# 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. 22h

PITTSBURGH® AUTOMOTIVE

**63273**

# 22 Ton Air/Hydraulic Floor Jack

| Specifications | |
|---|---|
| Weight Capacity | 22 Ton (44,000 lb.) |
| Height Range | 8-15/16"–17-3/4" |
| Max. Air Pressure | 120 PSI |
| Air Inlet | 1/4"–18 NPT |

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

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.


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.

## ⚠WARNING

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

# IMPORTANT SAFETY INFORMATION

1. Study, understand, and follow all instructions before operating this device.
2. Do not exceed rated capacity.
3. Use only on a hard, level surface capable of supporting the load.
4. Support the vehicle with appropriate means immediately after lifting.
5. Failure to heed these markings may result in personal injury and/or property damage.
6. Lift only on areas of the vehicle as specified by the vehicle manufacturer.
7. No alterations shall be made to this product.
8. Only attachments and/or adapters supplied by the manufacturer shall be used.
9. Do not move or dolly the vehicle while on the jack.
10. Never work on, under or around a load supported only by this device.
11. Do not adjust safety valve.
12. Wear ANSI-approved safety goggles and heavy-duty work gloves during use.
13. Keep clear of load while lifting and lowering.
14. Lower load slowly.
15. Apply parking brake and chock tires before lifting vehicle.
16. Inspect before every use; do not use if parts are loose or damaged.
17. Do not use for aircraft purposes.
18. 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.

**IMPORTANT! Before first use:**

Check hydraulic oil level and fill to 1/4″ below the fill port as needed as stated on page 5. Thoroughly test the Jack for proper operation. If it does not work properly, bleed air from its hydraulic system as stated on page 5.

## Air Source

a.  **Never connect to an air source that is capable of exceeding 200 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.

## Symbol Definitions

| Symbol | Property or statement |
|---|---|
| **PSI** | Pounds per square inch of pressure |
| **CFM** | Cubic Feet per Minute flow |
| **SCFM** | Cubic Feet per Minute flow at standard conditions |
| **NPT** | National pipe thread, tapered |

**Chart continued in next column.**

| Symbol | Property or statement |
|---|---|
|  | 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. |

 **SAVE THESE INSTRUCTIONS.**

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## Assembly Instructions

**Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this document 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.

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

# Assembly

1. Attach Adapter Holder (40) to the Lower Handle (18) with two U-Bolts (39) and Nuts (23). Refer to Figure A.

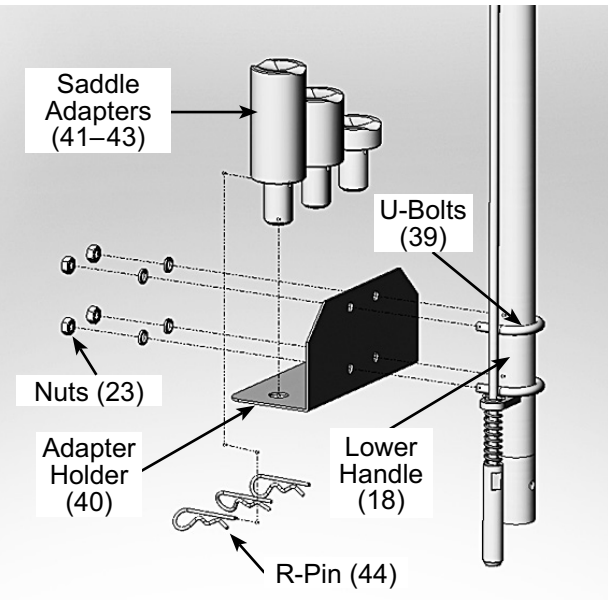


**Figure A:**

2. Tighten Nuts to secure Adapter Holder to Handle.

3. Put height adjustment Saddle Adapters (41–43) into the Adapter Holder (40) and lock each with an R-Pin (44). Refer to Figure A.

