

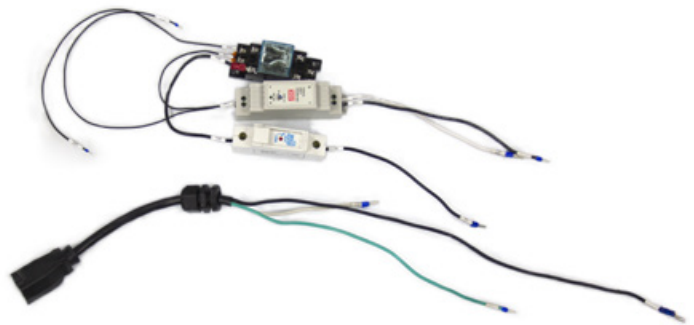
PCNC 440™ Coolant Control Kit

Product Identification: PCNC 440 Coolant Control Kit (PN 37109)

Purpose: This document details installation and use of a coolant control kit on a PCNC 440 mill.

Qty.	PCNC 440 Coolant Control Kit	PN
1	Coolant Power Supply Assembly	—
1	Coolant Relay Assembly	—
1	Coolant Fuse Assembly	—
1	Coolant Outlet Cable w/ Cord Grip	—

NOTE: If any of these items are missing, contact Tormach Customer Service at (608) 849-8381 for a replacement.



Required Tools:

- Flat-head screwdriver
- Phillips screwdriver

Electrical Installation

1. Power off mill according to *Power Off/On Procedure* detailed below.



WARNING! Electrical Shock Hazard: Be sure to power off machine before making any electrical modifications. Failure to do so may result in serious injury or death.

Power Off/On Procedure

Power Off	1. Push red <i>E-stop</i> button in
	2. Click <i>Exit</i> on screen; when prompted click <i>OK</i> to power off
	3. Turn PathPilot® Controller power strip off
	4. Turn Main Disconnect <i>Off</i> (see image at right)
Power On	1. Turn PathPilot Controller power strip on
	2. After software loads, turn Main Disconnect <i>On</i> (see image at right)
	3. Turn red <i>E-stop</i> button clockwise to release
	4. Press green <i>Start</i> button
	5. Click <i>Reset</i> on screen



2. Remove electrical cabinet cover from back of mill; set aside.
3. Remove five Wire Trough covers inside electrical cabinet as shown in **Figure 1**; set aside.

