

Summary	Turboseal USEM to SEW Eurodrive Retrofit				
Products Affected	Turboseal				
Key Word Tags	US, SEW, Motor, Retro, TS				
Tools/Equipment (If Required)	Lift, Sockets and Wrenches, Allen Wrenches, Misc. Screwdrivers				
Parts/Materials (If Required)	See Below				
Related Media					
Author	Jason Freimuth, RevA Mike Burzlaff	Issue Date	1/1/2001	Status	Active

Please Read The Entire Bulletin Before Proceeding

NOTE: The motor cable supplied with the new motor must be used. Failure to do so will void any motor warranty.

At the end of the year 2000, Eurodrive introduced the R47 gearbox to replace the R40 gearbox used on motors for the Turboseal door. Since the mounting hole locations are different between the two gearboxes, it is necessary to use a retro plate assembly to mount the new motors to existing doors. This service bulletin outlines the procedure to install this retro plate in the field.

CAUTION

This retrofit involves high voltage electrical wiring.
Technicians must be qualified to perform such functions.

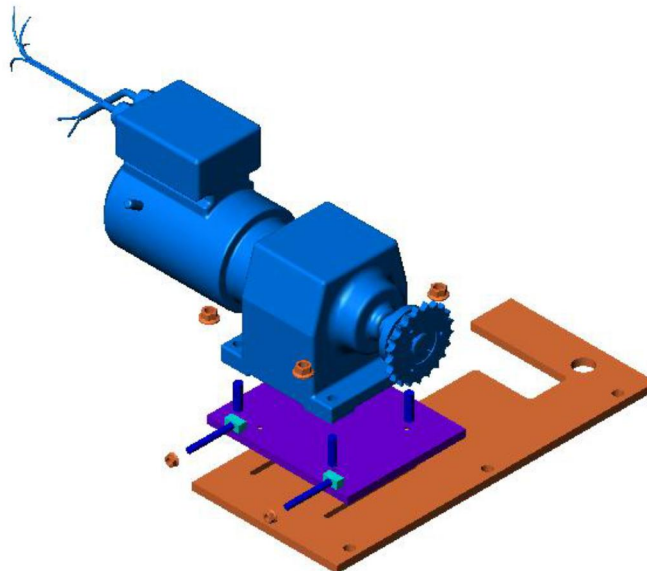
ASSY,MTR,230/460V, .75HP,1SP,HTR,LH or RH,DG,TS	Part Number Will Vary
ADAPTER PLATE WELDT,R40 TO R47,RH	R0899845
OR	
ADAPTER PLATE WELDT,R40 TO R47,LH	R0899846
HLNSF, 5/16-18, STL ZN	R0553104
HLNSF 1/2-13,HEX, STL ZN	R0553100
HLNSF, 3/8-16, STL ZN	R0553229

WARNING

The disconnect must be in the OFF position and properly locked and tagged before performing the next step of the procedure.

Retrofit Mechanical Instructions:

1. Remove hood section from above the motor assembly (if present.)
2. Disconnect the motor wiring in the junction box on the head and make sure the wires are numbered for reference when reconnecting the new motor. Disconnect the manual brake release components from the motor by unscrewing the eyebolt from the brake assembly.
3. Remove the two motor adjustment bolts that protrude through the front spreader.
4. Loosen up the four motor mounting bolts enough to remove the drive chain. Then remove the four mounting bolts and take off the old motor and motor mounting plate.
5. Position the new retro plate so that the two studs fit through the front spreader and the bottom four studs fit in the slots in the head plate. Secure the four bottom studs with the provided nuts but do not tighten them yet.
6. Install the new motor on the retro plate so that all four studs go through mounting holes on the gearbox. Secure and tighten the nuts on these four studs.
7. Replace the drive chain and adjust the tension using the two front studs and nuts. When the chain is at the proper tension (see owner's manual), tighten the four bottom nuts connecting the retro plate to the head plate.
8. Reconnect the motor wiring in the junction box on the head and the manual brake release components.
9. Reapply power and test motor prior to replacing the hood.



Electrical Changes from Electroid to Eurodrive:

The Electroid motor had different electrical connections than the SEW Eurodrive. This will require modifying the wires on the new contactors in the control box. The following instructions can be used as a general guide on how these changes can be done.

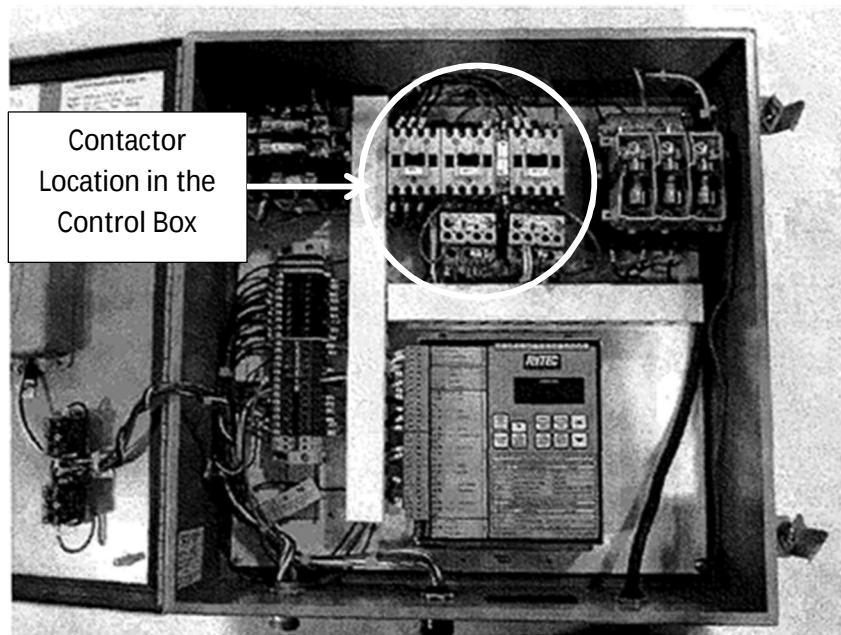
Read the instructions carefully and completely before beginning the retrofit. Only a qualified electrician should perform this work. It is imperative to have an understanding of these changes to prevent damage to the electrical controls and any possible injury.

⚠ WARNING

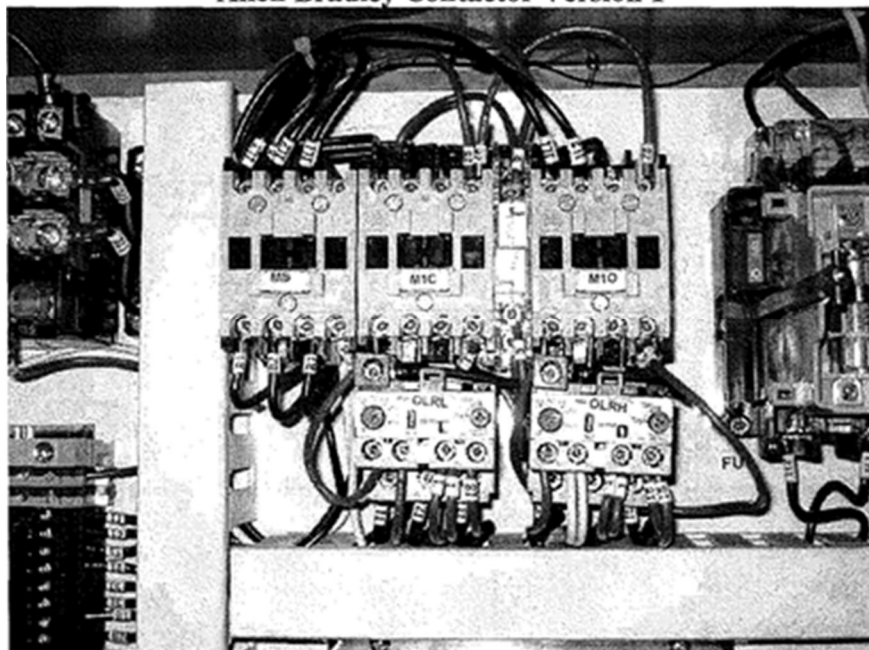
The disconnect must be in the OFF position and properly locked and tagged before performing the next step of the procedure.

