

# Service Bulletin

SB 4300-XXX-04

## **Electric Attitude Indicator**

4300 Series

Modification 4

Improves radio frequency susceptibility and lightning protection

### **1. Effectivity:**

This service bulletin is applicable to all 4300 Series Electric Attitude Indicators manufactured by Mid-Continent Instrument Co., Inc. These updates are installed by the manufacturer on all applicable units as of January 1, 2008 (serial numbers A08-00001 and above). The units are identified by Modification Status 4 as shown on the nameplate.

### **2. Reason:**

Improve high intensity radio frequency (HIRF) susceptibility to meet newly amended 14 CFR Part 23.1308 and Part 25.1317 requirements for flight-critical electronic equipment. Improve lightning susceptibility to Level A requirements for Critical Display equipment.

### **3. Description:**

Replace internal circuit board with new version containing updated circuitry and components to meet increased HIRF and lightning protection guidelines. HIRF qualification complies with RTCA DO-160E, Section 20, Category WF. Lightning qualification complies with RTCA DO-160E, Section 22, Category A3H33.

### **4. Compliance:**

Optional.

### **5. Approval:**

TSO approval not affected.  
FAA approval of updated RTCA DO-160 compliance on record with manufacturer.

### **6. Weight and Balance:**

No change.

### **7. Electrical load data:**

No change.

### **8. Other Publications affected:**

4300-3XX/-5XX, Installation Manual and Operating Instructions, Revision K  
4300-4XX, Installation Manual and Operating Instructions, Revision G

## 9. Installation Instructions: (optional)

### A. Planning

#### 1. Manpower:

Approximately 12 minutes plus retest and qualification prior to return to service.  
Approximately 6 minutes extra time required if incorporated into normal overhaul.

#### 2. Material – cost and Availability:

The parts and materials necessary to accomplish this service bulletin are available from Mid-Continent Instruments, Inc. Refer to Section 3 (Material Information) for part numbers. Check for current pricing.

#### 3. Tooling:

No special tooling required.

### B. Procedure: Refer to the 4300-XXX Component Maintenance Manual for part locations and disassembly instructions.

#### 1. Remove cover of the unit.

#### 2. For -3XX/-4XX models: Remove the screws that hold the Pump circuit board on one side of the assembly and the Inverter circuit board from the other side. (3 screws each) Unplug the Inverter circuit board from the small Power circuit board.

#### 3. For -3XX models: Unplug the Pump circuit board from the Power circuit board.

#### 4. For -4XX models: Remove the Control circuit board (2 screws, 3 standoffs) and unplug the Control circuit board from the Power circuit board.

#### 5. Remove the four screws from the connector. Remove the two screws from the backplate that retain the Power circuit board through two standoffs. (1 screw for -5XX models)

#### 6. For -3XX/-4XX models: Unsolder the white lighting wires from the Power circuit board. Slide the power circuit board out of the unit.

#### 7. For -5XX models: Slide the Power circuit board out of the unit and unsolder the 6 wire connections. (make note of wire locations)

#### 8. Remove the screw(s) from the Power circuit board that retain the standoff(s).

#### 9. Replace the Power circuit board and re-assemble the unit in reverse order as above.

#### 10. Perform the tests called out in the 4300-XXX Component Maintenance Manual (page 201, Testing and Fault Isolation).JHH

#### 11. Using permanent black ink, mark out block 4 in the modification section on the unit nameplate.

## 10. Material Information

Parts:

Model	P/N	Qty	Description	Old Revision	New Revision*
4300-2XX	**	1	PCB Assy, Power	J or before	K or after
4300-3XX	9015474-4	1	PCB Assy, Power	J or before	K or after
4300-4XX	9015474-5	1	PCB Assy, Power	J or before	K or after
4300-5XX	9015474-6	1	PCB Assy, Power	J or before	K or after

\* must specify/verify revision when ordering and/or installing part

\*\* -2XX series are OEM specific versions. Contact manufacturer for appropriate information.