AC2020
PORTABLE AIR
COMPRESSOR

OPERATION MANUAL

CAUTION READ THIS MANUAL CAREFULLY before operating or servicing this air compressor, to familiarize yourself with the proper safety, operation, and standard operating procedures of this unit. **FAILURE TO COMPLY WITH INSTRUCTIONS IN THIS MANUAL COULD RESULT IN THE VOIDING OF YOUR WARRANTY, AND PERSONAL INJURY, AND/OR PROPERTY DAMAGE. THE MANUFACTURER OF THIS AIR COMPRESSOR WILL NOT BE LIABLE FOR ANY DAMAGE BECAUSE OF FAILURE TO FOLLOW THE INSTRUCTIONS IN THIS MANUAL.** By following the instructions and recommendations in this manual you will ensure a longer and safer service life of your air compressor.

TABLE OF CONTENTS

Attention: Read through the complete manual prior to the initial use of your compressor.

Using the Operator's manual

Thank you for purchasing a BE Air Compressor. Your machine is designed for long life, dependability, and the top performance you demand! Please take time now to read through this manual so you better understand the machine's operation, maintenance and safety precautions. Everyone who operates this machine must read and understand this manual. The time you take now will prolong your machine's life and prepare you for its safe operation. Enjoy the exceptional performance of your BE Air Compressor, the industry leader!

The manufacturer reserves the right to make improvements in design and/or changes in specifications at any time without incurring any obligation to install them on units previously sold.

SPECIFICATIONS

Item	Data			
Model	AC2020			
Power	1.5HP/2HP/2.5HP			
Voltage	230V/240V		120V/220v	
Frequency	50Hz		60Hz	
Motor Poles	2P			
Rated Speed	2850 r/min		3450 r/min	
Current	7.5 15A			
Delivery	4.3CFM@40psi		3.3CFM@90psi	
Discharge Pressure	125 PSI			
Restart Pressure	95 PSI			
Tank Capacity	10 GAL	12 GAL	15 GAL	20 GAL
Air Outlet Size	1/4"			

Record Identification Numbers

Compressor
If you need to contact an Authorized Dealer or Customer Service line (1-866-850-6662) for information on servicing, always provide the product model and identification numbers.

You will need to locate the model and serial number for the machine and record the information in the places provided below.

Date of Purchase:

Dealer Name:

Dealer Phone:

Product Identification Numbers

Model Number:

Serial Number:

Receipt and Inspection

Before signing the delivery receipt, inspect for damage and missing parts. If damage or missing parts are apparent, make the appropriate notation on the delivery receipt, then sign the receipt. Immediately contact the carrier for an inspection. All material must be held in the receiving location for the carrier's inspection. Delivery receipts that have been signed without a notation of damage or missing parts are considered to be delivered "clear." Subsequent claims are then considered to be concealed damage claims. Settle damage claims directly with the transportation company.

If you discover damage after receiving the air compressor (concealed damage), the carrier must be notified within 15 days of receipt and an inspection must be requested by telephone with confirmation in writing. On concealed damage claims, the burden of establishing that the compressor was damaged in transit reverts back to the claimant. Read the compressor nameplate to verify it is the model ordered, and read the motor nameplate to verify it is compatible with your electrical conditions. Make sure electrical enclosures and components are appropriate.

Save these Instructions

Safety Rules

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

The safety alert symbol (⚠) is used with a signal word (DANGER, CAUTION, WARNING), a pictorial and/or a safety message to alert you to hazards.