Two Speed Motor Connections:

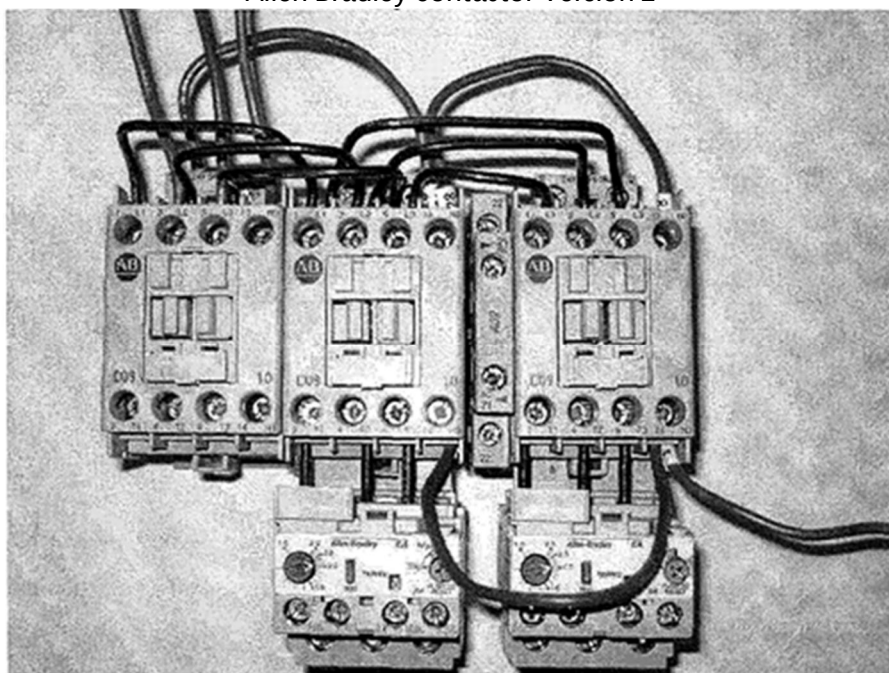
1. If you have a 2 speed motor, continue to step 2 below. If you have a single speed motor, continue to step 12.
2. The beginning wiring is shown below. It is important to note that several versions of the Allen Bradley contactor have been used in the Predadoor control box. While they may look slightly different, the wiring in each step of the process will be the same. Two versions are shown below.

