



# 50 TON SHOP PRESS

**Model 96188**

## ASSEMBLY AND OPERATION INSTRUCTIONS



Diagrams within this manual may not be drawn proportionally.  
Due to continuing improvements, actual product may differ slightly from the product described herein.

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

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## SPECIFICATIONS

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Maximum Capacity	50 Tons
Compressed Air PSI Range	70 to 150 PSI
Overall Dimensions	67-1/2" H x 56-1/2" W x 31-1/2" D
Rail Width	9-1/4"
Pressure Gauge Markings	0-70 Tons
Pressure Gauge Thread	1/2" NPT
Piston Rod Diameter	2-1/4"
Piston Rod Travel	6-5/8"
Air Inlet Connector Size	1/4" - 18 NPT
Mounting Holes	4 at 3/4" Diameter
Weight	645 Pounds

### SAVE THIS MANUAL

**You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance, and cleaning procedures. 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.**

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## GENERAL SAFETY WARNINGS

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1. **Keep work area clean and dry.** Cluttered, dark or wet work areas invite injuries.
2. **Keep children and bystanders away from work area.** Do not allow children or untrained individuals to handle this product.
3. **Store idle equipment.** When not in use, tools and equipment should be stored in a dry location to inhibit rust. Always lock up tools and equipment and keep out of reach of children.
4. **Do not use a power tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury. Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not use this product.
5. **Dress with safety in mind.** Wear ANSI approved safety impact eyeglasses and heavy-duty work gloves when using this product. Non-skid footwear or safety shoes should be used when working with this product. 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.
6. **Industrial applications must follow OSHA requirements.**

7. **Do not overreach.** Keep proper footing and balance at all times. Proper footing and balance enable better control in unexpected situations.
8. **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.
9. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation.** If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
10. **Maintain this product with care.** Keep this tool clean and dry for better and safer performance.
11. **Maintenance: For your safety, service and maintenance should be performed regularly by a qualified technician.**
12. **Do not force the tool.** Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed. Do not force the tool and do not use the tool for a purpose for which it is not intended.

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## **SPECIFIC PRODUCT WARNINGS**

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1. **Warning: if you detect anything that may indicate imminent structural failure to the Shop Press, discontinue use immediately.** Disconnect the Shop Press from its compressed air supply source and have the problem corrected before further use.
2. **Do not install this equipment on any asphalt or wood surface.** Make sure the Shop Press is firmly secured to a dry, oil/grease free, flat, level concrete surface capable of supporting the combined weight of the Shop Press, the workpiece being pressed, and any additional tools and equipment. Do not install the Shop Press on expansion seams or on cracked, defective concrete.
3. **Maintain a safe work environment.** Do not use the Shop Press near wet areas. Do not expose this tool to rain. Make sure there is adequate surrounding work space. Use this tool in a well-ventilated area. Do not operate this tool in the presence of flammable liquids, gases, or dust.
4. **Read and understand all instructions and safety precautions in the manufacturer's manual for the workpiece you are pressing.** Always use the manufacturer's recommended pressing points, minimum/maximum pressing force required, etc. for the workpiece you are pressing.
5. **Never exceed the maximum PSI and pressing capacity.** This Shop Press will do the work better and safer at the speed and capacity for which it is designed. Do not exceed the maximum 150 psi compressed air supply or the 50 ton press capacity.

6. **Remove adjusting keys or wrenches before turning the Shop Press on.** A wrench or a key that is left attached to a rotating part of the power tool may result in personal injury.
7. **Avoid unintentional starting.** Make sure you are prepared to begin work before squeezing the handle on the Air Valve (40A).
8. **Avoid off-center loads.** If the Pressure Head Assembly (22A) seems unusually hard to press, immediately stop the operation. Disconnect the Shop Press from its compressed air supply source, and adjust the workpiece to eliminate or diminish an off-center load. Do not operate the Shop Press if the workpiece tilts or binds during the down movement of the Pressure Head Assembly.
9. **Prior to lowering the Pressure Head Assembly (22A) remove tool trays, stands, and all other tools and equipment from the Press Table (6A).**
10. **Always keep hands, fingers, and feet away from the Pressure Head Assembly (22A) and Press Table (6A) during the pressing process.**
11. **Never attempt to remove a workpiece stuck in the moving parts of the Shop Press while it is connected to the compressed air supply source.**
12. **The workpiece must be supported and controlled at all times during operation.** Use a roller stand (not provided) with a larger workpiece. Whenever possible, secure the workpiece with clamps (not provided).
13. **Once contact between the pressure head and workpiece has been made, step away as far as possible and continue to slowly apply pressure until the procedure is complete.**
14. **Never leave a compressed workpiece unattended.** When a workpiece is compressed, there is a large degree of force that has been stored in the workpiece, this must be controlled until the Pressure Head Assembly is released.
15. **Keep the Shop Press properly filled with hydraulic oil.** For instructions, see “Inspection, Maintenance, and Cleaning” section in this manual.
16. **Before performing service or maintenance release the load from the Shop Press and disconnect it from the compressed air supply source.**
17. **WARNING: 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.*)

