

HONEYWELL KHF-1050 HF COMMUNICATION SYSTEM - MAINTENANCE PRACTICES

1. General

- A. This section gives the maintenance practices for the optional Honeywell KHF-1050 HF Communication System. The components included in this section are the HF antenna, KAC-1052 HF antenna coupler, HF remote control circuit breaker, KRX-1053 HF receiver/exciter, KPA-1052 HF power amplifier, and PS-440 HF control unit. For a general description of the HF communication system, refer to Honeywell KHF-1050 HF Communication System - Description and Operation.

2. Tools and Equipment

- A. For a list of tools and equipment, refer to Communications - General.

3. HF Antenna Removal/Installation

- A. Remove the HF Antenna (Refer to Figure 201).

WARNING: Do not touch the HF antenna when you transmit on the radio. High RF voltages can cause RF burns.

NOTE: If the HF antenna wire is to be replaced, cut the wire approximately two inches (50 mm) from the antenna tension unit and from the sleeve, then remove wire ends from the antenna tension unit and the antenna feed-thru assembly.

- (1) Remove external power from the airplane.
- (2) Disengage the HF circuit breaker on the copilot's circuit breaker panel.
- (3) Open the aft baggage compartment door.
- (4) Disconnect the coaxial connector (PT1005) from the antenna feed-thru assembly.
- (5) Remove the nut, washer, and screw that attach the bonding strap to the upper mount assembly.
 - (a) Disconnect the bonding strap from the upper mount assembly.
- (6) Remove the cotter pin, washer, clevis pin, and spacers from the antenna tension unit.
 - (a) Disconnect the antenna tension unit from the upper mount assembly.
- (7) Loosen the sleeve from the elbow and move the antenna wire out of the sleeve.
- (8) Loosen the elbow from the antenna feed-thru assembly.
- (9) Move the elbow up the antenna wire.
- (10) Remove the insulation from the antenna wire.
- (11) Remove the antenna wire from the antenna feed-thru assembly and the antenna tension unit.
- (12) Have a second person hold the antenna feed-thru assembly and remove the screws that attach the antenna feed-thru assembly to the fuselage.
 - (a) Remove the antenna feed-thru assembly, insulator, and gasket from the airplane.

- B. Install the HF Antenna (Refer to Figure 201).

- (1) Install the gasket and the insulator to the antenna feed-thru assembly.
- (2) Have a second person put the antenna feed-thru assembly in position and install the screws.
- (3) Install the antenna wire. Refer to the Introduction, Supplier Publication List for the manufacturers installation instructions.
- (4) Apply Type I, Class B sealant to make a fillet seal around the perimeter of the antenna feed-thru assembly and the inside of the fuselage skin. Refer to the Chapter 20, Fuel, Weather and High-Temperature Sealing - Maintenance Practices.
- (5) Put the antenna tension unit in position at the upper mount assembly.
 - (a) Install the clevis pin, spacers, washer, and cotter pin.
- (6) Put the bonding strap in position at the upper mount assembly.
 - (a) Install the screw, washer, and nut.
- (7) Make sure that the bonding strap is Type I electrically bonded to the upper mount assembly. Refer to the Chapter 20, Electrical Bonding - Maintenance Practices.
- (8) Connect the coaxial connector (PT1005) to the antenna feed-thru assembly.

- (9) Engage the HF circuit breaker.
- (10) Do the HF Antenna Operational Check. Refer Honeywell KHF-1050 HF Communication System - Adjustment/Test.
- (11) Close the aft baggage compartment door.