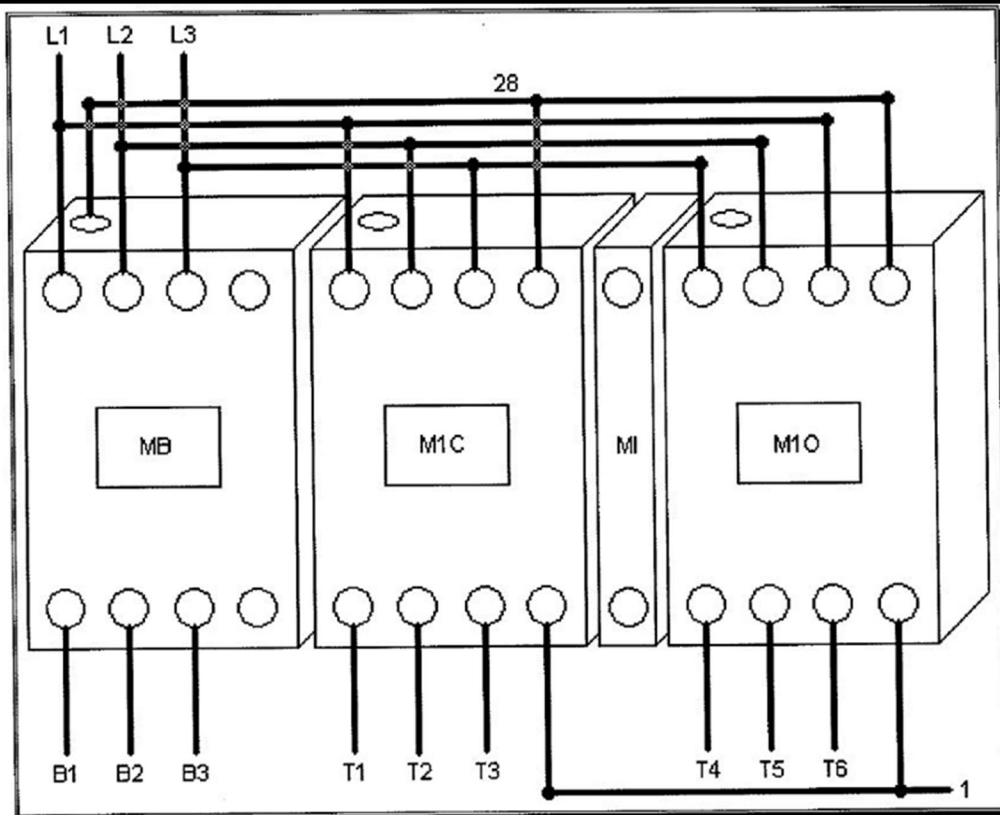


Allen Bradley Contactor Version 1



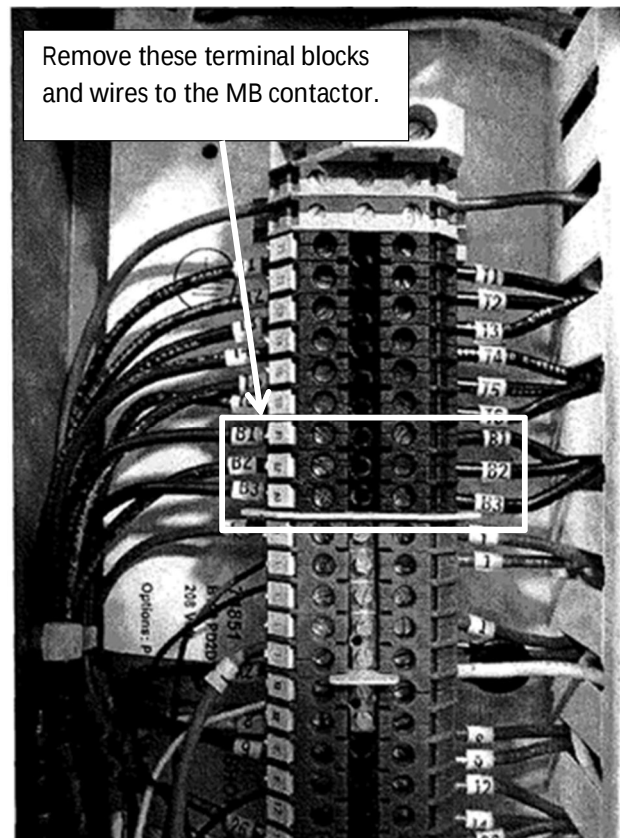
Allen Bradley Contactor Version 2



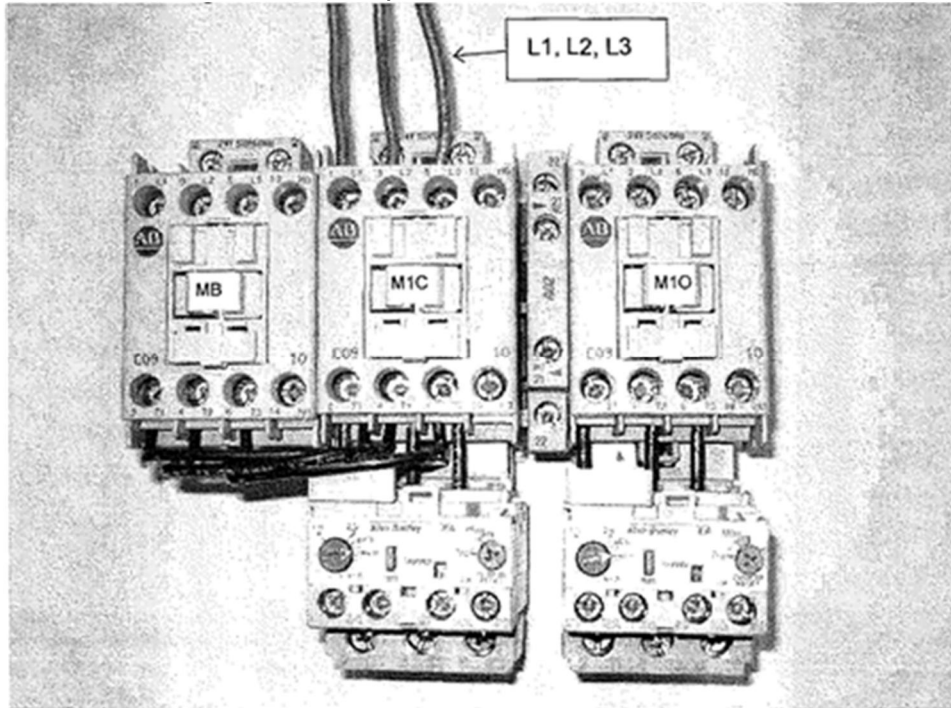


Original Wire Layout

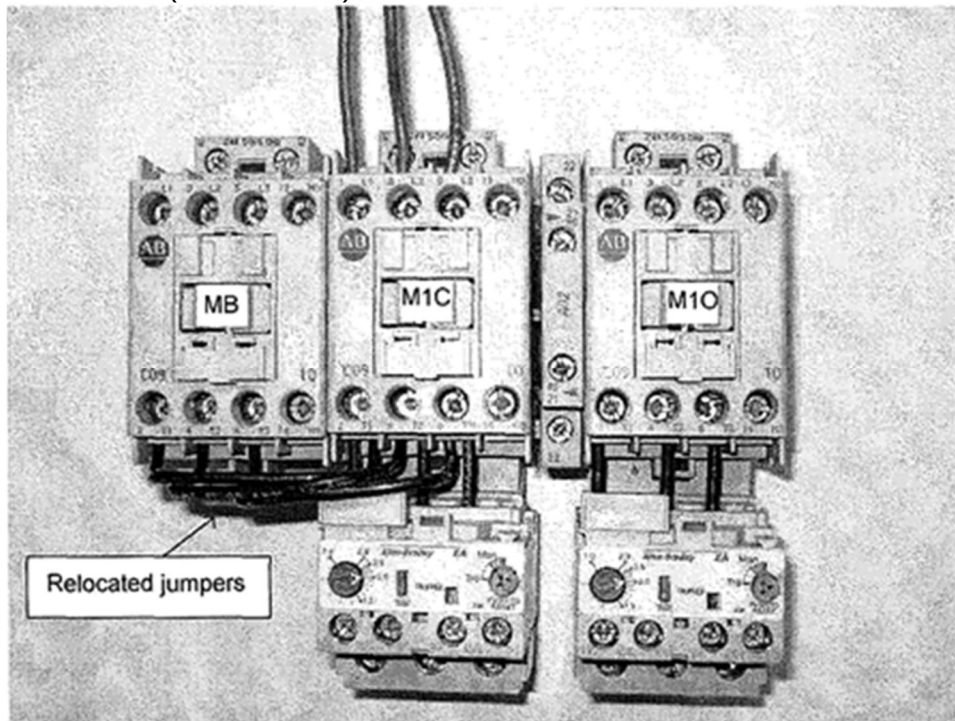
3. Remove terminal blocks B1, B2, and B3 from the controller along with the wires that are attached between it and the MB contactor.



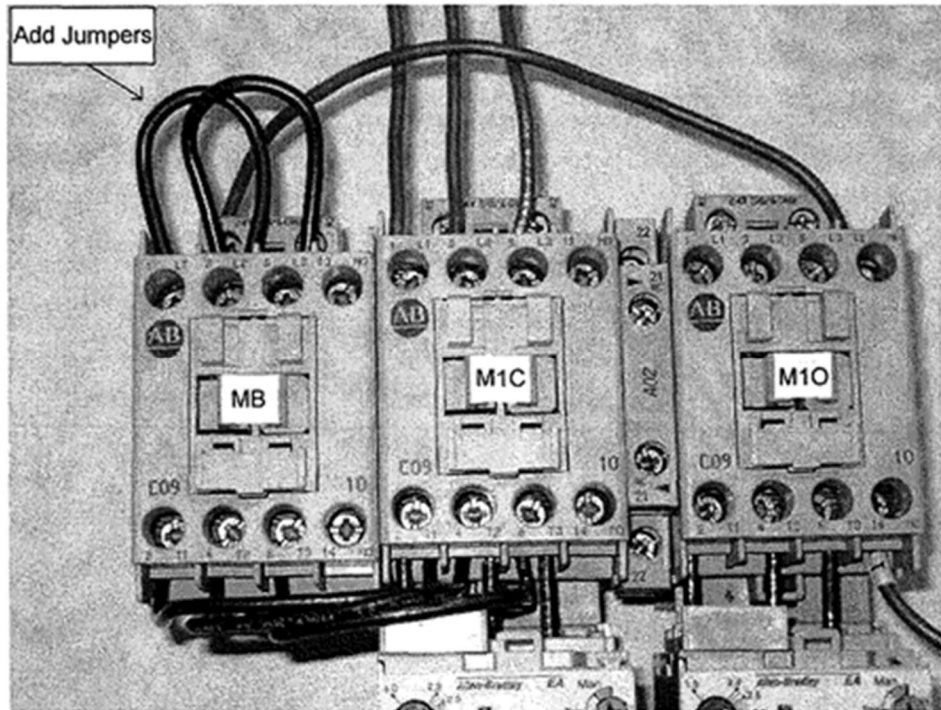
4. If the incoming power L1, L2, and L3 are connected to the top of the MB contactor, remove them and relocate them to the top three terminals of the M1C contactor.



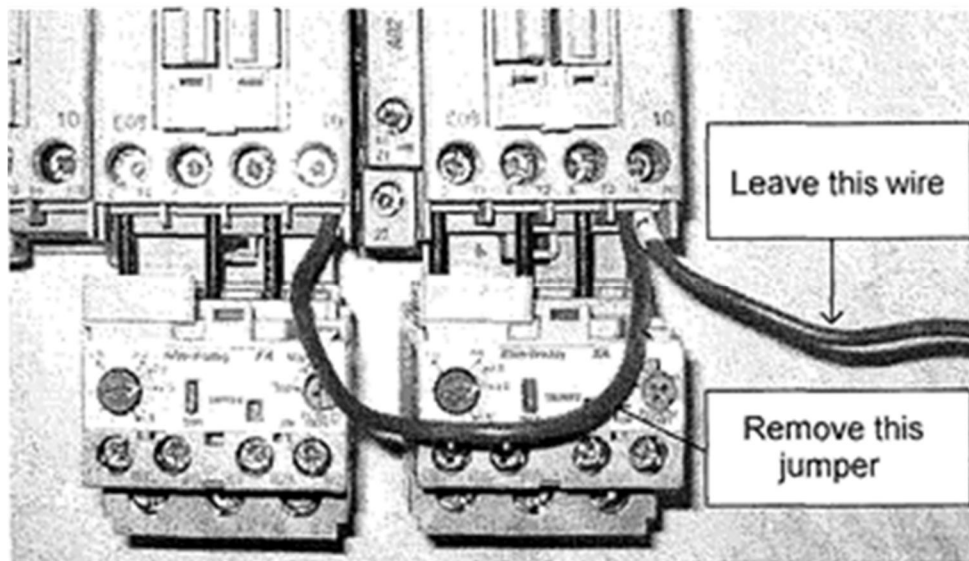
5. Remove the three black jumpers from the top of the MB contactor that connect to the top of the M1C contactor. Re-use these jumpers to connect from the bottom left three terminals of the MB contactor to the bottom left three terminals of the M1C contactor where the OLRL (overload left) attaches to the M1C.