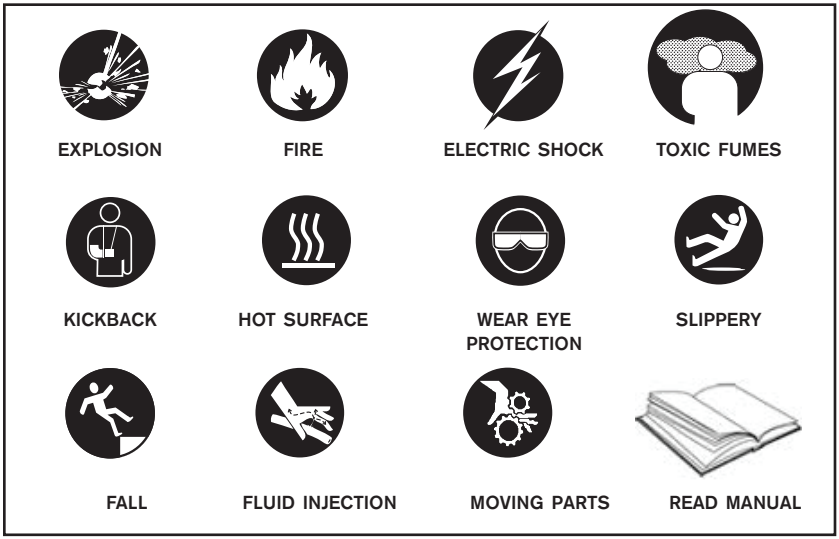
DANGER WILL cause DEATH, SEVERE INJURY or substantial property damage.

WARNING CAN cause DEATH, SEVERE INJURY or substantial property damage.

CAUTION WILL or CAN cause MINOR INJURY or property damage.

NOTICE indicates a situation that could result in equipment damage. Follow safety messages to avoid or reduce the risk of injury or death.

Hazard Symbols and Meanings



⚠ WARNING	
	**AIR TANK WARNING:** Drain liquid from air tank daily, or after each use, using the drain valve located on the bottom of the lower air tank. Failure to properly drain liquid from the tank will cause rust from moisture build-up, which weakens the tank and could lead to a violent tank explosion, Periodically inspect the tanks for unsafe conditions such as corrosion.
Never attempt to repair or make modifications to the tank or its attachments. Welding, drilling or any other modifications may weaken the tank, which may result in damage from rupture or explosion. Never remove or attempt to adjust the pressure switch, safety valve, or other factory set operating pressures.	

⚠ WARNING	
	**FIRE WARNING:** Avoid dangerous environments. Do not use compressor near gasoline or other flammable materials. Keep work area well lit. Normal sparking of a motor or sparking from grinding metal could ignite fumes. Do not spray flammable materials in the vicinity of an open flame or other ignition source, including the air compressor itself. Do not direct paint or other spray material towards the compressor.
Read and follow all safely instructions for the material you are spraying. Be sure to use an approved respirator designed for use with your specific application.	

⚠ WARNING	
	**BREATHABLE AIR WARNING:** This air compressor in not designed, nor intended for the supply of breathable quality air. Air produced by this unit may contain carbon monoxide or other toxic vapors.
Do not inhale air from the compressor or from a breathing device connected to it.	

⚠ WARNING	
	**ELECTRIC SHOCK WARNING:** When using electric powered tools, machines or equipment, basic safety precautions should always be followed to minimize the risk of electrical shock or personal injury to yourself and others.
This air compressor is powered by electricity and should never be used without properly grounded electrical connections. Do not use in wet or damp locations or expose to rain.	

⚠ WARNING	
	**AIR TOOLS AND ACCESSORIES WARNING:** Do not exceed the pressure rating of any air tools, spray guns, air accessories, or inflatables. Excess pressure can cause them to explode, resulting in serious injury. Follow the manufacturers recommended pressure settings for all air tools and air accessories.

⚠ WARNING	
	Do not direct compressed air stream at people or pets. The powerful compressed air stream can damage exposed skin and easily propel loose dirt and other small objects. Always wear eye protection that meets ANSI Z28.1 specifications.

⚠ WARNING	
	Keep hands and fingers away from exposed metal parts on a running air compressor. Air compressors generate significant heat during normal operation, which can cause serious burns. The compressor will remain hot for some time after operation and should not be touched or moved until cool.

