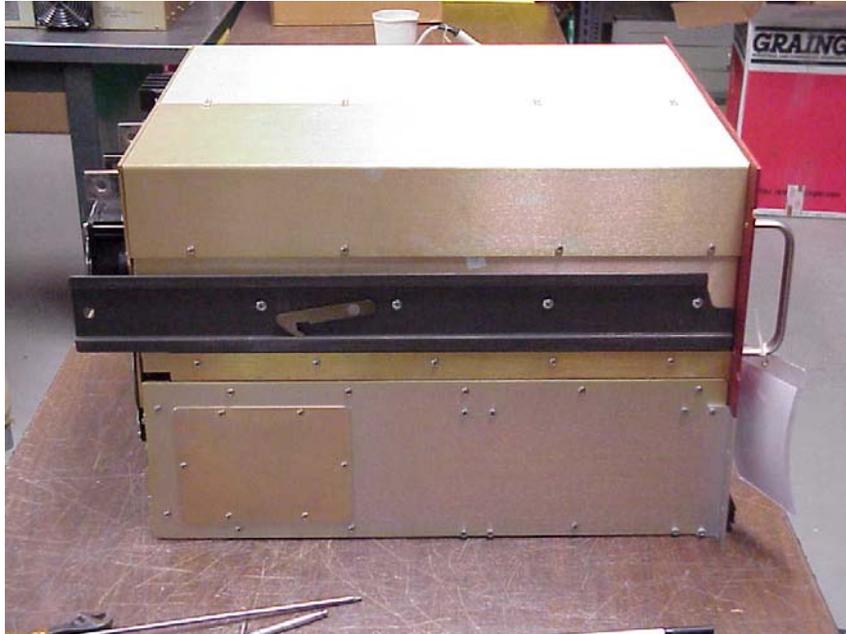


SunCraft 150 amp P.S. Modifications and Disassembly Procedures for Jan 02 Shutdown

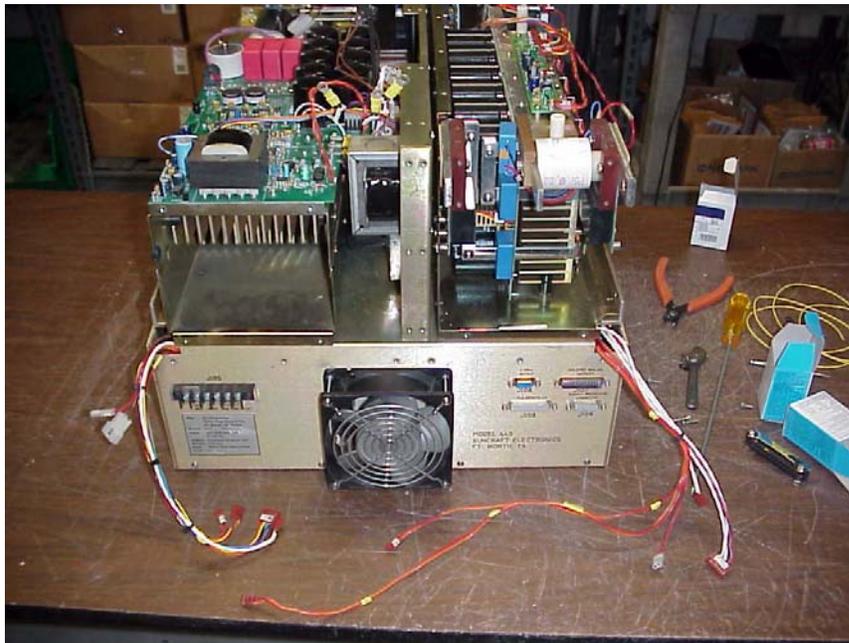
- 1) Remove both top covers (16 screws).



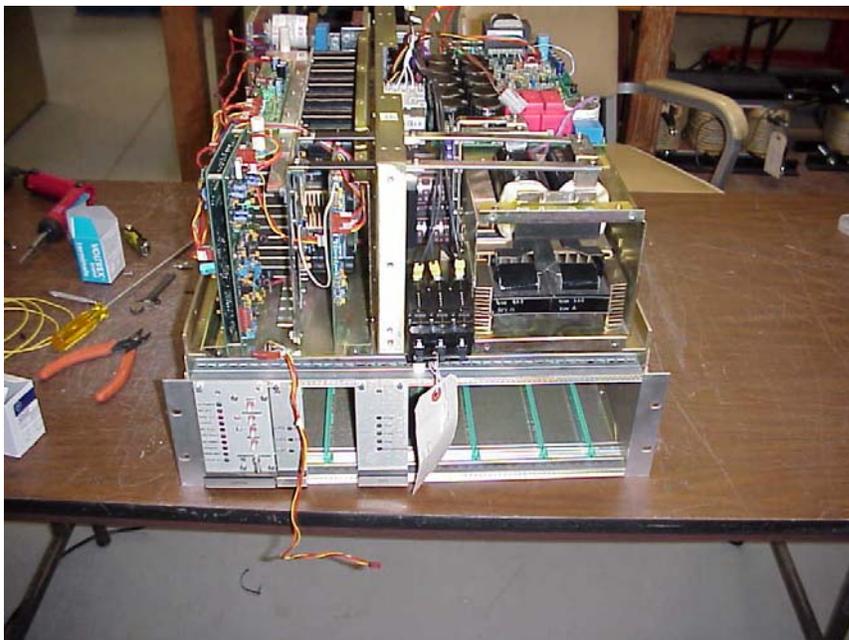
- 2) Remove red front panel (21 screws), do not remove the 4 screws on the inside of the left grill. These are attached to plastic board positioners.
- 3) Remove both side rail panels (left and right (14 screws)).



