

Problem Solving

Problem Solving Chart

Use the chart on the following pages to help solve mechanical problems.

It is assumed that the engine is in good condition, that there is adequate fuel flow to the filter and injection equipment, and compressor/engine maintained with the recommended oil.



An electrical fault must be traced by an electrician.

Make sure that the wires are not damaged and that they are clamped tight to their terminals.

Alternator Precautions

1. Never reverse the polarity of the battery or the alternator.
2. Never break any alternator or battery connections while the engine is running.

3. When recharging the battery, disconnect it from the alternator. Before using booster cables to start the engine, be sure of the polarity and connect the batteries positive to positive, negative to negative.
4. Never operate the engine without the main or voltage sensing cables connected in the circuit.

Problem: Compressor capacity or pressure below normal.

| Possible faults | Corrective actions |
|---|---|
| Air consumption exceeds capacity of compressor. | Check equipment connected. |
| Choked air filter elements (AF). | Remove and inspect elements. Clean or replace, if necessary. |
| Regulating valve (RV) defective. | Have regulating valve removed and inspected by an Atlas copco Service representative. |
| Blow down valve stuck in open position. | Check and correct as necessary. |
| Loading valve (LV) leaking past O-ring. | With compressor running at max. load speed, disconnect hose leading to unloader. If air leaks from the hose, remove and inspect loading valve. Replace damaged or worn O-rings. |
| Oil separator element clogged. | Have element removed and inspected by an Atlas copco Service representative. |
| Air intake throttle valve remains partially closed. | Check unloader and identify reason for open valve; if possible: solve; else: contact Atlas copco. |
| Safety valve (SV) leaking. | Remove and inspect. Replace if not airtight after reinstallation. |
| Blow-off valve leaking. | Remove and inspect. Replace if necessary. |

Problem: Pressure in air receiver rises above maximum and causes safety valve to blow.

| Possible faults | Corrective actions |
|--|---|
| Regulating valve (RV) opens too late or its ball valve spring is broken. | Have regulating valve removed and inspected by an Atlas copco Service representative. |
| Air leaks in regulating system. | Check hoses and their fittings. Stop leaks; replace leaking hoses. |
| Air intake throttle valve does not close for some reason. | Check unloader and identify reason for open valve; if possible: solve; else: contact Atlas copco. |
| Minimum pressure valve malfunctioning. | Remove and inspect valve. |
| Blow-off valve malfunctioning. | Remove and inspect valve. |

Problem: After working some time, the unit stops through a shutdown switch.

| Possible faults | Corrective actions |
|---------------------------------------|--|
| Engine oil pressure too low. | Refer to the engine instruction manual. |
| Compressor or engine overheating. | See corrective actions “Compressor overheating”. |
| Fuel tank contains insufficient fuel. | Fill fuel tank. |
| Low coolant level. | Top up cooling system. |

Problem: Air and oil mist expelles from air filters immediately after stopping.

| Possible faults | Corrective actions |
|--------------------------------|--|
| Check valve at element outlet. | Remove and inspect. Replace if necessary. Replace air filter elements and safety cartridges. Check the oil level and add oil if necessary. Run the compressor for a few minutes, stop and recheck oil level. |

Problem: Compressor overheating.

| Possible faults | Corrective actions |
|--|--|
| Insufficient compressor cooling. | Locate compressor away from walls; when banked with other compressors, leave space between them. |
| Oil cooler clogged externally. | Clean oil cooler. Refer to section Cleaning Coolers. |
| Oil cooler clogged internally. | Consult Atlas copco. |
| Oil filters clogged. | Replace oil filters. |
| Oil level too low. | Check oil level. Top up with recommended oil if necessary. |
| Thermostatic by-pass valve remains stuck in open position. | Remove valve and check for proper opening and closing. Replace if out of order. |
| Fan blade(s) broken. | Check and correct if necessary. |
| Oil separator element (OS) clogged. | Have element removed and inspected by an Atlas copco Service representative. |

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3. When recharging the battery, disconnect it from the alternator. Before using booster cables to start the engine, be sure of the polarity and connect the batteries correctly.
4. Never operate the engine without the main or voltage sensing cables connected in the circuit.