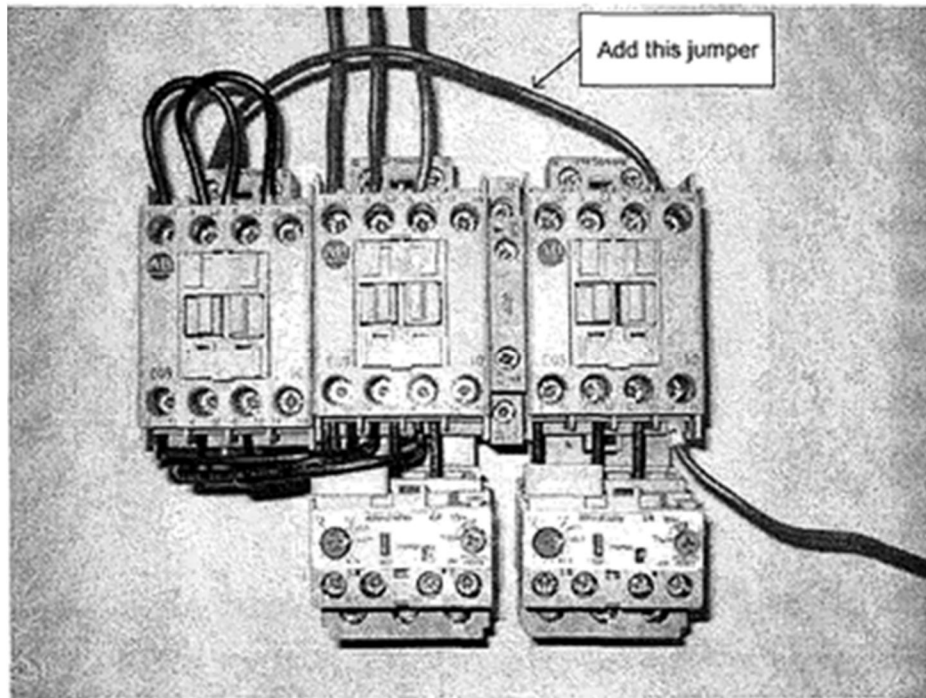
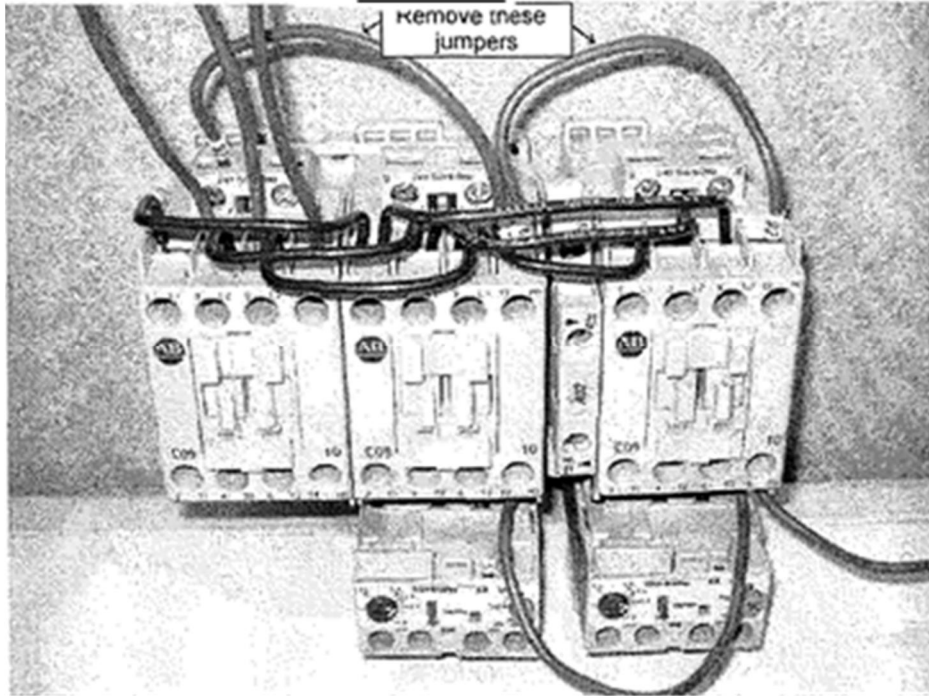
6. Install two jumpers on the top three terminals of the MB contactor that will bridge from the 1st to the 2nd terminal and from the 2nd to the 3rd terminal.



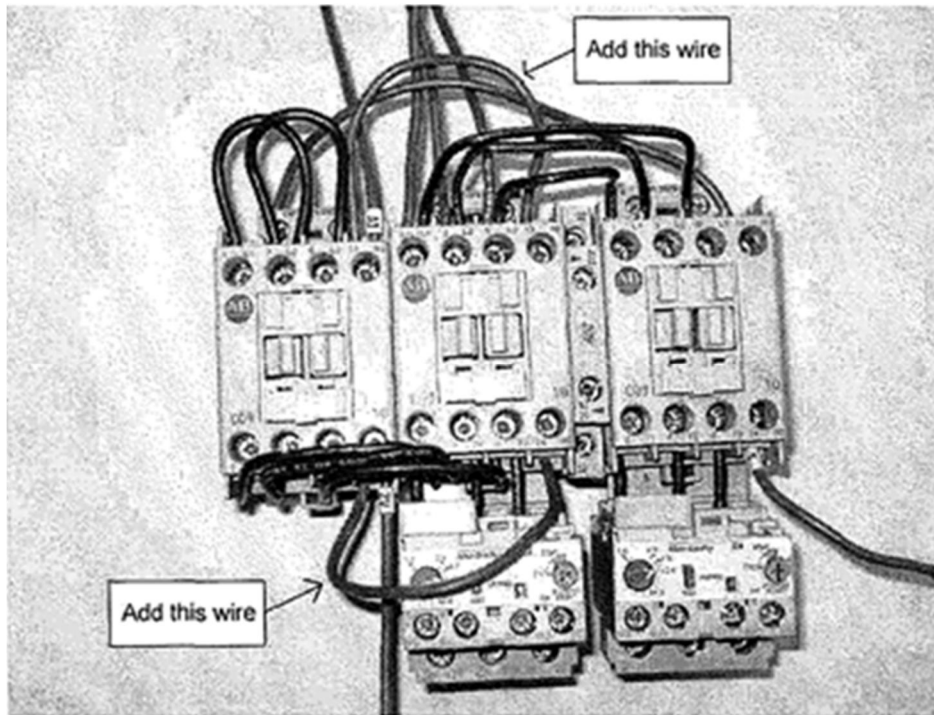
7. Remove the red wire that connects the fourth bottom terminal of the M10 to the fourth bottom terminal of the M1C. Leave the other red wire labeled #1 in place on the M10.