- 4) Remove both back covers. Disconnect fan molex connector and remove cover. After removing all screws (noting different sizes (right side has 14 screws) note the exact location of the black 208V A.C. wires by labeling them with proper phase rotation and then remove them. Disconnect the fan molex connector (left side has 10 screws).

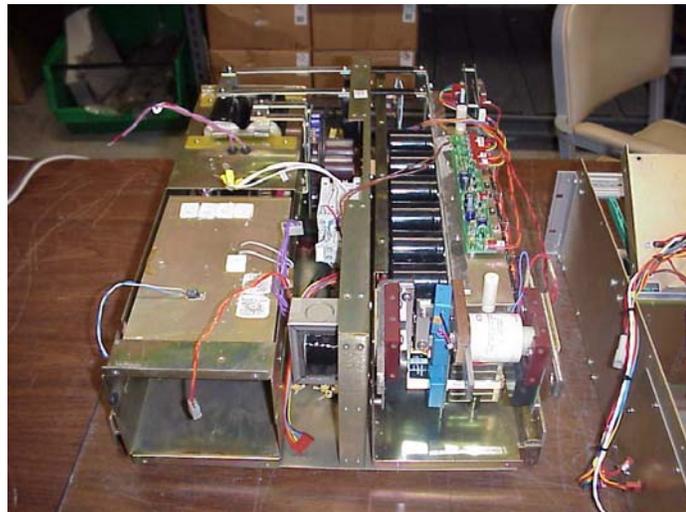
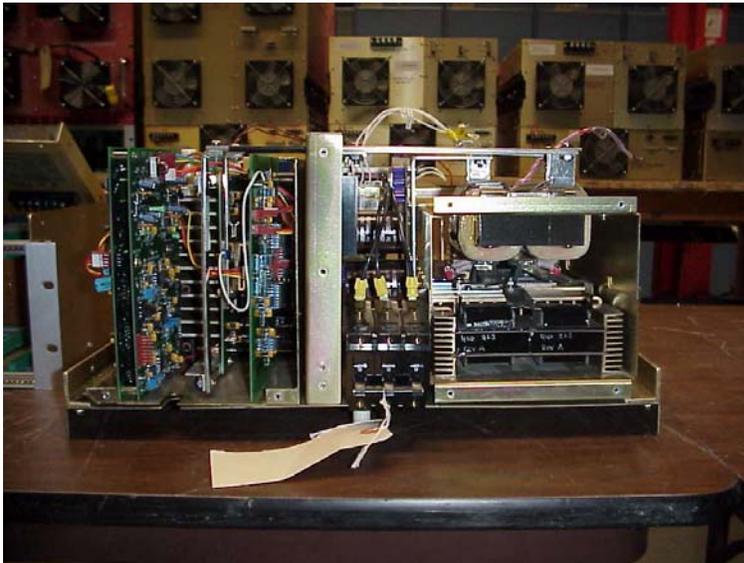


- 5) Remove two top covers and one side cover surrounding the FET Assembly Banks (these are the big gold heatsinks with components and fuses, etc. attached to them) noting the different size screws.
- a. (2ea.) Top covers-12 screws
 - b. (1ea.) Side cover-14 screws



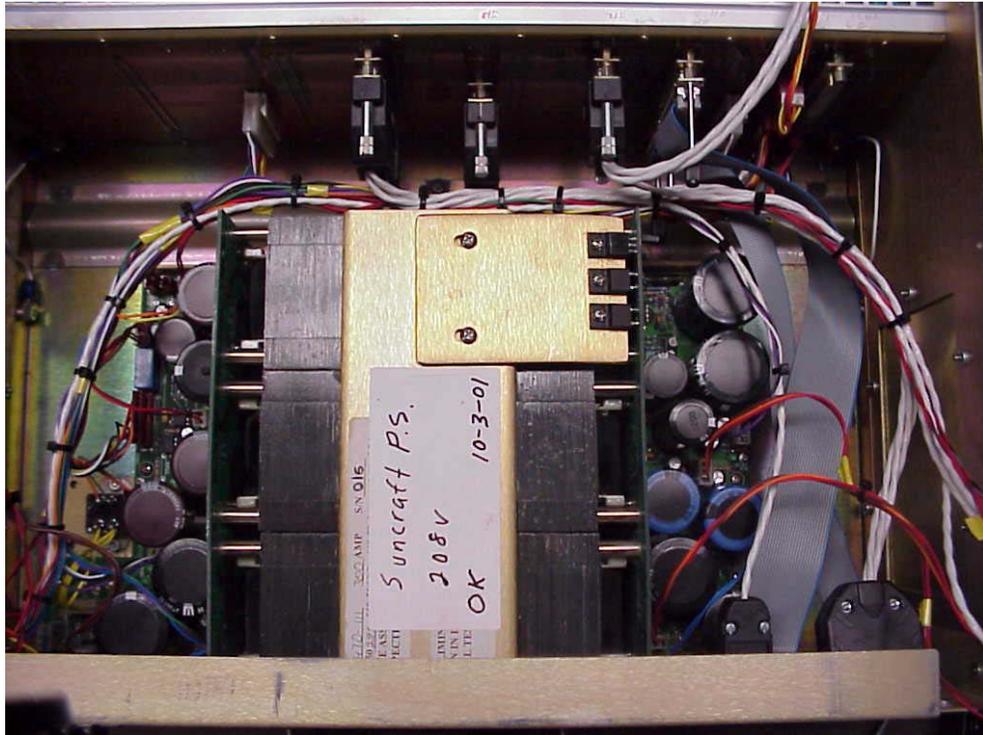
Removing complete top assembly from Control Chassis

