## **Owner's Manual & Safety Instructions**

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

# **CENTRALPNEUMATIC<sup>®</sup>**

# 30<u>GAL</u> gas powered two-stage air compressor

### 

Using an engine indoors CAN KILL YOU IN MINUTES.

Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell.





NEVER use inside a home or garage, EVEN IF doors and windows are open.

Dnly use OUTSIDE

and far away from windows, doors, and vents.

Visit our website at: http://www.harborfreight.com Email our technical support at: tech@harborfreight.com

**ITEM 69784** 

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-800-444-3353 as soon as possible.

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### 

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Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

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	WARNING SYMBOLS AND DEFINITIONS	
	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.	
	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.	
	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.	
	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.	
NOTICE	Addresses practices not related to personal injury.	
CAUTION		

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Symbol	Property or Statement
RPM	Revolutions Per Minute
HP	Horsepower
	WARNING marking concerning Risk of Eye Injury. Wear ANSI-approved safety goggles with side shields.

Symbol Symbol R C fr fr W

Property or Statement WARNING marking concerning Risk of Respiratory Injury. Operate engine OUTSIDE and far away from windows, doors, and vents.

WARNING marking concerning Risk of Explosion.

### **IMPORTANT SAFETY INFORMATION**

### **General Safety Warnings**

WARNING Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. Save all warnings and instructions for future reference.

The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

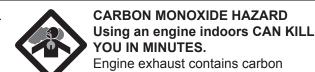
### Set up Precautions

- 1. Gasoline fuel and fumes are flammable, and potentially explosive. Use proper fuel storage and handling procedures. Do not store fuel or other flammable materials nearby.
- 2. Have multiple ABC class fire extinguishers nearby.
- Operation of this equipment may create sparks that can start fires around dry vegetation. A spark arrestor may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.
- 4. Set up and use only on a flat, level, well-ventilated surface.
- 5. Use only lubricants and fuel recommended in the engine manual or in the Specifications chart of this manual.
- 6. Wear ANSI-approved safety goggles, heavy-duty work gloves, and dust mask/respirator during set up.

### **Engine Precautions**

Follow engine precautions and instructions in the included engine instruction manual.

### **Operating Precautions**



Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell.



NEVER use inside a home or garage, EVEN IF doors and windows are open.



Only use OUTSIDE and far away from windows, doors, and vents.

- 2. Keep children away from the equipment, especially while it is operating.
- 3. Fire Hazard! Do not fill gas tank while Compressor engine is running. Do not operate if gasoline has been spilled. Clean spilled gasoline before starting engine. Do not operate near pilot light or open flame.
- 4. Do not touch Compressor engine during use. Let engine cool down after use.
- 5. Never store fuel or other flammable materials near the Compressor engine.
- 6. Only use a suitable means of transport and lifting devices with sufficient weight bearing capacity when transporting the Compressor.
- 7. Secure the Compressor on transport vehicles to prevent the tool from rolling, slipping, and tilting.
- 8. Industrial applications must follow OSHA requirements.
- 9. Do not leave the equipment unattended when it is running. Turn off the equipment (and remove safety keys, if available) before leaving the work area.
- 10. Wear ANSI-approved safety glasses, hearing protection, and NIOSH-approved dust mask/ respirator under a full face shield along with steel-toed work boots during use.

- 11. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to a heart pacemaker could cause pacemaker interference or pacemaker failure. Caution is necessary when near the engine's magneto or recoil starter.
- Use only accessories that are recommended by Harbor Freight Tools for your model. Accessories that may be suitable for one piece of equipment may become hazardous when used on another piece of equipment.
- 13. Do not operate in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Gasoline-powered engines may ignite the dust or fumes.
- 14. Stay alert, watch what you are doing and use common sense when operating this piece of equipment. Do not use this piece of equipment while tired or under the influence of drugs, alcohol or medication.
- 15. Do not overreach. Keep proper footing and balance at all times. This enables better control of the equipment in unexpected situations.
- Dress properly. Do not wear loose clothing or jewelry. Keep hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- 17. Parts, especially exhaust system components, get very hot during use. Stay clear of hot parts.
- Do not cover the engine or equipment during operation.
- 19. Keep the equipment, engine, and surrounding area clean at all times.
- 20. Use the equipment, accessories, etc., in accordance with these instructions and in the manner intended for the particular type of equipment, taking into account the working conditions and the work to be performed. Use of the equipment for operations different from those intended could result in a hazardous situation.
- 21. Do not operate the equipment with known leaks in the engine's fuel system.
- 22. This product contains or, when used, produces a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. (California Health & Safety Code § 25249.5, *et seq.*)

24. Keep hands and feet away from moving parts. Do not reach over or across equipment while operating.

### Service Precautions

- 1. Before service, maintenance, or cleaning:
  - a. Turn the engine switch to its "OFF" position.
  - b. Allow the engine to completely cool.
  - c. Then, remove the spark plug cap from the spark plug.
- 2. Keep all safety guards in place and in proper working order. Safety guards include muffler, air cleaner, mechanical guards, and heat shields, among other guards.
- 3. Do not alter or adjust any part of the equipment or its engine that is sealed by the manufacturer or distributor. Only a qualified service technician may adjust parts that may increase or decrease governed engine speed.

