VIAIR®
Your Vital Air Source

200 PSI HIGH-FLOW AIR SOURCE KIT

50% Duty Compressor on 2.0 Gallon Air Tank

PART NO. 20008

IMPORTANT:
It is essential that you and any other operator of this product read and understand the contents of this manual before installing and using this product.

SAVE THIS MANUAL FOR FUTURE REFERENCE

USER MANUAL

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200 PSI HIGH-FLOW AIR SOURCE KIT

IMPORTANT SAFETY INSTRUCTIONS:

CAUTION: To reduce risk of electrical shock or electrocution:

- Do not disassemble. Do not attempt repairs or modifications. Refer to qualified service agencies for all service and repairs.
- Do not use this product in or area where it can fall or be pulled into water or other liquids.
- Do not reach for this product if it has fallen into liquid.
- Use this compressor with 12-volt DC systems only.
- This product should never be left unattended during use.

WARNING: To prevent injuries:

- Never allow children to operate this compressor. Close supervision is necessary when this compressor is being used near children.
- This compressor will become very hot during and immediately after use. Do not touch any part of this compressor with bare hands other than the ON/OFF switch during and immediately after use.
- Do not use this product near flames or explosive materials or where aerosol products are being used.
- Do not operate this product where oxygen is being administered.
- Do not pump anything other than atmospheric air.
- Never use this product while sleepy or drowsy.
- Do not use any tools or attachments without first determining maximum air pressure for that tool or attachment.
- Never point any air nozzle or air sprayer toward another person or any part of the body.
- This air compressor is equipped with an Automatic Reset Thermal Protector, and can automatically restart after the thermal protector resets. Always cut off power source when thermal protector becomes activated.
- Wear safety glasses or goggles when operating this product.
- Use only in well ventilated areas.

INSTALLATION:

Please read and follow the Installation Instructions carefully to avoid injury or damage to the compressor or your vehicle.

Selecting a Mounting Location:
The selection of a proper mounting location for your air source kit will help ensure a long and trouble free service life. Please pay close attention to the following guidelines:

1. Select a FLAT, UPRIGHT AND SECURE location where the air source kit can be mounted.

2. To maximize air compressor performance, locate compressor as CLOSE TO THE BATTERY as possible so that length of positive lead wire required is at a minimum.

3. Choose mounting location that is as cool as possible and AWAY FROM HEAT SOURCES. The cooler the ambient temperature the less chance the compressor will overheat.

4. The compressor is moisture & splash resistant, but NOT WATERPROOF. Do not mount air source kit in locations where the unit is likely to come in contact with water.

5. If it is necessary to mount the air compressor further away from the battery, such as inside your vehicle or in the bed of your pickup, use a minimum 8 AWG positive lead wire for remote installation.

6. Do not mount air source kit near areas where flammable liquids are stored.

MOUNTING AND WIRING:

1. Disconnect ground cable from vehicle's battery.

2. Temporarily position the air source kit in the location where it will be mounted.

3. Route ground wire to the negative post of the battery or to an appropriate grounding point and cut ground wire to length as needed.

4. Mount air source kit at tank leg mounts with the four grommets, and four sets of bolts, nuts, washers, and locking washers provided. Use of thread sealant is recommended.

5. Route 3/8-inch I.D. air line from the 1/2-inch tank port to a 3/8-inch compression fitting and make your air line connection. Tighten compression fitting nut securely using a wrench.

6. Connect ground (Black) wire to a clean ground, (preferably a negative post of battery) and secure with a self-tapping screw.

7. Connect positive (Red) lead wire from pre-installed pressure switch to a fuse holder (30-amp minimum).

8. Once the kit is properly fused as close as possible to the power source, connect and test compressor system by running the compressor for a short time to build up pressure in your air tank.

9. Once air pressure reaches preset cut out pressure of your pressure switch (165 PSI cut-on, 200 PSI cut-off), the compressor will shut off automatically. Inspect all air line connections for leaks with soap and water solution. If a leak is detected, the air line may not be cut squarely or pushed all the way in. Tighten connections if needed.

OPERATING INSTRUCTIONS:

1. **IMPORTANT:** Always operate the compressor BELOW the MAXIMUM PRESSURE RATING of the compressor. Please refer to Application & Specifications Sections of this manual for details.

2. Always observe the MAXIMUM DUTY CYCLE of the air compressor. Refer to Compressor Applications and Specifications Section of this manual for details. Operation exceeding maximum pressure ratings and or duty cycle will result in damage to air compressor.

3. Your air compressor is equipped with an AUTOMATIC THERMAL OVERLOAD PROTECTOR. This feature is designed to protect the air compressor from overheating causing permanent damage to your air compressor. The thermal overload protector will automatically cut off power to your air compressor should the internal operating temperature of the air compressor rise above safe levels during excessive use.

4. Should at any time during use, your air compressor automatically shuts off; do not attempt to restart air compressor. Turn power switch to the air compressor to the OFF position. The automatic thermal overload protector will automatically reset when internal temperature of the air compressor drops below safe levels. After allowing air compressor to cool off for about 30 minutes, you can safely resume use of the air compressor by turning on the air compressor.

5. To prevent discharge of your vehicle's battery, we strongly recommend that you keep the vehicle's engine running while using the air compressor. Compressor performance is enhanced when operating compressor with vehicle's engine running.

