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 (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.

22k

PITTSBURGH 2 TON FOLDABLE SHOP CRANE



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.

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No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools.

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

Tools required for assembly and service may not be included.

▲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						
A	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.					
ACAUTION	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

General Safety Warnings

- Study, understand, and follow all instructions before operating this device.
- Do not exceed rated capacity.
- Use only on a hard, level surface capable of supporting the load.
- Before moving, lower the load to the lowest possible height.
- 5. Failure to heed these markings may result in personal injury and/or property damage.
- Use only slings or chains with a rated capacity greater than the weight of the load being lifted.
- Do not allow load to swing or drop violently while lowering or moving.
- 8. No alterations shall be made to this product.
- 9. Do not move Shop Crane when under load.
- 10. Attach application to Shop Crane using fitted sling that is rated for weight being lifted.
- 11. Do not adjust safety valve.

- 12. Secure Boom in proper setting before use.
- 13. Follow capacities marked on Boom; capacity decreases as boom lengthens.
- 14. Wear ANSI-approved safety goggles and heavy-duty work gloves during use.
- 15. Verify replacement Jack has same rating, mounting points and maximum length.
- 16. Do not use for aircraft purposes.
- 17. Inspect before every use; do not use if parts loose or damaged.
- Keep your work area clean and well lit. Cluttered work areas invite accidents.
- Keep bystanders, children, and visitors away while operating Shop Crane.
 Distractions can cause loss of control.
- 20. Stay alert. Watch what you are doing, and use common sense when operating a Shop Crane. Do not use a Shop Crane while tired or under influence of drugs, alcohol, or medication. A moment of inattention while operating Shop Crane may result in serious personal injury.

- 21. Follow instructions in "Maintenance and Servicing" section of this manual. Use of unauthorized parts or failure to follow maintenance instructions may create a risk of injury and may void any applicable warranty.
- 22. Maintain labels and nameplates on Shop Crane. These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
- 23. Before use, read manufacturer's instruction manual for object you will lift.

- 24. Industrial applications must follow OSHA requirements.
- 25. 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.



SAVE THESE INSTRUCTIONS.

Specifications

Specifications					
Shop Crane Weight	197.1 Lb.				
Boom Height	17.75" - 75.2" at position 4.				
Boom Length	41" - 62.4"				
Jack Hydraulic Oil Type	15#				

	Boom Positions Max Lifting Capacity					
1/2 Ton - 1,000 Lb.	Position 1					
1 Ton - 2,000 Lb.	Position 2					
1-1/2 Ton - 3,000 Lb.	Position 3					
2 Ton - 4.000 Lb.	Position 4					

Assembly

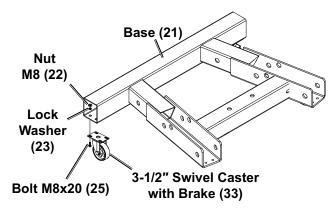
Part #2 12x80 mm	Part #8 14x100 mm	Part #11 16x80 mm	Part #15 16x100 mm	Part #16 16x110 mm	Part #20 16x90 mm	Part #25 8x20 mm
						Part #29
						8x12 mm

AWARNINGTO PREVENT SERIOUS INJURY AND DEATH: The correct bolts must be used during assembly. Carefully compare bolts to Bolt Identification illustration above and the measurements shown in the parts list and assembly diagrams near the end of this manual to make sure that the correct bolts are used in the correct place.

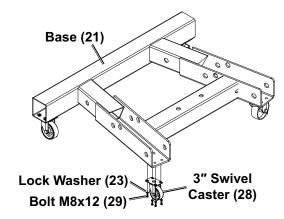
WARNING! TO PREVENT SERIOUS INJURY: For safety and ease of assembly, use two people to assemble the Shop Crane.

<u>CAUTION!</u> DO NOT TIGHTEN ANY BOLTS UNTIL YOU ARE FULLY FINISHED WITH ASSEMBLY. OTHERWISE PARTS WILL NOT LINE UP PROPERLY.

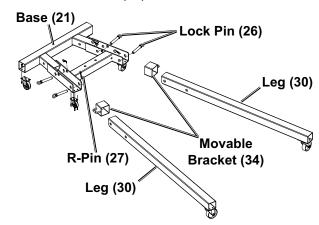
- 1. Place Base (21) on a secure, level surface.
- 2. Place two 3-1/2" Swivel Caster with Brake (33) on Base.
- 3. Install eight Bolts M8x20 (25) into Casters and Base.
- 4. Install eight Lock Washers (23) onto Bolts.
- 5. Install eight Nuts M8 (22) onto Bolts.
- 6. Tighten Nuts M8.