General Safety Information

Do not operate unit if damaged during shipping, handling or use. Damage may result in bursting and cause injury or property damage.
Since the air compressor and other components (filters, lubricators, hoses, etc.) used, make up a high pressure pumping system, the following safety precautions must be observed at all times:

1. Read all manuals included with this product carefully. Be thoroughly familiar with the controls and the proper use of the equipment.
2. Follow all local electrical and safety codes
3. Only persons well acquainted with these rules of safe operation should be allowed to use the compressor.
4. Keep visitors away and NEVER allow children in the work area.
5. Wear safety glasses and use hearing protection when operating the pump or unit.
6. Do not stand on or use the pump or unit as a handhold.
7. Before each use, inspect compressed air system and electrical components for signs of damage, deterioration, weakness or leakage. Repair or replace defective items before using.
8. Check all fasteners at frequent intervals for proper tightness.

WARNING	
	Motors, electrical equipment and controls can cause electrical arcs that will ignite a flammable gas or vapor. Never operate or repair in or near a flammable gas or vapor. Never store flammable liquids or gases in the vicinity of the compressor.

WARNING	
	Compressor parts may be hot even if the unit is stopped.

9. Keep fingers away from a running compressor; fast moving and hot parts will cause injury and/or burns.
10. If the equipment should start to abnormally vibrate, STOP the engine/motor and check immediately for the cause. Vibration is generally a warning of trouble.
11. To reduce fire hazard, keep engine/motor exterior free of oil, solvent, or excessive grease. Never remove or attempt to adjust safety valve. Keep safety valve free from paint and other accumulations.

12. Never attempt to repair or modify a tank! Welding, drilling or any other modification will weaken the tank resulting in damage from rupture or explosion. Always replace worn or damaged tanks. Drain liquid from tank daily.
13. Tanks rust from moisture build-up, which weakens the tank. Make sure to drain tank daily and inspect periodically for unsafe conditions such as rust formation and corrosion.
14. Fast moving air will stir up dust and debris which may be harmful. Release air slowly when draining moisture or depressurizing the compressor system.

Spraying Precautions

15. Do not smoke when spraying paint, insecticides, or other flammable substances.
16. Use a face mask/respirator when spraying and spray in a well ventilated area to prevent health and fire hazards.
17. Do not direct paint or other sprayed material at the compressor. Locate compressor as far away from the spraying area as possible to minimize overspray accumulation on the compressor.
18. When spraying or cleaning with solvents or toxic chemicals, follow the instructions provided by the chemical manufacturer.

⚠ WARNING	
	Do not spray flammable materials in vicinity of open flame or near ignition sources including the compressor unit.

Hose Precautions

19. Inspect hose before use. Do not exceed working pressure marked on hose. Do not twist, bend knot, or abrade hose. Do not wrap hose around body.
20. Keep away from hot surfaces and chemicals.

⚠ WARNING	
	Arcing Parts. Keep the compressor/motor at least 6m away from explosive vapour.

Installation and Location
The compressor must be used on a stable level surface. The air compressor must be used in a clean and well-ventilated area. The compressor requires an unobstructed airflow and must be located a minimum of 18 inches from any walls or other obstructions.

Grounding Instructions
This product should be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

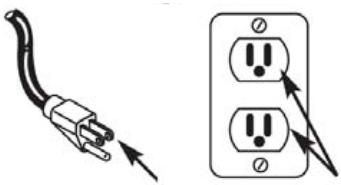
⚠ DANGER	
	**ELECTRIC SHOCK:** Improper installation of the grounding plug can result in a risk of electric shock. If repair or replacement of the cord is necessary, do not connect the grounding wire to either flat blade terminal. The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.

This product is for use on a nominal 120-volt circuit and has a three-prong grounding plug that looks like the plug illustrated in Figure 1. Make sure that the product is connected to an outlet having the same configuration as the plug. No adapter could be used with this product.

The use of a GFCI outlet is strongly recommended. The third prong is to be used ground the tool and provide protection against electrical shock. Never remove the third prong.

Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if In doubt as to whether the product is properly grounded. Do not modify the plug provided; if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Figure 1



Extension Cords

We do not recommend the use on an extension cord with this product as this may result in the loss of power and overheating of the motor. An additional air hose should be used instead of an extension cord. However, if the use of an extension cord is unavoidable, use only UL listed wire extension cords that have three-pronged grounding type plugs and three prong receptacles that accept the tool's plug. Improper use of extension cords may cause inefficient operation of you tool, which can result an overheating.

