SERVICE BULLETIN	
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TEC Board Assembly Replacement Guide

Summary

This bulletin describes how to replace the TEC Board Assembly in the eDrive Nitro.

Materials and Equipment

- eDrive
- 3/32" Ball Driver

Contact Northrop Grumman for assistance in obtaining any of these items.

Scope

This bulletin applies only to the 4U eDrive with the internal TEC controller option.

Replacing the TEC Board Assembly

1. Ensure the power is turned off to the eDrive.
2. Unplug the power supply and eDrive.
3. Disconnect all cables from the back of the eDrive.
4. Remove top cover from eDrive.
5. Find the TEC Card shown in Figure 1.

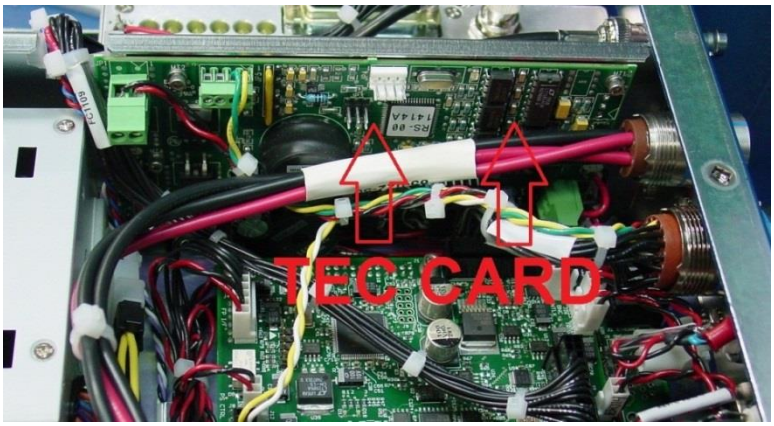

Figure 1: TEC Card

6. With a screwdriver, loosen the screws holding the red wire and black wire into **JP1 shown in Figure 2**. Loosen the screws holding the yellow wire and green wire into **JP5 shown in Figure 3**. Remove the wires.

