



# **REPLACEMENT PUMP ASSEMBLY 70456**

**Obsolete Pumps 2390, 2532 & 2542**

**Effective November 2024**

**RPI 70456**



(800) 846-9659  
EQSystems.us

## REPLACEMENT PUMP 70456

### **Obsolete Pumps 2390, 2532 & 2542 Used On Multi-function Systems**

**Replacement pump part #70456 cannot be ordered online. You must call the Parts Department to order.**

Pumps 2390, 2532 & 2542 are obsolete. These are the lower assembly motor/port plate and tank assemblies used in many applications over the past years. This does not include what is known as the upper manifold (used on 4 plus function systems). At some point there will be no motors or reservoirs available for replacement on these units. Internal parts such as check valves, or the gear pump have never been available as replacement parts.

This lower assembly on these systems can be replaced using the current #2542KS. The upper manifold used on these units can transfer over. There will be some slight wiring modifications covered in the instructions and drawings below. The other option is to replace the complete assembly including the upper manifold and control valves. The application/vehicle/coach info as well as photos of the pump assembly, control panel and wiring connections would be needed for that.

Depending on the application/installation this may be accomplished leaving the hose assemblies connected to the manifold. Other applications may not have sufficient clearance above the manifold for its removal to do so, or if hose connections are 90 degrees. In these instances, the complete assembly will need to be removed from the coach and the lower assembly changed on the work bench. If hoses are disconnected verify that they are properly labeled for proper reattachment later.

## MANIFOLD REMOVAL AND REPLACEMENT

When removing a manifold from the lower assembly the jacks and slides (when hydraulic) should be in a “neutral state” not fully retracted or extended supporting weight. This will minimize the amount of fluid pressure present when disassembling.

Note: There is a high amperage 12 VDC connection from the battery/supply to the motor solenoid that can short out. It is recommended that the ground cables at the battery(s) be disconnected prior to this process to prevent shorting to ground.

Caution the battery cable attached to the pump solenoid will be hot (12 VDC plus). If possible, the cable/supply end at the battery should be disconnected to prevent shorting.

## WIRING DISCONNECT

There are wires (all black) connecting the manifold valve coils, pressure switch and others to the pump ground stud 5/16-inch dia. This ground stud is located in the center section of the lower assembly. Remove the nut and the black ground wires from this stud.

The manifold has other wires connected to valve coils and the pressure switch these go into a multi plug connector. Unplugging this connector and disconnecting the blue and green wires from the motor solenoids will allow the wiring to stay with the upper manifold.

One of the motor solenoids will have a heavy gauge wire/cable that is battery plus connected to one of the large studs remove this and protect from contacting ground.

There will be a power and ground connection harness with a two-pin connector. The yellow or red lead will be fused. The black lead was one of the wires connected to the pump ground stud. This will not be reused, a new one is supplied.

## MANIFOLD REMOVAL

The upper manifold is attached to the lower assembly with a pair of bolts or studs and nuts that pass through the upper manifold to hold/clamp it to the lower assembly. Loosen/remove these. The manifold will then “lift” from the lower assembly. There are a pair of o-rings that seat into grooves on the lower assembly that seal the fluid pressure between the two.



## REASSEMBLY

Install the manifold onto the new pump # 2542KS. It is critical that the o-rings be properly placed into the proper recesses/grooves in the center section of the new (2542KS) lower. New studs, nuts and o-rings are included. Take care that none of the wiring is pinched between the upper manifold and the lower new section. Tighten nuts/studs to 15-20 lb. ft. See Illustration #2.

## WIRING CONNECTIONS

### BLUE AND GREEN SOLENOID TRIGGER WIRES

The original 2390, 2532, 2542 units used small stud terminals for the connection of the blue and green wires that trigger the solenoid/motor run. The replacement pump unit # 2542KS has a single solenoid or contactor that both the blue and green wire will be connected to. Doing this will require that the #10 ring terminals on the green and blue wires be replaced (cut/strip/crimp) with ¼ female spade or quick connect terminals, that are included. On the side of the contactor on the 2542KS unit there are three male spade terminals the center one will need to be connected to the pump ground stud. A new ground wire is included for this. The one to the left gets the green wire and the one to the right gets the blue wire.

