



INSTALLATION MANUAL

MP 1200 Mist Collector



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MP Systems is committed to delivering precisely designed products, providing users with maximum productivity and uptime. Our engineering team is diligent in eliminating high maintenance issues associated with machine tool accessories, to allow better performing equipment for your business.

Thanks to our quality components, dedicated team of engineers, and manufacturing personnel, MP Systems high pressure coolant systems & accessories are low maintenance and longer lasting. MP Systems prides itself on building and supporting a dependable product.

Our team works closely with CNC machine tool manufactures, distributors and customers to provide excellent customer service and application experience. Our goal is to help make you a more productive with less downtime, decreased cycle times, improved tool life and more parts out the door.



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1. MP 1200 Mist Collector Features / Benefits

The MP 1200 Mist Collector is used to remove unwanted mist and vapors created by spraying coolant in machine tool cabinets. Instead of coolant mist escaping into the work atmosphere, the MP 1200 Mist Collector collects the majority of the mist that would normally escape and recycles it back into machine coolant reservoir. Not only does the MP 1200 keep the air in a work place much cleaner it can save money by recycling wasted coolant.

Section: 1

There are three filters located inside the MP 1200 Mist Collector and one optional post filter mounted on top. Starting from the bottom there is a baffle that traps most liquids passing through the unit. Next a 2" wire mesh filter that will remove the remaining fluids passing through. The main piece of filtration is the high capacity, high efficiency filter that provides 95% efficiency. And finally there is an optional post filter that can be fastened to the top of the unit that provides 99.97% efficiency.

2. Prepping R Series for MP 1200

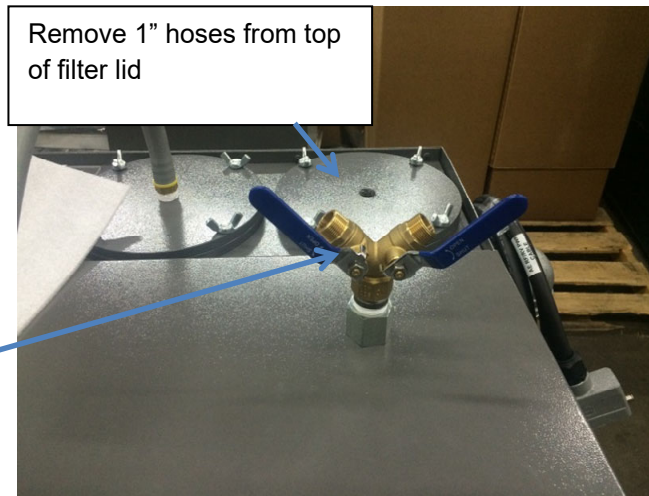
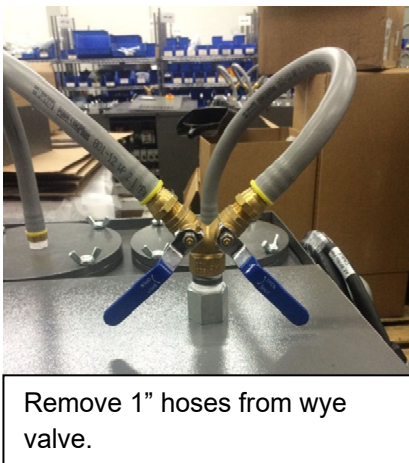
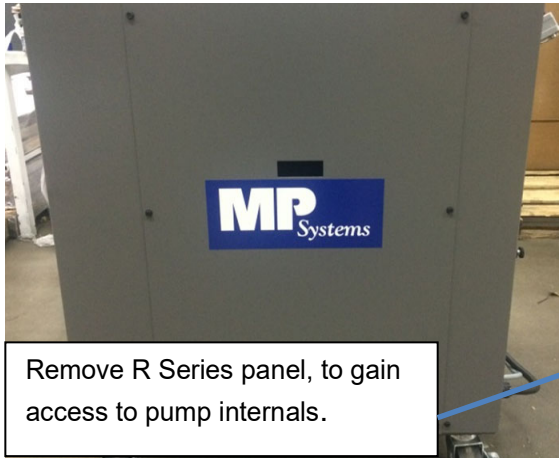
A few modifications will need to be made to the R Series high pressure unit before a MP 1200 Mist Collector can be installed.