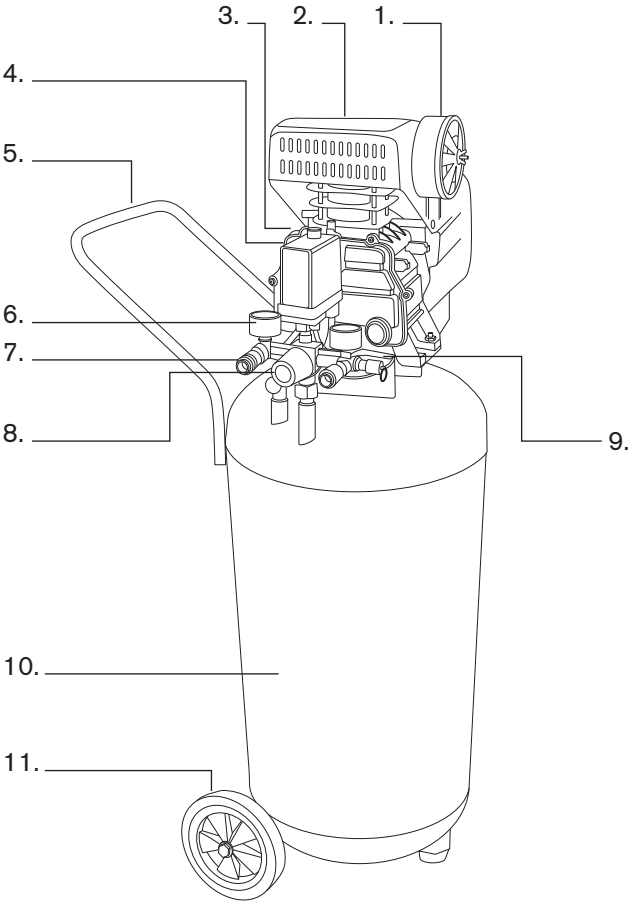
Be sure your extension cord is rated to allow sufficient flow to motor. Refer to the guide for minimum gauge required for extension cords.

Extension Cord Length	Wire Size (A.W.C.)
Up to 25 Feet	14
26 to 50 Feet	12
51 to 100 Feet	10

Use of an extension cord heavy enough to carry the current the tool will draw is very important. Especially when the power source is of great distance. An extension cord that is insufficient will cause a drop in line voltage, resulting in power loss and causing the motor to overheat.

Guard against electrical shock. Avoid body contact with grounded services such as pipes, radiators, ovens, stoves, and refrigerator enclosures. If not properly grounded, this power tool can incur the potential hazard of light trickle shock, particularly when used in damp locations. If an electrical shock occurs, there is the potential of a secondary hazard such as your hands contacting an operating air tool.

Read this operator's manual and safety rules before operating your compressor.

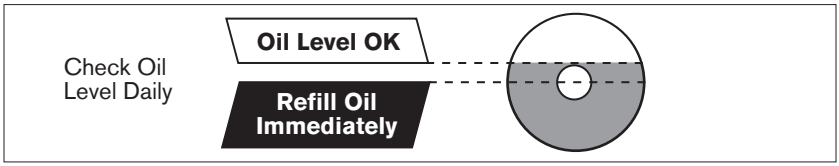


1. Air Filter
2. Fan Cover
3. Pump
4. Pressure Switch
5. Hand
6. Pump
7. Quick Couplers
8. Unit Support
9. Safety Valve
10. Tank
11. Wheel

Assembly

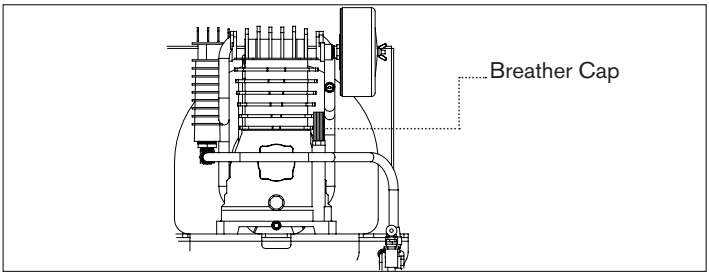
Read all safety instructions before using air compressor.

