Replacing the MCU Motor Controller

Product

Magnus VLF MCU

FCO

CA07626

Priority

Next Failure

Background

The KEB controller for the MCU drive gear motor is obsolete and the manufacturer will no longer ship them.

Solution

MCU motor controllers that fail in the field must be replaced with the new controllers.

When replacing a KEB controller, also install the thermal fuse upgrade if it has not already been done. See FCO CA08833.

Time required

Parts required

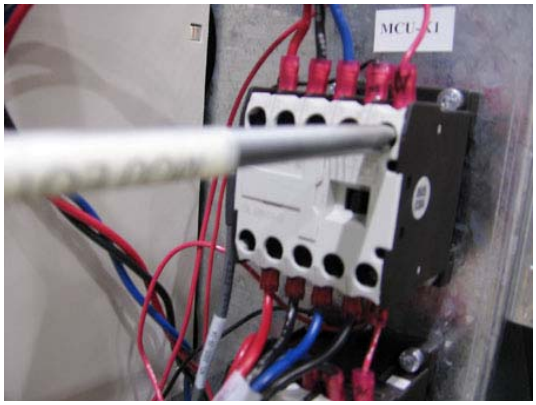
Part Number	Part Name	Quantity
512-00313A	FCO CA07626 upgrade kit	1

Tools required Service tool kit

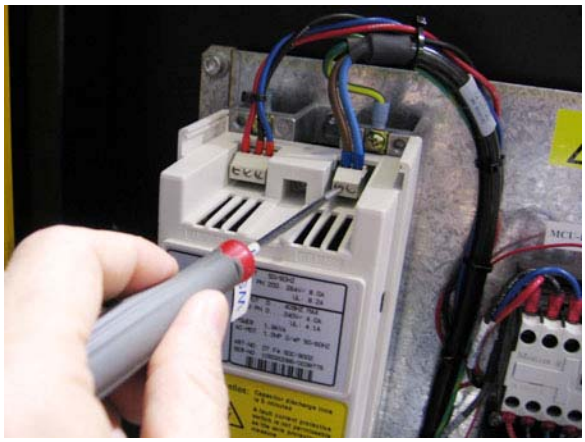
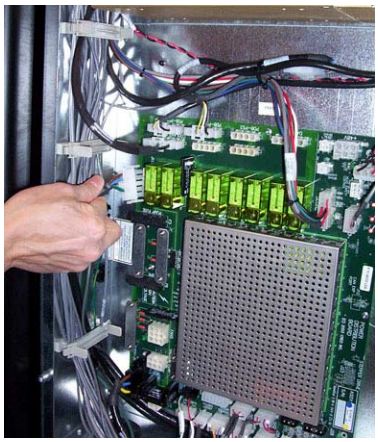
Removing parts

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. Remove the MCU power box cover for access to the power distribution board (PDB) and cables.
4. Disconnect cable 220-00278B from the controller and the contactor K1. Remove the cable.

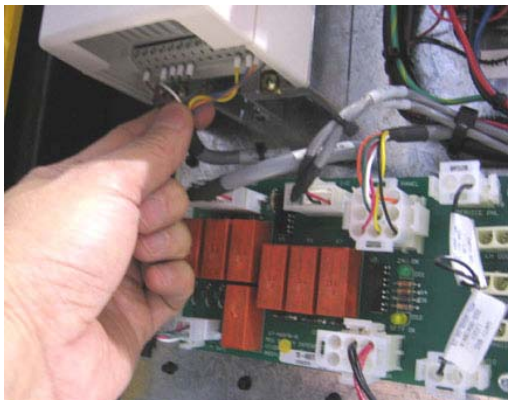
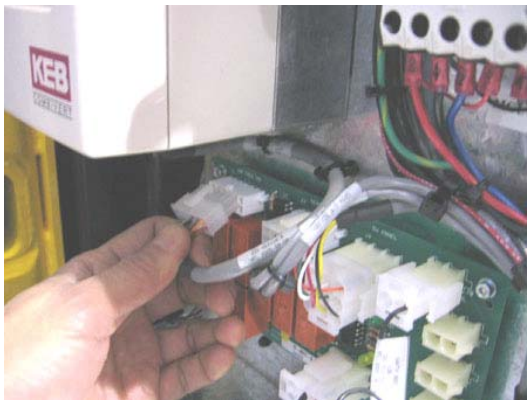




