

# TECH TIPS

Service Call:

**Unit will not stay running on gas from Platform Controls but runs fine on propane.**

Tools Needed:

7/16 wrench	1 relay
multimeter	12" blue wire
side cutters	12" red wire
wire stripper	20" black wire
terminal crimper	
Genie / pocket screwdriver	
4 16ga female spade terminals	
1 16ga 1/4" ring terminal	

Model:

**Ford LRG423**



## 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

If your unit will not stay running from the platform controls in gasoline mode, then go to the platform controls. Using your 7/16" wrench remove the three 1/4" bolts and washers that keep the lid closed.



## Step 2

Once the 1/4" bolts are removed locate the fuel select toggle switch.

Verify it is in gasoline mode as shown in the picture to the right.



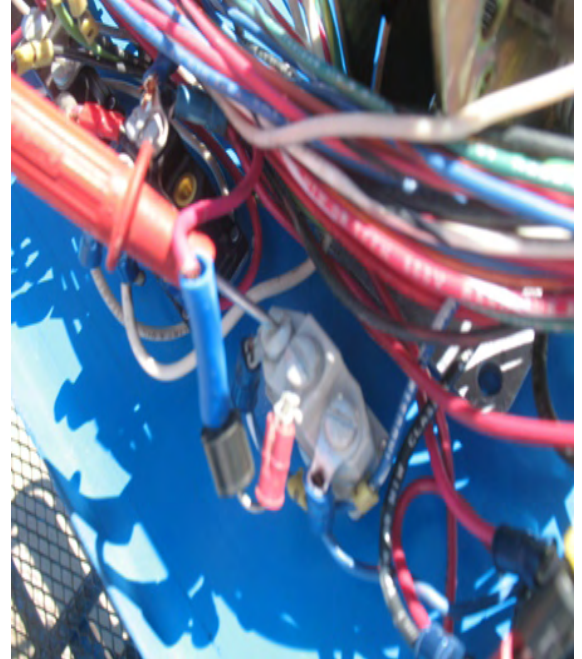
## Step 3

Verify key switch is in the platform control mode and pull up the platform control E-stop button.

Using the platform controls, start the engine and open the platform control box lid.

Using a multimeter connect your negative lead to the ground lug bolt located in the bottom or the left side panel of the platform control box and your positive lead to the blue/white wire on the fuel select toggle switch.

Using a multimeter verify that the blue/white wire on the fuel select toggle switch is getting 12V or more.



## Step 4

If the blue/white wire on your fuel select toggle switch is getting more than 12V as shown here, move your positive test lead from the toggle switch and verify the same voltage on both sides of the terminal strip in the bottom of the platform control box on terminal 38. Proceed to Step 5

If the blue/white wire at the fuel select toggle switch is showing less than 12V, move your positive lead of your multimeter to the center post of the toggle switch.

If the center post has more than 12V then your toggle switch is bad and needs to be replaced.

If the center post has less than 12V move the positive lead of your multimeter to the contacts on the bottom of the E-stop switch.

If the E-stop contacts show less than 12V contact Terex AWP Service @ 1-800-536-1800 for further assistance.



## Step 5

Using a 7/16" wrench remove the 1/4" fasteners at the ground control cover.

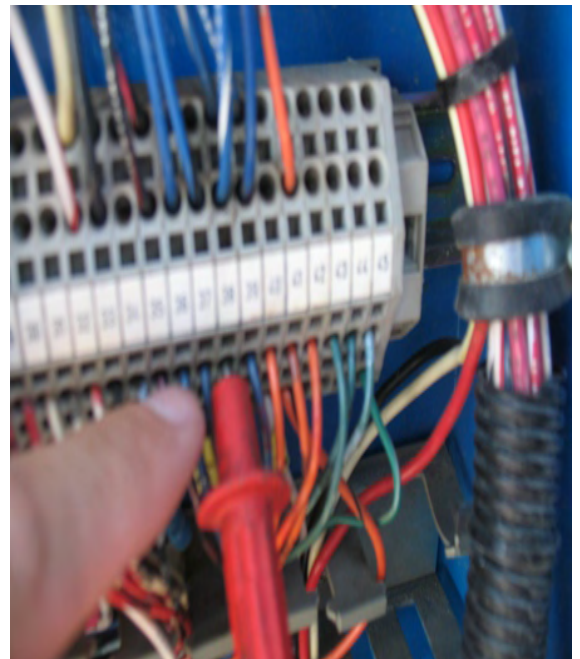
Once open locate the blue/white wire at terminal 38.