- Re-position wye valve to accommodate Mist Collector and Mist Collector bracket.
- Replace (1) 1" grey push lock hose.
- Install new overload and terminal blocks for Mist Collector electrical interface, in R Series electrical cabinet.
- Install 1" cord grip on R Series lid to allow Mist Collector signal/power cable to reach R Series electrical cabinet.
- Install MP 1200 Mist Collector bracket.

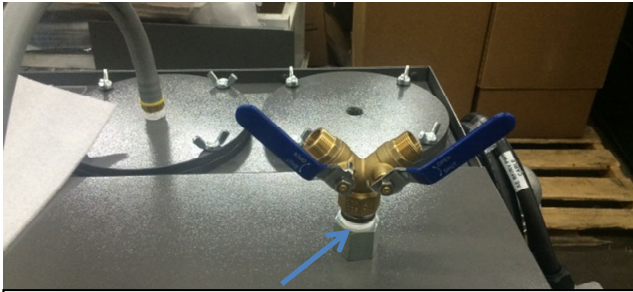
Section: 2

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2.1. Re-position Wye Valve



MP 1200 Mist Collector



Loosen wye valve bulk head by using steel coupler at base of wye valve & nut located under lid.



DO NOT LOOSEN 1" JIC FITTING



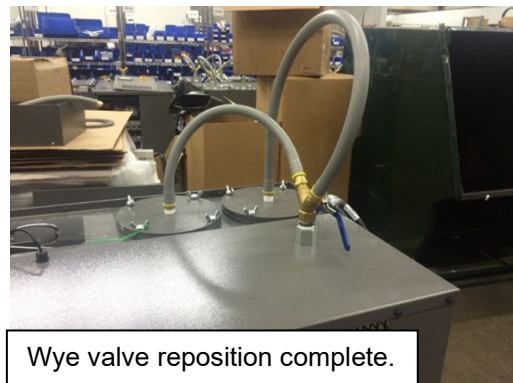
- Rotate wye valve counter clockwise until wye valve is perpendicular to front of R Series.
- Re-tighten wye valve bulk head.



- Install supplied 43" long 1" hose into filter lid.
- Re-install 1" hose to wye valve.



