

TROUBLESHOOTING

Symptom	Probable Cause	Remedy
Failure to start	<p>Power not turned on.</p> <p>Blown main circuit fuse.</p> <p>Blown control circuit fuse.</p> <p>Safety circuit shutdown-high discharge temperature</p> <p>Overloaded motor, thermal overload, Relay tripping.</p>	<p>Turn power on by connecting main disconnect switch or circuit breaker.</p> <p>Replace fuse.</p> <p>Replace fuse.</p> <p>Correct situation per remedy described under "High Discharge Air Temperature" symptom of this troubleshooting guide, then press the manual reset button on the high discharge temperature switch, restart compressor.</p> <p>Press reset button on motor starter.</p>
Unscheduled shut down	<p>High discharge temperature.</p> <p>Overloaded motor, Thermal Overload relay tripping.</p>	<p>Correct situation per remedy described under "High Discharge Air Temperature" symptom of this troubleshooting guide, then press the manual reset button on the high discharge temperature switch, restart compressor.</p> <p>Press reset button on motor starter.</p>
Low receiver pressure	<p>Excessive air demand</p> <p>Excessive leaks in service lines.</p> <p>Inlet valve not fully open.</p> <p>Dirty inlet air filter.</p> <p>Air pressure switch not set Correctly.</p> <p>Faulty receiver pressure gauge.</p>	<p>Re-evaluate air demand.</p> <p>Repair service lines.</p> <p>Correct situation as per remedy described in "Malfunctions in the capacity system" (A) "Inlet valve not opening or closing in relation to air demand" section of this troubleshooting guide.</p> <p>Clean air filter element or replace with a new element.</p> <p>Readjust air pressure switch to desired cut-in and cut-out pressure.</p> <p>Check and replace if found faulty.</p>

TROUBLESHOOTING (CON'T.)

Symptom	Probable Cause	Remedy
High discharge air temperature	<p>Not enough cooling water flowing through the cooler (water cooled models).</p> <p>Inadequate circulation of cooling air at cooler (air cooled models).</p> <p>Low oil level in separator.</p> <p>Dirty oil filter.</p>	<p>Check water system for possible restriction, including water regulator valve.</p> <p>Check location of cooler to make sure there is no restriction to free circulation of cooling air. Also check the fins of the cooler and if found dust laden, clean with compressed air while the machine is not running.</p> <p>Add oil and bring to recommended level. Also check oil system for possible leaks.</p> <p>Replace oil filter element.</p>
Low air delivery	<p>Dirty air filter.</p> <p>Excessive leaks in service line.</p> <p>Inlet valve not opening completely.</p>	<p>Clean air filter element(s) or replace with new element(s).</p> <p>Repair service lines.</p> <p>Correct situation per remedy described under "Malfunctions in the capacity control system" – (A) "Inlet valve not opening or closing in relation to air demand" section of this trouble shooting guide.</p>
Safety valve blows	<p>Air pressure switch not set correctly.</p> <p>Inlet valve not closing properly in relation to air demand.</p> <p>Dirty separator.</p> <p>Faulty receiver pressure gauge.</p> <p>Faulty safety valve.</p>	<p>Readjust pressure switch so that the compressor unloads at the desired pressure.</p> <p>Correct situation per remedy described under "Malfunctions in the capacity control system" – (A) "Inlet valve not opening or closing in relation to air demand" section of this trouble-shooting guide.</p> <p>Replace with new air/oil separator element.</p> <p>Check gauge for accuracy.</p> <p>Check safety valve for correct pressure setting. Replace valve if leaking.</p>
Excessive oil consumption	<p>Separator tank overfilled.</p> <p>Blocked scavenger line.</p> <p>Faulty oil filter.</p>	<p>Drain oil in separator to full mark on oil level gauge.</p> <p>Clean scavenger line and orifice.</p> <p>Replace oil filter element.</p>

TROUBLESHOOTING (CON'T.)

Symptom	Probable Cause	Remedy
	<p>Oil breakdown.</p> <p>Wrong oil being used.</p> <p>Rapid start/stop or load/unload cycle.</p> <p>Excessive oil foaming.</p> <p>Scavenger line does not extend to bottom of separator.</p> <p>Operating pressure too low.</p> <p>Faulty or damaged separator element.</p> <p>Leak in oil line.</p> <p>Shaft seal failure.</p> <p>Rapid pressure loss in system.</p> <p>Starting the unit before the separator has been blown down.</p>	<p>Correct situation per remedy described in "Oil breakdown" section of this troubleshooting guide.</p> <p>Refer to SPECIFICATIONS section of this manual for correct oil.</p> <p>Correct situation per remedy described in "Malfunctions in the capacity control system" - (C) "Rapid cycling" section of this troubleshooting guide.</p> <p>Same as above.</p> <p>Check scavenger line connections on separator tank.</p> <p>Receiver pressure should not drop below 100 PSIG when running loaded. Leak in system or air consumption is too great.</p> <p>Change air/oil separator.</p> <p>Check for leaks and correct.</p> <p>Replace necessary components of the seal or complete seal if necessary.</p> <p>Look for applications using large amounts of air very quickly. An air receiver should be installed in the system.</p> <p>Change procedure and instruct operators on proper use.</p>
Frequent air filter clogging	<p>Faulty air filter or inadequate filter for the environment.</p>	<p>Replace faulty air filter element. If air filter is inadequate replace it with a heavy-duty air filter.</p>
Oil breakdown	<p>Extreme operating conditions such as high oil injection and compressor discharge temperatures, high ambient temperature with high humidity and high receiver pressure.</p> <p>Contaminated oil.</p>	<p>Operate compressor at recommended receiver pressure and oil injection temperature.</p> <p>Service air filter element and oil filter element in accordance with maintenance schedule.</p>

TROUBLESHOOTING (CON'T.)