**See illustrations #1 and #3**

## BATTERY TERMINAL CONNECTION AT SOLENOID/CONTACTOR

The battery cable that was connected to the original pump solenoid will have a 5/16 eyelet on it. This will need to be removed and replaced with a ¼ eyelet. The battery cable along with the fused wire (yellow or red) will then be attached to the battery terminal stud together on the contactor of the new 2542KS pump. Tighten to 32-inch lbs. See illustration #3.

## GROUND WIRES

Connect all the black ground wires from the manifold valves and the new one going to the contactor along with the black wire that is in the two-pin connector and the battery/frame ground cable (if present) to the pump ground stud. Tighten the nut to 15- lb. ft. See illustration #3

## FINISHING UP

Fill reservoir with Automatic transmission fluid. Any Dexron or multipurpose ATF is fine.

Note that if the jacks and or slides are extended that the reservoir may overflow when all jacks and slides are retracted, if so, start off about ½ full.

## OPERATION AND TEST

During the below process monitor for proper operation and for leakage. Stop if there are any issues that need resolved.

Press all retract button on the control panel for the jacks. If slides are present retract them. Check the fluid level in the reservoir. Fill to 1 inch from top..

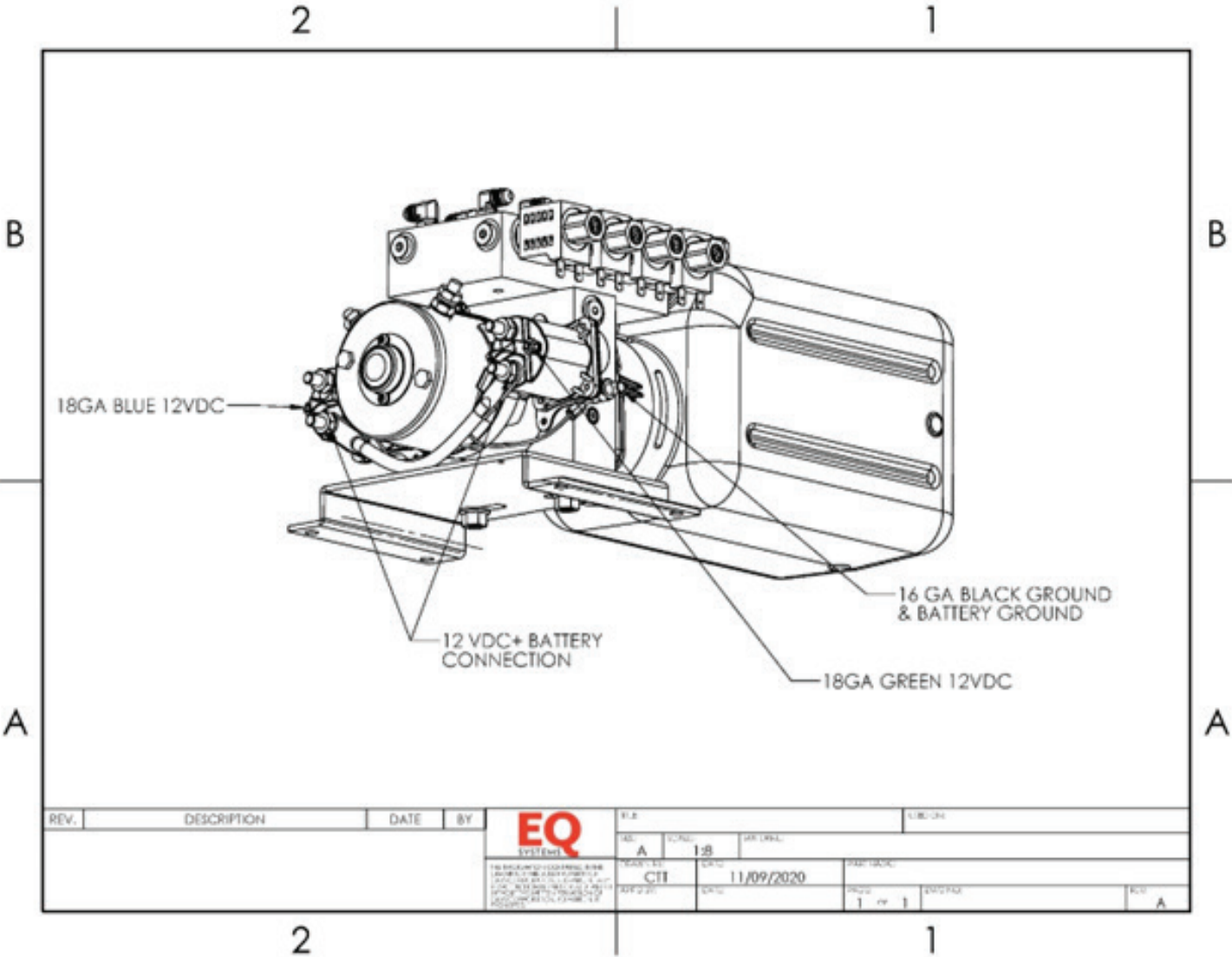
## PURGE

Using the manual control buttons. Extend the front jacks to the ground then press all retract. Next extend the rear jacks to the ground then press all retract.

Check the fluid level in the reservoir. If it is foamed up or aerated allow time for fluid to clear. Fill to full if needed approximately 1 inch from top.

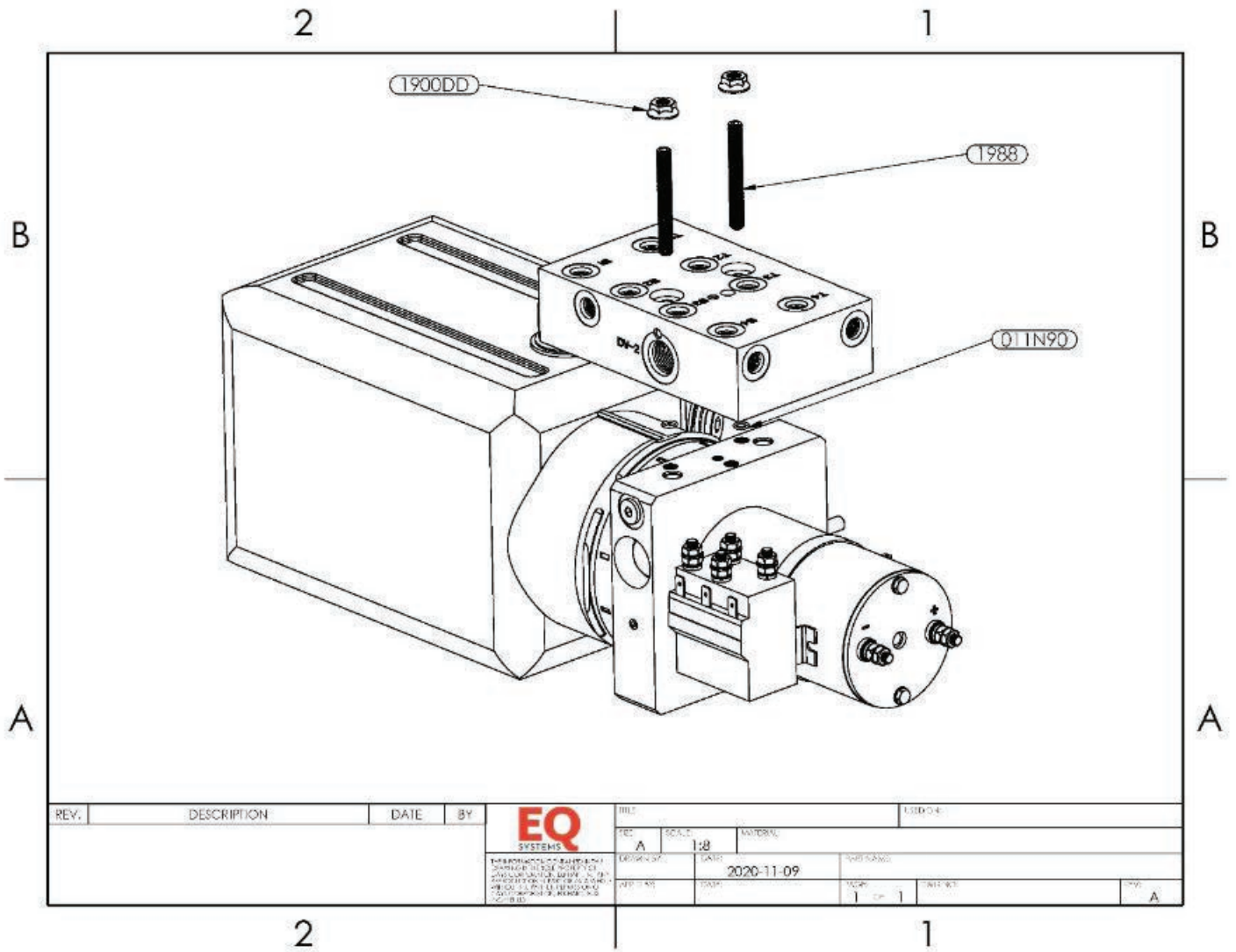
Perform auto level, verify that all is well.