4. KAC-1052 HF Antenna Coupler Removal/Installation

- A. Remove the HF Antenna Coupler (Refer to Figure 202).
 - (1) Remove external power from the airplane.
 - (2) Disengage the HF circuit breaker on the copilot's circuit breaker panel.
 - (3) Open the aft baggage compartment door.
 - (4) Remove the screws that attach the right cover to the shelf assembly.
 - (5) Remove the right cover from the shelf assembly.
 - (6) Disconnect the electrical connector (PT502) from the antenna coupler.
 - (7) Disconnect the coaxial connectors (PT1006 and PT1016) from the antenna coupler.
 - (8) Remove the screw that attaches the bonding strap to the antenna coupler.
 - (9) Loosen the thumbscrews on the tray assembly.
 - (10) Remove the antenna coupler from the tray assembly and the airplane.
- B. Install the HF Antenna Coupler (Refer to Figure 202).
 - (1) Make sure that the tray assembly is Type I electrically bonded to the shelf assembly. Refer to the Chapter 20, Electrical Bonding - Maintenance Practices.
 - (2) Put the antenna coupler in position on the tray assembly.
 - (3) Tighten the thumbscrews on the tray assembly.
 - (4) Put the bonding strap in position at the antenna coupler.
 - (a) Install the screw.
 - (5) Connect the coaxial connectors (PT1006 and PT1016) to the antenna coupler.
 - (6) Connect the electrical connector (PT502) to the antenna coupler.
 - (7) Engage the HF circuit breaker on the copilot's circuit breaker panel.
 - (8) If a new or repaired antenna coupler is installed, do the KHF-1050 HF Communication System Functional Test. Refer Honeywell KHF-1050 HF Communication System - Adjustment/Test.
 - (9) If the same antenna coupler is installed, do the KHF-1050 HF Communication System Operational Check. Refer Honeywell KHF-1050 HF Communication System - Adjustment/Test.
 - (10) Put the right cover in position at the shelf assembly.
 - (a) Install the screws.
 - (11) Close the aft baggage compartment door.

5. HF Remote Control Circuit Breaker Removal/Installation

- A. Remove the HF Remote Control Circuit Breaker (Refer to Figure 203).
 - (1) Remove external power from the airplane.
 - (2) Disengage the HF PA RESET circuit breaker on the copilot's circuit breaker panel.
 - (3) Open the aft baggage compartment door.
 - (4) Remove the nuts, lock washers, and washers that attach the electrical connectors to the circuit breaker.
 - (a) Disconnect the electrical connectors.
 - (5) Remove the screws that attach the circuit breaker to the upper tray assembly.
 - (6) Remove the circuit breaker from the airplane.
- B. Install the HF Remote Control Circuit Breaker (Refer to Figure 203).
 - (1) Put the remote control circuit breaker in position on the upper tray assembly.
 - (2) Install the screws that attach the circuit breaker to the upper tray assembly.
 - (3) Make sure that the circuit breaker is Type I electrically bonded to the upper tray assembly. Refer to the Chapter 20,

Electrical Bonding - Maintenance Practices.

- (4) Attach the electrical connectors to the circuit breaker.
- (5) Install the washers, lock washers, and nuts to the circuit breaker.
- (6) Engage the HF PA RESET circuit breaker on the copilot's circuit breaker panel.
- (7) Do the HF Remote Control Circuit Breaker Operational Check. Refer Honeywell KHF-1050 HF Communication System - Adjustment/Test.
- (8) Close the aft baggage compartment door.

6. KRX-1053 HF Receiver/Exciter Removal/Installation

- A. Remove the HF Receiver/Exciter (Refer to Figure 204).
 - (1) Remove external power from the airplane.
 - (2) Disengage the HF circuit breaker on the copilot's circuit breaker panel.
 - (3) Open the aft baggage compartment door.
 - (4) Disconnect the electrical connector (PT500) from the receiver/exciter.
 - (5) Disconnect the coaxial connector (PT1017) from the receiver/exciter.
 - (6) Loosen the thumbscrews on the tray assembly.
 - (7) Remove the receiver/exciter from the tray assembly and the airplane.
- B. Install the HF Receiver/Exciter (Refer to Figure 204).
 - (1) Make sure that the tray assembly is Type I electrically bonded to the upper tray assembly. Refer to the Chapter 20, Electrical Bonding - Maintenance Practices.
 - (2) Put the receiver/exciter in position on the tray assembly.
 - (3) Tighten the thumbscrews on the tray assembly.
 - (4) Connect the coaxial connector (PT1017) to the receiver/exciter.
 - (5) Connect the electrical connector (PT500) to the receiver/exciter.
 - (6) Engage the HF circuit breaker on the copilot's circuit breaker panel.
 - (7) If a new or repaired receiver/exciter is installed, do the KHF-1050 HF Communication System Functional Test. Refer Honeywell KHF-1050 HF Communication System - Adjustment/Test.
 - (8) If the same receiver/exciter is installed, do the KHF-1050 HF Communication System Operational Check. Refer Honeywell KHF-1050 HF Communication System - Adjustment/Test.
 - (9) Close the aft baggage compartment door.