**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.**

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## UNPACKING

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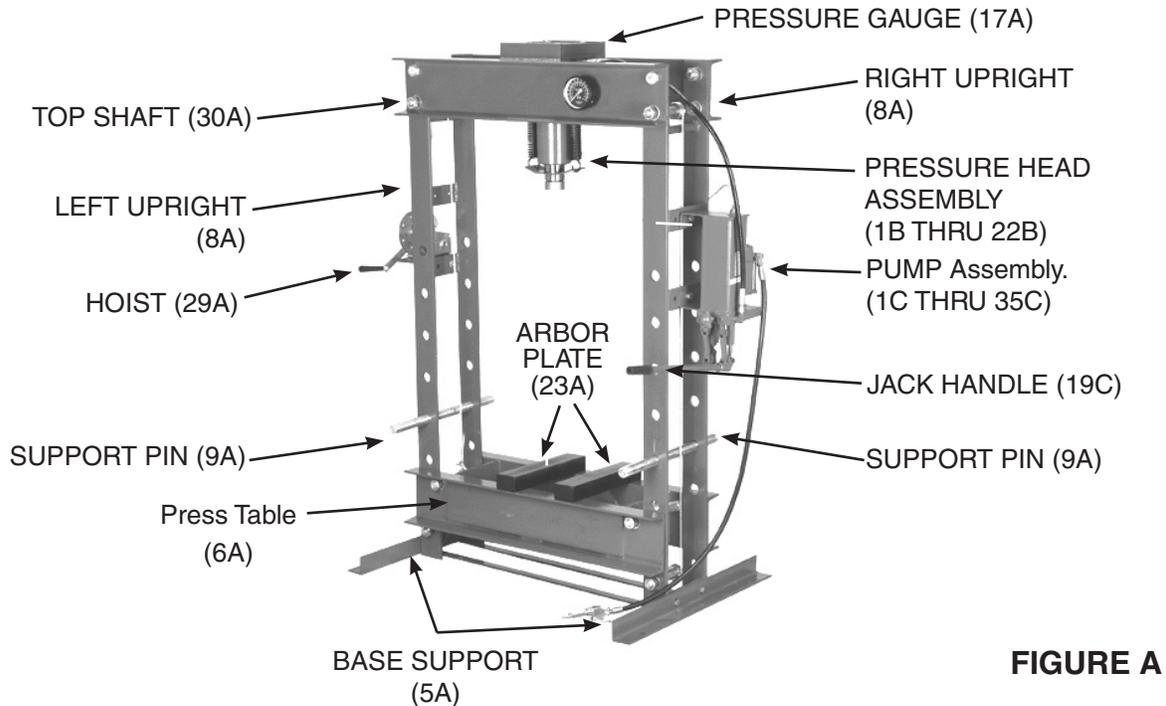
When unpacking, check to make sure all parts listed in the Parts List are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

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## ASSEMBLY INSTRUCTIONS

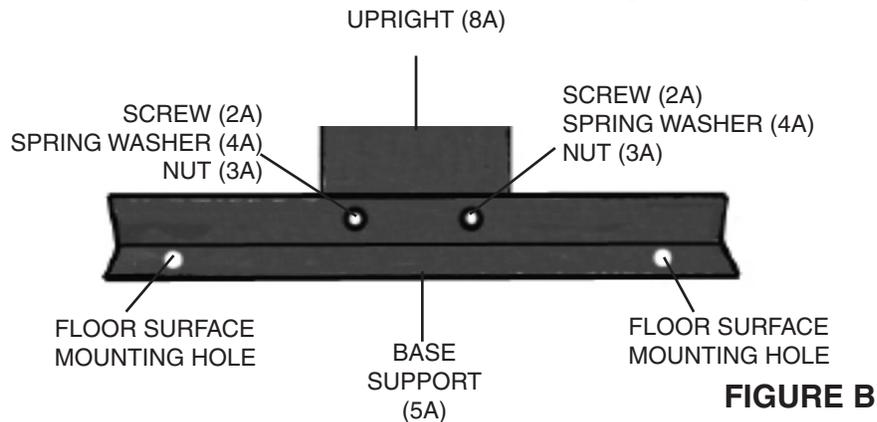
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**For additional references to the parts listed below, refer to Assembly Diagrams.**



### ***To Attach The Base Supports:***

- Secure the right and left Base Supports (5A) to the bottoms of the right and left Uprights (8A), using two Screws (2A), two Spring Washers (4A), and two Nuts (3A) for each Base Support. Seek help to set upright. **(See Figure A & B)**

