



**ONBOARD COMPRESSOR
OPERATION GUIDE
Part #AIR8250**

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1. INTRODUCTION -----

IMPORTANT

To get the safest and most effective service from this onboard air compressor, please read this guide in its entirety before attempting to use the compressor.

1.1 Features of The Compressor

This air compressor is a compact sized, yet high performance, compressed air source that is intended for rapid inflation of tires and operation of most air powered tools rated up to 85LPM [3CFM] @ 600kPa [90PSI].

This world class recreational product is built to commercial/industrial standards and boasts the following features:

- Ultra-compact twin motor, dual cylinder design makes this one of the highest flowing portable compressor of its size on the market at 6.16CFM [174LPM]
- Integrated pressure switch regulates pressure between 70PSI [483kPa] and 100PSI [690kPa] suited to most air powered tools.
- Ducted IP55 sealed brushed DC cooling fan and anodized aluminum motor mounting brackets effectively dissipate heat from the motors, heads and electronics allowing for a 100% duty cycle (under room temperature conditions).
- Hard-anodized cylinder bores and PTFE (Teflon) impregnated carbon fiber piston seals for reduced friction and maximum trouble-free life.
- Built with sealed components for moisture and dust resistance.
- Motors are 100% ball bearing equipped and feature a unique linear brush pre-load system for extra long life, low heat and quiet operation throughout the life of the unit.
- Compressor pistons are equipped with high shock rated roller bearing.
- High density and high flow washable sintered bronze air filter element.
- Motors are thermal cut-out protected against damage caused by extreme temperature use.
- Pressure switch and relay equipped electrical system prevents run-on when not filling, or any damage to the compressor or hoses because of the pressure generated from a kinked airline.
- Illuminated isolating switch is easy to see at night and protects the user from hazardous sparking when connecting the alligator clips to the battery terminals.
- Equipped with dual heavy-duty Maxi-Fuses for professional in-line circuit protection and true circuit redundancy in case of a fault.
- Over-pressure safety valve equipped as a back-up protection from either pressure switch failure, thermal over pressure generated in a hot vehicle (i.e., no need to drain pressure when finished use.), or accidental connection to an external high-pressure source.

1.2 What Is Included

Below is a list of items included with this kit:

- Fully assembled and performance tested air compressor in plastic case.
- Two splash resistant air filters with washable high flow sintered bronze filter cartridges.
- 19.685 ft [6 meters] long high-quality abrasion and heat resistant air hose with male to female couplings.
- Tire inflation gun with gauge.
- High-flow tire filler attachment with integral stop-valve.

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1.3 Specifications

GENERAL SPECS	IMPERIAL		METRIC	
SUPPLY VOLTAGE	12	Volts DC	12	Volts DC
MAX CURRENT DRAW (each motor)	34.3	Amps@150PSI	34.3	Amps@1030 kPa
MAX CURRENT DRAW (total)	68.6	Amps@150PSI	68.6	Amps@1030 kPa
FUSE RATING (each motor)	40	Amps	40	Amps
RELAY RATING (each motor)	40	Amps	40	Amps
WEIGHT (total kit)	33	lbs	15	kgs
DIMENSIONS - LENGTH	18.8	inches	478	mm
- WIDTH	14	inches	355	mm
- HEIGHT	7.3	inches	186	mm
DUTY CYCLE @ 72°F (22°C)	60	mins. per hour	100	%
PRESSURE SWITCH CLOSED	<70	PSI	<4830	kPa
PRESSURE SWITCH OPEN	>100	PSI	>690	kPa
SAFETY VALVE PRESSURE	>180	PSI	>1240	kPa
MOTOR THERMAL CUT-OUT	239	Degrees F	115	Degrees C
MAX. AMBIENT TEMPERATURE	212	Degrees F	100	Degrees C
SPECS @ NO LOAD	IMPERIAL @ 0 PSI		METRIC @ 0 kPa	
CURRENT DRAW	28.4	Amps	28.4	Amps
AIR FLOW RATE	616	CFM	174.4	L/min
SPECS @ TIRE PRESSURE	IMPERIAL @ 29 PSI		METRIC @ 200 kPa	
CURRENT DRAW	50.4	Amps	50.4	Amps
AIR FLOW RATE	4.68	CFM	131.8	L/min
NOTE: The specifications above were recorded under laboratory conditions at 72°F [22°C]				
EXTERNAL CONNECTIONS SPECS				
AIR INTAKE THREADS (female)	1/4-18 NPSC (parallel pipe thread)			
AIR FILTER THREAD (male)	1/4-18 NPT (tapered pipe thread)			
PRESSURE SWITCH THREAD	1/4-18 NPT (tapered pipe thread)			
SAFETY VALVE PORT THREAD	1/8 BSPP (parallel pipe thread)			
MANIFOLD OUTLET THREAD	1/4-18 NPT (tapered pipe thread)			
AIR COUPLING FITTING TYPE	US Industrial Standard			