- 7. Place two 3" Swivel Casters (28) on Base.
- 8. Install eight Lock Washers (23) onto eight Bolts M8x12 (29).
- 9. Install eight Bolts and Lock Washers into Casters and Base.
- 10. Tighten eight Bolts.



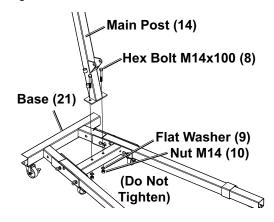
- 11. Install two Movable Brackets (34) onto Legs with loops facing outward.
- 12. Place two Leg (30) into Base.
- 13. Install four Lock Pin (26) into Base and Legs.
- 14. Place four R-Pin (27) onto Lock Pins.



- 15. Install Main Post (14) onto Base.
- 16. Install two Hex Bolts M14x100 (8) through Main Post and Base.
- 17. Place two Flat Washers (9) onto Bolts.

<u>Note:</u> Do not tighten two Nuts M14 (10) until Shop Crane is fully assembled.

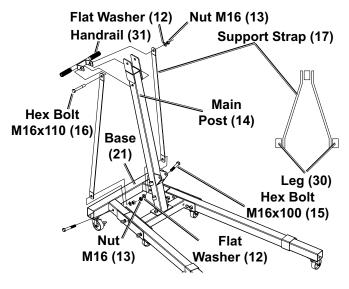
18. Place two Nuts M14 (10) onto Bolts then thread two Nuts onto Bolts by hand until snug and then loosen a few turns.



- 19. Place Handrail (31) onto Main Post then place Support Straps (17) onto Handrail, refer to **Figure A: Handrail and Support Strap Configuration.**
- 20. Install Hex Bolt M16x110 (16) through Support Strap, Handrail flange, Main Post, Handrail flange and Support Strap.
- 21. Place Flat Washer (12) onto Bolt.
- 22. Place Nut M16 (13) onto Bolt then thread Nut onto Bolt by hand until snug and then loosen a few turns.
- 23. Place two Support Straps (17) onto inner Base (21). Ensure Support Straps angle towards Main Post.
- 24. Install two Hex Bolts M16x100 (15) through Base and Support Straps.
- 25. Place two Flat Washers (12) onto Bolts.

Note: Do not tighten two Nuts M16 (13) until Shop Crane is fully assembled.

26. Place two Nuts M16 (13) onto Bolts then thread two Nuts onto Bolts by hand until snug and then loosen a few turns.



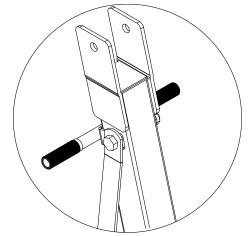
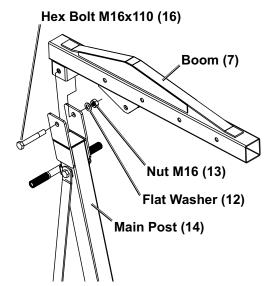


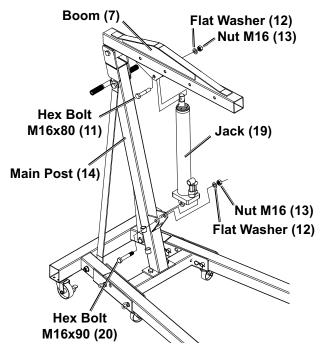
Figure A: Handrail and Support Strap Configuration.

- 27. Tighten two Nuts M14 (10) on Main Post and Base.
- 28. Tighten two Nuts M16 (13) on Base and Support Straps.
- 29. Tighten Nut M16 (13) on Support Straps, Handrail and Main Post.
- 30. Place Boom (7) into Main Post.
- 31. Install Hex Bolt M16x110 (16) through Main Post and Boom.
- 32. Place Flat Washer (12) onto Bolt.
- 33. Place Nut M16 (13) onto Bolt.
- 34. Tighten Nut.

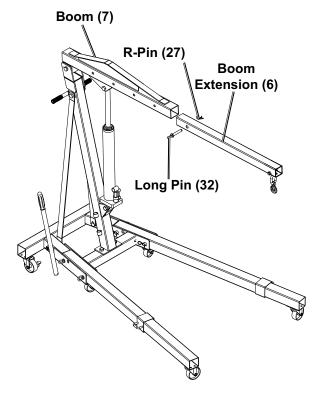


- 35. Place lower Jack (19) onto Main Post (14) flange with Handle insert facing outward.
- 36. Install Hex Bolt M16x90 (20) through Main Post flange and Jack.
- 37. Place Jack cylinder into Boom (7) flange.
- 38. Install Hex Bolt M16x80 (11) through Boom flange and Jack cylinder.
- 39. Place Flat Washer (12) onto Hex Bolt M16x80 (11).