7. KPA-1052 HF Power Amplifier Removal/Installation

- A. Remove the HF Power Amplifier (Refer to Figure 205).
 - (1) Remove external power from the airplane.
 - (2) Disengage the HF PA RESET circuit breaker on the copilot's circuit breaker panel.
 - (3) Open the aft baggage compartment door.
 - (4) Disconnect the electrical connector (PT501) from the power amplifier.
 - (5) Disconnect the coaxial connectors (PT1014 and PT1015) from the power amplifier.
 - (6) Loosen the thumbscrews on the tray assembly.
 - (7) Remove the power amplifier from the tray assembly and the airplane.
- B. Install the HF Power Amplifier (Refer to Figure 205).
 - (1) Make sure that the tray assembly is Type I electrically bonded to the shelf assembly. Refer to the Chapter 20, Electrical Bonding - Maintenance Practices.
 - (2) Put the power amplifier in position on the tray assembly.
 - (3) Tighten the thumbscrews on the tray assembly.
 - (4) Connect the coaxial connectors (PT1014 and PT1015) to the power amplifier.
 - (5) Connect the electrical connector (PT501) to the power amplifier.

- (6) Engage the HF PA RESET circuit breaker on the copilot's circuit breaker panel.
- (7) If a new or repaired power amplifier is installed, do the KHF-1050 HF Communication System Functional Test. Refer Honeywell KHF-1050 HF Communication System - Adjustment/Test.
- (8) If the same power amplifier is installed, do the KHF-1050 HF Communication System Operational Check. Refer Honeywell KHF-1050 HF Communication System - Adjustment/Test.
- (9) Close the aft baggage compartment door.

8. PS-440 HF Control Unit Removal/Installation

A. Remove the HF Control Unit (Refer to Figure 206).

- (1) Remove external power from the airplane.
- (2) Disengage the HF circuit breaker on the copilot's circuit breaker panel.
- (3) Turn the mounting screws counterclockwise until the cams are disengaged.
- (4) Pull the control unit aft toward you to get access to the electrical connector (PI515).
- (5) Disconnect the electrical connector (PI515).
- (6) Remove the control unit from the instrument panel and the airplane.

B. Install the HF Control Unit (Refer to Figure 206).

- (1) Put the control unit in position at the instrument panel.
- (2) Connect the electrical connector (PI515) to the control unit.
- (3) Turn the mounting screws clockwise until the cams are engaged.
- (4) Engage the HF circuit breaker on the copilot's circuit breaker panel.
- (5) If a new or repaired HF control unit is installed, do the PS-440 HF Control Unit Functional Test. Refer Honeywell KHF-1050 HF Communication System - Adjustment/Test.
- (6) If the same HF control unit is installed, do the PS-440 HF Control Unit Operational Check. Refer Honeywell KHF-1050 HF Communication System - Adjustment/Test.