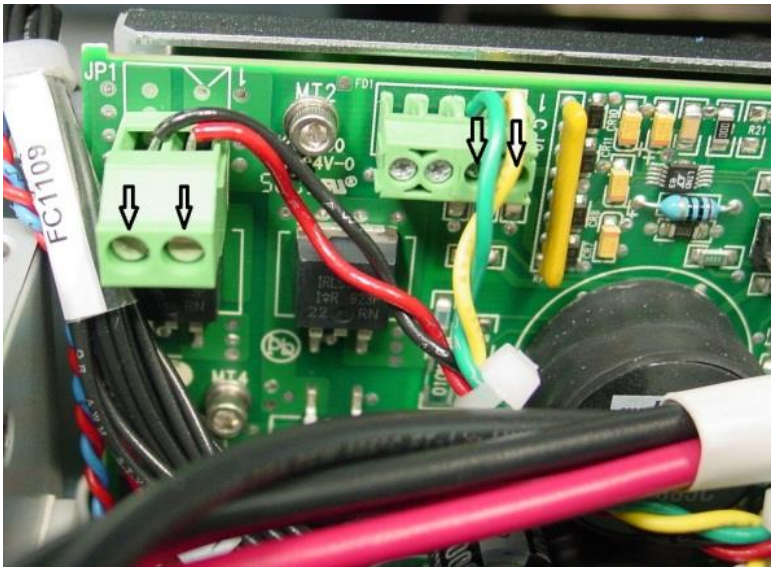

Figure 2: Loosen Screws on **JP1** and **JP5**

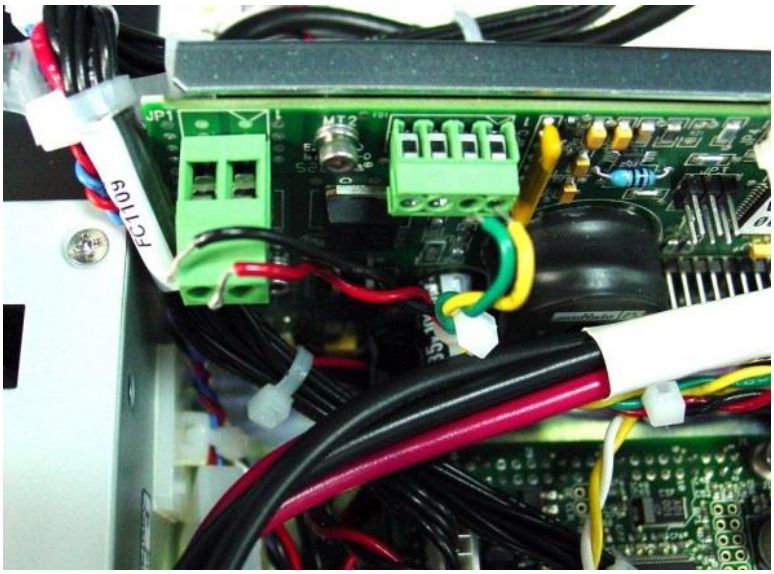

Figure 3: Remove Wires from **JP1** and **JP5**

7. With a 3/32" ball driver, remove the four screws and mounting hardware attaching the board to the eDrive. The screws are labeled **MT1**, **MT2 Shown in Figure 4**, **MT3**, and **MT4**.

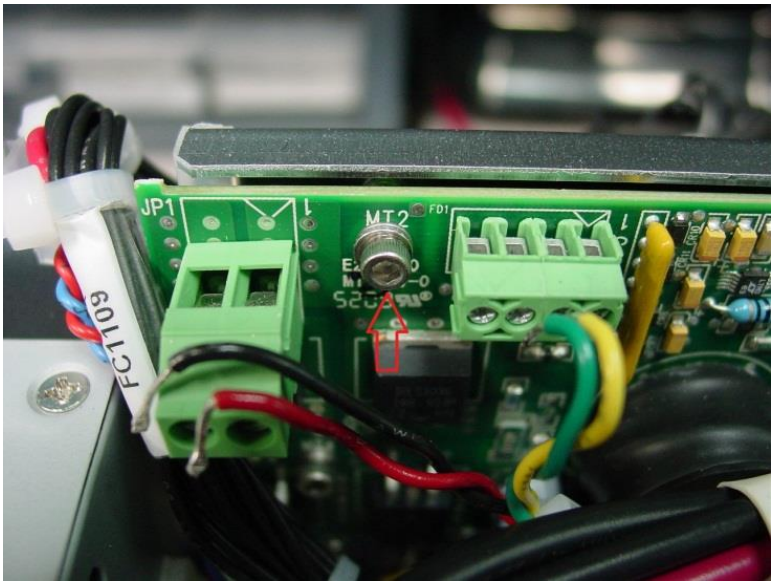

Figure 4: Remove 4 Screws and Washers

8. Follow the purple, white, and black wire from the back of the TEC board to the 9-pin connector shown in Figure 5. With a 3/32" ball driver, remove the two screws with mounting hardware attaching the 9-pin connector that houses the purple, white, and black wire. Remove the connector.