5. Put the Handle Assembly into Handle Socket and secure with Bolt (6). Refer to Figure B.

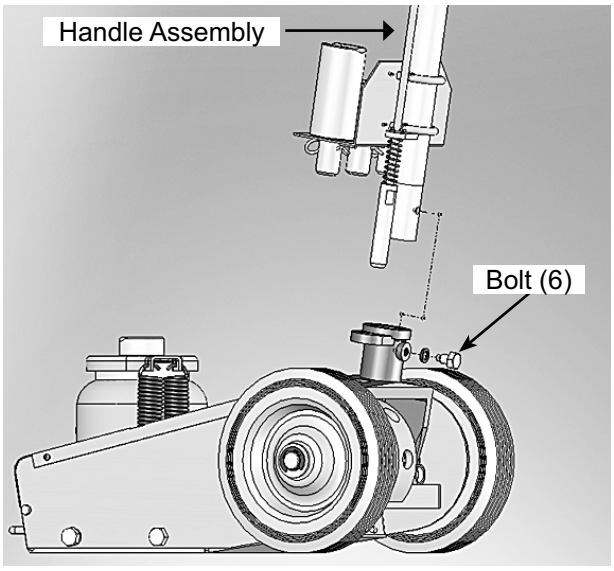


**Figure B:**

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## Air Supply

**⚠WARNING**

**TO PREVENT SERIOUS INJURY FROM 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 a filter, regulator with pressure gauge, oiler, in-line shutoff valve, and quick coupler for best service, as shown on Figure C on page 6 and Figure D on page 7. **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.**

**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 to the compressor's air outlet. Connect the air hose to the Jack's Air Inlet. Other components, such as a connector and quick coupler, will make operation more efficient, but are not mandatory.

**⚠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 will allow the air tool to retain pressure and operate accidentally after the air supply is disconnected.

**Note:** Air flow, and therefore tool performance, can be hindered by undersized air supply components. The air hose must be long enough to reach the work area with enough extra length to allow free movement while working.

3. Turn the tool's throttle or switch to the off position; refer to Operation section for description of controls.

4. Close the in-line shutoff valve between the compressor and the tool.

5. Turn on the air compressor according to the manufacturer's directions and allow it to build up pressure until it cycles off.

6. 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.

7. Inspect the air connections for leaks. Repair any leaks found.

8. 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.

## Bleeding Instructions

Before each use or if Bottle Jack performance decreases, check for excessive air and proper hydraulic oil level in Bottle Jack. If Jack appears not to be working properly, it may be necessary to purge its hydraulic system of excessive air as follows:

1. Turn Knob completely clockwise.

2. Release the Air Lever Lock and depress the Air Lever completely for a few seconds. Then turn the Knob 1-1/2 turns counterclockwise, releasing pressure.

3. Remove the Filler Plug (22a), and fill the Reservoir (21a) with hydraulic oil (not included).

4. Depress the Air Lever completely for a few seconds to purge air.

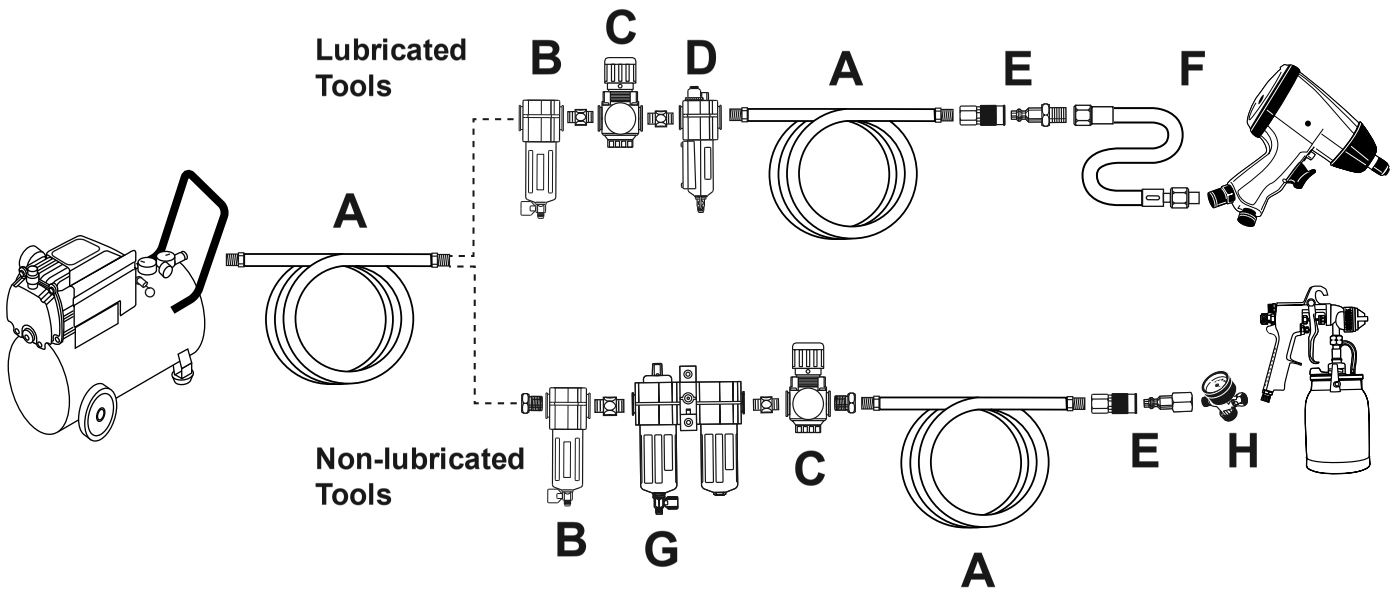
5. Turn Knob clockwise until snug to hold pressure.

