

21 GALLON CAST IRON VERTICAL OIL-LUBRICATED AIR COMPRESSOR

Model 94667

OPERATING INSTRUCTIONS



Visit our website at: http://www.harborfreight.com

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

Copyright[®] 2006 by Harbor Freight Tools[®]. All rights reserved. No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools. Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. Tools required for assembly and service may not be included.

For technical questions or replacement parts, please call 1-800-444-3353. Revised Manual 10d

SPECIFICATIONS TABLE

Maximum Air Pressure	115 PSI			
Air Tank Capacity	21 Gallons			
Air Flow Capacity	4.9 SCFM at 90 PSI 7 SCFM at 40 PSI			
Motor	3 HP Working / 5 HP Peak 120 Volt / 60 Hz / 12 A / 1-Phase			
Required Circuit	Minimum 20 Amp * Dedicated			
Pump Stage	Single			
Air Outlet Size	1/4" - 18 NPT			
Accessories	Air Intake Filter; Air Hose Coupler			



*A dedicated circuit is used only for a single load, for this compressor. Other loads on the circuit must be disconnected or turned off when the compressor is plugged in.

SAVE THIS MANUAL

You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures, parts list and assembly diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep this manual and invoice in a safe and dry place for future reference.

GENERAL SAFETY WARNINGS AND PRECAUTIONS

- 1. **KEEP WORK AREA CLEAN AND DRY.** Cluttered, damp, or wet work areas invite injuries.
- 2. **KEEP CHILDREN AWAY FROM WORK AREA.** Do not allow children to handle this product.
- 3. **KEEP IDLE EQUIPMENT.** When not in use, tools and equipment should be kept in a dry location to inhibit rust. Always lock up tools and equipment, and keep out of reach of children.
- 4. **DO NOT USE THIS PRODUCT IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.** Read warning labels on prescriptions to determine if your judgement or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to use this product.
- 5. **USE EYE AND HAND PROTECTION.** Wear ANSI-approved safety impact goggles and heavy-duty work gloves when using this product. ANSI-approved safety impact eyeglasses and heavy-duty work gloves are available from Harbor Freight Tools.
- 6. **DRESS SAFELY.** Do not wear loose clothing or jewelry, as they can become caught in moving parts. Wear a protective hair covering to prevent long hair from becoming caught in moving parts. If wearing a long-sleeve shirt, roll sleeves up above elbows.

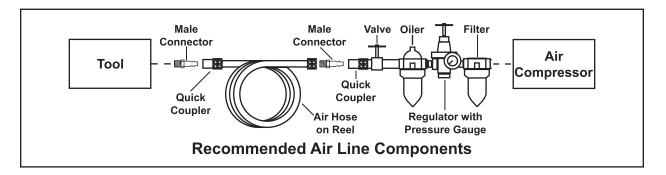
- 7. **DO NOT OVERREACH.** Keep proper footing and balance at all times to prevent tripping, falling, back injury, etcetera.
- 8. INDUSTRIAL APPLICATIONS MUST FOLLOW OSHA REQUIREMENTS.
- 9. **STAY ALERT.** Watch what you are doing at all times. Use common sense. Do not use this product when you are tired or distracted from the job at hand.
- 10. **CHECK FOR DAMAGED PARTS.** Before using this product, carefully check that it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace or repair damaged or worn parts immediately.
- 11. **REPLACEMENT PARTS AND ACCESSORIES:** When servicing, use only identical replacement parts. Only use accessories intended for use with this product. Approved accessories are available from Harbor Freight Tools.
- 12. **MAINTAIN THIS PRODUCT WITH CARE.** Keep this product clean and dry for better and safer performance.
- 13. **MAINTENANCE:** For your safety, service and maintenance should be performed regularly by a qualified technician.
- 14. **USE THE RIGHT TOOL FOR THE JOB.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this tool, and do not use this tool for a purpose for which it was not intended.
- 15. **WARNING:** The warnings, precautions, and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. The operator must understand that common sense and caution are factors, which cannot be built into this product, but must be supplied by the operator.

