

12 LARS SEAL TROUBLESHOOTING GUIDE

The best ways to prevent seal failure are to carefully follow the steps detailed in this manual and to assess and monitor any risks in the process/application which may compromise the seal assembly. This may take the form of shutdown switches for temperature, pressure, vibration, or flow, or specialized start-up and shutdown procedures. When does occur or is suspected, the following guide can assist in basic troubleshooting. For further troubleshooting, contact LobePro to discuss your application in greater detail.

Reported Issue	Common Causes	Corrective Action
Gear housing oil contaminated	Failure of shaft O-rings: <ul style="list-style-type: none"> • Damage resulting from abrasion • Improper installation/missing • Incompatible materials • Excessive Vibration Other possible causes: <ul style="list-style-type: none"> • Result of continued operation after contamination of quench chamber • Over pressurization • Strain bolt failure Moisture ingress from shaft lip seal or drain/fill plugs	Replace shaft O-rings: S-frame item no. 50 M-, L-, Lh-frame item no. 31 Check strain bolt tightness Check tightness of external casing plugs and lip seal integrity
Quench chamber oil contaminated	Mechanical seal failure: <ul style="list-style-type: none"> • Damage or failure of the face seals or O-rings • Incompatible materials • Damage resulting from abrasion • Over pressurization • Excessive vibration • Excessive suction pressure/cavitation Excessive heat/dry running	Replace mechanical face seals and O-rings: <ul style="list-style-type: none"> • S-frame item no. 39, 43, 44, 49 • M-, L-, Lh-frame item no. 21, 26, 27 Install sensor or shutdown switch to monitor: <ul style="list-style-type: none"> • High pressure • High temperature • Vibration • Flow
Quench chamber and gear housing oil communicating; no contamination	Lip seal failure/defect or failure of base O-ring <ul style="list-style-type: none"> • Improper installation/missing • Incompatible lubrication/lack of lubrication • High temperature Quench/seal not thoroughly cleaned after maintenance/previous failure	Replace secondary seal O-rings and lip seal <ul style="list-style-type: none"> • S-frame item no. 39, 41, 49 • M-, L-, Lh-frame item no. 21, 23 Check rating/compatibility of lubricant Install temperature switch or sensor

Reference pump specification sheets and bill of materials for part numbers listed above.