

TROUBLE SHOOTING CHART Mellott Hydraulic Systems

Apparent Trouble	Possible Causes	Correction
1. System overheats on new installation.	Incorrect hose connections between components.	Carefully check hose routing between components. Hose routing and components should correspond exactly with hydraulic circuit diagram for the specific installation.
2. System overheats on existing installation.	Valve spool not returning to center or neutral position.	Replace centering spring on valve spool. Check carefully to insure that spool is centering correctly when handle or foot pedal is in center or neutral position.
3. Oil leakage around valve spools.	Worn spool seals in valve.	Replace valve spool seals. Note: Valve spools are matched to honed valve body. Do not file or use any abrasive on valve spool.
4. Oil leakage around pump shaft.	Worn seals or thrust plates in pump.	Install a new seal kit in pump.
5. Oil leakage around hydraulic motor shaft.	Worn seals in hydraulic motor. Cracked motor mounting flange.	Install a new seal kit in hydraulic motor. Check motor mounting flange of motor. If flange is cracked, replace.
6. Oil leakage around hydraulic cylinder rod.	Worn seals or broken piston in hydraulic cylinder.	Install a new seal kit in hydraulic cylinder. Check cylinder piston. If cracked or broken, replace.
7. Oil leaking through breather plug on 4-A turner cylinder.	Worn seals or broken piston in hydraulic cylinder.	Install a new seal kit in hydraulic cylinder. Check cylinder piston. If cracked or broken, replace.
8. Valve spool does not return to center or neutral position.	Broken centering spring or snap ring not seated.	Install new centering spring in valve. Make certain that snap ring No. 914 is sealed in groove upon re-assembly.
9. Deck or turner lacks normal power.	Cracked or broken relief valve spring.	Replace relief valve spring No. 1212 or No. 922. Refer to valve parts sheet or book to determine proper spring for specific relief valve.
10. Deck or turner lacks normal speed in operation.	Worn pump/worn seals in hydraulic cylinders and/or hydraulic motors, clogged sump filter.	If sump filter is clogged, remove and clean. Flush system of old oil and replace with clean hydraulic oil. Check pump, hydraulic motor and hydraulic cylinders for leaks, worn or broken parts, replace seals as necessary.
11. Turner bar will not hold load (bar returns to lowered position).	Worn seals or broken piston in hydraulic cylinder/hydraulic oil is leaking by piston in hydraulic cylinder.	Inspect cylinder piston, replace if cracked or broken. Install new seal kit.
12. Turner bar (Model No. 5 Turner) doesn't follow contour of log when turning.	Gas has leaked from accumulator.	Charge accumulator with 190 psi nitrogen.
13. A "squealing" sound in valve when new installation is started.	Incorrect hose connections between components; oil is flowing through relief valve.	Carefully check hose routing between components. Hose routing and components should correspond exactly with hydraulic circuit diagram for the specific installation.
14. Hydraulic oil thickens in cold weather.	Cold weather.	Thin hydraulic oil with diesel fuel 25% to 75% hydraulic oil.
15. Pressure check indicates system pressure at less than 1000 psi.	Relief valve not set at correct pressure.	Add shims No. 949 to non-adjustable relief valve. Turn No. 925 adjusting screw on adjustable relief valve. Refer to parts sheet or service and parts manual to determine specific relief valve.
16. Metal particles in hydraulic oil.	Piston in cylinder is broken.	Inspect cylinder piston, replace if cracked or broken. Install new seal kit. Drain and flush system and fill.
17. Cracked or broken valve body.	Excess pressure in return core of hydraulic valve, components incorrectly connected.	Carefully check hose routing between components. Hose routing and components should correspond exactly with hydraulic circuit diagram for the specific installation. Install new valve.
18. TC-24 vane pump will not pump oil in cold weather.	Hydraulic oil too thick.	Thin hydraulic oil with diesel fuel 25% to 75% hydraulic oil. Remove large intake cover of pump. Flush inside of pump with diesel fuel, re-assemble intake cover. Pump should start and operate after this step has been accomplished.