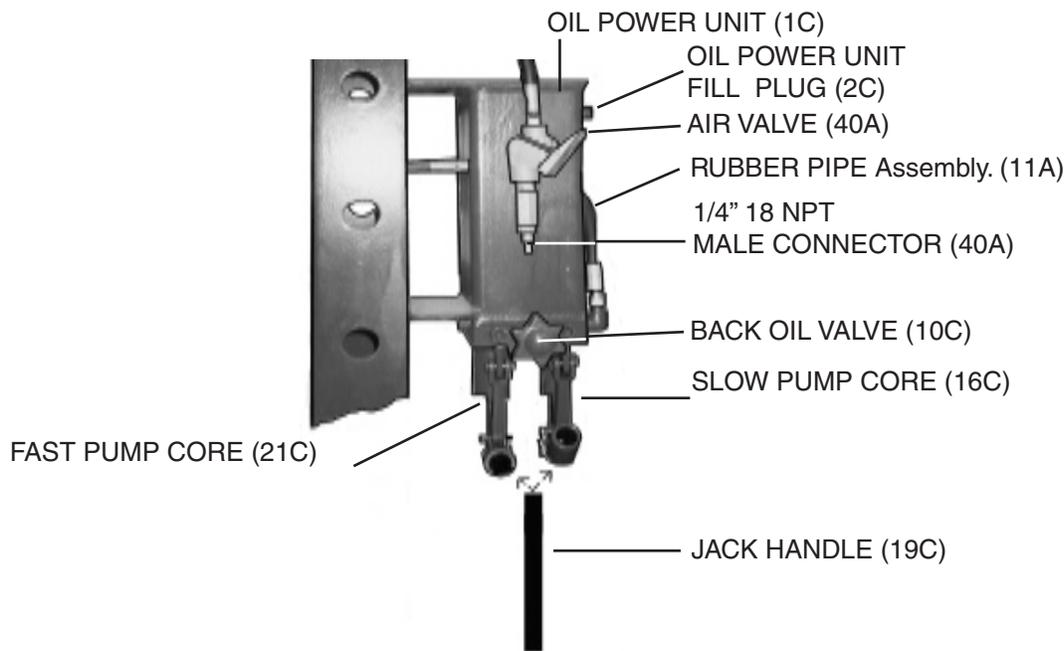


**To Attach An Air Inlet Connector:**

- To attach the 1/4"-18 NPT Air Inlet Connector to the Air Valve (40A), wrap the male threads of the Air Inlet Connector with about 4" of Teflon® tape. Then, screw the Air Inlet Connector *clockwise* into the female connection of the Air Valve (40A). (See Figure C)

**To Attach The Pressure Gauge:**

- To attach the Pressure Gauge (17A), wrap the male threads of the Pressure Gauge with about 4" of Teflon® tape. Then, screw the Pressure Gauge *clockwise* onto the top of the Pressure Head Assembly (22A). (See Figure A)



**FIGURE C**

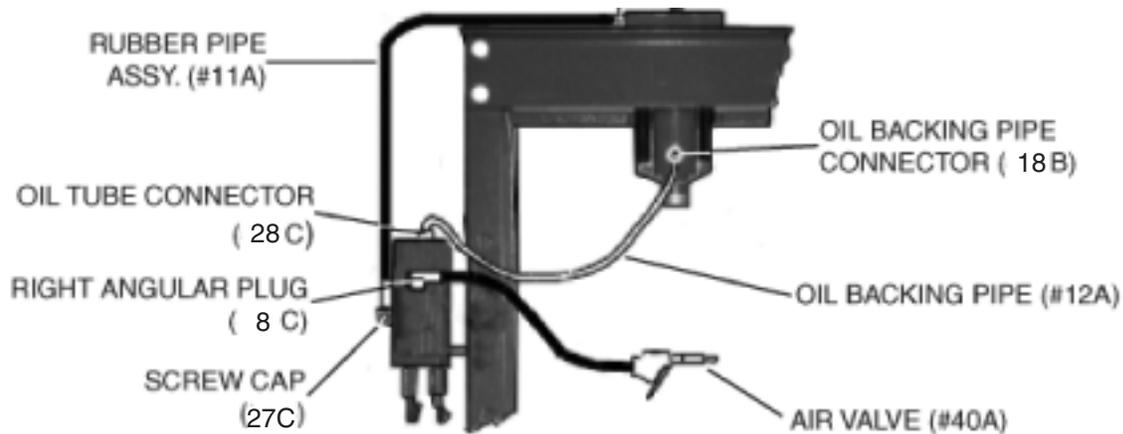
**To Attach The Rubber Pipe Assembly, Oil Backing Pipe, And Air Valve:**

- **To attach the Rubber Pipe Assembly** (11A), wrap both male threaded ends of the Rubber Pipe Assembly with about 4" of Teflon® tape. Then, connect one end of the Rubber Pipe Assembly to the Screw Cap (27C), and connect the other end to the Rubber Pipe Assembly Connector. (See Figures C & D)
- **To attach the Oil Backing Pipe** (12A), wrap both male threaded ends of the Oil Backing Pipe with about 4" of Teflon® tape. Then, connect one end of the Oil Backing Pipe to the Oil Tube Connector (28C), and connect the other end to the Oil Backing Pipe Connector (18B). (See Figure D)
- **To attach the Air Valve** (40A), wrap the male threaded end of the Air Valve Hose with about 4" of Teflon® tape. Then, connect the male threaded end of the Air Valve to the Right Angular Plug (8C). (See Figure D)

