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8 Things to Check

When Your Hydraulic Pump Stops Flowing

Hydraulic pumps often stop working. Lack of flow or system pressure is the most common hydraulic pump problem. Here we'll talk about 8 typical problem sources worthy of investigation.

The first step is to detect the problem. Begin by installing a gauge at the pump outlet or portable pressure meter that easily couples into system piping. If there is no flow in the system, one or several problems could be at play. Perform these checks to figure out what is wrong with your hydraulic pump.

Check #1:

Is There Enough Oil in the Reservoir?

If not, fill the reservoir with approved fluid. There are several reasons for low oil in the reservoir. The first and most common reason are leaks in the hydraulic system. Whatever oil leaks out of the system from worn fittings, shaft seals, or leaky conductors must be replaced. The second reason for low oil level is poor maintenance. If both of these things are occurring (leaks and poor maintenance), the machine will eventually run out of oil and the pump won't work. Low oil levels lead to increased heat, aeration of the hydraulic fluid, faster fluid oxidation rates, higher energy consumption, and higher rates of internal wear on system components.

Check #2:

Is the Shaft Turning in the Wrong Direction?

Check if the rotation of the pump matches the arrow on the nameplate. If not, shut it down immediately. Hydraulic pumps must run in the direction marked on their nameplate or case. Reversed leads on a 3-phase motor are the most common cause for wrong rotation. Check that the motor wiring is correct.

Check #3:

Is the Pump Rotating?

First, check the coupling. If it is not rotating, check the rotation of the electric motor. Check the pump keys and motor engine shaft to ensure the shaft is not broken.

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Check #4:

Is the Oil Too Thin?

f so, it could be the wrong choice of oil or from the oil thinning out at a high temperature. A system with this problem may operate normally the first few hours after start-up and then gradually slow as the oil gets overheated. Check that the oil characteristics are in accordance with the temperature and pump requirements.

Check #5:

Is There an Air Lock in the Pump Inlet Hose?

If there is, use compressed air to pressurize the reservoir while running the pump or fill the inlet hose with oil from the pump end. When finished, make sure to check that no air remains in the pressure line.

Check #6:

Is the Pump Speed High Enough?

Refer to your hydraulic pump's documentation and check to ensure the speed is set high enough; this is an especially common issue after a recent motor replacement.

Check #7:

Is Flow Moving in the Right Direction?

Check the hydraulic circuit and the main sequences to ensure all valves are set properly and working. Make sure pressure is adequate at the main relief valve to avoid backflow into the tank. Then, check the directional valves as they might be stuck in a position that creates problematic backflow.

Check #8:

Is the Actuator Working Correctly?

If not, check the motor for inlet flow leaks as well as the cylinder for inner seal damage. If you find either of these issues, a repair is in order.

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