- 1) Remove 10 screws at base attachment points.
- 2) Unplug the following connectors as follows:
 - J770 from the DCCT Head
 - J611 from the FET Assy. Cap Card under DCCT Head- The harness is threaded through the inner center location of the DCCT Head
 - J601 and J616 from the Upper FET Control Card
 - J694 and J695 from the FET HK Board (you have to cut some tie wraps but cut only enough to remove connectors)
- 3) Cut all tie wraps on harness connecting Converter Board
- 4) Disconnect the two brown wire molex connector going to the HK P.S. from the EMI Filter
- 5) Unplug the following connectors as follows from the Converter Board as follows:
 - J505, J506, J507, J507a, and J509
- 6) Using two people, carefully lift the top assembly off the Control Chassis and place aside

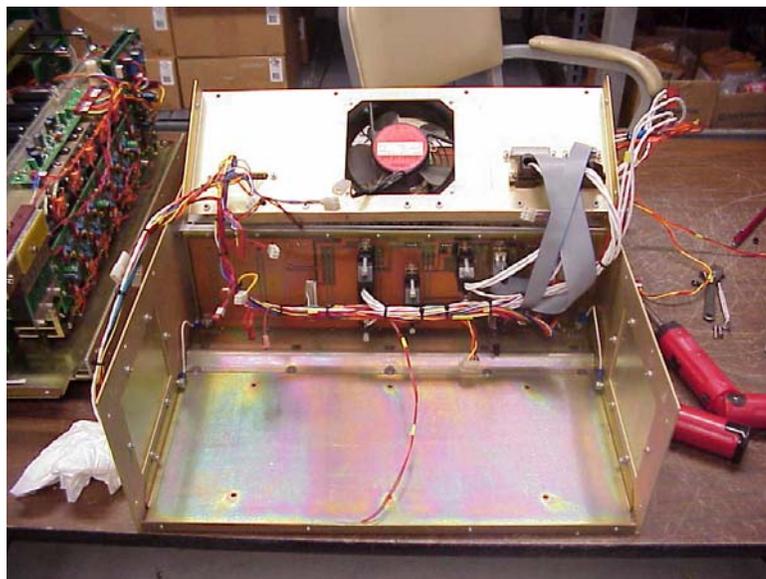


Housekeeping P.S. removal

- 1) Looking down (top view of HK P.S.), remove all necessary connectors from HK P.S. attached to harnesses so the P.S. can be removed after the six screws are removed from the bottom plate that holds the P.S.



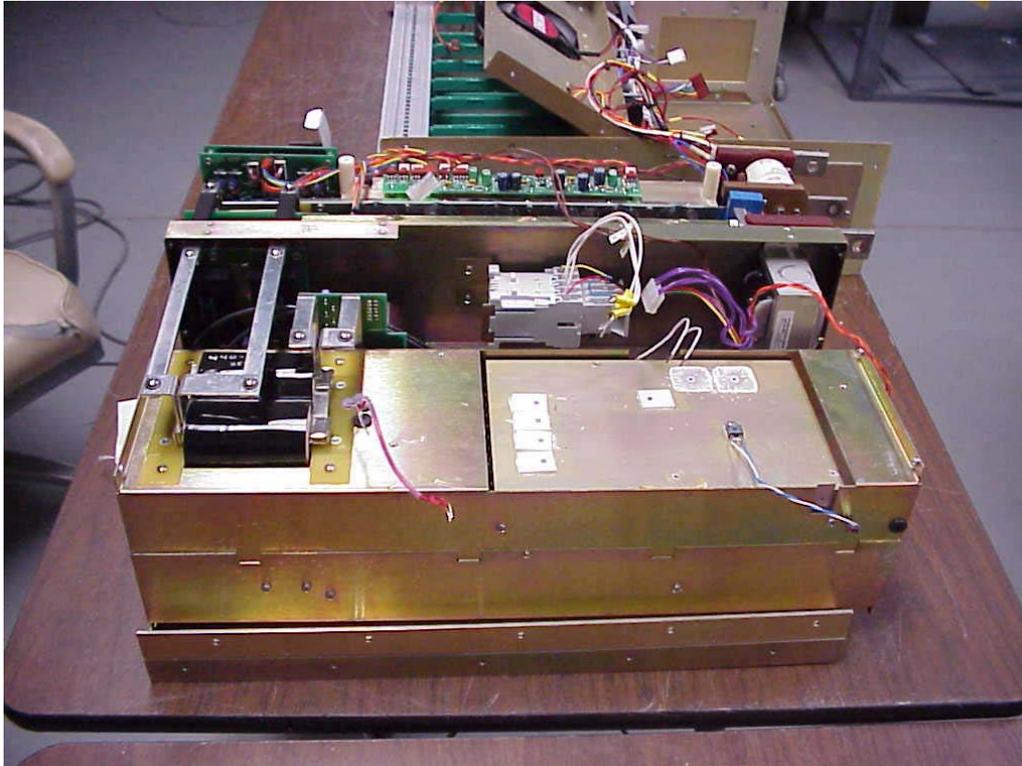
- 2) Remove the back panel of the Control Chassis (8 screws).
- 3) Disconnect the fan molex connector (8 screws) and flip back panel onto top of Control Chassis.



Lift and remove P.S.