**To Attach The Hoist:**

1. Position the Hoist (29A) on the Mounting Plate located on the left Upright (8A), and align the *four* mounting holes in the Hoist with the *four* mounting holes in the Mounting Bracket. **(See Figures A & E)**
2. Secure the Hoist (29A) to the left Upright (8A), using four Screws (25A), four Washers (33A), and four Nuts (3A). **(See Figures A & E).**

**RUBBER PIPE ASSEMBLY CONNECTION**

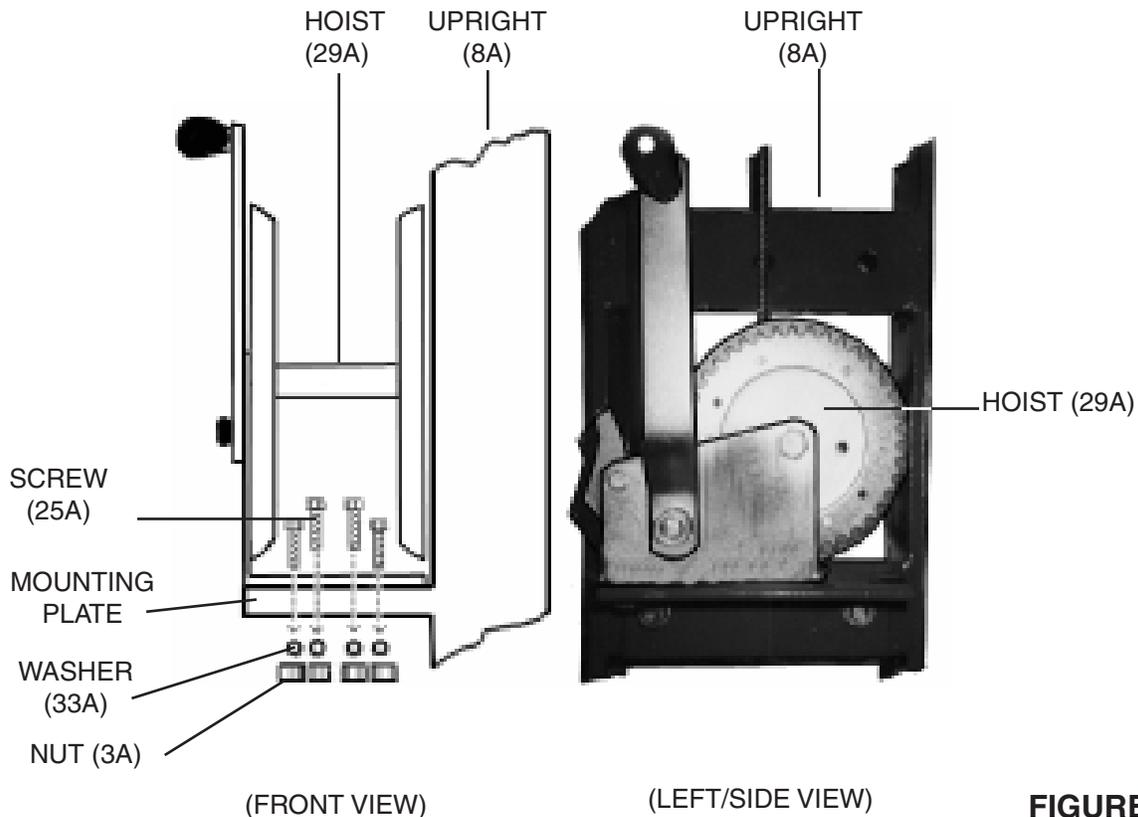


**FIGURE D**

**To Mount the Shop Press on a Concrete Floor Surface:**

1. Do not install this equipment on any asphalt or wood surface. Make sure the Shop Press is firmly secured to a dry, oil/grease free, flat, level **concrete** surface (minimum 4" thick) capable of supporting the weight of the Shop Press, the workpiece being pressed, and any additional tools and equipment. Do not install the Shop Press on expansion seams or on cracked, defective concrete.
2. With assistance, use a lifting device to stand the Shop Press in the upright position in the desired location. Use the *two* mounting holes located in each of the two Base Supports (part #5A) as a template to mark the points where mounting holes will be drilled in the concrete floor surface. Then, temporarily remove the Shop Press. **(See Figures A & B)**
3. Drill four previously marked 3/4" diameter, 4" deep, holes in the concrete floor surface. **NOTE:** Be sure to blow out the cement dust from the drilled holes.
4. Move the Shop Press back to the desired location, aligning the Base Support (part #5A) mounting holes with the mounting holes drilled in the concrete.

5. If necessary, level the Shop Press by inserting steel shims between the base of the two Uprights (part #8A) and the concrete floor surface. **NOTE:** Do not exceed more than 1/2" thickness of shims. (See Figures A & B)
6. Secure the Shop Press to the concrete floor surface, using four cement anchor bolts (not provided) of appropriate length.



