

## **TROUBLESHOOTING**

This section contains instructions for troubleshooting the equipment following a malfunction. The troubleshooting procedures are to be performed on the equipment are listed below. Each symptom of trouble for a component or system is followed by a list of probable causes of the trouble and suggested procedures to be followed to identify the cause.

In general the procedures listed below should be performed in the order in which they are listed, although the order may be varied if the need is indicated by conditions under which the trouble occurred. In any event, 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.

### **TRUCK ENGINE WILL NOT START**

Most problems in this area will not be connected with the compressor, and should therefore be checked out with the engine manual.

Manual transmissions require our safety shutdown switch to shut off the engine in cases of high temperature or pressure. If this occurs the truck can be restarted by pushing in the reset button on the shutdown switch. In most cases this shutdown switch is located in the 1.5" discharge line between the compressor and the receiver tank. If the compressor hi-temperature gauge on the pressure switchgauge has shut off the engine, the compressor truck should be taken in for service/troubleshooting.

Trucks that have automatic transmissions that use hot shift PTO's should be wired so the PTO disengages in the event of a safety shutdown instead of shutting off the truck engine.

### **UNPLANNED SHUTDOWN**

When the operation of the machine has been interrupted by an unexplained shutdown, check the following:

1. Check the fuel level and truck dash gauges and indications for possible engine problems.
2. Check the compressor discharge temperature/pressure shutdown switch; it is normally closed. If it is popped out, it has opened the circuit and will need to be reset. Push the button to reset it. You will then hear the button click if it was tripped by the switchgauges.
3. Check that the compressor oil is at proper level.
4. Check oil cooler for dirt, slush, ice on the fins, or any other obstructions to the cooling air flow.
5. Make a thorough external check for any cause of shutdown such as a broken hose, broken oil lines, loose or broken wire, etc.

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## **IMPROPER DISCHARGE PRESSURE**

If discharge pressure is too low, check the following:

1. Too much air demand. (Air tools require more air than what the compressor can produce, air tools are free wheeling without resistance.)
2. Service valve wide open to atmosphere.
3. Leaks in service line.
4. Restricted compressor inlet air filter.
5. Faulty control system operation (i.e. regulator is sending a signal to close inlet valve at all times.)

If discharge pressure is too high, safety valve blows, or system shuts down on high pressure, check the following:

1. Faulty discharge pressure switch.
2. Coalescer plugged up.
3. Faulty safety valve.
4. Faulty regulator (regulator air pressure signal is not getting to inlet valve.)

High pressure shutdown at compressor idle:

1. Inlet valve leaking or open.
2. Faulty regulator.

## **BLOWDOWN VALVE**

If after the compressor is shutdown, pressure does not automatically blow down, check for:

1. Automatic blow down valve may be inoperative at coalescer head.
2. Blockage in air line from side of inlet valve to blow down valve.
3. Muffler at blow down clogged.

## **OIL CONSUMPTION**

Abnormal oil consumption or oil in service line, check the following:

1. Over filling of oil sump.
2. Leaking oil lines or oil cooler.
3. Plugged oil return line: check entire line, to the compressor.
4. Defective coalescer element.
5. Compressor shaft seal leakage.
6. Discharge pressure below 65 PSI or above 175 PSI.

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## **ENGINE LUGGING**

If engine does not accelerate or will not maintain full load speed, check the following:

1. Engine problem (refer to engine manual.)
2. Compressor discharge pressure too high.
3. Improper compressor speed. (Compressor running at truck idle.)
4. Operating above maximum altitude rating of compressor and truck.

## **COALESCER PLUGGING**

If the coalescer element has to be replaced frequently because it is plugging up, it is an indication that foreign material may be entering the compressor inlet or the compressor oil is breaking down.

Compressor oil can break down prematurely for a number of reasons.

1. Extreme operation temperature.
2. Negligence in draining condensate from oil sump.
3. Using the improper type of oil.
4. Dirty oil.
5. Oil return line plugged.

The complete air inlet system should be checked for leaks.

## **HIGH COMPRESSOR DISCHARGE TEMPERATURE**

1. Check compressor oil level. Add oil if required (see section for oil specifications.)
2. Check thermal valve operation. (Front mounting coolers only.)
3. Clean outside of oil cooler.
4. Clean oil system (cooler) internally.
5. Check fan switch/relay harness.