

# TECH TIPS

Service Call:

## **Loss of Proportional Drive in the Elevated Position**

Tools Needed:

Multimeter  
Side Cutters  
Wire stripper / crimper  
1/2" wrench  
16ga wire approx. 30" in length

Model:

## **GS2668RT - 3268RT**



## Tech Tips Safety Rules



### **Danger**

Failure to obey the instructions and safety rules in the appropriate Operator's Manual and Service Manual for your machine will result in death or serious injury. Many of the hazards identified in the operator's manual are also safety hazards when maintenance and repair procedures are performed.

### **Do Not Perform Maintenance Unless:**

- You are trained and qualified to perform maintenance on this machine.
- You read, understand and obey:
  - manufacturer's instructions and safety rules
  - employer's safety rules and worksite regulations
  - applicable governmental regulations
- You have the appropriate tools, lifting equipment and a suitable workshop.

The information contained in this tech tip is a supplement to the service manual. Consult the appropriate service manual of your machine for safety rules and hazards.

## Step 1

Open the hydraulic tray door.

Locate the hydraulic manifold.

Depending on the serial number of the particular machine you are working on you will see the manifold in several different scenarios the following photos will show these examples.

The valve we are looking for on the manifold always has an acorn style nut and is always the largest single valve on the manifold and is known as the Proportional Valve pictured to the right.

This photo shows the proportional valve facing out towards the side of the machine.

This photo also shows the use of Deutsch plug electrical connectors.

Proceed to Step 5 if this is your manifold style.

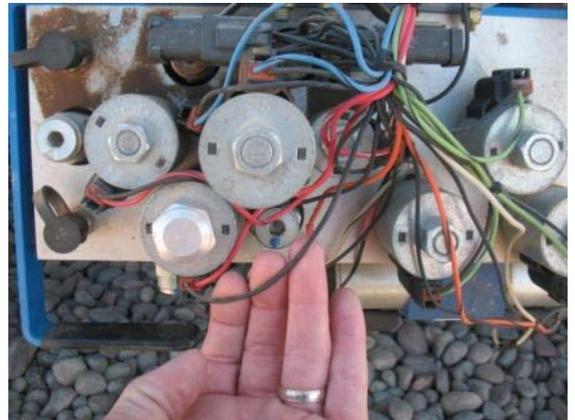


## Step 2

This particular photo shows the proportional valve on the top of the manifold.

This photo also shows the use of Deutsch plug electrical connectors.

Proceed to Step 5 if this is your manifold style.



## Step 3

This photo shows the proportional valve facing out towards the side of the machine.

This photo shows the use of spade electrical connectors.

Proceed to Step 7 if this is your manifold style.



## Step 4

This photo shows the proportional valve facing out the top of the manifold.

This photo shows the wires are actually molded to the coil with approx. 10" of lead coming out.

Proceed to Step 8 if this is your manifold style.



## Step 5

Note the two 16ga wires connected to the negative battery post.

Follow those two wires and verify that one of those wires is going direct to the proportional valve.

If there is only one 16ga ground wire on the negative post, or if you follow both ground wires and neither one of them leads direct to the proportional valve then go back to the valve itself and follow the ground wire (black).

Proceed to Step 6.



## Step 6

From the proportional valve the ground wire (black) will lead to a Deutsch connector that only has wires on one side, the other side is a ground buss. This takes one ground wire feed and supplies it to other valves on the manifold. There are two of these ground buss connectors and they are not shown on the electrical schematic so verify by following the valve ground wire to the correct connector.

Unplug the connector and remove the center retaining cap on the wire side of the Deutsch plug it will either be green or orange in color.

After you remove the retaining cap there will be a plastic lock that you will need to hold open and then you can remove the proportional valve ground wire from the plug.

You should now have a ground wire still connected to the two pin plug of the proportional coil.

Proceed to Step 10



## Step 7

Notice in this photo that all of the valve grounds are "daisy chained" together.

Remove the ground wire.

Install a new 16ga wire with a female spade connector crimped to it and slide it onto the valve in place of the old ground wire.

You should now have a ground wire with a female spade connector on the proportional coil.

Proceed to Step 10



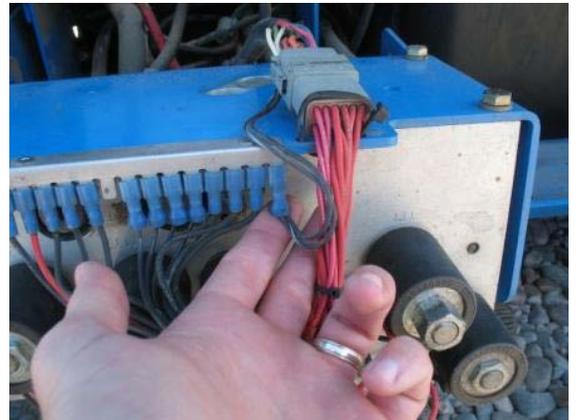
## Step 8

Unlock and roll the function manifold out so that you can see the top / inside section of the manifold as shown to here.

This represents the original style of ground supply to the valves.

You can see the supply ground is a black/white tracer and black wire tied together into one female spade. These ground supplies came from the ground control box where the ECM is located.

Proceed to Step 9



## Step 9

In this photo the red wire on the ground strip is the direct ground supply to the proportional coil.

Remove the ground wire from the ground strip and cut off the female spade.

Proceed to Step 10



## Step 10

With one end of your ground wire connected to the proportional valve take the free end and loosely route it from the valve to the negative battery lug to verify you have enough wire.

Once you have the correct length of wire, crimp on a 3/8" ring connector and bolt it to the negative post on your battery as shown in this photo.

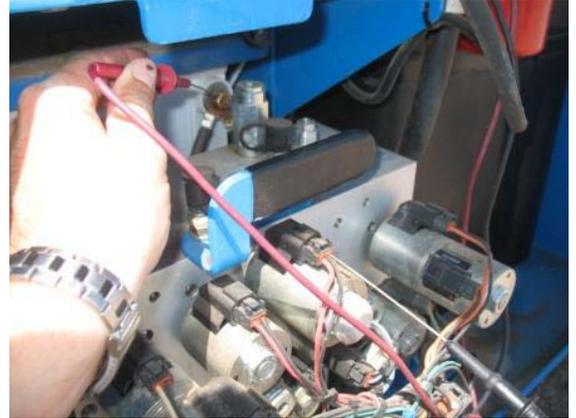
Proceed to Step 11



## Step 11

Using your multi meter test for continuity from the negative post on the battery to the negative connector on the proportional valve.

Proceed to Step 12



## Step 12

You should see approx .3 to .5 ohms.

Once this is verified start the machine and test the functions.

If problem still persists contact Genie Industries  
1-800-536-1800 for further assistance.

