



# Air Compressor Owner's Manual

## **Warning!!!**

**Warranty is void if unit is disassembled or operated without proper lubrication!**

Please note: Motor brushes and oil are consumable items - oil must be added periodically, and brushes must be replaced periodically.

Read these instructions carefully before installing or using this product. Failure to follow instructions may result in personal injury, death and/or property damage and may void warranty! Save these instructions for future reference.

## SAFETY INFORMATION

### WARNING!!!

You are completely responsible for your own safety and the safety of those with you. Oasis Mfg. will not be responsible and will not assume any liability for indirect, incidental, or consequential loss, damage, injury, expense or inconvenience to property or persons as a result of use or misuse of this product.

Compressor and motor surfaces become extremely hot during use! To avoid serious burns, do not touch any part of this equipment, except for the on/off switch, with bare hands during or for up to 30 minutes immediately following operation

1. Only persons who have read and understand these instructions should be allowed to use this compressor.
2. The air produced by this compressor is not fit for human or animal consumption and it must not be used to provide a breathing air supply.
3. Do not operate compressor with any damaged hose(s) or after the compressor or attachments have been dropped or damaged.
4. Never use while sleepy or drowsy.
5. Do not use near flames.
6. Do not pump anything but air.
7. Never point any air nozzle at any person or animal. Serious injury may result.
8. Do not leave unattended during use.
9. Do not attempt to reach for this equipment if it has fallen into water or any other liquid.
10. Under no circumstances ever rely on a safety valve to protect this compressor in place of a pressure switch.
11. Always use open fittings (male plugs) to terminate air lines coming from compressor and an open tire chuck to terminate the air hose unless a pressure switch is installed. An open tire chuck allows air to flow at all times, even when it is not connected to a tire. If air lines are not free to flow and a pressure switch is not used, excess pressure will build rapidly and either stall the compressor motor, which creates a fire hazard, or a line or hose will burst, which may cause serious bodily injury.
12. Overheating, short circuiting and fire damage will result from inadequate wiring.
13. If the equipment starts to vibrate abnormally, slows down or stalls, STOP the motor immediately.
14. Never operate near a flammable gas or liquid. Never store flammable liquids or gasses in the vicinity of the compressor.
15. Keep this equipment's exterior clean and free of oil, solvent and grease to reduce fire hazard.
16. Disconnect power and release all pressure from the system before attempting to install or perform maintenance to the system (tank, air lines, etc.).
17. Be sure any tools or attachments are compatible with the pressure and flow rate of this equipment.
18. Check all fasteners and electrical connections at frequent intervals for proper tightness and cleanliness.
19. Do not attempt to disassemble, modify or repair this equipment.

# INSTALLATION

Mounting location should be:

Vertical – The intake and output fittings must be located on top of the compressor for proper lubrication.

Dry – Avoid mounting in a location that may become submerged if possible. **The air intake filter must be mounted in a dry location.** Use a section of 5/8" heater hose to remotely mount it if necessary. If unit is submerged, allow motor to drain thoroughly before use!

Cool and well ventilated – This will allow the compressor to run for longer periods.

Away from combustible/meltable materials – Compressor gets extremely hot during operation.

Level – Compressor must be as level as possible during operation for proper lubrication.

Close to battery – The shorter the power cables are, the better your performance will be. New ring terminals and heat shrink are available from the manufacturer if you wish to shorten the power cables. Mounting an isolated auxiliary battery next to the compressor and cutting the cables down to minimum length will provide maximum performance. **Use a deep cycle battery.** If you must mount the compressor farther away than the 10' power cables will allow, use #0AWG wire for runs up to 20' instead of #4AWG cable provided.

Be sure charging system is in top condition, and optimized to deliver maximum charge current to battery. Some applications may require an upgrade to the charging system and/or multiple batteries.

