

5.14.3.5 AHC 1 (and ICU 1) Test Procedure

Caution

Be extremely careful when handling the AHC, especially when setting the unit down on a fixture, workbench, etc. Dropping one end as little as 19 mm (3/4 in) can damage gyro bearings. Store the unit in its original shipping container when not in use and when carrying the unit between shops or to the airplane for installation.

Note

The two AHCs may be swapped with each other to verify airplane wiring and to isolate a failed unit. If the AHC is swapped or replaced, the ICU remains with the mount. If the ICU is replaced, a compass swing must be performed.

- a. Check the LRU STATUS and LRU DIAGNOSTIC DATA pages, then troubleshoot according to diagnostic word explanations in Table 5-5 through Table 5-41.

If no faults are present, check the LRU FAULT HISTORY page for intermittent faults and troubleshoot according to diagnostic word explanations in Table 5-5 through Table 5-41.

Note

When a new AHC is first installed, the AHC may repeat the initialization several times if the orientation strapping does not match the orientation stored in RAM memory. Do not interrupt power to the unit during this first initialization period. Subsequent initializations should complete in one or two 70-second intervals.

- b. If the AHRS power-up initialization is not successful, swap AHC 1 with (operational) AHC 2. If the fault follows the AHC replace the AHC, otherwise check the airplane wiring.
- c. If any of the following STIM modes do not operate correctly, replace AHC 1. Push and hold the AHRS 1 test switch to enter STIM 0A mode. PFD display annunciates STIM 0A. All STIM mode causes the PFD pitch and roll attitude displays and the MFD compass card to constantly move in both the positive and negative directions. Release the AHRS 1 test switch.

Push and hold the AHRS 1 test switch. PFD display annunciates STIM 01. Roll STIM mode causes the PFD roll display to move and pause briefly at the 5, 10, and 30 degree roll right and roll left points. Verify N (north) on the compass card rotates to and points in the same direction as the front panel (face) of the computer.

The Astra SPX AHC computers face aft and the N on the compass card should point down. If not, display the LRU DIAGNOSTIC DATA page showing the AHC 1 word. The AHC 1 label 351 bits 17 and 18 are set = 1 for AHC facing aft. The AHC mount orientation strapping has AHC P1-33 grounded to P1-37 (strap common) and P1-34 open. Release the AHRS 1 test switch.

Push and hold the AHRS 1 test switch. PFD display annunciates STIM 02. Pitch STIM mode causes the PFD pitch display to move and pause briefly at the 2, 4, and 12 degree nose up and nose down points. Release the AHRS 1 test switch.

Push and hold the AHRS 1 test switch. PFD display annunciates STIM 03. Heading STIM mode causes the compass card to move to N (north), then increase heading pausing briefly at the 15, 30, and 90 degree points, return to north, then decrease heading pausing briefly at the 345, 330, and 270 degree points. Release the AHRS 1 test switch, then push again to exit STIM mode.

- d. If both HDG fail (red boxed HDG) and ATT fail (red boxed ATT) annunciate on the pilot's PFD, select AHS XFR on left RSP. If both annunciations clear, replace AHC 1. Deselect AHS XFR.