Converter Board removal

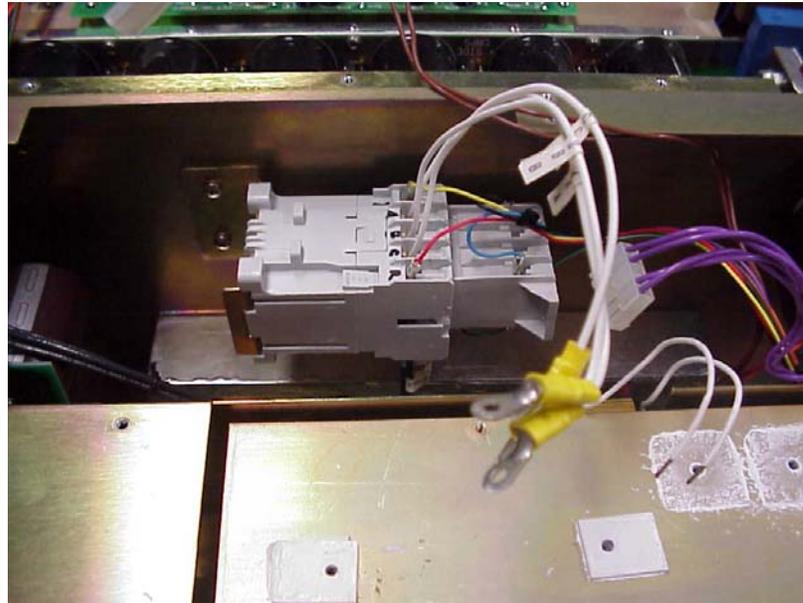
- 1) Unplug the following connectors from the Converter Board as follows:
J503, J504 (noting the color and location of wires in ref. to connector pins on board), J505, and J508.



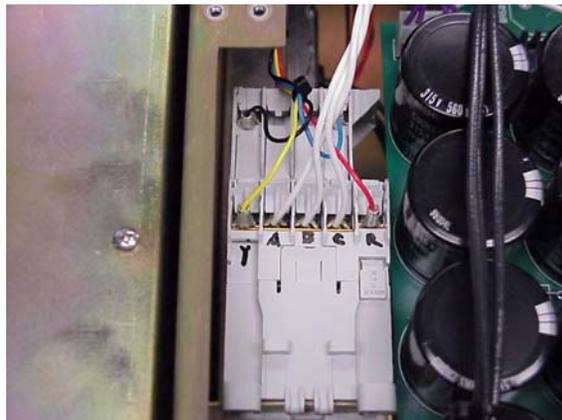
- 2) After labeling the exact location of the three white wires with ring lugs connected to J502, remove them from the converter board.
- 3) Unsolder the two white wires from solder Turrets R538
- 4) Unsolder the two red wires from solder turrets E3 and E3a and pull wires through T504
- 5) Unscrew and remove ring lug from top of L501
- 6) Remove all 13 Phillips head screws from Converter Board that are threaded for standoffs and FET insulator positioning.
- 7) Unscrew heatsink screw from IC508 hanging on side towards rear of Converter Board so the Converter Board can be lifted and removed for rework.
- 8) Carefully lift the Converter Board away from the chassis housing.
- 9) The next step is to remove and replace the Main Contactor.

Removal and replacement of Main Contactor

- 1) Remove the two screws that hold the contactor bracket to P.S. housing.



- 2) Remove the bracket from the contactor by bending down the bottom tab on the contactor.
- 3) Remove the bracket from the contactor by bending down the bottom tab on the contactor.
- 4) While noting the exact location of the wires, remove all wires from the main contactor block.
- 5) Using a new contactor block as a reference to show direction of removal, slide off auxiliary block from main contactor block.
- 6) Noting wire color and location, remove all wires from the auxiliary contactor block and crimp on non-insulated spade lugs on all eight wires of the J505 connector harness.