**Caution: Do not change power cables to a smaller wire size. Extreme fire danger will result!**

## Parts list

This package should contain one each of the following:

Compressor, air filter,

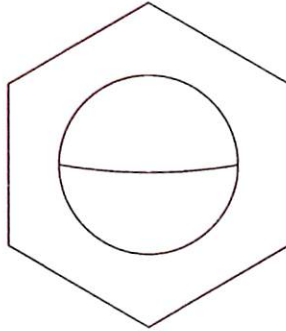
and four each of the following:

3/8" studs, nuts, flat washers and lock washers.

1. Temporarily position the compressor in the mounting location to ensure fit and adequate clearance. Be sure location is sturdy enough to support compressor properly.
2. Using the template, drill four 7/16" diameter holes.
3. Mount compressor using the four 3/8" studs on the bottom of the compressor, and secure with nuts and lock washers.
4. Be sure compressor on/off switch is "**off**". Attach black wire to negative terminal of battery and then the red wire to positive terminal of battery. Control wire must eventually go to ground (see wiring diagram).
5. Be sure all electrical connections are clean and secure. Loose or dirty connections will result in poor performance.
6. Install air filter or fitting for a filtered intake line into the suction port. **Do not use Teflon tape! Pieces of tape can get sucked into the compressor valves.**



- Compressor is shipped with oil. Check oil sight glass after compressor has been sitting level for at least one hour. Hold a carpenter's level next to the unit if necessary to ensure it is level. If no oil is visible in window, remove the oil plug from the side of compressor (the suction side). This will relieve the crankcase and allow oil in the overflow reservoir to drain back into the crankcase. If oil level is not visible within a few minutes, add oil until it is visible in window. Use a full synthetic 30 weight (ISO 100) air compressor oil.



Oil Sight Glass showing proper oil level

- Install air hose, quick disconnect plug, or air line fitting to a tank into discharge port. Read items #10 & 11 under SAFETY INFORMATION! **Warning: Do not tighten fitting to more than 20 ft/lbs (finger tight plus no more than one full turn). Doing so may crack the head!** We recommend the use of Loctite #567 high temp pipe sealant.
- If you use a closed tire chuck, air tools or a tank, you must install a pressure switch that will shut the compressor off at 200psi or less. A pressure switch automatically turns the motor off when the tank or line pressure reaches a preset high level, and back on again when pressure drops to a preset low level. To wire a pressure switch to the compressor, disconnect the .250" electrical quick connector located under the power cables on top of the motor and connect the leads from the pressure switch to this point.

We recommend the use of an unloader valve if the compressor will be operated at pressures of 150 psi or greater. Unloader valves are available from the manufacturer.

For installations involving tanks, some applications may require the use of a one way check valve at the output of the compressor to prevent air flow back into the compressor, and an air line filter at the output of the tank to separate oil mist and moisture out of the air line. The filter must be rated at least 175 deg. and be located at least 3' away from the compressor due to the high temperatures at the compressor. Both items are available from the manufacturer.

**If you are unsure about any part of installation or operation, contact the manufacturer for clarification.**

## OPERATING INSTRUCTIONS

Turning the on/off switch to the "on" position will start the compressor. It may now be used to inflate tires, operate air tools, etc.

Occasionally small amounts of smoke can be seen coming from the unit as it warms up. This is normal.

Since this is an oil bath type compressor, some oil discharge is normal. If an application requires oil free air delivery, a coalescing air line filter may be required. Filters are available from the manufacturer.

This equipment draws large amounts of current during operation. We recommend your vehicle engine be left running to prevent excessive discharge of your battery, and to maximize compressor performance. Some applications may require the use of a throttle positioning device to maintain engine RPM at a point where the alternator delivers maximum output.