WARRANTY

This Air Compressor is designed to provide many years of trouble-free recreational use and is warranted to be free from manufacturing defects for one (1) year from the date of purchase.

2. SAFE AIR COMPRESSOR OPERATION -----

2.1 Safety Precautions

Please carefully read and always abide by each of the following points when using a portable air compressor.

HINT : Place a ✓ mark inside each of the symbols to ensure you have read and understood all of the safety precautions.

2.1.1 Electrical Safety

- Never make connections to the battery with the compressor isolating switch turned 'ON' as the resulting sparking at the battery terminals could pose a fire hazard.

2.1.2 Compressed Air Safety

- Wear suitable protective equipment (e.g. glasses, face shields etc.) to control the risk of injury due to projectile particles
- Never point the hose at anyone and always see that bystanders are out of the line of air flow.
- Never attempt to stop or slow the flow of compressed air using direct exposure to skin.

NOTE : Normal textile clothing does not protect the skin against the risk of air embolism posed by exposure to compressed air.

NOTE : An air embolism is a serious condition of the blood stream which may result in severe injury or death.

- For the same reason as above, never use compressed air to clean clothing, hair or body.
- Disconnecting hoses or other accessories from a compressed air system can result in projectiles. To avoid projectiles either hold the item being disconnected securely or switch off the compressor and evacuate all compressed air from the system.
- If using compressed air accessories (e.g., extension or replacement hoses or pneumatic devices like air tools), avoid the danger of spontaneous disconnection by using only products with hose fittings that conform to one of the international standards listed in the specifications (ref: Section 1.3).
- If using extension or replacement hoses, use only sound strong hose with secure couplings and connections having a high temperature rating and a maximum pressure rating of over 200 PSI [1380 kPa].
- Air hoses should be held securely to prevent whipping.
- Compressed air contains contaminants which makes it unsuitable for use in air-supplied respiratory protective devices such as spray-painting masks. Only use compressed air with such devices when appropriately filtered through approved filtration equipment.

2.1.3 Pressure Vessel Safety

- This compressor contains two mechanical pressure relief valves that will bleed off pressure if the system is above 160PSI [1100kPa].
- Never disable or modify any of the compressor's built-in protection devices.

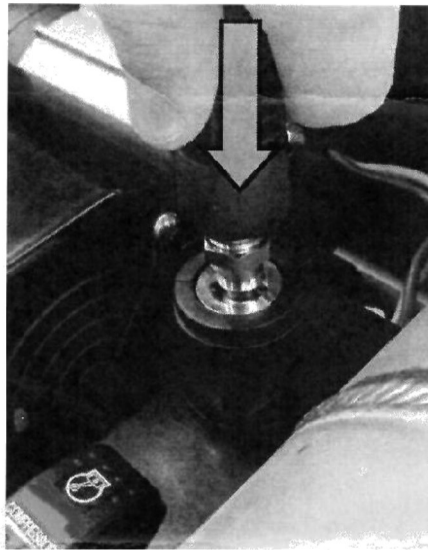
2.1.4 High Temperature Safety

- The compressor hoses and fittings may become hot after an extended period of use. Caution must be exercised to avoid handling hot surfaces.

