

Troubleshooting

CONDITION	POSSIBLE CAUSE	SUGGESTED REMEDY
<p>Pump fails to prime or loses prime</p>	<p>Air leaks</p>	<p>Clean and tighten all intake connections. Make sure intake hoses and gaskets are in good condition.</p> <p>Use the following procedure to locate air leaks:</p> <ol style="list-style-type: none"> 1. Connect intake hose to pump and attach intake cap to end of hose. 2. Close all pump openings. 3. Open priming valve and operate primer until vacuum gage indicates 22 in. Hg./735 atmospheres. (If primer fails to draw specified vacuum, it may be defective, or leaks are too large for primer to handle.) 4. Close priming valve and shut off primer. If vacuum drops more than 10 in. Hg./334 atmospheres in 5 minutes, serious air leaks are indicated. With engine stopped, air leaks are frequently audible. If leaks cannot be heard, apply engine oil to suspected points and watch for break in film or oil being drawn into pump. <p>Completely fill water tank (if so equipped). Connect intake hose to hydrant or auxiliary pump. Open one discharge valve and run in water until pump is completely filled and all air is expelled. Close discharge valve, apply pressure to system and watch for leaks or overflowing water tank. A pressure of 100 psi is sufficient. DO NOT EXCEED RECOMMENDED PRESSURE.</p> <p>If pump has not been operated for several weeks, packing may be dried out. Close discharge and drain valves and cap intake openings. Operate primer to build up a strong vacuum in pump. Run pump slowly and apply oil to impeller shaft near packing gland. Make sure packing is adjusted properly.</p> <p>Remove all leaves, dirt and other foreign material from intake strainer.</p> <p>When drilling from shallow water source with mud, sand or gravel bottom, protect intake strainer in one of the following ways:</p> <ol style="list-style-type: none"> 1. Suspend intake strainer from a log or other floating object to keep it off the bottom. Anchor float to prevent it from drifting into shallow water. 2. Remove top from a clean barrel. Sink barrel so open end is below water surface. Place intake strainer inside barrel. 3. Make an intake box, using fine mesh screen. Suspend intake strainer inside box. <p>With rotary primer, oil is required to maintain a tight rotor seat. Check priming tank oil supply and replenish, if necessary.</p> <p>A worn or damaged priming valve may leak and cause pump to lose prime. Consult primer instructions for priming valve repair.</p> <p>After prolonged service, wear may increase primer clearance and reduce efficiency. Refer to primer instructions for adjusting primer clearance.</p> <p>Refer to instructions supplied with primer for correct priming speeds. Speeds much higher than those recommended do not accelerate priming, and may actually damage priming pump.</p> <p>If a bypass line is installed between the pump discharge and water tank to prevent pump from overheating with all discharge valves closed, look for a check valve in the line. If valve is stuck open, clean it, replace it or temporarily block off line until a new valve can be obtained.</p> <p>Do not attempt lifts exceeding 22 feet (6.7m) except at low altitudes and with equipment in new condition.</p> <p>Although intake hose might be immersed enough for priming, pumping large volumes of water may produce whirlpools, which will allow air to be drawn into intake hose. Whenever possible, place end of intake hose at least two feet below water source.</p> <p>If possible, avoid placing any part of intake hose higher than pump inlet. If high point cannot be prevented, close discharge valve as soon as pressure drops, and prime again. This procedure will usually eliminate air pockets in intake line, but it may have to be repeated several times.</p> <p>Refer to instructions supplied with primer for required priming time. The maximum time for priming should not exceed 45 seconds for lifts up to 10 feet (3.0m).</p> <p>Engine requires maintenance. Check engine in accordance with manufacturer's instructions supplied with truck.</p> <p>Engine operated at high altitudes and/or high air temperatures. Engine power decreases with an increase in altitude or air temperature, except for turbo charged engines. Adjusting carburetor or changing carburetor jets (or injector nozzles) may improve engine performance. Consult with engine manufacturer.</p> <p>If relief valve is set to relieve below desired operating pressure, water will bypass and reduce capacity. Adjust relief valve in accordance with instructions supplied with valve.</p>