### Air Compressor Safety Warnings

- 1. Risk of fire or explosion Do not spray flammable liquid in a confined area or towards a hot surface. Spray area must be well-ventilated. Do not smoke while spraving or sprav where spark or flame is present. Arcing parts - Keep compressor at least 20 feet away from explosive vapors, such as when spraying with a spray gun.
- Risk of bursting Do not adjust regulator higher 2. than maximum stated pressure of attachment.
- 3 Risk of injury - Do not direct air stream at people or animals.
- Do not use to supply breathing air. 4.
- 5. Do not use the air hose to move the compressor.
- Drain Tank daily and after use. Internal rust 6. causes tank failure and explosion.

- 25. Before use, check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the equipment's operation. If damaged, have the equipment serviced before using. Many accidents are caused by poorly maintained equipment.
- 26. Use the correct equipment for the application. Do not modify the equipment and do not use the equipment for a purpose for which it is not intended.
- 4. Wear ANSI-approved safety goggles, heavy-duty work gloves, and dust mask/respirator during service.
- 5. Maintain labels and nameplates on the equipment. These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
- 6. Have the equipment serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the equipment is maintained. Do not attempt any service or maintenance procedures not explained in this manual or any procedures that you are uncertain about your ability to perform safely or correctly.
- 7. Store equipment out of the reach of children.
- 8. Follow scheduled engine and equipment maintenance.
- 7. Add correct amount of compressor oil before first use and every use. Operating with the incorrect amount of oil causes permanent damage and voids warranty. To prevent damage, do not use with overfilled or low oil.
- 8. Compressor head gets hot during operation. Do not touch it or allow children nearby during or immediately following operation.
- 9. Release the pressure in the storage tank before moving.
- 10. The use of accessories or attachments not recommended by the manufacturer may result in a risk of injury to persons.
- 11. All air line components, including hoses, pipe, connectors, filters, etc., must be rated for a minimum working pressure of 125 PSI, or 150% of the maximum system pressure, whichever is greater.

## SAVE THESE INSTRUCTIONS.

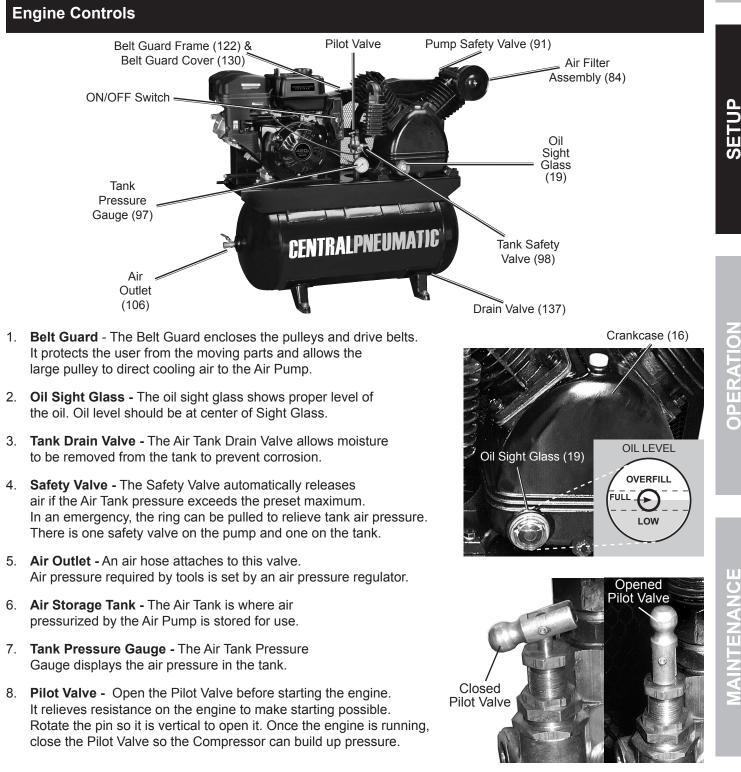
MAINTENANCE

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Specifications				
Pump	Two stage	Oil Capacity	61 oz. (1.8L)	
Air Outlet Size	1/2"- NPT female		SAE 30W non-detergent	
Air Pressure Auto Shut-Off @ 180 PSI Restart @ 140 PSI		Oil Type	Air Compressor Oil (SKU 95048, sold separately)	
Air Tank Capacity	30 Gallons	Required Rotation	Counterclockwise	
Air Flow Capacity18 CFM @ 90 PSI 19.5 CFM @ 40 PSI(power takeoff - the Required Eng		(power takeoff - the output shaft)		
		Required Engine	2100 RPM ± 100 RPM	

Note: Engine specifications are found in the engine manual supplied with this equipment.



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For technical questions, please call 1-800-444-3353.

