ILD Liftgate trouble shooting guide

1.1) Check voltage minimum 10 volts at motor at by pass.

1.2) Motor does not run.
    Check motor solenoid. If it is getting power but you
    Do not hear click, you should change the motor solenoid.

1.3) If the motor solenoid is getting power and you can hear it click,
    replace motor.

2.1) Liftgate makes squealing noise:
    a. Noise happens in both raising and lowering.
       Use Caterpillar additive 1U-9891. Start with 2 ounces, engage up switch to
       by-pass and hold for 30 seconds then cycle liftgate 4-5 times or until noise
       stops. Add two ounces more at a time until noise stops. Maximum 8 ounces.
       If after 8 ounces the noise does not stop or diminish contact factory.

    b. Noise happens only when it’s lowering.
       Lower the pressure on the down function. If lowering the pressure does not
       work, you will need to change the pressure compensating valve located on
       the top of the passengers side cylinder.

2.2) Liftgate will not raise:

    a. Motor runs but nothing is happening or platform raises slow.
       Check your batteries. Batteries are not charged or weak. Recharge or
       replace batteries. Use a booster if necessary to rule out battery problems.

    b. Check power on lock valve and lowering valve with up button activated.

    c. If you are getting power on the lowering valve and lock valve,
       replace the diode on the green wire. Lowering valve should not get power
       when raising platform.

    d. If you are getting power only to the lock valve: The lock valve should
       have at least 10V. (It is Important to have volt meter to perform proper test).
       If valve has power to it, put your finger on the valve block while activating
       the switch and feel if the valve is actually switching. If it feels like it is but the
       liftgate operates slow, put a booster on your batteries. If the booster solves
       the problem, check you batteries again, they are probably not holding a
       charge. If booster does not help, replace valve and coil.
e. **If you are not getting power:** Follow the schematic through to the switch to find, either the faulty wire that may be broken or a faulty switch. Usually, if this is a switch problem, one of the two switches will work fine. If both switches do not turn the liftgate on, then you probably have a broken wire inside the pump & motor box.

f. **Motor runs but platform goes down when the up button is pressed.**
Hoses are reversed where they connect to the power unit box.

### 3.1) Platform does not lower down

#### a. Motor does not run.
If it is not getting power, follow the schematic through wiring to check for power to the switch to find either the faulty wire that may be broken or a faulty switch. Usually if this is a switch problem one of the two switches will work fine. If both switches do not run the liftgate down, then you probably have a broken wire.

#### b. Motor runs but platform does not move or moves slow.
Check power on both lock valve and lowering valve when switch’s are activated. Test first with each switch activated individually.

#### c. No power at coil.
Determine by following the schematic diagram → Bad switch or broken wire? Make sure master switch is on and circuit breakers are not tripped.

**Note:** There are diodes in some wires that may be faulty. If you have a wire with a diode in it, it is most likely is a bad diode. Replace it.

#### d. Lock valve has power and lowering valve has power.
If in your test for lowering, the gate raises fine but just will not lower, it most likely is a **bad lower valve and coil**. Feel the valve when activating switch. You should feel a pulse on the valve and hear it click. If you can’t feel the valve activate or hear a clicking, change the valve and coil. Holding a screwdriver on the end while coil is activated → should create a magnet and pull the screwdriver in. If it does not coil is bad replace it.

**Pressure compensating valve is loose or contaminated.**
Located in right side lift cylinder, retighten or clean out.
3.2) Platform does not open or close.

   a. Motor does not run.
      Check motor solenoid. If it is getting power but you do not hear click, you
      should change the motor solenoid.

   b. Motor Runs but platform does not move.
      Check power on both coils of open and close valve.

   c. No power at coil.
      Determine by following the schematic diagram. Bad switch or broken wire?
      Make sure master switch is on and circuit breakers are not tripped.

Note: There are diodes in some wires that may be faulty. If you have a wire
with a diode in it check for power flow to rule out a bad diode first.

   e. Coil has power.
      If in your test the platform closes fine but will not open (or the opposite)
      either the one coil is bad or the valve. If coil is getting power you can
      reverse the two coils and try the function again. If the one coil is bad the
      opposite will happen. If the opposite does not happen replace the coils and
      valve. If the opposite does happen replace only the bad coil.

      Fittings with orifices plugged
      Hydraulic hose plugged
      Hydraulic pressure set to low

3.3) If the platform does not close:

   a. Motor is running
      Check for power at the open valve/coil. When the switch for open/close is
      activated, there should be power at the coil.
      → If you have power and nothing happens try activating both up button and
         open button to check for power at the lock valve. You should not be getting
         power to the lock valve if the open switch is activated and the up button is
         activated.
      → If you have power on the lock valve the relay is not kicking in. Follow the
         Schematic to make sure the relay is kicking in to prevent power going to the
         lock valve. Change relay if it is faulty.
      → If you are not getting power to the lock valve when you press the up button
         change the valve and coils. If you do not have power, follow the schematic
         wiring diagram to check for possible broken wire.
      If after changing the valve it still does not work contact factory.
b. Motor not running
   Check motor solenoid. If it is getting power but you do not hear it clicking, you should change the motor solenoid. If it does not have power, follow the schematic to find the broken wire or diode and repair as necessary.

3.4) Platform does not close.
   → If platform opens fine but just will not close check for power at coil that activates the valve for opening.
   → If it does not have power, follow the schematic to find the broken wire.
   Check also that the relay is functioning properly. Follow the schematic.

4.1) Platform opens or closes to slow.
   The hydraulic cylinder that power closes and opens the platform has 90 degree fittings with orifices. Platform should be lowered to the ground and the fittings removed for inspection. The hole in the orifice should be no larger than 1/64”. A welding tip cleaner can be used to clean the hole out if it is contaminated.

5.1) Platform will not lock properly on both sides.
   Power the liftgate platform up to the top before locking the platform. Hold the button at the top for 5-10 seconds to relevel the platform. Sometimes if the platform goes out of sync it may need to be relevelled at the top before it goes into the locks properly.

6.1) Platform leaks down.
   Run platform to the top and hold the button for 30 seconds to bleed the system through, before determining if there is any leakage.

a. Does only one side leak down?
   Yes: Replace cylinder on that one side where it is leaking. Some leaking overnight is normal. Contact factory before changing cylinder.
   No: Check lock valve. Lock valve may have dirt or contamination causing it to leak down. Lower platform to the ground, remove the lock valve and coil. Clean the valve and reinstall. If it still leaks down replace the lock valve.

7.1) Checking the Oil level in the Tank
   Always check the oil with the platform in the raised position at floor level. The oil level should be about 1” below the top of the filler or just visible in the sight glass.
How the ILD works

“UP”

Hydraulic/ Electric Schematic
How the ILD works

“Down”
Hydraulic/
Electric
Schematic
How the ILD works

“OPEN”
Hydraulic/Electric Schematic
How the ILD works

“CLOSE”
Hydraulic/Electric Schematic