

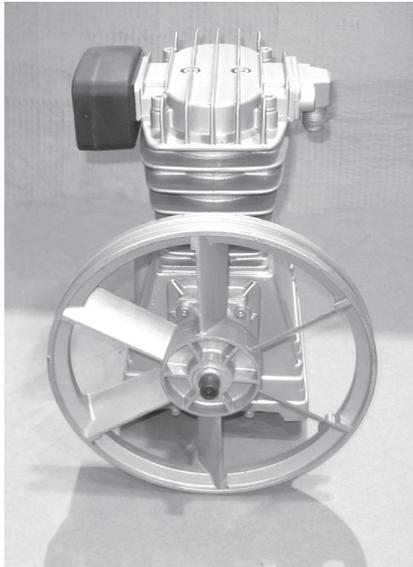
CENTRAL PNEUMATIC®

3 HP

Air Compressor Pump

Model 93785

ASSEMBLY AND OPERATING INSTRUCTIONS



Due to continuing improvements, actual product may differ slightly from the product described herein.



3491 Mission Oaks Blvd., Camarillo, CA 93011

Visit our Web site at <http://www.harborfreight.com>

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.

For technical questions and replacement parts, please call 1-800-444-3353

Specifications

Construction:	Cast Aluminum Pump, Flywheel and Head.
Maximum Pressure:	140 psi
Lubrication:	Splash Oil type with Oil Level Window and Ball Bearing Check Release Valve
Pulley Dimensions:	10- $\frac{1}{4}$ " Dia. x 1- $\frac{3}{8}$ "W with V-groove for belt
Overall Dimensions:	12- $\frac{1}{4}$ "L x 10- $\frac{1}{4}$ "W x 12- $\frac{1}{4}$ "H

Compressor Type:	Single Stage, Twin Cylinder
Maximum Speed:	1200 rpm
Air Delivery Rate at 1050 rpm:	8.7 cfm at 40 psi 7.7 cfm at 90 psi 6.95 cfm at 115 psi
Piston Dimensions:	65mm Dia. x 50mm stroke
Net Weight:	23 lbs.

Caution: Before operating, fill the oil reservoir with a premium quality, 30-weight, nondetergent oil before operating. Running the Air Compressor Pump with little or no oil will cause damage to the pump and void the warranty.

Save This Manual

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

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this tool!

1. **Keep work area clean.** Cluttered areas invite injuries.
2. **Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.
3. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
4. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
5. **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.

6. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.
7. **Use eye and ear protection.** Always wear ANSI approved impact safety goggles. Wear a full face shield if you are producing metal filings or wood chips. Wear an ANSI approved dust mask or respirator when working around metal, wood, and chemical dusts and mists.
8. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.
9. **Maintain tools with care.** Keep tools maintained and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and, if damaged, have them repaired by an authorized technician.
10. **Disconnect power.** Unplug drive motor when not in use.
11. **Remove adjusting keys and wrenches.** Check that keys and adjusting wrenches are removed from the tool or machine work surface before starting work.
12. **Avoid unintentional starting.** Be sure the drive motor power switch is in the Off position when not in use and before plugging in.
13. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
14. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn On and Off properly.
15. **Guard against electric shock.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerator enclosures.
16. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
17. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels if taking prescription medicine to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.

18. **Maintenance.** For your safety, service and maintenance should be performed regularly by a qualified technician.

Note: Performance of this Air Compressor Pump may vary depending on variations in local line voltage or motor capacity. Extension cord usage may also affect tool performance.

19. **Use proper size and type extension cord.** If an extension cord is required, it must be of the proper size and type to supply the correct current to the tool without heating up. Otherwise, the extension cord could melt and catch fire, or cause electrical damage to the tool. Longer extension cords require larger size wire. If you are using the tool outdoors, use an extension cord rated for outdoor use. (signified by “WA” on the jacket). Check with the manufacturer of the electric motor (not included) for the proper power supply requirements.