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#### Setup

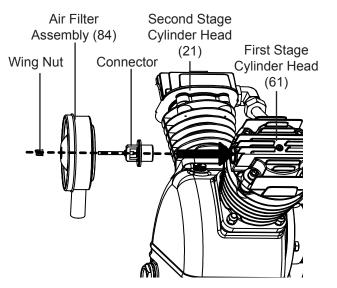
The emission control system for this Compressor's Engine is warranted for standards set by the U.S. Environmental Protection Agency and by the California Air Resources Board (also known as CARB). For warranty information, refer to the engine manual.

### Mounting to a Truck bed

- 1. Before mounting, if needed, reinforce the area with plywood or steel plating.
- 2. With assistance, move the compressor to the truck bed location and mark the floor of the truck bed through the holes in the compressor's feet. Check for any hidden wiring or cables and adjust the location for the holes as needed. Then, temporarily set the compressor aside.
- 3. Drill the four 1/2" diameter holes through the truck bed and any reinforcing materials.
- 4. Set the compressor back in place, and align the foot holes with the pre-drilled holes. Use four 1/2" diameter, bolts, washers and lock washers (all not included) to secure the compressor in place.

### Assembly

To install the Air Filter Assembly (84), fit the Connector into the Air Filter Assembly and slide the assembly into the hole on the side of the First Stage Cylinder Head (61). Secure in place with the Wing Nut.



### **Break-In Compressor**

Break in the new Air Compressor as follows:

- a. Make sure the engine is off. Open the air outlet valve on the left side of the tank.
- b. Check all fluid levels in the engine and pump.
- c. Start the engine following the General Operating Instructions.
- d. Let the unit run for 30 minutes. Air will expel freely through the Coupler.
- e. Turn OFF the engine.
- f. Remove the male coupler.

### Connection

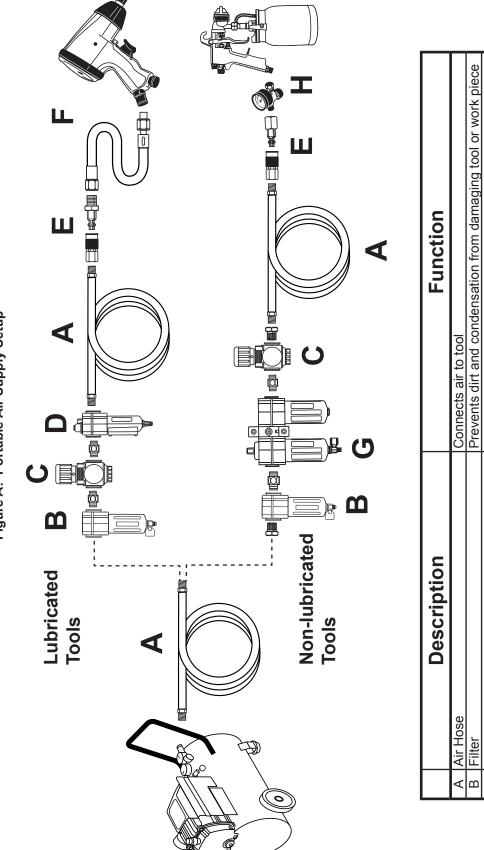
 Connect a regulator valve, an in-line shut off valve and a 1/2" NPT air hose (all sold separately) to the Quick Coupler. The air hose must be long enough to reach the work area with enough extra length to allow free movement while working.

<u>Note:</u> An in-line shutoff ball valve is an important safety device because it controls the air supply even if the air hose is ruptured. The shutoff valve should be a ball valve because it can be closed quickly.

 Depending on the tool which you will be using with this compressor, you may need to incorporate additional components, such as an in-line oiler, a filter, or a dryer (all sold separately). Consult your air tool's manual for needed accessories. See Typical Air Line Setup charts on the following pages. This is a truckbed compressor, so use the portable setup as a model.

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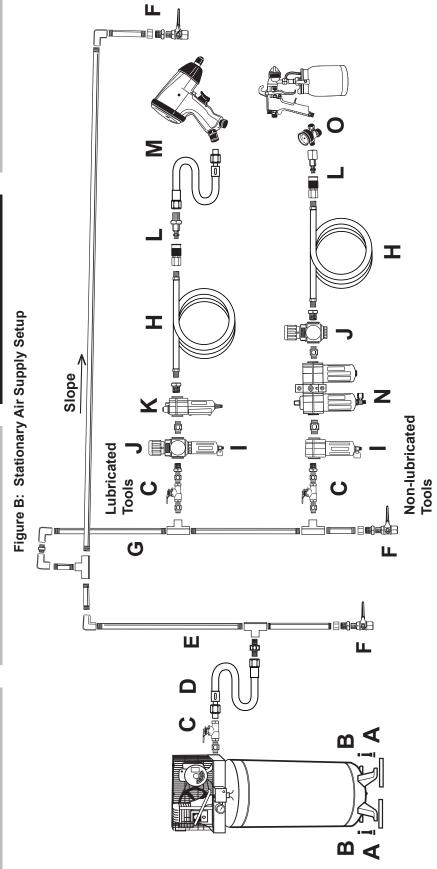


