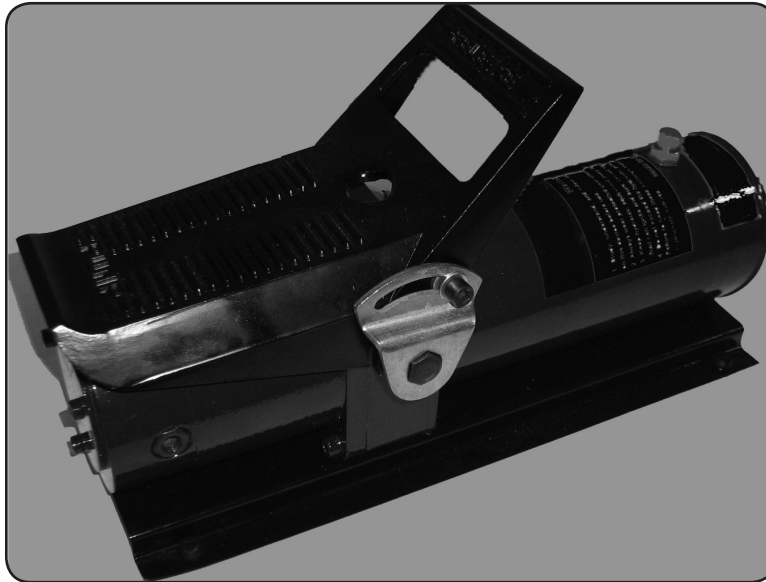


# **Central Hydraulics®**

## **10,000 PSI AIR/HYDRAULIC FOOT PUMP**

**Model 98318**

### **SET UP AND OPERATING INSTRUCTIONS**



Diagrams within this manual may not be drawn proportionally.

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

**Distributed exclusively by Harbor Freight Tools®.**

3491 Mission Oaks Blvd., Camarillo, CA 93011

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.**

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**For technical questions or replacement parts, please call 1-800-444-3353.**

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## SAVE THIS MANUAL

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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.

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### Safety Alert Symbol and Signal Words

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In this manual, on the labeling, and all other information provided with this product:



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.

### **DANGER**

**DANGER** indicates a hazardous

situation which, if not avoided, will result in death or serious injury.

### **WARNING**

**WARNING** indicates a

hazardous situation which, if not avoided, could result in death or serious injury.

### **CAUTION**

**CAUTION**, used with the safety

alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

### **NOTICE**

**NOTICE** is used to address practices not related to personal injury.

### **CAUTION**

**CAUTION**, without the safety alert symbol, is used to address practices not related to personal injury.

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## IMPORTANT SAFETY INSTRUCTIONS

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### INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

**WARNING** – When using tools, basic precautions should always be followed, including the following:

#### General

- a. To reduce risks of electric shock, fire, and injury to persons, read instructions before using tool.


#### Work area


- a. Keep the work area clean and well lighted. Cluttered benches and dark areas increase the risks of electric shock, fire, and injury to persons.
- b. *Keep bystanders, children, and visitors away while operating the tool.* Distractions are able to result in the loss of control of the tool.

#### Personal safety

- a. *Stay alert. Watch what you are doing and use common sense when operating the tool. Do not use the*

***tool while tired or under the influence of drugs, alcohol, or medication.*** A moment of inattention while operating tool increases risk of injury.

- b. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair increases risk of injury to as result of being caught in moving parts.
- c. **Avoid unintentional starting. Be sure the switch is off before connecting to the air supply.** Do not carry the tool with your finger on the switch or connect the tool to the air supply with the switch on.
- d. **Do not overreach. Keep proper footing and balance at all times.** Proper balance enables better control of the tool in unexpected situations.
- e.  **Use safety equipment.** A dust mask, non-skid safety shoes and a hard hat must be used for the applicable conditions. Wear heavy-duty work gloves during use.

- f.  **Always wear eye protection.** Wear ANSI-approved safety goggles.

- g.  **Always wear hearing protection when using the tool.** Prolonged exposure to high intensity noise is able to cause hearing loss.

### **Tool use and care**

- a. ***Use clamps or another practical way to secure and support the workpiece to a stable platform.***

Holding the work by hand or against the body is unstable and is able to lead to loss of control.