20. **Maintenance.** For your safety, service and maintenance should be performed regularly by a qualified technician.

Warning: The warnings, cautions, 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.

NOTE: This item must be properly mounted on a strong, level surface which is capable of holding the compressor weight, and the forces put on it during operation. A properly sized motor (not included) must also be mounted on a level and sufficiently strong surface. The motor and pump must be connected with a V shaped drive belt (not included). The drive belt must be completely enclosed in a sturdy belt cover (not included).

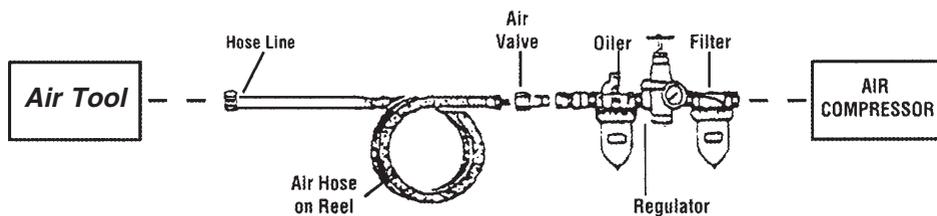
WARNING: By supplying this air compressor, Harbor Freight Tools makes no representations and accepts no responsibility for the motor, V-belt, enclosure or mounting surface not supplied by HFT which may be used in the installation. You are strongly advised to have this air compressor properly installed by a qualified service technician using appropriate components in good condition.

Air Compressor Pump Safety Precautions

1. **Use proper size motor and motor pulley.** This air compressor Pump must be installed with a 3 HP electric motor and pulley (both not supplied) which can turn the Air Compressor Belt Wheel (35) at approximately 1050 rpm, but not more than 1200 rpm.
2. **Install motor, pully belt and pully belt cover securely.** Be sure to use the proper size bolts to install your motor (not included). The belt and belt cover (not included) must be strong enough to prevent breaking and possible injury.
3. **Be sure all equipment is rated to the appropriate capacity of this pump.** Make sure that the lowest rated piece of equipment you are using can handle the maximum pressure of the Air Compressor Pump (see Specifications).
4. **Avoid explosions and fire.** Never place flammable objects near the compressor. Never spray water or any flammable liquids towards the compressor.
5. **Avoid bodily injury.** Never direct the air outlet at any person or animal.
6. **Use Safety Guard for Pulleys.** The Air Compressor Belt Wheel (35), V-belt (not supplied), and motor pulley (not supplied) must be covered by a safety guard (not supplied) covering all moving elements before operation.
7. **Avoid burns.** The Cylinder (12), Cylinder Head (5) and Air Outlet (6) become very hot during operation. Do not touch.
8. **Industrial Applications.** If used in an industrial applications, you must follow OSHA requirements.
9. **Properly fill Air Compressor Pump oil reservoir before operating.** Fill the oil reservoir with a premium quality, 30-weight, non-detergent oil before operating. **Check oil level through the Oil Level Window before each use.** Running the Air Compressor Pump with little or no oil will cause damage to the pump and void the warranty.

Recommended Compressed Air System Components

We recommend that you use both a filter and an in-line oiler in your air supply system as illustrated in the diagram below. These components are not included with this tool, but are available from Harbor Freight Tools.



Recommended Air Line Components

Unpacking

When unpacking, check to make sure that the product is intact and undamaged. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual as soon as possible.

Installation

Note: Depending on your level of expertise, you may wish to have a qualified technician perform this installation.

Caution: Avoid damage to the Air Compressor Pump and other equipment. Make sure the mounting surface for the Air Compressor Pump is installed on a flat and level surface, strong enough to support the pump and motor.

