

# TROUBLESHOOTING GUIDE FOR HYDRAULICS

Hydraulic analysis and proper repair require the use of a vacuum gauge and pressure gauge for testing.

Possible Pump Trouble	Cause	Cure
<b>Aeration and cavitation: noisy pump</b> Use vacuum gauge to isolate problem	Low oil supply. Heavy oil / cold oil / wrong oil. Dirty suction strainer. Suction line undersized. Restriction in suction line.	Fill to proper level. Change to proper oil. Clean and replace. Increase size. Remove and replace.
<b>Pump takes too long to respond or fails to respond</b>	Low oil supply. Insufficient relief valve pressure. Pump worn or damaged.	Fill to proper level. Use gauge to reset pressure. Repair or replace.
<b>Oil Heating Up</b>	Contamination in relief valve. Oil too light. Dirty oil. Oil level too low. Reservoir capacity too small. Insufficient relief valve pressure or pressure too high. Pump slippage	Remove contaminates. Drain and refill with proper oil. Drain, flush, refill with clean oil. Fill to proper level. Install oil cooler. Use gauge to reset pressure.  Repair or replace.
<b>Oil Foaming</b>	Air leaking into suction line from tank to pump. Wrong kind of oil. Oil level too low. Improper tank or reservoir baffle. Return line above oil level. Damaged or worn shaft seal on pump.	Tighten all connections.  Drain & refill w/non-foaming oil. Fill to proper level. Baffle correctly. Install below oil level. Replace shaft seal(s).
<b>Actuator Slips</b>	Contamination damages control valve and allows check valve to leak. Cylinder or piston packing defective. Valve is cracked. Spool not centering.  Incorrect oil. Load check stuck.	Clean out the system.  Repair or replace. Replace. Clean contaminants from valve or replace. Replace with correct oil. Open.