Kodak

Magnus VLF MCU

Replacing the MCU Jackscrew Motor

18 Apr 2007

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1. OVERVIEW

This procedure describes how to replace the new braked type jackscrew motor. If the motor being replaced is an old type motor (part #184-00016), then the MCU motor must be upgraded according to FCO CA10533. See document 719-00727A: *MCU Braked Motor Upgrade*.

Estimated replacement time is 1 Hr.

2. REPLACING THE MOTOR

2.1 Removing the Motor

1. Open the MCU rear doors and turn the safety interlock override switch to **Safety Interlock Override** .
2. Turn the manual jog panel switch to **Manual Jog Mode**.
3. Using the manual jog panel, lower the forks onto wooden blocks.
4. Turn the device power to **OFF** and use the approved lockout procedure to secure the device. Disconnect the voltage supply connector from the wall supply.
5. Remove the cable clamp that fastens the motor cable to the MCU frame.

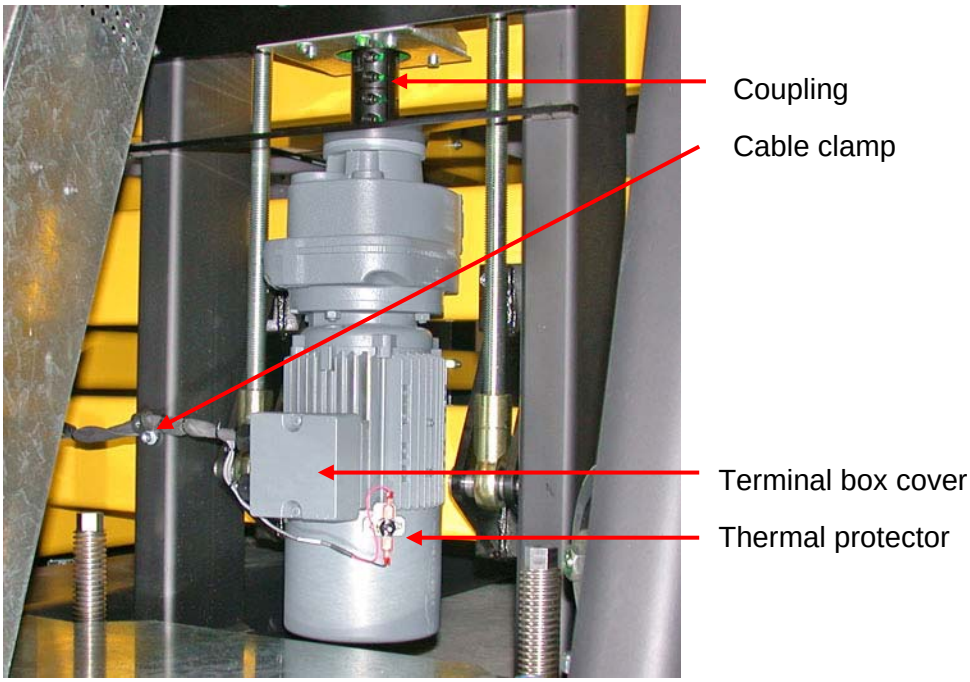


Figure 1: MCU jackscrew motor components

6. Put a piece of foam or wood under the motor to support it when the coupling screws are loosened.

WARNING: Take care not to get your hands or fingers pinched between the motor and MCU frame when removing the motor.

7. Loosen the lower four coupling screws that attach the coupling to the motor shaft. When the shaft becomes loose in the coupling, the motor will drop under its own weight onto the foam or wood.

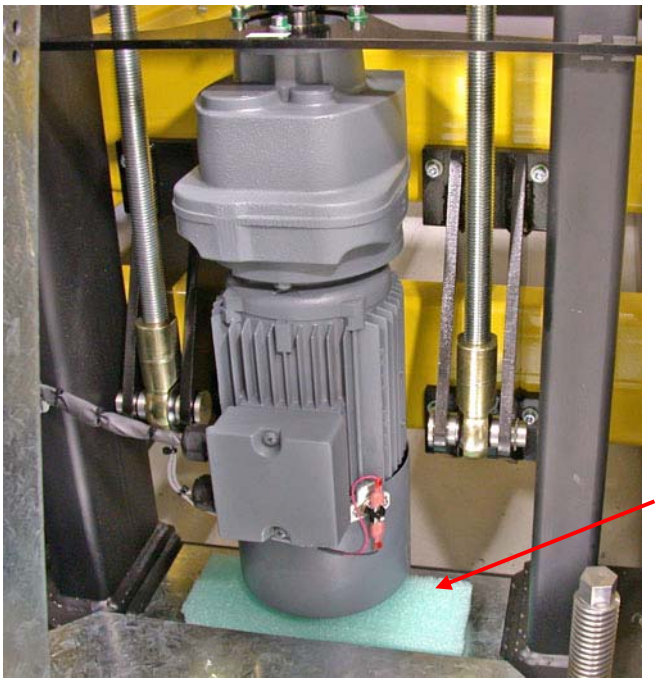


Figure 2: Removing the MCU motor

8. Move the motor closer so that the wires and top bracket can be removed.
9. Remove the bracket on top of the motor—four screws.
10. Remove the terminal box cover on the motor—two screws. Take note of the wire connections inside the terminal box.