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2.2 Connecting For Use

- Position the compressor on a sturdy flat surface before opening the box.
- Unlock and open the box using the two latches.
- Make sure that the switch is in the 'OFF' position by pressing down on the top of the switch rocker.



- Uncoil the power lead and connect the positive (+) alligator clamp (RED handle) directly to the positive(+) terminal of the vehicle's 12 volt battery.
- Connect the negative (-) alligator clamp (BLACK handle) directly to the negative(-) terminal of the vehicle's 12 volt battery.

NOTE: The switch should now be illuminated telling you that the compressor has been connected to power. But the compressor will not start until the switch rocker is pressed on the bottom.

- Attach the air hose to the compressor by inserting the male end of the hose into the hose coupling on the compressor and simply pressing inward until the coupling sleeve clicks forward. The sleeve of the coupling does not need to be pulled back by hand at all.
- Attach the compressed air accessory to the opposite end of the hose in the same way.
- Press the bottom of the rocker switch down to start the compressor and pressurize the air hose.
- The compressor will automatically stop when the pressure in the system reaches the pre-set pressure switch 'OFF pressure' of 100PSI [690kPa].

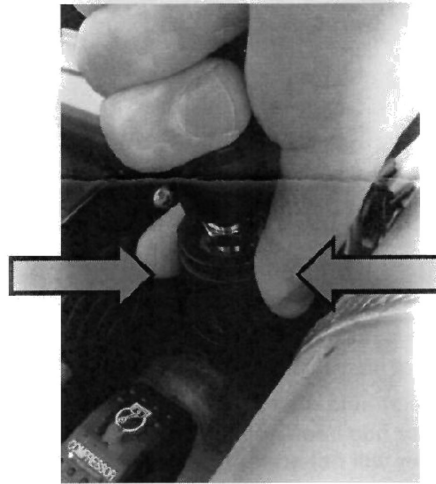
NOTE: Once compressed air has been expelled through the attached device (e.g., tire filler, air tool, etc.) and the pressure in the system reduces the pre-set pressure switch 'ON pressure' of 70PSI [483kPa] then the compressor will automatically start running again.

IMPORTANT

When accessories such as the hose are connected to the compressor they will contain compressed air. As such, care must be taken when they are disconnected from the compressor to avoid projectiles

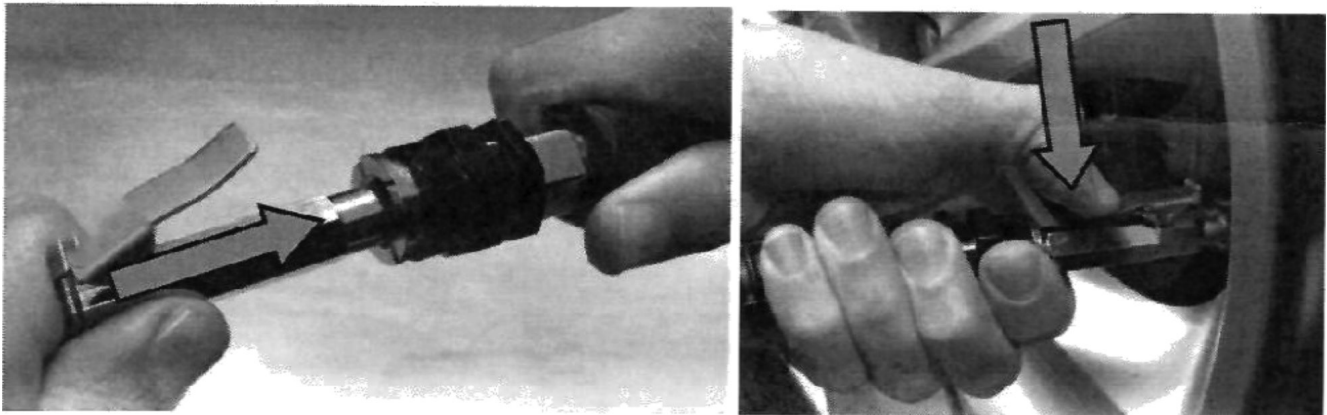
- To disconnect the air hose from the compressor, hold the hose coupling grip between your thumb and forefinger as shown, then press the hose coupling down. Make sure to securely hold the hose grip with the remaining fingers on your hand to control the hose release when pressurized.

