**Troubleshooting guide for common faults of air compressor**



The following provides a general list of common air compressor problems and some quick repair methods that may help solve the problem. Some products are mentioned below. Remember to check your user manual to ensure that you have purchased the correct parts.

| **Problem** | **Cause** | **Solution** |
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| Compressor will not operate. | 1. No electrical power. | Turn on power.  Push the reset button. |
|  | 2. Low oil level. | Check oil level. Replace your oil if necessary |
|  | 3. Pressure switch not making contact. | See pressure switch adjustment. |
|  | 4. Pressure in the tank is below the cut-in pressure. | See pressure switch adjustment.  Replace pressure switch to one that has a lower cut-in PSI |
| Excessive noise in operation. | 1. Loose pulley， flywheel， belt， belt guard， cooler， clamps or accessories. | Tighten any loose ends. |
|  | 2. Lack of oil in crankcase. | Check for possible damage to bearings  Replenish the oil level. |
|  | 3. Piston hitting the valve plate. | Remove the compressor cylinder head and inspect for foreign matter on top of the piston. Add a new gasket and reassemble the head. |
|  | 4. Compressor floor mounting loose. | Tighten the bolts on the air compressor. It may also be a good idea to replace your vibration pads |
|  | 5. Defective crankcase. | Repair or replace. |
|  | 6. Excessive crank end play. | Adjust and shim properly. |
| Knock - same cycle as R.P.M. | 1. Main bearings. | Replace bearings. |
|  | 2. Connecting rod bearings. | Replace rod. |
|  | 3. Loose flywheel. | Tighten. |
| Knock occurs while compressor is loading. | 1. Connecting rod bearings. | Replace rod. |
|  | 2. Wrist pins， wrist pin bearings. | Replace piston assembly. |
|  | 3. Loose connecting rod nut. | Tighten. |
| Milky oil in oil reservoir. | 1. Water entering oil reservoir due to compressor operating in high humidity environment. | a. Pipe air intake to less humid air source. |
|  |  | b. Service unit (change oil， clean or replace air cleaner element， more often， at least every 45 days or 500 operating hours for oil changes. |
|  |  | c. Drain tank daily. |
| Excessive oil consumption. | 1. Restricted air intake. | Clean or replace air filter. |
|  | 2. Oil leaks. | Tighten bolts or replace gasket. |
|  | 3. Worn piston rings. | Replace rings. |
|  | 4. Wrong oil viscosity. | Drain oil， refill with oil of proper viscosity. |
|  | 5. Compressor tilted too much. | Level compressor. Vibration pads may help with this |
|  | 6. Scored cylinder. | Replace cylinder. |
| Oil in discharge air. | 1. Compressor air intake restricted. | Clean or replace your air filters. |
|  | 2. Worn piston rings. | Replace rings. |
|  | 3. Excessive oil in compressor. | Drain down to full mark on sight gauge. |
|  | 4. Wrong oil viscosity. | Check viscosity. |
|  | 5. Piston rings installed up-side down. | Replace crankshaft. |
| Compressor vibrates. | 1. Mounting bolts loose. | Tighten. |
|  | 2. Compressor not properly mounted. | Level compressor so that all feet touch the floor before tightening down. |
|  | 3. Pulley and flywheel misaligned. | Realign. |
|  | 4. Belts loose. | Tighten belts. |
|  | 5. Bent crankshaft. | Replace crankshaft. |
| Air blowing out of inlet. | 1. Broken first stage inlet valve. | Replace valve plate assembly. |
| Insufficient pressure at point of use. | 1. Leaks or restriction. | Check for leaks or restriction in hose or piping. Repair. |
|  | 2. Restricted air intake. | Clean or replace air filter element. |
|  | 3. Slipping belts. | Tighten belts. |
|  | 4. Service hose too small. | Replace with larger hose. |
|  | 5. Excessive air requirement. | Limit air usage to compressor capacity by using fewer or smaller tools. |
| Receiver does not hold pressure when compressor is unloaded. | 1. Faulty check valve. | Bleed tank! Disassemble check valve assembly， clean or replace faulty parts. |
| Excessive belt wear. | 1. Pulley out of alignment. | Realign motor pulley with compressor flywheel. |
|  | 2. Belts too tight. | Adjust tension. |
|  | 3. Belts too loose. | Adjust tension. |
|  | 4. Pulley or flywheel wobble. | Check for worn worn crankshaft， keyway or pulley bore， resulting from running with loose pulleys. Check for bent crankshaft. |
|  | 5. Nick in belt groove of pulley or flywheel. | File smooth. |
| Excessive discharge air temperature. | 1. Dirty cooling surfaces. | Clean cooling surfaces of cylinder， intercooler and discharge tube. |
|  | 2. Poor ventilation. | Improve ventilation or relocate compressor. |
|  | 3. Blown head gasket. | Replace head gasket. |
|  | 4. Restricted air intake. | Clean or replace air filter element. |
|  | 5. Worn valves. | Replace valve plate assembly. |
| Air leaking from inter stage safety relief valve when compressor is pumping. | 1. Safety relief valve not functioning properly. | Remove and install new safety relief valve. If new safety valve leaks remove cylinder head， inspect and clean  reed valve  assembly. |
|  | 2. Leaky gasket - High pressure inlet valve. | Replace gasket. |
| Receiver pressure builds up slowly. | 1. Dirty air filter. | Clean or replace filter element. |