Figure 201 : Sheet 1 : HF Antenna Installation

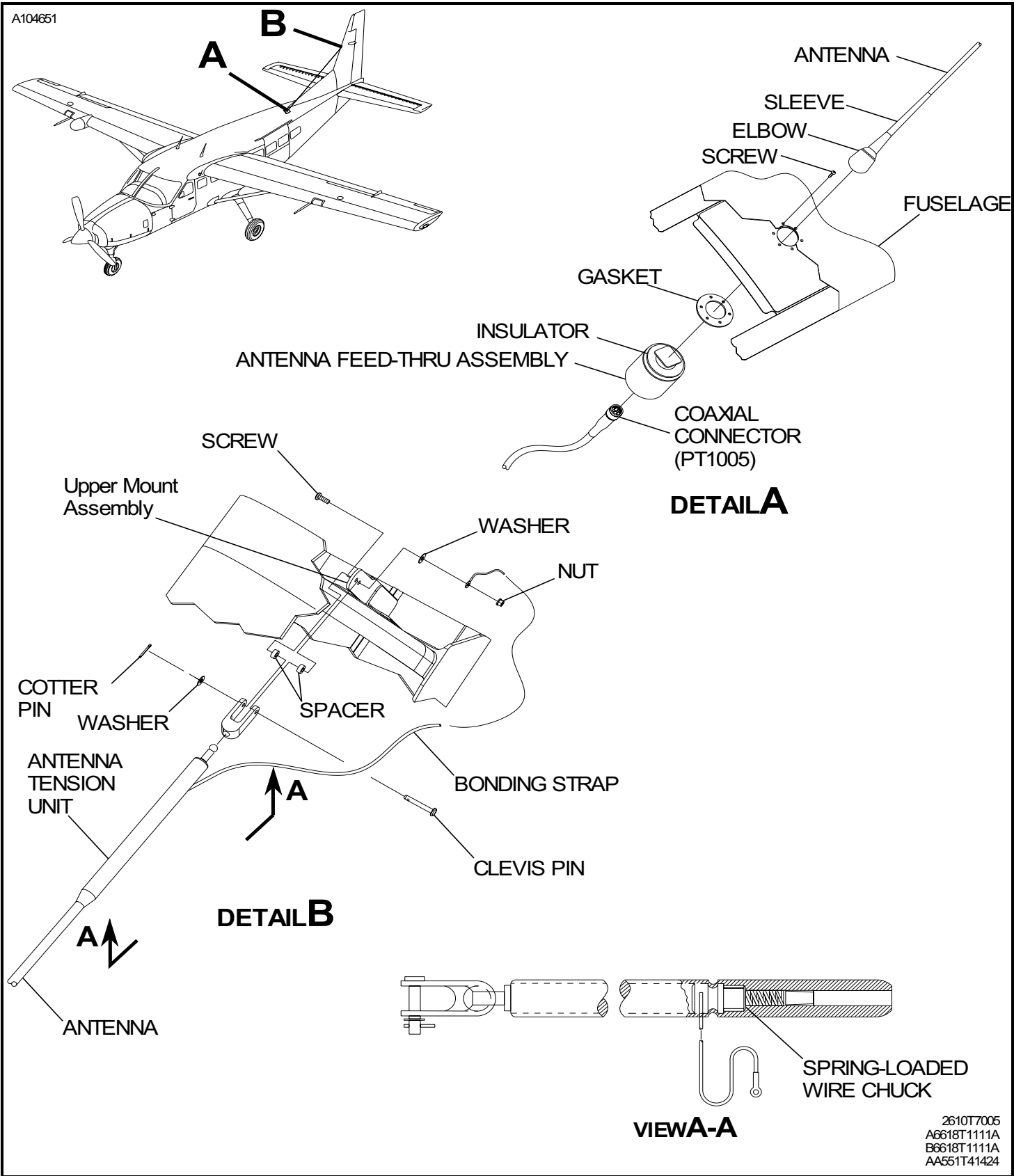


Figure 202 : Sheet 1 : KAC-1052 