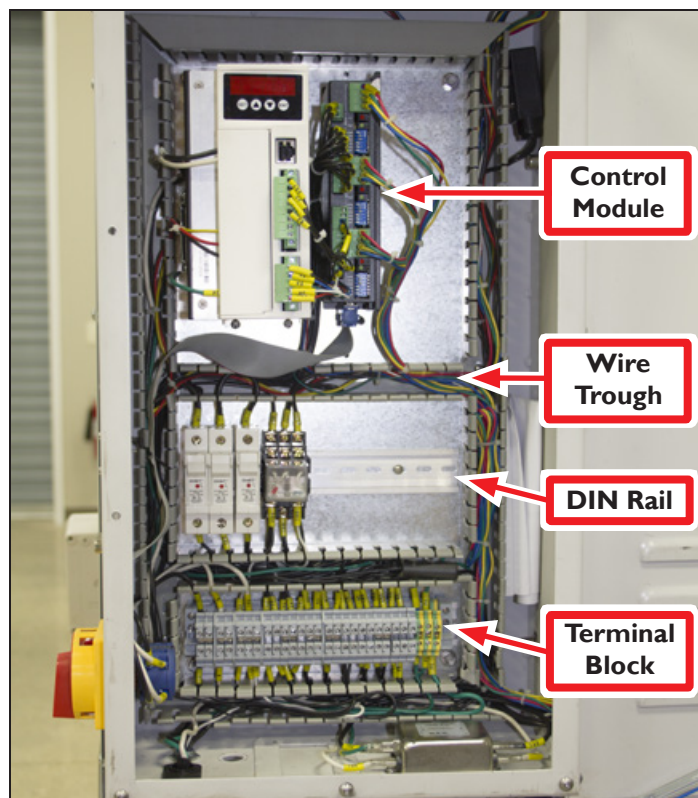


Figure 1

4. Clip Coolant Fuse, Coolant Power Supply, and Coolant Relay into DIN Rail (see **Figure 1** and **Figure 2**).

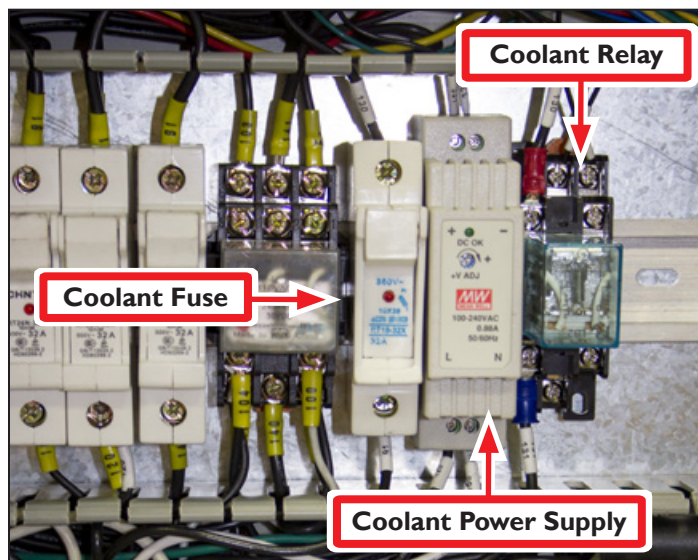


Figure 2

1. Identify loose wire 330 from Coolant Power Supply and loose wire 332 from Coolant Relay; route through wire trough to Control Module (see **Figure 4**).

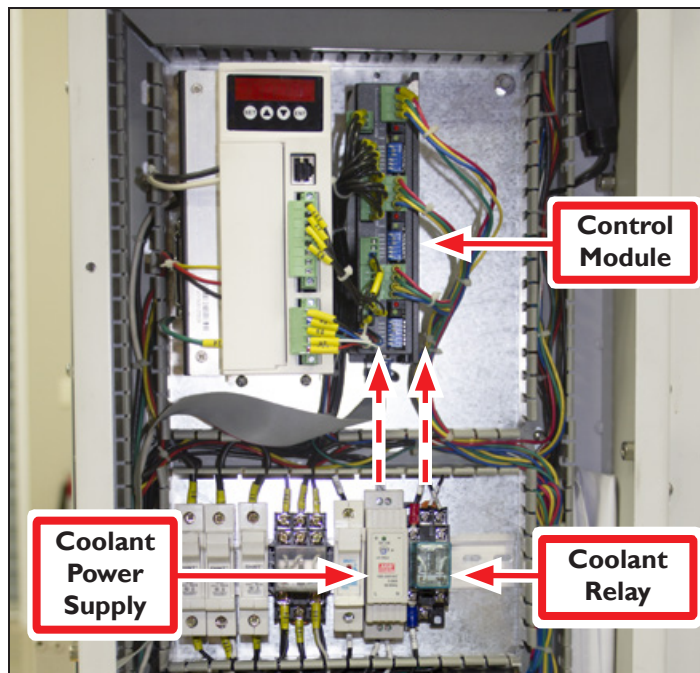


Figure 4

2. Identify two Output Connector Blocks on Control Module as shown in **Figure 5**; remove top Output Connector Block.

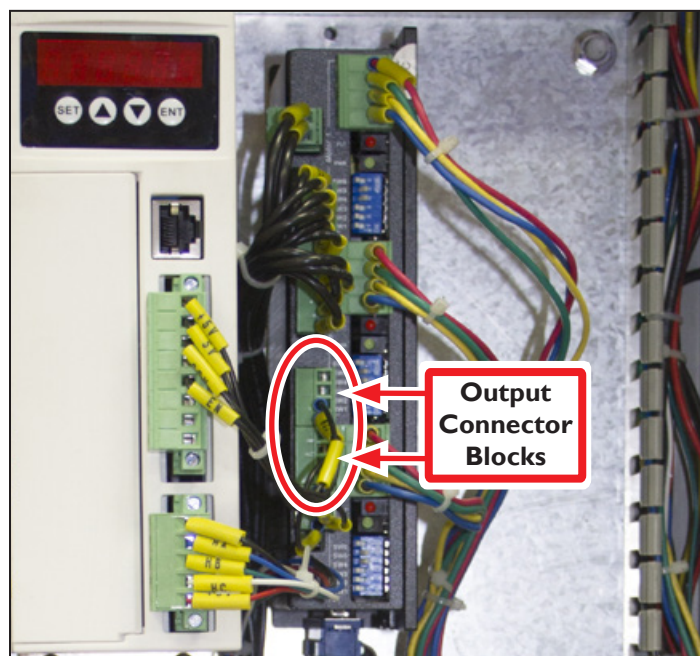


Figure 5

3. Connect wire 330 and wire 332 to the Output Connector Block in open locations shown in **Figure 6**; re-connect assembly to Control Module (see **Figure 7**).

