SCREW COMPRESSOR TROUBLESHOOTING GUIDE



NEVER RUN THE COMPRESSOR IN REVERSE!

REVERSE ROTATION TRIPS

AT INITIAL START-UP:

- Compressor is running in reverse, check phase sequence and bump compressor to ensure proper rotation (check pressure at outlet port).
- Ensure LonCEM module and discharge pressure transducer are wired and functioning correctly.

WHEN COMPRESSOR CYCLES OFF:

- Pressure switch set too high, reset as low as necessary (older systems with reverse rotation switch).

OIL PRESSURE DIFFERENTIAL TRIPS

- Ensure all manual oil line valves are open.
- Check pressure drop through oil system, oil filters may have to be changed.
- Ensure oil line solenoid is functioning properly.
- Ensure LonCEM module and pressure transducers are wired and functioning properly.

THERMAL PROTECTION (HIGH MOTOR TEMPERATURE) TRIPS

- Check motor cooling valve for operation.
- Check economizer rotalock valve to ensure it is open.
- Check superheat from economizer expansion valve.
- Check motor cooling valve for operation to ensure liquid is feeding.
- Verify motor cooling valve is downstream of economizer line check valve.
- Verify motor thermistor wiring from module to compressor terminal plate.

CIRCUIT BREAKER TRIPS

- Check voltage. If low, verify power supply.
- Check circuit breaker. If incorrect, install correct breaker.
- Check and re-torque all power and control circuit wiring connections.
- Short cycling of compressor. Adjust controls to limit compressor cycles.
- High discharge pressure. Check condenser control and operation.
- Compressor full of oil due to oil solenoid manually open or stuck open. Repair or replace solenoid.
- Check contactor. Replace if damaged.

THERMAL PROTECTION (HIGH DISCHARGE TEMPERATURE) TRIPS

- Check motor cooling valve for operation.
- Check economizer rotalock valve to ensure it is open.
- Ensure liquid feed is available to the valve(s) - add refrigerant charge if necessary.
- Check superheat from economizer expansion valve.
- Check for high system discharge pressure.
- Verify size of motor cooling valve and desuperheating valve (where applicable).
- If desuperheating valve is not installed, check application conditions and add valve if needed.
- Check internal pressure relief valve. If blown, replace compressor.

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LOW OIL LEVEL

- Check for adequate oil charge (fill to top separator sightglass).
- Check discharge superheat (less than 20 °F will cause high carryover past separator).
- Check for high pressure system transients (rapid pressure changes in the discharge).

LOW COMPRESSOR CAPACITY

- Check operation of economizer (is liquid temperature at evaporator TXV as expected).
- Verify unloader is energized. Check wiring and power source.
- Check unloader coil and replace if bad.
- Check unloader valve. Replace unloader assembly.
- Remove clogged suction filter, clean and reinstall.
- Check internal pressure relief valve. If blown, replace compressor.

COMPRESSOR SEEMS EXCESSIVELY NOISY AT START-UP (HIGH PITCH)

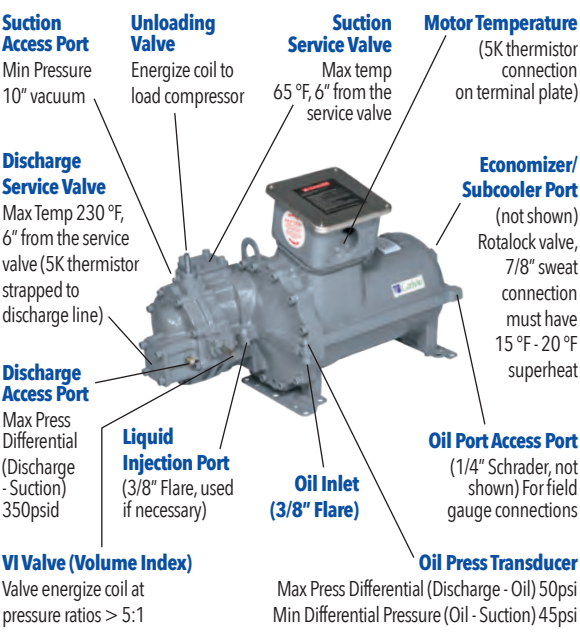
- Ensure oil feed lines are open (oil solenoid).
- Check oil pressure at compressor manifold with a gauge.

COMPRESSOR MAKES A LOUD GRINDING NOISE AT START-UP

- Oil solenoid is leaking oil into the compressor while off. Repair or replace oil solenoid.
- Compressor filling with refrigerant while off. Determine refrigerant source and eliminate during compressor off cycle.
- Check evaporator superheat.

COMPRESSOR PERIODICALLY MAKES LOUD NOISE OR BECOMES VERY QUIET FOR A SHORT TIME

- Check for excessive liquid/oil return to compressor.



Carlyle service replacement compressors, parts, and support are available through a wide distribution network. **Technical support is provided by your local distributor.** Customer Service Representatives can provide assistance in locating your nearest distributor.

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800-Go-Carlyle
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