

Motor Problems

Check valve problem

1. If motor works fine and powers compressor pump until cut-out pressure, but when the compressor cuts back on and tries to recharge the tank, it is unable to start and stalls. (kicks the circuit breaker)
2. Good indication that you have a defective check valve. Go to check valve test.

Capacitor Problem

1. Remove capacitor covers. These are the “humps” on the back of the motor.
2. Do they look overheated? Use a capacitor tester or if not available, test continuity across the leads of the capacitor.

Starter Switch Problem

1. If your motor begins to start your compressor, but slows down, stalls and then kicks the circuit breaker, you could have bad starter points. Try the following:
2. Remove the end of the motor that has the wires entering it. This should be held on with 4 long bolts and nuts that run the length of the motor. Use a screwdriver and small hammer to gently remove the end cover.
3. Under the cover, you will see a white plate that has the wire terminals. You should also see a round brown disc. Extending from the round disc you should see a long slender piece of copper or other material, the size of a wooden coffee stirring stick. At the end of this stick are electrical contact points. These points should be “closed”. Sometimes corrosion will build up on them. Take an emery file and file between the contact points to clean them. When the motor builds up speed, the small weights on the springs swing out and separate the points. This opens the circuit between the starter capacitor and the motor. One of the round hump capacitors helps to start the motor and when the motor reaches high enough speed the weights and springs open the points and the starter capacitor then stops sending a charge to the motor. At this point, the other capacitor, the run capacitor continues to keep the motor running. If there is corrosion on the points, the starter capacitor never kicks in and helps the motor to start.

Belts

4. 90% of the time, low RPM is caused by OLD hard belts. Change the Belt(s). Tension should be about one half inch (1/2") deflection or give at a point halfway between pulleys when pressed with your thumb. Do not over tighten belt, it will break the crankshaft or burn up a bearing. Compressors do NOT squeal when the belts slip. It sounds like the motor is slowing down but what is really happening is the belt is slipping.

Motor HP

5. Make sure you have the right motor pulling the Pump. If you have a 230 V motor converted to 120, you may have lost some pulling power. If it is the wrong motor not matching the correct motor pulley you may be overloading the motor. You may have an under-powered motor, or the motor is too small. Look at the amp rating on the motor plate and put an amp probe on the motor if and when it starts bogging down. The unit could be starved for power, have a weak ground, have low voltage, a poor connection or burnt contacts on starter or pressure switch

etc...Amp probe will most likely show over-amping. You could also have under size wire from panel or too long of a run on wire itself from panel. If you don't have an amp probe it's recommended to take the motor in to a local repair shop or have an electrician come to your house for further diagnosis.