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**Additional Locations**

Eastern Washington: (509) 949-3368

Idaho & Montana: (208) 360-3833

Oregon: (503) 708-9609

AODD Pump Troubleshooting Guide

PROBLEM	PROBABLE CAUSE	SOLUTION	
Pump will not cycle, or cycles once and stops	Air valve is stuck or dirty.	Disassemble and clean air valve. Use filtered air.	
	Air valve or center block gaskets installed incorrectly.	Install gaskets with holes properly aligned with parts or valve and center block.	
	Check to see if the valve ball is severely worn and/or wedged in seat or manifold.	Replace ball and seat.	
	Check to see if the valve ball is wedged into seat due to over pressurization.	Install pressure relief valve.	
	Air valve gasket damaged.	Replace gasket.	
Pump cycles at stall or fails to hold pressure at stall.	Worn check valve balls, seats or O-rings.	Replace valve balls, seats or O-rings.	
Pump operates erratically	Clogged suction line.	Unclog suction line.	
	Clogged manifolds.	Clean manifolds to allow proper air flow.	
	Cavitation on suction side.	Check suction condition (move pump closer to product).	
	Sticky or leaking valve balls.	Clean or replace.	
	Pilot valves damaged or worn.	Replace pilot valves.	
	Diaphragm (or backup diaphragm) ruptured.	Replace diaphragms.	
	Restricted exhaust.	Remove restriction.	
	Air supply erratic or lack thereof.	Repair air supply. Check the following:	
		• Air line size length.	
		• Compressor capacity (HP vs CFM required).	
		• Other air usage in production facility.	
	• Air requirement by pump (pump capacity, product viscosity and specific gravity).		
Air valve damaged.	Replace air valve.		
Air valve gasket damaged.	Replace air valve gasket.		
Worn O-rings.	Replace O-rings.		
Exhaust muffler icing.	Use drier air supply.		
Incorrect pump size.	Consult Northwest Industrial Repair for evaluation and recommendations.		
Pumped fluid in exhaust air	Diaphragm (and backup) ruptured.	Replace.	
	Loose fluid side diaphragm plate.	Tighten or replace.	
Moisture in exhaust air	High inlet air humidity.	Use drier air supply.	

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Air bubbles in fluid	Suction line is loose	Tighten.
	Diaphragm (or backup) ruptured	Replace diaphragms.
	Loose inlet manifold, damaged seal between manifold and seal, damaged O-rings	Tighten manifold bolts or replace seats or O-rings.
	Loose diaphragm shaft bolt	Tighten or replace.
	Diaphragm shaft bolt O-ring damaged	Replace O-ring.
	Pump cavitation	Reduce pump speed or suction lift.
Pump air valve freezes	Excessive moisture in compressed air	Install a dryer or hot air generator for compressed air. Alternatively, a filter may be used to remove the water from the compressed air in some applications.
Pump exhausts excessive air at stall	Worn air valve block, O-ring, plate, pilot block, u-cups or pilot-pin O-rings	Inspect; replace.
	Worn shaft seals	Replace.
Pump leaks air externally	Air valve cover or air valve cover screws are loose	Tighten screws.
	Air valve gasket or air cover gasket is damaged	Inspect; replace.
	Diaphragm damaged.	Replace diaphragms.
Product leaking through exhaust or around clamp bands	Diaphragm failure-product leaking out exhaust	Replace diaphragms. Clean out entire center section of pump.
	Diaphragm plate loose-product leaking out exhaust	Check diaphragms for damage and retighten diaphragm plates
	Diaphragms stretched around center hole or bolt holes	Check for excessive inlet pressure or air pressure.
	Clamp bands loose or stretched	Tighten clamp bands (check for stretching) or replace clamp bands.
	Clamp bands not seated properly	Seat clamp bands with mallet.
	Teflon gasket tape ruined	Replace Teflon gasket tape with Teflon diaphragms.
	Excessive air supply pressure	Check operating manual for recommendations.