- b. **Do not force the tool.** Use correct tool for application. The correct tool will do the job better and safer at the rate for which the tool is designed.
- c. **Do not use the tool if the Foot Pedal (37) does not turn the tool on or off.** Any tool that cannot be controlled is dangerous and must be repaired.
- d. **Disconnect the tool from the air source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool unintentionally. Turn off and detach the air supply, safely discharge any residual air pressure, and release the throttle and/or turn the switch to its off position before leaving the work area.
- e. **Store the idle tool out of reach of children and other untrained persons.** A tool is dangerous in the hands of untrained users.
- f. **Maintain the tool with care.** Keep a cutting tool sharp and clean. A properly maintained tool, with sharp cutting edges reduces the risk of binding and is easier to control.
- g. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that affects the tool's operation.** If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools. There is a risk of bursting if the tool is damaged.
- h. **Use only accessories that are identified by the manufacturer for**

**the specific tool model.** Use of an accessory not intended for use with the specific tool model, increases the risk of injury to persons.

### Service

- a. ***Tool service must be performed only by qualified repair personnel.***
- b. **When servicing a tool, use only identical replacement parts. Use only authorized parts.**
- c. **Use only the lubricants supplied with the tool or specified by the manufacturer.**

### Air source





- a.  **Never connect to an air source that is capable of exceeding 120 psi.** Over pressurizing the tool may cause bursting, abnormal operation, breakage of the tool or serious injury to persons. Use only clean, dry, regulated compressed air at the rated pressure or within the rated pressure range as marked on the tool. Always verify prior to using the tool that the air source has been adjusted to the rated air pressure or within the rated air-pressure range.
- b. ***Never use oxygen, carbon dioxide, combustible gases or any bottled gas as an air source for the tool.*** Such gases are capable of explosion and serious injury to persons.



**SAVE THESE INSTRUCTIONS.**

## SYMBOLS AND SPECIFIC SAFETY INSTRUCTIONS

### Symbol Definitions

Symbol	Property or statement
<b>n<sub>o</sub></b>	No-load speed
<b>.../min</b>	Revolutions or reciprocation per minute
<b>PSI</b>	Pounds per square inch of pressure
<b>ft-lb</b>	Foot-pounds of torque
<b>BPM</b>	Blows per minute
<b>CFM</b>	Cubic Feet per Minute flow
<b>SCFM</b>	Cubic Feet per Minute flow at standard conditions
<b>NPT</b>	National pipe thread, tapered
<b>NPS</b>	National pipe thread, straight
	WARNING marking concerning Risk of Eye Injury. Wear ANSI-approved eye protection.
	WARNING marking concerning Risk of Hearing Loss. Wear hearing protection.
	WARNING marking concerning Risk of Respiratory Injury. Wear NIOSH-approved dust mask/respirator.
	WARNING marking concerning Risk of Explosion.

### Specific Safety Instructions

1. The warnings and precautions discussed in this 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.

2. Do not adjust the factory set Safety Valve. This valve should only be set or reset by a qualified technician.
3. This air hydraulic Foot Pump must be secured tightly to a stable surface to prevent dynamic pressure from moving it around during use. Make sure there is no tripping hazard.
4. Follow manufacturer's instructions for compressor and attachments used.
5. **WARNING:** The brass components of this product contain lead, a chemical known to the State of California to cause birth defects (or other reproductive harm). (California Health & Safety code § 25249.5, *et seq.*)
6. Hydraulics must be opened and serviced only by a qualified technician.
7. Only use with hose (not included) and other accessories rated to handle the forces exerted by this tool during operation. Other accessories not designed for the forces generated may break and forcefully launch pieces.
8. Never press the end of the hose (not included) against your skin or the skin of another person or animal. It is possible to inject fluids into your skin if using this tool inappropriately.
9. Attach all accessories properly to the tool before connecting the air supply. A loose accessory may detach or break during operation.
10. Obey the manual for the air compressor used to power this tool.
11. Install in-line shutoff valve to allow control over the air supply in an emergency, even if a hose is ruptured.

### **Vibration Precautions**

This tool vibrates during use. Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibration-related injury:

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any medical or physical symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
2. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.
3. Wear suitable gloves to reduce the vibration effects on the user.
4. Use tools with the lowest vibration when there is a choice between different processes.
5. Include vibration-free periods each day of work.
6. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.
7. To reduce vibration, maintain tool as explained in this manual. If abnormal vibration occurs, stop immediately.