6. Top off the reservoir with hydraulic oil. Then replace the Filler Plug.

**IMPORTANT: After bleeding the Bottle Jack, test the Jack for proper operation prior to its actual use.**

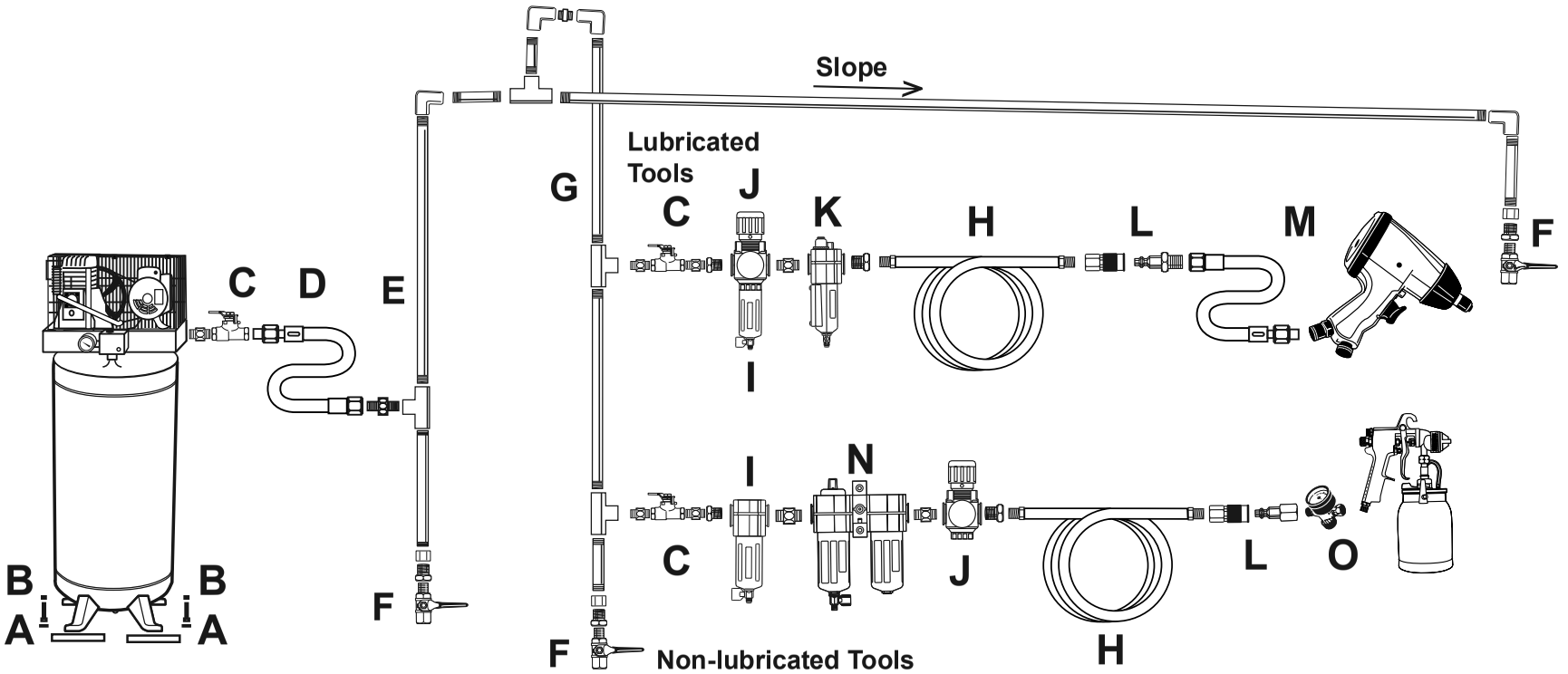
**Note:** To prevent damage to the Bottle Jack, check for excessive air and/or low hydraulic oil regularly.

