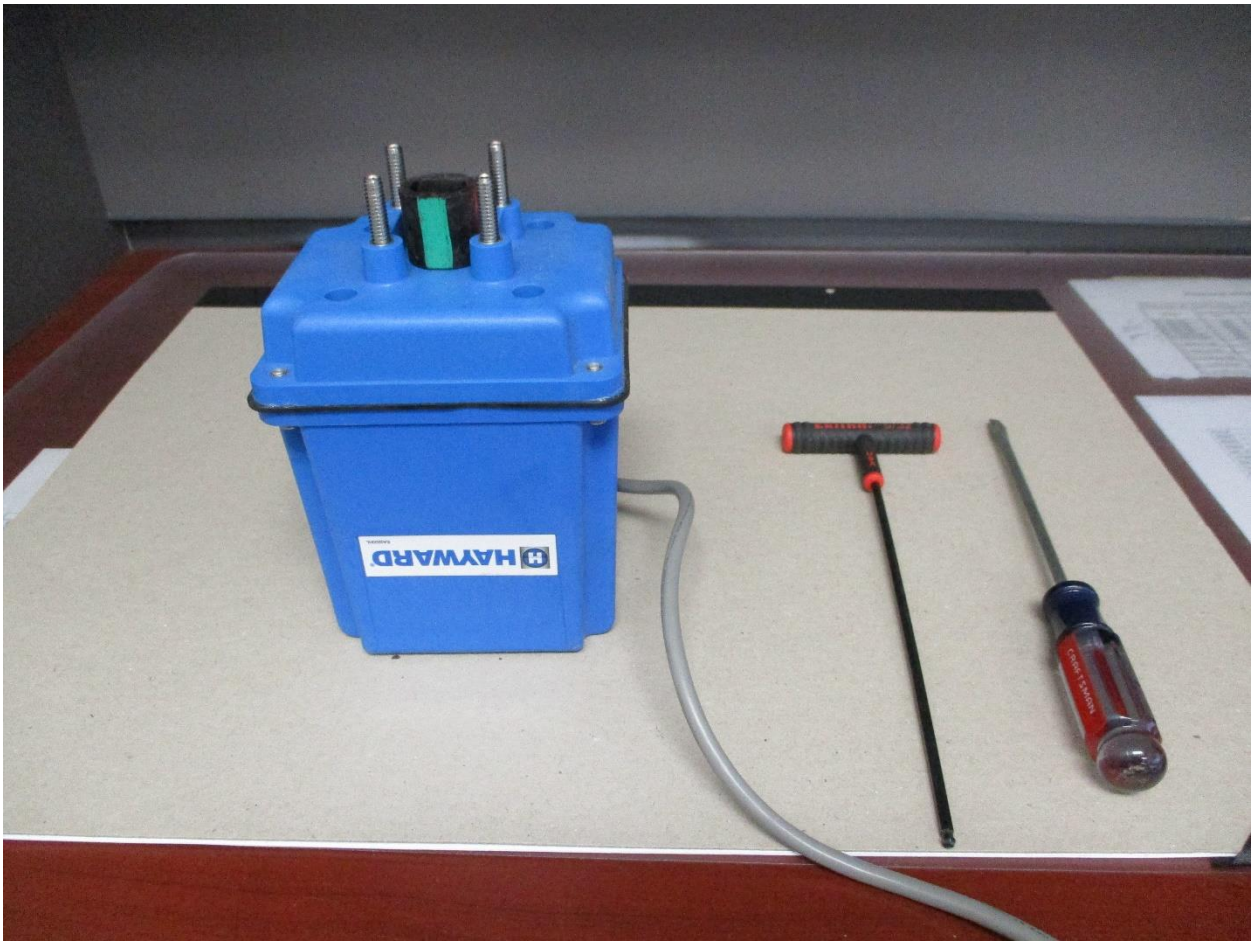
PURCLEAN™
Spot-Free Rinse & Water Recovery Systems

3315 Orange Grove Avenue • North Highlands, CA 95660 • 1.800.882.8854
www.purclean.com

Disassembly and checking the Micro switches in the Hayward motorized ball valve.

To get to the inside of the motorized ball valve you will need to remove it from the Ball valve. If it is a new style of ball valve it will have 4 nuts holing the motor head to the gray valve body. After you remove the motor head from the valve body it should look like below.



The tools you will need to disassemble the motor head will be.

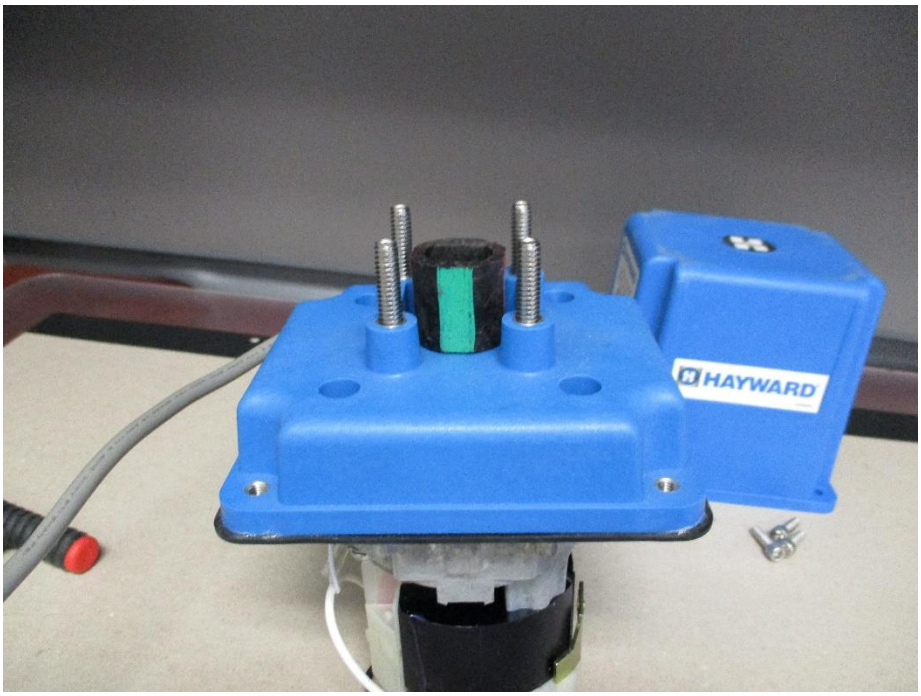
One hex key wrench 5/32 or 4mm.

