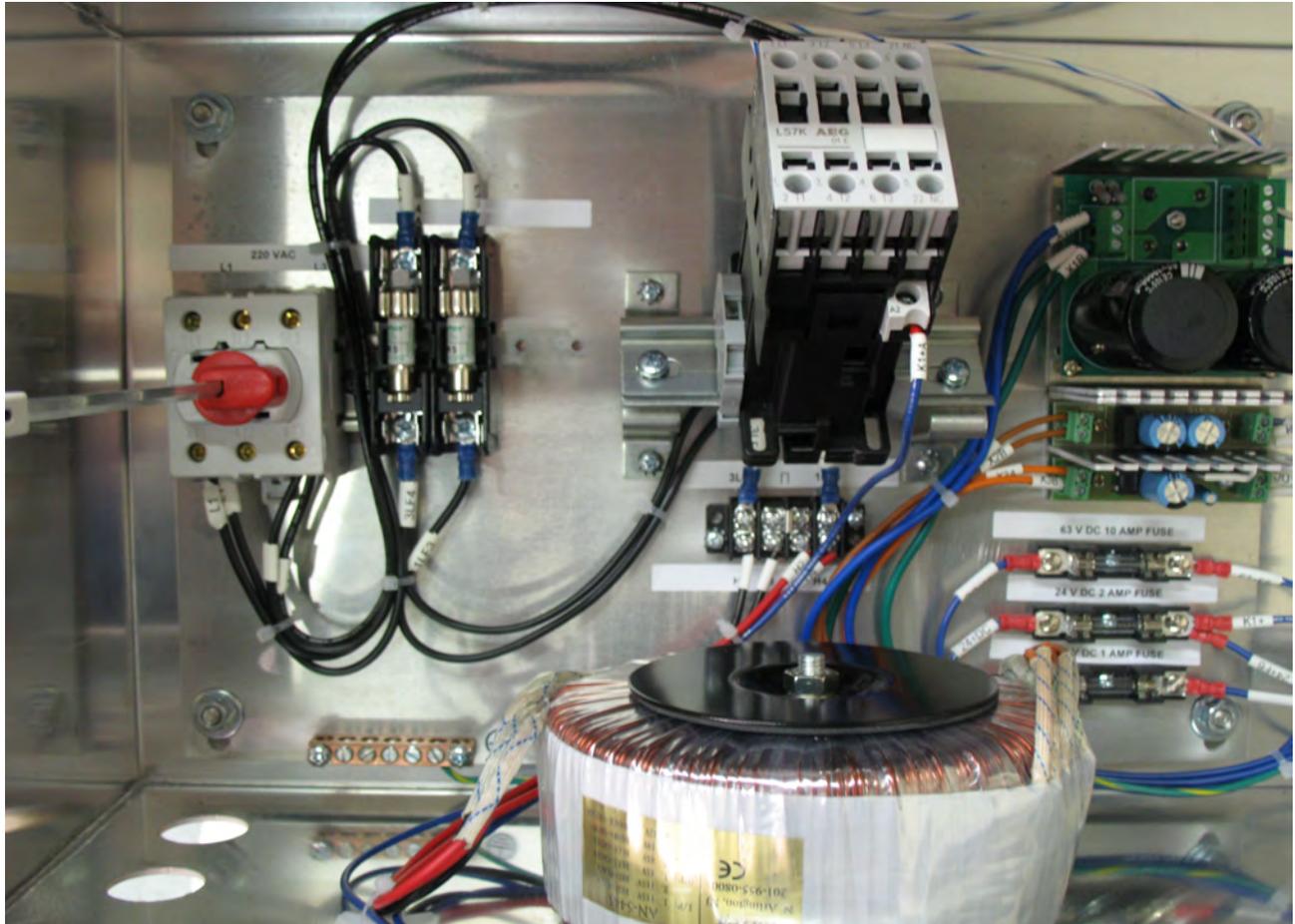


Upgrading from Router to Spindle in the 10270 RBK Control Box



Overview - This document will walk you through the steps needed to change your 110 RBK Router control box over to a Spindle control box. We will be converting the power system from 110v (10270) to 220v single phase spindle (10272) or 220v three phase spindle (10273) depending on the spindle that you purchased. The ShopBot (15355) Router to Spindle Upgrade Kit for RBK control boxes is needed for this conversion.