# SAVE THESE INSTRUCTIONS.

## Specifications

Air Pressure Range	110-120 PSI
Maximum Air Pressure	120 PSI
Maximum Hydraulic Pressure	10,000 PSI
Air Inlet	1/4" -18 NPT
Oil Capacity	23 oz.
Air Consumption	7 CFM @ 110-120 PSI

## INITIAL TOOL SET UP/ ASSEMBLY



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

**Note:** For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

## Unpacking

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

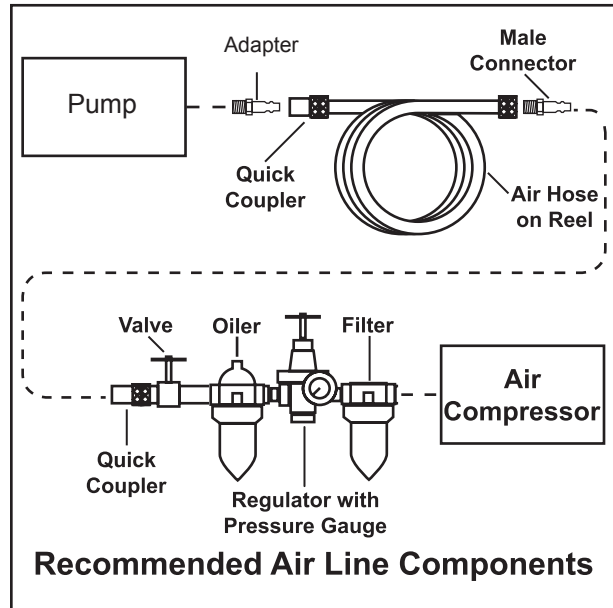
- This air tool may be shipped with a protective plug covering the air inlet. Remove this plug before set up.

## Air Supply

### **WARNING** TO PREVENT EXPLOSION:



Use only clean, dry, regulated, compressed air to power this tool. Do not use oxygen, carbon dioxide, combustible gases, or any other bottled gas as a power source for this tool.



1. Incorporate an in-line oiler, shut-off valve, hose, regulator with pressure gauge, and filter for best service, as shown in the diagram above. **An in-line shutoff valve is an important safety device because it controls the air supply even if the air hose is ruptured.**

**Note:** If an automatic oiler system is not used, add a few drops of Pneumatic Tool Oil to the airline connection before operation. Add a few more drops after each hour of continual use.

2. Attach an air hose (not included) to the compressor's air outlet. Attach

the Air Nipple (1) to the air inlet and tighten it.

** WARNING! TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:**

**Do not install a female quick coupler on the tool.** Such a coupler contains an air valve that allows air tool to retain pressure and operate accidentally after the air supply is disconnected. The Foot Pedal is designed to fit a 1/4" NPT air nipple (included). Also verify air source can dedicate 7 CFM @ 110-120 PSI.

**Note:** Air flow, and therefore tool performance, can be hindered by under-sized air supply components.

3. The air hose must be long enough to reach the work area with enough extra length to allow free movement while working.
4. Make sure throttle or switch is in the off position; refer to Operation section for description of controls.
5. Close the in-line safety valve between the compressor and the tool.
6. Turn on compressor according to the manufacturer's directions and allow it to build up pressure until it cycles off.
7. Adjust the air compressor's output regulator 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. Adjust the pressure gradually, while checking the air output gauge to set the right pressure range.
8. Inspect the air connections for leaks. Repair any leaks found.

9. If the tool will not be used at this time, turn off and detach the air supply, safely discharge any residual air pressure, and release the throttle and/or turn the switch to its off position to prevent accidental operation.

**Note:** Residual air pressure should not be present after the tool is disconnected from the air supply. However, it is a good safety measure to attempt to discharge the tool in a safe fashion after disconnecting to ensure that the tool is disconnected and unpowered.

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## **OPERATING INSTRUCTIONS**

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

**Inspect tool before use, looking for damaged, loose, and missing parts. If any problems are found, do not use tool until repaired.**

### **Tool Set Up**

** WARNING TO PREVENT SERIOUS INJURY**

**FROM ACCIDENTAL OPERATION:**

**Turn off the tool, detach the air supply, safely discharge any residual air pressure in the tool, and press down on the Release Bar (43) before performing any inspection, maintenance, or cleaning procedures.**

## TO PREVENT SERIOUS INJURY:

**Do not adjust or tamper with any control or component in a way not specifically explained within this manual. Improper adjustment can result in tool failure or other serious hazards.**

**Note:** This Air Hydraulic Foot Pump is designed to operate pneumatically. It is an ideal power source for various body, frame and alignment applications. It can be used with different ram kits, shop presses and hydraulic pullers (not included) that operate up to 10,000 PSI. It is equipped with a factory set Safety Valve to prevent sudden hydraulic failure.