|  | 2. Blown cylinder head gasket. | Install new gasket. |
|  | 3. Worn or broken low pressure intake or discharge valves. | Install new valve plate. |
|  | 4. Air leaks. | Tighten joints. |
|  | 5. Loose belts. | Tighten or replace belts. |
|  | 6. Speed too slow. | Check speed. |
| Receiver pressure builds up quickly on compressor. | 1. Excessive water in receiver. | Drain receiver/tank. |
|  | 2. Speed too fast. | Check speed. |
| Reset mechanism cuts out repeatedly; fuses of proper size blow. | 1. Motor overload. | Shut down immediately to avoid damage. |
|  | 2. Malfunction or improperly adjusted. | Adjust or replace. |
|  | 3. High ambient temperature. | Provide ventilation. |
| Fuses blow repeatedly. | 1. Wrong fuse size. | Check to make sure that fuses are of proper ampere rating. |
| Compressor will not operate. | 1. No electrical power. | Turn on power， check fuse， breaker， or motor overload. |
|  | 2. Pressure switch not making contact. | Replace or repair. |
|  | 3. Defective unloader or check valve. | Replace or repair. |
| Excessive noise in operation. | 1. Loose pulley， flywheel belt， belt guard， clamps or accessories. | Tighten. |
|  | 2. Lack of oil in crankcase. | Check for possible damage to bearings， replenish oil. |
|  | 3. Piston hitting the valve plate. | Remove the compressor cylinder head and inspect for foreign matter on top of the piston， clean， add a new gasket， and reassemble the head. |
|  | 4. Compressor floor mounting loose. | Tighten. |
|  | 5. Defective crankcase. | Repair |
| Knock-same cycle as RPM. | 1. Main bearings. | Replace bearings. |
|  | 2. Connecting rod bearings. | Replace rod. |
|  | 3. Loose flywheel. | Tighten. |
| Knock occurs while compressor is loading. | 1. Connecting rod bearings. | Replace rod. |
|  | 2. Wrist pins， wrist pin bearings. | Replace complete piston assembly. |
|  | 3. Loose connecting rod bolt. | Tighten bolt. |
|  | 4. Loose flywheel. | Tighten setscrew. |
| Milky oil in crankcase. | 1. Water entering oil reservoir due to compressor operating in high humidity environment. | Pipe air intake to less humid air source. |
| Excessive oil consumption. | 1. Restricted air intake. | Clean or replace air filter. |
|  | 2. Oil leaks. | Tighten bolts or replace gasket. |
|  | 3. Worn piston rings. | Replace rings. |
|  | 4. Wrong oil viscosity. | Drain oil， refill with oil of proper viscosity. |
|  | 5. Compressor tilted too much. | Level compressor. |
|  | 6. Scored cylinder. | Replace cylinder. |
| Oil in discharge air. | 1. Compressor air intake restricted. | Clean air filter element and check for other restrictions in the intake system. |
|  | 2. Worn piston rings. | Replace rings. |
|  | 3. Excessive oil in compressor. | Drain down to bottom of threads. |
|  | 4. Wrong oil viscosity. | Check viscosity and change oil if necessary |
|  | 5. Piston rings installed up-side down. | Install rings in proper position. |
|  | 6. Plugged crankcase breather. | Clean or replace. |
| Compressor vibrates. | 1. Mounting bolts loose. | Tighten. Consider installing vibration pads. |
| Receiver does not hold pressure when compressor shuts off | 1. Faulty check valve. | Bleed tank! Disassemble check valve assembly， clean or replace faulty parts. |
| Excessive belt wear. | 1. Pulley out of alignment. | Realign motor pulley with compressor flywheel. |
|  | 2. Belts too tight. | Adjust tension. |
|  | 3. Belts too loose. | Adjust tension. |
|  | 4. Pulley or flywheel wobble. | Check for worn crankshaft， keyway or pulley bore， resulting from running with loose pulleys. Check for bent crankshaft - if bent then replace. |
|  | 5. Nick in belt groove of pulley or flywheel. | File smooth. |
| Excessive discharge air temperature. | 1. Dirty cooling surfaces. | Clean cooling surfaces of cylinder， intercooler and discharge tube. |
|  | 2. Poor ventilation. | Improve ventilation or relocate compressor. |
|  | 3. Blown head gasket. | Replace head gasket. |
|  | 4. Worn valve. | Repair or replace valves. |
| Receiver pressure builds up slowly. | 1. Dirty air filter. | Clean or replace filter element. |
|  | 2. Blown cylinder head gasket. | Install new gasket. |
|  | 3. Worn or broken low pressure intake or discharge valves. | Install new flapper valves and gaskets. |
|  | 4. Air leaks. | Tighten joints. |
|  | 5. Loose belts. | Tighten belt or replace belt. |
|  | 6. Speed too slow. | Check pulley size and belt tension. |
| Receiver pressure builds up rapidly. | 1. Excessive water in receiver. | Drain receiver/tank. |
| Reset mechanism cuts out repeatedly. | 1. Motor overload. | Shut down immediately to avoid damage. |
|  | 2. Malfunction or improperly adjusted. | Adjust or replace. |
|  | 3. High ambient temperature. | Provide ventilation. |
| Fuses blow repeatedly. | 1. Wrong fuse size. | Check to make sure that fuses are of proper ampere rating. |
|  | 2. Low voltage. |  |
|  | 3. Defective unloader or check valve. | Replace or repair. |
|  | 4. Belt to tight. | Loosen belt. |
| Compressor suddenly stops working | 1. Bad unloader valve | Replace the unloader valve. |
|  | 2. Loss of power | Plug compressor into a new power source |
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