It is advised that licensed electricians perform this upgrade for liability reasons and local code requirements

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919-680-4800 or 888-680-4466
www.shopbottools.com

Before you Begin



WARNING

ELECTRIC SHOCK CAN KILL

Use extreme caution when working near electrical circuits. Dangerous voltages exist inside the power supply that can cause serious injury or death.

Use extreme caution throughout this installation.

Disconnect the incoming power from your control box. Make sure the power has been shut off at the main panel before opening the door to the control box. We will be running a new 220v circuit to supply power to the box at a future point in this Document. You will be removing the existing contactor and replacing it with the new one from the kit. Make sure that you have the RBK Router to Spindle Upgrade Kit (15355).

(15355) Control Box Standard RBK Router to Spindle Upgrade Kit

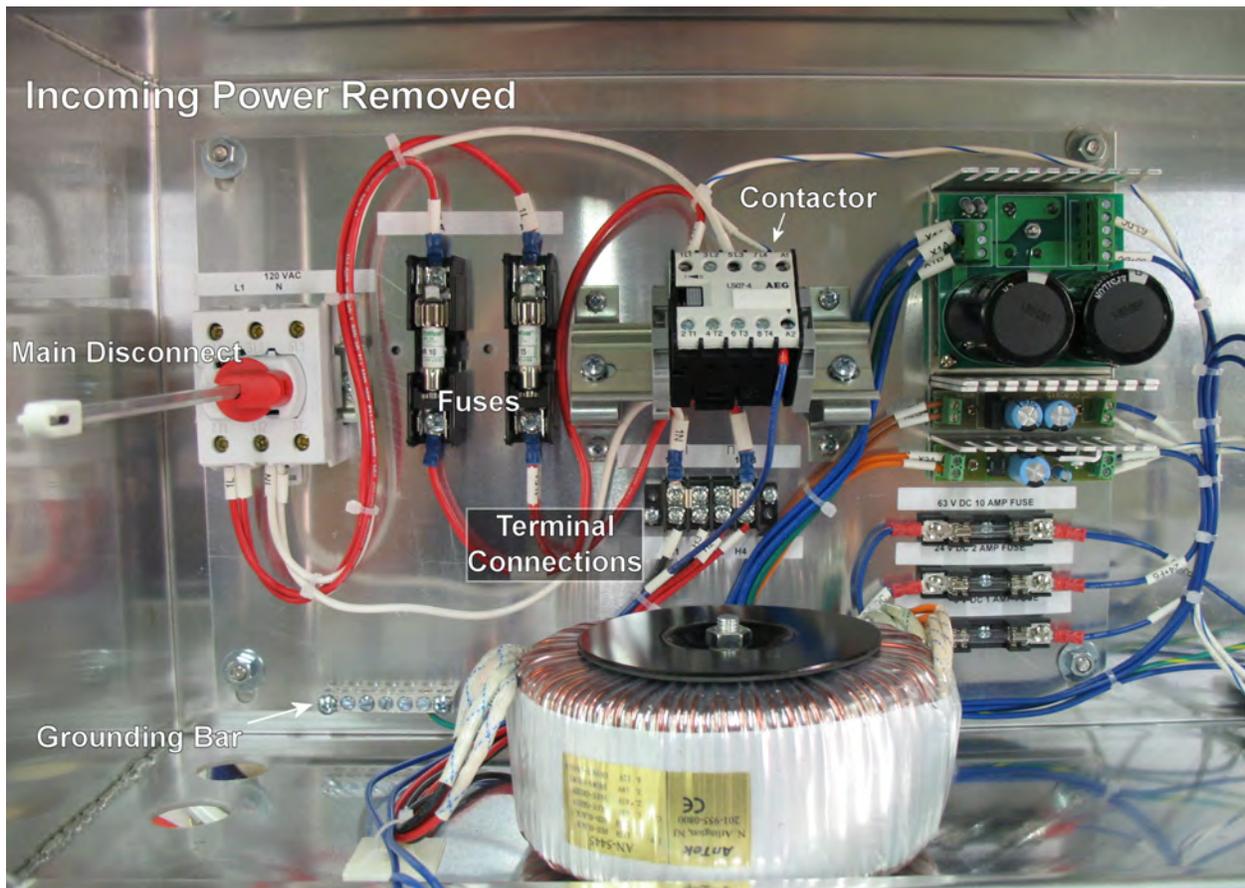
- 1 - (001604) Contactor 5HP 230V 3PH 24V
- 2 - (001893) Fuse 5A, 250V, Fast Blow
- 20' - (002757) Cable 14 AWG Black
- 4 - (003888) Connector Fork 22-16 AWG #10 Stud
- 1 - (Label) 220VAC L1 L3 OR 230VAC L1 L2 L3
- 1 - (Label) Fuse F1 5A F3 5A
- 10 - (002782) 4" NATURAL WIRE TIES
- 1 - (SBG00375) Upgrading from Router to Spindle in the 10270 RBK control box