## Step 6

Using a multimeter connect the negative lead to the ground lug at the lower left side of the ground control box and back probe with your positive lead at terminal 38 and verify voltage while having an operator start the engine and operate a boom function like primary up and down.

Normally you should see close to the same voltage that you had in the upper controls. But with the engine shutdown that we are experiencing from the upper controls you will see a lower voltage like we see in Step 7.





## Step 7

In this example we see 9V at the ground controls terminal 38 while the engine is running and a function is being operated, in some instances you will have a voltage drop without running a function. This voltage is too low to keep the fuel pump running, causing the engine to starve for fuel.

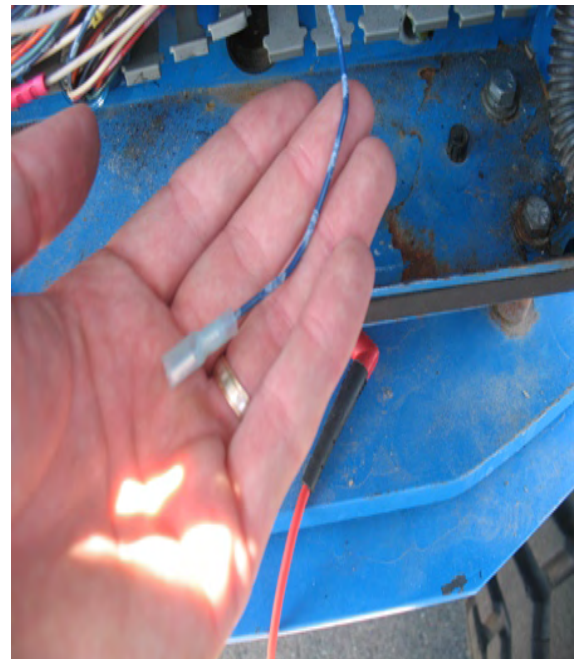


## Step 8

Using a flat blade pocket screwdriver/Genie screwdriver locate and remove the blue/white wire that connects to terminal 38 but is part of the engine harness. The engine harness on the older control boxes is the far left harness.

Make note of this now open terminal 38 location it will be used at Step 12.

Using a wire crimping tool, crimp on a female spade connector as shown here.



## Step 9

Using side cutters you will need a brown or black 16ga wire approx 20" long.

Strip and crimp a 1/4" ring on one end and a female spade connection on the other.

Connect the ring end to the ground lug on the left side of the control box as shown here.



## Step 10

Using side cutters, you will need a red 16ga wire approx 10" long.

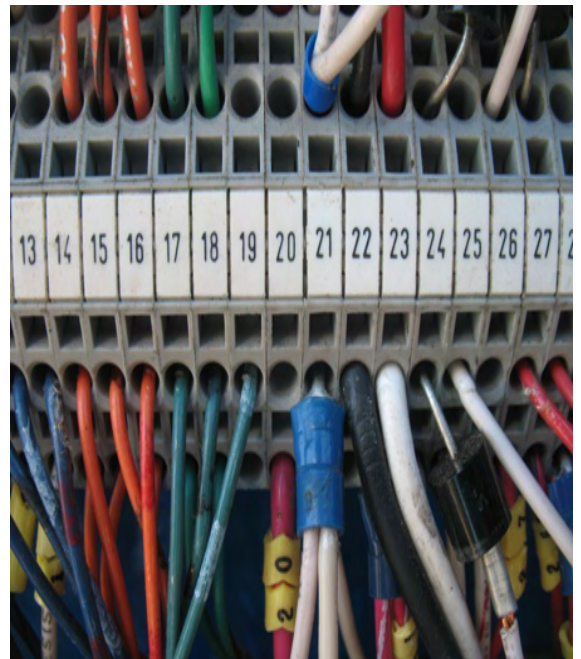
Using wire strippers you will strip approx 3/8" on each end.

