

## 1. INTRODUCTION

This Instruction Sheet describes installation of the APT 5 Stepper Motor Kit (PN 2335312-1); a field replacement for the MDrive stepper motor used on TE Connectivity APT 5 machines. The kit contains a Lexium MDrive stepper motor, metric specified flex coupling, a motor cover assembly, mounting hardware, and a USB flash drive containing a software update file, a software update instructional video, and a basic CQM II operation instructional video.

## 2. SOFTWARE

The Lexium stepper motor requires a software update (version 3.00.41). Perform this update as follows:



### NOTE

The video file "UpdatingFirmwareOnCqmII.mov" (located on the USB flash drive) may be used for additional guidance on updating the CQM II software.

1. With the machine energized, insert the flash drive into the USB port on the Host Module. Allow a few seconds for the flash drive to be recognized. Once recognized, press "ok".
2. On the host module, press the blue triangle and then the screwdriver/wrench icon.
3. Press "Maintenance", then press "Firmware Update".
4. Press "USB", and select file CqmII\_reinstall\_update\_3.00.41.iso
5. Press "Load".
6. The Host Module screen will display the status of the installation. Depending on the software version currently installed, the process may vary.

Restart the system as directed by the on-screen prompts. If the screen is no longer displaying information or turns "black", power down and remove the flash drive. Power on once again to continue the software update.

7. Once Host Module restarts in either case, the software will finish installing. Once completed, press "Eject USB" button. Remove the USB flash drive.

The software update is complete.

## 3. INSTALLATION PROCEDURE

1. Power off machine
2. Remove (2) M4x6.0 socket head cap screws on top of the motor cover.  
Remove cover.

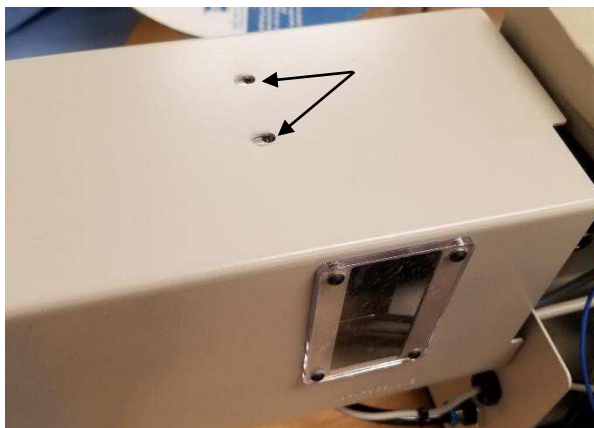


Figure 1

MDrive is a trademark.

- Loosen the M2.5 socket head cap screw securing the flex coupler to the drive shaft.

**IMPORTANT:** Determine the distance between the drive shaft dowel pin and the edge of the motor coupler (see Figure 2). This positioning must be re-established during Step 9.

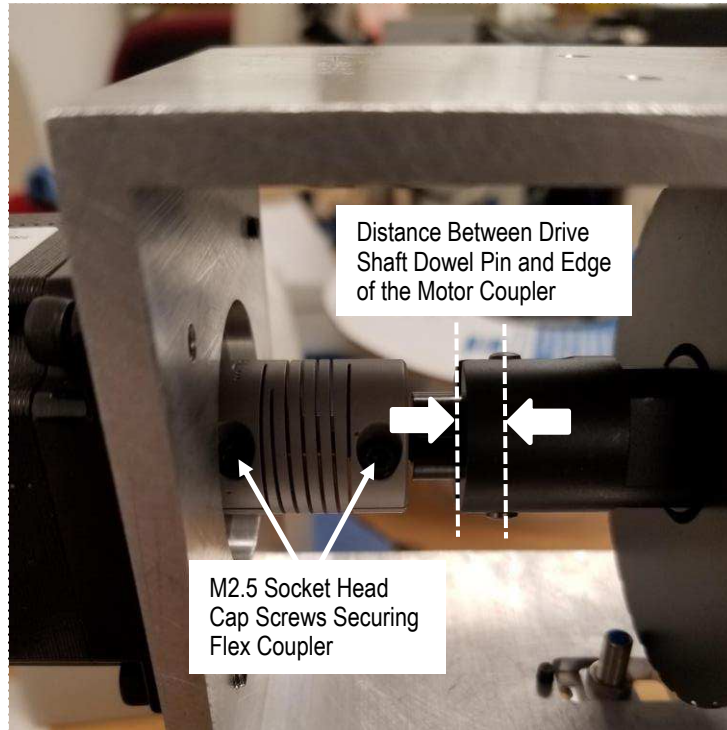


Figure 2

- Unplug the Controller Area Network (CAN) cable connector and Release Power/Proximity Switch cable connections.

