

Warren Rupp Troubleshooting Guide

| THE PROBLEM:  | Pump cycles No flow | | Pump will not cycle | | Pump cycles, flow unsatisfactory | | Unbalanced cycling | | Vibration | | Actions to Take |
|---|---------------------|------|---------------------|------|----------------------------------|------|--------------------|------|-----------|------|--|
| | System | Pump | System | Pump | System | Pump | System | Pump | System | Pump | |
| Excessive suction lift. | ✓ | | | | ✓ | ✓ | | ✓ | | | For lifts exceeding 20' of liquid, filling the chambers with liquid will prime the pump in most cases. |
| Excessive flooded suction. | | | | | | | ✓ | | ✓ | | For flooded conditions exceeding 10' of liquid, install a back pressure device. Refer to Warren Rupp Technical Bulletin #41R. |
| System head exceeds air supply pressure. | | | ✓ | | | | | | | | Increase the inlet air pressure to the pump. Pump is designed for 1:1 pressure ratio at zero flow. (Does not apply to models EH2 and SH2). |
| Air supply pressure or volume exceeds system hd. | | | | | ✓ | | | | | | Decrease inlet air (press. and vol.) to the pump. Pump is cavitating the fluid by fast cycling. Refer to Head/Cap Curve on data sheet for your model pump. |
| Undersized suction line. | | | | | ✓ | | ✓ | ✓ | | | Meet or exceed pump connections. Refer to the dimension drawing or data sheet for your model pump. |
| Restrictive or undersize airline. | | | | | ✓ | | | | | | Install a larger air line and connection. Refer to the ?Air Inlet? section of the service manual for recommendations. |

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| Check ESADS air distribution system. | | | | ✓ | | | | | | | Disassemble and inspect main air distribution valve, pilot valve and pilot valve actuators. Refer to ?Air Valve Servicing? section of the service manual. Check for clogged discharge or closed valve before reassembly. |
| Rigid piping. | | | | | | | | | ✓ | | Install flexible connectors and Warren Rupp Tranquilizer® surge suppressor. |
| Blocked air exhaust muffler. | | | | ✓ | | ✓ | | | | | Remove muffler screen, clean or de-ice, and re-install. Refer to ?Air Exhaust? section of the service manual for alternative piping recommendations. |
| Pumped fluid in air exhaust muffler. | | ✓ | | ✓ | ✓ | | ✓ | | | | Disassemble pump chambers. Inspect for diaphragm rupture or loose diaphragm plate assembly. Refer to the ?Diaphragm Replacement? section of the service manual. |
| Suction side air leakage or air in product. | ✓ | ✓ | | ✓ | ✓ | | ✓ | | | | Visually inspect all suction-side gaskets and pipe connections. |
| Check valve obstructed. | | ✓ | | | | | ✓ | ✓ | | | Disassemble the wet end of the pump and manually dislodge obstruction in the check valve pocket. Refer to the service manual for disassembly procedure. |
| Check valve and/or seat is worn or needs adjusting. | | | | | | | ✓ | ✓ | | | Inspect check valves and seats for wear and proper setting. Replace if necessary. Refer to the service manual for disassembly procedure. |

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| Suction line is blocked. | ✓ | | | | ✓ | | | | | | Remove or flush obstruction. Check and clear all suction screens or strainers. |
| Discharge line is blocked. | | | ✓ | | | | | | | | Check for inadvertently closed discharge line valves. |
| Pump chamber is blocked. | | | | ✓ | | | | | | | Disassemble and inspect wetted chambers. Remove or flush any obstructions. Refer to the service manual for disassembly. |
| Entrained air or vapor lock in chamber(s). | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | | Purge chambers through tapped chamber vent plugs. Purging the chambers of air can be dangerous. Call WR Tech Services Dept. for specific procedure. Top-ported discharge (available on some models) can also help. |