One flat blade screwdriver.

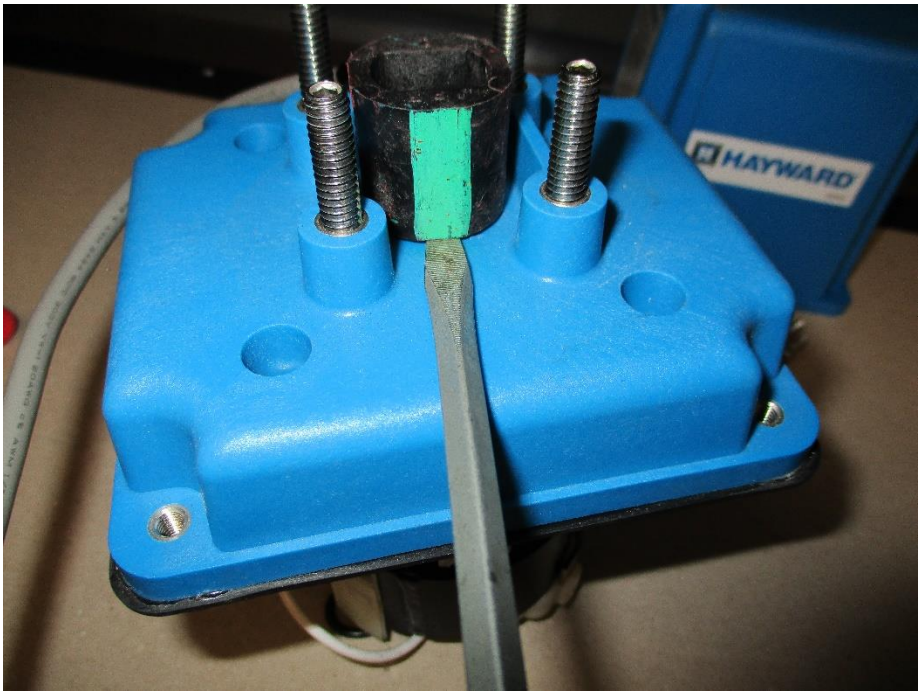
Loosen the 4 hex head screws that hold the back cover on the motor.

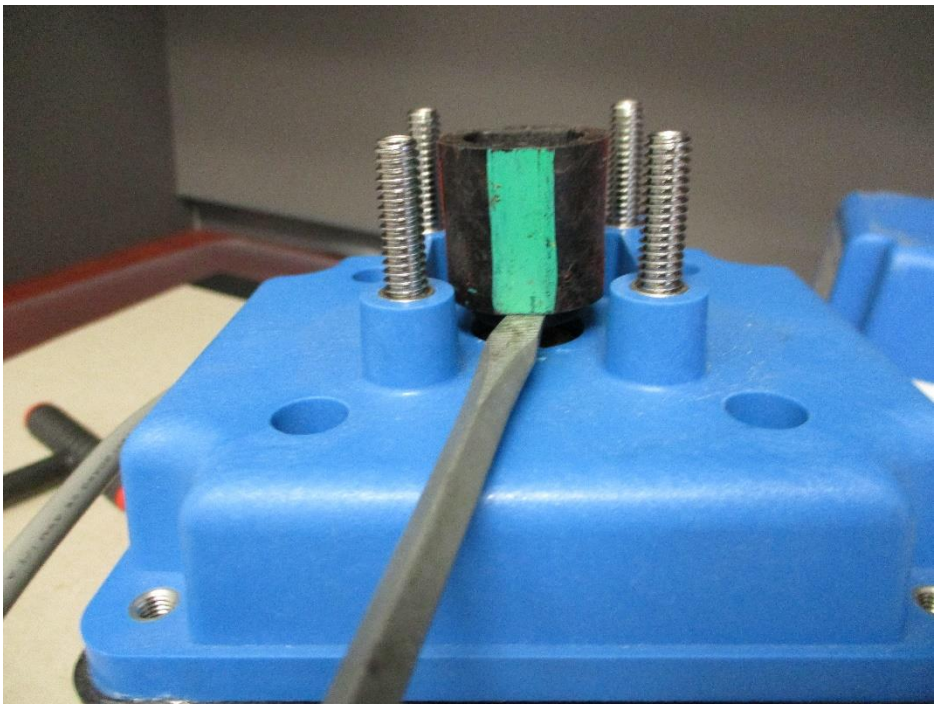
When you have all 4 screws lose you should be able to remove the back cover, set it aside with the screws.