Control Module

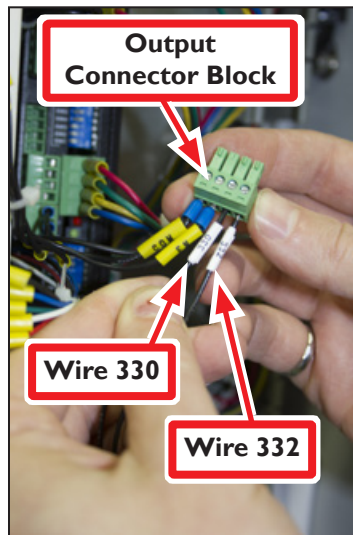


Figure 6

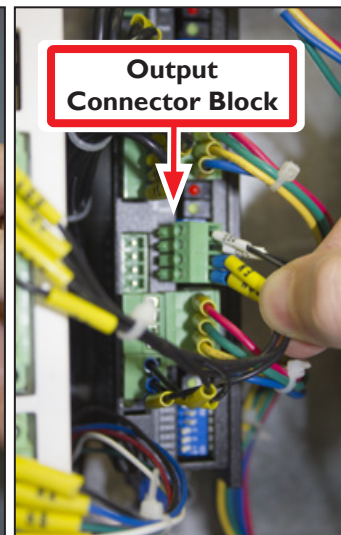


Figure 7

4. Identify wire 91 from Coolant Fuse; route through wire trough and connect to open slot adjacent to pre-installed wire L on upper terminal block (see **Figure 8** and **Figure 9**).
5. Identify wire 100 from Coolant Power Supply; route through wire trough and connect to open slot adjacent to pre-installed wire N on upper terminal block (see **Figure 8** and **Figure 9**).