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2.3 Tire Filling

- With the compressor connected and switched on as described in Section 2.2, connect the tire filler (supplied) to the air hose coupling by inserting it into the coupling and simply pressing inward until the coupling sleeve clicks forward. The sleeve of the coupling does not need to be pulled back by hand at all.



NOTE: Tire filler attachment is equipped with a stop valve, air will not pass through the tire filler attachment until it is connected to a tire valve.

NOTE: To get maximum performance out of the compressor and to avoid depleting your vehicle's battery, it is highly recommended to leave the vehicle running at idle.

- Attach the tire filler to any standard tire valve by depressing the lever on the filler and then pushing the filler onto the tire valve until a good seal is made.

NOTE: Once air has passed through the filler and the pressure in the air tank reduces the compressor will automatically start.

- To keep air flowing without holding the filler, simply release the lever on the filler while still holding the filler onto the tire valve and then let go of the filler.
- To stop filling and remove the filler from the valve depress the lever on the filler and pull the filler away from the tire valve.

NOTE: Periodically disconnect the filler and check the tire pressure with an automotive tire pressure gauge. (Sold separately).

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IMPORTANT

Do not fill your tires over the manufacturer's specified maximum pressure rating

2.4 Air Powered Tools

In addition to tire inflation, this air compressor is suitable for operating most air powered tools.

- This air compressor will continuously run air tools which require up to 3CFM [85LPM] @ 90PSI [600kPa]. For maximum power output from your air tool allow the compressor to fill the air tank to maximum pressure before operating and in between uses.

2.5 Understanding the Built-In Protection Devices

This compressor has been equipped with both THERMAL and OVER PRESSURE protection devices in the interests of personal safety and to protect the unit from unnecessary internal damage.

NOTE: Never disable or modify any of the compressor's built-in protection devices.

2.5.1 Thermal Cutout Switch

The process of compressing air is a natural generator of heat. This heat generation is increased accordingly by increasing the compressed air flow rate or increasing the pressure level of the air flow.

The large DC electric motor inside the compressor is also a source of heat which increases with the amount of work being done by it.

The compressor has been designed to naturally disperse this heat into the air around it. However, the ambient temperature outside will have an effect on how fast this heat can be dispersed. If excessive levels of heat are allowed to build up inside the compressor the unit may be put at risk of internal damage. For this reason an internal electric switch has been designed into the back of each motor which will simply turn the compressor off if the temperature approaches a dangerous level and will automatically reset and turn the compressor back on once the unit has cooled down to a safe temperature.

This off time may last anywhere from just a few minutes up to half an hour depending on conditions around the compressor.

2.5.2 Over Pressure Safety Valve

This compressor is equipped with a pressure operated electric switch which has been factory set to turn off the compressor at a safe level of pressure, and then turn it back on again once the pressure has been exhausted down to a lower level. Should this switch fail for any reason the compressor is capable of producing pressure well beyond its safe shut off limit.

A compressor which has reached its safe pressure maximum that has been left in direct sun or inside a hot vehicle may build up additional pressure past the safe working level.

Connecting your compressor up to any air system which might already contain a residual pressure that is higher than the compressor's safe pressure limit may raise the internal pressure of the compressor past the safe pressure limit.

This compressor is equipped with a mechanical over pressure safety valve which has been factory set to bleed off to atmosphere any excessive pressure build up (i.e., from any of the situations above) before it can pose any personal danger or cause damage to compressor components.