**Figure C: Portable Air Supply Setup**




| | Description | Function |
|---|---|---|
| A | Air Hose | Connects air to tool |
| B | Filter | Prevents dirt and condensation from damaging tool or workpiece |
| C | Regulator | Adjusts air pressure to tool |
| D | Lubricator (optional) | For air tool lubrication |
| E | Coupler and Plug | Provides quick connection and release |
| F | Leader Hose (optional) | Increases coupler life |
| G | Air Cleaner / Dryer (optional) | Prevents water vapor from damaging workpiece |
| H | Air Adjusting Valve (optional) | For fine tuning airflow at tool |

**Figure D: Stationary Air Supply Setup**




| | Description | Function |
|---|---|---|
| A | Vibration Pads | For noise and vibration reduction |
| B | Anchor Bolts | Secures air compressor in place |
| C | Ball Valve | Isolates sections of system for maintenance |
| D | Isolation Hose | For vibration reduction |
| E | Main Air Line - 3/4″ minimum recommended | Distributes air to branch lines |
| F | Ball Valve | To drain moisture from system |
| G | Branch Air Line -1/2″ minimum recommended | Brings air to point of use |
| H | Air Hose | Connects air to tool |
| I | Filter | Prevents dirt and condensation from damaging tool or workpiece |
| J | Regulator | Adjusts air pressure to tool |
| K | Lubricator (optional) | For air tool lubrication |
| L | Coupler and Plug | Provides quick connection and release |
| M | Leader Hose (optional) | Increases coupler life |
| N | Air Cleaner / Dryer (optional) | Prevents water vapor from damaging workpiece |
| O | Air Adjusting Valve (optional) | For fine tuning airflow at tool |

**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.**

## ⚠WARNING

**Park vehicle on a flat, level, solid, surface safely away from oncoming traffic. Turn off the vehicle's engine. Place the vehicle's transmission in "PARK" (if automatic) or in its lowest gear (if manual). Set the vehicle's emergency brake. Then, chock the wheels that are not being lifted.**

## Raising a Vehicle

**Note:** Safety shutoff prevents lifting in excess of rated load.

1. Pull Handle Lever to reposition handle as desired.
2. Turn Knob completely *clockwise* to its *locked* position. Then connect an air hose (not included) to the Air Inlet.
3. Depress the Air Lever until the Saddle of the Bottle Jack has nearly reached the vehicle lifting point. Position the Jack at 90° to the vehicle's lifting point to ensure the Bottle Jack's Saddle and vehicle lifting point are in alignment. If not, remove and then reposition the Bottle Jack before lifting.
4. To lift the vehicle, continue to depress the Air Lever. Once the vehicle is lifted, place the Air Lever Lock in its locked position.
5. Set properly-rated jack stands (not included) to the same minimum practical height according to the manufacturer's instructions, making sure they lock securely into position.
6. Position the jack stand saddles under the vehicle manufacturer's recommended support points.

**WARNING! TO PREVENT SERIOUS INJURY:** Ensure that the vehicle support points are fully seated in the saddles of both jack stands. Use a matched pair of jack stands per vehicle to support one end only.