	Description	Function
∢	Air Hose	Connects air to tool
ш	Filter	Prevents dirt and condensation from damaging tool or work piece
ပ	Regulator	Adjusts air pressure to tool
	Lubricator (optional)	For air tool lubrication
ш	Coupler and Plug	Provides quick connection and release
ш	Leader Hose (optional)	Increases coupler life
Ċ	Air Cleaner / Dryer (optional)	Prevents water vapor from damaging work piece
Т	Air Adjusting Valve (optional)	For fine tuning airflow at tool

Figure A: Portable Air Supply Setup



**OPERATION** 



	Description	Function
∢	Vibration Pads	For noise and vibration reduction
B	Anchor Bolts	Secures air compressor in place
ပ	Ball Valve	Isolates sections of system for maintenance
	Isolation Hose	For vibration reduction
ш	Main Air Line - 3/4" minimum recommended	Distributes air to branch lines
ш	Ball Valve	To drain moisture from system
G	Branch Air Line -1/2" minimum recommended	Brings air to point of use
Т	Air Hose	Connects air to tool
_	Filter	Prevents dirt and condensation from damaging tool or work piece
~	Regulator	Adjusts air pressure to tool
$\mathbf{x}$	Lubricator (optional)	For air tool lubrication
_	Coupler and Plug	Provides quick connection and release
Σ	Leader Hose (optional)	Increases coupler life
z	Air Cleaner / Dryer (optional)	Prevents water vapor from damaging work piece
0	Air Adjusting Valve (optional)	For fine tuning airflow at tool

#### Operation



Read the <u>ENTIRE</u> IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

### Using the Compressor

Inspect Compressor, engine, pump and equipment looking for damaged, loose, and missing parts before set up and starting. If any problems are found, do not use equipment until fixed properly.

**Note:** At the beginning of the day's first use of the Air Compressor, check for air leaks by applying soapy water to connections while the Air Compressor is pumping and after pressure cut-out. Look for air bubbles. If air bubbles are present at connections, tighten connections. Do not use the air compressor unless all connections are air tight. The extra air leaking out will cause the compressor to operate too often, increasing wear on the compressor.

#### Before starting the Compressor:



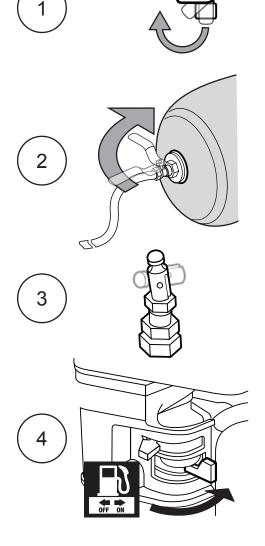
- a. Follow the Set Up Instructions in the equipment manual to prepare the equipment.
- b. Follow the Set Up Instructions in the Engine manual to prepare the engine.
- c. Inspect all components of the setup. Make sure all nuts and bolts are tight.
- d. Fill the Engine with the proper amount and type of both fuel and oil.
- e. Fill the Compressor Pump with compressor oil following the Maintenance Instructions in this manual.

#### To Start and Use the Compressor

1. Close the Drain Valve (137) by turning the lever up so that it is perpendicular to the valve.

- 2. Close the in-line Shutoff Valve between the compressor and the air hose.
- 3. Open the Pilot Valve by rotating it to a vertical position.

4. Open the Fuel Valve.

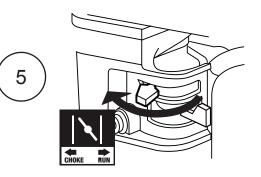




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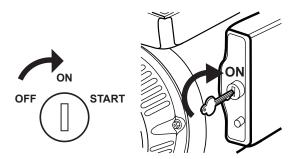
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 To start a cold engine, move the Choke to the CHOKE (start/closed) position.
 To restart a warm engine, leave the Choke in the RUN position.

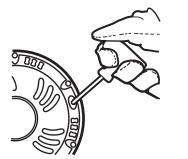


#### 6. For MANUAL START

a. Turn the Engine Switch to ON.



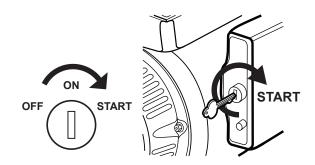
b. Grip the Starter Handle of the Engine loosely and pull it slowly several times to allow the gasoline to flow into the Engine's carburetor. Then pull the Starter Handle gently until resistance is felt. Allow Cable to retract fully and then pull it quickly. Repeat until the engine starts. Note: Do not let the Starter Handle snap back against the engine. Hold it as it recoils so it doesn't hit the engine.



#### For ELECTRIC START

Turn the Engine Switch to START.

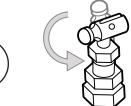
**Note:** To prolong starter life, use short starting cycles (5 seconds maximum). Then wait one minute before attempting to start again.



 Allow the Engine to run for several seconds. Then, if the Choke lever is in the CHOKE position, move the Choke Lever very slowly to its RUN position.

**Note:** Moving the Choke Lever too fast could kill the engine.





8. Close the Pilot Valve by rotating it to a horizontal position.

SAFE

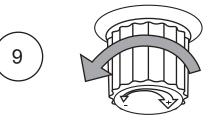
For technical questions, please call 1-800-444-3353.