<p>Dirt on intake strainer</p>	<p>Dirt on intake strainer</p>	<p>When drilling from shallow water source with mud, sand or gravel bottom, protect intake strainer in one of the following ways:</p> <ol style="list-style-type: none"> 1. Suspend intake strainer from a log or other floating object to keep it off the bottom. Anchor float to prevent it from drifting into shallow water. 2. Remove top from a clean barrel. Sink barrel so open end is below water surface. Place intake strainer inside barrel. 3. Make an intake box, using fine mesh screen. Suspend intake strainer inside box. <p>With rotary primer, oil is required to maintain a tight rotor seat. Check priming tank oil supply and replenish, if necessary.</p> <p>A worn or damaged priming valve may leak and cause pump to lose prime. Consult primer instructions for priming valve repair.</p> <p>After prolonged service, wear may increase primer clearance and reduce efficiency. Refer to primer instructions for adjusting primer clearance.</p> <p>Refer to instructions supplied with primer for correct priming speeds. Speeds much higher than those recommended do not accelerate priming, and may actually damage priming pump.</p> <p>If a bypass line is installed between the pump discharge and water tank to prevent pump from overheating with all discharge valves closed, look for a check valve in the line. If valve is stuck open, clean it, replace it or temporarily block off line until a new valve can be obtained.</p> <p>Do not attempt lifts exceeding 22 feet (6.7m) except at low altitudes and with equipment in new condition.</p> <p>Although intake hose might be immersed enough for priming, pumping large volumes of water may produce whirlpools, which will allow air to be drawn into intake hose. Whenever possible, place end of intake hose at least two feet below water source.</p> <p>If possible, avoid placing any part of intake hose higher than pump inlet. If high point cannot be prevented, close discharge valve as soon as pressure drops, and prime again. This procedure will usually eliminate air pockets in intake line, but it may have to be repeated several times.</p> <p>Refer to instructions supplied with primer for required priming time. The maximum time for priming should not exceed 45 seconds for lifts up to 10 feet (3.0m).</p> <p>Engine requires maintenance. Check engine in accordance with manufacturer's instructions supplied with truck.</p> <p>Engine operated at high altitudes and/or high air temperatures. Engine power decreases with an increase in altitude or air temperature, except for turbo charged engines. Adjusting carburetor or changing carburetor jets (or injector nozzles) may improve engine performance. Consult with engine manufacturer.</p> <p>If relief valve is set to relieve below desired operating pressure, water will bypass and reduce capacity. Adjust relief valve in accordance with instructions supplied with valve.</p>
<p>No oil in priming tank</p>	<p>No oil in priming tank</p>	<p>With rotary primer, oil is required to maintain a tight rotor seat. Check priming tank oil supply and replenish, if necessary.</p> <p>A worn or damaged priming valve may leak and cause pump to lose prime. Consult primer instructions for priming valve repair.</p> <p>After prolonged service, wear may increase primer clearance and reduce efficiency. Refer to primer instructions for adjusting primer clearance.</p> <p>Refer to instructions supplied with primer for correct priming speeds. Speeds much higher than those recommended do not accelerate priming, and may actually damage priming pump.</p> <p>If a bypass line is installed between the pump discharge and water tank to prevent pump from overheating with all discharge valves closed, look for a check valve in the line. If valve is stuck open, clean it, replace it or temporarily block off line until a new valve can be obtained.</p> <p>Do not attempt lifts exceeding 22 feet (6.7m) except at low altitudes and with equipment in new condition.</p> <p>Although intake hose might be immersed enough for priming, pumping large volumes of water may produce whirlpools, which will allow air to be drawn into intake hose. Whenever possible, place end of intake hose at least two feet below water source.</p> <p>If possible, avoid placing any part of intake hose higher than pump inlet. If high point cannot be prevented, close discharge valve as soon as pressure drops, and prime again. This procedure will usually eliminate air pockets in intake line, but it may have to be repeated several times.</p> <p>Refer to instructions supplied with primer for required priming time. The maximum time for priming should not exceed 45 seconds for lifts up to 10 feet (3.0m).</p> <p>Engine requires maintenance. Check engine in accordance with manufacturer's instructions supplied with truck.</p> <p>Engine operated at high altitudes and/or high air temperatures. Engine power decreases with an increase in altitude or air temperature, except for turbo charged engines. Adjusting carburetor or changing carburetor jets (or injector nozzles) may improve engine performance. Consult with engine manufacturer.</p> <p>If relief valve is set to relieve below desired operating pressure, water will bypass and reduce capacity. Adjust relief valve in accordance with instructions supplied with valve.</p>