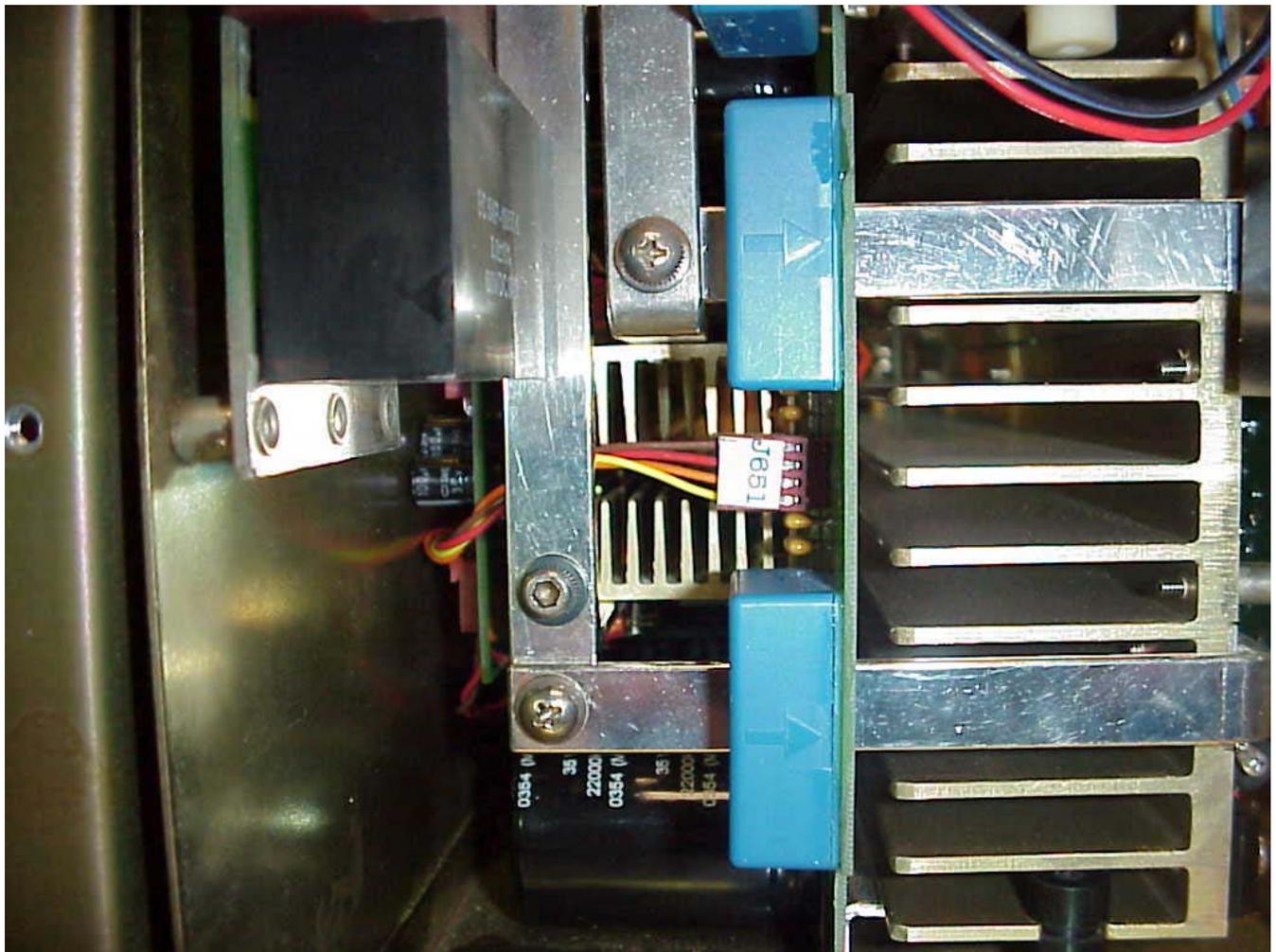


- 7) Reconnect auxiliary contactor to main contactor; rewire the contactors with newly lugged wires, and re-install main contactor.

- 8) The only wires left hanging are to be connected to the Converter Board after its modifications are completed.

Modifying the D.C. Buss

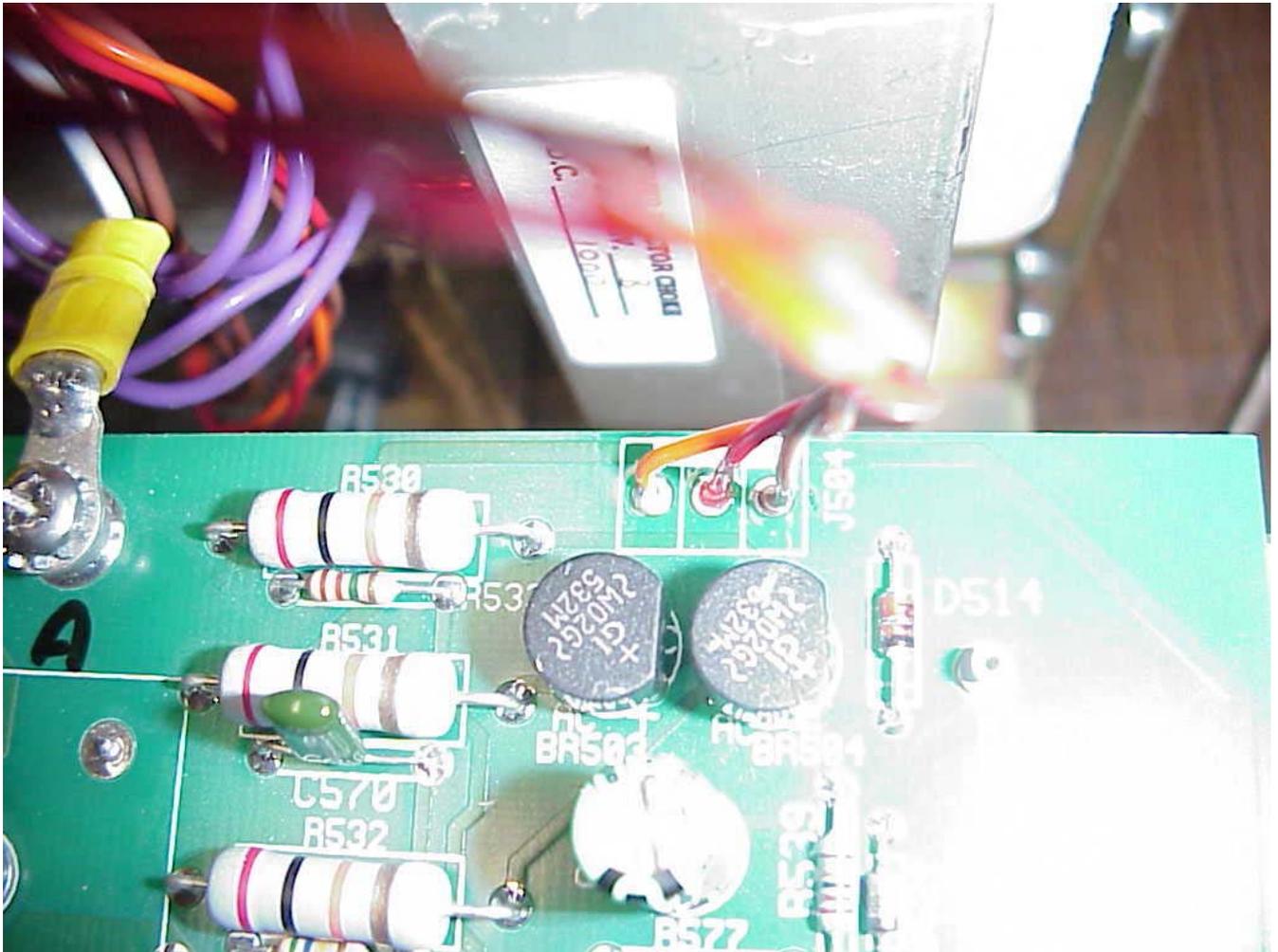
- 1) Using a #19 drill bit, drill a through hole through both sections of the D.C. buss that is joined together by a soldered joint approximately in the center of the area to be drilled.
- 2) Use an 8-32 x 1/2 socket head bolt with a Belleville washer and an 8-32 kepnut washer to secure the joint.



- 3) Place a paper barrier behind the buss to be drilled to prevent metal chips from entering the P.S.
- 4) Tighten and vacuum all metal chips thoroughly.