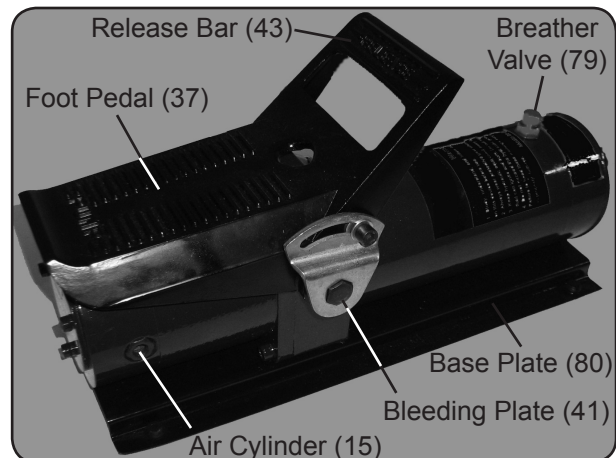
**Note:** Check the oil level and purge air from system before use. The Reservoir (72) should be full but after shipping it may need to be topped off. Check the oil in the pump reservoir prior to use. Place Pump on flat and horizontal surface. Wipe top of cylinder with clean, dry rag. Remove the Fill Plug (77) and add the fluid being careful not to spill. Replace the Fill Plug and wipe up any spilled hydraulic fluid. Periodically check the fluid level.

**FOR BEST OPERATION:** Before use, unscrew the Breather Valve. After use, shut the Breather Valve.

## Work Piece and Work Area Set Up

1. Designate a work area that is clean and well-lit. The work area must not allow access by children or pets to prevent injury and distraction.

2. Route the air hose along a safe route to reach the work area without creating a tripping hazard or exposing the air hose to possible damage. The air hose must be long enough to reach the work area with enough extra length to allow free movement while working.



## Pneumatic Tool Operation

1. Push down momentarily on Foot Pedal (37) and release it. The Air Valve (12) should be raised in order to operate. (Feel underneath the Foot Pedal to make sure Valve is raised.)
2. Attach the air hose from your compressor to the Air Nipple (1).
3. As pressure may be present, verify that the system is not pressurized before hydraulic hoses are connected or disconnected. Verify this by pressing Release Bar (43) with hand to release any internal hydraulic pressure. Remove the Protective Plug (84) from the Adapter (85), attach your hydraulic hose with a 1/4" NPT end to the hose Connector (68) directly. If you use our SKU 95944 Hydraulic Hose



(not included) with thread-on 13/16"-20 UNF fitting, please first attach the Adapter (85) to the Hose Connector (68), which is supplied in the bag containing instruction manual. Use this hose to attach to any tool that is to be activated/deactivated with this Pump.

4. Then press down Pedal (37) to apply pressure. Please note: There is no high/low settings for Pump. Once the Pedal is pressed, pressure is applied at a constant setting. Press on Release Bar (43) to release pressure.
5. To prevent accidents, turn off the tool, shut the Air Valve (12), and detach the air supply, and safely discharge any residual air pressure in the tool after use. Clean external surfaces of the tool with clean, dry cloth, and apply a thin coat of tool oil. Then store the tool indoors out of children's reach.

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## USER-MAINTENANCE INSTRUCTIONS

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Procedures not specifically explained in this manual must be performed only by a qualified technician.

### **WARNING**

#### **TO PREVENT SERIOUS INJURY**

##### **FROM ACCIDENTAL OPERATION:**

Turn off the tool, detach the air supply, safely discharge any residual air pressure in the tool, and release the throttle and/or turn the switch to its off position before performing any inspection, maintenance, or cleaning procedures.

##### **TO PREVENT SERIOUS INJURY FROM TOOL FAILURE:**

Do not use damaged equipment. If abnormal noise, vibration, or leaking air occurs, have the problem corrected before further use.



##### **TO PREVENT EXPLOSION:**

Lubricate the tool only with specified lubricants. Lubricate the air inlet using only pneumatic tool oil. Other lubricants may damage the mechanism and may be highly flammable, causing an explosion.

## Cleaning, Maintenance, and Lubrication

**Note:** These procedures are in addition to the regular checks and maintenance explained as part of the regular operation of the air-operated tool.

**WARNING!** Make sure the Foot Pump is disconnected from air supply and all hydraulic pressure is released before performing any inspection, maintenance, or cleaning procedures.

