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Electric Hydraulic Troubleshooting Guide



Prior to performing any inspections &/or tests, which may require the body to be in a raised position, the body must be secured and stabilized to prevent accidental collapse of body and hoist. Body must be unloaded, safety prop must be raised, and depending on the problem, tests, and repairs to be performed, additional blocking &/or chain hoist may also be required to safely secure and stabilize the body from accidental fall.

Failing to properly secure and stabilize the body may result in serious bodily injury or death.

SYMPTOM	POSSIBLE CAUSE & SOLUTIONS
PUMP &/OR MOTOR DOESN'T RUN	<ol style="list-style-type: none"> 1. Is there power at the solenoid switch? <ol style="list-style-type: none"> a. Possible grounding issues. Check for corrosion on battery leads. b. Check for cut power or ground wires. c. Is pump/motor grounded to the battery or to the frame of truck? <ol style="list-style-type: none"> i. Ground needs to be directly from battery to get correct current. d. Is there power coming from the control box? Check for Volts/amps from white wire on solenoid switch. <ol style="list-style-type: none"> i. If no power, check for cut lines, rusty or bad connections at Deutsch connector. Replace control box/cord as needed. 2. Motor corroded or rusty & cannot make connections? 3. Motor burned out. Stud going into motor is loose and arc's out. Motor has gotten hot...overused with no cool down time allowed. <ol style="list-style-type: none"> a. Replace D/C motor 4. Check solenoid switch to see if it is working. <ol style="list-style-type: none"> a. Use jumper wire to go from battery side of solenoid switch to motor side...if motor runs at this point, the solenoid switch is bad...if motor does not run at this point, the D/C motor is bad <ol style="list-style-type: none"> i. Replace part accordingly.
MOTOR RUNS, BUT PUMP DOESN'T WORK:	<ol style="list-style-type: none"> 1. Is there sufficient oil in the reservoir? <ol style="list-style-type: none"> a. If no...fill as needed 2. On single acting power units, the only problem that it can be is gear is broken in the pump. <ol style="list-style-type: none"> a. Replace complete power unit 3. On double acting power units: <ol style="list-style-type: none"> a. Check to see if coils have continuity <ol style="list-style-type: none"> i. If they do not...replace the coil(s) b. Check to see if 4-way valve is activating. If it clicks, the valve is activating but the gear is broken <ol style="list-style-type: none"> i. Replace complete power unit 4. Is the control box working correctly? <ol style="list-style-type: none"> a. Is there current going to the coil/valve? b. Is there good contact at the Deutsch connector?
PUMP WILL NOT LIFT LOAD	<ol style="list-style-type: none"> 1. Is the pump supplying sufficient pressure? <ol style="list-style-type: none"> a. Test pressure to verify pump is supplying correct pressures ("C1" port – 3200psi) ("C2" port if double acting unit – 500 psi). Pressure should be within +/- 100 psi. <ol style="list-style-type: none"> i. If incorrect PSI is found, replace the power unit...there is no adjustment. 2. Is the motor turning the correct RPM? <ol style="list-style-type: none"> a. If no...check for poor ground 3. If situation is a new installation of double acting power unit, are the hoses connected incorrectly? <ol style="list-style-type: none"> a. See the installation/operation manual for correct routing of hydraulic hoses.