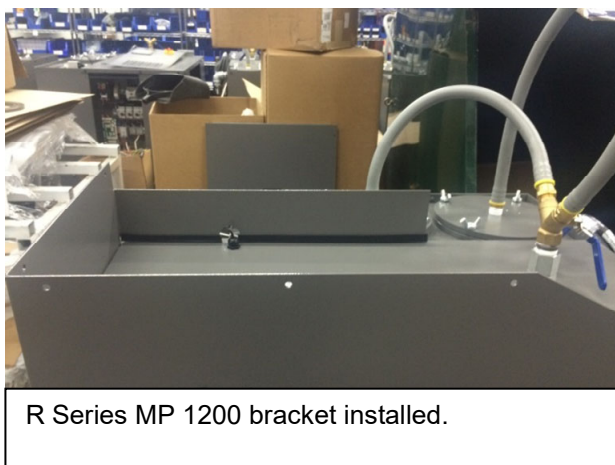
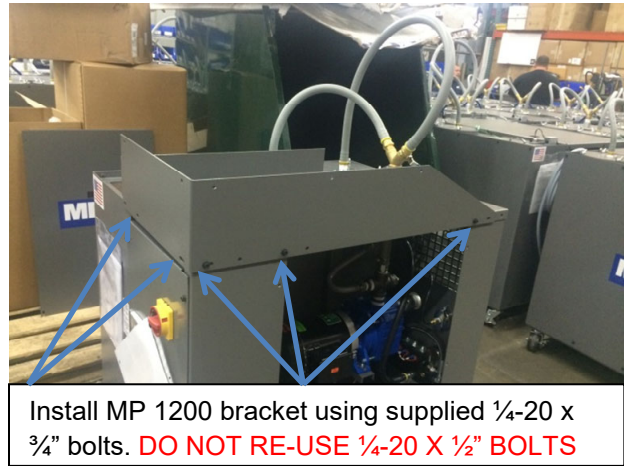
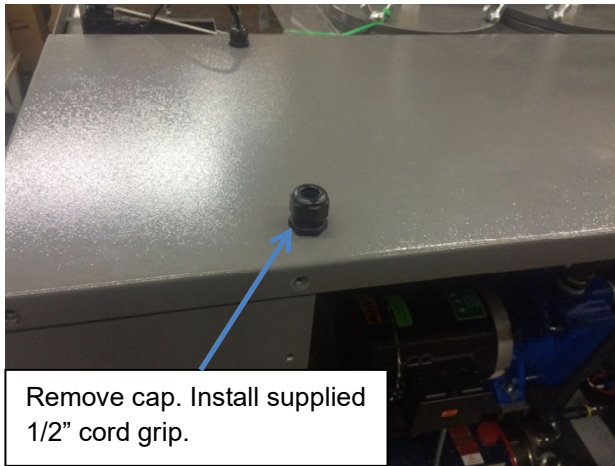
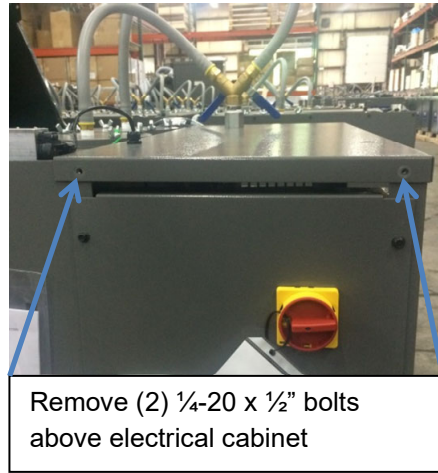
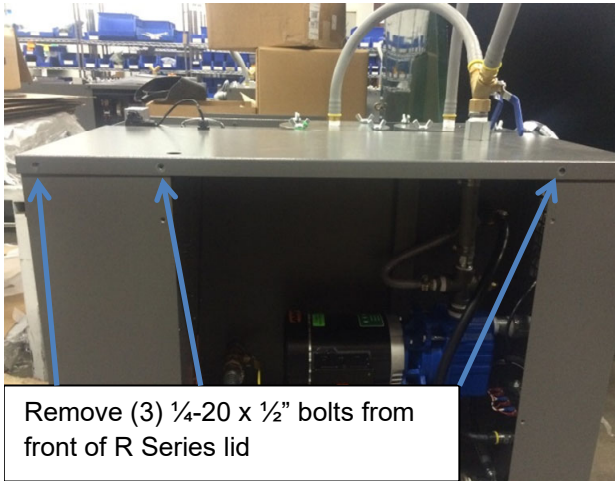
Re-tighten hose clamp



Wye valve reposition complete.

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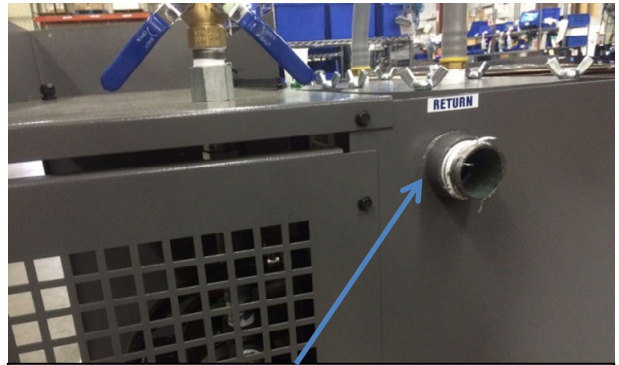
2.2. MP 1200 Bracket Installation



2.3. R Series MP 1200 Return Replacement



R Series return will need to be replaced with MP 1200 mist collector return.



Double sided nip may not come out with 90, a pipe wrench may be used to remove.



Replace with supplied R Series MP 1200 return. R Series is ready for MP 1200.

