

Installation of the Dual Control Relay Assembly (DCRA) (FMU 2500/3500 Plus)

CAUTION This procedure should not be attempted in a rainy environment!

This product bulletin describes how to remove the existing Pump Relay Board (STS Part ID: 198663-30) and install the Dual Control Relay Assembly (DCRA) (STS Part ID: 233560). The Dual Control Relay Assembly (DCRA) will allow the FMU to control up to 2 control devices per hose position such as motor/turbine starter contactor coils, solenoid valves, or anti-siphon valve coils. The Dual Control Relay Assembly (DCRA) was designed for low current applications. Therefore, you must not control any type of motor/turbine directly. This board will control up to 4 hose positions A–D or E–H per board. Each FMU can be outfitted with up to 2 Dual Control Relay Boards. Therefore, each FMU can control up to 8 hoses. The Dual Control Relay board provides a second terminal on the board itself to control a motor/turbine starter contactor, anti-siphon valve, and other components.

CAUTION This board was designed to control components with low current not to exceed 2 amps per component. Do not control motors directly!

Removal of existing Pump Relay Board(s) (STS Part ID: 198663-30)

1. Open the lower pedestal door. Remove power to the FMU.
2. Remove the upper and lower access covers above and below the manual mode switches.
3. Disconnect the ribbon cable in JP-2 and the 10-pin connector labeled K-1 through K-4.
4. Remove the existing Pump Relay Board(s) (Part Number 198663-30).

Removal of existing manual mode switches (STS Part ID: 198445)

1. Disconnect the 4 pin connectors in J11, J12, J13 etc. located on the Pedestal I/O (Ped I/O) Board for each manual mode switch used.

Remove the manual mode switches mounted to the switch panel in the FMU pedestal.

Installation of the Dual Control Relay Assembly (STS Part ID: 233560)

1. Install the Dual Control Relay Assembly(ies).
2. Reconnect the ribbon cable in JP-2 and the 10-pin connector labeled K-1 thru K-4.

Installation of the Dual Control manual mode switches (STS Part ID: 234397)

1. Install the Dual Control manual mode switches to the switch panel located in the FMU pedestal.

2. Connect the 4-pin connectors of the manual mode switch to J11, J12, J13, etc. located on the Ped I/O Board for each manual mode switch used. Be sure the switches correspond to the correct hose position – for example, switch 1 into J11 for hose 1, switch 2 into J12 for hose 2, etc.
3. Connect the 2-pin connectors of the manual mode switch to J1, J2, J3, etc. located on the Dual Control Board. Be sure the switches correspond to the correct hose position – for example, switch 1 into J1 for hose 1, switch 2 into J2 for hose 2, etc.