WARNING	
oil	The compressor is shipped without oil in the crankcase. Add oil as indicated below.



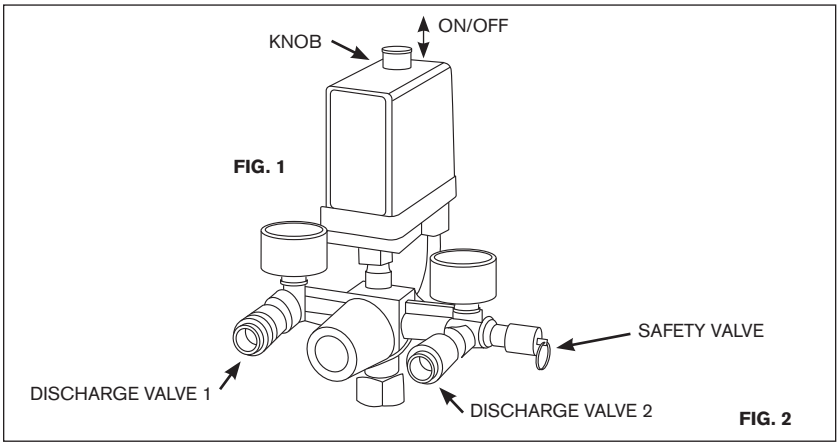
1. After opening the carton, please remove all parts and check against photograph on carton. If any parts are missing, please call at 1-866-850-6662.
2. Place air compressor on a flat, level surface.
3. Pour supplied oil into crankcase until the oil level reaches the red dot in the oil level sight glass. Be careful not to overfill.
4. Install oil fill plug, supplied for compressor operation, before starting compressor.
5. Close tank drain valve on the bottom of the air tank by turning the valve clockwise until fully closed.
6. Attach the air coupler to the compressor regulator valve. Use Teflon thread-sealing tape on the threads to make sure you have an airtight connection. Do not over tighten fittings.
7. Attach the supplied air filter to the air intake port on the pump head.
8. Attach air hose and any desired air accessories (which are not included). Use Teflon thread-sealing tape on the threads to make sure you have an airtight connection. Do not over tighten fittings.

NOTICE
Do not operate the compressor without lubricant or with low lubricant level. We are not responsible for damage caused to the compressor due to operation without proper lubrication.



Preperation for Starting

1. Check all bolts and nuts. Make sure all parts loosened must be tightened
2. The place to set the compressor should be clean, dry and ventilated.
3. Keep the using voltage within ±4% of the rated.



4. Keep the oil level in the red circle of the oil leveler.
5. Recommend SAE30 or L-DAB100 over 10°C, and use SAE10 or L-DAB46 below 10°C of the compressor oil.
6. Open the outlet valve, set the knob of pressure switch in position on (Fig.2), let the compressor run 10 minutes with no load to ensure lubricating the moving parts before regular service

CAUTION

Unusual noise or vibration indicates a problem. Do not continue to operate until you identify and correct the source of the problem.

CAUTION

Do not attach air tools to open end of the hose until start-up is completed and the unit checks out OK.

OPERATION AND ADJUSTMENT

1 The compressor is controlled by pressure switch when normal working. It can be stopped automatically as pressure increasing to the max and restart as pressure decreasing to the min. The rated pressure has been adjusted when produced. Don't change it carelessly. As soon as motor switched off the compressed air in the discharge pipe should be released through the release valve under the switch. This is the necessary condition for restart, or the motor will be damaged. The rated pressure can be adjusted by turning the adjusting bolt of the switch (Fig.3).

2 The output pressure of compressed air can be adjusted by regulating valve. Pull up the knob of regulation valve and turn it clockwise or counterclockwise to increase or decrease the pressure (Fig.3).