3. SERVICE AND MAINTENANCE -----

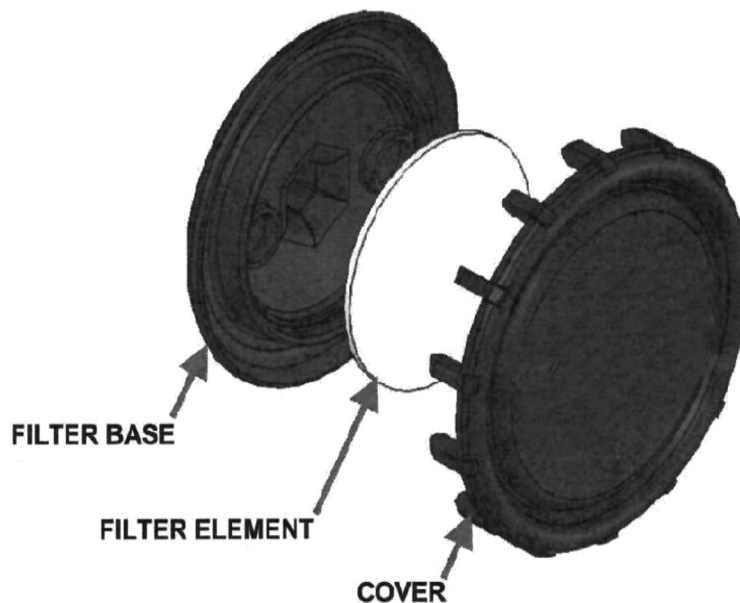
3.1 Air Filter Service

This compressor comes factory fitted with high density, high flow, sintered bronze air filters to protect the compressor components and any accessories that might be used with the compressor from damage caused by the ingress of dirt and fine dust particles. The filter element is removable and cleanable and should provide for years of continuous service.

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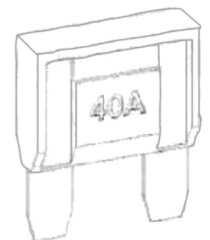
Follow the steps below to disassemble, clean and re-assemble the air filter.

- Unscrew the air filters from the compressor.
- Remove the air filter cover from the base by applying slight prying pressure under the fingers of the cover.
- Remove the filter element disk.
- Vigorously wash the element in a solution of hot soapy water.
- Rinse the element in pure hot water.
- Dry thoroughly.
- Insert the element back into the air filter base making sure that the flattest face of the disk faces toward the filter base.
- Snap the air filter cover back onto the base and rotate the cover into the desired position.
- Install the air filters back into the compressor.