1. Place the Air Compressor Pump on the mounting surface at the same level as the 3 HP motor used to drive it. The 14- $\frac{1}{4}$ inch V-groove Belt Wheel (35) of the Air Compressor Pump must be in perfect alignment with the motor pulley (not included).
2. Verify that the Belt Wheel (35) turns freely where it overhangs the mounting surface.
3. Place the V-groove belts (not included) over the Belt Wheel (35) and motor pulley.
4. Pull Compressor Pump until properly aligned, and the belt is tight. Recheck motor pulley, V-groove belt, and Belt Wheel alignment.
5. Use a pencil to mark through the Air Compressor Pump mounting holes onto the mounting surface.
6. Move the Air Compressor Pump and drill four $\frac{3}{8}$ inch holes in the mounting surface.
7. Move the Air Compressor Pump back to its mounting position.
8. Secure each corner of the base with a $\frac{3}{8}$ inch diameter bolt, washer, lock washer, and nut (all not supplied).
9. Make final alignment and belt tightness adjustments from the motor. It may be necessary to loosen the motor mounting bolts to adjust the motor location. To test the proper tension on the V-belts, press down on the belts, they should not depress more than $\frac{1}{2}$ inch at mid-point. Tighten all mounting hardware.
10. Mount the motor (not supplied) as recommended by the motor manufacturer. Be sure that the motor is securely mounted.
11. Connect plumbing hardware (not supplied) from the male $\frac{1}{2}$ " - 14 tpi Air Outlet (6) to the air destination (i.e., air pressure tank, not supplied).
12. Install a safety guard (not supplied) that surrounds the motor pulley, V-belts, and Belt Wheel (35). This safety guard must cover all sides of the moving belts and pulleys. It should have a clearance of about one inch from the moving parts. The safety guard must be sturdy enough to prevent injury.

Note: A qualified electrician must wire in a pressure switch control that turns off the motor when the pump reaches the desired pressure (less than 140 PSI).

Note: Always install this Air Compressor Pump to an air tank that has a pressure release valve set at less than 140 PSI.

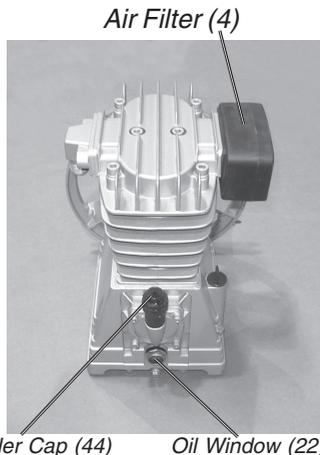
Note: A high/low cut-in/cut-out switch (not included) can be incorporated to operate a motor starter or motor contractor for semi-automatic control of air pressure in the vessel.

Warning: Avoid serious injuries. Do not operate this Air Compressor Pump without the Safety Guard in place.

13. Unscrew the Oil Filler Cap (44) and fill the oil reservoir to mid point as seen in the Oil Window (22). The oil should be premium quality, 30-weight, non-detergent oil. Do not overfill.

Operation

1. Turn on the power switch to the drive motor.
2. Check the following items:
 - V-belt should not vibrate.
 - Listen for air leaks.
 - Listen for abnormal noise or vibration.
 - If there is a problem, turn power off and release air pressure from the line before attempting repairs.
3. Allow Air Compressor Pump to cool down after each hour of use.
4. Turn off the power switch to the drive motor when finished using the Air Compressor Pump. Do not leave on if the compressed air is not being used.



Maintenance

Caution: Remove power from the drive motor before attempting any maintenance on the Air Compressor Pump.

1. Before each use, verify that the oil level is at the proper level as viewed through the Oil Window (22).
2. Periodically check V-belts for proper tension.
3. Periodically remove Air Filter (4) and blow clean with compressed air. If it is dark in color and will not blow clean, replace the filter.
4. If the oil appears dirty, open the Oil Filler Cap (44), and remove the Oil Drain Bolt (24), capturing the oil in a suitable container. Dispose of the used oil in accordance with local regulations. Replace the Oil Drain Bolt, and refill as discussed in item 12 above.