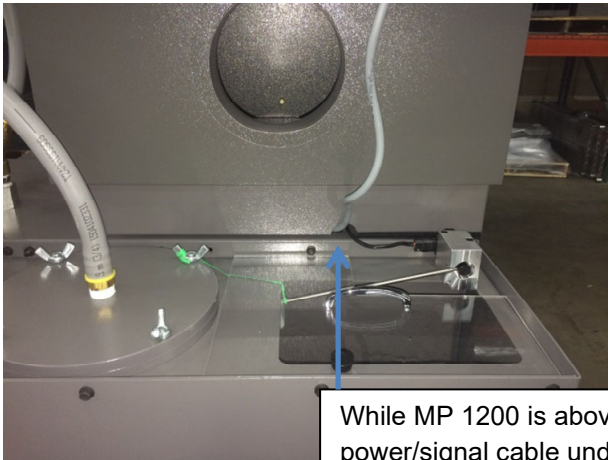
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3. MP 1200 Installation

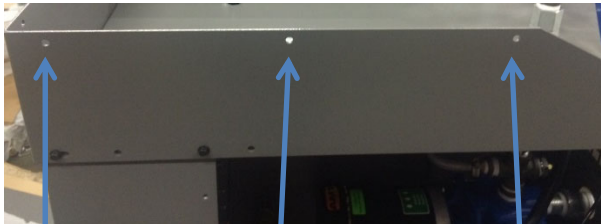
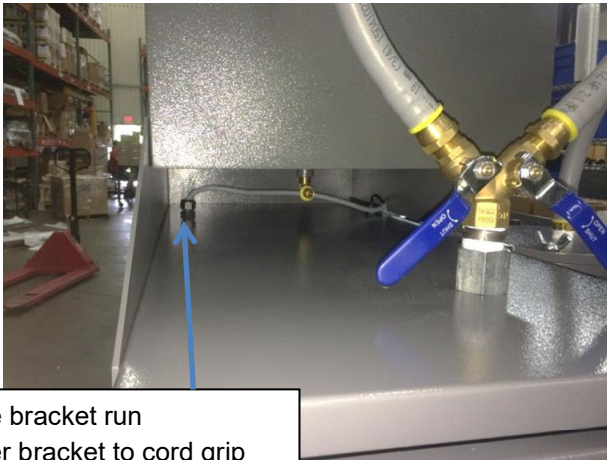
Installing MP 1200 Mist Collector will require a fork truck / overhead crane & suitable straps or chains (The MP 1200 weighs approximately **200lbs**). No less than 2 people should install MP 1200 Mist Collector (1 lifting with fork truck / overhead crane & 1 person to guide MP 1200 Mist Collector into place).

Section: 3

3.1. MP 1200 Mounting



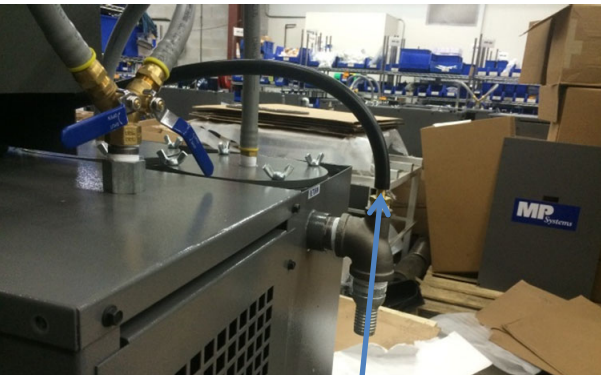
While MP 1200 is above bracket run power/signal cable under bracket to cord grip on R Series lid.



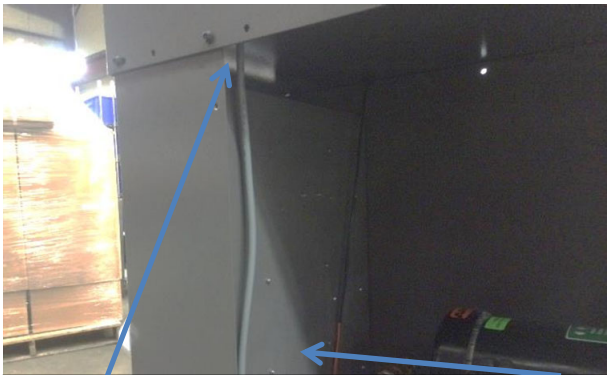
Line up 3 bolt holes on bracket with 3 holes on MP 1200 base.