Symptom	Probable Cause	Remedy
	<p>Negligence in draining condensate from the separator.</p> <p>Mixing of different brands of oil.</p> <p>Wrong type of oil being used.</p>	<p>Drain condensate from the separator periodically. More frequent draining might be necessary when operating at high ambient temperature and high humidity environment.</p> <p>DO NOT MIX DIFFERENT BRANDS OF OIL.</p> <p>Refer to SPECIFICATIONS section of this manual for correct oil.</p>
<p>Malfunctions in the capacity control system</p> <p>(A) Inlet valve not opening or closing in relation to air demand.</p> <p>(B) Compressor does not unload when there is no air demand.</p> <p>(C) Rapid cycling between Load and Unload</p> <p>Oil coming out through air filter at shutdown</p> <p>Oil coming out through blow down valve</p>	<p>Improper setting of the air pressure switch or faulty switch.</p> <p>Faulty unloader solenoid valve.</p> <p>Jammed inlet valve.</p> <p>Pressure regulator set to low.</p> <p>Air pressure switch not set correctly.</p> <p>Faulty solenoid valve.</p> <p>Faulty air pressure switch.</p> <p>Leaks in service lines.</p> <p>Too small volume of air in service line.</p> <p>Using too much air.</p> <p>Cut-in cut-out pressure set too close in pressure switch.</p> <p>Faulty inlet valve.</p> <p>Oil level too high in separator.</p> <p>Cycling too often between load and unload.</p>	<p>Readjust air pressure switch to proper setting. Replace if faulty.</p> <p>Replace solenoid valve.</p> <p>Check inlet valve assembly.</p> <p>Adjust pressure regulator to 100 PSI minimum (175 PSI units).</p> <p>Readjust air pressure switch setting.</p> <p>Check wiring and solenoid valve.</p> <p>Replace air pressure switch.</p> <p>Repair leaks.</p> <p>Provide sufficient volume by adding air receiver.</p> <p>Add larger compressor, check system for air leaks</p> <p>Readjust cut-in and cut-out pressure settings.</p> <p>Inspect valve. If necessary, replace.</p> <p>Bring the oil to recommended level by draining the separator. Use the oil level gauge as a guide.</p> <p>Correct situation as per solutions described under "MALFUNCTIONS IN THE CAPACITY CONTROL SYSTEM" – "(C) Too rapid cycling between load and unload" section of this guide.</p>

V-BELT TROUBLESHOOTING CHECK LIST

Symptom	Cause	Remedy
Too frequent air filter clogging	Compressor operating in highly contaminated area.	Use remote air intake mounting.
	Air filter not adequate for operating conditions.	Use heavy duty air filter.
Belts slip, shiny or glazed sheave sidewalls	Not enough tension.	Replace V-belt and apply proper tension.
Belts squeal	High starting load.	Apply proper tension.
	Shock load.	
	Inadequate tension.	
Belts turn over	Broken cord caused by improper installation.	Replace belts and install correctly.
	Impulse loads.	Tension properly.
	Misalignment.	Realign sheaves.
	Worn sheaves.	Replace sheaves.
	Excessive belt vibration.	Check equipment for solid mounting.
Mismatched belts	New belts mixed with old belts.	Replace entire set of belts.
	Sheave grooves worn unevenly.	Replace sheaves.
	Sheave shafts not parallel.	Realign drive correctly.
Belts break frequently	Inadequate belt tension.	Increase tension (Ref. "DRIVE SYSTEM" page 22).
	Heavy starting loads.	Increase tension (Ref. "DRIVE SYSTEM" page 22).
	Belts forced over sheaves by prying.	Replace belt correctly by moving drive (Ref. "DRIVE SYSTEM" page 22).
Belts wear rapidly	Sheave grooves worn.	Replace sheaves.
	Mismatched belts.	Always replace entire belt set. Do not mix old and new belts or different types of belts.
	Misalignment.	Realign drive.
	Belts slip.	Tension properly.
	Abrasive conditions.	Protect drive from dirt.
Sheave has nicks or burrs	Foreign object in drive.	Re-install belt guard Replace belts and sheaves.
Metal flanges between sheaves have knife edges	Belt slip and/or abrasive atmosphere	Replace sheave Protect against abrasives.
Groove sidewalls have lip, ridge or are dished out.	Belt slip and/or abrasive atmosphere.	Replace sheave. Protect against abrasives.