



Vacuum Pump OVT Priming System centrifugal Pump Troubleshooting Guide

Pump Series: V, TSV, STV, JV, JSV, TSVW, STVW, JWV, JSVW

Symptoms	Causes	Corrections
Pump fails to prime – low vacuum	Insufficient product at inlet Pump drain valve left open Priming chamber valve closed Speed too low Air leak on suction side Air lock Discharge non return valve not seating Vacuum pump inlet screen clogged Mechanical seal leaking	Reposition inlet/piping Close drain valve Open priming chamber valve Increase within recommended limits Fix leaks Vent air/install air release valve Clear obstruction/check for wear Clear any obstructions Check and repair/replace as required
Pump fails to prime – high vacuum	Strainer clogged Excessive suction lift	Clean strainer Lower if possible or select larger piping
Pump takes a long time to prime	Speed too low High suction lift and/or long hose length Air leak on suction side Discharge check valve obstructed or worn Worn vacuum pump or drive belt slipping	Increase within recommended limits Reduce if possible Fix leaks Clear obstruction/check for wear Repair/replace

Pump fails to hold prime when turned off	<p>End of hose/strainer out of fluid</p> <p>Discharge check valve obstructed or worn</p> <p>Air leak on suction side of pump</p> <p>Priming chamber non return valve obstructed</p>	<p>Check pipe/strainer submergence</p> <p>Clear obstruction/check for wear</p> <p>Fix leaks</p> <p>Clear obstruction/check for wear</p>
Reduced performance	<p>Vortexing/improper submergence</p> <p>Air leaks on suction side</p> <p>Strainer or impeller partially clogged</p> <p>Excessive suction lift</p> <p>Speed too low</p> <p>Discharge head too high</p> <p>Pump internals worn</p>	<p>Lower strainer deeper in sump</p> <p>Clear any obstructions</p> <p>Lower if possible or select larger piping</p> <p>Increase within recommended limits</p> <p>Lower if possible or select larger piping</p> <p>Check and adjust/repair as required</p> <p>Adjust/replace as necessary</p>
Pump overheating	<p>Strainer clogged</p> <p>Cavitation (improper suction design)</p> <p>Discharge head too high</p> <p>Pump internals worn</p> <p>Air lock</p>	<p>Clear any obstructions</p> <p>Correct suction problems</p> <p>Lower if possible or select large piping</p> <p>Check and adjust/repair</p> <p>Vent air/install air release valve</p>
Excessive pump vibration or noise	<p>Material lodged in impeller (out of balance)</p> <p>Discharge head too high</p> <p>Cavitation (improper suction design)</p> <p>Misalignment</p> <p>Worn bearings</p>	<p>Clear any obstructions</p> <p>Lower if possible or select large piping</p> <p>Correct suction conditions</p> <p>Align all rotating parts</p> <p>Check and replace bearings</p>

Premature mechanical seal failure	Inadequate lubrication Loss of lubrication Piping not properly supported Cavitation (improper suction design) Misalignment Discharge head too high Incompatibility with fluid being pumped	Regrease or refill with oil Check/replace lip seal Provide suitable bracing and supports Correct suction problems Align all rotating parts Lower if possible or select large piping Check pumping fluid properties
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Premature bearing failure	<p>Inadequate lubrication</p> <p>Piping not properly supported</p> <p>Cavitation (improper suction design)</p> <p>Misalignment</p> <p>Water or contaminants entering bearings</p>	<p>Regrease with proper grease</p> <p>Provide suitable bracing and supports</p> <p>Correct suction problems</p> <p>Align all rotating parts</p> <p>Check/replace lip seals as required</p>
Premature drive coupling failure	<p>Piping not properly supported</p> <p>Misalignment</p>	<p>Provide suitable bracing and supports</p> <p>Align all rotating parts</p>
Fluid discharging from vacuum pump	<p>Float obstructed or damaged.</p> <p>Priming chamber bumper obstructed or worn</p>	<p>Clean or replace.</p> <p>Clean or replace.</p>