Place the motor head with the motor pointing down

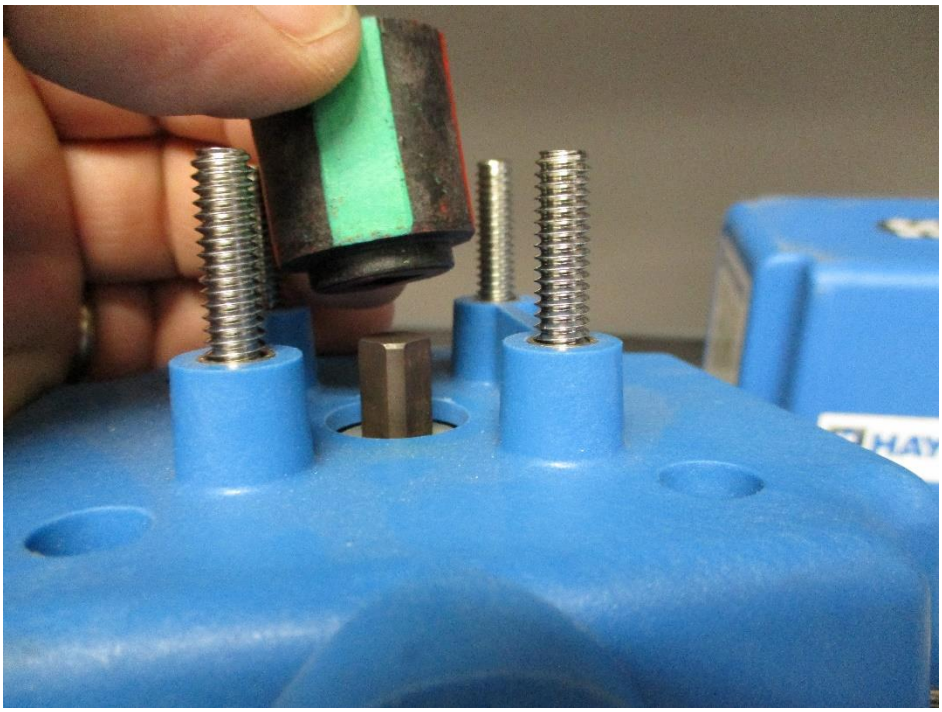


Using a flat blade screwdriver pry the black coupler up.



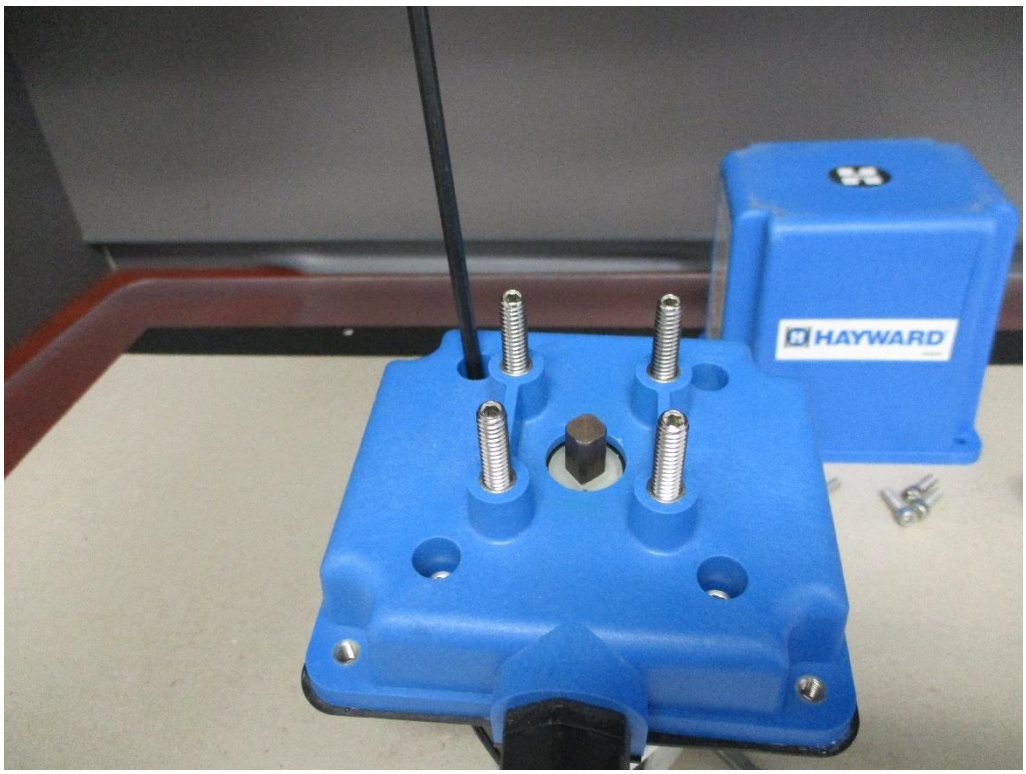


Once you have it up far enough you should be able to remove it with your hand.

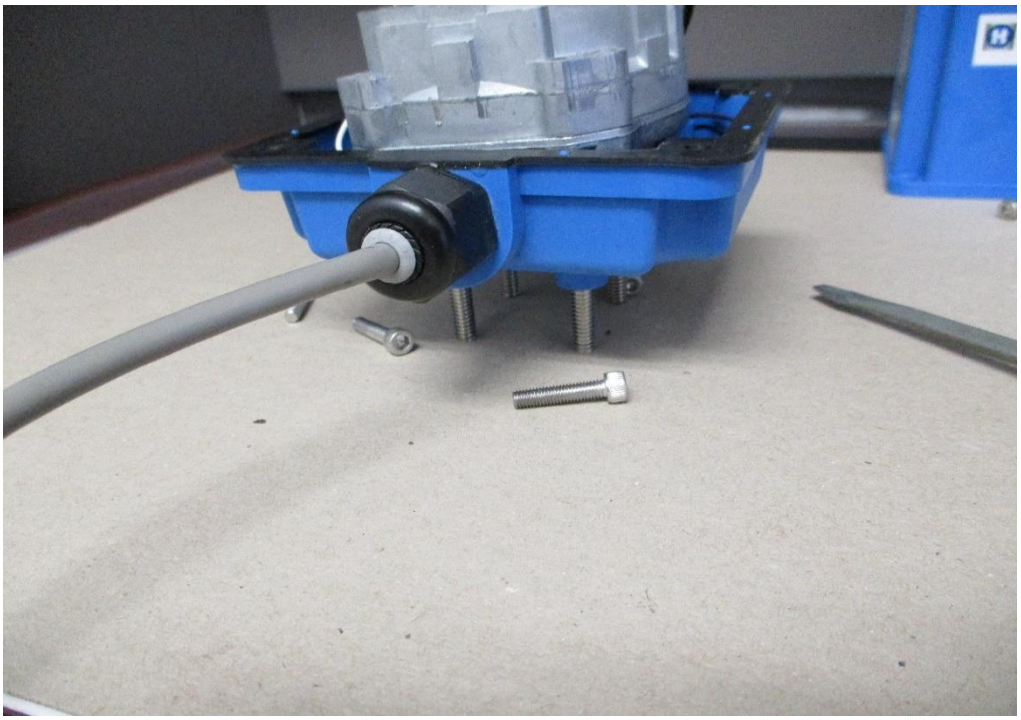


Be sure to remember what color is in the view port area when you remove the coupler so that you can re place it in the same position.