1. **BEFORE USE**, inspect the general condition of the Foot Pump. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, cracked welds, cracked or broken hoses, leaking oil, and any other condition that may affect its safe operation as well as abnormal noise or vibration. If any of this should occur, have the problem corrected before further use.


### **Do not use damaged equipment.**

2. **AFTER USE**, wipe off with a clean cloth. Be sure to wipe away any spilled hydraulic fluid.
3. **MONTHLY**, check and refill hydraulic fluid. (See Bleeding Instructions, below.)

## Bleeding Instructions

1. **WARNING!** Air may accumulate in the Foot Pedal's system during shipping and/or use. Before each use, bleed air from system for better performance. To do this:
2. Open the Fill Plug (77) by turning it counterclockwise.
3. Depress the Release Bar (43) to open the Release Valve Seat (46).
4. Depress the Air Valve (12) located on the top of the Air Cylinder (15) to remove air from system.
5. Top off with hydraulic oil and close the Fill Plug (77).

## Troubleshooting

<b>Problem</b>	<b>Possible Causes</b>	<b>Likely Solutions</b>
Foot Pedal (37) will not depress when trying to pump.	Reservoir (72) is overfilled with hydraulic oil.	Make sure the Breather Valve (79) is open, letting the trapped oil escape if necessary.
Low hydraulic pressure	<ol style="list-style-type: none"> <li>1. Loose air fittings.</li> <li>2. Cracked hose.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten all fittings.</li> <li>2. Change any cracked or broken hoses. <b>DO NOT FEEL FOR LEAKS WITH HANDS. HIGH PRESSURE CAN INJECT FLUID UNDER SKIN. DO NOT REPAIR WITH TAPE OR METAL CLAMPS. ALWAYS REPLACE THE HOSE.</b></li> </ol>
Housing heats during use.	<ol style="list-style-type: none"> <li>1. Incorrect lubrication or not enough lubrication.</li> <li>2. Worn parts.</li> </ol>	<ol style="list-style-type: none"> <li>1. Lubricate using air tool oil and grease according to directions.</li> <li>2. Have qualified technician inspect internal mechanism and replace parts as needed.</li> </ol>
Severe air leakage. (Slight air leakage is normal, especially on older tools.)	<ol style="list-style-type: none"> <li>1. Cross-threaded housing components.</li> <li>2. Loose housing.</li> <li>3. Damaged valve or housing.</li> <li>4. Dirty, worn or damaged valve.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check for incorrect alignment and uneven gaps. If cross-threaded, disassemble and replace damaged parts before use.</li> <li>2. Tighten housing assembly. If housing cannot tighten properly, internal parts may be misaligned.</li> <li>3. Replace damaged components.</li> <li>4. Clean or replace valve assembly.</li> </ol>
 <b>Follow all safety precautions whenever diagnosing or servicing the tool. Disconnect air supply before service.</b>		

## PARTS LIST

Part	Description	Q'ty
1	Air Nipple	1
2	Oil Port	1
3	Screw	3
4	Lock Washer	3
5	Cover	1
6	O-Ring	1
7	O-Ring	1
8	Small piston	1
9	Air Valve Seat	1
10	O-Ring	1
11	O-Ring	1
12	Air Valve	1
13	O-Ring	1
14	Spring	1
15	Air Cylinder	1
16	Screw	1
17	Lock Washer	1
18	Sealing Ring	4
19	Snap Retainer	4
20	Sealing Ring	1
21	O-Ring	1
22	Air Piston	1
23	Sealing Ring	1
24	Piston	1
25	Washer	1
26	Spring	1
27	Nut	1
28	Sealing Ring	1
29	Cylinder	1
30	Screw	1
31	Copper Washer	1
32	Spring	1
33	Ball	1
34	Spring	1
35	Ball	1
36	Valve Base	1
37	Foot Pedal	1
38	Screw	1
39	Lock Washer	1
40	Washer	1
41	Bleeding Plate	1
42	Washer	1
43	Release Bar	1