7. Slowly turn the Knob counterclockwise to ease the vehicle onto the jack stands.

## Lowering a Vehicle

1. Remove all tools, old vehicle parts, etc. from under the vehicle.
2. Turn Knob completely *clockwise*.
3. Release the Air Lever Lock and depress the Air Lever to raise the vehicle slightly above the jack stand saddles. Carefully remove the jack stands from under the vehicle.
4. *Slowly* turn Knob *counterclockwise* (not more than one full turn) to lower the vehicle.
5. To prevent accidents, lower the Jack completely and disconnect its air supply after use. Clean, then store the Jack indoors out of children's reach.

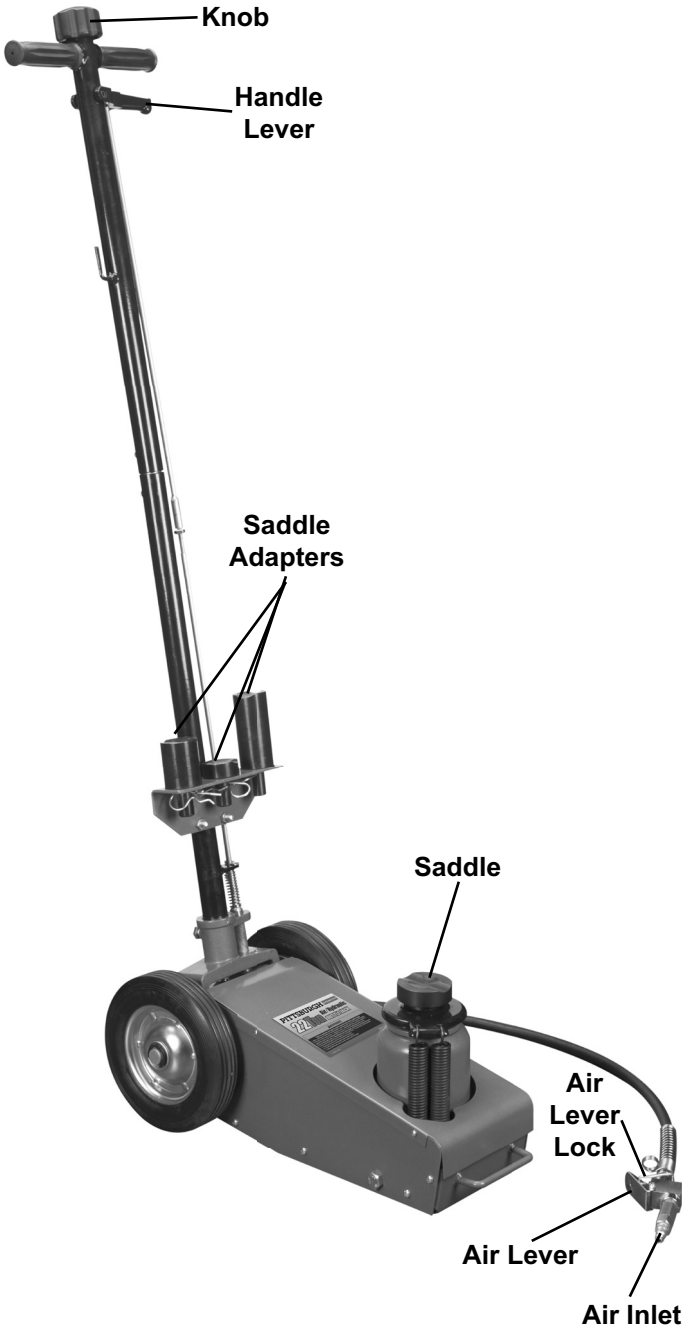



**Figure E: Controls**

## Inspection, Maintenance, & Cleaning

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

## ⚠WARNING

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

1. **BEFORE EACH USE,** inspect the general condition of the tool. Check for:
   - loose hardware or housing
   - misalignment or binding of moving parts
   - damaged air hose
   - cracked or broken parts
   - any other condition that may affect its safe operation.
2. **AFTER USE,** clean external surfaces of the Jack with a clean, moist cloth and a mild detergent. Do not use solvents.
3. **WHEN STORING,** turn Release Valve *counterclockwise* to its open position. Store the Jack and its accessories in a clean, dry, safe location out of reach of children and other unauthorized people.
4. **DAILY - Air Supply Maintenance:** Every day, maintain the air supply according to the component manufacturers' instructions. Drain the moisture filter regularly. Performing routine air supply maintenance will allow the tool to operate more safely and will also reduce wear on the tool.
5. Periodically, check the condition of the hydraulic fluid. Change the hydraulic fluid as needed through the Fill Plug. Thoroughly bleed Jack after changing fluid.