SPECIFIC PRODUCT WARNINGS AND PRECAUTIONS

- 1. **WARNING:** Make sure to fill the Air Compressor with a premium quality, 30-weight, non-detergent compressor oil before each use. Running the Air Compressor with no oil or low oil will cause damage to the equipment. **Note:** The oil reservoir has an optimal capacity of 30 ounces of oil.
- 2. WHEN CHECKING THE OIL LEVEL: Make sure to <u>unscrew</u> (do not pull) the Breather Valve (14B) out. (See Figure C, and Assy. Diagram B.)
- 3. MAKE SURE ALL TOOLS AND EQUIPMENT USED WITH THE AIR COMPRESSOR ARE RATED TO THE APPROPRIATE CAPACITY. Do not use any tool or equipment that does not operate from 0 to 115 PSI.
- 4. DO NOT LEAVE COMPRESSOR UNATTENDED FOR AN EXTENDED PERIOD WHILE PLUGGED IN. Unplug compressor after working.
- 5. **KEEP COMPRESSOR WELL-VENTILATED.** Do not cover compressor during use.
- 6. **DRAIN AIR COMPRESSOR EVERY DAY.** Do not allow moisture to build up inside the Air Compressor. (See "INSPECTION, MAINTENANCE, AND CLEANING" section of this manual.)
- 7. **MAINTAIN A SAFE WORKING ENVIRONMENT.** Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use the Air Compressor in areas near flammable chemicals, dusts, and vapors.
- 8. **AVOID INJURY:** Never direct the Air Flow Valve (6A) at people or animals. **(See Assy. Diagram A.)**
- 9. DO NOT ALTER OR REMOVE THE FACTORY SEALED PRESSURE RELEASE VALVE (5A). (See Assy. Diagram A.)
- 10. DO NOT OPEN THE WATER DRAIN VALVE (10A) SO THAT MORE THAN FOUR THREADS ARE SHOWING. (See Assy. Diagram A.)
- 11. AN EXTENSION CORD MUST <u>NEVER</u> BE USED WITH THIS ITEM. Connecting this item to an outlet through an extension cord MAY CAUSE ELECTRICAL DAMAGE TO THE MOTOR and could present a FIRE HAZARD.
- 12. THIS COMPRESSOR MAY REQUIRE A DEDICATED ELECTRICAL CIRCUIT AS THE AMPERAGE DRAW UNDER FULL LOAD COMBINED WITH USE OF ANY OTHER ITEM MAY OVERLOAD YOUR CIRCUIT.
- WARNING: This product contains or 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.*)

SKU 94667 For technical questions, please call 1-800-444-3353. PAGE 4

14. **WARNING:** People with pacemakers should consult their physician(s) before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference to or failure of the pacemaker.



TO EXTEND THE LIFE OF YOUR AIR TOOLS AND EQUIPMENT, it is recommended to install an oiler and water filter in series (available from Harbor Freight Tools) with the Air Output Line of the Air Compressor.

UNPACKING

When unpacking, check to make sure all the parts shown on the <u>Parts Lists on</u> <u>pages 9, and 10</u> are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

IMPORTANT! This compressor is shipped with the oil fill plug removed and without oil. The oil fill plug is attached to the power cord as a reminder to add oil to the crankcase. Add oil to the proper level as explained below and secure the oil fill plug before use.

OPERATING INSTRUCTIONS

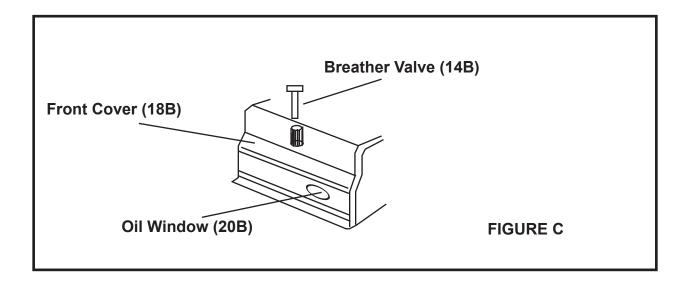
NOTE: For additional references to the parts listed below, refer to the **Assembly Diagrams on pages 9, and 10**.

To Check The Oil Level:

1. The Oil Window (20B) is used to determine if oil is needed. The oil level should always be at the maximum level (red line on the Oil Window). (See Figure C, and Assy. Diagram B.)

REV 07i

 If necessary, add a premium quality, 30-weight, non-detergent compressor oil into the Oil Fill Hole until the level of oil reaches the maximum level as indicated on the Oil Window (20B). The optimal capacity of the oil reservoir is 30 ounces. <u>Do not overfill</u>. Then thread the Breather Valve back into the Oil Fill Hole, being careful not to strip the plastic threads. (See Figure C, and Assy. Diagram B.)



To Turn The Air Compressor On:

- 1. Check to make sure the Water Drain Valve (10A) is fully closed.
- 2. Turn the Air Flow Valve (6A) to its "OFF" position.
- 3. Connect the air hose (not provided) to the Air Flow Valve (6A) of the Air Compressor. Then, connect the other end of the air hose to the pneumatic tool (not provided) that is to be used.
- 4. Note: Always plug the Power Cord of the Air Compressor into a 115 V~ electrical source (±10% maximum variation).
- 5. Rotate the "ON/OFF" Power Switch (1A) to the horizontal position to turn the Air Compressor <u>on</u>. (Rotate the "ON/OFF" Power Switch (1A) to the vertical position to turn the Air Compressor <u>off</u>.)
- 6. Allow sufficient time for the Tank Pressure Gauge (4A) to indicate **<u>80 PSI</u>** before using the Air Compressor.
- 7. Turn the Air Flow Valve (6A) to its "ON" position to allow air to the pneumatic tool.