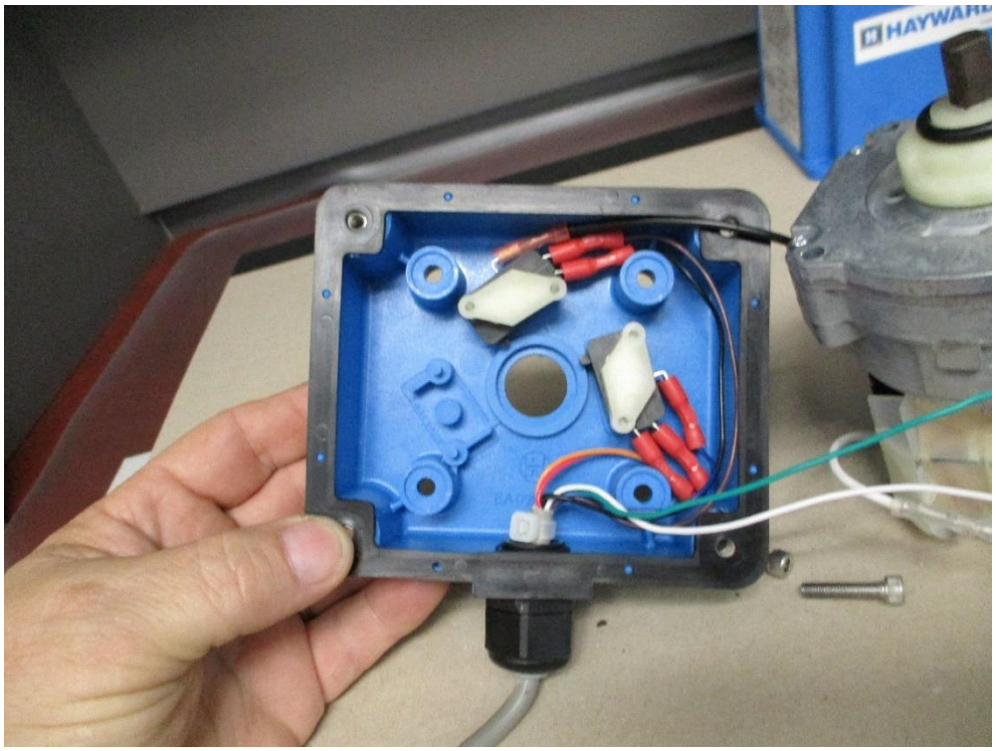
Now loosen the 4 hex head screws that hold the motor to the motor base. This will be with the 5/32 (4mm) hex tool.



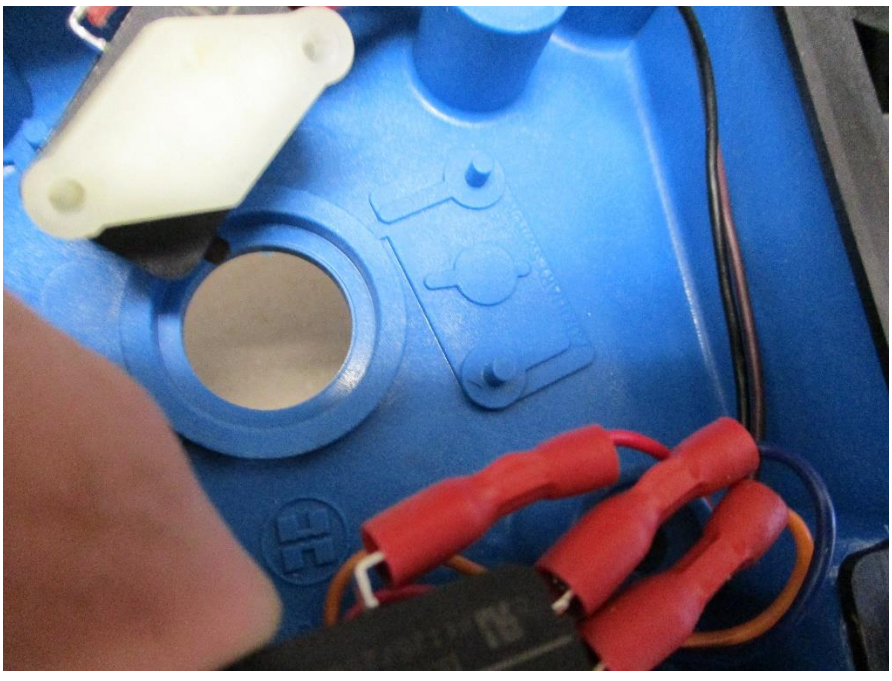
Then turn the Motor and base over, the screws will probably come out.



Keep in mind the position that the motor is in on the motor base so that it can be reassemble the same way. Taking a picture with your phone will help with this. Then you can tip the motor over to reveal the micro switches under the motor.