Line up 2 bolt holes on bracket with 2 holes on MP 1200 base.



Run 1/2" black push lock hose from bottom of MP1200 too MP 1200 return/overflow.



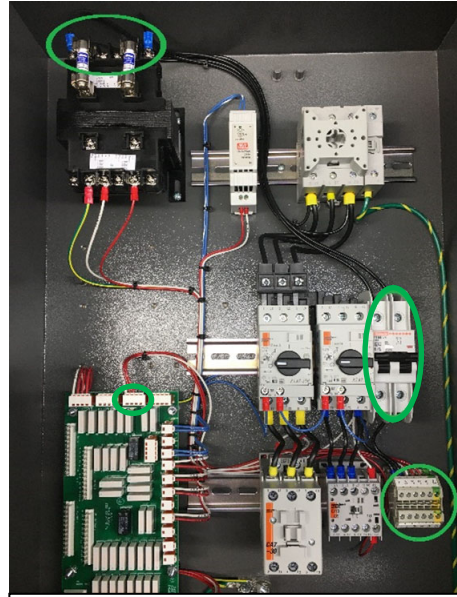
MP 1200 power/signal cable runs through cord grip to bottom of R Series electrical panel.

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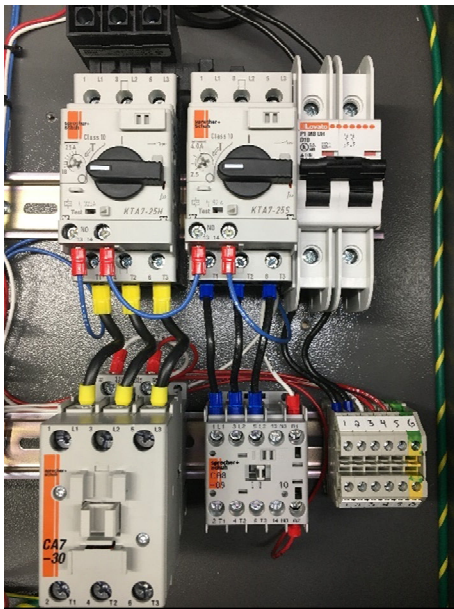
3.2. MP 1200 Electrical Installation



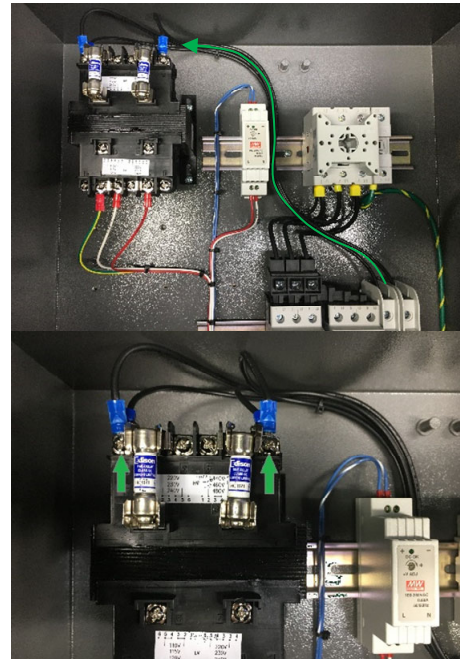
Power off R Series. Remove electrical panel door.



Standard R Series electrical cabinet. MP1200 circuitry circled.

