MidContinent™
INSTRUMENTS+AVIONICS
Wichita, Kansas USA

Service Information Letter

SIL 4300-XXX-04

Electric Attitude Indicator
Inverter frequency adjustment

1. PLANNING INFORMATION

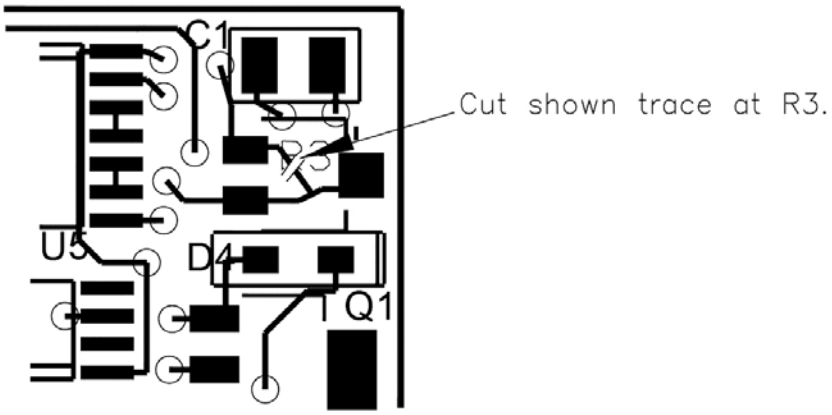
This service information is applicable to the 4300-XXX Series Electric Attitude Indicators manufactured by Mid-Continent Instrument Co., Inc. before November 1, 2006. Changes to the inverter circuit board p/n 9015951 at revision D allow for the manual adjustment of the inverter frequency and the resulting rotor speed.

The change added a variable resistor (R3) to the assembly and also changed a series resistor (R2) from 1.3kohm to 680 ohm. These changes allow the adjustment of the rotor speed for better erection control and stability. With this change the rotor speed can be accurately set between 16,500 and 17,500 RPM.

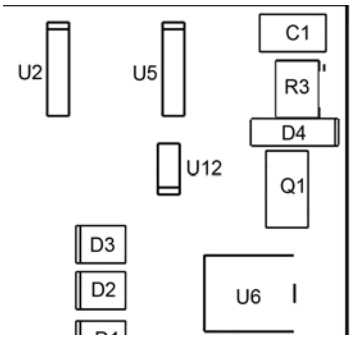
Units containing revision B or C of the inverter circuit board may have these changes made if the unit rotor speed is not sufficient to meet the calibration requirements. To perform this change one trace will need to be cut, the 1K trim pot added and resistor R2 changed to a 680 ohm value.

To add frequency adjustment:

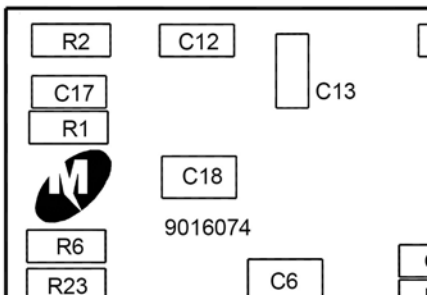
i) Cut trace from U5C pin 6 to R2. See diagram for location.



ii) Carefully solder 1K ohm trim pot across the cut trace. Align the trim pot so that the adjustment screw is toward the end of the inverter circuit board as shown.



iii) Remove R2 from opposite side of the board and replace with a 680 ohm resistor.



iv) Connect the unit to the rated power and check rotor rotation direction. The rotor should spin clockwise when viewing from the bottom. Allow the unit to warm up for 10 minutes minimum. Check rotor speed for 16,500 to 17,500 RPM. If the rotor speed is not within, adjust the inverter frequency by 10Hz for each 300 RPM change required. Wait at least 3 minutes between adjustments for the rotor speed to stabilize.

2. Material

Old MCI Part Number	Replaced by New MCI Part Number	Description	Figure – Item Affected
--	9015645	TRIM POT 1K OHM	R3
53-1331F1TK-E	53-6800J1TK-E	RESISTOR 680 OHM	R2