DIAGNOSTIC FLOW CHART FOR V-68 ELECTRO LIFT® UNIT

These charts are intended to be used as an aid in diagnosing problems on the V-68 unit. They are not a substitute for factory training and experience. Be certain to read the General Information and Testing Tips sections before attempting any troubleshooting.

IMPORTANT: Maintenance and repairs must be performed with the moldboard on the ground.

General Information

Before any troubleshooting is started, make certain the following conditions are met.

1. The power angling cylinders must be installed correctly on to the plow assembly. The left cylinder (Driver’s side) has two hoses. Attach the left wing 1/4” hose to the rod or live end of left ram. Attach the left wing 3/8” hose to the fixed end of left ram. Attach the right wing 1/4” hose to the rod or live end of right ram. Attach the right wing 3/8” hose to the fixed end of right ram. See Figure 1

2. The solenoid wires must be on their proper coil. See Figure 2

Testing Tips

Many tests do not require removing the Electro Lift® unit from the vehicle. However, more thorough testing can be performed using the Meyer Test Stand which allows direct pressure and amperage readings.

1. Using a screwdriver or other small tool to check for magnetism of the solenoid coils “S1”, “S2”, “S3”, “S5”, “S6” and “S7”. Place the tool on the nut securing the coil and have an assistant operate the switch. You should feel strong magnetic attraction.

2. Use a test light or volt meter to determine whether there is power at the harness.

3. When determining AMP draw of the motor, always obtain the highest value possible, i.e., at maximum raise or maximum angle with motor running.

4. The pump shaft of a good pump can be turned smoothly using two fingers. If it can’t be turn easily, the pump is too tight and must be replaced.

5. Pump pressure can be measured at an angle hose (note pressure at full angle) Note: The V-68 Unit has a non adjustable pressure relief valve.

6. Flush the complete system including unit, hoses and power angling rams with Meyer Hydra-Flush™ Fluid M-2.

V-68 Controller Operation

- The snow plow should only be in operation when the vehicle ignition switch and the control switch are in the “ON” position. Care should be taken to insure that the control switch is kept dry and free from moisture during normal operation.

- When the control switch is turned “On,” lights illuminate the location of the individual touch pads for the functions of the snow plow: (Up), (Angle Left), (Left Extend), (Left Retract), (Angle Right), (Right Extend), (Right Retract), (Scoop), (Vee) and (Down).

- Lowering of the snow plow an inch at a time is possible by tapping the down arrow in short intervals. Holding down the down arrow will activate a float light located in the upper right corner of the control switch. This light indicates the snow plow is now in the Lower/Float position. In this position the snow plow will be able to follow the contour of the road and the snow plow can also be angled to the left or right. Touching the up arrow automatically cancels the Lower/Float position.

- While angling left or right or raising the snow plow if the button is pressed for more than six seconds the operation will be cancelled. This feature eliminates unnecessary amp draw from the vehicle charging system.

- This switch is self diagnosing. The monitor light is located in the upper left corner next to the float light of the control switch. When the monitor light turns on and begins to flash the control switch is sensing a problem with a specific coil/connection on the hydraulic unit. The label below is on the back side of your control switch.

- Reset is accomplished by turning off the ignition switch or by turning the power switch off momentarily and then back on. If the monitor light is still illuminated after attempts to reset the switch have failed, contact your nearest authorized Meyer Distributor for repairs.
## V-68 Operation Chart

<table>
<thead>
<tr>
<th>V-68</th>
<th>RAISE</th>
<th>LOWER</th>
<th>RIGHT RETRACT</th>
<th>RIGHT EXTEND</th>
<th>LEFT RETRACT</th>
<th>LEFT EXTEND</th>
<th>ANGLE RIGHT</th>
<th>ANGLE LEFT</th>
<th>VEE</th>
<th>SCOOP</th>
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### V-68 Wiring

- Keyed Ignition (Blue)
- Light Module “C” Harness
- Light Module “B” Harness (Orange)
- Not Used (Blue w/Red Stripe)
- Light Module “C” Harness

### Hydraulic Solenoid Color Code:
- S1 (Red and Black w/white stripe)
- S2 (Black and Black w/white stripe)
- S3 (Green and Black w/white stripe)
- S5 (Yellow and Black w/white stripe)
- S6 (Blue w/white stripe and Black w/white stripe)
- S7 (Purple and Black w/white stripe)
Snow Plow will not Raise

Does the Snowplow Vee or Scoop?
- Yes
- No

Does the Motor Turn On?
- Yes
- No

Pump Pressure 2000 P.S.I.
- Yes
- No

Does the Motor have 12 volts to the red wire when the Raise switch is pressed?
- Yes
- No

Check Motor Solenoid for ground and 12 volts on both large terminals and small terminal with White wire.

Does the S1 Solenoid magnetize when the raise switch is pressed?
- Yes
- No

Replace the S1 Solenoid Cartridge

Does the the coil plug Red and Black w/White stripe have 12 volts when the raise switch is pressed?
- Yes
- No

Replace the S1 Solenoid Coil

Check Harness and Switch

Check Black ground wire or replace Motor.