# Troubleshooting

## ⚠WARNING

**TO PREVENT SERIOUS INJURY AND DEATH:**
Use caution when troubleshooting a malfunctioning jack. Stay well clear of the supported load. Completely resolve all problems before use. If the solutions presented in the Troubleshooting guide do not solve the problem, have a qualified technician inspect and repair the jack before use.

After the jack is repaired: Test it carefully without a load by raising and lowering it fully, checking for proper operation, BEFORE RETURNING THE JACK TO OPERATION.

## DO NOT USE A DAMAGED OR MALFUNCTIONING JACK!

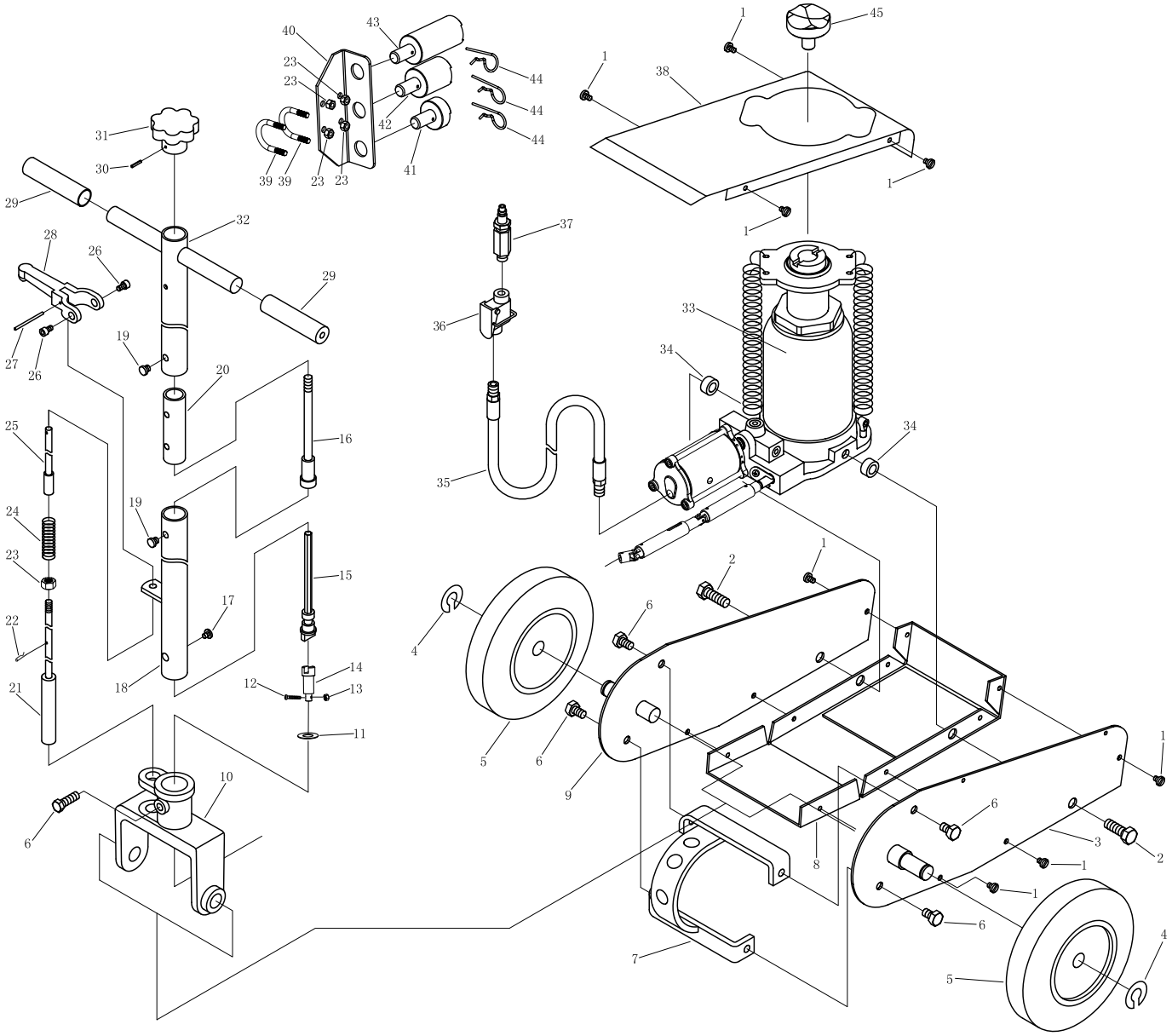
| POSSIBLE SYMPTOMS | | | | | | PROBABLE SOLUTION (Make certain that the jack is not supporting a load while attempting a solution.) |
|---|---|---|---|---|---|---|
| Jack will not lift at its weight capacity | Saddle lowers under load | Pump stroke feels spongy | Saddle will not lift all the way | Handle moves up when jack is under load | Oil leaking from filler plug | |
| X | X | | | | | Check that Release Valve is fully closed. Bleed air from the system. |
| X | X | | | X | | Valves may be blocked and may not close fully. To flush the valves:<br>1. Lower the Saddle and securely close the Knob.<br>2. Manually lift the Saddle several inches.<br>3. Open the Knob and force the Saddle down as quickly as possible. |
| X | | X | X | | | Jack may be low on oil. Check the oil level and refill if needed. |
| | | | | | | Jack may require bleeding - see instructions. |
| | | | | | X | Unit may have too much hydraulic oil inside, check fluid level and adjust if needed. |