Control Connections

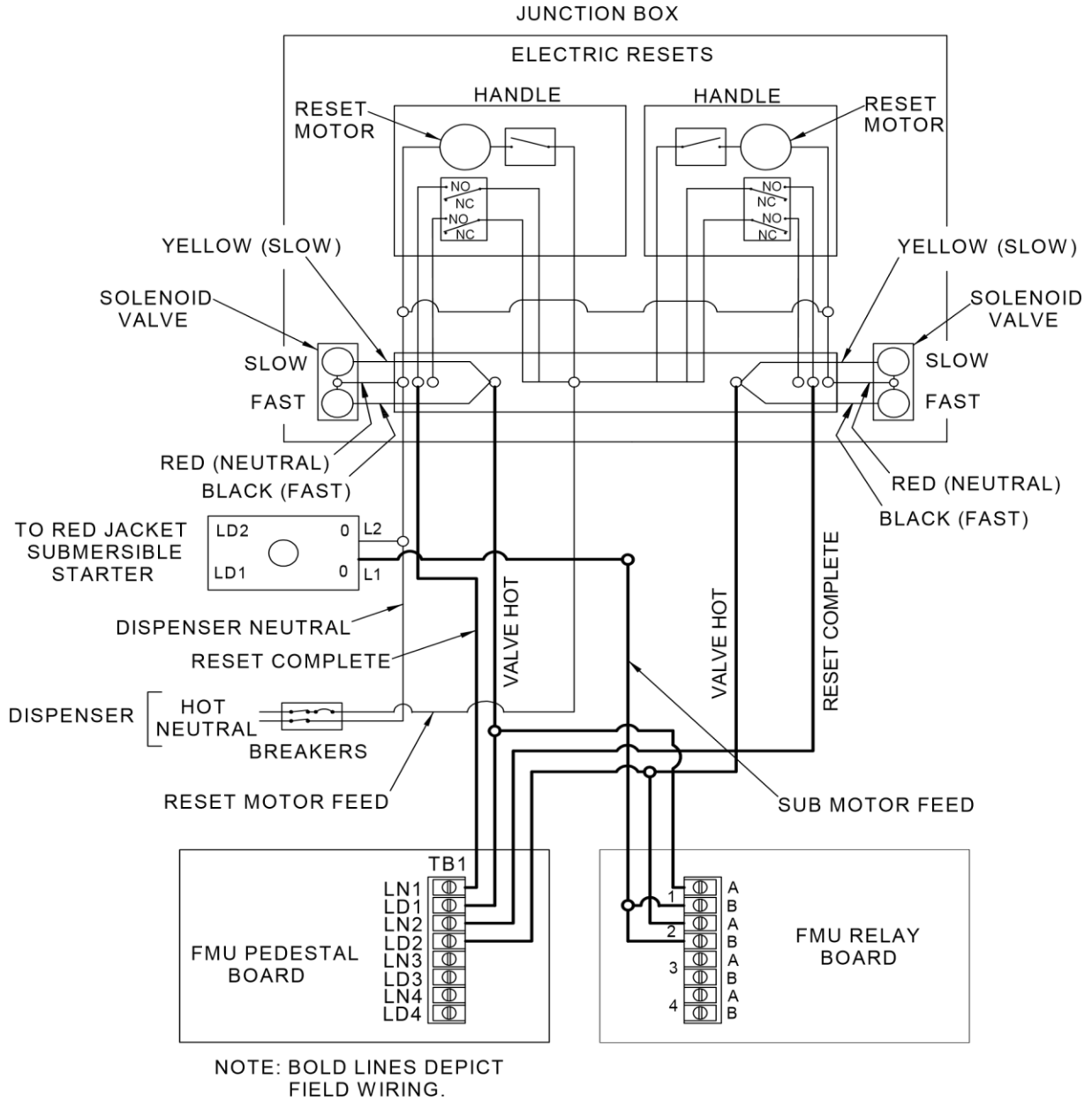
1. Pulling wires - Pull 3 wires into the FMU pedestal for each hose to be controlled. The three wires are:
 - a. Hot from reset complete for pump handle sensing and source.
 - b. Valve Control (hot lead) to control power to the valve.
 - c. Motor/Turbine starter contactor (hot lead) to control power to the motor/turbine.
2. Connect the wires from reset complete (dispenser) to the LN positions located on the Ped I/O Board (FMU): LN1 for hose 1, LN2 for hose 2, etc.
3. Connect the wires from the solenoid valve control(dispenser) to the LD positions located on the Ped I/O Board (FMU): LD1 for hose 1, LD2 for hose 2, etc.

NOTE

Relay power for the 1A, 2A, 3A, 4A, terminal positions on the Dual Control Relay Assembly (DCRA) should come from the LD switched power to ensure authorized control to only the related components.

4. Connect a jumper wire from the LD position located on the Ped I/O Board to the corresponding A terminal on the Dual Control Board. For example, LD1 to 1A, LD2 to 2A, LD3 to 3A, etc.
5. Connect the B terminals of the Dual Control Board to the motor/turbine starter contactor. Remember: Do NOT connect these wires directly to the motor/turbine. These should only be connected to a contactor coil.

The following diagram outlines the scenario of controlling dispenser solenoid valves and a single submersible turbine starter relay to ensure the turbine only runs when the hose positions are authorized.



6. Replace the upper and lower access covers above and below the manual mode switches.
7. Restore power to the FMU and close the lower pedestal door. Refer to the FuelMaster Installation Manual for proper testing guidelines.