

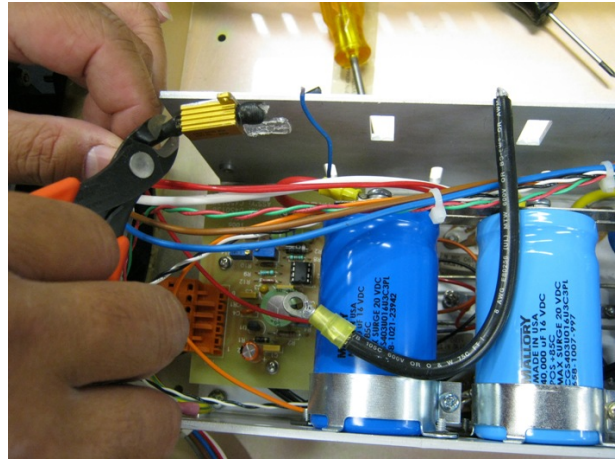
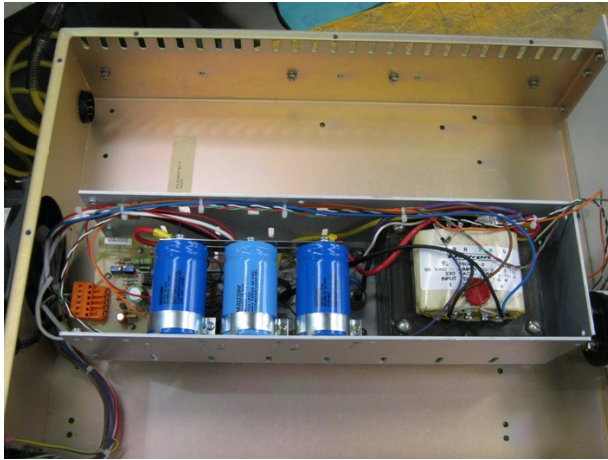
Technical Service Bulletin 110611

DCX Focus Supply Current Sense Upgrade Procedure

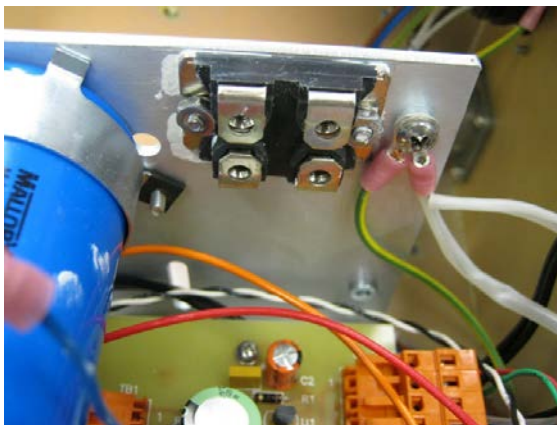
Service Bulletin 110611 applies to all Comark converted IOX (now DCX1), DCX1, DCX Millennium transmitters. As part of an on-going effort to proactively improve the quality and reliability of our transmitter products, Comark has developed a retrofit for the “X”-series focus supplies.

DCX Focus Supply Current Sense Upgrade Procedure	
Applicability	All Comark Converted IOX (now DCX1), DCX1, DCX Millennium transmitters with 450128-01,-02, (R) Focus Supply.
Prerequisites	Fully read and understand this bulletin before attempting procedure.
Equipment Required	453497-01 Focus Supply Upgrade Kit – this upgrade kit improves the accuracy and reliability of the focus current sample that is sent to the HPA controller and to the supply’s front panel meter. Standard hand tools, controlled-cycle crimp tool, soldering station and a heat gun. 412828-01 Precision Current Shunt, DVM, SB030612, Note: Customers can also return the focus supply assembly to Comark for repair to have the upgrade installed. Quick Exchange is also available.
Comments	The (3) Filter caps may be replaced at this time. Part # 603789-01-CS CAP, ELEC 40K UF 16VDC CAN

