

# TECH TIPS

Service Call:

**Ford starter doesn't engage.**

Tools Needed:

Digital Multimeter

Model:

**Ford DSG 423**



## 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.

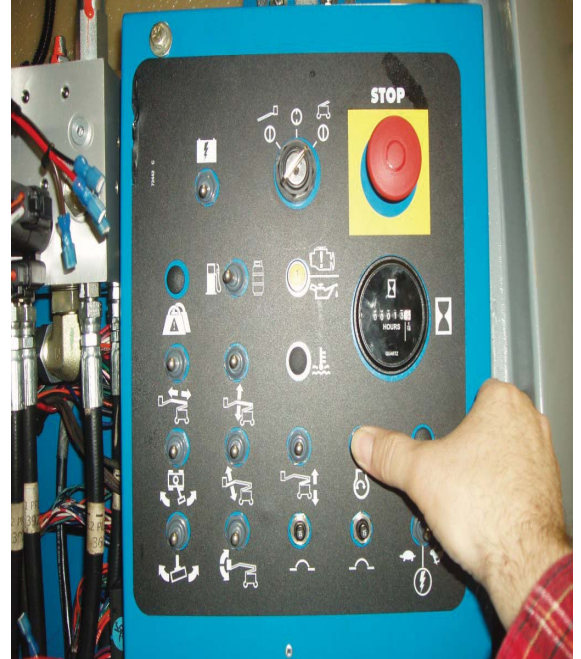
### **Do Not Perform Maintenance Unless:**

- 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

Turn the key switch to base controls and pull the red Estop switch on. Activate the start toggle switch.



## Step 2

Connect volt meter to the light blue/pink wire on the starter solenoid. You should see 9-12 VDC. If the voltage drops below 9 volts and the starter doesn't engage check the battery condition to see if it drops. If so replace or charge the battery. If battery voltage is good replace the starter.



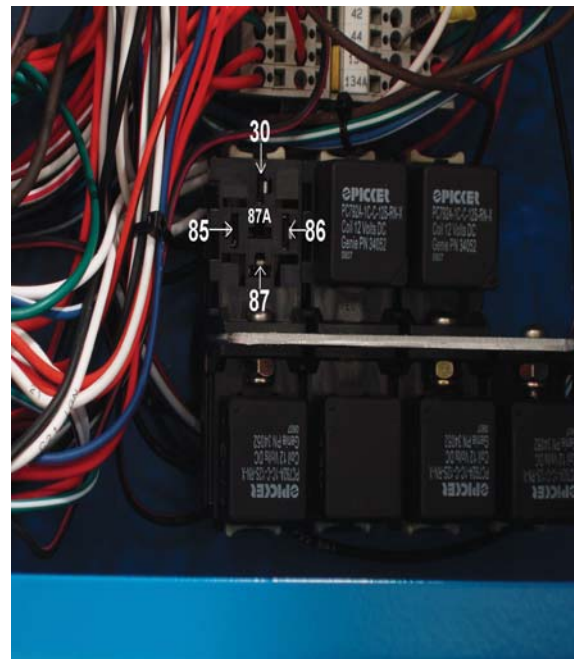
## Step 3

If no voltage is detected on the light blue/pink wire go to CR1 start relay in the base control box. The relay should click when the start toggle switch is activated.



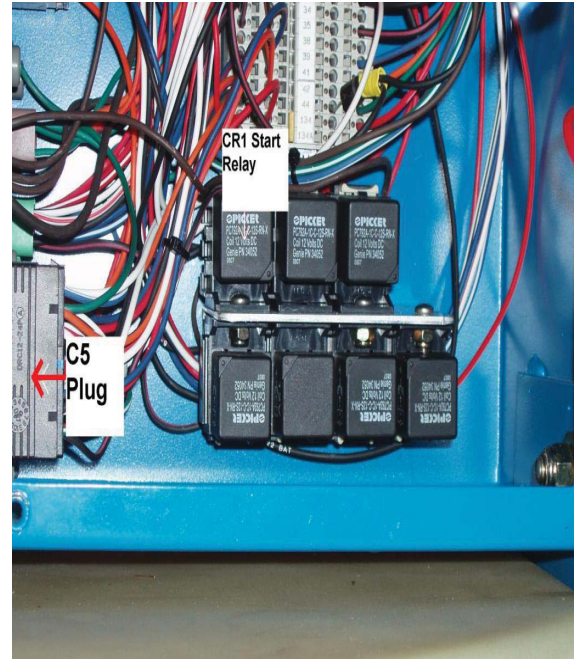
## Step 4

If no click is detected on the relay when start is activated check terminal 30 on the relay. The voltage starts at CB1 circuit breaker to terminal base 24 then to terminal 30 on the relay. Check voltage on terminal 86 of the relay when you activate start. From the start toggle switch the voltage goes to terminal base 33 then to terminal 86 on the relay. Terminal 85 on the relay is a ground. Use that terminal as your ground for all your voltage checks. If power and ground is present on all checks, replace the relay.



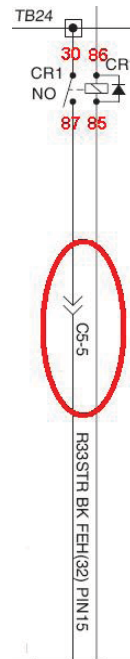
## Step 5

If the relay closes and there is no power present on the starter solenoid, locate the large black plug in the base control box C5. Back probe the connector at pin 5 on both sides to see if voltage is present when you activate the start toggle switch.



## Step 6

Schematic of the start circuit as described above.





## Step 7

Once voltage has been determined through the C5 plug, locate the Ford 42 pin connector on the engine side. You will notice that the schematic above shows the wire in pin 15 of this plug. The wire on one side is black which comes from our relay and C5 and the other side is Ford's light blue/pink wire that goes to the starter solenoid. Back probe the 42 pin connector on both sides to confirm voltage is present when the start switch is activated.

If more diagnosis is needed contact the Genie Service Department at 1-800-536-1800.