3 The the compressor in running need be stopped only set the knob of pressure switch in positing off.

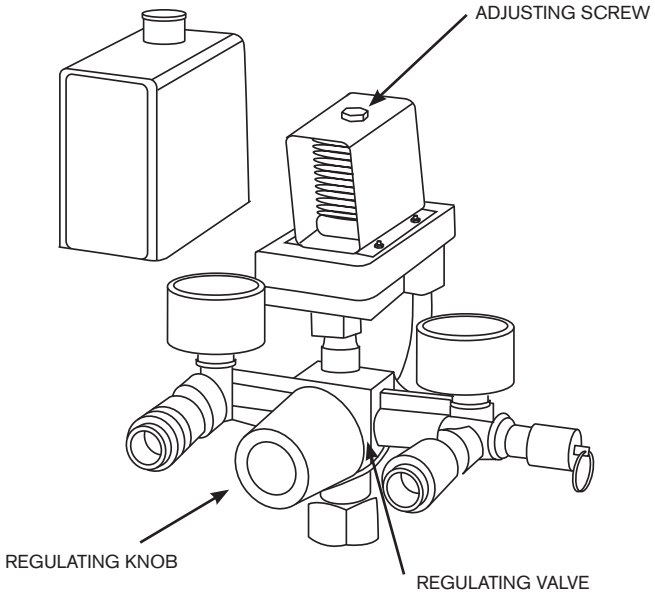


FIG. 3

Maintenance

1. Before maintenance operation, stop the air compressor, cut off power supply and discharge all air in the air tank.
2. Clean crank case and renew lubricating oil after the first 10 working hours.
3. Check the oil level after every 20 working hours, and replenish if necessary (Fig.4).
4. Clean crank case and renew the oil, clean air filter every three months.
5. Open the drain cock under the tank to exhaust the condensate after every 60 working hours but less than every 7 days.
6. Check the safety valve and pressure gauge by professional organization every 6 months and make sure they are in correct condition.
7. Make sure there is no rust on the air tank and the air tank is not damaged.
8. Check the thickness of the air tank by professional organization every year and make sure the thickness is not less than 2.1mm.

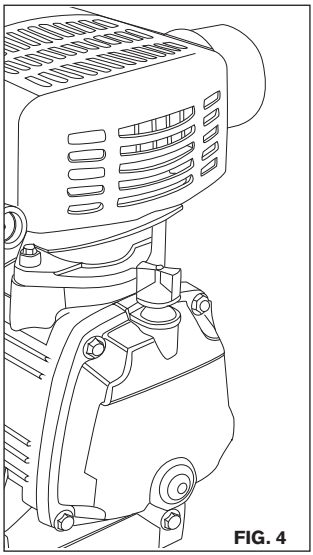


FIG. 4

⚠ WARNING

Disconnect spark plug wire from spark plug and release air pressure from system before performing maintenance.

NOTE: All compressed air systems contain maintenance parts (e.g. lubricating oil, filters, separators), which are periodically replaced. These used parts may be, or contain, substances that are regulated and must be disposed of in accordance with local, state, and federal laws and regulations.

NOTE: Take note of the position and locations of parts during disassembly to make reassembly easier. The assembly sequences and parts illustrated may differ for your particular unit.

Daily or before each operation

·· Check lubrication levels. Fill as needed.
·· Drain receiver tank condensation.
·· Check for unusual noise or vibration.
·· Ensure area around compressor is free from rags, tools, debris, and flammable or explosive materials.

Weekly

·· Check safety/relief valves by pulling rings. Replace safety/relief valves that do not operate freely.
·· Inspect air filter element. Clean if necessary.

Monthly
·· Inspect for air leaks. Squirt soapy water around joints during compressor operation and watch for bubbles. Tighten fittings if necessary.
·· Clean exterior.

3 months or 500 hours
·· Change petroleum lubricant in pump while crankcase is warm.
12 months or 1000 hours
·· Replace air filter element.

Caution

1. Put the cover off first and put on the breath pipe and air filter before the compressor run (Fig.5).
2. Never unscrew any connecting part when the tank is in pressure condition.
3. Never disassemble any electrical part before disconnecting the plug.
4. Never adjust the safety valve carelessly.
5. Never use the compressor in place where voltage is too low or too high.
6. Never disconnect the plug to stop compressor, set the switch knob in position off instead.
7. If the release valve doesn't work as motor stopped, find the cause immediately so as not to damage motor.
8. Lubricating oil must be clean, oil level should be kept in the score of oil ruler.
9. Disconnect the plug to cut off power supply and open the outlet valve.