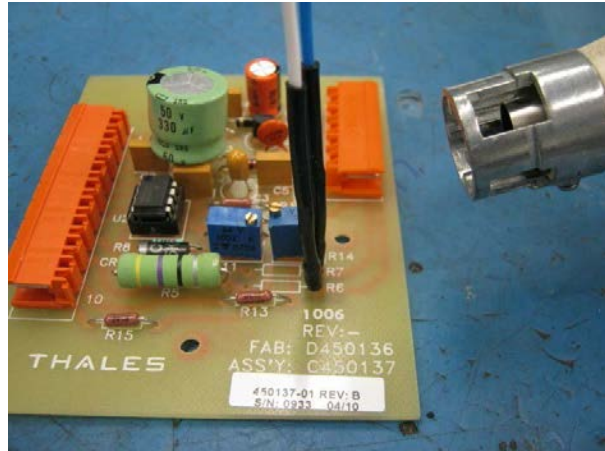
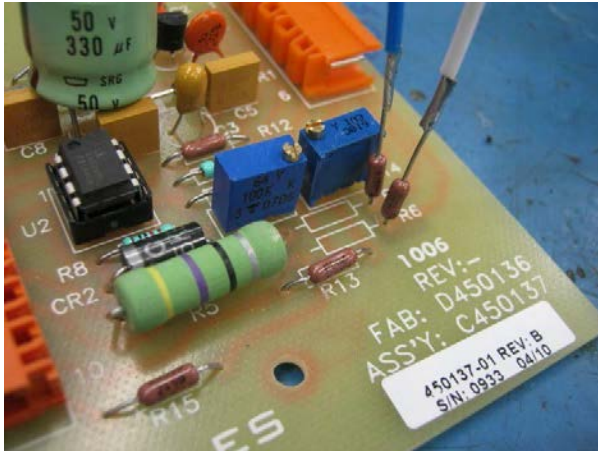
1. Determine that the supply is pre-revision “E” which can be found typically on the back left upper corner of the supply; it should be a white or metal sticker.
2. Remove the top cover and verify gold power resistor on inside back of the chassis/heat-sink.
3. Remove both air baffles and unscrew the power supply and turn it to expose the components.
4. Remove the large black wire from one of the large capacitors. The screw may be accessed through a cutout in the power supply heat sink.
5. Remove screws that hold the gold resistor, and cut the resistor out of circuit so that the maximum amount of wire is left to strip and crimp the supplied ring terminals.



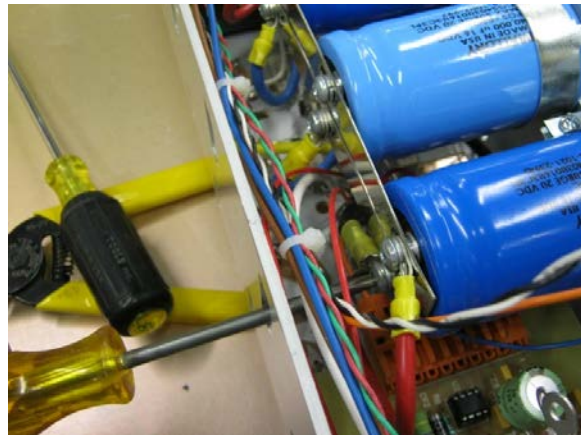
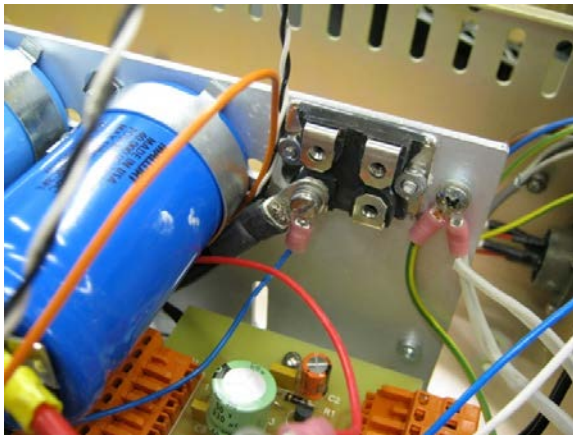
6. Clean off the heat sink compound left from the gold resistor. Apply a thin layer of heat sink compound on the back of the new precision current sensor. Mount the new sensor on the opposite side of the heat sink using the provided hardware.