This unit is equipped with a low voltage cut off circuit. If the power supply voltage drops to dangerously low this circuit will stop the motor, and either the lamp in the manual on-off switch will start blinking or LED next to the switch (if so equipped) will light, indicating a low power condition. The circuit will latch in this mode until it is manually reset. To reset the circuit, turn the manual on-off switch to the off position, then back to the on position. This circuit is designed to protect the compressor motor from damage due to stalling. **It is not designed to protect a battery!**

Use heat resistant hose if connected directly to compressor. Attach a quick disconnect male plug to compressor, female quick disconnect coupler to hose and use an open tire chuck to prevent damage from excessive pressure if no pressure switch is used. Use gloves to disconnect hose after use.

Factors that affect tire inflation times: Battery and connection condition, tire size, valve stem flow rate, temperature and altitude.

## MAINTENANCE

Check oil level after every 50 hours of operation. If no oil is visible in window, remove the oil plug from the side of compressor (the suction side) and add oil until visible in window. Use a full synthetic 30 weight (ISO 100) air compressor oil.

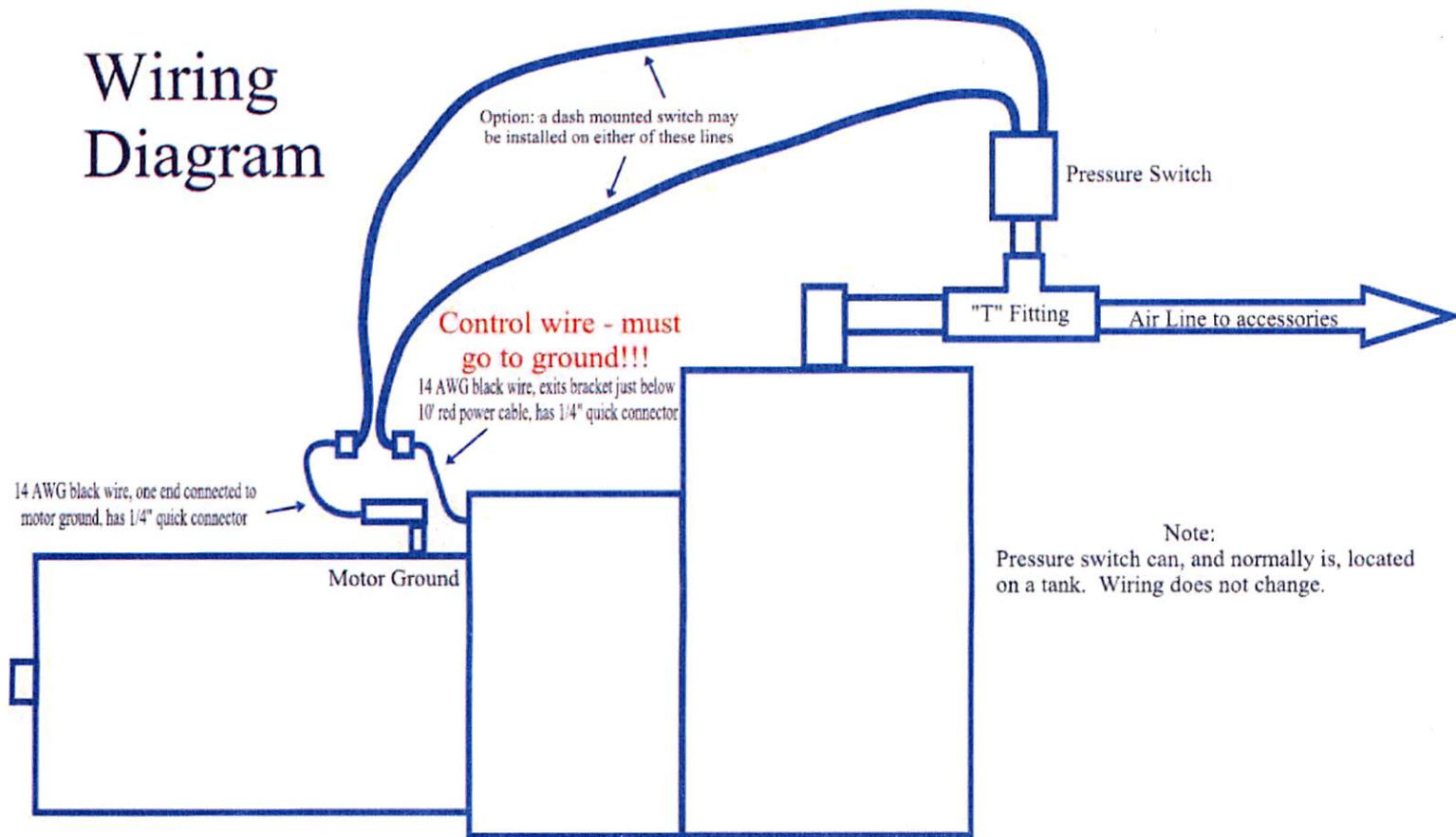
Change air filter element annually. Elements are available from the manufacturer.