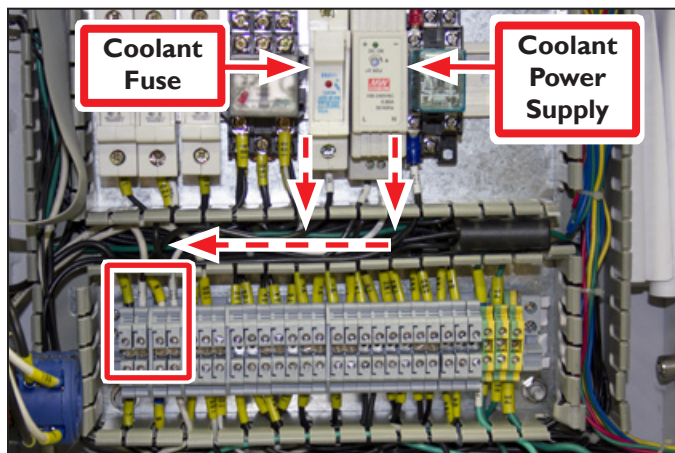


Figure 8

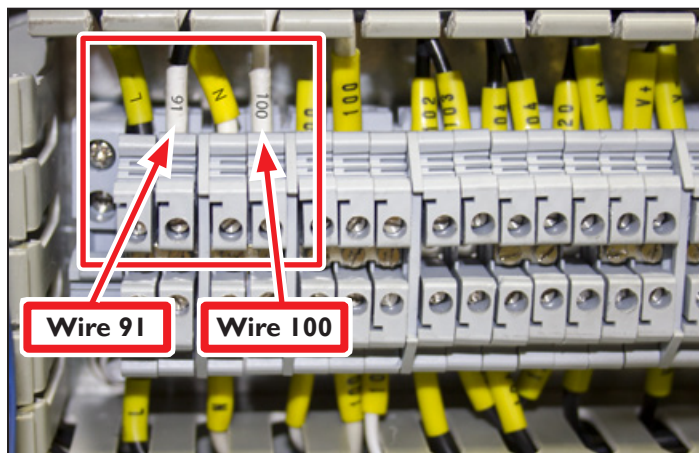


Figure 9

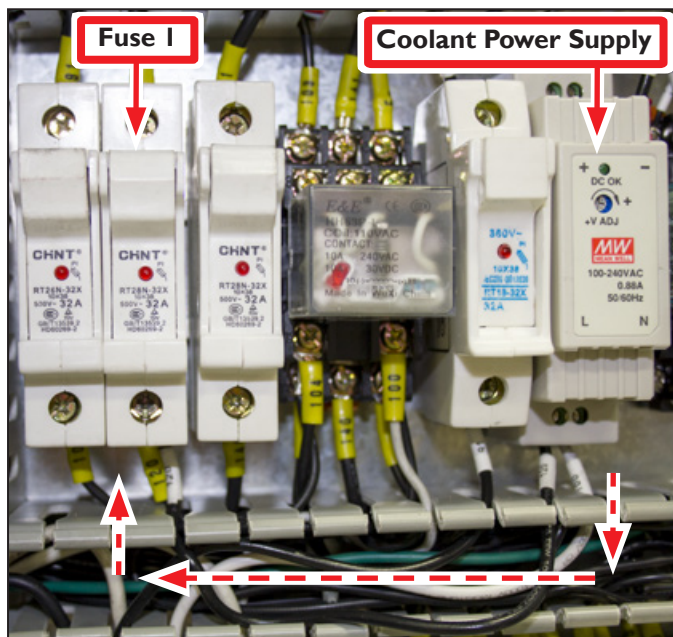


Figure 10

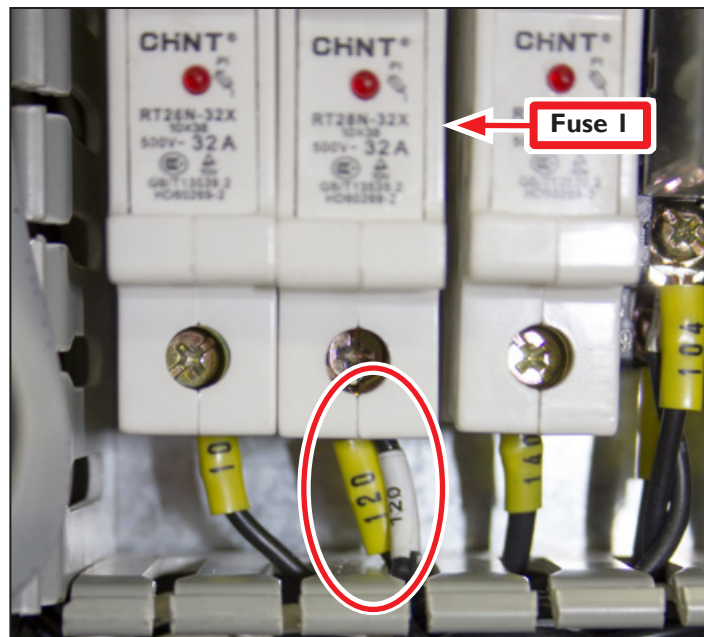


Figure 11

6. Identify wire 120 from Coolant Power Supply; route through wire trough and connect to the corresponding output of Fuse 1 (see **Figure 10** and **Figure 11**).

7. Route Coolant Outlet Cable through base of electrical cabinet as shown in **Figure 12**.

NOTE: Some earlier model mills may have a cord grip pre-installed in the base of the electrical cabinet; for these mills, remove, discard, and replace with the Cord Grip included in this kit.