Does the S2 Solenoid magnetize when the raise switch is pressed?
- Yes
- No

Replace the S2 Solenoid Cartridge

Does the the coil plug Black and Black w/White stripe have 12 volts when the raise switch is pressed?
- Yes
- No

Replace the S2 Solenoid Coil

Check Harness and Switch

Replace Pump Relief Valve and/or Pump
Snow Plow will not Lower

- Does the Snowplow Raise?
  - Yes: Does the S3 Solenoid magnetize when the Lower switch is pressed?
    - Yes: Replace the S3 Solenoid Cartridge
    - No: Does the the coil plug Green and Black w/White stripe have 12 volts when the lower switch is pressed?
      - Yes: Replace the S3 Solenoid Coil
      - No: Check Harness, Switch and Lower Adjustment
  - No: See Snow Plow Does Not Raise

Snow Plow Leaks Down

- Does the Snow Plow Leak Down?
  - Yes: Inspect / Replace Lift Cylinder
  - No: Does the Snow Plow Leak Down?
    - Yes: Inspect / Replace Universal Valve Block Assembly
Snow Plow will not Angle Left

Does the Snowplow Raise?
  Yes → Does the Snow plow lower?
    No → See Snow Plow Does Not Raise
    Yes → Does the Snow plow Retract the Left Wing?
      No → See Snow Plow Does Not Retract Left Wing
      Yes → Does the Snow Plow Extend the Left Wing
        No → See Snow Plow Does Not Extend Left Wing
        Yes → Check Harness and Switch

Snow Plow will not Extend the Left Wing

Does the Snowplow Raise?
  Yes → Does the Snow plow lower?
    No → See Snow Plow Does Not Lower
    Yes → Does the Snow plow Retract the Right Wing?
      No → See Snow Plow Does Not Retract Right Wing
      Yes → Does the S5 Solenoid magnetize when the Left Extend switch is pressed?
        No → See Snow Plow Does Not Extend Left Wing
        Yes → Replace the S5 Solenoid Cartridge
          Yes → Replace the S5 Solenoid Cartridge
            No → Check Harness and Switch

Does the the coil plug Yellow and Black w/White stripe have 12 volts when the left extend switch is pressed?
  Yes → Replace the S5 Solenoid Coil
    No → Check Harness and Switch
Snow Plow will not Retract the Left Wing

- **Does the Snowplow Raise?**
  - Yes: **Does the Snow plow lower?**
    - Yes: **Does the Snow plow Retract the Right Wing?**
      - Yes: Replace the S7 Solenoid Cartridge
      - No: See Snow Plow Does Not Retract Right Wing
    - No: See Snow Plow Does Not Lower
  - No: See Snow Plow Does Not Raise

- **Does the S7 Solenoid magnetize when the Left Retract switch is pressed?**
  - Yes: Replace the S7 Solenoid Cartridge
  - No: **Does the coil plug Purple and Black w/White stripe have 12 volts when the left retract switch is pressed?**
    - Yes: Replace the S7 Solenoid Coil
    - No: Check Harness and Switch
Snow Plow will not Angle Right

- **Does the Snowplow Raise?**
  - Yes: **Does the Snow plow lower?**
    - Yes: Does the Snow Plow Extend the Right Wing?
      - Yes: Check Harness and Switch
      - No: See Snow Plow Does Not Extend Right Wing
    - No: See Snow Plow Does Not Retract Right Wing
  - No: See Snow Plow Does Not Raise
Does the Snowplow Raise?

Yes → Does the Snowplow Lower?

Yes → Does the Snowplow Retract the Left Wing?

Yes → Does the Snowplow Extend the Left Wing?

Yes → Does the Snowplow Retract the Right Wing?

Yes → Does the Snowplow Extend the Right Wing?

Yes → Does the Snowplow VEE?

Yes → Check Harness and Switch

No → See Snow Plow Does Not Raise

No → See Snow Plow Does Not Lower

No → See Snow Plow Does Not Retract Left Wing

No → See Snow Plow Does Not Extend Left Wing

No → See Snow Plow Does Not Retract Right Wing

No → See Snow Plow Does Not Extend Right Wing

No → See Snow Plow Does Not VEE
Snow Plow will not VEE

Does the Snowplow Raise?

Yes

Does the Snow Plow lower?

No

See Snow Plow Does Not Lower

No

See Snow Plow Does Not Raise

Yes

Does the Snow Plow Retract the Left Wing?

No

See Snow Plow Does Not Retract Left Wing

Yes

Does the Snow Plow Extend the Left Wing

No

See Snow Plow Does Not Extend Left Wing

Yes

Does the Snow Plow Retract the Right Wing?

No

See Snow Plow Does Not Retract Right Wing

Yes

Does the Snow Plow Extend the Right Wing

No

See Snow Plow Does Not Extend Right Wing

Yes

Check Harness and Switch
Snow Plow Wing Does Not Hold Position

Is the wing Spongy? Yes
Fill with Fluid and Bleed out Air

No
Inspect / Replace (4) 2000 P.S.I Relief Valves above hoses

Does the Snow plow Wing now hold? No

Replace S7 Cartridge

No
Does the Snow plow Wing now hold? No

Inspect / Replace Wing Cylinder

No
Does the Snow plow Wing now hold? No

Inspect / Replace Super V Valve Block Assembly