Oklahoma CTE

Hydraulics (2012)

Adopted 2012

General System Operation	1. Identify system type (closed and open) and verify proper operation. 2. Read and interpret system diagrams and schematics. 3. Perform system temperature, pressure, flow, and cycle time tests; determine needed action. 4. Verify placement of equipment/component safety labels and placards; determine needed action.
Pumps	1. Identify system fluid type. 2. Identify causes of pump failure, unusual pump noises, temperature, flow, and leakage problems; determine needed action. 3. Determine pump type, rotation, and drive system. 4. Remove and install pump; prime and/or bleed system. 5. Inspect pump inlet for restrictions and leaks; determine needed action. 6. Inspect pump outlet for restrictions and leaks; determine needed action.
Filtration/Reservoirs (Tanks)	1. Identify type of filtration system; verify filter application and flow direction. 2. Service filters and breathers. 3. Identify causes of system contamination; determine needed action. 4. Take a hydraulic oil sample. 5. Check reservoir fluid level and condition; determine needed action. 6. Inspect and repair or replace reservoir, sight glass, vents, caps, mounts, valves, screens, supply and return lines.
Hoses, Fittings, and Co	1. Diagnose causes of component leakage, damage, and restriction; determine needed action.

Skip to main content

	2. Inspect hoses and connections (length, size, routing, bend radii, and protection); repair or replace as needed.
	3. Assemble hoses, tubes, connectors, and fittings in accordance with manufacturers' specifications; use proper procedures to avoid contamination.
	4. Inspect and replace fitting seals and sealants.
Control Valves	1. Pressure test system safety relief valve; determine needed action.
	2. Perform control valve operating pressure and flow tests; determine needed action.
	3. Inspect, test, and adjust valve controls (electrical/electronic, mechanical, and pneumatic).
	4. Identify causes of control valve leakage problems (internal/external); determine needed action.
	5. Inspect pilot control valve linkages, cables, and PTO controls; adjust, repair, or replace as needed.
Actuators	1. Identify actuator type (single/double acting, multi-stage/telescopic, and motors).
	2. Identify the cause of seal failure; determine needed repairs.
	3. Identify the cause of incorrect actuator movement and leakage (internal and external); determine needed repairs.
	4. Inspect actuator mounting, frame components, and hardware for looseness, cracks, and damage; determine needed action.
	5. Remove, repair, and/or replace actuators in accordance with manufacturers' recommended procedures.
	6. Inspect actuators for dents, damage, and leakage; determine needed action.
	7. Purge and/or bleed system in accordance with manufacturers' recommended procedures.