6. **IMPORTANT:** ONLY OPERATE THE AIR COMPRESSOR IN WELL-VENTILATED AREAS.

AIR TANK PRECAUTIONS:

IMPORTANT:

a. The air source kit air tank is rated for 200 PSI maximum working pressure. Do not overfill. Overfilling may result in death or serious injury.
b. Tank is not to be used as a breathing device.
c. Always wear ANSI approved safety glasses when operating air tank.
d. Bleed pressure from tank after each use, and before servicing or adding attachments.

DRAIN TANK OFTEN TO REMOVE CONDENSATE. FAILURE TO DRAIN TANK WILL ALLOW TANK TO RUST INTERNALLY.

a. To remove any accumulated condensation inside the tank, bleed pressure from tank until pressure is approximately 5 PSI to 20 PSI.
b. Drain water from tank by opening the drain cock drain valve.
c. If drain cock is plugged, release all air pressure from tank, remove drain valve and clean, then reinstall.
d. After condensate has been drained, close the drain cock.

IMPORTANT: Observe air tank Date of Manufacture (stamped on tank leg). Replace air tank 2 to 5 years from date air tank was first used, or use the date of manufacture as reference. Your adherence to air tank draining guidelines will determine the replacement date of your air tank. RUSTED TANKS CAN FAIL CAUSING EXPLOSIONS OR FATAL INJURIES. Discard tank immediately if tank is rusted.

NOTE: When using a safety pressure relief valve, point the safety pressure relief valve away from your body. Use the pull ring on the safety relief valve; open the relief valve to vent any pressure inside the tank before attempting to service tank.

COMPRESSOR APPLICATION GUIDE:

ABOUT COMPRESSOR DUTY CYCLE:
Duty cycle refers to the amount of time a compressor can be operated in a given time period at 100 PSI, and a standard ambient temperature of 72° F. It is commonly expressed in percentage format: Compressor on time ÷ (on time + off time) = Duty Cycle %.

ONE-HOUR DUTY CYCLE (100 PSI @ 72°F)	MINUTES ON / MINUTES OFF
9%	5 Min. On / 55 Min. Off
10%	6 Min. On / 54 Min. Off
15%	9 Min. On / 51 Min. Off
20%	12 Min. On / 48 Min. Off
25%	15 Min. On / 45 Min. Off
30%	18 Min. On / 42 Min. Off
33%	20 Min. On / 40 Min. Off
50%	30 Min. On / 30 Min. Off
100%	1 Hour Run Time

NOTE: All compressors, regardless of rated duty cycle, require sufficient rest time in between cycles to allow for partial or complete heat dissipation. Heat dissipation rates may vary depending on ambient temperatures and operating conditions.

ABOUT RATED WORKING PRESSURE:
To ensure trouble free service life of your compressor, always operate compressor within rated working pressure of the compressor. Never use a pressure switch with a higher cut-off pressure than compressor's rated working pressure.

SPECIFICATIONS:

480C AIR COMPRESSOR

Motor Voltage:	12 Volts
Max. Current Consumption:	23 Amps
Recommended Fuse:	30 Amps
Motor Type:	Perm. Magnetic
Horse Power:	1/4
Max. Working Pressure:	200 PSI
Max. Duty Cycle (@72°F & 100 PSI):	100%
Max. Duty Cycle (@72°F & 200 PSI):	50%
Max. Ambient Temperature:	158°F
Min. Ambient Temperature:	-40°F
Auto. Reset Thermal Protection:	Yes

Excessive moisture in discharge	1. Excessive water in air tank 2. High humidity	1. Drain tank, tilt tank to drain. Drain tank more frequently 2. Move compressor to area with less humidity, or use air line filter.
Compressor will not run	1. No power, or power switch in OFF position 2. Blown fuse 3. Motor overheats 4. Faulty pressure switch.	1. Make sure compressor switch is ON 2. Disconnect compressors from power source, replace fuse. (Refer to Specifications section for correct fuse amperage.) 3. Let compressors cool off for about 30 Minutes to allow thermal overload switch reset. 4. Replace pressure switch
Thermal overload protector cuts out repeatedly	1. Lack of proper ventilation or ambient temperature too high 2. Compressor valves failed	1. Move compressor to well ventilated area, or area with lower ambient temperature 2. Repair or replace compressor
Excessive knocking or rattling	1. Loose mounting bolts 2. Worn bearing on eccentric or motor shaft 3. Cylinder or piston ring is worn	1. Tighten mounting bolts 2. Repair or replace compressor 3. Repair or replace compressor

<u>CAUTION:</u> NEVER DISASSEMBLE COMPRESSOR WHILE COMPRESSOR IS PRESSURIZED.

TROUBLESHOOTING GUIDE:

PROBLEM:	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Tank pressure drops when compressor(s) shut off	1. Loose drain cock 2. Check valve leaking 3. Loose connections	1. Tighten drain cock 2. Replace check valve or compressor(s) 3. Check all connections with soap and water solution and tighten
Compressor runs continuously and air flow lower than normal	1. Excessive air usage 2. Loose connections 3. Worn piston ring or inlet valve. 4. Clogged air filter element	1. Decrease air usage 2. Check all connections wit soap and water solution and tighten. 3. Repair or replace compressor 4. Replace air filter element
Compressor runs continuously causing safety valve (if equipped) to open	1. Bad pressure switch 2. Defective safety valve	1. Replace pressure switch 2. Replace safety valve