- 40. Place Nut M16 (13) on Bolt.
- 41. Tighten Nut.
- 42. Place Flat Washer (12) onto Hex Bolt M16x90 (20).
- 43. Place Nut M16 (13) onto Bolt.
- 44. Tighten Nut.



- 45. Place Boom Extension (6) into Boom (7).
- 46. Install Long Pin (32) through Boom and Boom Extension, and attach R-Pin (27) to end of Long Pin.



PITTSBURGH

Operating Instructions



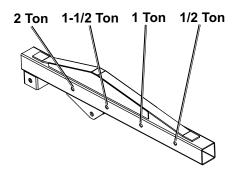
Read <u>ENTIRE</u> IMPORTANT SAFETY INFORMATION section at beginning of this manual including all text under subheadings therein before set up or use of this product.

Note: Once Assembly is complete, tighten ALL Bolts before initial operation.

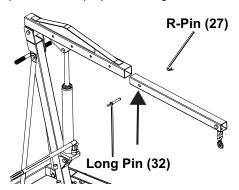
Lifting and Lowering

1. Locate hole on Boom (7) with a weight limit higher than weight to be lifted.

For example: Locate 1 TON hole on Boom for a load that is under one Ton.



 Adjust Boom Extension (6) so hole furthest from Hook and Chain (1) aligns with chosen hole on Boom. Secure into place by inserting Long Pin (32) through all aligned holes, then place R-Pin (27) onto Long Pin.



<u>WARNING!</u> Do not stand under an object that is being lifted by Shop Crane. Be aware of possibility of a load slipping off Hook and Chain. An item that falls from Shop Crane can cause serious injury.

- 3. Move Shop Crane so that Hook and Chain is directly above item to be lifted.
- 4. Securely attach Hook and Chain to item.

WARNING! TO PREVENT SERIOUS INJURY:

Fully tighten release valve or else Jack may lower or may not be able to reach full height.

 To raise Boom, turn Jack's release valve fully clockwise (right). Insert Handle (18) into Jack and pump (up and down) repeatedly until item has been lifted to desired height.

<u>WARNING!</u> TO PREVENT SERIOUS INJURY: DO NOT MOVE SHOP CRANE WHEN UNDER

LOAD. Casters are not designed to be rolled when Shop Crane is lifting heavy objects.

6. To lower Shop Crane, **SLOWLY** turn Jack's release valve counterclockwise (left).

Folding the Frame

WARNING! Do not fold Shop Crane while loaded.

- 1. Lower Shop Crane all the way.
- Remove both forward R-Pins from Base and Legs and remove Lock Pins. Leave rear Lock Pins installed.
- 3. Raise Leg completely.
- 4. To lock Legs in upright position, insert a front Lock Pin into hole closest and just above rear Lock Pin on Base for each Leg, then install R-Pins.

Bleeding Instructions

<u>IMPORTANT!</u> Before first use, check for hydraulic oil leaks and thoroughly test equipment. If it does not work properly, bleed excess air from its hydraulic system as follows:

- 1. Fully turn Release Valve (counter clockwise) and lower Jack completely.
- 2. Insert Handle into Jack.
- 3. Apply downward pressure to Boom and pump Handle quickly several times.
- 4. Turn Release Valve (clockwise).
- Test Shop Crane several times for proper operation before attempting to lift a load. If, after bleeding, equipment still does not appear to be working properly, do not use equipment until it has been repaired by a qualified service technician.

Maintenance and Servicing



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

AWARNING

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

Cleaning, Maintenance, and Lubrication

- Before each use, inspect the general condition of Shop Crane. Check for broken, cracked, or bent parts, loose or missing parts, and any condition that may affect proper operation of product. If a problem occurs, have problem corrected before further use.
 Do not use damaged equipment.
- 2. Before each use, thoroughly test Shop Crane for proper operation prior to its actual use. If Shop Crane appears *not* to be working properly, follow *Bleeding* instructions on page 7.
- 3. Change hydraulic oil at least once every three years:
 - a. With Jack fully lowered, remove Oil Filler Plug on the side of Housing.

- b. Tip Jack to allow the old hydraulic oil to drain out of the Housing completely, and dispose of old hydraulic oil in accordance with local regulations.
- c. With Jack upright, completely fill Housing with 15# hydraulic oil (not included) until oil just begins to run out of Oil Fill Hole.
- d. Open Release Valve, then pump Handle to bleed air from the system.
- e. Reinstall Oil Filler Plug.
- 4. Wipe dry with a clean cloth. Then, store Shop Crane in a safe, dry location out of reach of children and other non-authorized people.