Disconnecting the Main Disconnect

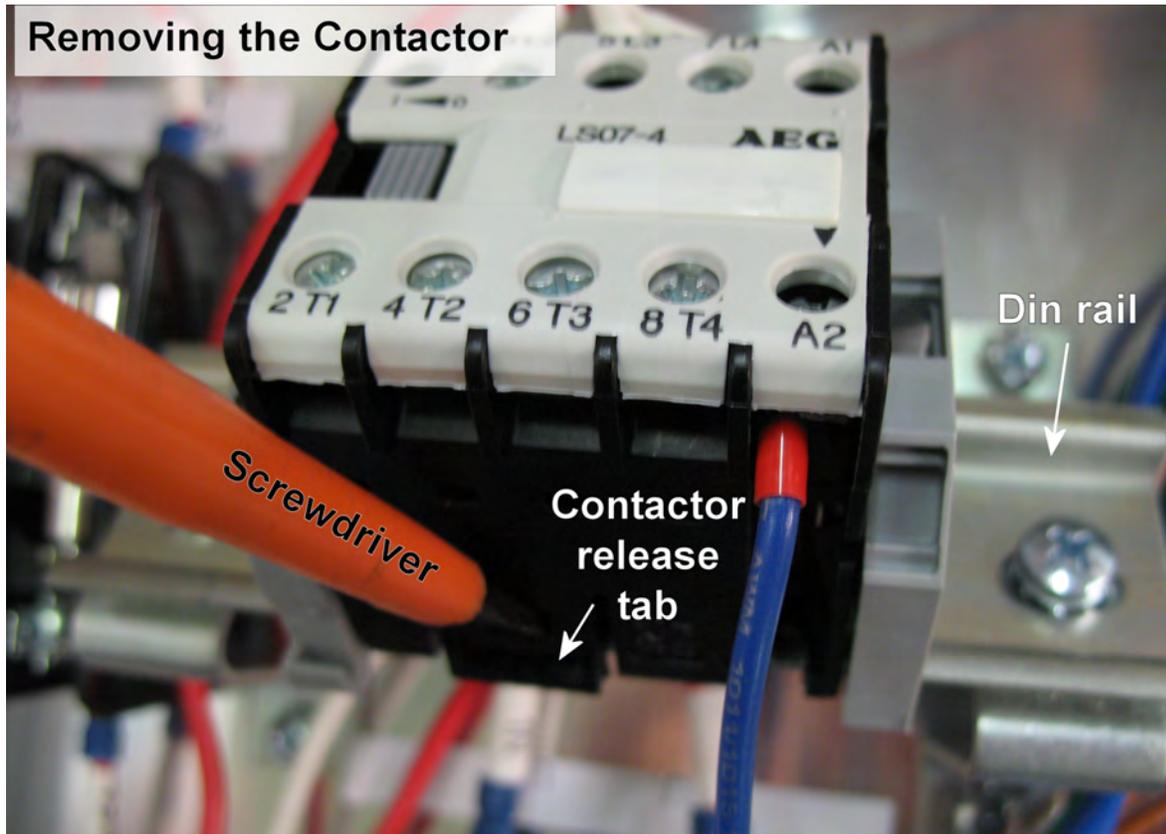
With power to the control box disconnected, open the control box door. Remove the wires that are supplying the power to the top side of the main disconnect switch and ground. The ground from the incoming power will be located on the grounding bar at the bottom of the control box. Remove this cable from the control box. A new 220V single phase line or a 230V 3phase line (based on spindle requirements) will need to be added later in this installation.

