## **Important information!**

## Power, power, power...

If the compressors stops and the yellow LED next to the on-off switch comes on, it is telling you the **compressor is not getting enough power!** It is not defective – the circuitry is doing what it is supposed to do: that is to turn the motor off before power gets so low the motor stalls. Because if it stalls, it burns up.

This is a high performance, high power device. You can not get healthy performance out of this compressor without making sure a healthy amount of power gets all the way to the motor. It is not enough to have a battery that measures 13.8 V to 14.2 V while being charged. If you are not making the measurement while the compressor is running, it is completely meaningless. A weak battery can easily measure 14 volts while being charged by either a charger or an alternator while your engine is running, and not have enough power to drive a compressor. As a battery weakens whether due to age or deep cycling (being allowed to discharge abnormally low) it's internal resistance increases. This resistance can't be measured directly, but can be calculated and it's effects observed UNDER LOAD. Under load performance (compressor running) is the key.

Furthermore, even if your battery is good under load (a good battery under a 50 amp charge will measure around 12.0 to 12.5 volts when this compressor is running) that in no way guarantees full power is making the trip from battery to compressor motor. Under the best of circumstances, the motor typically gets only about 10.5 volts (measured at the stud terminals under the black boots on the motor). Where did the other two volts go? It is lost as heat in the wires and connections between the battery and the motor.

Every connection and every foot of wire robs the motor of more power. That is why it is vitally important to make sure your vehicle's electrical system AND your installation are in top notch condition, or you will get nothing but frustration. Make life easy for yourself – install a new deep cycle auxiliary battery as close to the compressor as possible, and cut our 10 foot power cables down as much as possible. Be sure to use new, heavy duty ring terminals and INSTALL THEM CORRECTLY. Wire these power cables straight to the battery terminals. Do not ground through chassis. Wire auxiliary battery to alternator with heavy gauge wire, preferably through a low loss isolator.

## The most common causes of low power condition:

A weak battery: either an old one, or a "new" battery that is not a <u>deep cycle battery</u>, but has been deep discharged a couple times.

Compressor mounted too far away from battery: it is a bad idea to go longer than the 10 feet of power cable we provide. It is asking for trouble.

Loose connections

Bad ground on either main power cable or control wire.

Too many connections. You do not need to control our compressor with an external solenoid!!! We have the solenoid built in. Use the control wire. Look at the wiring diagram in the owner's manual.

Also note: You do not need to disassemble unit to get the on-off switch out so it can be used as a dash mounted switch. Simply wire another switch in series with the pressure switch on the control wire (see owner's manual wiring diagram) and leave the compressor switch "on". Disassembly and/or modification voids warranty!

Please call us with your questions, but PLEASE pay attention to this information first.