<p>Defective priming valve</p>	<p>Defective priming valve</p>	<p>With rotary primer, oil is required to maintain a tight rotor seat. Check priming tank oil supply and replenish, if necessary.</p> <p>A worn or damaged priming valve may leak and cause pump to lose prime. Consult primer instructions for priming valve repair.</p> <p>After prolonged service, wear may increase primer clearance and reduce efficiency. Refer to primer instructions for adjusting primer clearance.</p> <p>Refer to instructions supplied with primer for correct priming speeds. Speeds much higher than those recommended do not accelerate priming, and may actually damage priming pump.</p> <p>If a bypass line is installed between the pump discharge and water tank to prevent pump from overheating with all discharge valves closed, look for a check valve in the line. If valve is stuck open, clean it, replace it or temporarily block off line until a new valve can be obtained.</p> <p>Do not attempt lifts exceeding 22 feet (6.7m) except at low altitudes and with equipment in new condition.</p> <p>Although intake hose might be immersed enough for priming, pumping large volumes of water may produce whirlpools, which will allow air to be drawn into intake hose. Whenever possible, place end of intake hose at least two feet below water source.</p> <p>If possible, avoid placing any part of intake hose higher than pump inlet. If high point cannot be prevented, close discharge valve as soon as pressure drops, and prime again. This procedure will usually eliminate air pockets in intake line, but it may have to be repeated several times.</p> <p>Refer to instructions supplied with primer for required priming time. The maximum time for priming should not exceed 45 seconds for lifts up to 10 feet (3.0m).</p> <p>Engine requires maintenance. Check engine in accordance with manufacturer's instructions supplied with truck.</p> <p>Engine operated at high altitudes and/or high air temperatures. Engine power decreases with an increase in altitude or air temperature, except for turbo charged engines. Adjusting carburetor or changing carburetor jets (or injector nozzles) may improve engine performance. Consult with engine manufacturer.</p> <p>If relief valve is set to relieve below desired operating pressure, water will bypass and reduce capacity. Adjust relief valve in accordance with instructions supplied with valve.</p>
<p>Improper clearance in rotary gear or vane primer</p>	<p>Improper clearance in rotary gear or vane primer</p>	<p>After prolonged service, wear may increase primer clearance and reduce efficiency. Refer to primer instructions for adjusting primer clearance.</p> <p>Refer to instructions supplied with primer for correct priming speeds. Speeds much higher than those recommended do not accelerate priming, and may actually damage priming pump.</p> <p>If a bypass line is installed between the pump discharge and water tank to prevent pump from overheating with all discharge valves closed, look for a check valve in the line. If valve is stuck open, clean it, replace it or temporarily block off line until a new valve can be obtained.</p> <p>Do not attempt lifts exceeding 22 feet (6.7m) except at low altitudes and with equipment in new condition.</p> <p>Although intake hose might be immersed enough for priming, pumping large volumes of water may produce whirlpools, which will allow air to be drawn into intake hose. Whenever possible, place end of intake hose at least two feet below water source.</p> <p>If possible, avoid placing any part of intake hose higher than pump inlet. If high point cannot be prevented, close discharge valve as soon as pressure drops, and prime again. This procedure will usually eliminate air pockets in intake line, but it may have to be repeated several times.</p> <p>Refer to instructions supplied with primer for required priming time. The maximum time for priming should not exceed 45 seconds for lifts up to 10 feet (3.0m).</p> <p>Engine requires maintenance. Check engine in accordance with manufacturer's instructions supplied with truck.</p> <p>Engine operated at high altitudes and/or high air temperatures. Engine power decreases with an increase in altitude or air temperature, except for turbo charged engines. Adjusting carburetor or changing carburetor jets (or injector nozzles) may improve engine performance. Consult with engine manufacturer.</p> <p>If relief valve is set to relieve below desired operating pressure, water will bypass and reduce capacity. Adjust relief valve in accordance with instructions supplied with valve.</p>