At this point remove the voltage sticker that is over the main disconnect (120VAC) and replace it with the label that was provided (220V or 230V). This will help to keep things easily recognizable for future diagnostics.

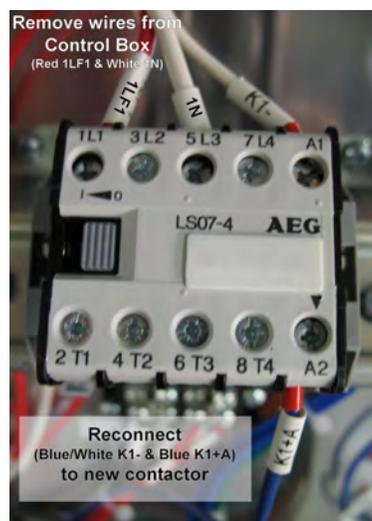


Removing the contactor

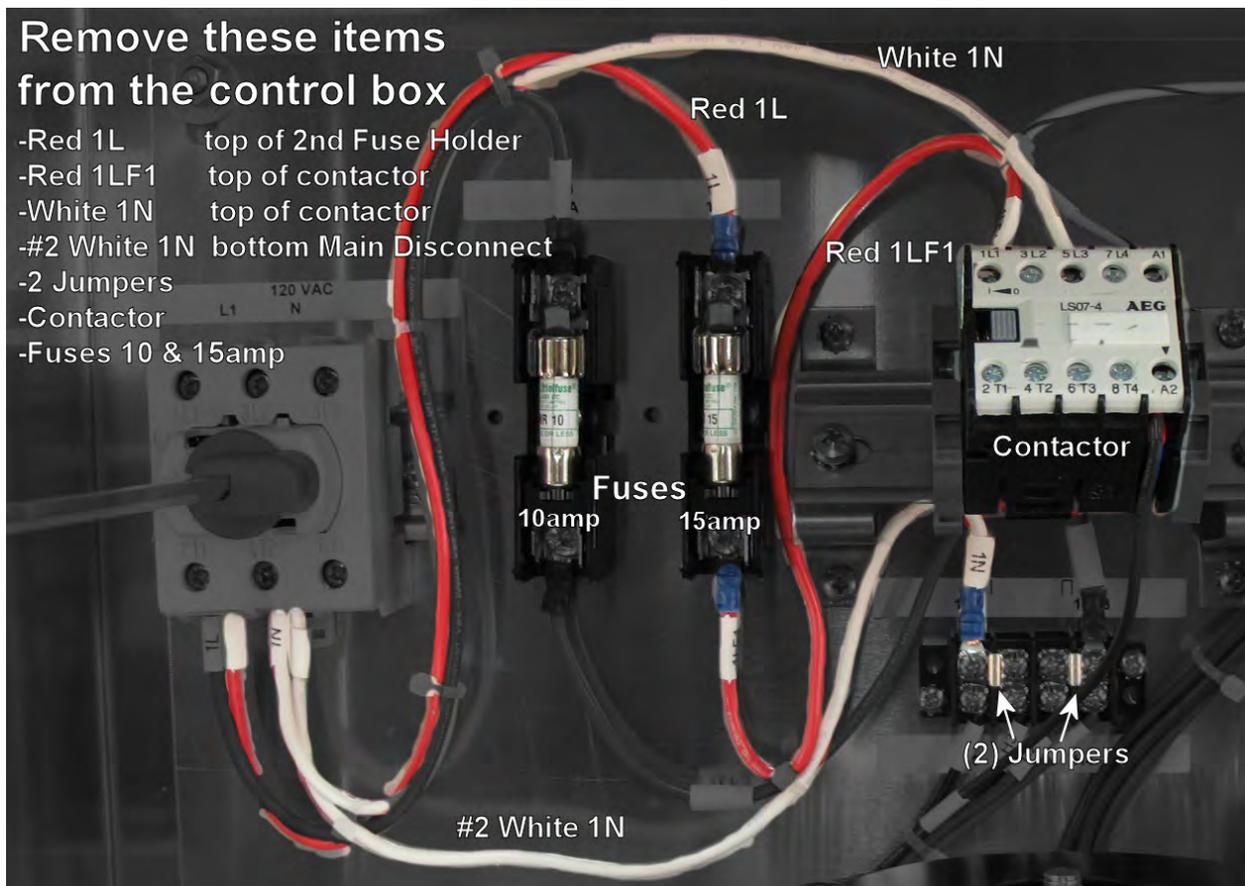
The existing contactor will need to be swapped with a larger capacity contactor included in the kit. To remove the existing contactor insert a flathead screwdriver into the tab located at the base of the contactor and gently pry outward until the contactor releases from the din rail mounting. At this time the wires are still connected to the contactor.