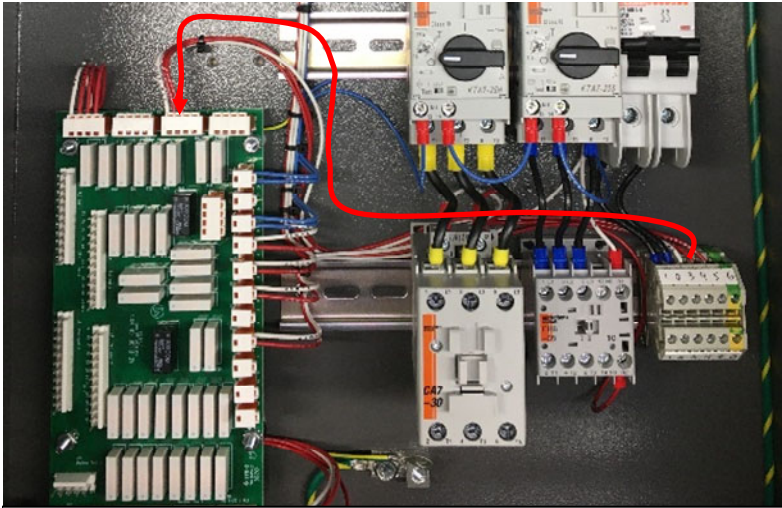


Install supplied 10a circuit breaker and pre-wired terminal strip using the available DIN rail to the right of the panel

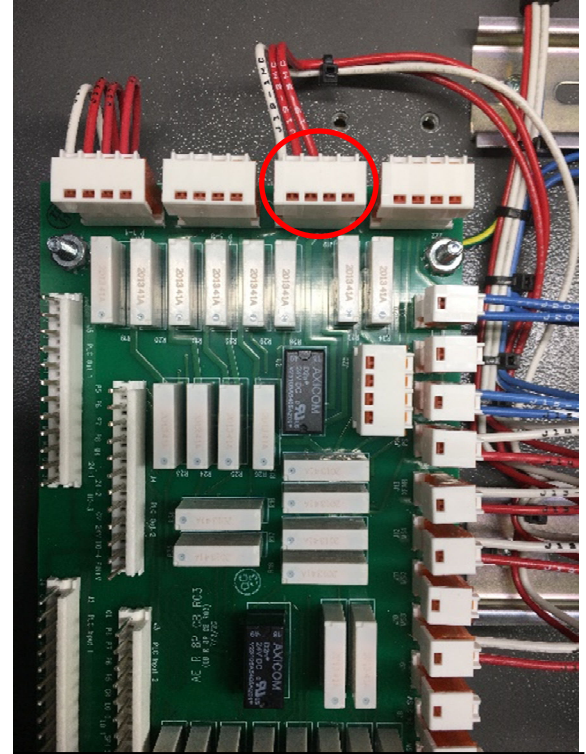


Route source power through the panel, terminating with the incoming power leads of the transformer

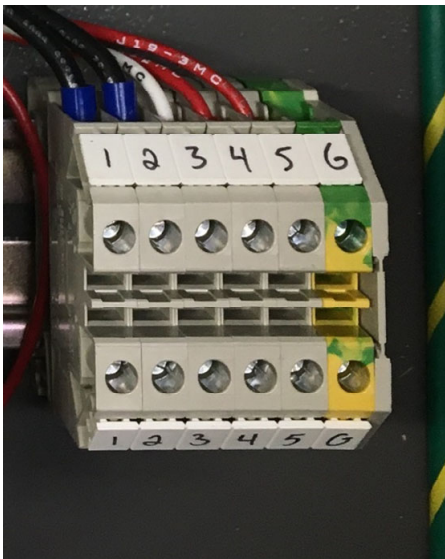
MP 1200 Mist Collector



Route the Red/White harness from the top of the terminal blocks to header J19 on the circuit board



Install the harness on the J19 header



Proceed to terminate the MP 1200 signal cable to the bottom pins of the terminal strip. Reference the pinout to the right

TB#1	TB#2	TB#3
Wire #1	Wire #2	Wire #3
L1	L2	110v COM
TB#4	TB#5	GND
Wire #4	Wire #5	GRN/YEL
SET SPD	FULL SPD	PE

3.3 MP 1200 Stand Alone Install

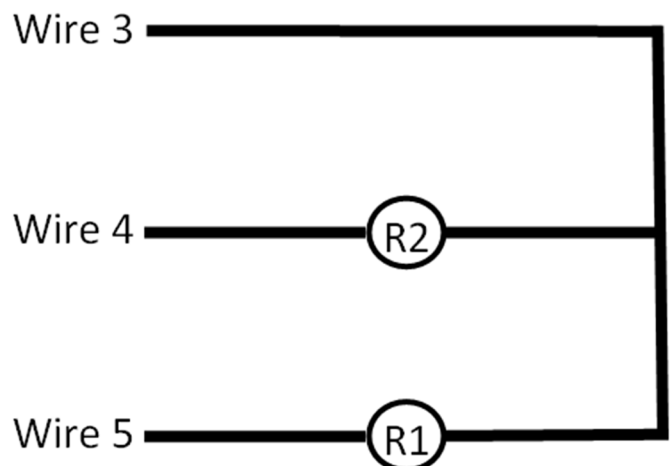
When the mist collector is installed, it shall turn off when the machine tool is in E Stop and when it is in an alarm.