8. **NOTE:** With the Air Compressor turned on, the operation is automatic and under the control of the automatic switches inside the box under the Power Switch (1A). **NEVER open the power switch box or adjust the controls within.**

To Adjust The Air Output To The Pneumatic Tool:

- NOTE: When adjusting the air pressure being forwarded to the pneumatic tool, you will need to compare the pressure readings of both the Tank Pressure Gauge (3A) and the Tool Pressure Gauge (4A). The reading on the Tank Pressure Gauge dictates the maximum/minimum air pressure at which the Tool Pressure Gauge may also be set.
- 2. With the Air Compressor running, and the air hose and pneumatic tool hooked up to the Air Compressor, pull up on the Tool Pressure Adjuster (2A). Turn the Tool Pressure Adjuster **clockwise to increase** the air output to the tool, up to the working air pressure (115 PSI) as indicated on the Tank Pressure Gauge (3A).
- 3. Turn the Tool Pressure Adjuster (2A) **<u>counterclockwise to decrease</u>** the air output to the tool, down to the minimum rated pressure (0 PSI) as indicated on the Tank Pressure Gauge (3A).

To Use The Tank Pressure Relief Valve:

- 1. The Tank Pressure Relief Valve Ring (5A) is used when decompression is needed quickly and efficiently.
- 2. To decompress the Air Tank (9A) pressure, rotate the "ON/OFF" Power Switch (1A) up to the vertical position to turn off the Air Compressor.
- 3. Pull out on the Tank Pressure Relief Valve Ring (5A) to immediately release air pressure in the Air Tank (9A).

To Empty Air And Condensation From The Tank:

1. The Water Drain Valve (10A) is located underneath the Air Tank (9A), and should be used daily to release all trapped moisture through this valve. The Water Drain Valve will also eliminate condensation that may cause Air Tank corrosion.

2. WARNING: Do not open the Water Drain Valve (10A) so that more than four threads are showing.

- 3. Rotate the "ON/OFF" Power Switch (1A) up to the vertical position to turn off the Air Compressor. Then, unplug the Air Compressor's Power Cord from the electrical outlet.
- 4. Slowly and carefully unscrew (no more than four threads) the Water Drain Valve (10A) until the compressed air and condensation begins to be released from the Air Tank (9A). Allow sufficient time for all of the air and condensation to escape from the Air Tank. Then, firmly retighten the Water Drain Valve.

Reference: Overload Switch (35B)

The overload breaker will trip if an over-current condition is sensed, stopping the motor. If this occurs, shut off the pressure switch and wait at least 5 minutes.

Release the air pressure in the tank to ease restarting. Then press the breaker button to reset it, and turn on the pressure switch.

INSPECTION, MAINTENANCE, AND CLEANING

- 1. **CAUTION:** Always disconnect the Air Compressor from its electrical supply source before performing any inspection, maintenance, or cleaning.
- 2. **BEFORE EACH USE,** inspect the general condition of the Air Compressor. Check all air fittings for leaks. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, damaged power cord and plug, and any other condition that may affect the safe operation of this tool. If abnormal noise or vibration occurs, immediately disconnect the Air Compressor from its electrical supply source and have the problem corrected before further use. **Do not use damaged equipment.**
- DAILY: Check the Air Compressor oil level. If necessary, fill with a premium quality, 30-weight, non-detergent compressor oil. <u>NOTE:</u> When checking the oil level, make sure to <u>unscrew</u> (do not pull) the Breather Valve (14B).
- 4. **DAILY:** Purge the Air Tank (9A) of all air and moisture to prevent corrosion. To do so, slowly and carefully unscrew (no more than four threads) the Water Drain Valve (10A) until the compressed air and condensation begins to be released from the Air Tank. Allow sufficient time for all of the air and condensation to escape from the Air Tank. Then, firmly retighten the Water Drain Valve.
- 5. **EVERY 100 HOURS OF USE:** Clean the Air Filter (7A) with a mild solvent. Then, dry and reattach the Air Filter. **NOTE:** Replace the Air Filter if it is too dirty to properly clean.
- 6. **EVERY 500 HOURS OR 12 MONTHS:** Replace the old oil with new, premium quality, 30-weight, non-detergent compressor oil.
- 7. **TO CLEAN**: wipe with a damp cloth, using a mild detergent or mild solvent.
- 8. **WHEN STORING**: Keep the Air Compressor in a clean, dry location.

