Adding a Thermal Protector to the MCU Motor

Document number: 719-00626A-A

Products

- Magnus VLF MCU
- Trendssetter VLF AL

FCO

CA08833

Priority

Next visit

Background

The addition of a thermal protector on the MCU motor is required to meet regulatory requirements.

Solution

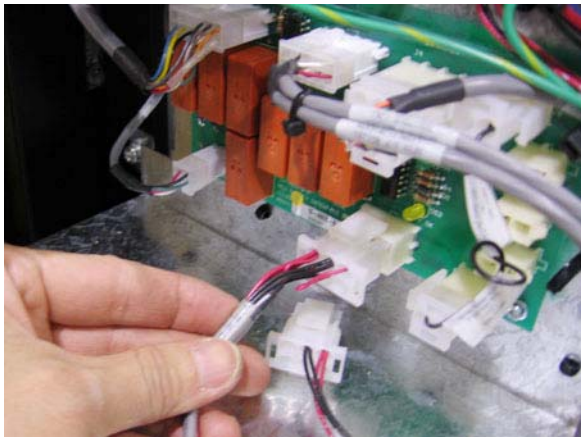
Install the thermal protector on all MCU motors that do not have one installed.

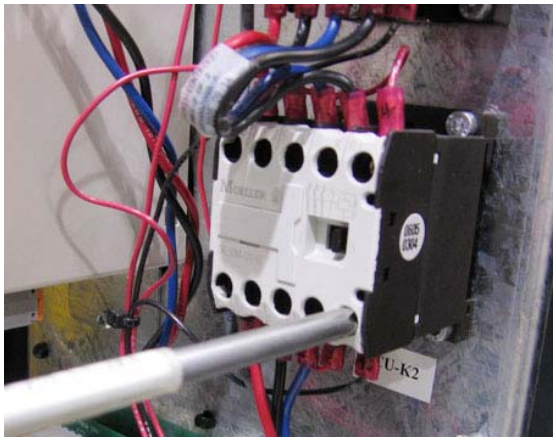
Parts required

Part Number	Part Name	Quantity
512-00324A	Thermal Interrupt upgrade kit	1

Upgrade Procedure

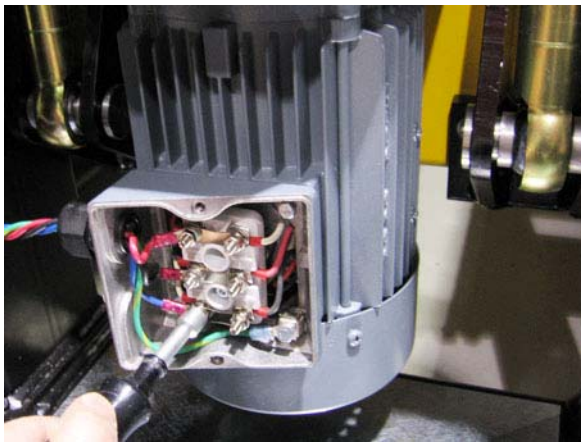
1. Turn the power to the MCU off.
2. Open the MCU doors at the rear of the MCU. The controller, safety interface board, and contactors K1 and K2 are mounted on the MCU bracket to the left of the power box.
3. Disconnect cable 220-00279A from the safety interface board (J5) and from the contactors K1 and K2. Remove the cable from the MCU.
4. Connect one end of the replacement cable 220-00279B to J5 of the safety interface board and the red and black wires to contactors K1 and K2.



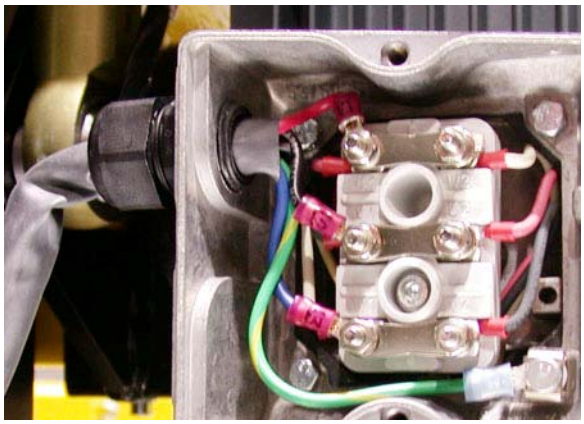


5. Route the loose end of cable 220-00279B to the MCU motor.
6. Remove the MCU motor terminal block cover.

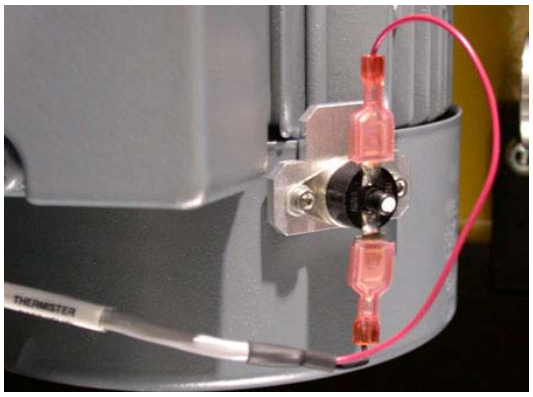
7. Note the connections by color on the terminal block, undo the terminal screws, and pull the cable from the terminal block through the strain relief.



8. Slide the heatshrink tube (18-3042) over the cable and tie the open end of the heatshrink furthest away from the motor with a cable tie. Feed the cable and heatshrink through the strain relief into the motor terminal block and reconnect the pins to the terminals as they were before.



9. Install the motor terminal block cover.
10. Install the thermal protector onto the motor:
    a. Remove the screw at the right hand side of the motor terminal block.
    b. Mount the T-plate (252-10025A) with a M4 flat screw (52-4024) onto the motor in place of the screw you just removed.
    c. Mount the thermal protector to the T-plate with two M3 screws and washers (52-7205 and 52-4003).
    d. Connect cable 220-00279B to the thermal protector terminals.



11. Use cable ties to neatly secure the loose cables and wires.

Testing the MCU Motor Direction

1. Turn on the power to the MCU.
2. Use the manual jog panel to move the MCU forks up or down. If the forks move in the correct direction, then the motor wiring is correct. If the MCU forks move in the wrong direction, then the wiring at the MCU motor must be changed.



3. Turn off the power to the MCU and remove the motor terminal block cover.
4. Switch the top two wires (the red and black wires) around.
5. Install the motor terminal block cover and turn on the power to the MCU.
6. Using the manual jog panel, check if the MCU forks are moving in the correct direction.

Adding a Thermal Protector to the MCU Motor

See also	Replacing the MCU Motor Controller Replacing the MCU Motor
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