Converter Board rework

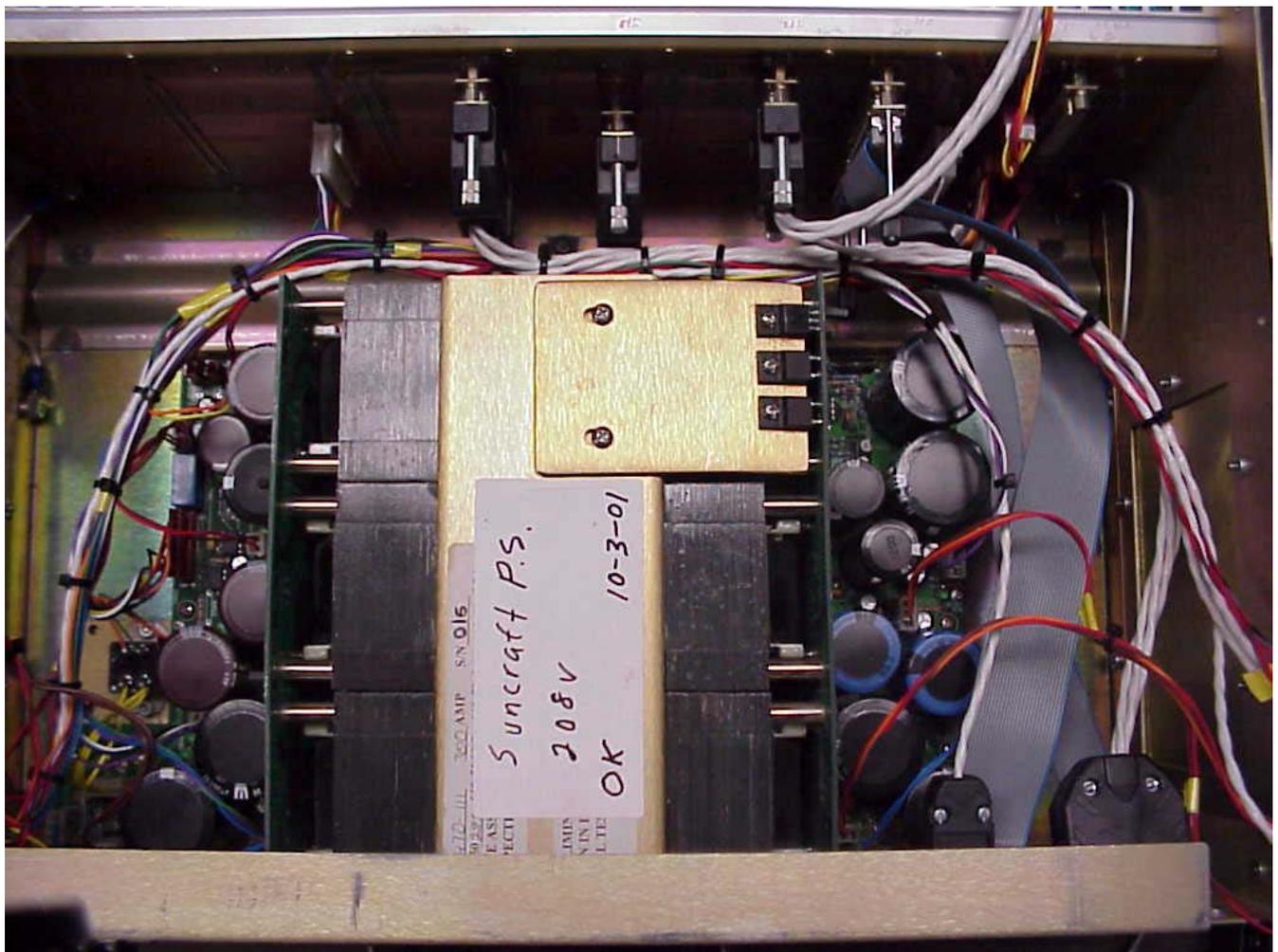
- 1) Unsolder the J504 connector from the converter board.
- 2) Clean the area of dirt, flux, etc... on top and bottom of board.
- 3) In the exact location that they were removed, solder the three wires (brown, red, and orange) in the location of where the J504 connector was removed from.



- 4) Tape off with masking tape the areas close to J504 that conformal coating could prevent proper operation such as unplugged connectors.
- 5) Conformal coat the top and bottom of the Converter Board at the J504 location.
- 6) Re- install the Converter Board carefully not to disturb the positions of the FET insulators.