HF Antenna Coupler Installation

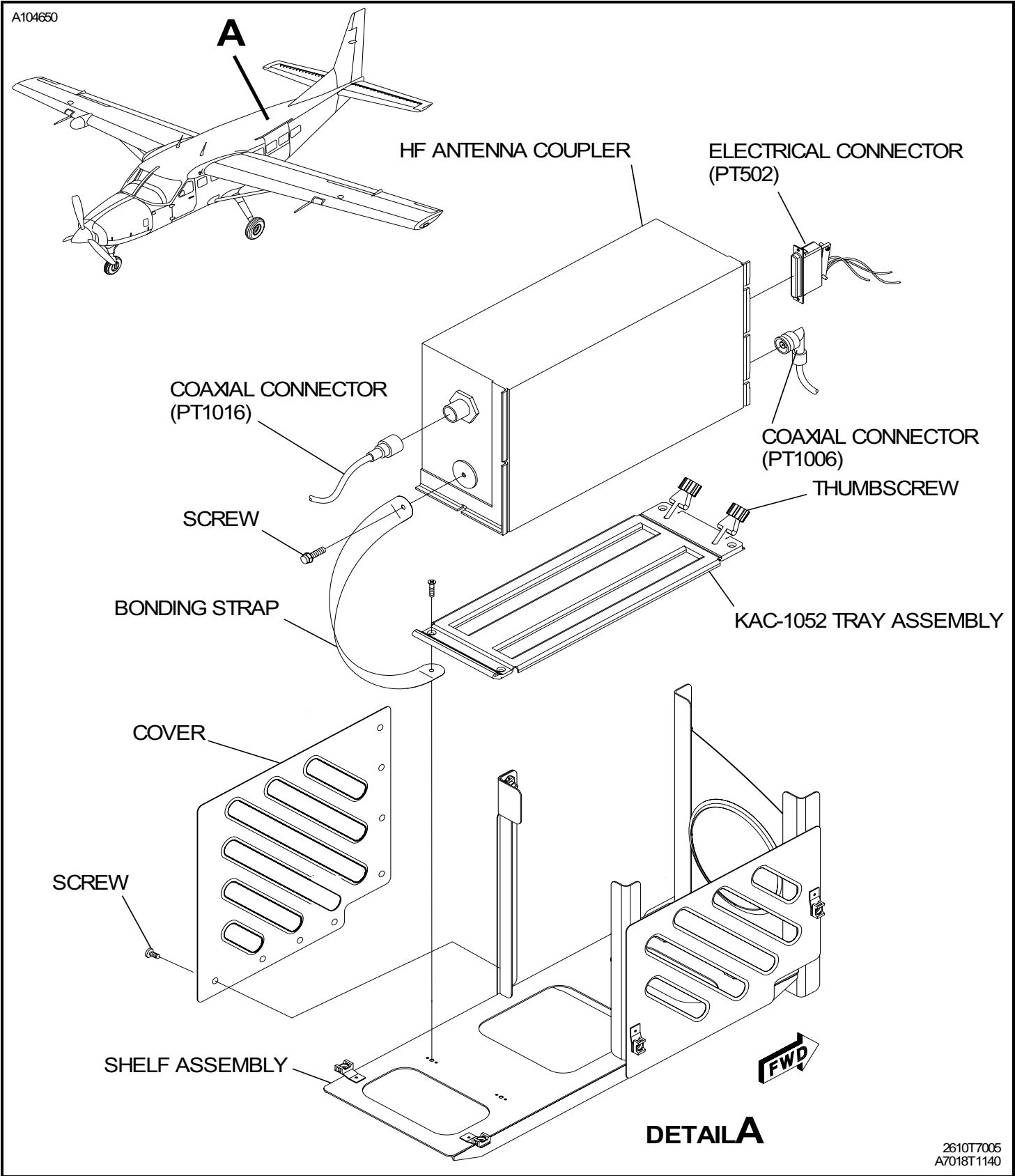


Figure 203 : Sheet 1 : HF Remote