# Main Parts List and Diagram

| Part | Description | Qty |
|---|---|---|
| 1 | Bolt | 10 |
| 2 | Bolt | 2 |
| 3 | Right Side Plate | 1 |
| 4 | Circlip | 2 |
| 5 | Wheel | 2 |
| 6 | Bolt | 5 |
| 7 | Adjustable Frame | 1 |
| 8 | Base Plate | 1 |
| 9 | Left Side Plate | 1 |
| 10 | Handle Socket | 1 |
| 11 | Washer | 1 |
| 12 | Screw | 1 |
| 13 | Nut | 1 |
| 14 | Connector | 1 |
| 15 | Tie Rod-1 | 1 |

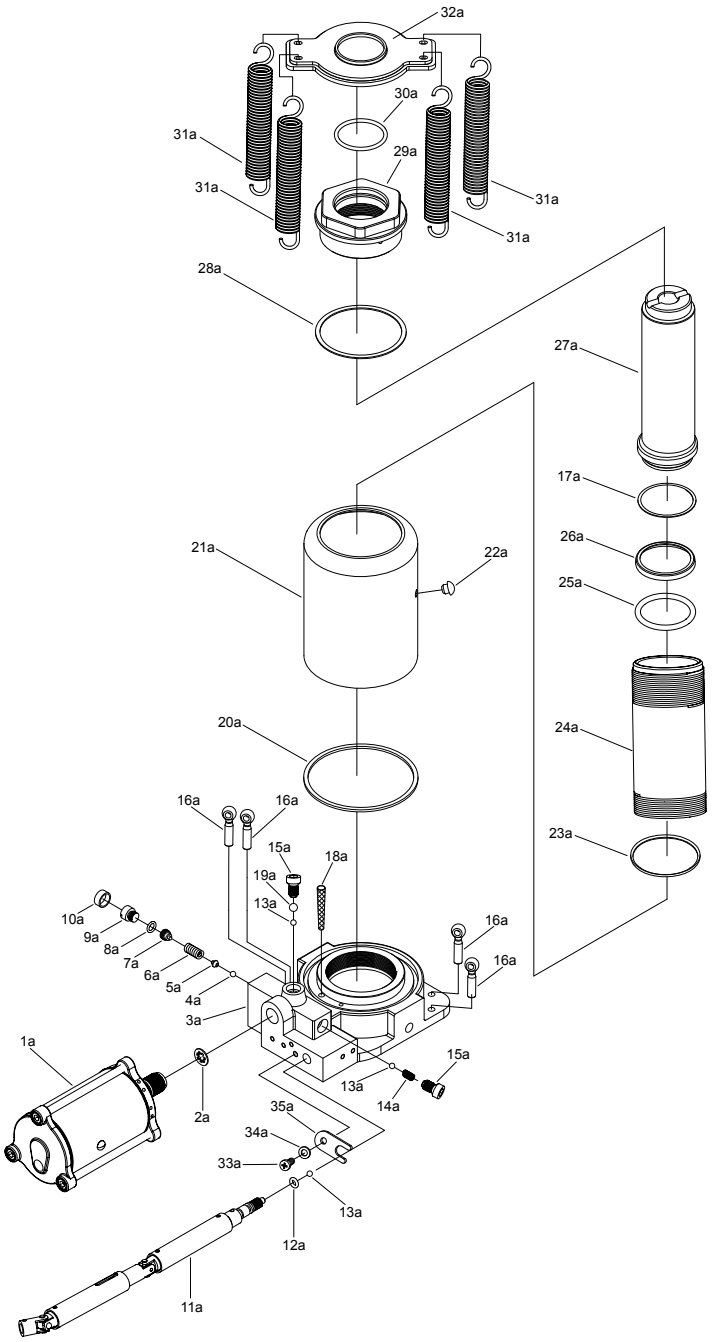
| Part | Description | Qty |
|---|---|---|
| 16 | Tie Rod-2 | 1 |
| 17 | Screw | 1 |
| 18 | Lower Handle | 1 |
| 19 | Screw | 2 |
| 20 | Handle Connector | 1 |
| 21 | Slotted Pin | 1 |
| 22 | R-Pin | 1 |
| 23 | Nut | 5 |
| 24 | Spring | 1 |
| 25 | Tie Rod-3 | 1 |
| 26 | Screw | 2 |
| 27 | Pin | 1 |
| 28 | Handle Lever | 1 |
| 29 | Handle Sleeve | 2 |
| 30 | Pin | 1 |

