

# TECH TIPS

SERVICE CALL:

**Unit will drive only when drive enable switch is activated , regardless of boom position.  
Drive enable light is on and solid.**

TOOLS NEEDED: multi meter, 7/16 wrench , appropriate electrical schematic (always helpful)

Model:

**S-60 and S-65** from SN 9154

**S-40 and S-45** from SN 7000



## 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.

## **Tools (delete this before publication)**

**⚠ DANGER**

**⚠ WARNING**

**⚠ CAUTION**

## Step 1

This procedure must be done with boom in the drive enable zone, (boom positioned in the center of the non steer wheels)

Remove ¼" bolts at base control box and open panel door.



## Step 2

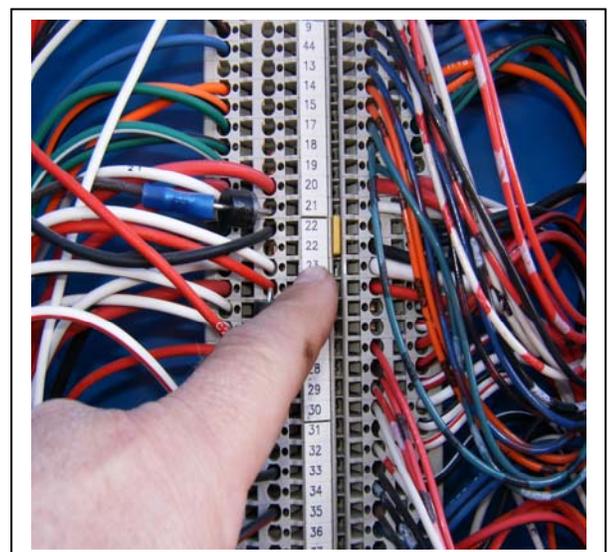
With e-stop pulled to the on position, verify voltage at TB22 (terminal 22). Should read 12 volts.

If no voltage at TB 22:

Trace circuit back to KS1 (Key switch), then , If needed to P1 (base e-stop), CB2 (circuit breaker 2), TB 20 etc

Find the open circuit and repair.

- This verifies that the LS3 drive enable limit switch circuit has power - 12 volts is essential to this circuit.



If 12 volt is present at TB22, proceed to step 3.

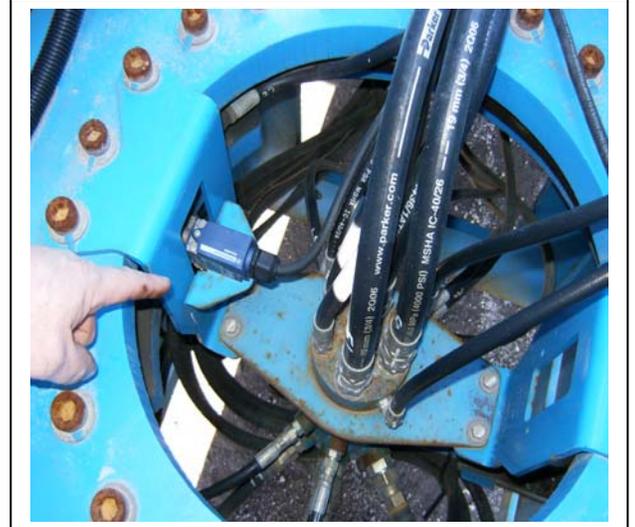
## Step 3

Locate LS3, which is located inside the turntable rotate bearing.

Check the switch head (cam) for damage. Open switch housing and check for broken or missing parts or disconnected wires. Check the voltage, switch should be closed and reading at 12 volts.

If no voltage present :  
There is an open circuit between TB22 and LS3.  
Find the open circuit and repair.

If 12 volt is present at LS3, proceed to step 4.

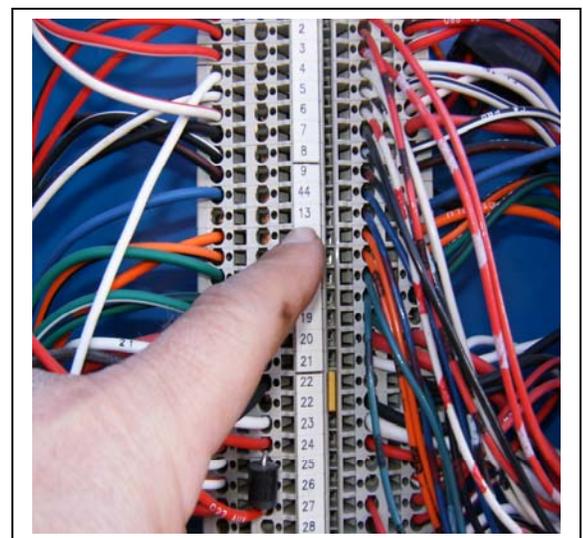


## Step 4

At the base control box, look for voltage (12 volts) at TB13.

If no voltage at TB13:  
There is an open circuit between TB13 and LS3.  
Find the open circuit and repair.

If there is voltage at TB13, proceed to step 5.



## Step 5

At the platform control box, remove the ¼” bolts and open cover.

With multi meter, probe pin 3 of the J2 connector on ALC 500 control card.

If there is no voltage (12 volts) at Pin 3, there is a open in the circuit between TB13 and the control card.

Find the open circuit and repair.

If 12 volts is present at pin 3 of J2, closely examine card and connector for a bad or intermittent connection.

If connections at card are good, replace control card.

**Note 1:** To order the ALC 500 control card, call our parts department, at 1-800-536-1800, and make sure to give the parts representative all needed information about the unit you are working on (i.e. model, engine, steer type etc).

**Note 2:** If this problem appears on booms other than the units specified on page 1, circuit number, wire color and test points will differ as will the troubleshooting method.

**Note 3:** On all units utilizing the ALC 500 control system, the drive enable circuit is always connected to pin 3 on J2.