3.2 FUSE REPLACEMENT

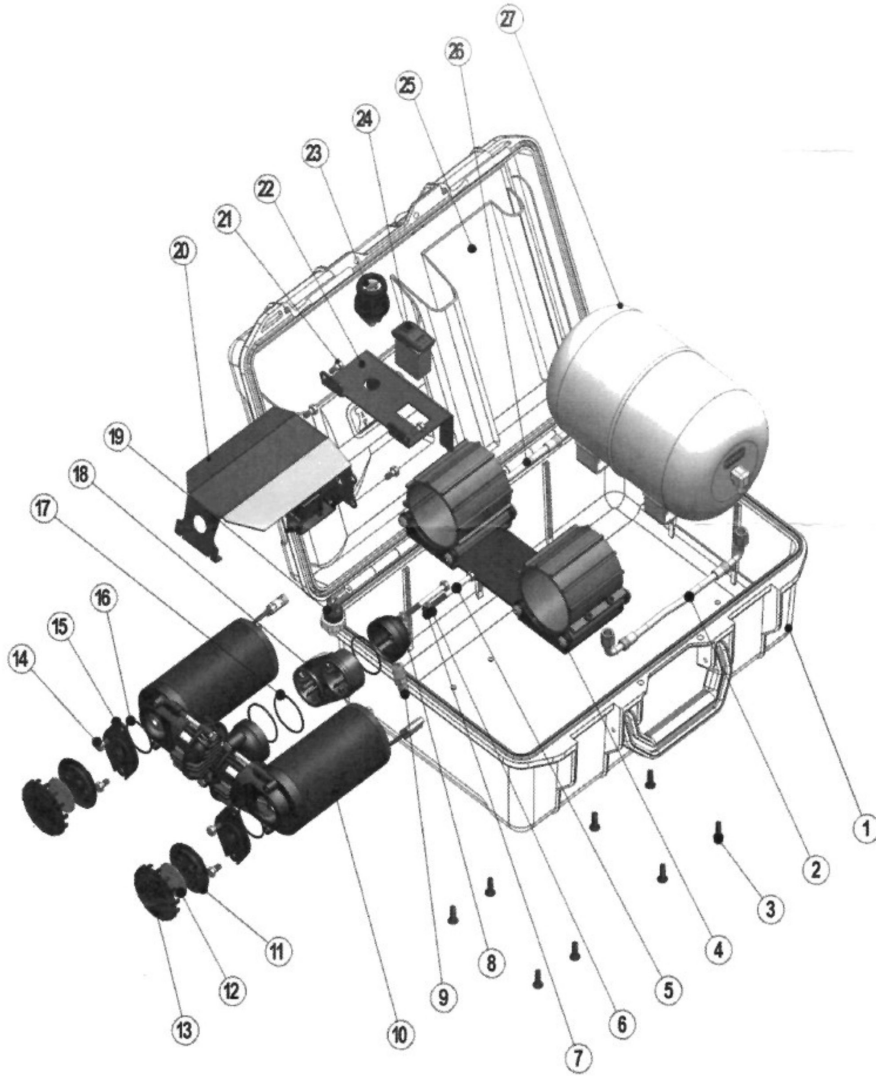
The supply wiring loom contains two inline fuses near the battery end of the positive (+ RED) wire providing independent circuit protection for each motor. If either of the fuses requires replacing, they can be removed by opening the black rubber fuse housing cover and pulling straight outward on the fuse until it slides free of the fuse block. The fuse should only be replaced with a fuse of the same type (maxi blade type) and of the same amp rating (40A) or less.



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4. PARTS LIST

Portable Compressor Kit - Exploded Parts Diagram



Items	Qty	Description
01	1	CARRY CASE
02	1	HOSE ASSEMBLY, TANK INPUT
03	8	SCREW (COUNTERSUNK M6 x 16)
04	1	TWIN COMPRESSOR MOUNT ASSEMBLY
05	2	MANIFOLD BOLT (M6 x 60mm)
06	2	FLAT WASHER
07	2	O-RING (METRIC 6 x 2 N70)
08	1	MANIFOLD CAP (1/4" NPT)
09	1	ADAPTER (1/4" NPT TO JIC-4)
10	2	COMPRESSOR ASSEMBLY
11	2	AIR FILTER BASE
12	2	AIR FILTER ELEMENT (DISK TYPE)
13	2	AIR FILTER COVER
14	6	BOLT (M6 x 10mm)
15	2	AIR FILTER FLANGE (1/4" NPT)
16	2	O-RING (BS029N70)
17	3	O-RING (BS031N70)
18	1	COUPLER MANIFOLD
19	1	PRESSURE SWITCH (11/4" NPT)
20	1	COVER ASSEMBLY
21	2	BOLT (M6 x 12mm), SWITCH BRACKET
22	1	SWITCH BRACKET
23	1	HOSE COUPLING (US STD FEMALE)
24	1	SWITCH (12V)
25	1	SWITCH COVER
26	1	HOSE ASSEMBLY, TANK OUTPUT
27	1	AIR TANK
29	1	HOSE ASSEMBLY (US STD)
31	1	WIRING LOOM (SUPPLY)
32	1	WIRING LOOM (SWITCH)
33	2	RELAY (12V, 40A)