M-06: Troubleshoot Water Supply (Cooling)

SAFETY FIRST

- Follow all Caterpillar facility safety standards when performing this task.
- The problem cannot be diagnosed without electrical power; there is no Lockout / Tagout. Before replacing a component to correcting a problem, perform a Lockout / Tagout.
- Wear glove to protect your hands from sharp objects and possible hot objects.
- Wear hearing protection.

EQUIPMENT

- flashlight
- Maintenance Mechanic hand tools

RESOURCES

- other repair and / or Engineering personnel

Troubleshoot Water Supply

1. Receive notification from production that there is a water supply problem.

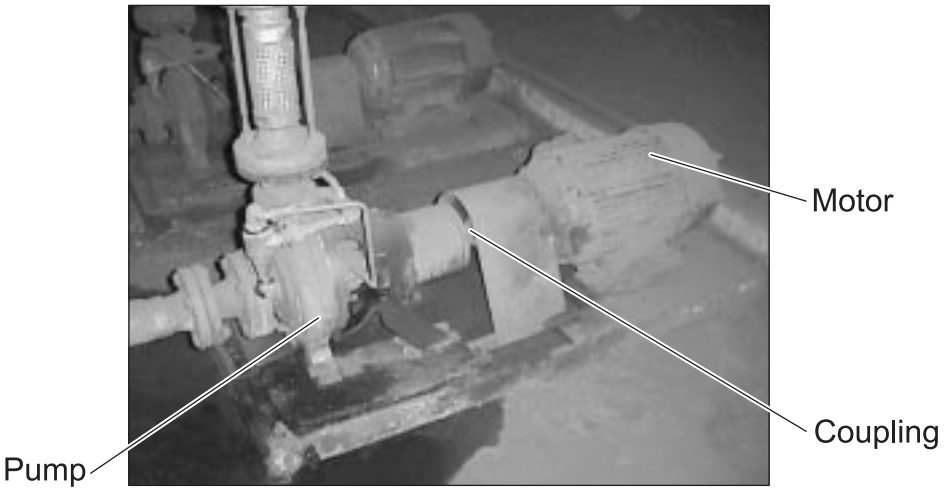
2. Check the water system pressure.

- Check the gages for pressure.

Pressure Gage

- Visually scan the area for excessive water.
- Repair any leaks detected.

3. Verify that the pump is operating.



- Listen for abnormal sounds if the pump is operating.
- Replace or repair the pump if any abnormal sounds are heard.
- Check the motor if the pump is not operating.

4. Verify that the pump motor is operating.

- Ensure that the power disconnect is closed.
- Check the coupling if the motor is operating according to nameplate data.
- Troubleshoot the motor, according to the maintenance procedures. If the motor is not operating in accordance with the data on the nameplate, contact an Electrician.

5. Verify that the coupling is serviceable.

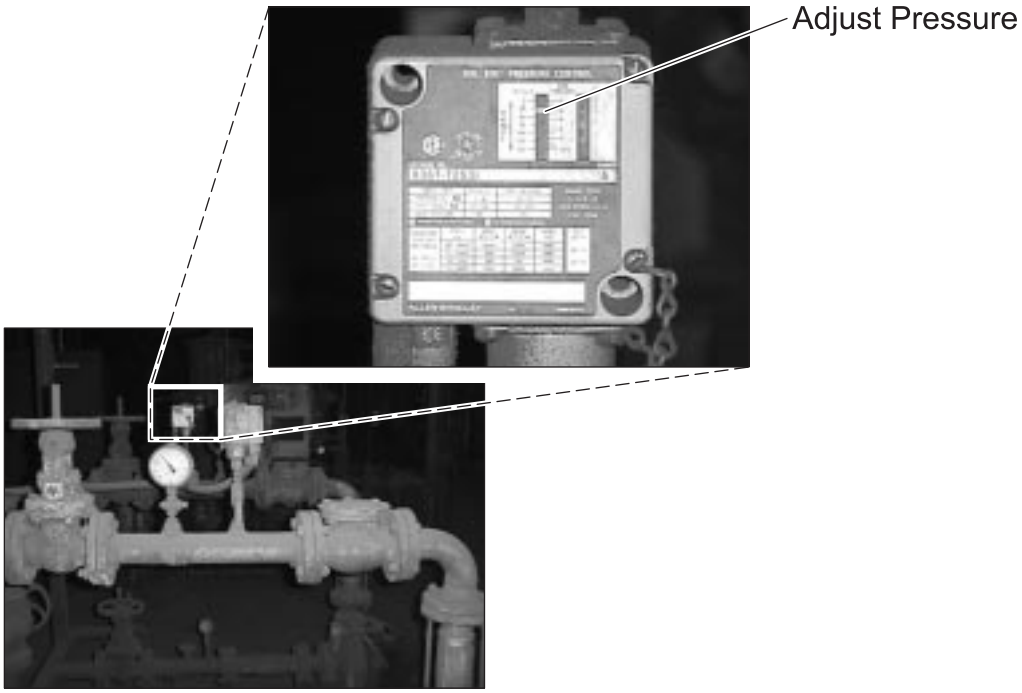
- Turn off the power, perform a lock and tag, and check the coupling.
- Remove the coupling cover, and check the grid or rubber spider.
- Verify that the coupling is visually transferring power from the motor to the pump.
- Troubleshoot the coupling, if it is not operating normally.

6. Troubleshoot the pump, following maintenance procedures, if the motor and coupling are operating normally and the pump is not working.

- Check the pump pressure if the pump is running.
- Check the pump flow.

7. Test the pump pressure at the pressure control.

- Adjust the pressure at the pressure control if the gage pressure reading is low.



- Turn the pressure control down, and attempt to increase the pressure.
- Replace the pressure control, following maintenance procedures, if the pressure fails to increase.

Note: The pump could be defective.

8. Check all valves for blockages.

- Listen for abnormal sounds due to blockage.
- Troubleshoot the valves according to the maintenance procedures. If they are ball valves or other similar valves, opening and closing two or three times may free the blockage.
- After finding and correcting the trouble, turn on the unit and check for pressure and flow. If the system checks OK, turn the water supply system over to production.