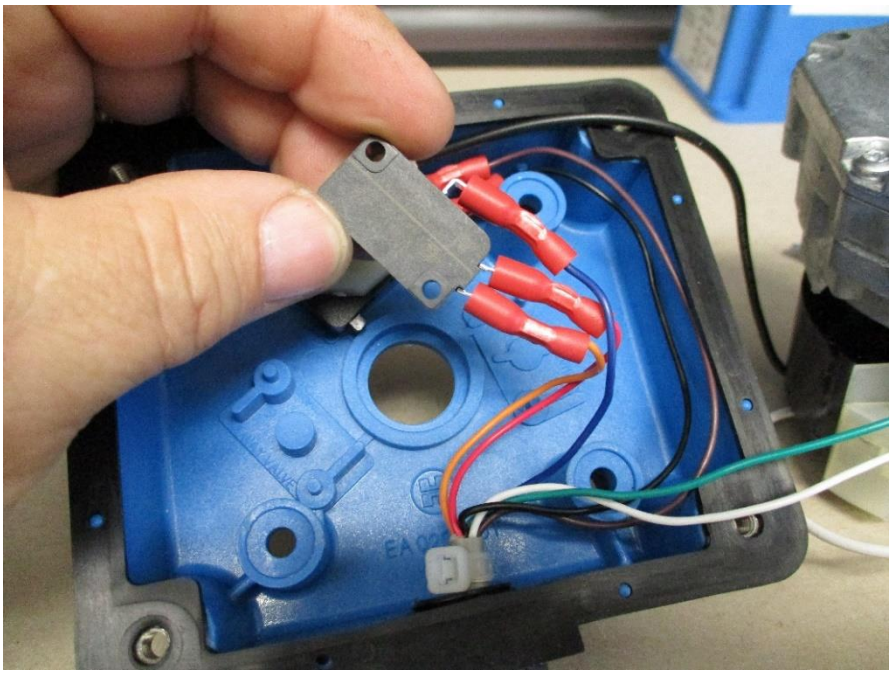


With the motor out of the way you will see that there are 2 micro switches, on top of the micro witches there are white keepers that fit in to the holes on the micro switches. When the switches are assembled to the motor base, they fit on to 2 pegs and then the white keepers fit on the switches and the motor sits down on the keepers to hold everything to the motor base.

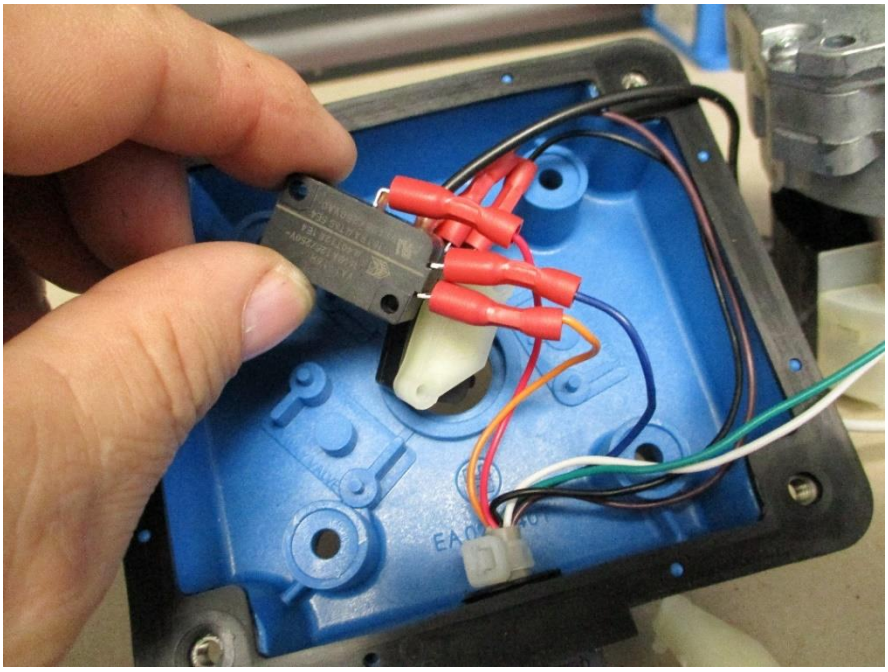


The position Micro switch is the one that will have the red and orange wires on it (sometime the factory will wire in the blue wire as well, but we do not use this).

In this picture I found a motor head that was having a problem that it was not showing that the valve was open when it was. It had been wired incorrect from the factory. They had the Blue wire on the common terminal.