Parts List

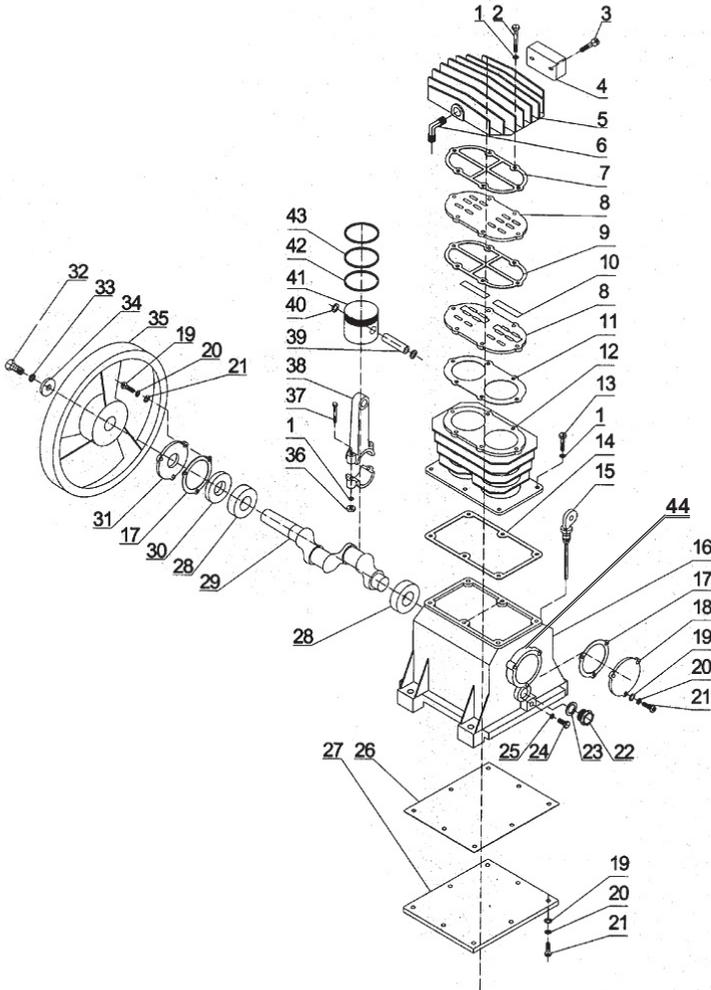
Part #	Description	QTY.
1	Washer	16
2	Bolt	14
3	Screw	6
4	Air Filter	2
5	Cylinder Head	1
6	Air Outlet	1
7*	Gasket Valve Seat	1
8*	Valve Seat	1
9*	Gasket Valve Seat	4
10*	Valve Plate	1
11*	Cylinder Head Gasket	4
12	Cylinder	1
13	Screw	1
14	Cylinder Gasket	6
15	Dipstick	1
16	Crankshaft Case	1
17	Gasket	1
18	Gasket	2
19	Washer	1
20	Spring Washer	6
21	Bolt	1
22	Oil Window	1

Part #	Description	QTY.
23	Oil Window Gasket	1
24	Oil Drain Bolt	1
25	Seal	1
26	Gasket	1
27	Base Cover	1
28	Bearing	2
29	Crankshaft	1
30	Oil Seal	1
31	End Cover	1
32	Screw	1
33	Spring Washer	1
34	Washer	1
35	Belt Wheel	1
36	Nut	1
37	Screw	4
38	Connecting Rod	2
39	Piston Pin	2
40	Lock Ring	4
41	Piston	2
42**	Piston Oil Ring	2
43**	Piston Air Ring	4
44	Oil Filler Cap (not shown)	1
45	Cylinder Gasket & Reed Valve Kit	1
46	Piston Ring Kit	1

NOTE: Parts # 7*-11* are sold only as an assembly called the “Cylinder Gasket & Reed Valve Kit”. Parts number # 42** and 43** are sold only as a set called “Piston Ring Set”.

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

Assembly Drawing



PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR 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.