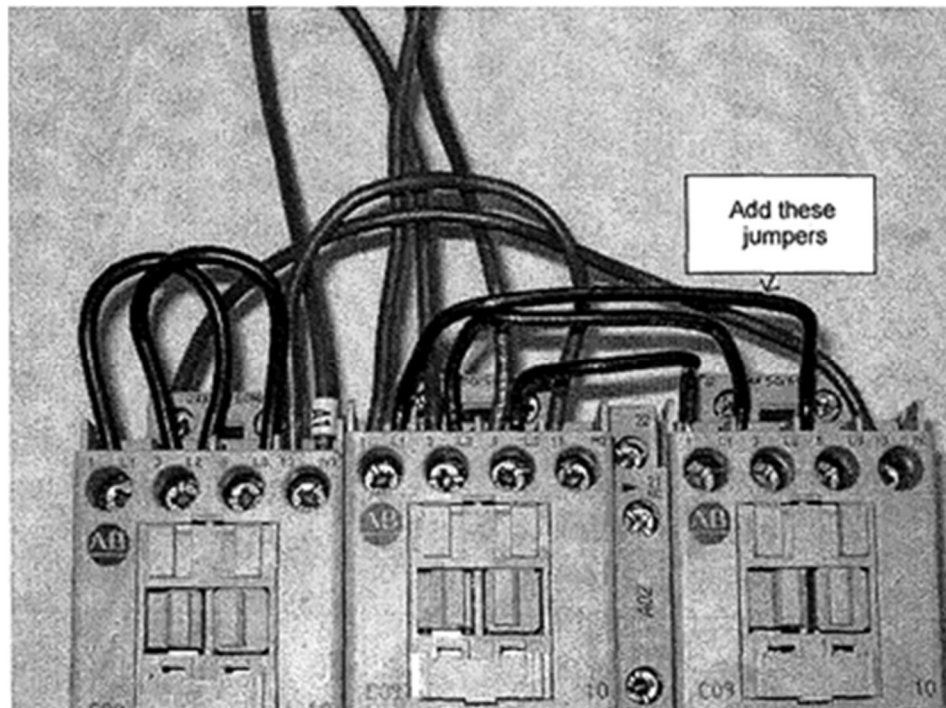
8. Remove the two red wires that are connected to the fourth top terminal on the M1C. The wires should lead to M1O and MB. Replace the old wires with one long wire that connects from the fourth top terminal of the M1O to terminal A1 on the MB contactor.



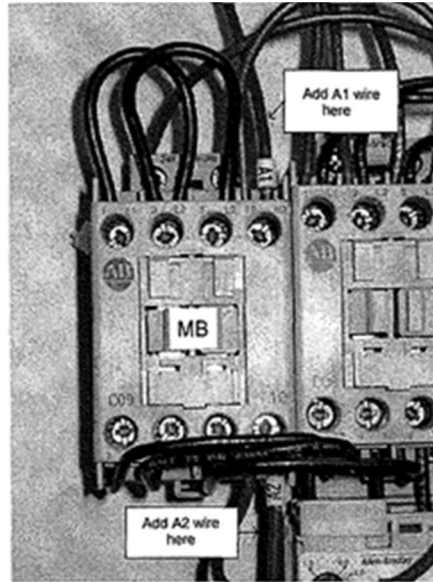
9. Install a jumper from the fourth top terminal of the MB contactor to the fourth top terminal of the M1C contactor. Install another jumper from the fourth bottom terminal of the MB contactor to the fourth bottom terminal of the M1C



10. Install a jumper from the M1C contactor terminal 1 to the M1O terminal 3. Install a jumper from the m1C terminal 2 to the M1O terminal 2. Install a jumper from the M1C terminal 3 to the M1O terminal 1.

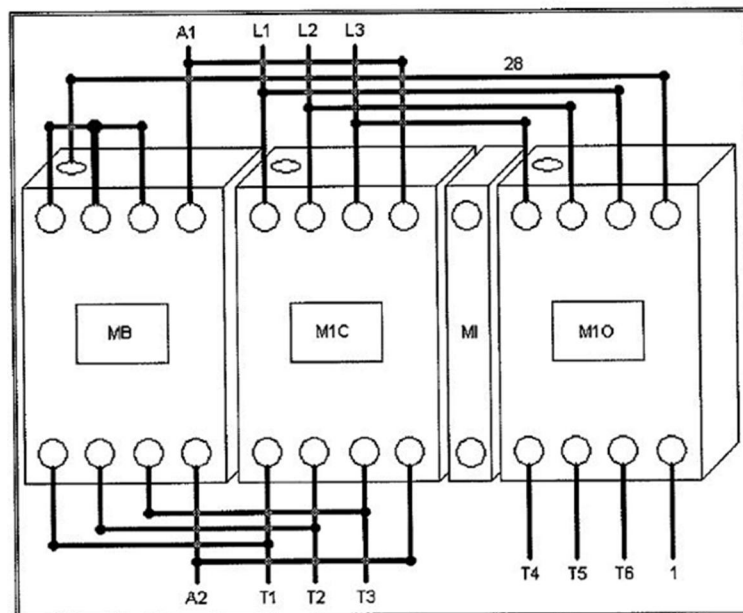


11. Run a wire from the fourth top terminal of the MB contactor to an unused terminal block. (Use the old B1 and B2 terminal blocks for this step.) This terminal should be re-labeled A1. Run a wire from the fourth bottom terminal of the MB contactor to the other unused terminal block. This terminal block should be re-labeled A2. (NOTE: These terminals have nothing to do with and do not represent the A1 and A2 terminal on the coils of all the contactors.)



IMPORTANT!!!

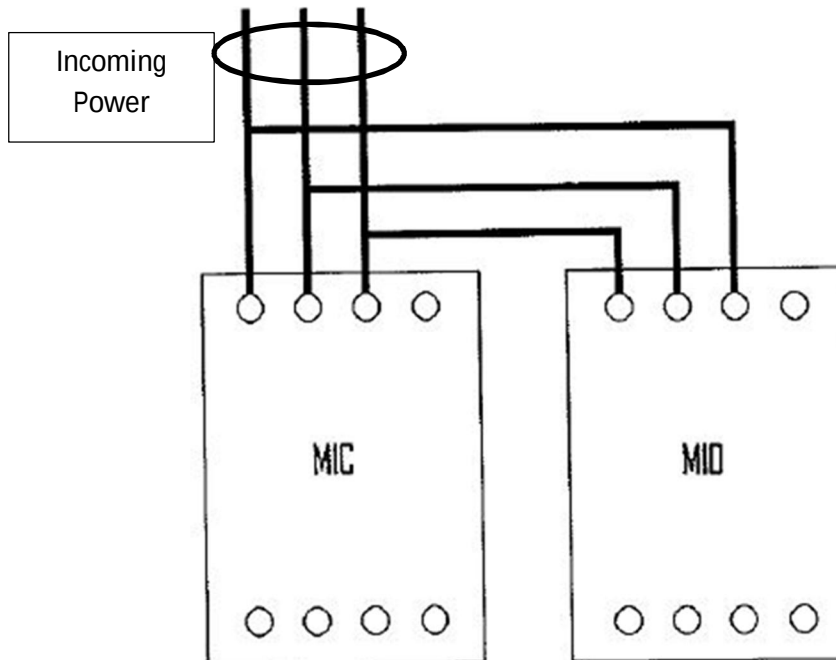
The new contactor setup will short out wires A1 and A2 whenever the M1O or the M1C contactors pull in. This allows the brake to grab immediately upon release. In addition, the MB contactor will ONLY pull in when the M1O is energized. When the MB contactor pulls in, it will short together all three legs of the low speed motor. It is important to double check all of the above steps. If the MB contactor pulls in with the M1C, you will blow all of your line fuses and possibly burn and fuse the two contactors.



