

Service Bulletin

SB 4305-150-02

REMOTE DIRECTIONAL GYRO

4305-150 Series

Modification 2

Replaces the Gyro Capsule Cable Assembly

1. PLANNING INFORMATION

A. Effectivity

This service bulletin is applicable to 4305-150 Series Remote Directional Gyro manufactured by the General Design Division of Mid-Continent Instrument Co., Inc. It applies to units manufactured with serial numbers listed in Table 1.

All affected units were manufactured between July 1 and September 30, 2001. However, not all units manufactured during this time frame will require this service.

B. Reason

1. Some units were manufactured using a connector on the ribbon cable assembly that may have contained loose connector socket to ribbon cable wire connections. These loose connections may cause intermittent loss of gyro valid and phasing outputs.
2. This service bulletin is highly recommended and should be accomplished as soon as possible. All listed units returned to the factory for service will have this service bulletin performed.

C. Description

This service bulletin applies to the Remote Gyro capsule only. The ribbon cable assembly connector must be cut off and a new connector with stripped and crimped connector sockets installed.

Approval

FAA and TSO approval not affected

D. Manpower

This service bulletin may be accomplished and unit tested in approximately 2.0 person-hours.

E. Material – Cost and Availability

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

F. Tooling

Wire crimping tool Molex model CR60930B or equivalent. Normal ESD procedures should be followed.

G. Weight and Balance

No change.

H. Electrical load data

No change.

I. Other Publications affected

None.

2. ACCOMPLISHMENT INSTRUCTIONS

A. Remove lower half of the electronic assembly from the gyro assembly by removing 8ea. 4-40x3/16 screws. Do not remove the gyro assembly from the upper half of the base assembly cover.

B. Disconnect the braided grounding cable from the base assembly lower half.

C. Carefully unplug the connector on the gyro assembly from the base electronic assembly. Set the base electronic assembly in an ESD protected area to avoid damage.

REMEMBER:

Remember that all gyro assemblies contain precision bearings and are easily damaged by rough handling. Always set the gyro assembly on a padded surface and avoid all shock impacts to the gyro. Handle the gyro assembly like eggs!

WARNING:

All electronic work must be performed at an Electrostatic protected workstation. Grounding of all tools and personnel must be observed.

D. Cut the connector from the gyro capsule ribbon cable assembly as close to the connector body as possible. Be sure to observe the wire colors and the orientation of the connector body for future installation of the new connector.

E. Separate the ribbon cable wires enough to allow 1/8 inch stripping of each wire. Use caution not to nick or cut any of the wire strands.

- F. Using the crimping tool, crimp one connector socket onto each of the 9 ribbon cable wires. Examine the crimp to insure a good electrical and mechanical crimp.
- G. Carefully insert the crimped connector sockets into the appropriate connector body location. Be sure to use the same connector body orientation as the original connector removed in step D.
- H. Reassemble the lower half of the electronic base assembly to the gyro and upper half using 8ea 4-40x3/16 Ph Hd screws. Connect the braided ground wire to the ground terminal on the base lower half.
- I. Perform a complete functional test on the unit to insure proper operation.
- J. On the modification label near the nameplate on the electronic base assembly, mark out the number 2.

3. MATERIAL INFORMATION

A. Parts

P/N	Qty.	Description
9011115	1	Connector
9011149	9	Terminal, Crimp
8014060	1	Label, Modification

Affected Serial number listing

07211911	07211947	08212035	09212100	09212123
07211912	07211948	08212036	09212103	
07211913	07211949	08212037	09212106	
07211915	08212009	08212038	09212107	
07211916	08212014		09212108	
07211917		09212086	09212109	
07211919	08212016	09212088	09212110	
07211920	08212020	09212089		
07211921	08212021	09212090	09212112	
07211922	08212026	09212091	09212113	
07211926	08212027	09212092	09212114	
07211927	08212030	09212094	09212116	
07211929	08212032	09212095		
07211930	08212033	09212097	09212119	
07211946	08212034	09212098		

Table 1