Housekeeping P.S. installation

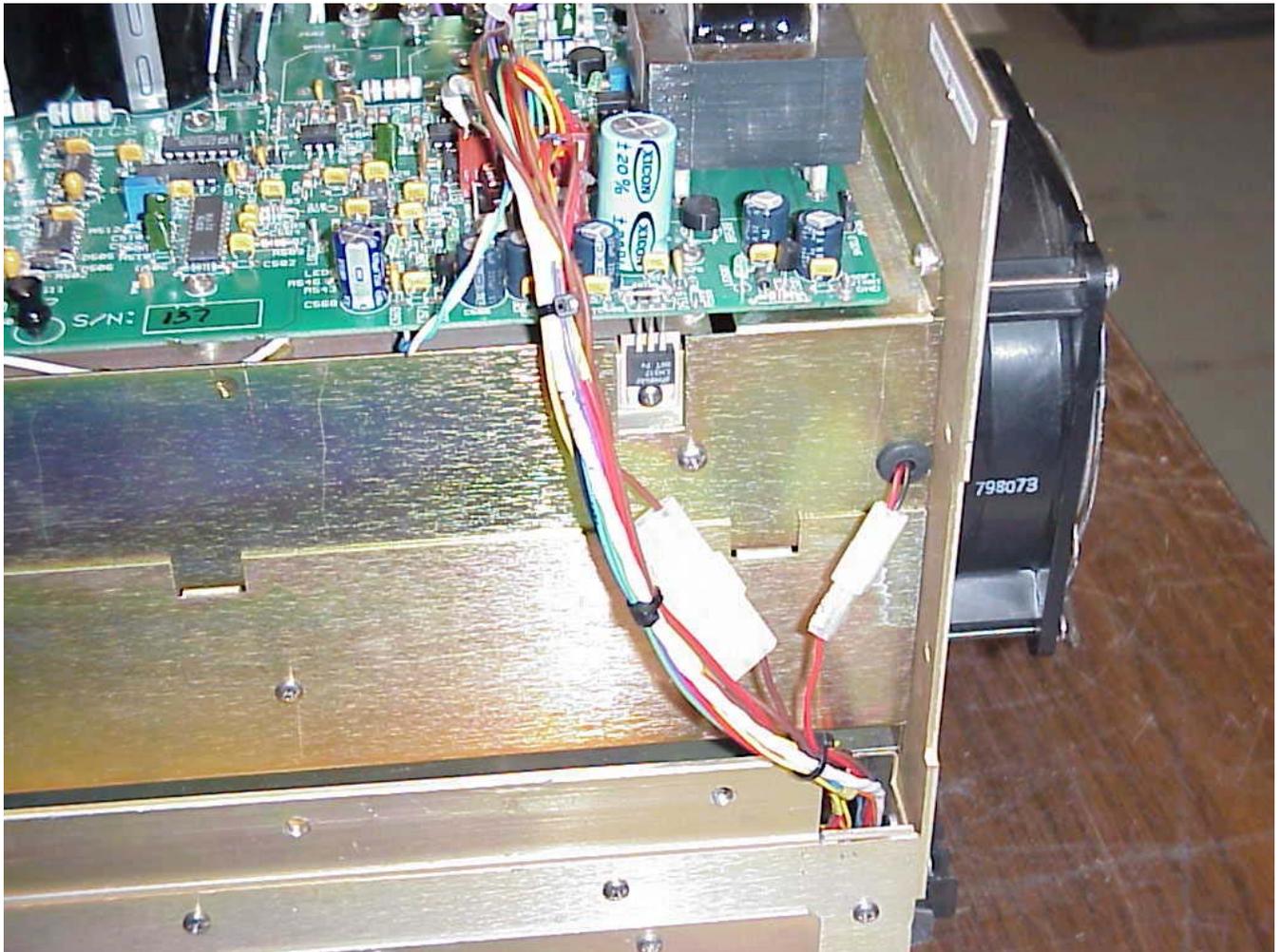
- 1) After the HK P.S. has been modified and tested, install the HK P.S. to the bottom plate with the six screws.
- 2) Before installing back cover, reconnect the fan attached to the back cover to the molex connector positioned through the heatsink of the HK P.S.
- 3) Install the back cover (8 screws).
- 4) Reconnect all of the HK P.S. connectors previously disconnected. The connectors are labeled and the harness should still have retained its original shape that the connectors are positioned just above where they are to be plugged in to.



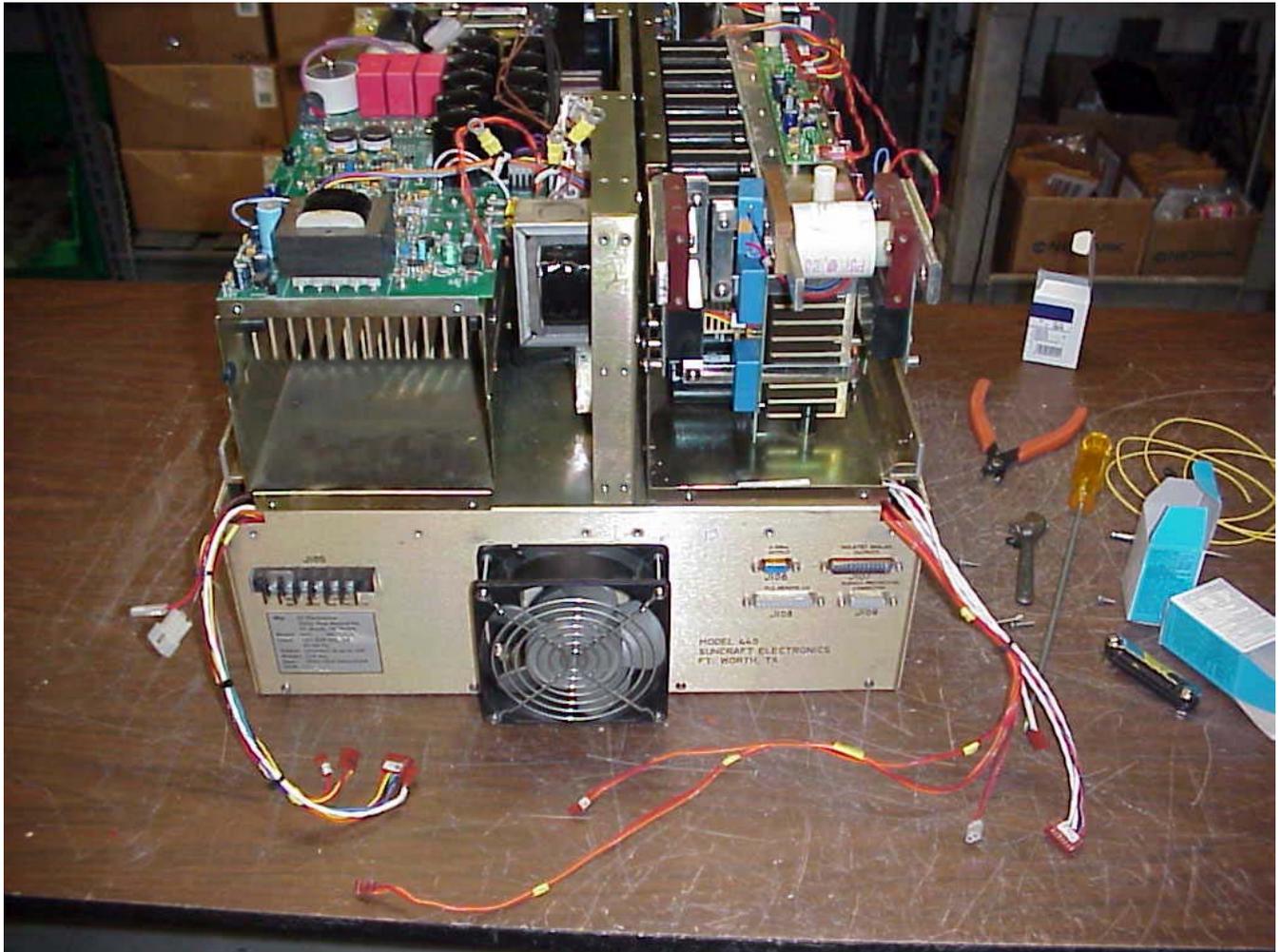
- 5) The next step is to re-attach the top half section of the P.S. to the Control Chassis.