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Item 69784

9. When the Gas Engine is started and running, the compressor Pump starts compressing air into the Air Tank. Open the in-line Shutoff Valve and adjust the Pressure Regulator (sold separately) so that the air output is enough to properly power the tool, but the output will not exceed the tool's maximum air pressure at any time. Turn the knob clockwise to increase the pressure and counterclockwise to decrease pressure. Adjust the pressure gradually, while checking the air output gauge to set the pressure.



**IMPORTANT:** Allow the engine to run for five minutes with no load after each start-up so that the engine can stabilize.

#### Maintenance Break-in Period:

Breaking-in the engine will help to ensure proper equipment and engine operation. The **maintenance** break-in period will last about 20 hours of use. After this period, change the engine oil.

Under normal operating conditions, subsequent maintenance follows the schedule explained in the MAINTENANCE AND SERVICING section.

**Note:** When maximum tank pressure is reached, the compressor automatically disengages, and the engine RPM drops down to idle speed. The engine remains at idle until Air Tank pressure falls to a preset level. The Gas Engine will then accelerate and air pressure once again begins to build up in the Air Tank.

**Note:** As long as the engine is running, the operation of the Air Compressor is automatic, controlled by an internal pressure switch.

**IMPORTANT:** The internal pressure switch is not user adjustable; **do not make changes to the air pressure settings of the internal pressure switch.** Any change to the automatic pressure levels may cause excess pressure to accumulate, causing a hazardous situation.

**<u>Note:</u> Depressurization -** If it is necessary to quickly *depressurize* the Compressor, turn OFF the engine. Then, pull on the ring on the tank Safety Valve to release stored air pressure.

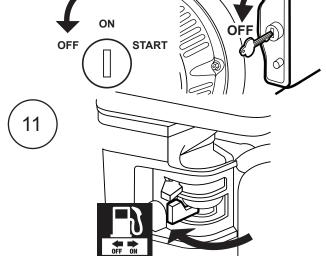
10. Use the air tool as needed.



 After the job is complete, turn OFF the engine. To stop the engine in an emergency, turn the Engine Switch off.

Under normal conditions, use the following procedure:

- a. Turn the Engine Switch off.
- b. Close the Fuel Valve.



For technical questions, please call 1-800-444-3353.

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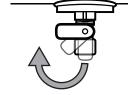
#### 12. Close the in-line Shutoff Valve.

- 13. Bleed air from the tool then disconnect the tool.
- SETUP
- 14. Open the Drain Valve at the bottom of the Tank, to release any built-up moisture and the internal tank pressure.



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13



15. Clean, then store the Air Compressor indoors.

**OPERATION** 

# SAFETY

#### Maintenance

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TO PREVENT SERIOUS INJURY FROM ACCIDENTAL STARTING:

Turn the Power Switch of the equipment to its "OFF" position, release tank air pressure, wait for the engine to cool, and disconnect the spark plug cap before performing any inspection, maintenance, or cleaning procedures.

TO PREVENT SERIOUS INJURY FROM EQUIPMENT FAILURE: Do not use damaged equipment. If abnormal noise, vibration, or excess smoking occurs, have the problem corrected before further use.

Follow all service instructions in this manual. The engine may fail critically if not serviced properly.



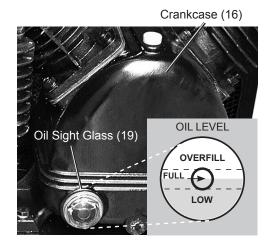
Many maintenance procedures, including any not detailed in this manual, will need to be performed by a qualified technician for safety. If you have any doubts about your ability to safely service the equipment or engine, have a qualified technician service the equipment instead.

### **Compressor Pump Oil Maintenance**

Check oil periodically for clarity. Replace oil if it appears milky or if debris is present, or every 6 months, or 100 hours of runtime, whichever comes first. In harsh environments such as high heat or high humidity, you will need to replace the oil more frequently.

Change the compressor oil after the first hour of use to remove any debris.

### Adding Oil



- The oil level should be at the center of the "full" level on the Oil Sight Glass, as shown above. Add oil as needed to maintain this level. Do not let the oil level go below the center dot (LOW as shown above) and do not overfill the oil so that it is above the center dot (OVERFILL as shown above) on the Oil Sight Glass.
- 2. To add oil:
  - a. Remove the Oil Plug (17).
  - b. Using a funnel to avoid spills, pour enough oil into the pump Crankcase to reach the "full" level in the Oil Sight Glass.
  - c. Replace the Oil Plug.

#### **Cold Weather Operation**

Premium quality 30-weight, non-detergent air compressor oil (sold separately) is recommended for use with this compressor. Start compressor in heated area if outdoor temperatures drop below 32° F. If this is not practical, drain out the old pump oil and use SAE 10W Non-detergent Air Compressor Oil in the pump crankcase instead whenever the compressor's temperature will fall below 40°. Do not use multi-viscosity oil (such as 10W-30), they leave carbon deposits on pump components and lead to accelerated failure. Heavy operation may require heavier viscosity oil.