Removing the wires and fuses



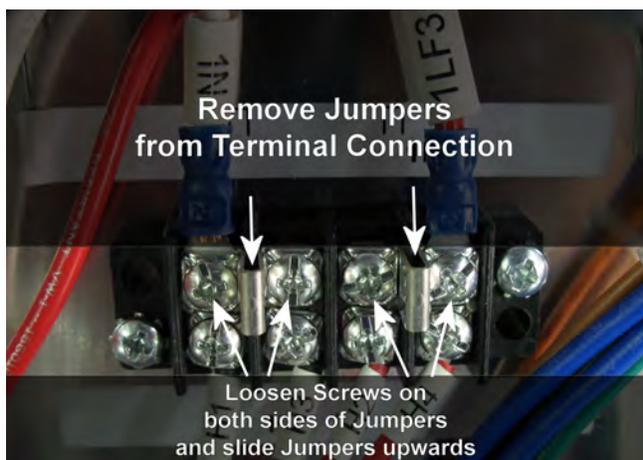
Remove the contactor wires from the existing contactor starting with **position A1 (Blue/White K1-)** and **position A2 (Blue K1+A)**. These will be reconnected later into the new contactor, let them hang for now.



Trace the last two wires connected to the existing contactor and remove them from the control box all together. **(Red 1LF1)** will be removed from the bottom of the 2nd fuse holder. **(White 1N)** will be removed from the bottom of the main disconnect 4T2. While there, remove the **(#2 White 1N)** from the same main disconnect location. The other end is on small terminal connection under where the contactor was located.

Also remove the **(Red 1L)** coming into the top of the 2nd fuse holder and connecting to the bottom of the main disconnect in position 2T1.

Remove both the 10 & 15 amp fuses as well.



To finish out all that is needed to be removed, remove the (2) jumpers located on this terminal. Loosen the screws on each side of the jumper and slide the jumper toward the top of the control box to remove.

One of these jumpers will be used later so do not lose them.

Putting the System back together

At this point the contactor, both fuses (10 & 15amp), 4 wires (Red 1L, Red 1LF1, White 1N, & #2White 1N), and 2 Jumpers should have been removed from the control box.



Locate the contactors and wires that came with the kit. The Blue/white wire (K1-) should be installed into the new contactor in position A1 located along the top and the Blue wire (K1+A) should be at position A2 on the bottom of new contactor.