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SYMPTOM	POSSIBLE CAUSE & SOLUTIONS
WHEN YOU PRESS UP OR DOWN BUTTONS, SOLENOID SWITCH ONLY CLICKS	<ol style="list-style-type: none"> 1. Check to see if it is the motor or solenoid switch that is bad. <ol style="list-style-type: none"> a. Use jumper wire to go from battery side of solenoid switch to motor side...if motor runs at this point, the solenoid switch is bad...if motor does not run at this point, the D/C motor is bad <ol style="list-style-type: none"> i. Replace part accordingly 2. Possible grounding issues. Check both power and ground lines coming from the battery for corrosion on ends/connections. 3. Is the pump grounded to the battery, or to the frame of the truck? It should be grounded directly to the battery. <ol style="list-style-type: none"> a. Is the pump getting enough volts or amps to activate the solenoid switch? 4. Does the battery have enough volts to run the motor?
NEW POWER UNIT INSTALL (DOUBLE ACTING ONLY): WHEN YOU LET GO OF THE "UP" BOTTON, THE UNIT COMES DOWN	<ol style="list-style-type: none"> 1. Hoses are on backwards. <ol style="list-style-type: none"> a. See installation/operation manual for proper routing of hydraulic hoses.
PUMP IS MAKING LOUD NOISES	<ol style="list-style-type: none"> 1. Are the sounds coming from the D/C Motor or the pump? <ol style="list-style-type: none"> a. If coming from the D/C Motor...possibly a dry or worn bearing <ol style="list-style-type: none"> i. Replace the D/C Motor b. If it is coming from the pump... <ol style="list-style-type: none"> i. Replace the complete power unit.
HOIST IS STUCK UP IN THE AIR	<ol style="list-style-type: none"> 1. Number 1 issue is hoist &/or rear hinge has not been greased. This is especially common on single acting power unit applications. 2. Check to verify there is power being supplied to the power unit 3. Check to verify the power unit is properly grounded to the battery. 4. Check to see if a coil has failed. <ol style="list-style-type: none"> a. If on a double acting power unit...coil can be checked by using a continuity tester. b. Another possible way to test is to reverse the coils and touch the up button to see if unit comes down. 5. Is the coil to tight on the valve body? <ol style="list-style-type: none"> a. If yes...loosen the retaining nut. 6. Check to see if screen on "down" valve is dirty or plugged thereby not releasing oil. <ol style="list-style-type: none"> a. Remove valve from pump body and clean. <ol style="list-style-type: none"> i. Reinstall valve and try to lower the hois. 7. Is the plunger stuck inside valve? <ol style="list-style-type: none"> a. Remove the valve from pump body...check to see if plunger is working freely. <ol style="list-style-type: none"> i. If not...replace the valve.
OIL COMES OUT OF BREATHER ON TOP OF RESERVOIR WHEN HOIST IS LOWERED	<ol style="list-style-type: none"> 1. Does the reservoir have enough oil to open the cylinder all the way on the up stroke? <ol style="list-style-type: none"> a. If not...air will get into the system & cause the oil to expand <ol style="list-style-type: none"> i. Fill reservoir accordingly...see installation/operation manual 2. Is the hoist closing faster than the power unit can pump oil back into the top side of cylinder? <ol style="list-style-type: none"> a. This can be caused when product is left in the body & hoist is lowered, forcing cylinder to close faster.



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SYMPTOM	POSSIBLE CAUSE & SOLUTIONS
CAN NOT GET ANY CURRENT FROM CONTROL BOX	<ol style="list-style-type: none"> 1. Are the control buttons bad, or pins in Deutsch connector defective? <ol style="list-style-type: none"> a. If so...replace the Control Box 2. The wire from control box to solenoid switch or coils could be cut, or has been damaged. <ol style="list-style-type: none"> a. Replace parts accordingly. 3. Control box has gotten water in it & contact points are rusty. <ol style="list-style-type: none"> a. Replace control box.
PUMP IS PUMPING OIL SLOWER THAN NORMAL	<ol style="list-style-type: none"> 1. In cold weather area's...is correct fluid being used? <ol style="list-style-type: none"> a. Dexron Automatic Transmission Fluid is recommended for all units...especially when operating in temperatures below 32° Fahrenheit. 2. Check grounding to make sure motor is turning at full RPM's 3. Check to see if water has gotten in hydraulic fluid and is freezing. 4. Screen on suction tube in reservoir could be getting dirty. How long has it been since hydraulic fluid was changed? 5. Screens on solenoid valve could be getting plugged. <ol style="list-style-type: none"> a. Remove valve(s), inspect, & clean. 6. Gear inside pump could be wearing out. <ol style="list-style-type: none"> a. Replace complete power unit.
MOTOR RUNS SLOW	<ol style="list-style-type: none"> 1. Check for Grounding Issues 2. Check motor for water or rust/corrosion 3. Check motor for bad bearing -- Replace D/C motor 4. Verify battery has enough charge to provide sufficient volts to run motor.