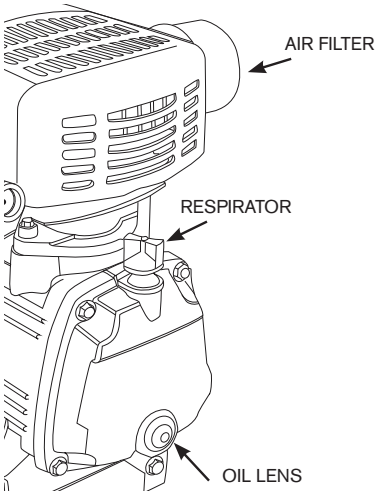
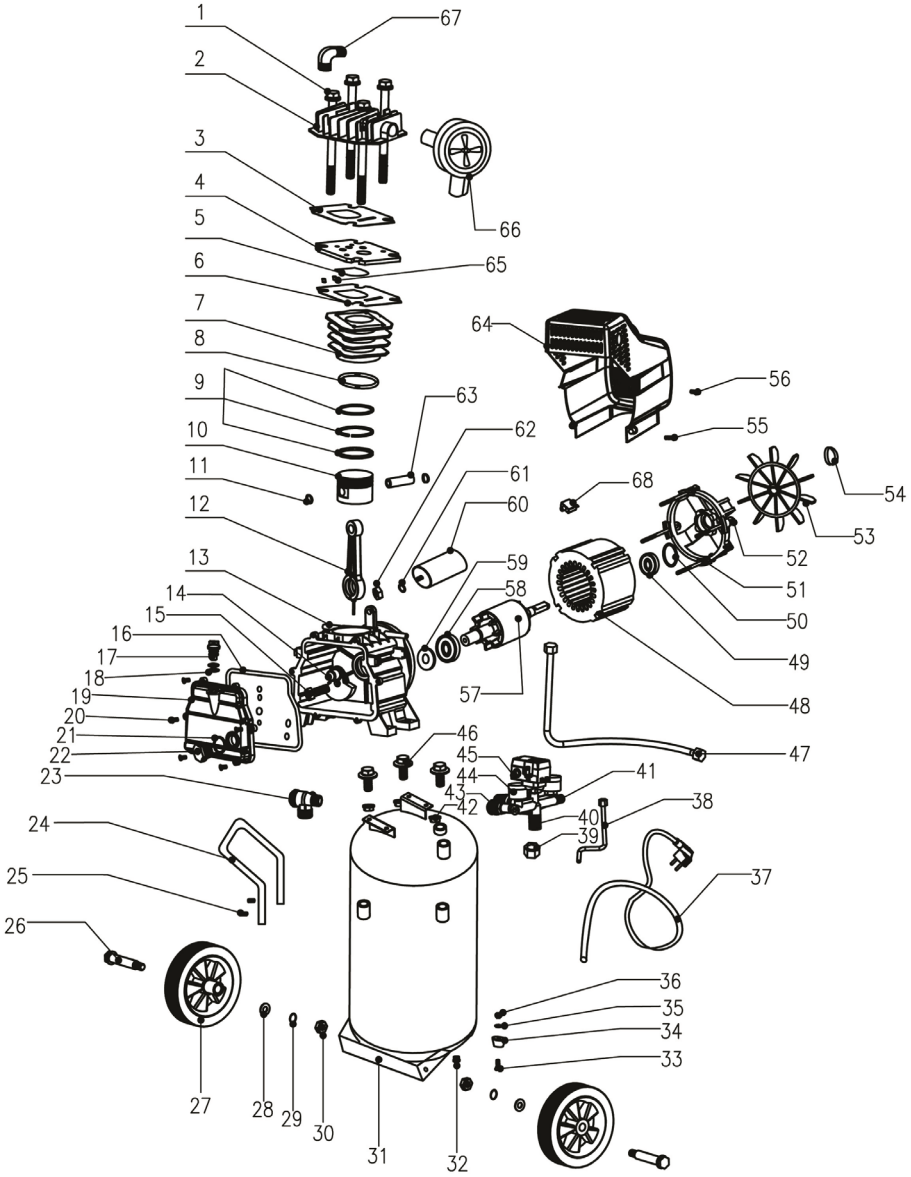


