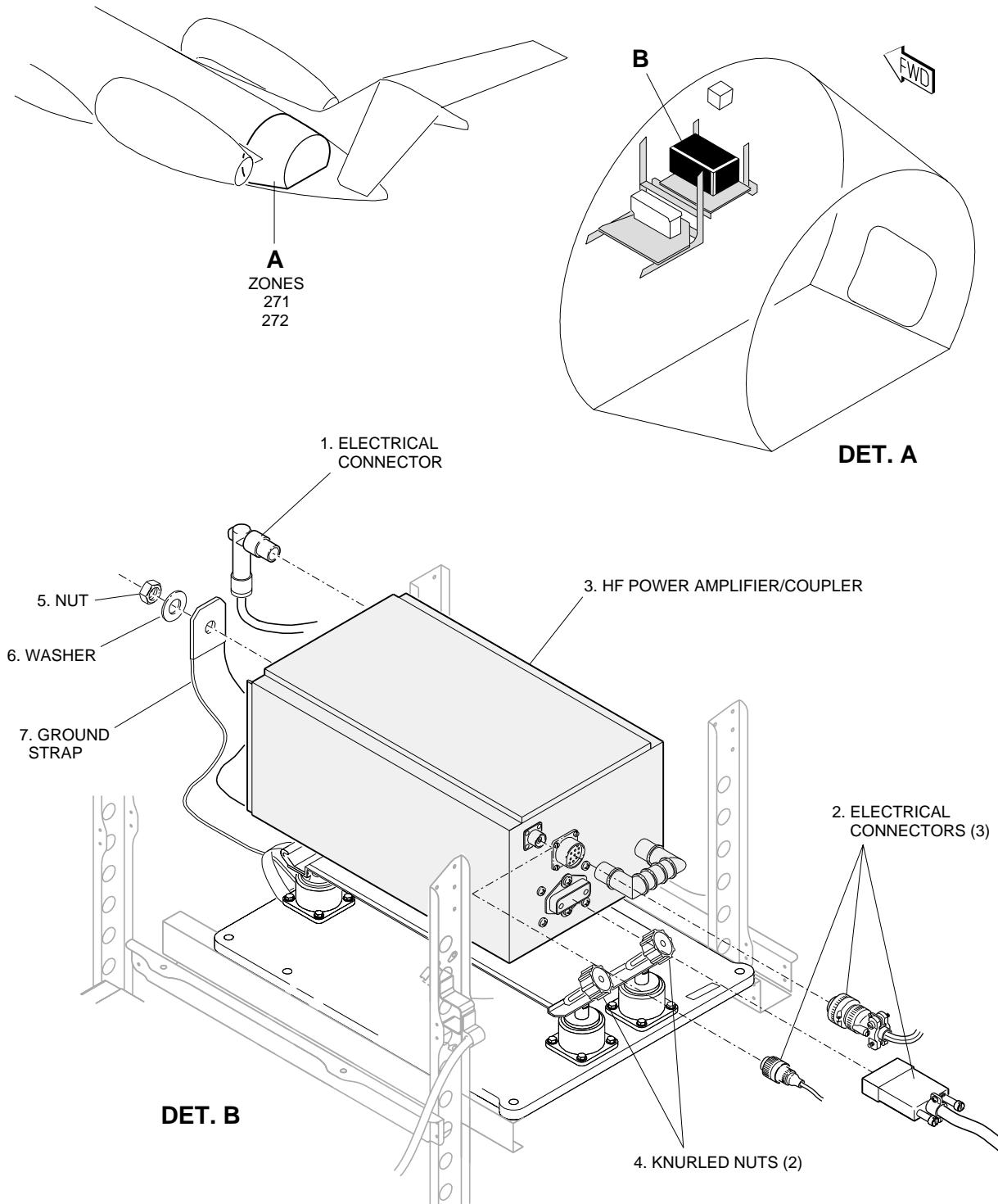
EFFECTIVITY: AIRCRAFT WITH KHF-950 SYSTEM

- (1) Disconnect the electrical connectors (1) and (2).
- (2) Release the two knurled nuts (4) which attach the HF Power Amplifier/Coupler (3).
- (3) Remove the nut (5) and washer (6) that attach the ground strap (7) to the HF Power Amplifier/Coupler (3).
- (4) Carefully remove the ground strap (7) from the HF Power Amplifier/Coupler (3).
- (5) Remove the HF Power Amplifier/Coupler (3) from the mounting rack.
- (6) Install the protection caps on the electrical connectors (1) and (2).

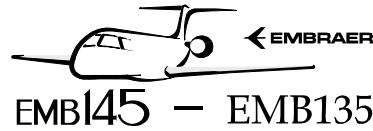
EFFECTIVITY: AIRCRAFT WITH KHF-950 SYSTEM

HF Power Amplifier/Coupler KAC-952 - Removal/Installation

Figure 403



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TASK 23-11-03-400-802-A

EFFECTIVITY: AIRCRAFT WITH KHF-950 SYSTEM

5. HF POWER AMPLIFIER/COUPLER - INSTALLATION

A. General

- (1) This task gives the procedures to install the HF Power Amplifier/Coupler.
- (2) To do this task, refer to the figure of HF Power Amplifier/Coupler KAC-952

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM TASK 23-11-00-700-802-A/500	HF SYSTEM - FUNCTIONAL TEST

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
272	272DR	Rear electronic compartment

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Wrench	To install the nut that attach the ground strap to the HF Power Amplifier/Coupler	

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	At the rear electronic compartment

I. Installation

SUBTASK 420-003-A

EFFECTIVITY: AIRCRAFT WITH KHF-950 SYSTEM

- (1) Remove the protection caps from the electrical connectors (1) and (2).
- (2) Install the HF Power Amplifier/Coupler (3) on the mounting rack.
- (3) Carefully put the ground strap (7) in position.



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- (4) Install the washer (6) and nut (5) that attaches the ground strap (7) to the HF Power Amplifier/Coupler (3).
- (5) Tighten the two knurled nuts (4) which attach the HF Power Amplifier/Coupler (3) to the mounting rack.
- (6) Connect the electrical connectors (1) and (2).

J. Follow-on

SUBTASK 842-003-A

EFFECTIVITY: AIRCRAFT WITH KHF-950 SYSTEM

- (1) On the circuit breaker panel, close the HF circuit breaker and remove the DO-NOT-CLOSE tags from it (Location Tip: DC BUS 2/COMM/HF).
- (2) Do an operational test of the HF system ([AMM TASK 23-11-00-700-802-A/500](#)).
- (3) Close access door 272DR (AMM MPP 06-41-01/100).