3. If uncertain which oil to use for this compressor, please call Harbor Freight Tools customer service at 1-800-444-3353 for assistance.

**WARNING!** To prevent serious injury from burns: Do not add or change the oil while the compressor is in operation. Allow the compressor to cool before replacing oil.

### **Changing Oil**

- Place a container under the Drain Plug. 1.
- 2. Remove the Oil Plug to allow air flow into the Pump.
- Remove the Drain Plug, allowing the 3. oil to drain into the container.
- When the oil is completely drained from 4 the Pump, replace the Drain Plug.

### Draining Moisture from the Tank

The Drain Valve is located under the Tank. It must be accessed daily to release all trapped air and moisture from the Tank. This will eliminate condensation which can cause tank corrosion. To empty the air and condensation:

- 1. Make sure the compressor engine is off.
- Place a collection pan under the Drain Valve. 2.

### Air Filter Maintenance

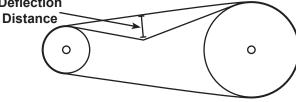
Check the Air Filter weekly to see if it needs replacement. If working in dirty environments, you may need to replace the filter more often. To replace the Air Filter:

Unthread the Wing Nut holding the 1. Air Filter Assembly in place.

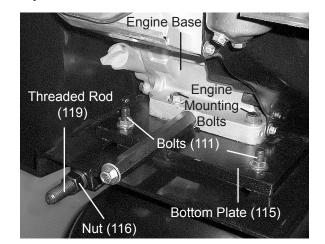
### Adjusting Belt Tension

1. Remove the Belt Guard Cover (130) and set it aside.

Deflection



Press on the center of the longest span on each belt with moderate finger pressure (4-4.5 lb.). Then measure the deflection distance, the distance that the belt moved. The belt should deflect anywhere from 1/2" to 1".



- 5. Fill the Pump with new compressor oil to the FULL level on the Oil Sight Glass.
- 6. Replace and tighten the Oil Plug.
- Discard the old oil according to local, 7. state and federal regulations.
- Open the Drain Valve by pivoting the lever 3. on the bottom of the Compressor so the lever is in line with the Drain Valve.
- When all the pressure is released, close 4 the Drain Valve by pivoting the lever on the bottom of the compressor so that the lever is perpendicular to the Drain Valve.
- 2. Remove the Air Filter Assembly.
- 3. Replace with a new Air Filter.
- Secure in place with the Wing Nut. 4.
- 3. If either belt deflects too much, tighten belts by loosening the four Bolts (111) on the Bottom Plate (115) and moving the engine away from the other pulley slightly by turning the Nut (116) holding the Threaded Rod (119). Secure engine mounting bolts and retest tension. If either belt is too long to be properly tensioned, both belts must be replaced.
- If either belt deflects too little, loosen belts by 4 loosening the Bolts on the Bottom Plate and moving the engine towards the other pulley slightly by turning the Nut (116) on the Threaded Rod (119). Secure engine mounting bolts and retest tension.
- 5 Before use, replace belt cover.

### Troubleshooting

Problem	Possible Causes	Likely Solutions	
Engine will	COMPRESSOR SPECIFIC:	COMPRESSOR SPECIFIC:	
not start	1. Pilot Valve closed.	<ol> <li>Open pilot valve before start procedure, close after unit is running.</li> </ol>	
(Note: See engine	2. Tank already pressuring		
manual for engine	2. Tank already pressurized.	<ol> <li>Turn engine on. Compressor will turn on as needed when pressure reaches preset level.</li> </ol>	
specific issues.)		needed when pressure reaches preseriever.	
	1. Incorrect lubrication or	1. Lubricate using recommended oil or	
Compressor	not enough lubrication.	grease according to directions.	
overheats	2. Worn parts.	<ol> <li>Have qualified technician inspect internal mechanism and replace parts as needed.</li> </ol>	
	1. Poor air outlet seal.	1. Tighten or re-attach using thread seal tape.	
	<ol> <li>Loose cylinder/cylinder head.</li> </ol>	2. Tighten cylinder/cylinder head assembly.	
Severe air		If cylinder/cylinder head cannot tighten properly,	L_
leakage	3. Damaged valve or housing.	internal parts may be misaligned.	
loanage	4. Dirty, worn or damaged valve.	3. Replace damaged components.	
		4. Clean or replace valve assembly.	
	1. Low engine idle.	1. Qualified technician should increase idle to	1
		2,200±100 RPM by adjusting pressure switch.	
Unit stalls	2. Severely clogged air filter.	2. Replace air filter.	
	3. Improper lubrication.	3. Check for proper oil level.	
	4. Defective pilot/unloader valve.	4. Replace pilot valve.	
	1. Loose drive pulley or flywheel.	1. Loose pulleys are a common cause of	1
		"knocking". Tighten appropriate bolts.	
	2. Misaligned pulleys.	2. Align pulleys with straightedge and secure in place.	
Excessive noise	3. Lack of oil in crankcase.	3. Check for proper oil level.	L
	4. Worn connecting rod.	4. Replace connecting rod.	
	5. Worn wrist pin bushing.	5. Remove piston assembly and replace necessary parts.	
	6. Worn bearings.	6. Replace bearings and oil.	
	7. Loose belts.	7. Check for proper belt tension.	
	<ol> <li>Wrong type of oil or low-quality oil.</li> </ol>	1. Change oil. Check oil recommendations under EQUIPMENT SET UP, Equipment Oil Fill section of this manual.	
	2. Overheating.	2. See above Excessive Noise section.	
Oil in the	3. Restricted intake air.	3. Clean or replace air filter.	
discharge air	4. Worn piston rings.	4. Replace piston rings.	
	5. Excessive moisture	5. Drain moisture from the tank daily.	
	in the tank.		
	1. Air leaks.	<ol> <li>Listen for escaping air. Apply soap solution to all fittings and connections. Bubbles will appear at points of leakage. Tighten or replace leaking fittings or connections.</li> </ol>	
Low discharge pressure	2. Leaking valves.	<ol> <li>Remove head and inspect for valve breakage, weak valves, scored valve plate, etc. Replace defective parts and reassemble. Replace head gasket each time the head is removed.</li> </ol>	
	3. Restricted air intake.	3. Clean or replace air filter element.	
	4. Blown gaskets.	4. Replace and gaskets proven faulty on inspection.	
	5. Slipping belts.	5. Tighten Belts (See monthly maintenance.)	