Locate the Black L1 wire from the kit and connect one end into contactor position (1L1). Locate the Black 3L wire and connect one end into contactor position (5L3)

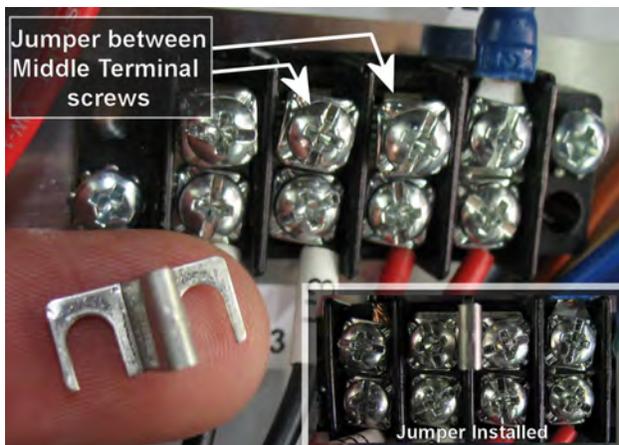
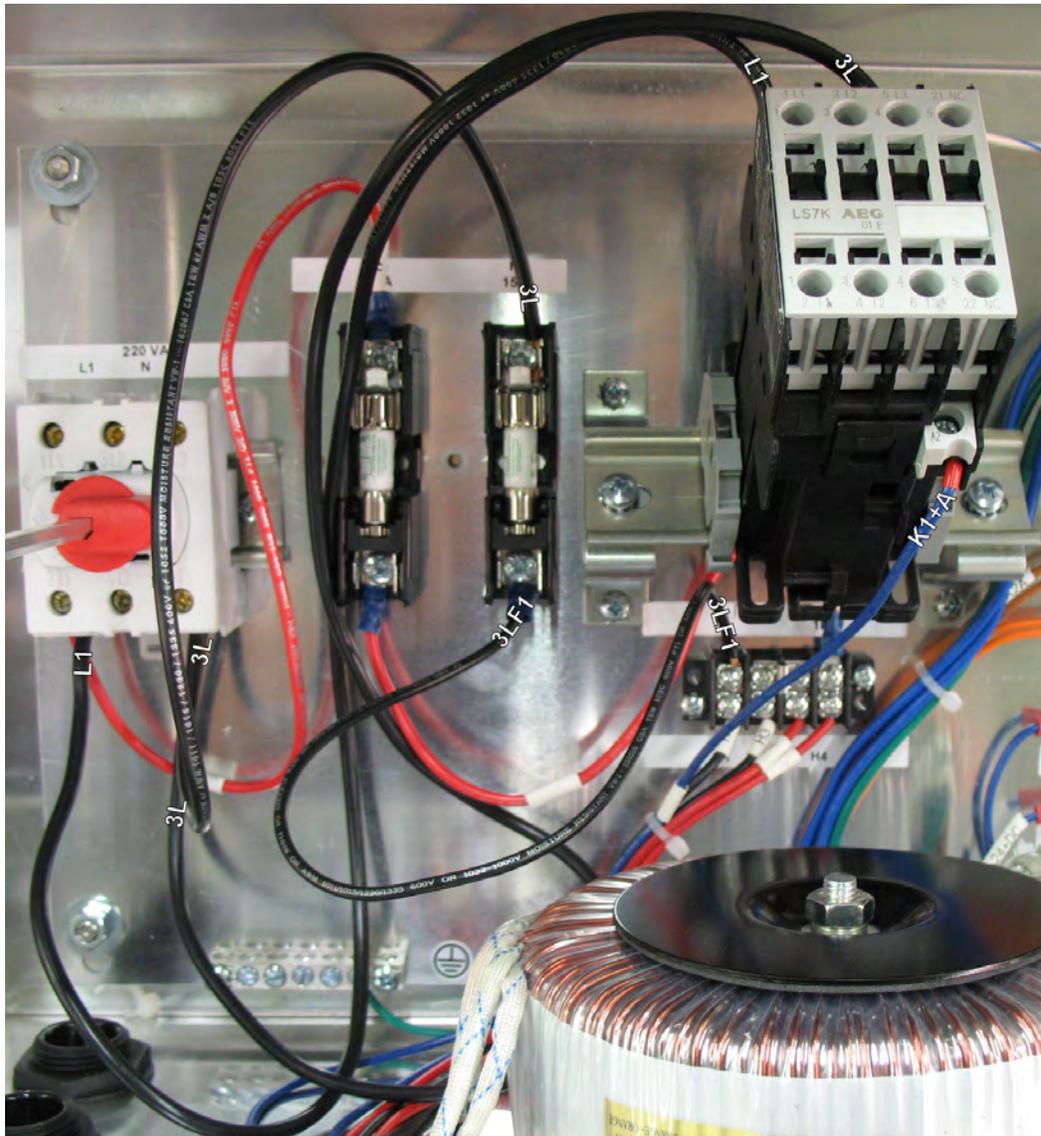
Make sure all connections into the contactor are tight and remount onto the din rail. Place the top edge onto the din rail and then lower the bottom edge. A flathead screwdriver may be necessary to lift the tab so that contactor locks firmly to the din rail.