Illustration #1



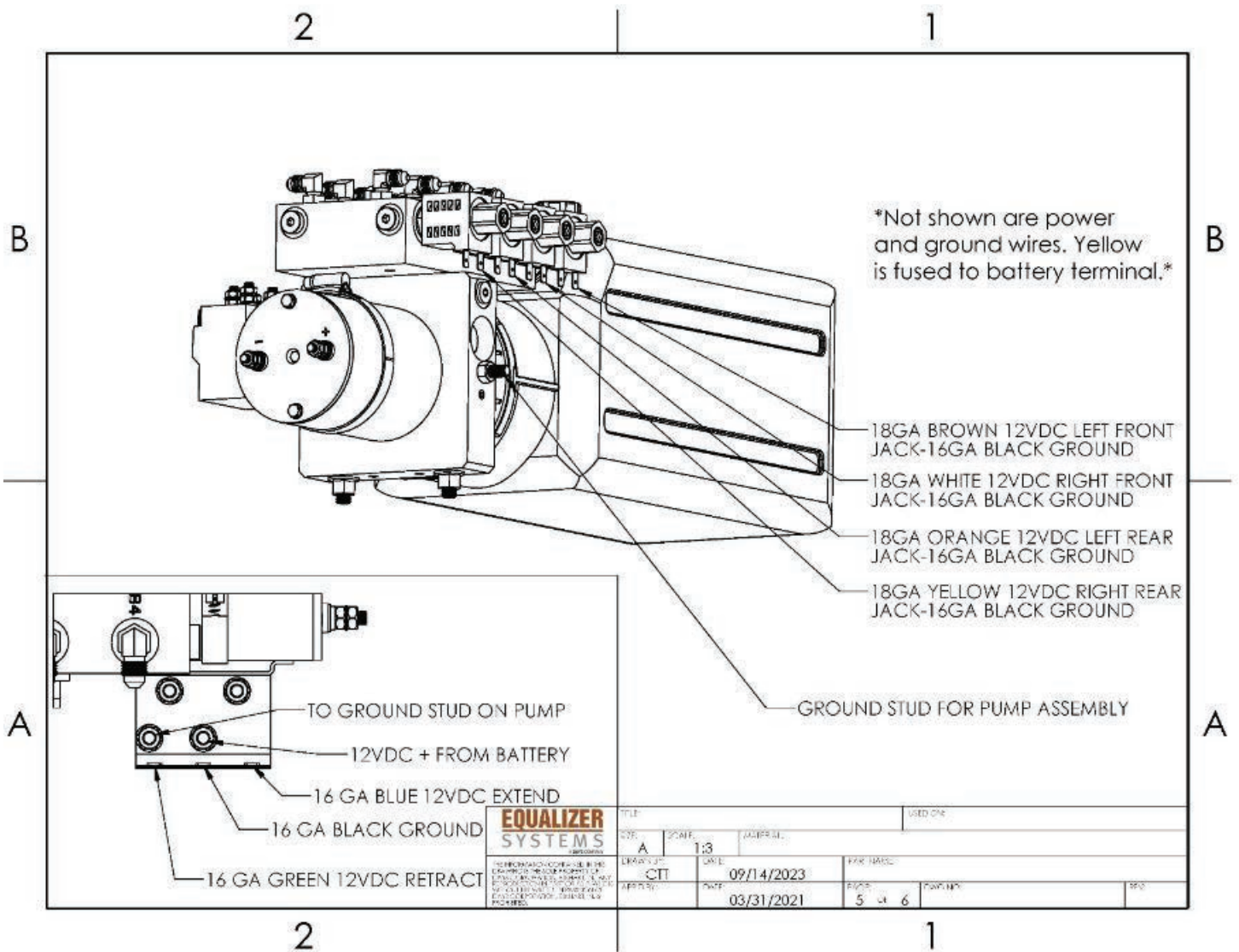
Original pump #2390, 2532 or 2542

# Illustration #2



Manifold installation with studs, nuts and o-rings

Illustration #3



New pump #2542KS wiring connections