

Washington Office Location

21850 88th Place South

Kent, WA 98031

Office: (253) 872-2000

Fax: (253) 872-7033

Email: info@nwindustrialrepair.com



Additional Locations

Eastern Washington: (509) 949-3368

Idaho & Montana: (208) 360-3833

Oregon: (503) 708-9609

Progressive Cavity Pump Troubleshooting Guide

| PROBLEM | | | | | | | | PROBABLE CAUSE | SOLUTION | |
|------------------------|---|------------------------|-----------------------|----------------------------|---|-------------------------------------|-------------------------------|--------------------------------|--|--|
| Pump does not start up | Pump not delivering liquid/generating suction | Pumping is not uniform | Premature stator wear | Pump is noisy and vibrates | Pump not delivering rated pressure head | Pump not delivering rated flow rate | Drive motor gets too warm/hot | Pump seized or no longer pumps | | |
| X | | | | | | | X | | Static friction between stator and rotor after long period of downtime. | Use tool to manually turn pump. |
| X | | | X | | | X | X | X | Delivery pressure head too great. | Check pressure head with pressure gauge, reduce pressure head by using larger diameter pipe or shorten pressure pipe length Verify pressure line not clogged. Ensure valves are fully open |
| X | | | X | | | X | | X | Foreign objects in pump. | Disassemble pump, remove foreign objects and replace defective parts. |
| X | X | | X | | | | X | X | Temperature of liquid too high. | Check temperature of pumped liquid, use an undersized rotor. |
| X | X | | | | | X | X | | Packing gland improperly adjusted. | Loosen or tighten gland bolts. |
| X | X | | X | | | | | X | Solids content of medium is too high and leads to blockages. | Increase liquid portion of medium. Install filter screen. Reduce pump speed |
| X | X | | X | | | | | | Solids settle and harden when pump is stationary. | Clean pump and rinse through after each run. |
| X | X | | X | | | | | X | Conveying product hardens when temperature drops below a certain limit. | Heat the pump. |
| X | | | X | | | | X | X | The stator has swollen, the elastomer is not compatible with the conveying medium. | Check chemical compatibility of elastomer and medium. Possibly change stator material. |
| | X | | | | | | | | Wrong direction of rotation. | Change rotation to concur with direction indicated by arrow on bearing housing or pump casing; swap motor connections if necessary. |
| | X | X | | X | | X | | X | Air leak in suction line. | Locate and seal air leak; replace gaskets. Tighten connections. |
| | X | X | | X | | X | | X | Shaft seal leaking. | Replace seal. |
| | X | | | X | | X | | | Suction head too high. | Check suction head; increase suction pipe diameter and use a larger filter, open suction side valve fully |
| | X | X | | | | X | | | Conveying product viscosity higher than expected. | Check product material data sheet. |
| | X | X | X | | | X | | X | Pump is running partially/completely dry. | Check there is adequate conveying product on pump suction side. Install Dry Running Protection. |

Washington Office Location

21850 88th Place South
 Kent, WA 98031
 Office: (253) 872-2000
 Fax: (253) 872-7033
 Email: info@nwindustrialrepair.com



Additional Locations

Eastern Washington: (509) 949-3368
 Idaho & Montana: (208) 360-3833
 Oregon: (503) 708-9609

Progressive Cavity Pump Troubleshooting Guide

| PROBLEM | | | | | | | | | PROBABLE CAUSE | SOLUTION |
|------------------------|---|------------------------|-----------------------|----------------------------|---|-------------------------------------|-------------------------------|--------------------------------|--|---|
| Pump does not start up | Pump not delivering liquid/generating suction | Pumping is not uniform | Premature stator wear | Pump is noisy and vibrates | Pump not delivering rated pressure head | Pump not delivering rated flow rate | Drive motor gets too warm/hot | Pump seized or no longer pumps | | |
| | X | | | | | X | | | Rotation speed too low. | Increase speed for low-viscosity medium and large suction volume. |
| | X | X | | X | | | | | Rotation speed too high. | Reduce speed for high-viscosity medium. |
| | X | | | | X | X | | X | Stator and/or rotor worn. | Replace stator and/or rotor |
| | X | | | X | | X | | X | Joint parts and/or stub shaft are worn. | Replace parts. |
| | X | | X | | | X | | X | Suction line clogged. | Unclog suction line. Confirm that any suction valves or control valves are not stuck shut. |
| | | X | | | | | | | Air bubbles in conveying product. | Avoid air inclusions in pumped Liquid. |
| | | | | X | | | | X | Check coupling. | If necessary, move pump in relation to drive, check wear on coupling gear, re-adjust coupling if necessary. |
| | | | | X | | | | | Joint play too large. | Check longitudinal tolerance of joint pins, joint bush may be improperly installed. |
| | | | | X | | | | | Worn bearings in pump drive housing or drive unit. | Replace bearings. |
| | | | | | | X | X | | Pump rotating speed incorrect. | Check speed and power consumption of drive motor. Check voltage and frequency. |