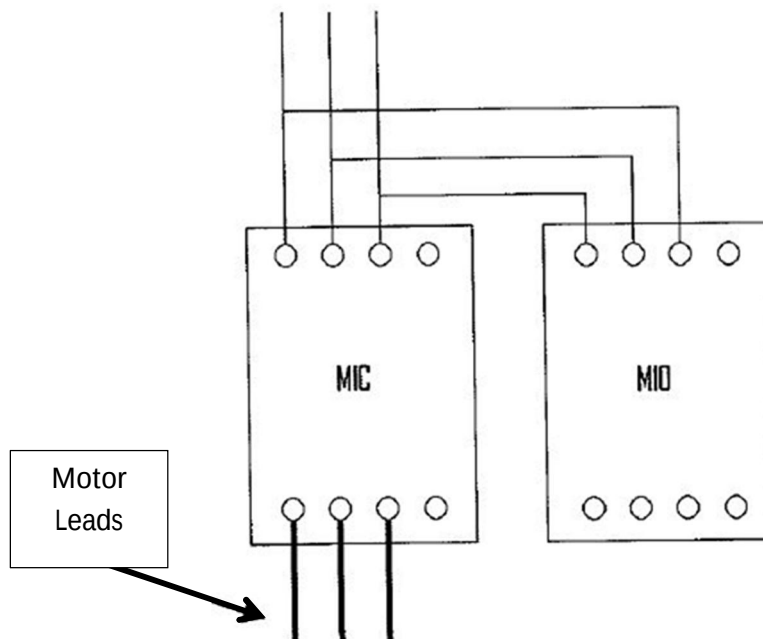
Final Wire Layout

Single Speed Motor Connections

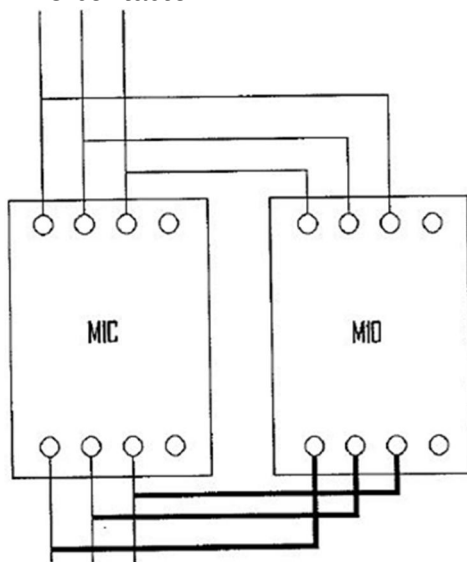
12. With a Single Speed motor you will NOT be using the MB contactor. You will only use the M1C and M1O contactors.
13. Connect the incoming power to L1, L2, and L3 on your M1C contactor.
14. Put a jumper from L1 on the M1C contactor to L3 on the M1O contactor. Put a jumper from L2 on the M1C contactor to L2 on the M1O contactor. Put a jumper from L3 on the M1C contactor to L1 on the M1O contactor.



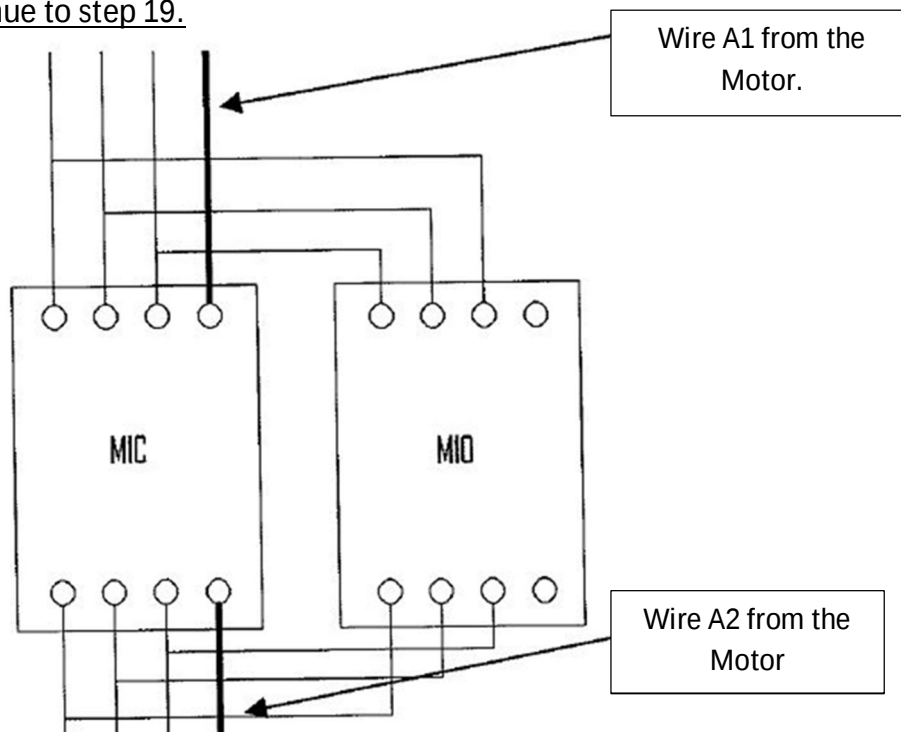
15. Connect T1, T2, and T3 from the motor leads to T1, T2, and T3 on the M1C contactor.



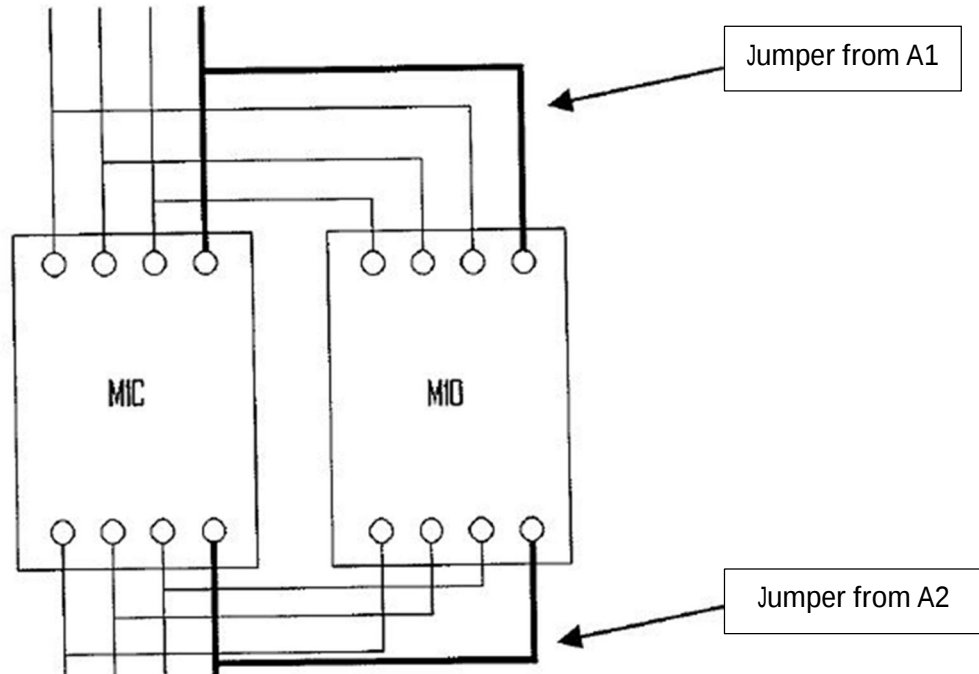
16. Put a jumper from T1 on the M1C contactor to T1 on the M1O contactor. Put a jumper from T2 on the M1C contactor to t2 on the M1O contactor. Put a jumper from T3 on the m1C contactor to T3 on the M1O contactor.



17. If there is an A1 and A2 from the motor, connect the A1 to terminal 13 on the M1C contactor and A2 to terminal 14 on the M1C contactor. If there is no A1 or A2 coming from the motor, continue to step 19.