**FIGURE E**

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## OPERATING INSTRUCTIONS

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**For additional references to the parts listed below, refer to the Assembly Parts Lists and Diagrams at the end of this manual.**

**Caution:** Always keeps hands and all tools clear of the Pressure Head and Press Table when working.

1. Place the two Arbor Plates (23A) *evenly and centered* on the Press Table (6A). (See Figure A)
2. Place the workpiece to be pressed *evenly and centered* on the two Arbor Plates (23A). If necessary, secure the workpiece and Arbor Plates to the Press Table (6A) with clamps (not included). (See Figure A)

3. Turn the Hoist (29A) *clockwise* to raise the Press Table (6A) to the desired height. Pull out the two Support Pins (9A) from the right and left Uprights (8A) completely. Then, reinsert the two Support Pins completely into the two nearest front/back holes (in each Upright) directly beneath the bottom edge of the Press Table. **Caution: Always visually check to make sure the Support Pins are reinserted all the way through the front and back holes in each Upright.** (See Figures A & E)
4. Turn the Hoist (29A) *counterclockwise* to lower the Press Table (6A) onto the Support Pins (9A). (See Figures A & E)
5. Make sure the Back Oil Valve (10C) is turned all the way *clockwise*. (See Figure C)
6. Connect the compressed air supply hose to the Air Valve (40A). Turn on the air compressor. Set the compressor's air pressure regulator at **no more than 150 maximum PSI**, and allow sufficient time for the air pressure to build up. (See Figures C & D)
7. The Shop Press features a Fast Pump Core (21C) and a Slow Pump Core (16C). The Fast Pump Core allows the Pressure Head Assembly (1B through 22B) to lower and make contact with the workpiece that is to be pressed *more quickly* than the Slow Pump Core. Whenever possible, it is recommended that the Slow Pump Core be used. (See Figure C)
8. To lower the Pressure Head Assembly (1B through 22B) to make contact with the workpiece that is to be pressed, insert the Jack Handle (19C) into either the Fast Pump Core or Slow Pump Core. Then, step as far away from the workpiece as possible, squeeze the Handle on the Air Valve (40A), and slowly pump the Jack Handle up and down. (See Figures A & C)
9. **Visually check the Pressure Gauge (17A), so as not to exceed the manufacturer's recommended pressing capacity on the workpiece for which you are pressing.** (See Figure A)
10. Continue squeezing the Air Valve (40A) and pumping the Jack Handle (19C) up and down until the pressing procedure is completed. Then release pressure on the Air Valve, pull the Jack Handle all the way up, and remove the Jack Handle from the Fast or Slow Pump Core (16C, 21C). (See Figure C.)
11. Turn the Back Oil Valve (10C) *counterclockwise* to allow the Pressure Head Assembly (1B through 22B) to fully retract to its upper position. Then, close the Back Oil Valve by turning it *clockwise*. (See Figures A & C)
12. Turn off the air compressor. Disconnect the air compressor supply hose from the Air Valve (40A). And remove the finished workpiece. (See Figures C & D)

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## INSPECTION, MAINTENANCE, AND CLEANING

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1. **Caution:** Always release load from the Shop Press, and disconnect the Shop Press from the compressed air supply source before performing any inspection, maintenance, or cleaning.
2. Before each use, inspect the general condition of the Shop Press. Inspect the compressed air and hydraulic oil lines for damage. Check for structural failure, loose, cracked, bent or damaged parts, misalignment or binding of moving parts, frayed or broken wire cable, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, disconnect the Shop Press from the compressed air supply source immediately and have the problem corrected before further use. **Do not use damaged equipment.**
3. Periodically, lubricate the Hoist (29A) and both Shafts (30A, 42A) with a light weight oil. **(See Figures A & E)**
4. To prevent rust, it to coat all exposed surfaces with a light weight oil.
5. **Always keep the Arbor Plates (23A) and Press Table (6A) area clean and free of oil and other lubricants. (See Figure A)**
6. Periodically, check the hydraulic oil level in the Oil Power Unit (1C):
  - a. Connect the compressed air supply hose to the Air Valve (40A) and turn on the air compressor.
  - b. Turn the Back Oil Valve (10C) *counterclockwise* .
  - c. Insert the Jack Handle (19C) into the Handle Socket (17C) that is attached to the Slow Pump Core (16C). Slowly pump the Jack Handle up and down several times to force unwanted air out of the hydraulic system.
  - d. Retighten the Back Oil Valve by turning it *clockwise*. **(See Figures A & C)**
6. If the Pressure Head Assembly (1B through 22B) still does not operate properly:
  - a. Unscrew and remove the Oil Power Unit Fill Plug (2C) to expose the Oil Fill Hole.
  - b. Through the Oil Fill Hole, top off the hydraulic oil.
  - c. Insert the Jack Handle (19C) into the Handle Socket (17C) that is attached to the Slow Pump Core (16C).
  - d. Slowly pump the Jack Handle up and down to force unwanted air out of the Oil Fill Hole. As you pump the Jack Handle, watch for the first sign of hydraulic oil leaking from the Oil Fill Hole.
  - e. As soon as it occurs, discontinue pumping the Jack Handle, and screw the Oil Power Unit Fill Plug (2C) back into the Oil Fill Hole. **(See Figure C)**

6. To clean, wipe with a damp cloth. You may use a mild detergent or a non-flammable solvent. Once clean, lubricate the parts listed in Step #3.
7. When storing, keep the Shop Press covered with a clean drop cloth in a cool, 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.