Using wire crimpers you will crimp on a female spade connector to one of the ends leaving the other end bare.

Locate terminal 20 on the ground control strip and locate a blank space as pictured to the right by the empty round hole below number 20.

Using a flat blade pocket screwdriver or Genie screwdriver place the flat blade into the square slot above the empty round terminal slot.

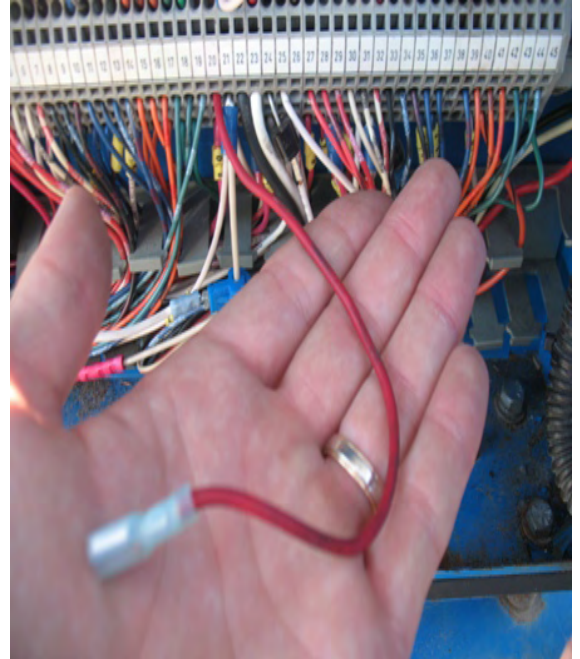
Push in the screwdriver until you feel it go in approx 1/4"



## Step 11

Leave the screwdriver in place and using the red wire that you made in Step 10 you will install the bare end of the wire into the empty and now unlocked terminal 20 slot.

Once the wire is fully inserted remove the screw driver and give the wire a tug to make sure the terminal is now holding it in place as pictured here.



## Step 12

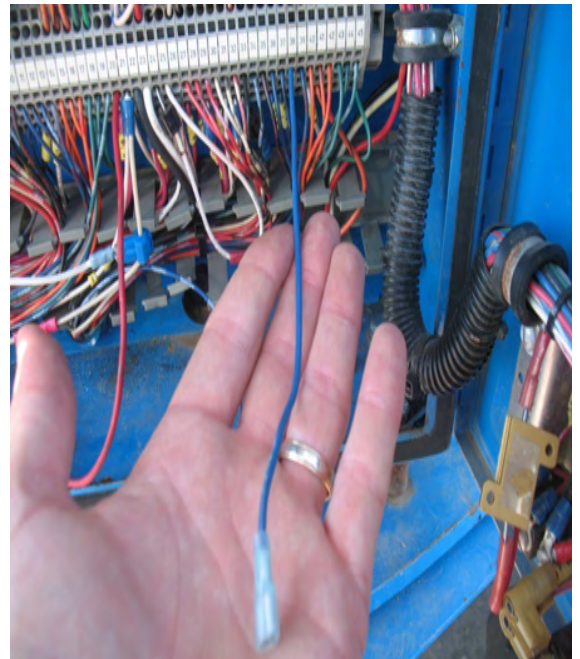
Using side cutters you will need a blue 16ga wire approx 10" long.

Using wire strippers, strip approximately 3/8" from each end of the blue wire.

Crimp a female spade connector on one end and leave the other end bare.

Using the flat blade pocket screwdriver/Genie screwdriver locate the empty terminal 38 slot from Step 8 and insert the bare end of the new blue wire into that slot. Once the wire is inserted make sure that the terminal jaws are locked by giving the wire a small tug.

The new blue wire should look similar to the photo here.





## Step 13

You should now have 4 wires with female spade terminals on the free ends.

Using a standard 5 terminal relay connect the wires as so:

red to terminal 30

blue to terminal 85

black to terminal 86

blue/white to terminal 87

Once the new relay is wired in use a multimeter to verify voltage at the blue/white wire on terminal 87 of the relay. Have an operator start the engine and operate it from the platform controls using boom up or down.

In the photo you can see that we are now getting 12.36V to the fuel pump versus the 9V we had at Step 7