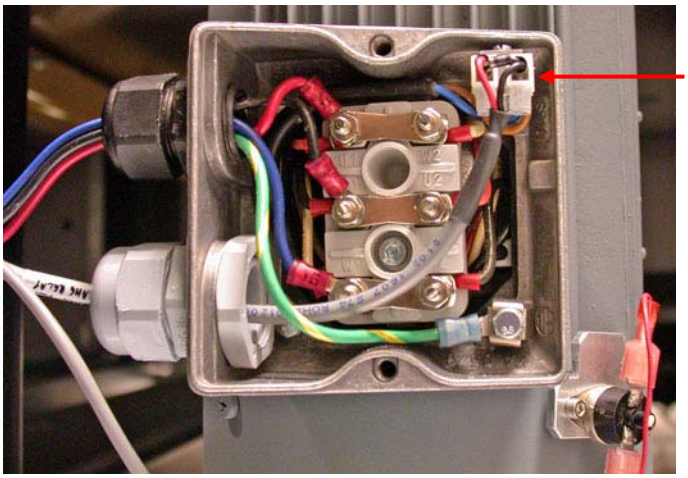


Figure 3: MCU motor connections

11. Remove the motor completely. To do this:

    a) Disconnect the four power wires from the terminal box and screw out the upper strain relief for those wires,

    b) Disconnect the two brake wires from the terminal block and screw out the lower strain relief for those wires,

    c) Pull the wires out of the terminal box,

    d) Disconnect the two wires on the thermal protector located next to the terminal box.

12. Remove the coupling from the jackscrew shaft—two screws.

2.2 Installing the Motor

1. Attach the top bracket using the four screws and washers removed earlier.
2. Place the coupling onto the braked motor shaft, but do not tighten the coupling screws yet.
3. Open the braked motor terminal box cover. On the terminal box, screw the power cable strain relief into the upper port and run the four power wires through that strain relief.
4. Connect the motor power cables in the exact same configuration that they were in before. See Figure 3: MCU motor connections.

Note: Ensure that the metal links that connect the incoming power wires with the internal motor wires are installed.

5. Screw the brake cable strain relief into the lower port and run cable 220-01799A through that strain relief.
6. Connect the two ferrules from cable 220-01799A to the brake terminal block inside the terminal box—ensure they are inserted as far as possible and use a screwdriver to tighten the terminal block connectors. Polarity does not matter for this connection.

Note: The two strain relief fittings may look different to those shown in the Figure 3.

7. Install the terminal box cover.
8. Connect the two wires to the thermal protector.
9. Install the braked motor:

    a. Angle the motor shaft and coupling in underneath the jackscrew shaft so that the jackscrew shaft is in the coupling.
    Because the braked motor is longer than the old motors, the coupling must be loose to be able to get the motor in underneath the jackscrew shaft.

    b. Slide the coupling up so that the jackscrew shaft is centered in the coupling and tighten the top two screws that hold the coupling to the jackscrew shaft.

c. Use a piece of wood and a suitable bar to lever the motor upwards until the bottom of the jackscrew and the top of the motor shaft are 1 mm apart inside the coupling. Use your other hand to guide the motor shaft into the coupling.



Figure 4: Installing the MCU motor

d. While holding the motor up with the lever, tighten two of the screws on the jackscrew coupling with the other hand. Rotate the jackscrew, and tighten the other two screws. The screws must be tightened to 19 N m.



Figure 5: Tightening the coupling screws

10. Install the cable clamp to fasten the motor cables to the MCU frame.

2.3 Checking the Motor Direction of Travel

1. Turn the device power to **ON.**
2. Using the manual jog panel, raise the forks off the wooden blocks and remove the blocks. Use the **Up** and **Down** buttons to check that the motor direction of travel is correct. If the MCU forks move in the wrong direction, then the wiring at the jackscrew motor must be changed.
3. Turn the device power to **OFF** and use the approved lockout procedure to secure the device.
4. Remove the motor terminal block cover and switch the red and black wires around.
5. Install the motor terminal block cover and turn the device power to **ON**.
6. Using the manual jog panel, check if the MCU forks are now moving in the correct direction.
7. Turn the manual jog panel switch back to **Autoloader/Semi-Automatic mode**.
8. Close the MCU rear doors and turn the safety interlock override switch to **Normal Operation**.