Control Circuit Breaker Installation

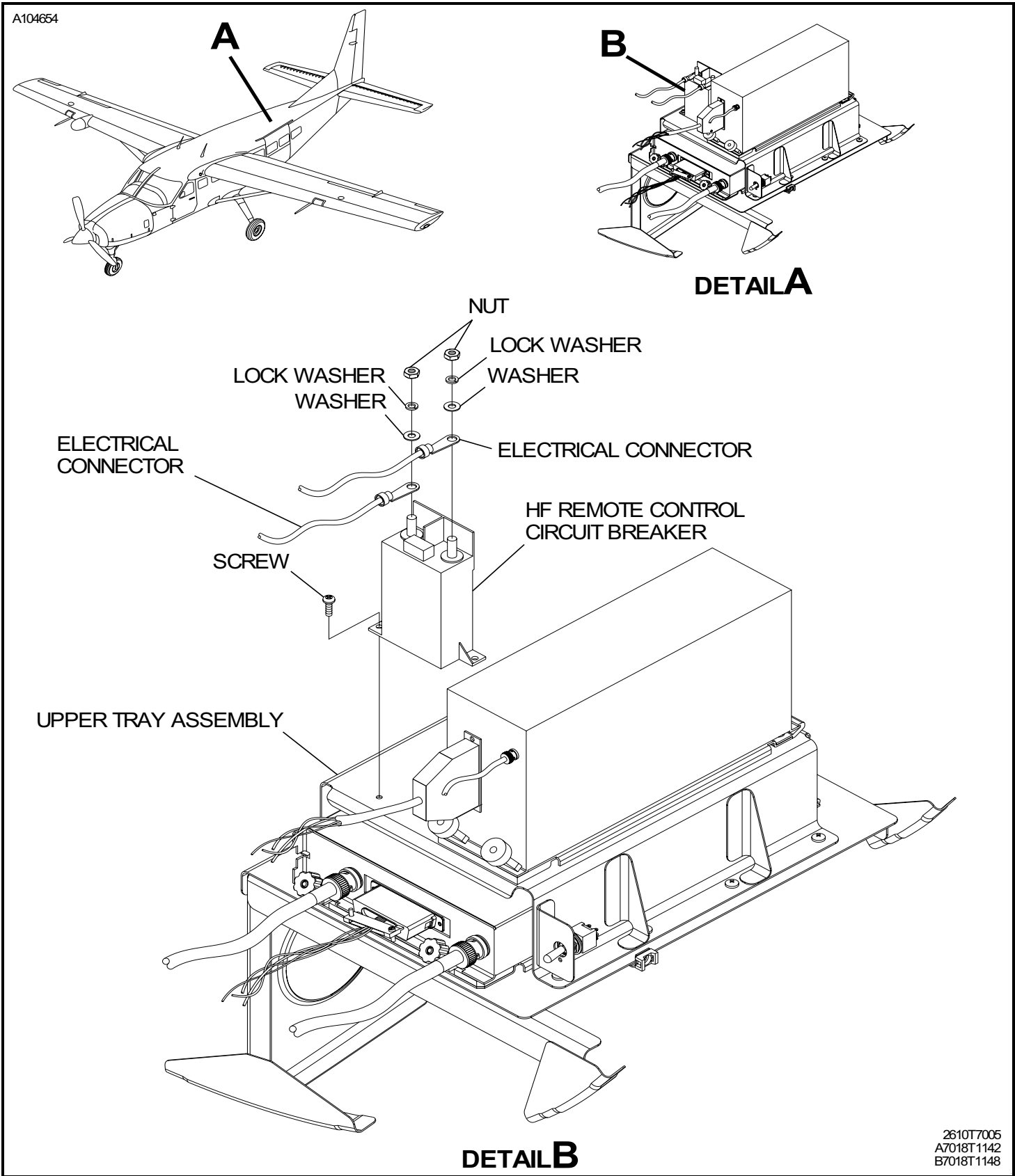


Figure 204 : Sheet 1 : KRX-1053 HF