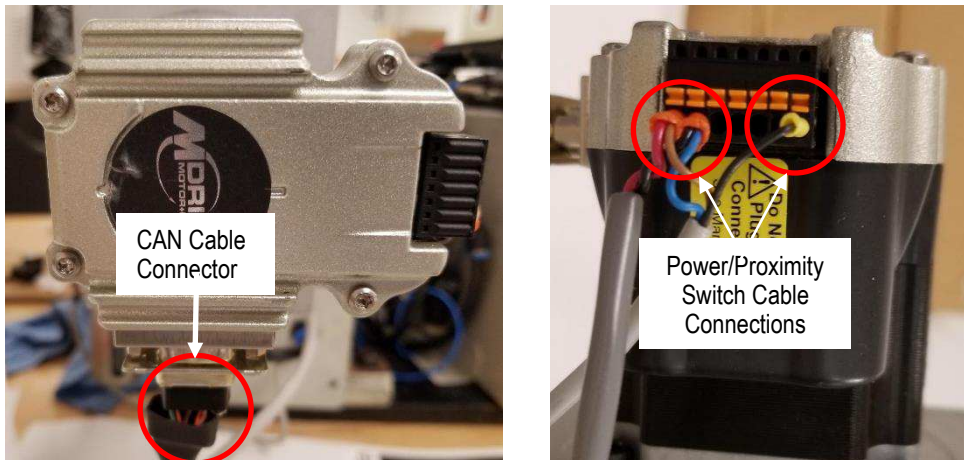


Figure 3

5. Remove (4) M2.5 motor mount socket head cap screws (Figure 4 shows only 3 screws - 1 is hidden). Remove old motor and old flex coupler, leaving drive shaft inserted into the motor coupler.

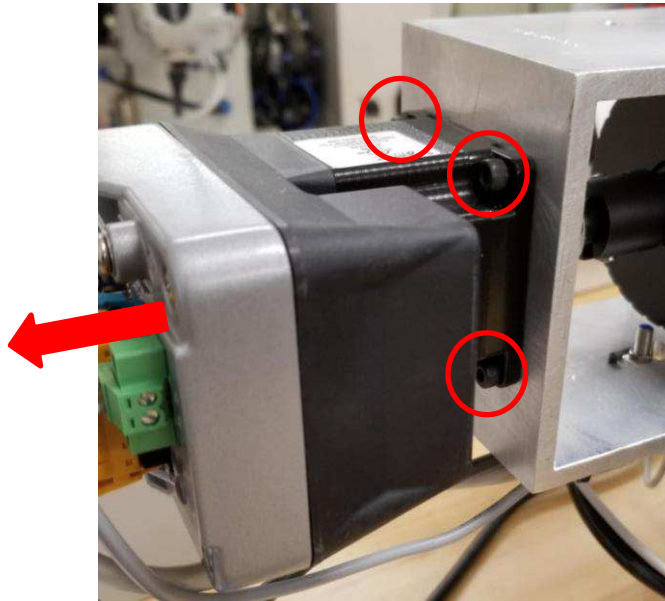


Figure 4

6. Place the new flex coupler into position on the shaft of the new motor. Install (2) M2.5 socket head cap screws into the threaded openings on the coupler and tighten until secure.
7. Install the new motor and flex coupler in the housing as shown in Figure 5 and begin threading the (4) M2.5 motor mount socket head cap screws.



**NOTE**

*As the new motor and flex coupler are installed into the housing, it will be necessary to carefully guide the new flex coupler onto the drive shaft (still located in the motor coupler).*

8. Tighten all 4 motor mount screws until the new motor/flex coupler is secure.
9. Slide the drive shaft inside the flex coupler to the left or right to establish the distance determined in Step 3 between the drive shaft dowel pin and the edge of the motor coupler (reference Figure 5). Once obtained, tighten (2) M2.5 socket head cap screws, securing the new flex coupler to the drive shaft.

