Symptom	*Potential Cause(s)*	*Recommendation(s)*
Pump cycles once and stops	1-Incorrect pilot o-ring placement 2-Inner diaphragm plate installed backwards 3-Deadhead (system pressure meets or exceeds air supply pressure) 4-Air valve or center block gaskets installed incorrectly	1-Reinstall pilot o-rings in correct positions 2-Reinstall inner diaphragm plate correctly 3-Check system for pressure ratio to pump 4-Install gaskets with holes properly aligned with parts or valve and center block
Pump will not operate	1-Pump is over lubricated 2-Lack of air (line size, PSI, CFM) 3-Centering of spool ("V" series) 4-Worn o-rings 5-Air porting in center block is plugged 6-Wrong type of lubrication (attack on o-rings) 7-Debris in air valve 8-Clogged manifolds 9-Incorrect o-ring placement 10-Deadhead (system pressure meets or exceeds air supply pressure) 11-Closed discharge valve	1-Set lubricator on lowest possible setting or remove • Elima-Matic is designed for lube free operation • Clean out center section 2-Check the air line size and length, compressor capacity (HP vs. cfm required), other usage of air in plant, air requirement by pump (to include pump capacity, product viscosity and specific gravity) 3-Disconnect and reconnect air • Replace with Elima-Matic air valve 4-Replace o-rings 5-Clean porting in center block to allow proper air flow 6-Check compatibility of o-rings with lubrication (Consult factory) 7-Clean air valve/filter • Check for scoring on spool, sleeve(s) and valve housing 8-Clean suction or discharge manifolds/piping • Clean filter bags or screens 9-Reinstall o-rings in correct position 10-Increase air supply pressure 11-Open discharge valve
Pump cycles and will not prime or flow	1-Cavitation on suction side 2-Valve ball(s) not seating properly or sticking 3-Valve ball(s) missing (pushed into pump/thermal expansion or missing) 4-Valve ball(s)/seat(s) damaged or attacked by product 5-Vapor pressure 6-Clogged suction line	1-Check suction condition (move pump closer to product) 2-Clean out around valve ball cage and valve seat area • Replace valve ball and valve seat if damaged • Check Chemical Resistance Guide for compatibility and proper elastomer match • Use heavier valve ball material 3-Worn valve ball or valve seat • Thermal expansion in discharge pipe (add one way valve into piping) • Worn fingers in valve ball cage (replace part) 4-Check Chemical Resistance Guide for compatibility and proper elastomer match 5-Consult factory for evaluation and recommendation 6-Clean suction manifold and/or piping • Install screen or bag filter
Pump running sluggish/stalling	1-Over lubrication 2-Wrong type of lubrication 3-Icing 4-Clogged manifolds 5-Deadhead (system pressure meets or exceeds air supply pressure) 6-Cavitation on suction side 7-Lack of air (line size, PSI, CFM) 8-Worn o-rings 9-Vapor pressure 10-Incorrect pump size	1-Set lubricator on lowest possible setting or remove • Elima-Matic is designed for lube free operation • Clean center of pump 2-Refer to Operating Manual for recommended lubrication 3- Clean or replace exhaust muffler 4-Clean manifolds to allow proper air flow 5-Check system to locate deadhead (equilibrium) • Increase air supply pressure 6-Check suction condition (move pump closer to product) 7-Check the air line size and length, compressor capacity (HP vs. cfm required), other usage of air in plant, air requirement by pump (to include pump capacity, product viscosity and specific gravity) 8-Replace o-rings 9,10-Consult factory for evaluation and recommendation

Product leaking through exhaust or around clamp bands	1-Diaphragm failure, or diaphragm plates loose, product leaking out of exhaust 2-Clamp bands loose or stretched, product leaking out clamp bands 3-PTFE gasket tape damaged (PTFE and XL fitted only) 4-Excessive positive suction pressure, product leaking around many or all clamp bands 5-Diaphragm stretched around center hole or bolt holes 6-Clamp bands not seated properly 7-Excessive air supply pressure	1-Replace diaphragms and back up when using PTFE, clean out entire center section of pump, check for damage and ensure diaphragm plates are tight 2-Tighten clamp bands (check for stretching), and/or replace clamp 3-Replace PTFE gasket tape kit with each rebuild 4-Check excessive positive suction pressure • Move pump closer to product • Add accumulation tank or pulsation dampener as close to pump as possible on suction side • Raise pump/place on top of tank to reduce inlet pressure • Install flex hose on inlet and discharge 5-Check for excessive inlet pressure or air pressure • Tighten bolts to recommended torque 6-Seat clamp bands with mallet 7-Check Operating Manual for recommendations
Premature diaphragm failure	1-Cavitation 2-Excessive flooded suction pressure 3-Misapplication (chemical/physical incompatibility) 4-Wrong type of lubrication (attack on air side) 5-Incorrect diaphragm plates or plates on backwards 6-Incorrect shaft with corresponding elastomer 7-Start up at full air pressure 8-Excessive dry running at high air pressure	1-Enlarge pipe diameter on suction side of pump 1,2- Move pump closer to product • Raise pump/place pump on top of tank to reduce inlet pressure 2-Add accumulation tank or pulsation dampener as close to the pump as possible 3,4-Consult Chemical Resistance Chart for compatibility with products, cleaners, temperature limitations and lubrication 5,6-Check model number on pump, compare to Operating Manual to check for correct part and installation 7-Start up pump slowly (manually or with Smart Start) 8-Install control or automatic shutoff
Breaking and bending shafts	1-Build up of solids in water chamber 2-Elima-Matic pump missing bumper washers 3-Loose diaphragm plates	1-Flush pump, start pump slow 2-Add bumper washers 3-Double check tightness of diaphragm plates when replacing diaphragms