<p>Engine speed too low</p>	<p>Engine speed too low</p>	<p>Refer to instructions supplied with primer for correct priming speeds. Speeds much higher than those recommended do not accelerate priming, and may actually damage priming pump.</p> <p>If a bypass line is installed between the pump discharge and water tank to prevent pump from overheating with all discharge valves closed, look for a check valve in the line. If valve is stuck open, clean it, replace it or temporarily block off line until a new valve can be obtained.</p> <p>Do not attempt lifts exceeding 22 feet (6.7m) except at low altitudes and with equipment in new condition.</p> <p>Although intake hose might be immersed enough for priming, pumping large volumes of water may produce whirlpools, which will allow air to be drawn into intake hose. Whenever possible, place end of intake hose at least two feet below water source.</p> <p>If possible, avoid placing any part of intake hose higher than pump inlet. If high point cannot be prevented, close discharge valve as soon as pressure drops, and prime again. This procedure will usually eliminate air pockets in intake line, but it may have to be repeated several times.</p> <p>Refer to instructions supplied with primer for required priming time. The maximum time for priming should not exceed 45 seconds for lifts up to 10 feet (3.0m).</p> <p>Engine requires maintenance. Check engine in accordance with manufacturer's instructions supplied with truck.</p> <p>Engine operated at high altitudes and/or high air temperatures. Engine power decreases with an increase in altitude or air temperature, except for turbo charged engines. Adjusting carburetor or changing carburetor jets (or injector nozzles) may improve engine performance. Consult with engine manufacturer.</p> <p>If relief valve is set to relieve below desired operating pressure, water will bypass and reduce capacity. Adjust relief valve in accordance with instructions supplied with valve.</p>
<p>Bypass line open</p>	<p>Bypass line open</p>	<p>If a bypass line is installed between the pump discharge and water tank to prevent pump from overheating with all discharge valves closed, look for a check valve in the line. If valve is stuck open, clean it, replace it or temporarily block off line until a new valve can be obtained.</p> <p>Do not attempt lifts exceeding 22 feet (6.7m) except at low altitudes and with equipment in new condition.</p> <p>Although intake hose might be immersed enough for priming, pumping large volumes of water may produce whirlpools, which will allow air to be drawn into intake hose. Whenever possible, place end of intake hose at least two feet below water source.</p> <p>If possible, avoid placing any part of intake hose higher than pump inlet. If high point cannot be prevented, close discharge valve as soon as pressure drops, and prime again. This procedure will usually eliminate air pockets in intake line, but it may have to be repeated several times.</p> <p>Refer to instructions supplied with primer for required priming time. The maximum time for priming should not exceed 45 seconds for lifts up to 10 feet (3.0m).</p> <p>Engine requires maintenance. Check engine in accordance with manufacturer's instructions supplied with truck.</p> <p>Engine operated at high altitudes and/or high air temperatures. Engine power decreases with an increase in altitude or air temperature, except for turbo charged engines. Adjusting carburetor or changing carburetor jets (or injector nozzles) may improve engine performance. Consult with engine manufacturer.</p> <p>If relief valve is set to relieve below desired operating pressure, water will bypass and reduce capacity. Adjust relief valve in accordance with instructions supplied with valve.</p>
<p>Lift too high</p>	<p>Lift too high</p>	<p>Do not attempt lifts exceeding 22 feet (6.7m) except at low altitudes and with equipment in new condition.</p> <p>Although intake hose might be immersed enough for priming, pumping large volumes of water may produce whirlpools, which will allow air to be drawn into intake hose. Whenever possible, place end of intake hose at least two feet below water source.</p> <p>If possible, avoid placing any part of intake hose higher than pump inlet. If high point cannot be prevented, close discharge valve as soon as pressure drops, and prime again. This procedure will usually eliminate air pockets in intake line, but it may have to be repeated several times.</p> <p>Refer to instructions supplied with primer for required priming time. The maximum time for priming should not exceed 45 seconds for lifts up to 10 feet (3.0m).</p> <p>Engine requires maintenance. Check engine in accordance with manufacturer's instructions supplied with truck.</p> <p>Engine operated at high altitudes and/or high air temperatures. Engine power decreases with an increase in altitude or air temperature, except for turbo charged engines. Adjusting carburetor or changing carburetor jets (or injector nozzles) may improve engine performance. Consult with engine manufacturer.</p> <p>If relief valve is set to relieve below desired operating pressure, water will bypass and reduce capacity. Adjust relief valve in accordance with instructions supplied with valve.</p>