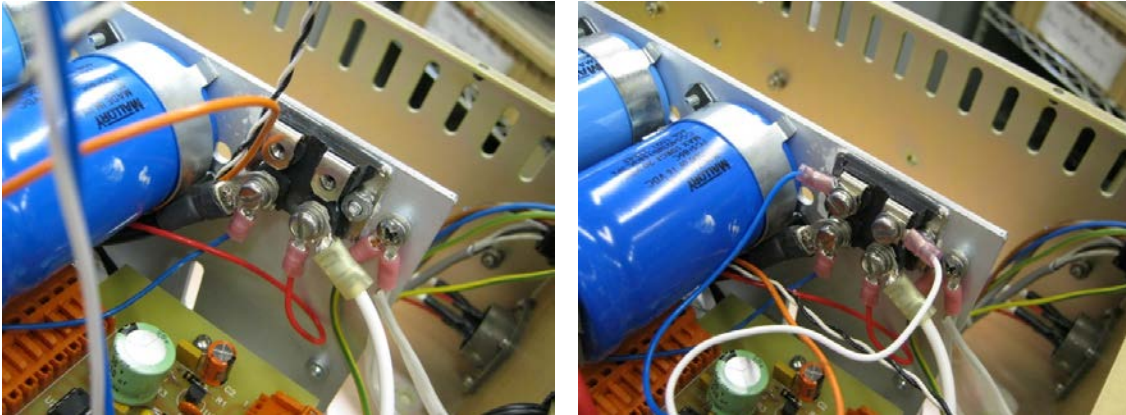
7. Remove screws holding the regulator board using a #1 Phillips Head screwdriver. Unplug connector and remove circuit board.
8. Locate resistors R6 and R7, unsolder and remove from PCB.
9. Strip each end of the blue and white wires. Tin each end, crimp and then solder a spade lug on one end of each wire and solder a precision 4.75k Ohm resistor on the other (cut one resistor lead to about $\frac{1}{2}$ ").
10. Slip a $\frac{3}{4}$ " length of heat shrink over the resistor and push it to the spade lug.
11. Insert the resistor of the blue wire to the solder tab nearest to the edge of the PCB marked "R7" and solder. Trim off the excess resistor lead.



12. Insert the resistor of the white wire to the solder tab nearest to the edge of the PCB marked "R6" and solder. Trim off the excess resistor lead.
13. Slide the heat shrink down over the resistors so that it is flush with the PCB. Use the heat gun to shrink the tubing.
14. Re-install the modified regulator board.



15. Connect the large black wire and the small blue wire (not the new R7 blue wire) on the bottom left terminal of the new precision current sensor.
16. Connect the other end of the large black wire to the bottom terminal of the large capacitor closest to the regulator board. The screw may be accessed through a cutout in the power supply heat sink.



17. Connect the large white wire and the small red wire on the bottom right terminal of the current sensor.
18. Connect the R7 blue wire to the top left terminal of the current sensor.
19. Connect the R6 white wire to the top right terminal of the current sensor.

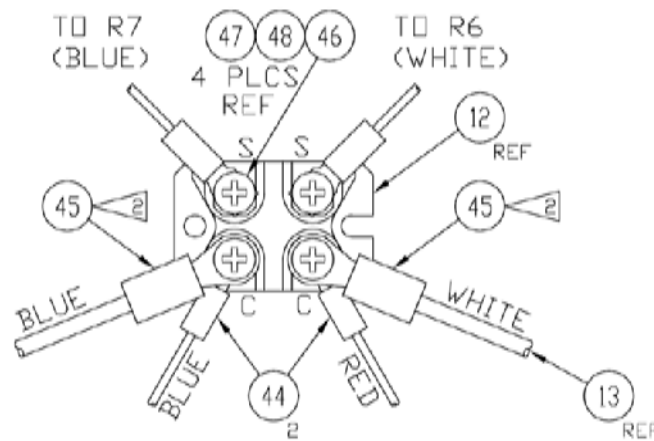


FIG 6
NOT TO SCALE
Detail from print 450132-01

20. Screw down the power supply assembly and re-install both air-baffles.
21. Install back in transmitter and power up. Recalibrate the focus voltage and current following SB030612 and using the DVM (Digital Volt Multimeter) and the 412828-01 Precision Shunt.
22. Install and screw down the top cover.
23. Procedure complete.



Here at Comark, we are constantly striving to improve the satisfaction of both our new and existing customers. Continually working to improve the reliability of the installed fleet of Comark transmitters in the field is another way in which we demonstrate our commitment to you, our valued customer.

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