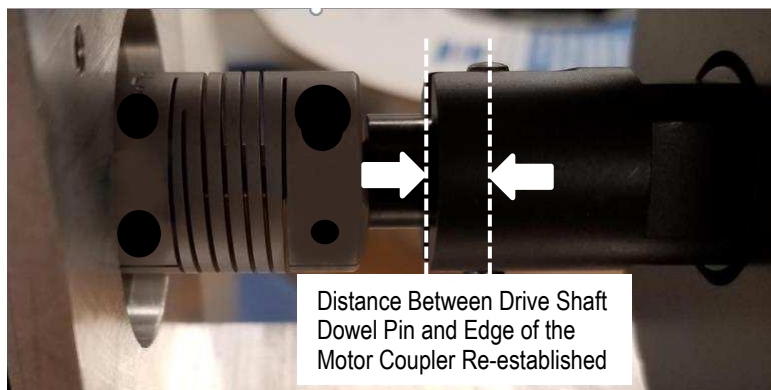


Figure 5

- Carefully pull additional CAN and Power/Proximity Switch cabling through the strain-relief and wire-tie (see Figure 6) to eliminate any tension on the new connections. **Note: Wire-tie may be removed, if necessary.**

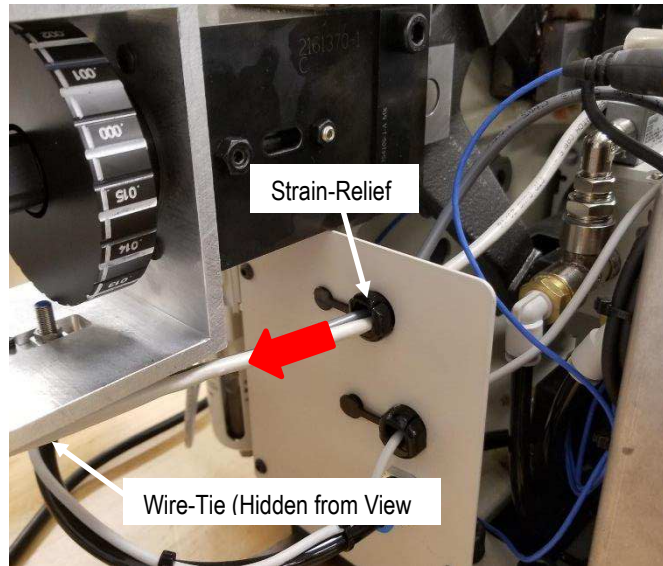


Figure 6

- Plug in the CAN cable connector and insert the Power/Proximity Switch cable connections (reference Figure 7). **Note: \*Green jumper on pin 2 of P1 is pre-installed.**  
Examine cabling for any tension and, if found, increase cable slack immediately.

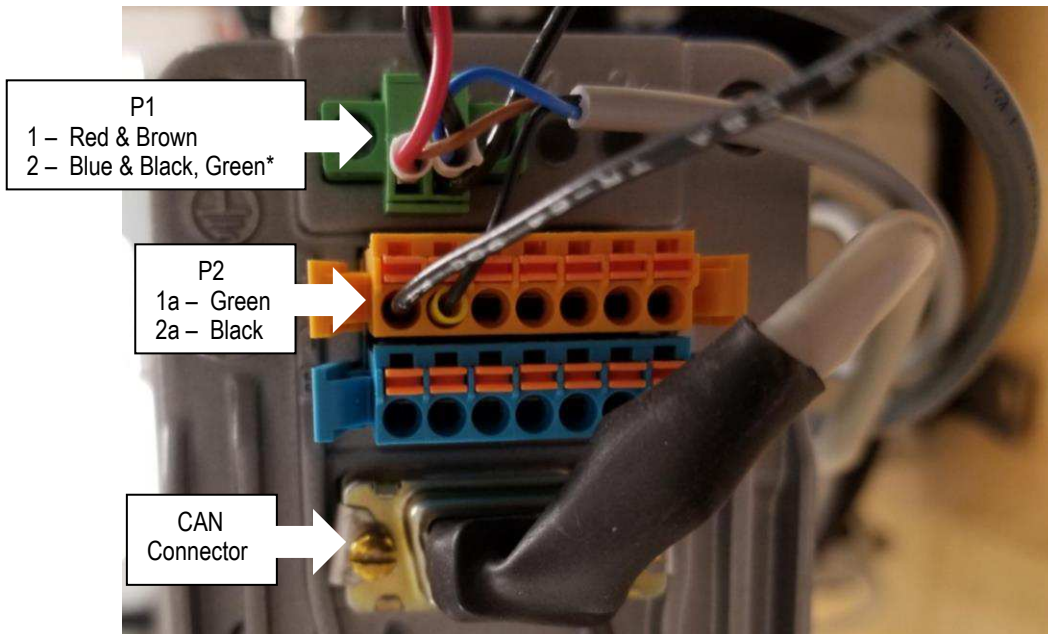


Figure 7

- Install the new motor cover and tighten (2) M4x6.0 socket head cap screws until cover is secure. Field installation of the APT 5 Stepper Motor Kit (PN 2335312-1) is complete.