

Problem	More Specifically	Possible Cause	Fix Actions
excessive noise	pump noisy	cavitation	fluid may be too cold; also see "A"
		air in fluid	see "B"
		coupling misaligned	align unit and check condition of seals, bearings and coupling
		pump worn/damaged	overhaul or replace
		coupling misaligned	align unit and check condition of seals, bearings and coupling
		motor/coupling worn/damaged	see "B"
relief valve noisy		setting too low or too close to another valve setting	install pressure gauge and adjust to correct pressure
		worn poppet and seat	overhaul or replace

Problem	More Specifically	Possible Cause	Fix Actions
excessive heat	pump heated	see "fluid heated"	see "A"
		cavitation	see "B"
		air in fluid	install pressure gauge and adjust to correct pressure (keep at least 125 PSI difference between valve settings)
		relief or unloading valve set too high	excessive load
		excessive load	see "C"
		worn/damaged pump	overhaul or replace
		see "fluid heated"	motor heated
		relief or unloading valve set too high	relief valve heated
		excessive load	see "C"
		worn/damaged motor	overhaul or replace
relief valve heated	see "fluid heated"	install pressure gauge and adjust to correct pressure (keep at least 125 PSI difference between valve settings)	
	valve setting incorrect	overhaul or replace	
	worn/damaged valve	overhaul or replace	
	system pressure too high	install pressure gauge and adjust to correct pressure (keep at least 125 PSI difference between valve settings)	
	unloading valve set too high	install pressure gauge and adjust to correct pressure (keep at least 125 PSI difference between valve settings)	
	fluid dirty or low supply	change filters and also system fluid if improper viscosity; fill reservoir to proper level	
	incorrect fluid viscosity	change filters and also system fluid if improper viscosity; fill reservoir to proper level	
	faulty fluid cooling system	clean cooler and/or cooler strainer; replace cooler control valve; repair or replace cooler	
	worn pump/valve/motor/cylinder/other	overhaul or replace	

Problem	More Specifically	Possible Cause	Fix Actions
incorrect flow	no flow	pump not receiving fluid	fill reservoir to proper level and/or see "A"
		pump drive motor not operating	overhaul or replace
		pump to drive coupling sheared	check for damaged pump or pump drive; replace and align coupling
		pump drive motor turning in wrong direction	reverse rotation
		directional control set in wrong position	check position of manually operated controls; check electrical circuit on solenoid operated controls; repair or replace pilot pressure pump
		entire flow passing over relief valve	adjust
		damaged pump	check for damaged pump or pump drive; replace and align coupling
		improperly assembled pump	overhaul or replace
		flow control set too low	adjust
		relief or unloading valve set too low	adjust
excessive flow	low flow	flow by-passing thru partially open valve	overhaul or replace or: check position of manually operated controls; check electrical circuit on solenoid operated controls; repair or replace pilot pressure pump
		external leak in system	tighten leaking connections (fill reservoir to proper level and bleed air from system)
		yoke actuating device inoperative (variable displacement pumps)	overhaul or replace
		RPM of pump drive motor incorrect	replace with correct unit
		worn pump/valve/motor/cylinder/other	overhaul or replace
		flow control set too high	adjust
		yoke actuating device inoperative (variable displacement pumps)	overhaul or replace
		RPM of pump drive motor incorrect	replace with correct unit
		improper size pump used for replacement	replace with correct unit

Problem	More Specifically	Possible Cause	Fix Actions
incorrect pressure	no pressure	no flow	see "no flow"
	low pressure	pressure relief path exists pressure reducing valve set too low pressure reducing valve damaged	see "no flow" and "low flow" adjust overhaul or replace
erratic pressure		damaged pump/motor/cylinder	overhaul or replace
		air in fluid	tighten leaking connections (fill reservoir to proper level and bleed air from system)
		worn relief valve	overhaul or replace
		contamination in fluid	replace dirty filters and system fluid
		accumulator defective or has lost charge	check for damaged pump or pump drive; replace and align coupling
excessive pressure		worn pump/motor/cylinder	overhaul or replace
		pressure reducing, relief or unloading valve misadjusted	adjust
		wok actuating device inoperative (variable displacement pumps)	overhaul or replace
		pressure reducing, relief or unloading valve worn/damaged	overhaul or replace

Problem	More Specifically	Possible Cause	Fix Actions		
faulty operation	no movement	no flow or pressure	see "no flow" or "no pressure"		
		limit or sequence device (mech/elec/hydro) inoperative or misadjusted	overhaul or replace		
		mechanical bind	locate bind and repair		
		no command signal to servo amplifier	repair command console or interconnecting wires		
		inoperative or misadjusted servo amplifier	adjust, repair or replace		
		inoperative servo valve	adjust, repair or replace		
		worn/damaged cylinder/motor	overhaul or replace		
		low flow	see "low flow"		
		fluid viscosity too high	fluid may be too cold or should be changed to clean fluid of correct viscosity		
		insufficient control pressure for valves	see "low or no pressure"		
slow movement	no lubrication of machine ways or linkage	no lubrication of machine ways or linkage	Lubricate		
		misadjusted or malfunctioning servo amplifier	adjust, repair or replace		
		sticking servo valve	adjust, repair or replace		
		worn/damaged cylinder/motor	overhaul or replace		
		erratic movement	erratic pressure	erratic pressure	see "erratic pressure"
				air in fluid	see "air in fluid"
				no lubrication of machine ways or linkage	see "erratic pressure"
				erratic command signal	repair command console or interconnecting wires
				misadjusted or malfunctioning servo amplifier	adjust, repair or replace
				malfunctioning feedback transducer	overhaul or replace
sticking servo valve	clean and adjust or replace; check condition of system fluid and filters				
worn/damaged cylinder/motor	overhaul or replace				
excessive flow	see "excessive flow"				
excessive speed/ movement	feedback transducer malfunctioning			feedback transducer malfunctioning	overhaul or replace
		misadjusted or malfunctioning servo amplifier	adjust, repair or replace		
		Over-riding work load	adjust, repair or replace counterbalance valve		

A: any or all of the following

- replace dirty filters
- wash strainers in solvent compatible with system fluid
- clean clogged inlet line
- clean or replace reservoir breather vent
- change system fluid
- change to proper pump drive motor speed
- overhaul or replace supercharge pump

B: any or all of the following

- tighten leaking connections
- fill reservoir to proper level (with rare exceptions all return lines should be below fluid level)
- bleed air from system
- replace pump shaft seal (and shaft if worn at seal journal)

C: any or all of the following

- align unit and check condition of seals, bearings and coupling
- locate and correct mechanical binding
- check for work load in excess of circuit design