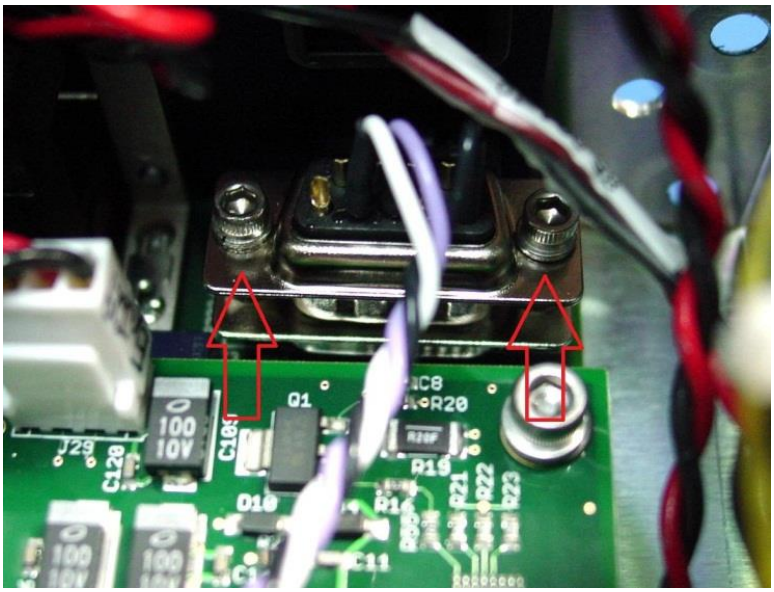

Figure 5: Remove 9-pin Connector

9. Remove the TEC Card as much as possible by lifting up and away from the standoffs in which it is attached.
10. With a screwdriver, loosen the screws holding the red wire and black wire into **JP7**. Remove the wires from **JP7 shown in Figure 6**.

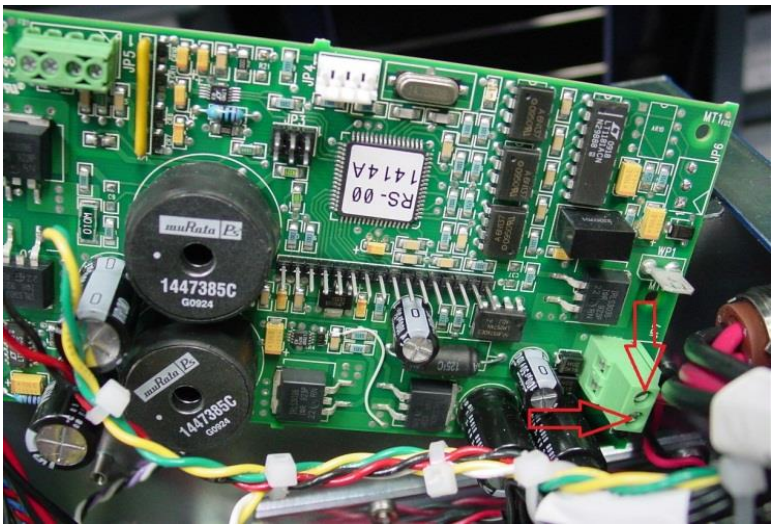

Figure 6: Partially Remove Board and Loosen Screws on **JP7**

11. Take note of the path of the purple, white, and black wires connected to the 9-pin connector. Remove the board with this cable attached out of the eDrive.

12. Install new board partially into the eDrive. Route the purple, white, and black cable as it was when the old board was removed. Attach the 2 screws and lock and flat washers holding the 9-pin connector using a 3/32" ball driver.
13. Re-attach the red wire and black wire to **JP7**. The black wire goes in the top location (pin 2) and the red wire goes into the bottom location (pin 1). Tighten both wires into place with a screwdriver.
14. Align screw holes on the board with the standoffs in which the board mounts to. Using a 3/32 ball driver, install and tighten the (4) 4-40 screws with lock and flat washers through **MT1**, **MT2**, **MT3**, and **MT4**.
15. Re-attach the red wire and black wire to **JP1**. The black wire goes in the left location (pin 2) and the red wire goes into the right location (pin 1). Tighten both wires into place with a screwdriver.
16. Re-attach the green wire and yellow wire to **JP5**. The green wire goes in the third from the left location (pin 2) and the yellow wire goes in the far right location (pin 1). Tighten both wires into place with a screwdriver.
17. Ensure all connectors on and around the TEC board are attached and tight.
18. Re-install the cover.
19. The eDrive is now ready to be re-connected and operated.