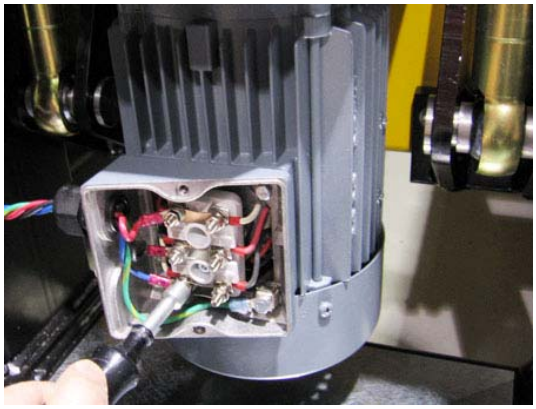
5. Disconnect cable 220-00272A from the controller and from the PDB (J15) inside the MCU power box. Remove the cable.

6. Disconnect cable 220-00311A from the bottom of the controller and from the safety interface board (J2). Remove the cable.

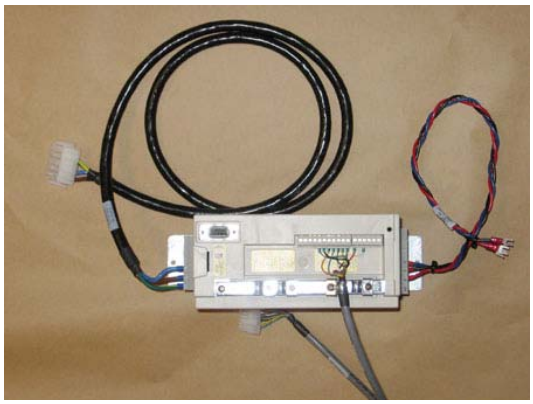
7. Remove the MCU motor terminal block cover.
8. Disconnect cable 220-00283A from the contactor K2, from the ground stud at the controller, and from the motor terminal block. Remove the cable.



9. Remove the two M4 screws that secure the controller to the MCU bracket—one at the top and one at the bottom. Remove the controller.

Installing parts

1. Mount the new KEB controller (601-00052) onto the adapter plate (252-09215A).
   Note: The adapter plate may already be mounted to the controller.
2. Remove the controller's front cover and connect cables 220-00272B, 220-00278B, and 220-00311B to the controller contacts. Install the front cover.



3. Mount the assembled controller to the MCU bracket with two M4 screws and washers.



4. Route and connect the following cables from the controller:
   a. Cable 220-00272B to the PDB (J15).
   b. Cable 220-00278B to contactor K1.
   c. Cable 220-00311B to the safety interface board (J2).

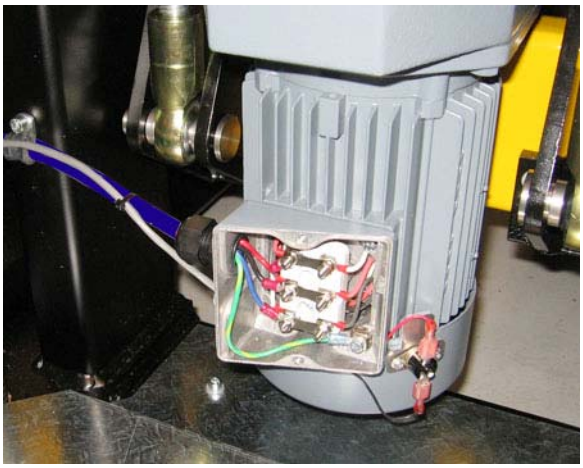


5. Install cable 220-00283B:

   a. Connect the cable to contactor K2 (pin 2, 4 and 6 as marked on the terminals) and connect the ground wire to the PE terminal of the controller. Route the other end of the cable to the motor side.



   b. Connect the cable to the motor terminal block.



6. Install the motor terminal block cover.
7. Use cable ties to neatly secure the loose cables and wires.

Testing the MCU Motor Controller

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 and the controller is working.
   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 the power to the MCU on.
6. Using the manual jog panel, check if the MCU forks are moving in the correct direction.

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