

Filename = ZFCTCardReplacementPro2.doc, 9/13/01

Don Bruno must be contacted before using this procedure.

Procedure for replacing the ZFCT card in any Dynapower power supply

1. Go to the spares locker in 1004B and find a ZFCT card with the white label on it that matches the amperage of the p.s. you are working on. For example if the ZFCT you are working on says "2000" on it this means it is a ZFCT card for a 2000A p.s. On the top shelf, of the locker in 1004B, on the right hand side is a blue extender card, take this with you and return it when done.
2. Take the new ZFCT card along with a scope and scope probes and the extender card to service building 1012A.
3. Go to the p.s. called you are working on.
4. Put the p.s. in the OFF state and remove the plastic cover.
5. All the lights should be off on the ZFCT card in the 3u chassis card slot now.
6. Carefully and slowly remove the ZFCT card from the 3u chassis card slot. When you remove it there are some components that may hit the card next to it so be careful.
7. Also make sure you remove the adapter card from the rear of the ZFCT card. If it is still inside the slot you must reach in and get it. This adapter card is the same height as the ZFCT card but is only about 2 to 3 inches long.
8. Take the new ZFCT card and put the adapter board on the back of it. Now plug the adapter board onto the extender card and slide the extender card into the slot that the ZFCT plugs into. Someone should hold the ZFCT card up or it will fall off the extender card. Be careful.
9. Take the positive scope probe and put it on TP101. Take the negative scope probe and put it on TP106. Set up the scope to read DC with the center of the waveform in the middle of the scope.
10. Put the p.s. in STANDBY and adjust the scope amplitude and time settings so you see a waveform that looks like a distorted sine wave. Make sure the scope is set to DC. Make sure the center of the waveform you see is in the center of the screen.
11. Now turn pot P101 clockwise until the output valid light and zero current light just turns off then stop turning the pot. The output valid light and zero current lights are on the front of the ZFCT card.
12. Once the lights go off measure the peak voltage of the waveform. The peak voltage is measured from the center of the waveform to the top of the waveform. Record this voltage. Subtract 2.25V from this voltage. Now turn pot P101 counter-clockwise until the peak voltage of this waveform has been reduced by 2.25V. Remember the peak voltage is measured from the center of the waveform to the top. The output valid light and zero current light should both be lit now. Put the p.s. in the off state and remove the extender card and replace the new ZFCT card in the 3u chassis. Put the p.s. in STANDBY and hand over to MCR.
13. If for some reason when you are turning pot P101 clockwise and you cannot get the output valid light and zero current light to go off after about 40 turns then stop turning P101. At this point measure the peak voltage. Record this voltage. Subtract 2.25V from this voltage. Now turn pot P101 counter-clockwise until the peak voltage of this waveform has been reduced by 2.25V. Remember the peak voltage is measured from the center of the waveform to the top. The output valid light and zero current light should both be lit now. Put the p.s. in the off state and remove the extender card and replace the new ZFCT card in the 3u chassis. Put the p.s. in STANDBY and hand over to MCR.

14. You must get the output valid light and zero current light to come on or the new card will not work. If for some reason you cannot then I would recommend putting the original card back in.