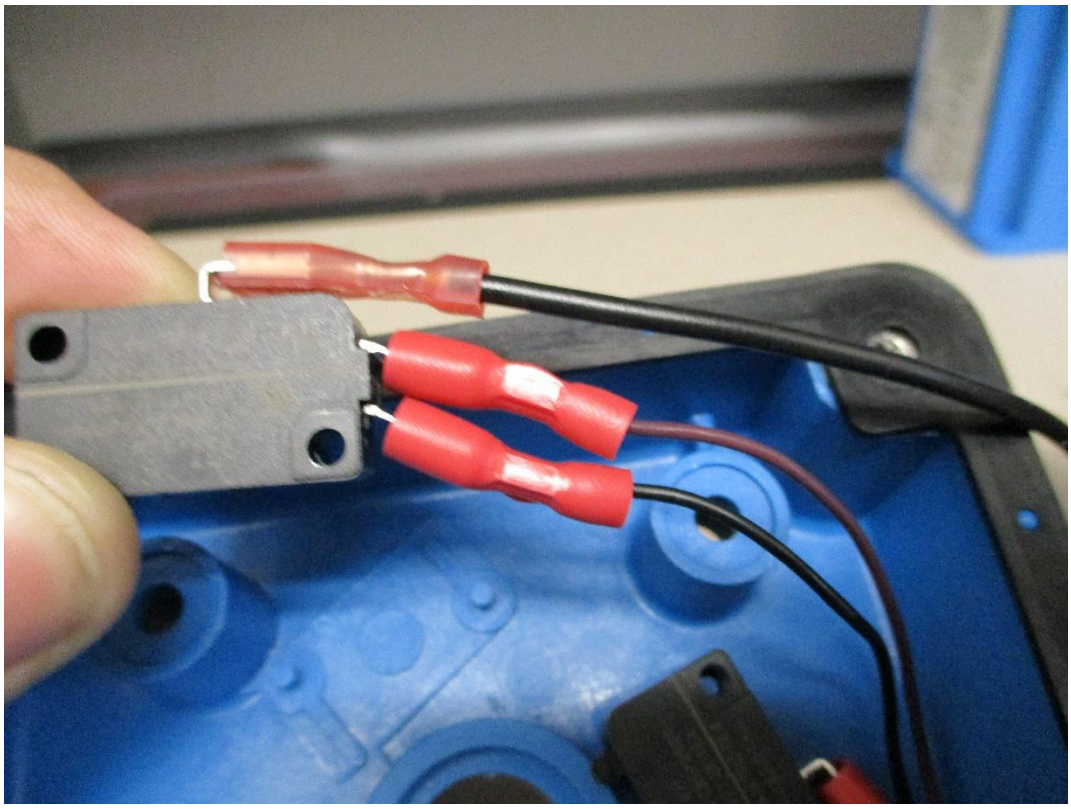


The fix for this was to move the Red wire to the common, and the Blue to the NO. (we do not use the blue wire this just keeps it from getting in the way)



The other switch that is in the motor head is the Motor run switch. This is the switch that gets its signal from the relay in the reclaim control box to tell the motor to turn.

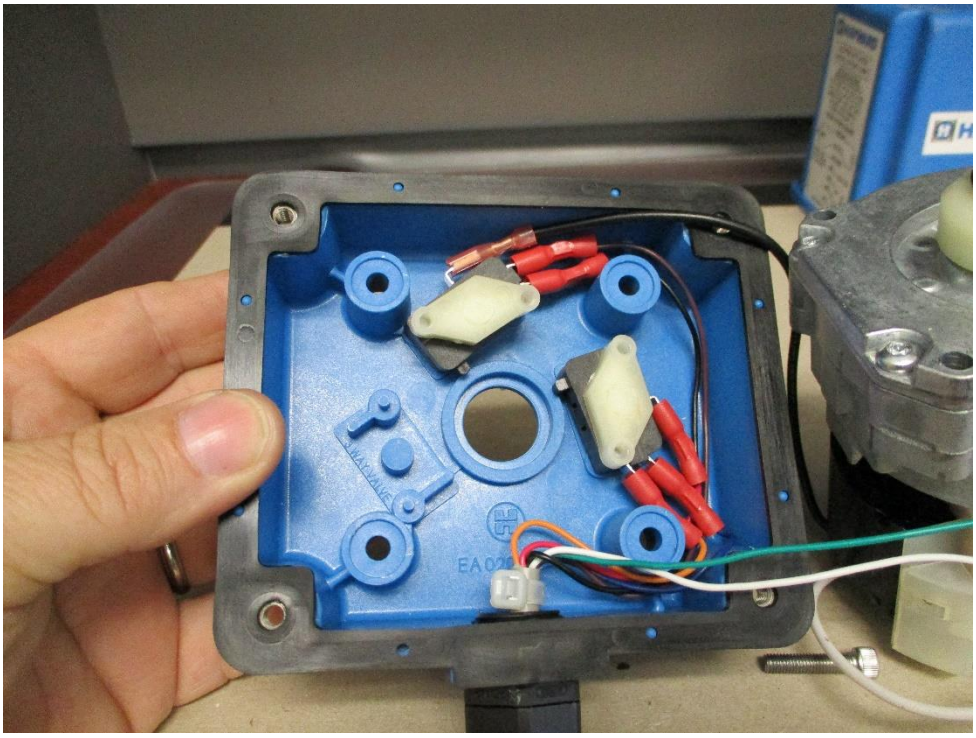
The common terminal on the micro switch is connected to the motor. The NO terminal should have the Brown wire and the NC terminal should have the Black wire.



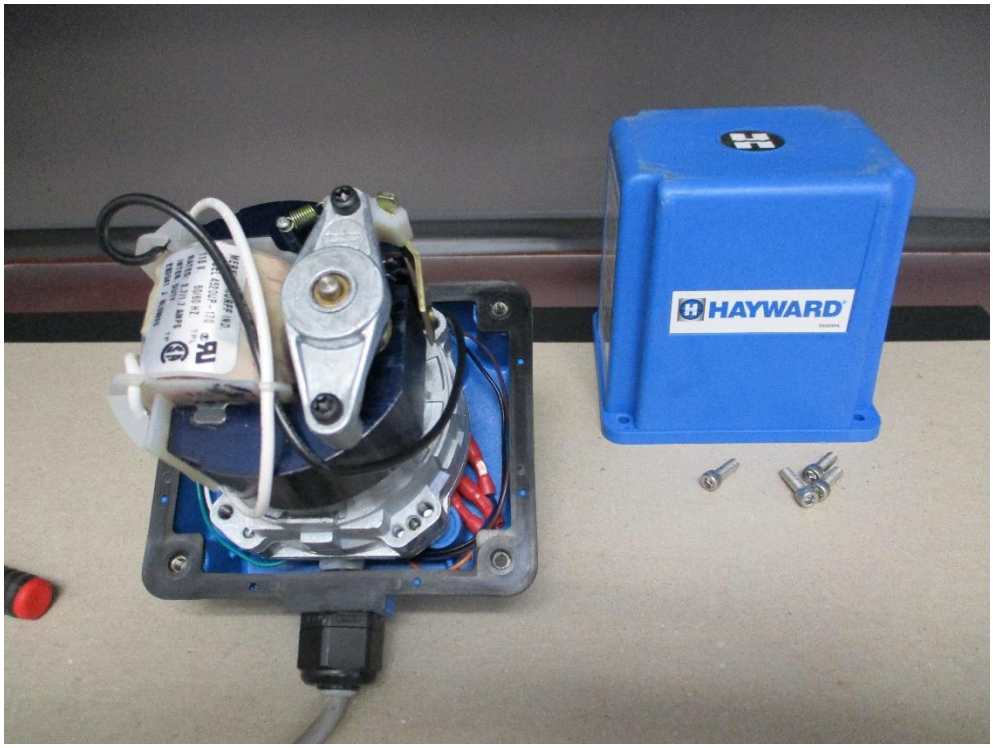
At this point you can check the Micro switches with a DVM and check continuity on the switches by pressing the small plunger on each switch and checking from comm to NO pressing the button and seeing if it closes and then checking from comm to NC pressing the button and seeing the switch open.