<p>End of intake hose not submerged deep enough</p>	<p>End of intake hose not submerged deep enough</p>	<p>Although intake hose might be immersed enough for priming, pumping large volumes of water may produce whirlpools, which will allow air to be drawn into intake hose. Whenever possible, place end of intake hose at least two feet below water source.</p> <p>If possible, avoid placing any part of intake hose higher than pump inlet. If high point cannot be prevented, close discharge valve as soon as pressure drops, and prime again. This procedure will usually eliminate air pockets in intake line, but it may have to be repeated several times.</p> <p>Refer to instructions supplied with primer for required priming time. The maximum time for priming should not exceed 45 seconds for lifts up to 10 feet (3.0m).</p> <p>Engine requires maintenance. Check engine in accordance with manufacturer's instructions supplied with truck.</p> <p>Engine operated at high altitudes and/or high air temperatures. Engine power decreases with an increase in altitude or air temperature, except for turbo charged engines. Adjusting carburetor or changing carburetor jets (or injector nozzles) may improve engine performance. Consult with engine manufacturer.</p> <p>If relief valve is set to relieve below desired operating pressure, water will bypass and reduce capacity. Adjust relief valve in accordance with instructions supplied with valve.</p>
<p>High point in intake line</p>	<p>High point in intake line</p>	<p>If possible, avoid placing any part of intake hose higher than pump inlet. If high point cannot be prevented, close discharge valve as soon as pressure drops, and prime again. This procedure will usually eliminate air pockets in intake line, but it may have to be repeated several times.</p> <p>Refer to instructions supplied with primer for required priming time. The maximum time for priming should not exceed 45 seconds for lifts up to 10 feet (3.0m).</p> <p>Engine requires maintenance. Check engine in accordance with manufacturer's instructions supplied with truck.</p> <p>Engine operated at high altitudes and/or high air temperatures. Engine power decreases with an increase in altitude or air temperature, except for turbo charged engines. Adjusting carburetor or changing carburetor jets (or injector nozzles) may improve engine performance. Consult with engine manufacturer.</p> <p>If relief valve is set to relieve below desired operating pressure, water will bypass and reduce capacity. Adjust relief valve in accordance with instructions supplied with valve.</p>
<p>Primer not operated long enough</p>	<p>Primer not operated long enough</p>	<p>Refer to instructions supplied with primer for required priming time. The maximum time for priming should not exceed 45 seconds for lifts up to 10 feet (3.0m).</p> <p>Engine requires maintenance. Check engine in accordance with manufacturer's instructions supplied with truck.</p> <p>Engine operated at high altitudes and/or high air temperatures. Engine power decreases with an increase in altitude or air temperature, except for turbo charged engines. Adjusting carburetor or changing carburetor jets (or injector nozzles) may improve engine performance. Consult with engine manufacturer.</p> <p>If relief valve is set to relieve below desired operating pressure, water will bypass and reduce capacity. Adjust relief valve in accordance with instructions supplied with valve.</p>
<p>Insufficient capacity</p>	<p>Insufficient capacity</p>	<p>Engine requires maintenance. Check engine in accordance with manufacturer's instructions supplied with truck.</p> <p>Engine operated at high altitudes and/or high air temperatures. Engine power decreases with an increase in altitude or air temperature, except for turbo charged engines. Adjusting carburetor or changing carburetor jets (or injector nozzles) may improve engine performance. Consult with engine manufacturer.</p> <p>If relief valve is set to relieve below desired operating pressure, water will bypass and reduce capacity. Adjust relief valve in accordance with instructions supplied with valve.</p>
<p>A. Engine and pump speed too low at full throttle</p>	<p>Transfer valve set improperly (Does not apply to single stage pumps.)</p>	<p>Place transfer valve in VOLUME (parallel) position when pumping more than two thirds rated capacity.</p> <p>When shifting transfer valve, make sure it travels all the way into new position. Failure of transfer valve to move completely into new position will seriously impair pump efficiency.</p> <p>Consult vehicle instructions for correct pump gear. Pump usually works best with transmission in direct drive. If truck is equipped with an automatic transmission, be sure transmission is in pumping gear.</p>
<p>Insufficient capacity</p>	<p>Truck transmission in too high a gear</p>	<p>Consult vehicle instructions for correct pump gear. Pump usually works best with transmission in direct drive. If truck is equipped with an automatic transmission, be sure transmission is in pumping gear.</p>