Re-attachment of the top section of the P.S. to the Control Chassis

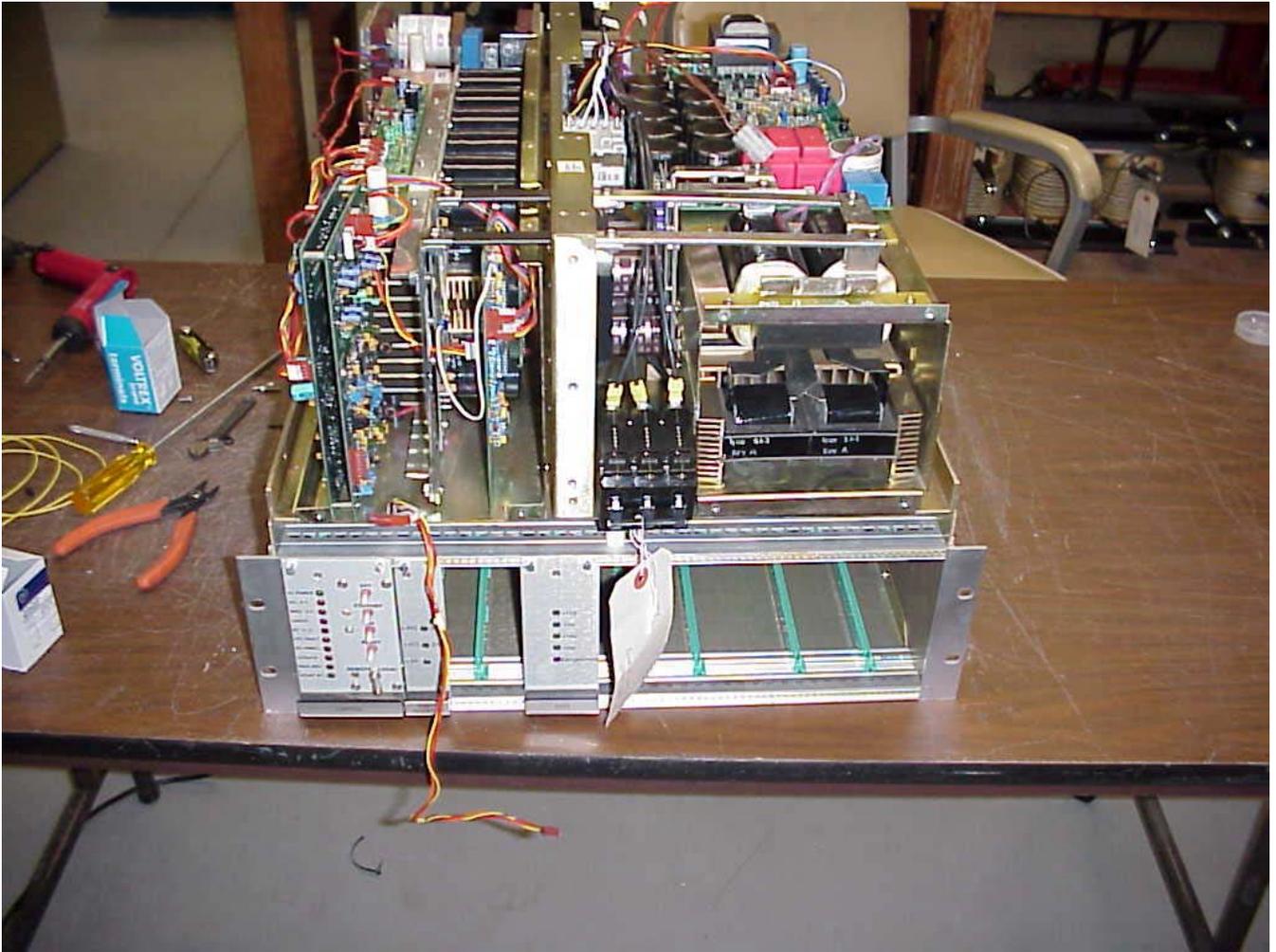
- 1) Make sure all cable harnesses are positioned in the manner to which they will come out of the Control Chassis before placing the top section onto the Control Chassis.



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- 2) With two people, carefully lift and place the top section of the P.S. on top of the Control Chassis making sure not to crush or pinch any wires or harnesses.
- 3) Screw the section to the Control Chassis (8 screws).
- 4) Reassemble the P.S. reconnecting all connectors and attaching all covers in the exact order in which they were disassembled.

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