Take the loose end of the Black L1 wire from the contactor and wire into the main disconnect at position (2T1). This connection will be shared with a Red wire going to the top of the 1st fuse holder.

Locate the Black 3L wire from the contactor as well as a 2nd Black 3L wire from the kit and wire them into the main disconnect at position (6T3). The loose end of the 2nd Black 3L will connect to the top of the 2nd fuse holder.

Locate the Black 3LF1 wire in the kit and secure one end to the bottom of the 2nd fuse holder and the other end to the top left position on the terminal connections.

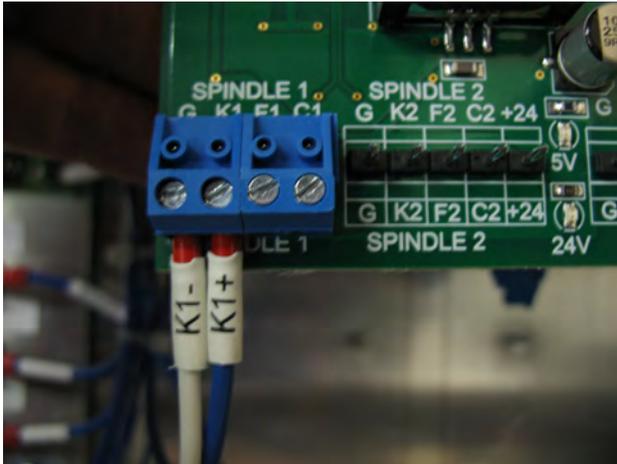


Using one of the Jumpers that were removed earlier, place 1 jumper on the top middle set of terminal screws.

From left to right on the top row of the terminal connection should be: Black (3LF1), Jumper from screw 2 & 3, and Red (1L that was already in place). The bottom row of screws should remain the same.

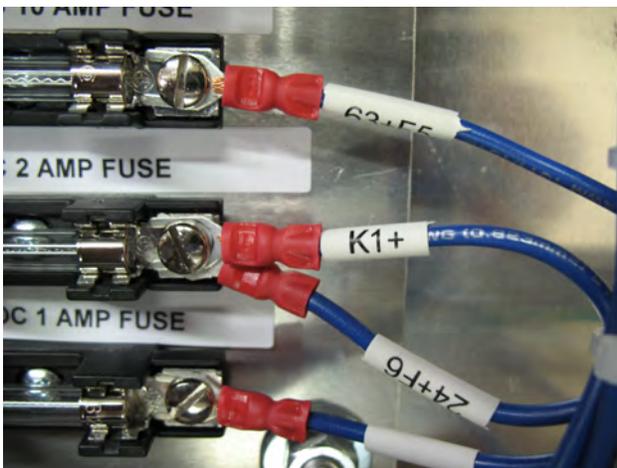
Install the (2) 5amp fuses from the kit into both fuse holders. Remove the label above the fuse holders and replace with the 5amp fuse label from the kit.

Use the wire ties provided, for cable management as necessary.



On the control board, remove the Blue wire (K1+) from its blue terminal block.

Clip the ferruled end of (K1+) and replace it with the forked crimp connector included in the kit.



Loosen the right side of the 24V DC 2 amp fuse connection (middle glass fuse) and secure the new forked connection for (K1+) with the existing wire marked (24+F6).

Double check all connections and tighten all screws that were mentioned in this installation. When you are certain that all is in order, bring the incoming 220V or 230V into the control box and wire into the top of the main disconnect.