If everything is wired correct and the switches test good you can put the motor head back together.

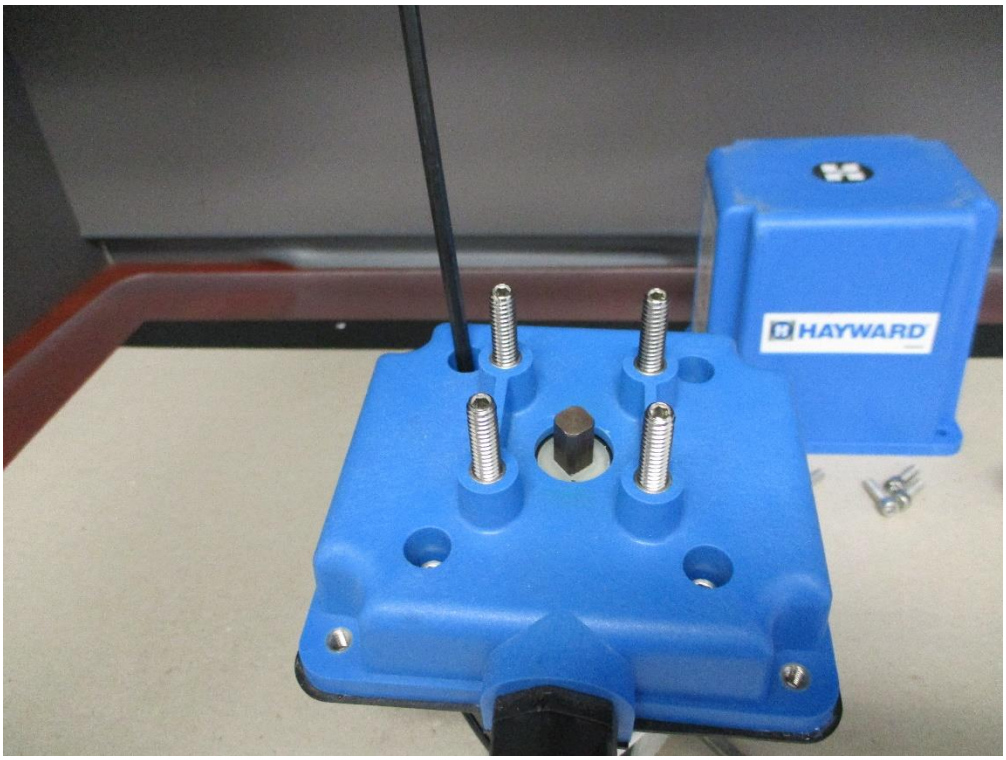
Before assembly be sure that the wires are routed correctly.



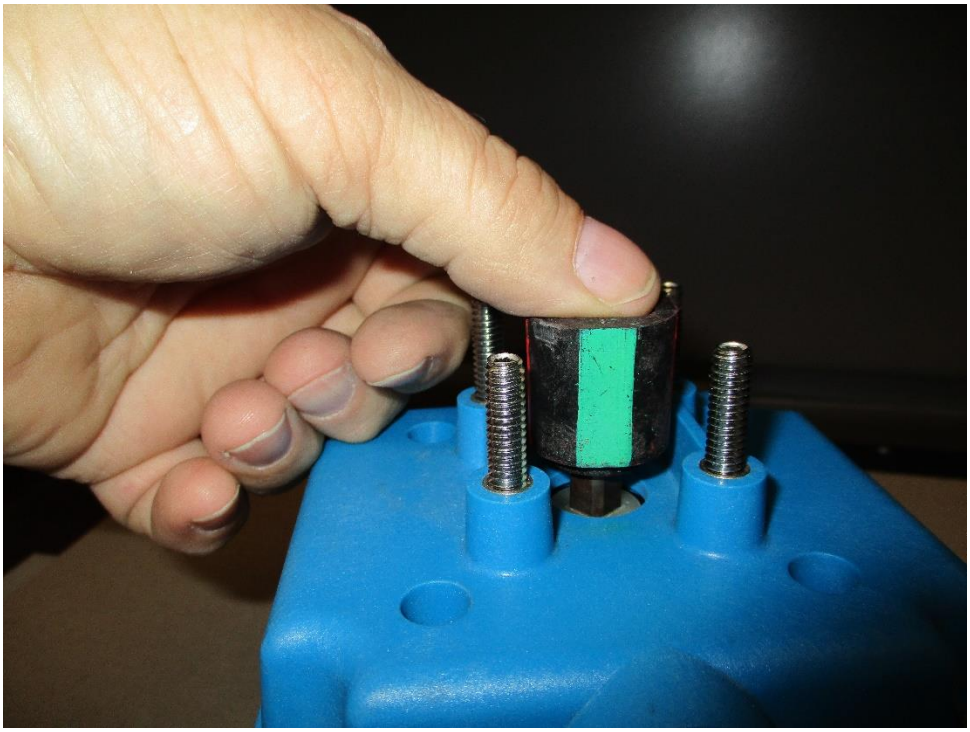
Place the motor Back on top of the micro switches, be sure the motor is in the same position as it was removed.