Receiver/Exciter Installation

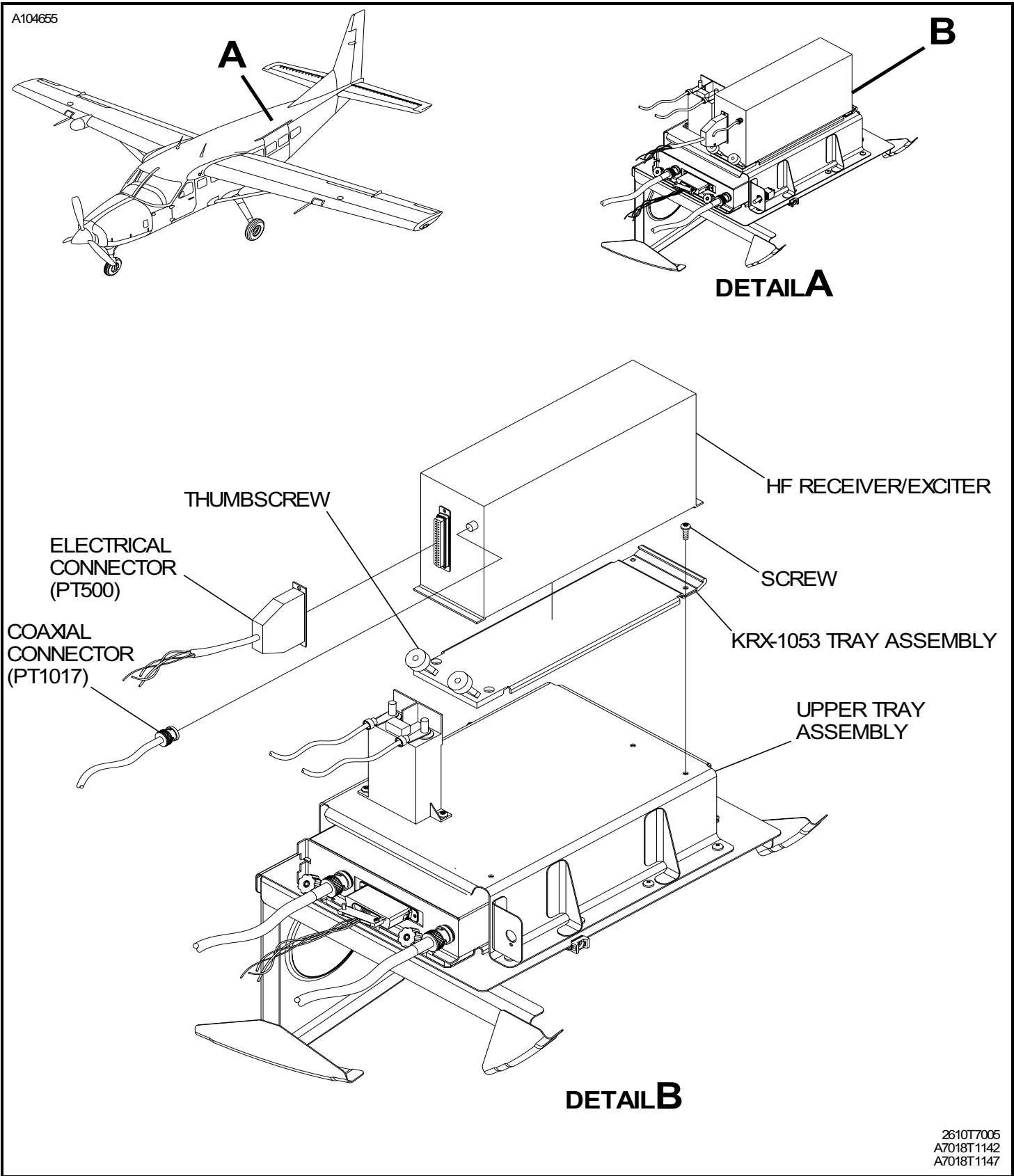


Figure 205 : Sheet 1 : KPA-1052 HF Power Amplifier Installation