**SHOP PRESS PARTS LIST**

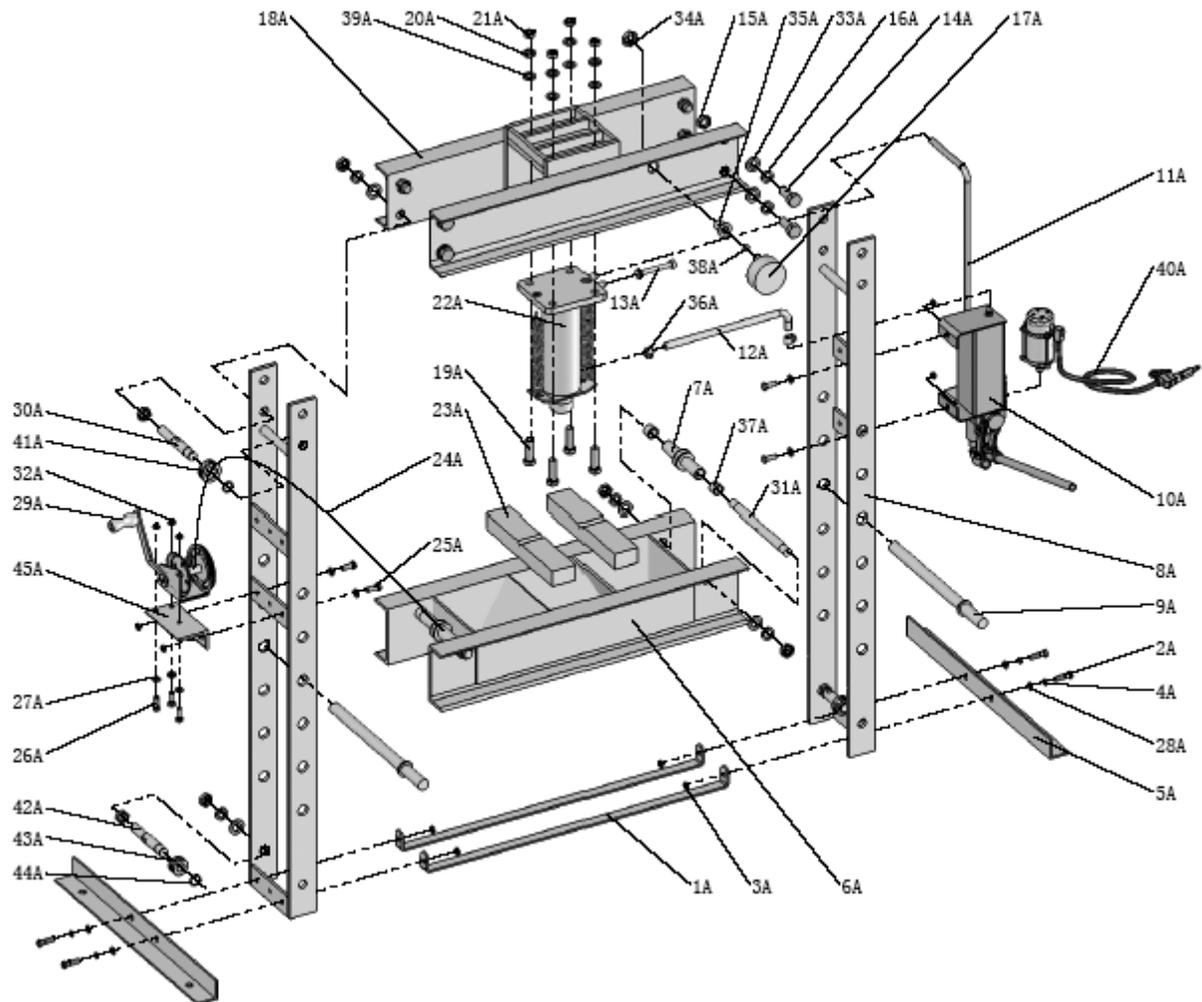
Part	DESCRIPTION	QTY
1	Spreader	2
2A	Screw (M12x15)	4
3A	Nut (M12)	8
4A	Spring Washer (12)	4
5A	Base Support	2
6A	Press Table	1
7A	Vise Wheel Shaft Assembly	3
8A	Upright	2
9A	Support Pin	2
10A	Pump Assembly	1
11A	Rubber Pipe Assembly	1
12A	Oil Backing Pipe	1
13A	Oil Pipe	1
14A	Screw (M24x55)	6
15A	Nut (M24)	18
16A	Spring Washer (24)	14
17A	Pressure Gauge	1
18A	Jack Ring/header	1
19A	Screw (20x65)	4
20A	Spring Washer (20)	4
21A	Nut (M20)	4
22A	Pressure Head Assembly	1
23A	Arbor Plate	2