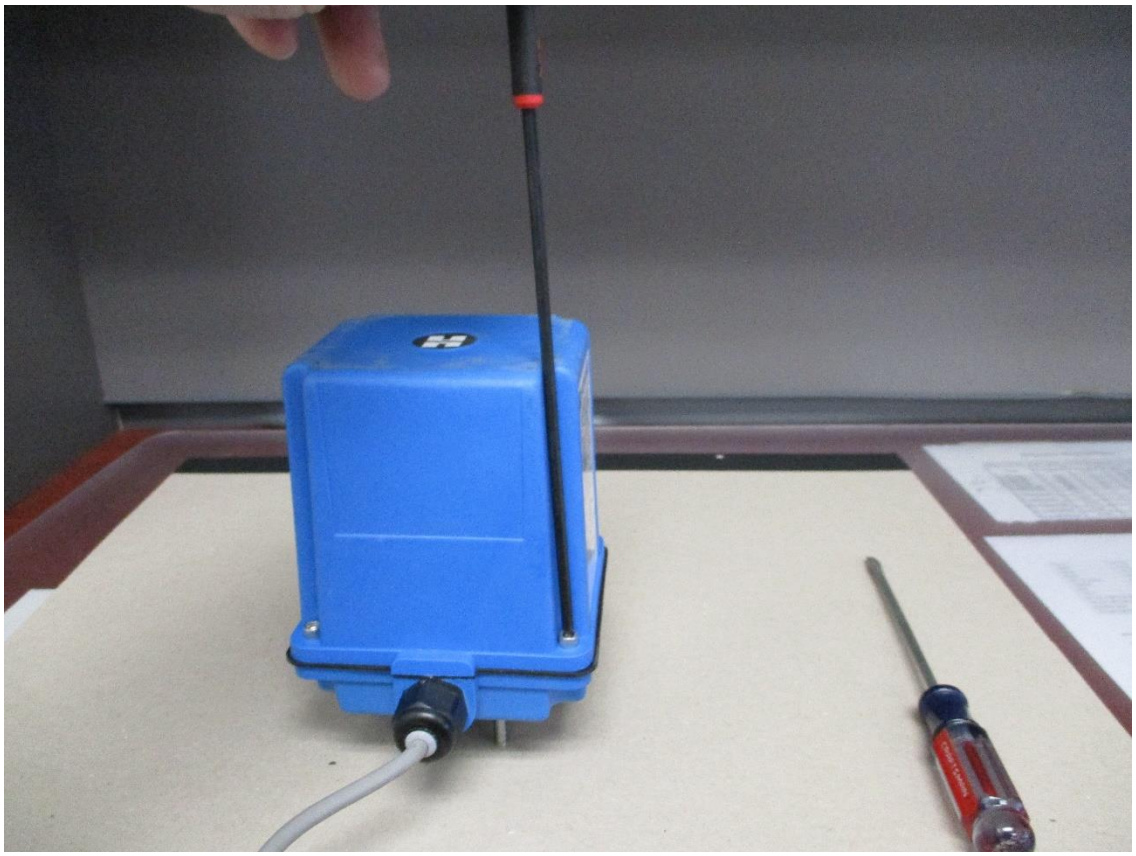
Install the 4 hex screws to hold the motor to the base.



Push the coupler back on to the square shaft, be sure to install it in the same direction it was removed.

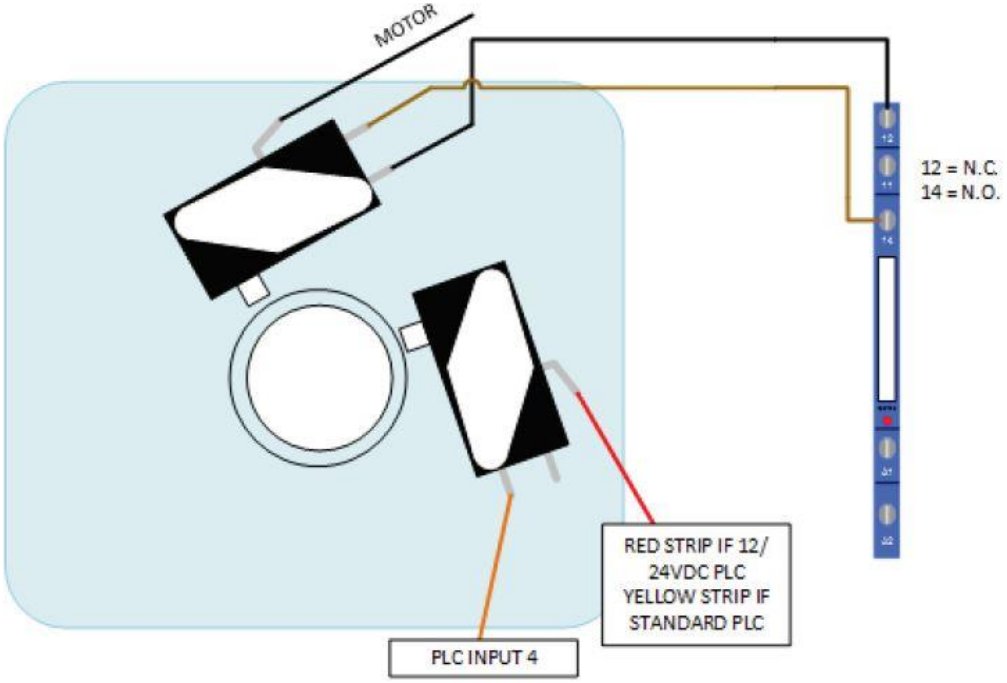


Install the back cover on the motor assembly.



Once the motor has been reassembled it can be tested by using the diagnostic menus in hand mode, to see if the valve rotates and is sending the correct open or close status.

RECIRCULATION BALL VALVE WIRING



UNDERFLOW BALL VALVE WIRING