

BENDIX/KING KR 87 ADF SYSTEM - TROUBLESHOOTING

1. General

- A. This section give the troubleshooting procedures for the Bendix/King KR 87 ADF System. For a general overview of the KR 87 ADF System refer to Bendix/King KR 87 ADF System - Description and Operation.

2. Bendix/King KR 87 ADF System Troubleshooting

- A. Tools and Equipment

NOTE: For the supplier publication part number and manufacturer data, refer to the Introduction - Supplier Publication List.

- (1) Tools and Equipment

- Multimeter.

- (2) Special Consumables

- None.

- (3) Reference Material

- Chapter 23, Garmin GMA 1347 Audio System - Troubleshooting
- Bendix/King KR 87 ADF System - Description and Operation
- Bendix/King KR 87 ADF System - Adjustment/Test
- Bendix/King KR 87 ADF Receiver - Removal/Installation
- KA-44B ADF Antenna - Removal/Installation
- Garmin G1000 Integrated Avionics System - Troubleshooting
- G1000 Integrated Avionics System - Adjustment/Test
- Model 208 Wiring Diagram Manual.

- B. Do the Bendix/King KR 87 ADF System Troubleshooting.

- (1) Do the Architecture Verification check and make sure all related systems are serviceable. Refer to G1000 Integrated Avionics System - Adjustment/Test, G1000 Architecture Verification Check.

- (a) Make sure that the correct software and configuration has been installed.

NOTE: The KR 87 ADF is not listed on the status page.

- (2) Make sure the GIA2 has check mark (green) and serial number next to its nomenclature on the list.

- (a) This indicates the LRU is serviceable.

NOTE: Serial number is not reported for the following equipment: COM1, COM2, GS1, GS2, GTX1, GTX 2 (OPT), NAV1, NAV2, AND WX500.

- (b) If the GIA2 shows a red X, troubleshoot the GIA. Refer to Garmin G1000 Integrated Avionics System - Troubleshooting.

- (3) Check the primary flight display crew alert system (CAS) window for messages to aid in troubleshooting the anomaly.

- (4) Push the rightmost softkey on the PFD and make sure that no messages show in the Alerts window.

- (5) Refer to the Model 208 Wiring Diagram Manual and carefully examine the electrical wiring and components as follows:

- (a) Do a visual check of the KR 87 ADF receiver electrical connectors and coaxial connector bent pins and pushed back pins.

1 If necessary, repair the damage.

- (b) If a red X shows on the PFD KR 87 ADF window, make sure that electrical power and ground signals are present at the KR 87 ADF receiver.

1 At the KR 87 ADF receiver electrical connector (PI601) pin 13 do a check for 28Vdc electrical power.

2 At the KR 87 ADF receiver electrical connector (PI601) pins M, P,R and S do a check for airplane ground.

3 If necessary, repair or replace the wiring bundles. Refer to the Model 208 Wiring Diagram Manual.

- (c) Make sure that data bus lines are correctly terminated and secure.

CAUTION: Do not touch bus wiring to each other or to shield grounds. Damage to equipment or circuits can result.

- (d) Remove electrical power from the airplane.
 - (e) Use a multimeter to do a continuity check of the sine/cosine inputs between the KR 87 ADF receiver electrical connector (PI601) pins A, B and D, and the 63W GIA No.2 electrical connector (PI512) pins 11, 10, and 32, respectively.
 - 1 Make sure that there is continuity only from each wires related pin end to end and to no other wires, airplanes grounds, or shields.
 - (f) Do a visual check of the wiring components and make sure that all applicable strapping is correct and any necessary G1000 system strapping is correct.
 - (g) Do a visual check of the wiring bundles for damage.
 - 1 If necessary, repair or replace the wiring bundles. Refer to the Model 208 Wiring Diagram Manual.
 - (h) Do a visual check of the electrical connector at the ADF antenna.
 - 1 Tighten loose electrical connector as necessary.
 - 2 Repair or replace unserviceable electrical connector as necessary.
 - (6) If there is a ADF audio problem, do a continuity check between the KR 87 ADF receiver electrical connector (PI601) pins 10 and H and GMA audio panel electrical connector (PI501) pins 35 and 36, respectively.
 - (7) If the KR 87 ADF wiring is serviceable, troubleshoot the GMA 1347 audio system. Refer to Chapter 23, Garmin GMA 1347 Audio System - Troubleshooting.
 - (8) If the KR 87 ADF system wiring is serviceable replace the components that follow:
 - (a) Replace the KR 87 ADF receiver. Refer to Bendix/King KR 87 ADF Receiver - Removal/Installation.
 - 1 Do an operational check of the KR 87 ADF system again. Refer to Bendix/King KR 87 ADF System - Adjustment/Test.
 - (b) Replace the KA-44B ADF antenna. Refer to Bendix/King KA-44B ADF Antenna - Removal/Installation.
 - 1 Do an operational check of the KR 87 ADF system again. Refer to Bendix/King KR 87 ADF System - Adjustment/Test.
- C. Put the Airplane Back to its Initial Condition.
- (1) None.