SECTION 6: TROUBLESHOOTING

6.1 GENERAL INFORMATION

This section contains symptoms and usual causes for the most common types of problems that may occur. All available data concerning the trouble should be systematically analyzed before undertaking any repairs or component replacement.

The information contained in the Troubleshooting chart has been compiled from field report data and factory experience. It contains symptoms and usual causes for the described problems. However, **DO NOT** assume that these are the only problems that may occur. All available data concerning the trouble should be systematically analyzed before undertaking any repairs or component replacement procedures.

A visual inspection is worth performing for almost all problems and may avoid unnecessary additional damage to the machine. Always remember to:

- Check for loose wiring.
- Check for damaged piping.
- Check for parts damaged by heat or an electrical short circuit, usually noticeable by discoloration or a burnt odor.

The procedures which can be performed in the least amount of time and with the least amount of removal or disassembly of parts should be performed first.

⚠ WARNING

Before starting, performing maintenance, or replacing parts, relieve the entire system pressure by opening a service valve, which will vent all pressure to the atmosphere.

Although Vanair® strives to anticipate situations that may occur during the operation life of the machine package, the Troubleshooting Guide may not cover all possible situations. Be aware that additional troubleshooting information may be found in other sources. Should the situation remain unresolved after exhausting available sources, contact Vanair® (below):

Vanair® Manufacturing, Inc.
— A Lincoln Electric Company —

10896 West 300 North

Michigan City, IN 46360

Telephone: (800) 526-8817

Service: (844) VAN-SERV

service@vanair.com

sales@vanair.com

vanair.com

NOTE

When contacting the Vanair® Service Department, please have machine serial number on hand to quickly expedite service. Serial number can be located on the serial plate, as shown in *Figure 6-1*.

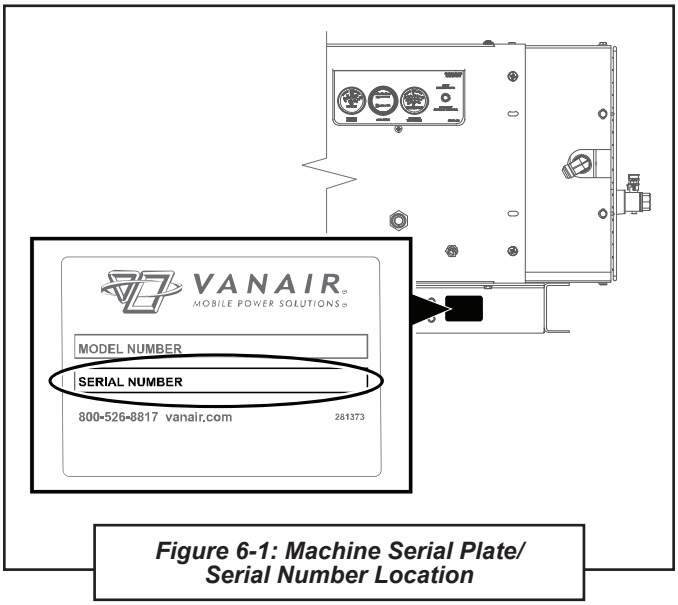

Figure 6-1: Machine Serial Plate/ Serial Number Location

6.2 TROUBLESHOOTING GUIDE

SYMPTOM	PROBABLE CAUSE	REMEDY
COMPRESSOR SHUTS DOWN WITH AIR DEMAND PRESENT	Compressor Discharge Temperature Switch is Open	Cooling air flow is insufficient; clean cooler and check for proper ventilation.
		Low fluid sump level; add fluid.
		Dirty compressor fluid filter; change element.
		Electric fan is not functioning.
		Defective discharge temperature switch; check for a short or open circuit to the engine fuel solenoid. Should this check out normal, it could be possible that the temperature switch itself is defective.
	Circuit Breaker Tripped on Instrument Panel	Reset circuit breaker and check for cause of overload.
	Loss of Hydraulics	Restore hydraulic supply.
COMPRESSOR WILL NOT BUILD UP FULL DISCHARGE PRESSURE	Air Demand is Too Great	Check service lines for leaks or open valves.
	Dirty Air Filter	Check the filter and change element if required.
	Pressure Regulator Out of Adjustment	Adjust regulator according to control adjustment instructions in the Maintenance section.
	Defective Pressure Regulator	Check diaphragm and replace if necessary.
	Incorrect Compressor Speed	Check & adjust to proper speed.
RELIEF VALVE OPENS	Pressure Regulating Valve is Set Too High	Readjust.
	Leak in Control System Causing Loss of Pressure Signal	Check control lines.
	Defective Pressure Regulating Valve	Repair valve.
	Inlet Valve Stuck Open	Free or replace valve.
	Defective Pressure Relief Valve	Replace pressure relief valve.
INSUFFICIENT AIR DELIVERY	Dirty Air Filter	Replace.
	Plugged Air/Fluid Separator	Replace separator element and also change compressor fluid and fluid filter at this time.
	Defective Minimum Pressure Valve	Replace.
	Defective Pressure Regulator	Adjust or repair.
	Check Compressor R.P.M.	Adjust hydraulic flow to unit.
EXCESSIVE COMPRESSOR FLUID CONSUMPTION	Clogged Return Line	Clear orifice.
	Defective Shutdown Blowdown Valve Diaphragm	Replace diaphragm.
	Leak in the Lubrication System	Check all pipes, connections and components.
	Separator Element Damaged or Not Functioning Properly	Change separator element.

Continued on next page

6.2 TROUBLESHOOTING GUIDE

SYMPTOM	PROBABLE CAUSE	REMEDY
EXCESSIVE COMPRESSOR FLUID CONSUMPTION (continued)	Fluid Sump Overfilled	Drain to proper level.
COMPRESSOR OVERHEATING	Dirty Fluid Cooler Core	Clean core thoroughly.
	Plugged Fluid Cooler Tube (Internal)	Clean tube thoroughly.
	Low Sump Fluid Level	Fill.
	Plugged Compressor Fluid Filter	Change element.
	Electric Fan is Not Functioning	Check wires, fan motor, & fan switch for fault & replace faulty part.
	Faulty Thermal Valve	Replace.
	Faulty Fan Motor	Replace.
	Faulty or Incorrectly-Adjusted Flow Control	Re-adjust or replace if necessary.
	Incorrect Compressor / Drive Speeds	Adjust flow.
	Incorrect Fan Motor Speed	Adjust fan motor flow control.

6.3 EXTREME CONDITION OPERATION

Refer to ***Section 4.2.1, High Moisture Condition: Emulsification of Oil in Rotary Screw Compressor Systems*** for steps to take to prevent moisture build-up within the compressor unit during operation.