FIG. 5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Item	Description	Qty
1	Blot M8	4
2	cylinder cover	1
3	cylinder cover gasket	1
4	valve plate	1
5	valve clack	1
6	valve plate gasket	1
7	cylinder	1
8	cylinder gasket	1
9	piston ring	3
10	piston	1
11	circlip	2
12	connecting rod	1
13	crank case	1
14	crank	1
15	hex bolt M8	1
16	rubber gasket	1
17	breath pipe	1
18	sealed ring	2
19	crank case cover	1
20	bolt M6	6
21	oil leveler gasket	1
22	oil leveler	1
23	only-way valve	1
24	hand	1
25	Tight settle the bolt	2
26	wheel bolt M10	2
27	wheel	2
28	spring washer	2
29	washer	2
30	lock nut M10	2
31	tank	1
32	Drain valve	1
33	bolt M8	1
34	washer foot	1

Item	Description	Qty
35	washer	1
36	nut M8	1
37	Plug line	1
38	release pipe	1
39	nut	1
40	regulator valve	1
41	safety valve	1
42	lock nut M8	4
43	quick couplers	2
44	pressure gauge	2
45	pressure switch	1
46	lock bolt M8	4
47	discharge pipe	1
48	stator	1
49	brearing 6203	1
50	conugated washer	1
51	motor cover	1
52	bolt M5	4
53	fan	1
54	circlip	1
55	bolt	2
56	bolt M5	2
57	rotor	1
58	brearing 6204	1
59	sealing ring	1
60	capacitance	1
61	washer	1
62	nut M8	1
63	piston pin	1
64	Fan cover	1
65	column	2
66	Air filter	1
67	Curved head	1
68	thermal protector	1

NO	Designation	Qty
1	Air compressor	1
2	Air filter	1
3	Breath pipe	1
4	Wheel	2
5	Wheel axis	2
6	Rubber gasket	1
7	Instruction manual	1

Troubleshooting Chart

If you are experiencing a problem that is not listed in this chart, or have checked all the possible cause listed and you are still experiencing the problem, see your authorized dealer

Trouble	Possible causes	Remedies
Motor unable running, Running too Slow, or Getting hot	1. Fault in line, or voltage insufficient 2. Power wire too thin or too long 3. Fault in pressure switch 4. Fault in motor 5. Sticking of main compressor	1. Check the line 2. Replace the wire 3. Repair or replace 4. Repair or replace 5. Check and repair
Sticking of main compressor	1. Moving parts burnt due to the oil insufficient 2. Moving parts damaged, or stuck by foreign body.	Check crankshaft, bearing, connecting rod, piston, piston ring, etc, And replace if necessary.
Terrible shake or abnormal noise	1. Connecting part loosed 2. Foreign body got into main compressor 3. Piston knocking valve seat 4. Moving parts seriously worn	1. Check and retighten 2. Check and clean away 3. Replace with thicker paper gasket 4. Repair or replace
Pressure insufficient or discharge capacity decreased	1 Motor running too slow 2. Air filter chocked up 3. Leakage of safety valve 4. Leakage of discharge pipe 5. Sealing gasket damaged 6. Valve plate damaged, carbon buildup or stuck. 7. Piston ring and cylinder worn or damaged	1. Check and remedy 2. Clean or replace the cartridge 3. Check and adjust 4. Check and repair 5. Check and replace 6. Replace and clean 7. Repair or replace
The oil Consumption too excessive	1. Oil level too high 2. Breath pipe chocked up 3. Piston ring and cylinder worn or damaged	1. Keep the level within set range 2. Check and clean 3. Repair or replace

If you need assistance with the assembly or operation of your Compressor please call

1-866-850-6662