Part	DESCRIPTION	QTY
24A	Wire Cable	2
25A	Screw (M12x30)	4
26A	Screw (M10x20)	3
27A	Washer (10)	3
28A	Washer (12)	8
29A	Hoist	1
30A	Top Shaft	1
31A	Pull Rod	2
32A	Nut (M10)	3
33A	Washer (24)	14
34A	Nut (M30)	1
35A	Tube Splice	1
36A	Oil Pipe Hook	1
37A	Bushing	4
38A	Washer	1
39A	Washer (20)	4
40A	Air Valve	1
41A	Pulley (large)	1
42A	Bottom Shaft	3
43A	Pulley (small)	3
44A	C-ring	4
45A	Table	1

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## SHOP PRESS ASSEMBLY DIAGRAM

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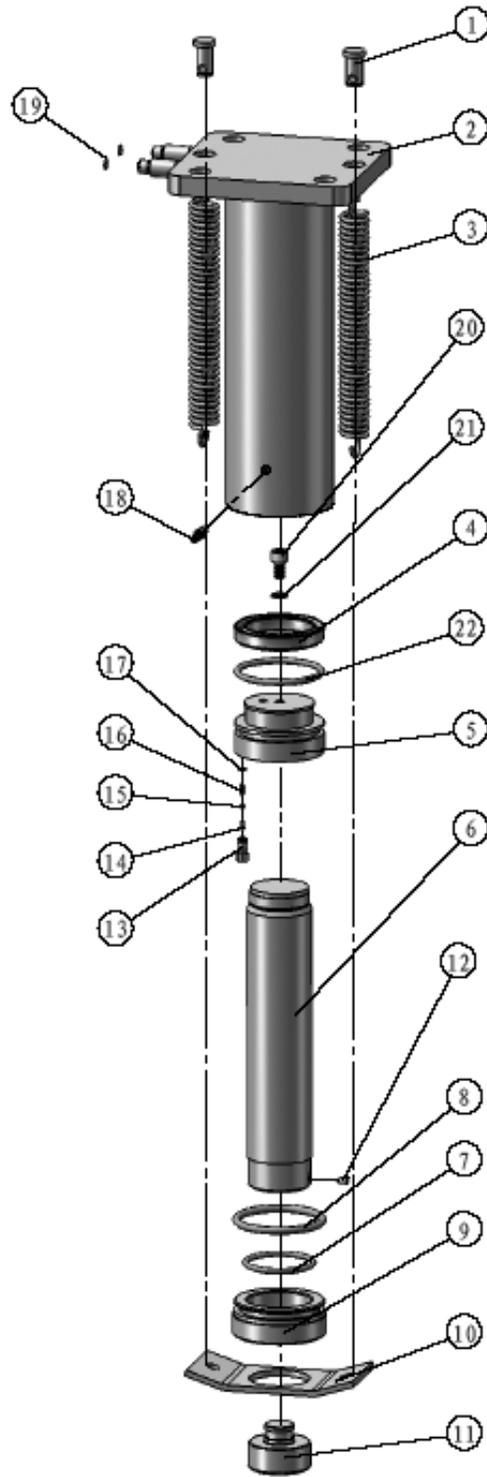


**Note:** Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

**Note:** When ordering replacement parts from this diagram, include an "A" so that the correct part will be ordered.

## PRESSURE HEAD DIAGRAM

Part	Description	Qty
1B	Extension Spring Bolt	2
2B	Cylinder Assembly	1
3B	Extension Spring	2
4B	Piston Seal Ring	1
5B	Pressure Head	1
6B	Piston Rod	1
7B	O-ring Kit 63x5	1
8B	O-ring Kit 80x7	1
9B	Guide Sleeve	1
10B	Spring Plate	1
11B	Pressure Head Base	1
12B	Locking Screw M8x16	1
13B	Backing Oil Bolt	1
14B	Limit Cross Bar	1
15B	Steel Ball 5	1
16B	Press Limit Spring	1
17B	Limit Copper Washer	1
18B	Backing Oil Pipe Connector	1
19B	O-ring Kit 7.5x1.8	2
20B	Bolt M10x18	1
21B	Spring Washer 10	1
22B	O-ring Kit 80x5.3	1