All repairs should be performed by the manufacturer. Any attempt to disassemble or repair the unit may void warranty.

# TROUBLESHOOTING CHART

Symptom	Possible Cause	Corrective Action
Low discharge pressure	Air leaks	Tighten or replace any leaking fittings or connections.
	Restricted air intake	Replace air filter element
	Compressor defective or worn.	Contact manufacturer
Unit runs slowly and/or low power indicator lights  Note: Units fitted with a pressure switch will shut off automatically when pressure builds and restart automatically as pressure drops	Battery voltage low	Check battery, alternator and regulator condition, repair if necessary.
	Dirty or loose connection	Check all electrical connections, clean and tighten if necessary.
	Low oil level	Check oil level. Fill if necessary.
	Compressor damaged or worn	Contact manufacturer.
	Defective check valve	Replace
	Defective pressure switch	Replace
	Misadjusted pressure switch	Readjust
Excessive noise	Loose hardware	Tighten hardware
	Low oil level	Check oil level. Fill if necessary.
	Compressor damaged or worn	Contact manufacturer
Oil in the discharge air	A small amount is normal, especially at initial start up.	Install an air line filter/separator.
	Restricted air intake	Replace air filter element.
	Excessive oil level	Drain oil to proper level.
	Wrong type of oil	Use Oasis Compressor Oil
	Compressor damaged or worn	Contact manufacturer

# Wiring Diagram



## OPTIONAL ACCESSORIES

Oil  
Air Tank  
Pressure Switch  
Check Valve  
Air Line Filter/Regulator  
Tubing  
Fittings  
Couplers  
Inflators  
Accessory Packages

### LIMITED WARRANTY:

This product is warranted against defects in workmanship or materials for the period of one year from the date of purchase by the original owner.

#### What is not covered under this Warranty:

1. Fitness for a particular purpose, including but not limited to the following examples: exposure to corrosive environments (such as saltwater, road de-icing chemicals, etc.), or extreme temperatures, or for use as an airlift water pump or pond aeration.
2. Any indirect, incidental or consequential loss, damage or expense that may result from any defect, failure or malfunction of this product.
3. Any failure that results from accident, abuse, corrosion, neglect, lack of maintenance, attempts to disassemble or repair, or failure to operate in accordance with instructions.
4. Items or service normally required to maintain the product: i.e. lubricants and filters.

**Warning: Warranty is void if unit is disassembled or operated without proper lubrication!**

Oasis Mfg. will replace or repair at its option, products or components which have failed during the warranty period.

Purchaser shall contact Oasis Mfg. before sending any product back for warranty service for instructions. KEEP YOUR ORIGINAL RECEIPT!

Purchaser is responsible to deliver product to Oasis Mfg. at purchaser's own expense, via traceable carrier, package insured.

This Limited Warranty gives you specific legal rights and you may also have other rights that vary from state to state.

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# Important information!

## Power, power, power...

If the compressor stops and the light in the On-Off switch starts blinking, or the yellow LED next to the 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 deep cycle battery, 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.**