Follow all safety precautions whenever diagnosing or servicing the equipment or engine.

**OPERATION** 

SAFETY

SETUP

#### Parts Lists and Diagrams

### **Pump Parts List**

Part	Description	Qty	Part	Description	Qt
1	Bolt M12×55	1	48	Brass Tube	1
2	Spring Washer 12	1	49	Cylinder Head	1
3	Flat Washer	1	50	Spring Washer	4
4	Drive Pulley	1	51	Bolt M10×65	4
5	Oil Seal Circle	1	52	Bolt M8×60	1
6	Flange Plate	1	53	Spring Washer 10	1
7	O-ring Ø85	1	54	Nut	1
8	Bearing	1	55	Elbow	1
9	Bolt M12×40	6	56	Bolt M8×35	2
10	Oil Breather	1	57	Spring Washer 8	2
11	Crankcase End Cover	1	58	Gasket	1
12	Flat Key	1	59	Radiator	1
13	Crankshaft	1	60	Connector	1
14	Bearing	1	61	First Stage Cylinder	1
15	Gasket	1	62	Bolt M12×40	4
16	Crankcase	1	63	Spring Washer 12	4
17	Oil Plug	1	64	Gasket	1
18	Gasket	1	65	Bushing	2
19	Oil Sight Glass	1	66	Connecting Rod A	1
20	Drain Oil Bolt	1	67	Connecting Rod B	1
21	Second Stage Cylinder	1	68	Spring Washer 10	2
22	Bolt M12×40	4	69	Bolt M10×55	2
23	Spring Washer 12	4	70	Bushing	1
24	Gasket	1	71	Wiper Ring	2
25	Connecting Rod A	1	72	Piston	1
26	Connecting Rod B	1	73	Pin	1
27	Bearing Shell	2	74	Clip	2
28	Spring Washer 10	4	75	Piston Ring	2
29	Bolt M10×55	2	76	Gasket	1
30	Bushing	1	77	Valve	1
31	Clip	2	78	Aluminum Seal	1
32	Pin	1	79	Bolt M8×30	4
33	Piston	1	80	Spring	8
34	Wiper Ring	2	81	Restrictor	4
35	Piston Ring	2	82	Valve Plate	4
36	Gasket	1	83	Nut M8	4
37	Valve	1	84	Air Filter Asm.	1
38	Aluminum Seal	1	85	Cylinder Head	1
39	Bolt M6×25	4	86		4
40	Valve Stop Block	4	87	Bolt M12×70	4
41	Spring	8	88	Spring Washer 8	4
42	Valve Plate	4	89	Bolt M8×70	4
43	Nut M6	4	90	Nut	1
44	Lock Nut	1	91	Safety Valve	1
45	Elbow	1	92	Elbow	1
46	Taper Sleeve		93	Taper Sleeve	1
47	Nut	1	94	Nut	1