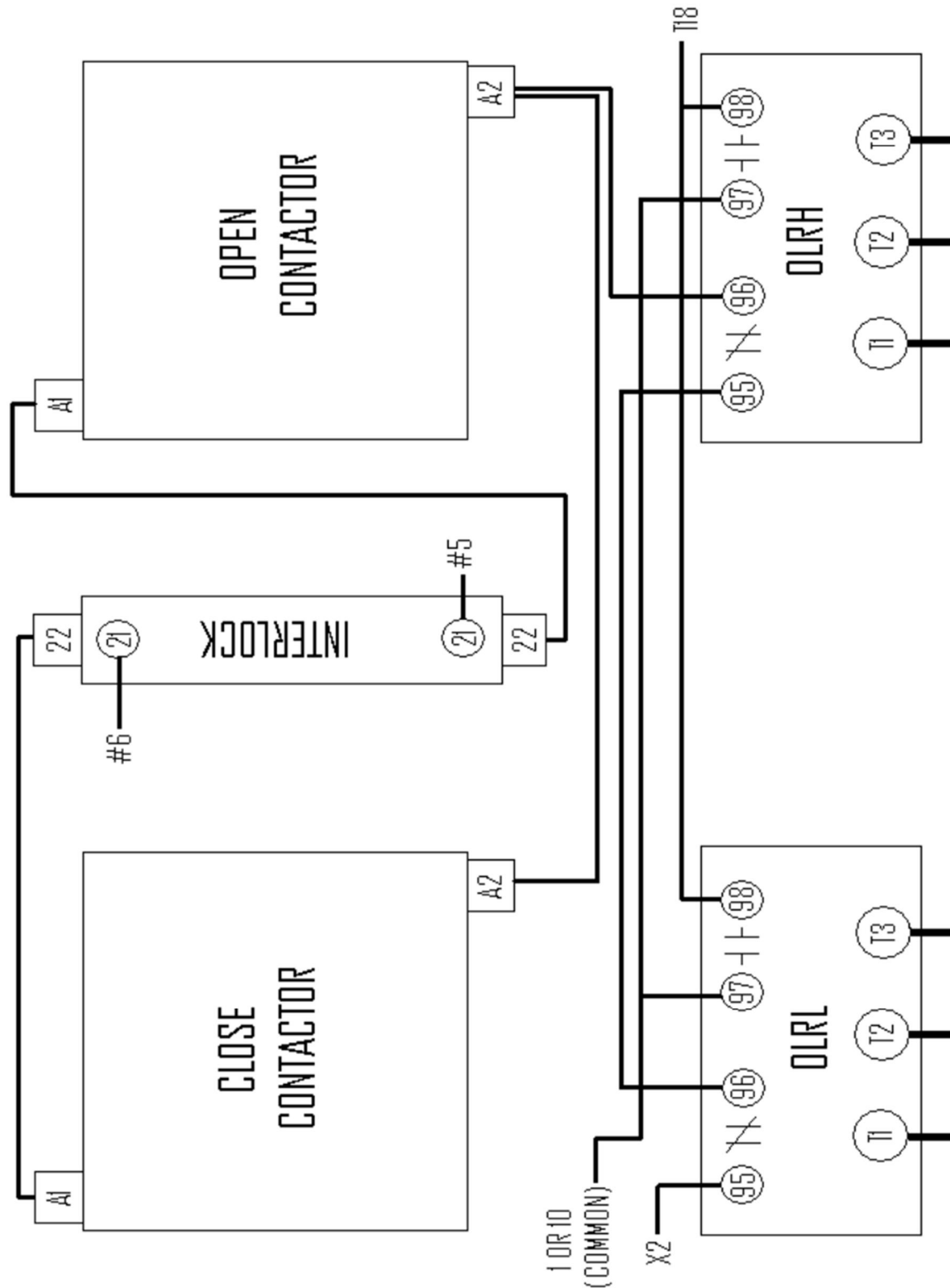


18. Put a jumper from terminal 13 on the M1C to 13 on the M1O. Put a jumper from terminal 14 on the M1C to terminal 14 on the M1O.

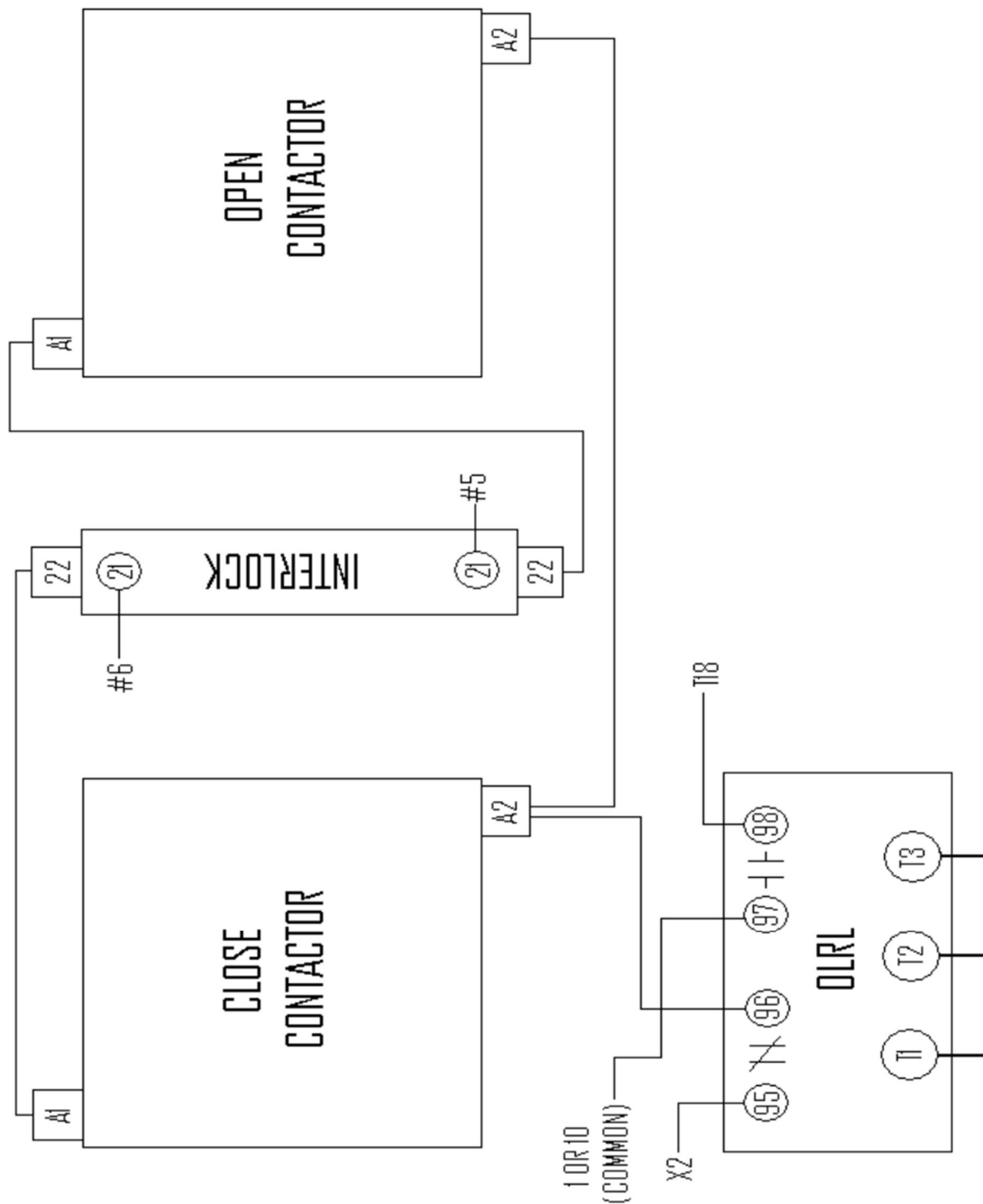


Reference drawings below for Interlock and Overload specific wiring, and Complete Schematics.