SAFETY

TO PREVENT SERIOUS INJURY: Use caution when troubleshooting malfunctioning jack. Stay clear of supported load. Completely resolve all problems before use. If solutions presented in Troubleshooting guide do not solve the problem, have a qualified technician inspect and repair jack before use. After jack is repaired: Test it carefully without a load by raising and lowering it fully, checking for proper operation, BEFORE RETURNING JACK TO OPERATION.

DO NOT USE A DAMAGED OR MALFUNCTIONING JACK!

POSSIBLE SYMPTOMS								
Jack will not lift at its weight capacity	Chain and/or Hook lowers under load	Pump stroke feels spongy	Chain and/or Hook will not lift all the way	Handle moves up when Jack is under load	Oil leaking from Filler Plug	PROBABLE SOLUTION (Make certain that the Jack is not supporting a load while attempting a solution.)		
X	X					Check that Release Valve is closed fully. Bleed air from the system.		
х	x			X		Valves may be blocked and may not close fully. To flush the valves: 1. Lower the Hook and Chain and securely close the Release Valve. 2. Manually lift the Hook and Chain several inches. 3. Open the release valve and force the Hook and Chain down as quickly as possible.		
х		Х	x			Jack may be low on oil. Check the oil level and refill if needed. Jack may require bleeding -		
					X	unit may have too much hydraulic oil inside, check fluid level and adjust if needed.		

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.

Parts List and Diagram

Parts List

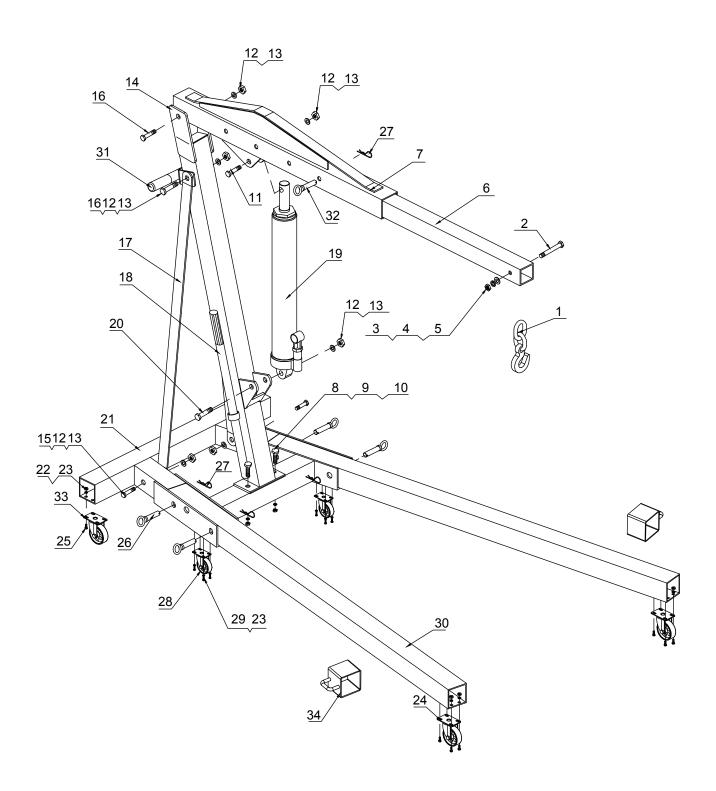
Part	Description	Qty
1	Hook and Chain	1
2	Hex Bolt M12x80	1
3	Lock Washer	1
4	Flat Washer	1
5	Nut M12	1
6	Boom Extension	1
7	Boom	1
8	Hex Bolt M14x100	2
9	Flat Washer	2
10	Nut M14	2
11	Hex Bolt M16x80	1
12	Flat Washer	6
13	Nut M16	6
14	Main Post	1
15	Hex Bolt M16x100	2
16	Hex Bolt M16x110	2
17	Support Strap	2

Part	Description	Qty
18	Handle	1
19	Jack	1
20	Hex Bolt M16x90	1
21	Base	1
22	Nut M8	16
23	Lock Washer	24
24	3½" Swivel Caster	2
25	Hex Bolt M8x20	16
26	Lock Pin	4
27	R-Pin	5
28	3" Swivel Caster	2
29	Hex Bolt M8x12	8
30	Leg	2
31	Handrail	1
32	Long Pin	1
33	3½" Swivel Caster with Brake	2
34	Movable Bracket	2

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. Specify UPC 193175446237 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.