8. Tighten Cord Grip so that Coolant Outlet Cable does not move while pulled firmly.

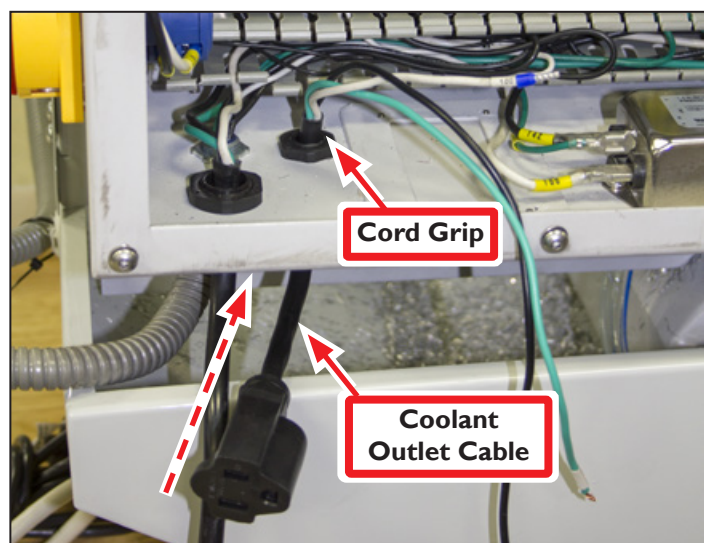


Figure 12

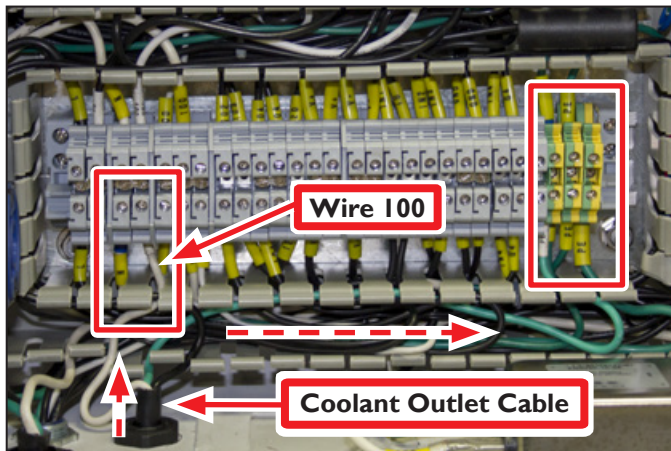


Figure 13

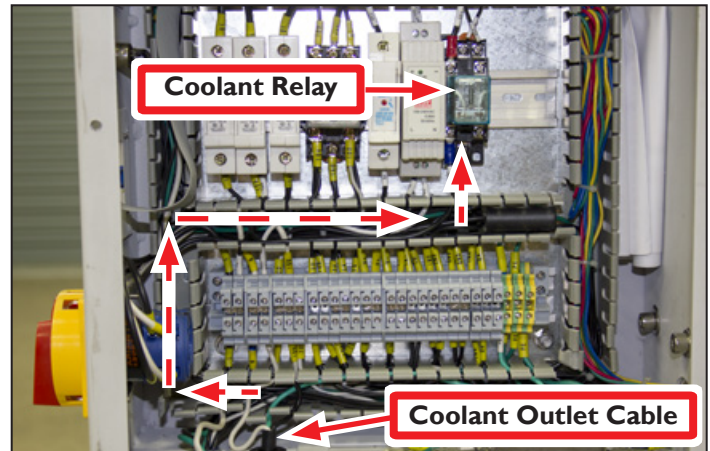


Figure 14

9. Identify the ground, wire 100, and wire 131 on the Coolant Outlet Cable.
10. Route all three wires through wire trough and connect to the locations outlined in the table below:

Coolant Outlet Cable Wire	Connection
Ground	Any open slot in green section of terminal block (see Figure 13)
100	Slot adjacent to pre-installed wire N on lower terminal block (see Figure 13)
131	Screw terminal 3 on Coolant Relay (see Figure 14)

11. Ensure all wires are tucked into wire troughs; re-install wire trough covers set aside earlier.
12. Re-install electrical cabinet cover set aside earlier.
13. Power on mill according to *Power Off/On Procedure* detailed earlier in this document.
14. On the *Main* tab in the PathPilot® interface, click *Coolant* (see **Figure 15**); test coolant control to ensure the PathPilot controller powers the outlet on and off when the *Coolant* button is toggled. If necessary, re-check wire connections and re-test.

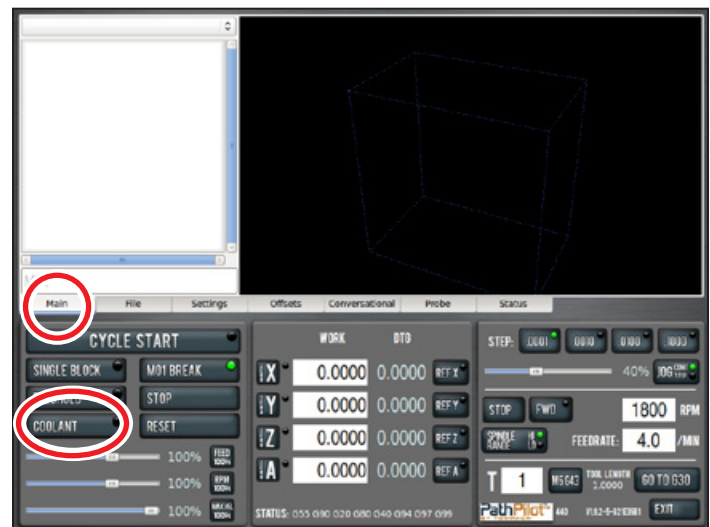


Figure 15