<p>A. Engine and pump speed too low at full throttle (continued)</p>	<p>Truck transmission in too high a gear</p>	<p>Consult vehicle instructions for correct pump gear. Pump usually works best with transmission in direct drive. If truck is equipped with an automatic transmission, be sure transmission is in pumping gear.</p>

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<p>Insufficient capacity</p> <p>B. Engine and pump speed higher than specified for desired pressure and volume</p>	<p>Transfer valve set improperly (Does not apply to single stage pumps.)</p> <p>Pump impeller(s) or wear rings badly worn</p> <p>Intake strainer, intake screens or impeller vanes fouled with debris</p> <p>Intake hose defective</p> <p>Intake hose too small</p>	<p>Place transfer valve in VOLUME (parallel) position when pumping more than two thirds rated capacity.</p> <p>When shifting transfer valve, make sure it travels all the way into new position. Failure of transfer valve to move completely into new position will seriously impair pump efficiency.</p> <p>Install undersize wear rings if impeller to wear ring clearance is within limits indicated in MAINTENANCE INSTRUCTIONS. If not, install new impeller(s) and wear rings.</p> <p>Remove intake strainer and hose, and clear away all debris. Pressure backwash (preferably in parallel or "Volume" position) will usually clear impeller vanes when pump is stopped.</p> <p>On old intake hoses, the inner liner sometimes becomes so rough it causes enough friction loss to prevent pump from drawing capacity. Sometimes, the liner will separate from the outer wall and collapse when drafting. It is usually impossible to detect liner collapse, even with a light. Try drafting with a new intake hose; if pump then delivers capacity, it may be assumed that previous hose was defective.</p> <p>When pumping at higher than normal lifts, or at high altitudes, use a larger or additional intake hoses.</p>
<p>Insufficient capacity</p> <p>C. Engine speed higher than specified for desired pressure and volume</p>	<p>Truck transmission in too low a gear</p>	<p>Consult vehicle Instructions for correct pumping gear. Pump usually works best with transmission in direct drive. (Check both engine and pump speed, if possible, to be sure transmission is in "direct".)</p>
<p>Insufficient pressure</p>	<p>Pump speed too low</p>	<p>In general, the above causes and remedies for low pump capacity will also apply to low pump pressure.</p>
<p>Insufficient pressure (continued)</p>	<p>Pump capacity limits pump pressure</p> <p>Flap valve stuck open</p>	<p>Check pump speed with a tachometer. If pump speed is too low, refer to engine manufacturer's instructions for method of adjusting engine speed governor.</p> <p>Do not attempt to pump greater volume of water at the desired pressure than the pump is designed to handle. Exceeding pump capacity may cause a reduction in pressure. Exceeding maximum recommended pump speed will produce cavitation, and will seriously impair pump efficiency.</p> <p>When pump is in PRESSURE (series), discharge will bypass to first stage intake. Operate pump at 75 psi/5.2 bar, and rapidly switch transfer valve back and forth between positions. If this fails, try to reach valve with a stick or wire and work it free.</p>
<p>Relief Valve Malfunction</p> <p>A. Pressure not relieved when discharge valves are closed</p>	<p>Sticky pilot valve</p> <p>Plugged tube lines</p>	<p>Disassemble and clean. Replace noticeably worn parts.</p> <p>Disconnect lines and inspect.</p>
<p>Relief Valve Malfunction</p> <p>B. Pressure will not return to original setting after discharge valves are reopened</p>	<p>Sticky pilot valve</p> <p>Sticky main valve</p> <p>Incorrect installation</p>	<p>Disassemble and clean. Replace noticeably worn parts.</p> <p>Disassemble and clean. Replace noticeably worn parts.</p> <p>Disassemble and clean. Replace noticeably worn parts.</p> <p>Check all lines to be sure installation instructions have been followed.</p>
<p>Relief Valve Malfunction</p> <p>C. Fluctuating pressure</p>	<p>Sticky pilot valve</p> <p>Water surges (relief valve)</p>	<p>Disassemble and clean. Replace noticeably worn parts.</p> <p>Pressure fluctuation can result from a combination of intake and discharge conditions involving the pump, relief valve and engine. When the elasticity of the intake and discharge system and the response rate (reaction time) of the engine, pilot valve and relief valve are such that the system never stabilizes, fluctuation results. With the proper combination of circumstances, fluctuation can occur regardless of the make or type of equipment involved. Changing one or more of these factors enough to disrupt this timing should eliminate fluctuation.</p>
<p>Relief Valve Malfunction</p> <p>D. Slow response</p>	<p>Plugged filter or line</p>	<p>Clean lines and filter.</p>