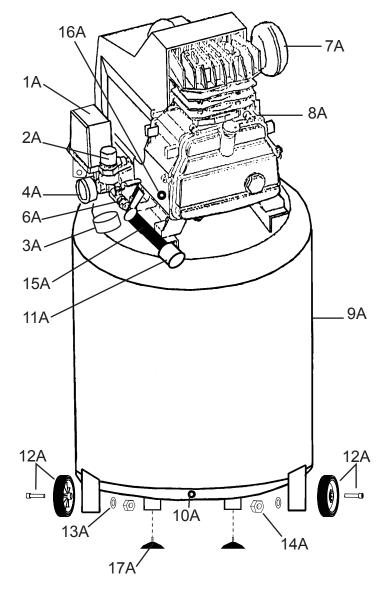
PLEASE READ THE FOLLOWING CAREFULLY

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.

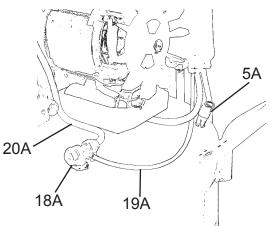
PARTS LIST A / ASSEMBLY DIAGRAM A

Part	Description	Qty.
1A	ON/OFF Power Switch	1
2A	Tool Pressure Adjuster	1
3A	Tank Pressure Gauge	1
4A	Tool Pressure Gauge	1
5A	Pressure Release Valve	1
6A	Air Flow Valve	1
7A	Air Filter	1
8A	Air Flow Lid	1
9A	Air Tank	1
10A	Water Drain Valve	1

Part	Description	Qty.
11A	Quick Release Coupler	1
12A	Rubber Wheel with Bolt	2
13A	Washer	2
14A	Nut	2
15A	Fitting	1
16A	Oil Drain Plug with Gasket	1
17A	Foot	2
18A	Unloader Valve	1
19A	Polyurethane Unloader Tube	1
20A	Copper Air Tube	1



(Rear View with motor cover removed.)



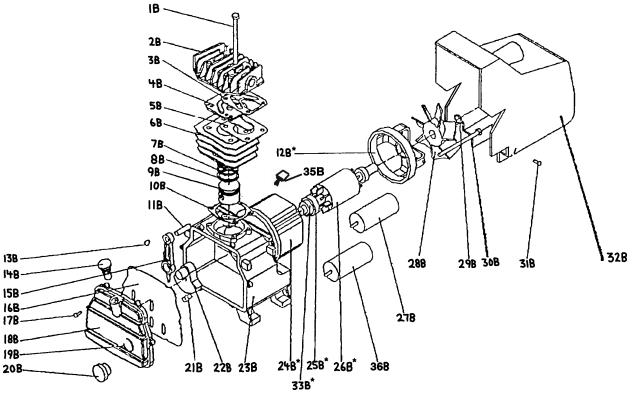
REV 07b; 07f; 10d

Part	Description	Qty.
1B	Bolt	4
2B	Cylinder Case	1
3B	Gasket	1
4B	Valve Seat	1
5B	Gasket	1
6B	Cylinder	1
7B	Compression Ring	2
8B	Oil Scraping Ring	1
9B	Piston	1
10B	Gasket	1
11B	Piston Pin	1
12B*	End Cover	1
13B	Crankshaft Retainer	2
14B	Breather Valve	1
15B	Connecting Rod	1
16B	Gasket	1
17B	Bolt	6
18B	Front Cover	1

PARTS LIST B / ASSEMBLY DIAGRAM B

IVIDLI		
Part	Description	Qty.
19B	Gasket	1
20B	Oil Window	1
21B	Crankshaft Bolt	1
22B	Crankshaft	1
23B	Crankshaft Case	1
24B*	Stator	1
25B*	Bearing	2
26B*	Armature	1
27B	Start Capacitor, 70 mF±5% bMK	1
28B	Radiating Fan Wheel	1
29B	Retainer Ring	1
30B	Bolt	4
31B	Screw	2
32B	Radiating Cover	1
33B*	Seal Washer	1
34B	Motor Assembly	1
35B	Overload Switch	1
36B	Run Capacitor, 50 mF±5% bMK	1

*Not available individually. Must be ordered as entire Motor Assembly (See part #34B).



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

LIMITED 1 YEAR / 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 for a period of one year from date of purchase that the tank is free of defects in materials and workmanship (90 days if used by a professional contractor or if used as rental equipment). Harbor Freight Tools also warrants to the original purchaser, for a period of ninety days from date of purchase, that all other parts and components of the product are free from defects in materials and workmanship. This warranty does not apply to damage due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, 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.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

3491 Mission Oaks Blvd. • PO Box 6009 • Camarillo, CA 93011 • (800) 444-3353