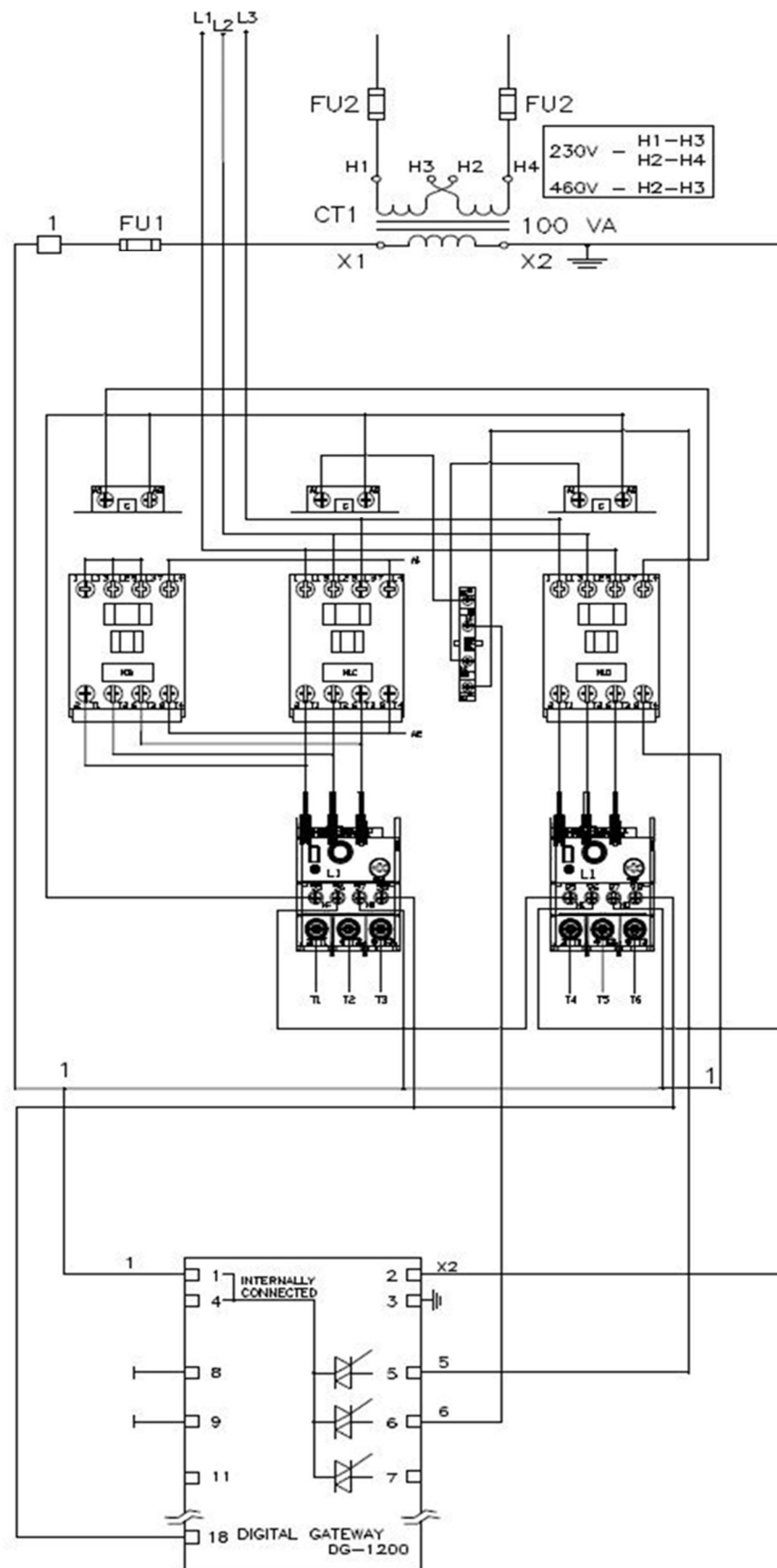
If you have any questions please contact Rytec Customer Support at 1-800-628-1909.

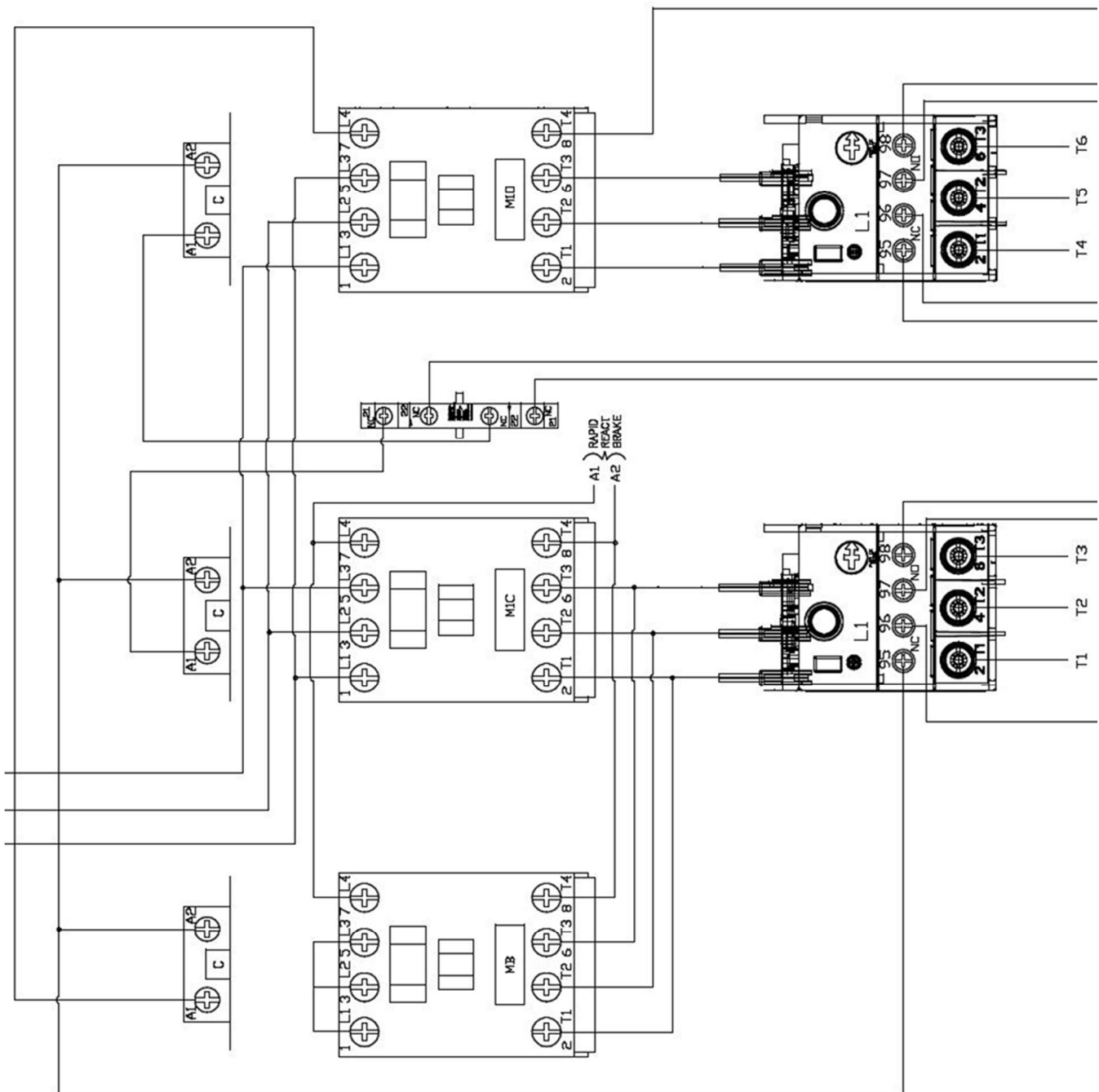


Two Speed Interlock and Overload Connections



Single Speed Interlock and Overload Connections





Close up of contactors, overloads, and interlock for 2 speed motor