**Note:** When ordering replacement parts from this diagram, include a “B” so that the correct part will be ordered.

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

## PUMP ASSEMBLY PARTS LIST

Part	Description	Qty	Part	Description	Qty
1C	Oil Power Unit	1	19C	Jack Handle	1
2C	Oil Power Unit Fill Plug	1	20C	Pump Core Pin	6
3C	O-Ring (6.0 x 1.8)	1	21C	Fast Pump Core	1
4C	Bolt	4	22C	O-ring 25x3.55	2
5C	O-ring 10.6x1.8	1	23C	Triangle Valve	1
6C	Spring	2	24C	Spring	1
7C	Steel Ball 9	4	25C	Adjustable Pressure Screw	1
8C	Right Angular Plug	1	26C	Copper Washer	1
9C	O-ring 12.5x2.65	1	27C	Screw Cap	1
10C	Back Oil Valve	1	28C	Oil Tube Connector	1
11C	Spring	2	29C	Air Pump	1
12C	O-ring 6.6x3	1	30C	Spring	1
13C	O-ring 11.88x3	1	31C	Washer	1
14C	O-Ring (12.5 x 2.65)	1	32C	Bolt	1
15C	Connector	2	33C	Washer	1
16C	Slow Pump Core	1	34C	Steel Ball 8	1
17C	Handle Socket	2	35C	Ball 6	1
18C	Split Pin	6			

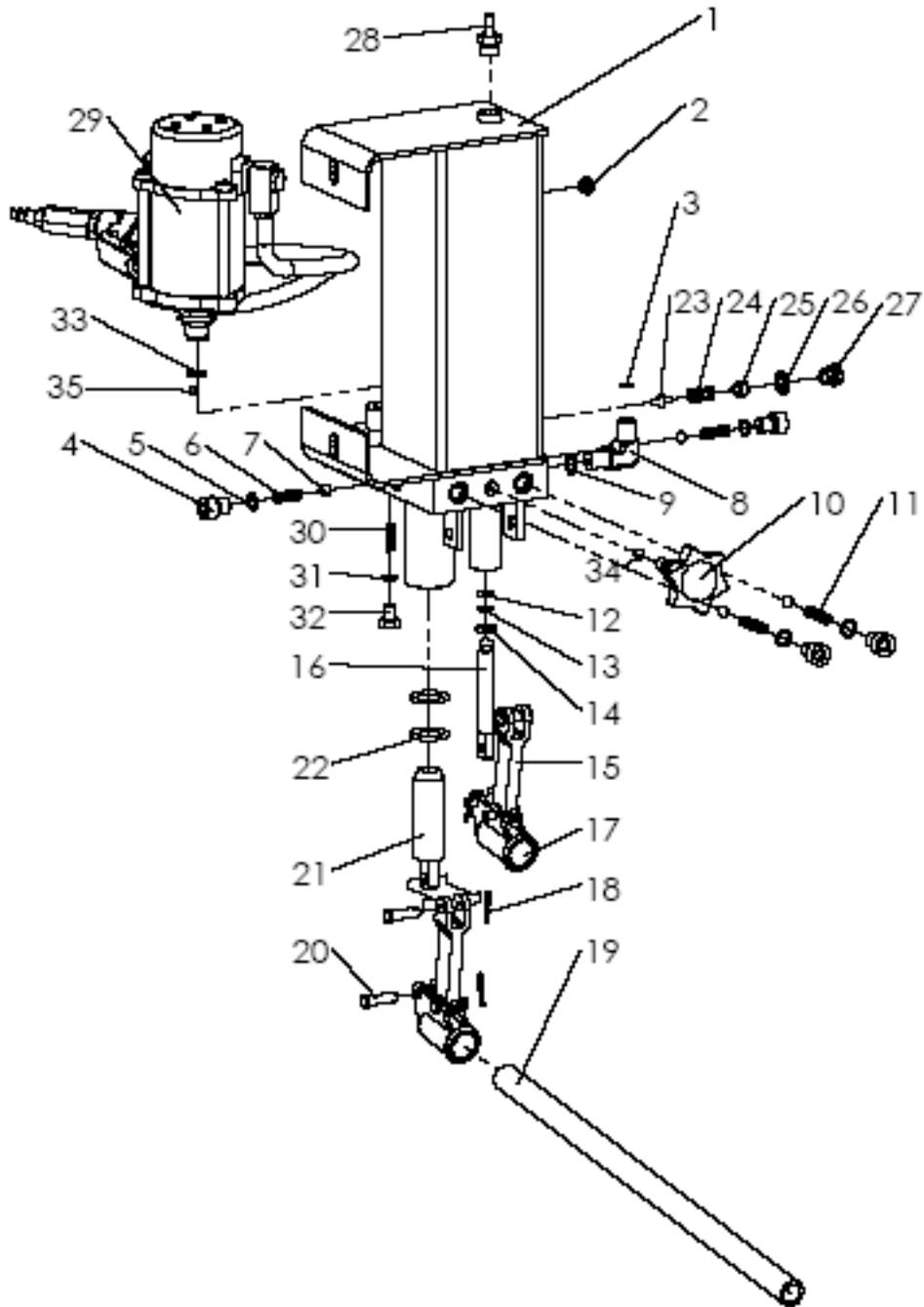
**Note:** Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

**Note:** When ordering replacement parts from this diagram, include a "C" so that the correct part will be ordered.

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## PUMP 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.

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**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.

REV 11h

SKU 96188

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

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