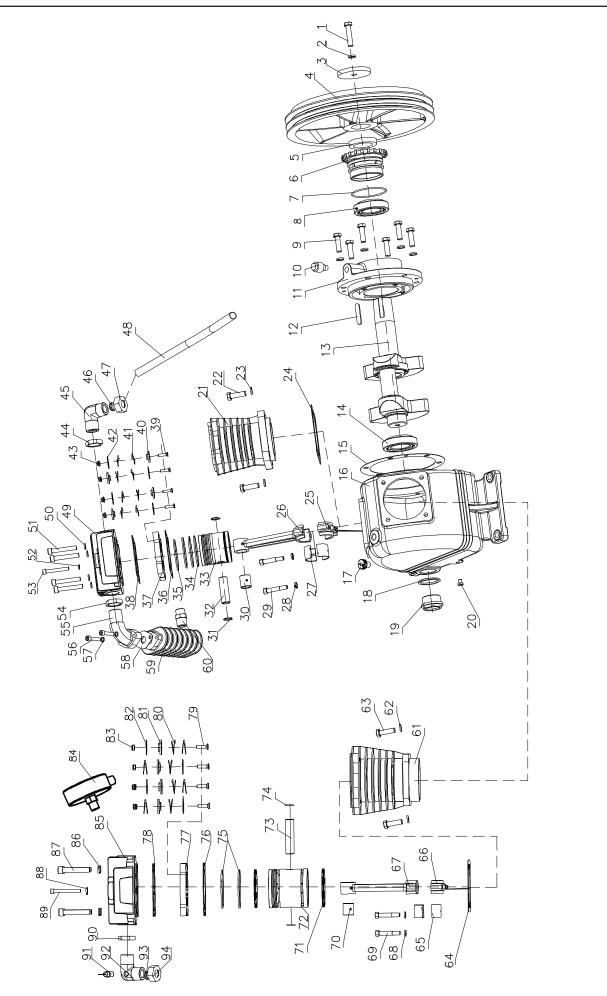
#### Record Product's Serial Number Here:\_

**Note:** If product has no serial number, record month and year of purchase instead.

**Note:** Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

For technical questions, please call 1-800-444-3353.

### **Pump Assembly Diagram**



SAFETY

SETUP

For technical questions, please call 1-800-444-3353.

### **Tank Parts List**

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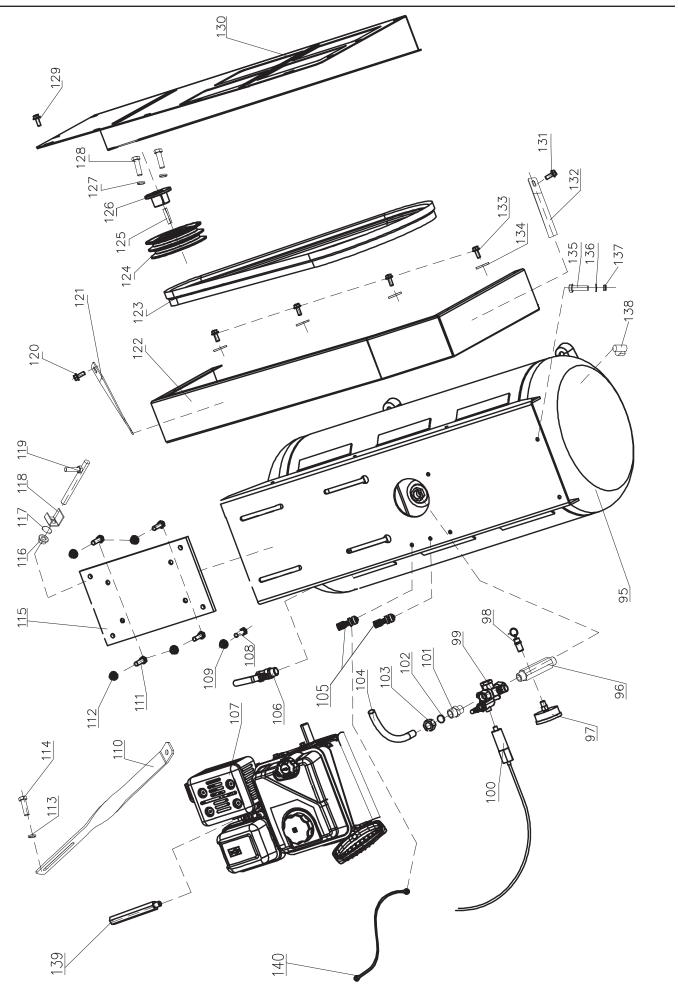
Part	Description	Qty
95	Tank	1
96	Connector	1
97	Pressure Gauge	1
98	Safety Valve	1
99	Unloader Valve	1
100	Throttle Control	1
101	Connector	1
102	Taper Sleeve	2
103	Pipe Nut	2
104	Brass Tube	1
105	Battery Terminal	2
106	Air Outlet	1
107	Engine	1
108	Bolt M10×40	4
109	Nut M10	4
110	Bracket	1
111	Bolt M10×50	4
112	Nut M10	4
113	Washer 8	1
114	Bolt M8×20	1
115	Bottom Plate	1
116	Nut M14	1
117	Spring Washer 14	1

Part	Description	Qty
118	Bracket	1
119	Threaded Rod	1
120	Bolt M6×20	1
121	Belt Guard Bracket A	1
122	Belt Guard Frame	1
123	Belt	2
124	Driven Pulley	1
125	Plate Ket	1
126	Bushing	1
127	Spring Washer 8	2
128	Bolt M8×30	2
129	Bolt M6×10	11
130	Belt Guard Cover	1
131	Bolt M6×10	1
132	Belt Guard Bracket B	1
133	Bolt M8×16	4
134	Washer 8	4
135	Bolt M12×45	4
136	Spring Washer 12	4
137	Bolt M12	2
138	Drain Valve	1
139	Engine Oil Drain Bolt	1
140	Wire	1

### PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

### Tank Assembly Diagram



SAFETY

SETUP

**OPERATION** 

#### Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

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