| Part | Description | Qty |
|---|---|---|
| 31 | Knob | 1 |
| 32 | Upper Handle | 1 |
| 33 | Pump Assembly | 1 |
| 34 | Washer | 2 |
| 35 | Air Hose | 1 |
| 36 | Valve Body Assembly | 1 |
| 37 | Quick Coupler-Male | 1 |
| 38 | Plate | 1 |
| 39 | U-Bolt | 2 |
| 40 | Adapter Holder | 1 |
| 41 | Saddle Adapter A | 1 |
| 42 | Saddle Adapter B | 1 |
| 43 | Saddle Adapter C | 1 |
| 44 | R-Pin | 3 |
| 45 | Saddle Adapter D | 1 |



# Parts List and Diagram A - Hydraulic Unit

| Part | Description | Qty |
|---|---|---|
| 1a | Air Motor | 1 |
| 2a | Copper Washer | 1 |
| 3a | Base | 1 |
| 4a | Ball | 1 |
| 5a | Ball Cup | 1 |
| 6a | Spring | 1 |
| 7a | Screw | 1 |
| 8a | O-Ring | 1 |
| 9a | Screw | 1 |
| 10a | Cap | 1 |
| 11a | Release Rod | 1 |
| 12a | O-Ring | 1 |
| 13a | Ball | 3 |
| 14a | Spring | 1 |
| 15a | Screw | 2 |
| 16a | Bolt | 4 |
| 17a | Nylon Ring | 1 |
| 18a | Oil Screen | 1 |
| 19a | Ball | 1 |
| 20a | Packing | 1 |
| 21a | Reservoir | 1 |
| 22a | Filler Plug | 1 |
| 23a | Nylon Ring | 1 |
| 24a | Cylinder | 1 |
| 25a | O-Ring | 1 |
| 26a | Cup Seal | 1 |
| 27a | Ram | 1 |
| 28a | Ring | 1 |
| 29a | Top Nut | 1 |
| 30a | O-Ring | 1 |
| 31a | Spring | 4 |
| 32a | Spring Plate | 1 |
| 33a | Screw | 1 |
| 34a | Spring Washer | 1 |
| 35a | Bracket | 1 |




# PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS DOCUMENT 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.

**Record 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. Reference UPC 792363632737 when ordering parts.

## 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.

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

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