Confirm if the machine tool is using 110V AC control voltage or 24V DC control voltage. The mist collector comes with 24V relays installed if you are using 110V AC control voltage then the relays will need to be swapped out. Swapping out the relays is a one to one replacement. On the relays there will be marking for the required voltage for the coils. These relays are found in the upper panel on the side of the mist collector. The relay coils are powered by wires 4 and 5.



The mist collector requires a latching signal to run. Sending a signal down wire 5 will turn on the mist collector and run at the speed the dial is set to. Wire 4 will run the mist collector at full speed regardless of the speed dial. Wires 1 and 2 are used for powering the mist collector with AC Voltage. Wire 3 is used as the common for wires 4 and 5. If the machine is using 24V control voltage wire 3 will need to be tied to the machine tool 0V DC.

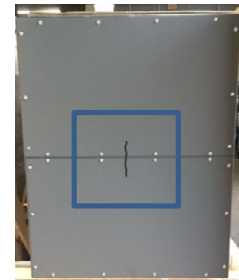
The circuit breaker that comes with the install kit is to be mounted inside of the machine tool. This circuit breaker is the only means of electrical protection for the mist collector and shall be installed.



4. MP 1200 Voltage Conversion

MP 1200 460v Transformer Installation

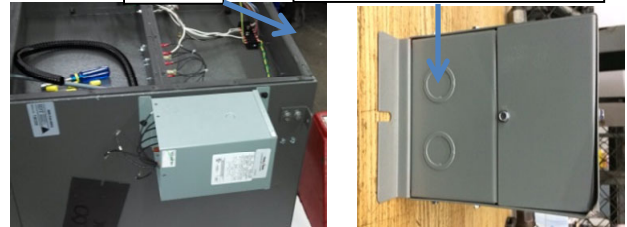
- Remove 2 outside panels. Mark the sides that touch for re-installation.



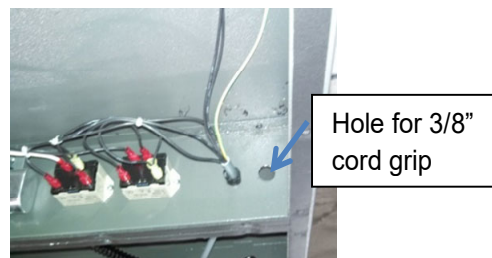
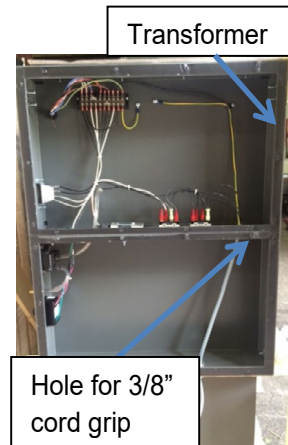
Remove inside circle only. Leave outer ring.

Top

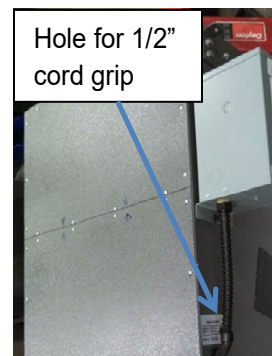
- Mount transformer with supplied nuts, bolts, and washers. Pop out **INNER** circle on bottom of transformer.



- Drill a hole to fit the supplied 3/8" cord grip. Hole should be next to cord grip already installed in cabinet



- A hole for 1/2" cord grip will need to be drilled on the side of the electrical cabinet. The hole should be a few inches below transformer, to allow enough room for conduit to flex.



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- Please follow the chart to wire the transformer to the MP1200 unit.
- **T1** wire **T2** wire may need to be extended. Use supplied connectors.