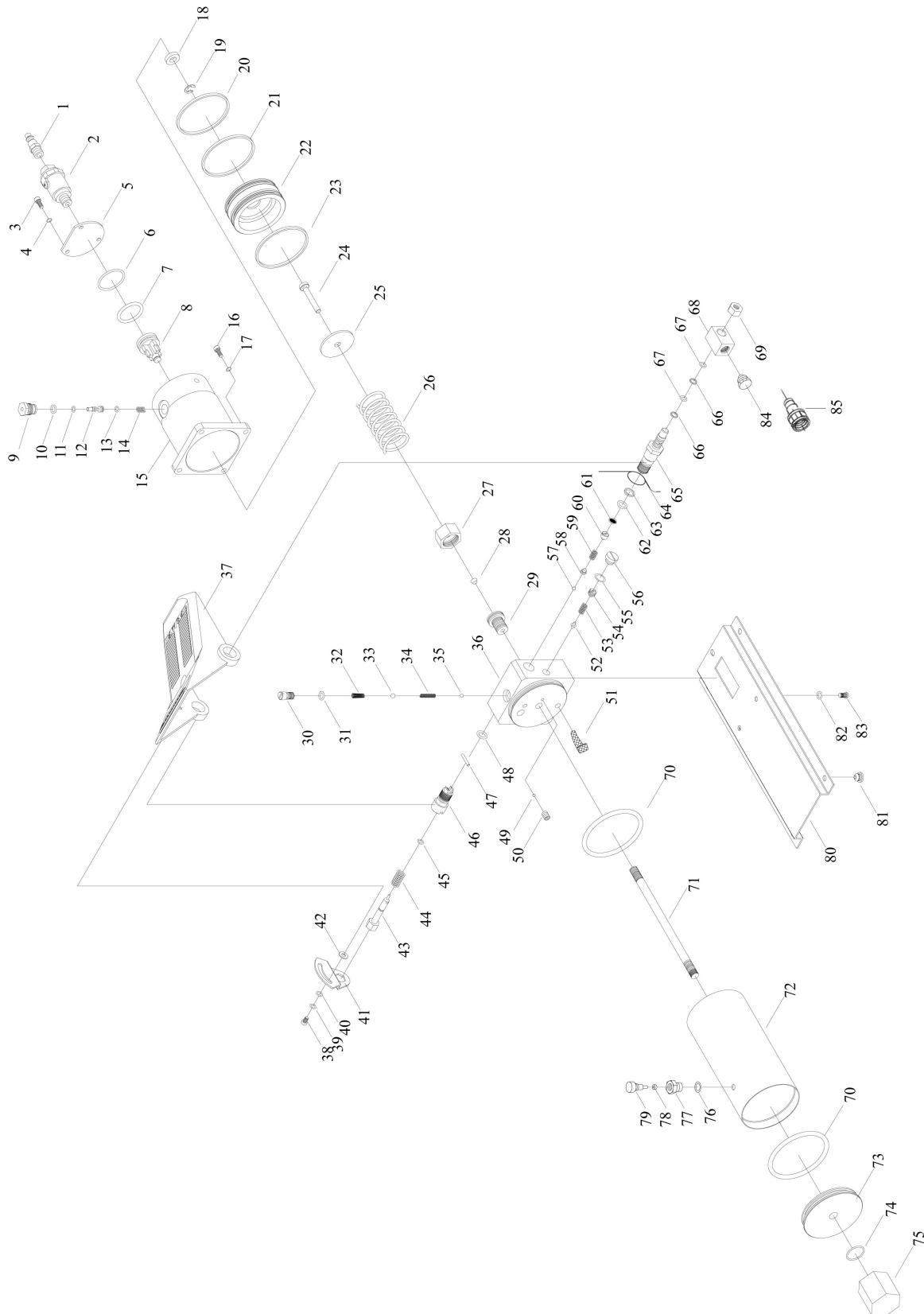
## PARTS LIST

Part	Description	Q'ty
44	Spring	1
45	O-Ring	1
46	Release Valve Seat	1
47	Pin	1
48	O-Ring	1
49	Ball	1
50	Screw	1
51	Strainer	1
52	Needle Valve	1
53	Safe Valve Spring	1
54	Screw	1
55	O-Ring	1
56	Screw	1
57	Ball	1
58	Ball Cup	1
59	Spring	1
60	Screw	1
61	Oil Filter	1
62	O-Ring	1
63	Retainer	1
64	Torsion Spring	1
65	Oil Outlet Seat	1
66	Retainer	2
67	O-Ring	2
68	Hose Connector	1
69	Lock Nut	1
70	O-Ring	2
71	Lever	1
72	Reservoir	1
73	Reservoir Cover	1
74	O-Ring	1
75	Nut	1
76	Nylon Ring	1
77	Fill Plug	1
78	Sealing Ring	1
79	Breather Valve	1
80	Base Plate	1
81	Rubber Foot	4
82	Lock Washer	3
83	Screw	3
84	Protective Plug	1
85	Adapter	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.

# ASSEMBLY DIAGRAM



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## 90 DAY WARRANTY

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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.

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**

**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.