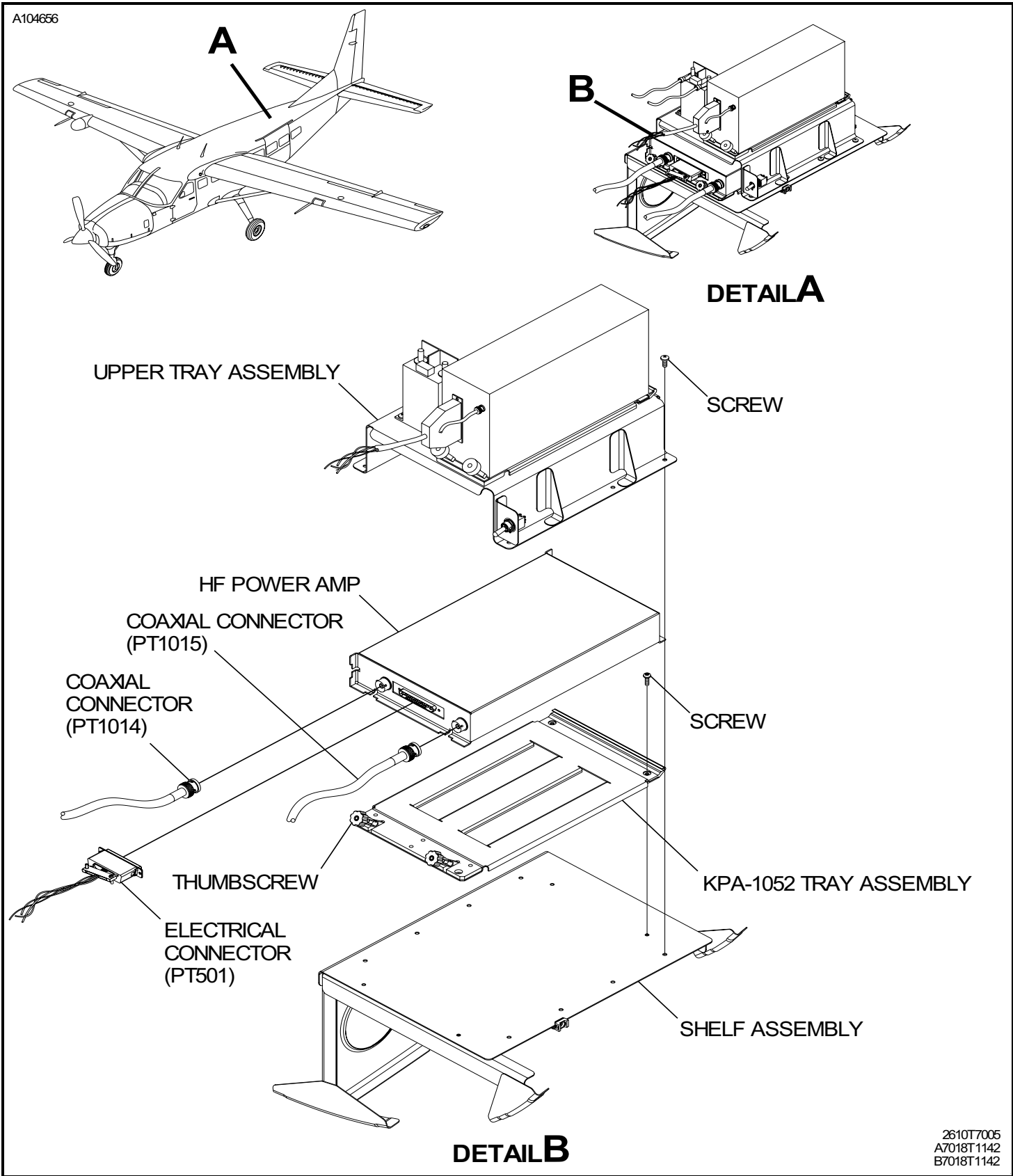


Figure 206 : Sheet 1 : PS-440 HF Control Unit Installation

