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.

221



LAWNMOWER/ATV HD HIGH LIFT JACK 23" LIFT / 750 LB. CAPACITY



63298

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.

AWARNING

Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

Specifications

Rated Capacity	750 lb	Wheel Bracket Width	30-5/8" – 56-1/8"
Maximum Lift Height	23"	vviider Bracket vviatir	center to center

IMPORTANT SAFETY INFORMATION

- Study, understand, and follow all instructions before operating this device.
- 2. Use only on a hard, level surface capable of supporting the load.
- Do not raise one end of the vehicle if the other end is supported.
- 4. Do not exceed rated capacity of the wheel lifts.
- 5. Wheel lifts shall be used as an identical pair.
- Disengage parking brake and place the transmission in neutral after the wheel lifts have been placed to engage the vehicle tires.
- Do not allow any part of your body under the vehicle until both of the wheel lifts are pinned as stands.
- Failure to heed and understand these instructions and markings may result in personal injury and/or property damage.
- Do not lift the entire vehicle with multiple sets of wheel lifts.
- 10. Use wheel lift only beneath the vehicle tires.
- 11. No alterations shall be made to this product.
- 12. Assemble only according to these instructions. Improper assembly can create hazards.
- 13. Keep bystanders out of the area during assembly.
- Do not assemble when tired or when under the influence of alcohol, drugs or medication.
- 15. Weight capacity and other product capabilities apply to properly and completely assembled product only.
- 16. Center load on Lift platforms.
- 17. Only lift tires using Wheel Brackets.
- 18. Immediately after lifting load, ensure Lift mechanical load holding means is engaged.
- 19. Do not move while loaded.
- 20. Secure load with appropriate restraint device.
- 21. Do not adjust safety valve.
- 22. Wear ANSI-approved safety goggles and heavyduty work gloves during assembly and use.

- 23. Keep clear of load while lifting and lowering.
- 24. Lower load slowly.
- 25. Do not use for aircraft purposes.
- 26. Inspect before every use; do not use if parts loose or damaged.
- Keep your assembly and work area clean and well lit. Cluttered work areas invite accidents.
- 28. Do not allow anyone on the vehicle while using the Lift. Keep bystanders a safe distance away from the vehicle and Lift.
- 29. Do not lift more than one vehicle at a time.
- 30. Stay alert. Watch what you are doing, and use common sense when operating a jack. Do not use a jack while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating jacks may result in serious personal injury.
- 31. Store idle jacks out of reach of children and other untrained persons. Jacks are dangerous in the hands of untrained users.
- 32. Jack service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.
- 33. When servicing a jack, use only identical replacement parts. Follow instructions in the "Maintenance and Servicing" section of this manual. Use of unauthorized parts or failure to follow maintenance instructions may create a risk of injury.
- 34. Maintain labels and nameplates. These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
- 35. Before use, read manufacturer's instruction manual for the vehicle you will lift.
- 36. Before lowering the Lift, remove all tools and equipment from under the vehicle.
- 37. 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.

Assembly Instructions

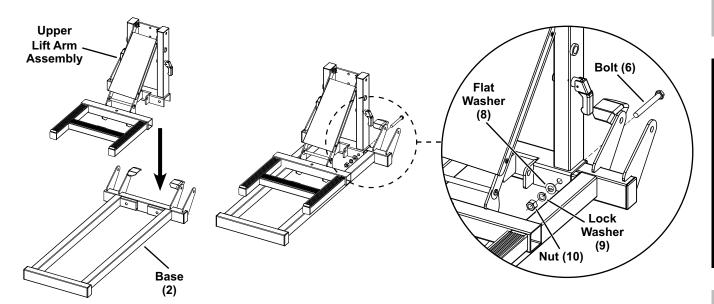


Read the <u>ENTIRE</u> IMPORTANT SAFETY INFORMATION section at the beginning of this document including all text under subheadings therein before set up or use of this product.

1. Place the Base (2) flat on a horizontal surface.

Place the Upper Lift Arm Assembly onto the end of the Base as shown and align the bolt holes.

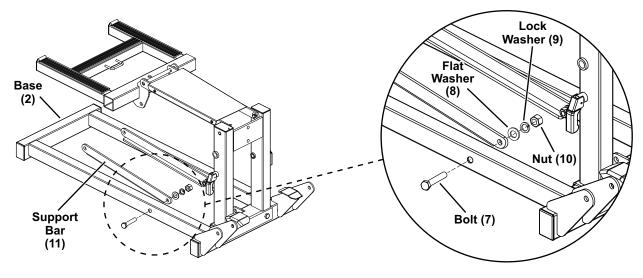
Secure the Upper Lift Arm Assembly to the Base using two Bolts (6), Flat Washers (8), Lock Washers (9), and Nuts (10).



Step 1: Attach Upper Lift Arm Assembly to Base

2. Place the two Support Bars (11) as shown and align with the bolt holes in the Base. Note that flat sides of Bars must align against Base as shown.

Attach the Support Bars to the Base using one Bolt (7), Flat Washer (8), Lock Washer (9), and Nut (10) per bar. Finger tighten the hardware.



Step 2: Attach Support Bars to Base

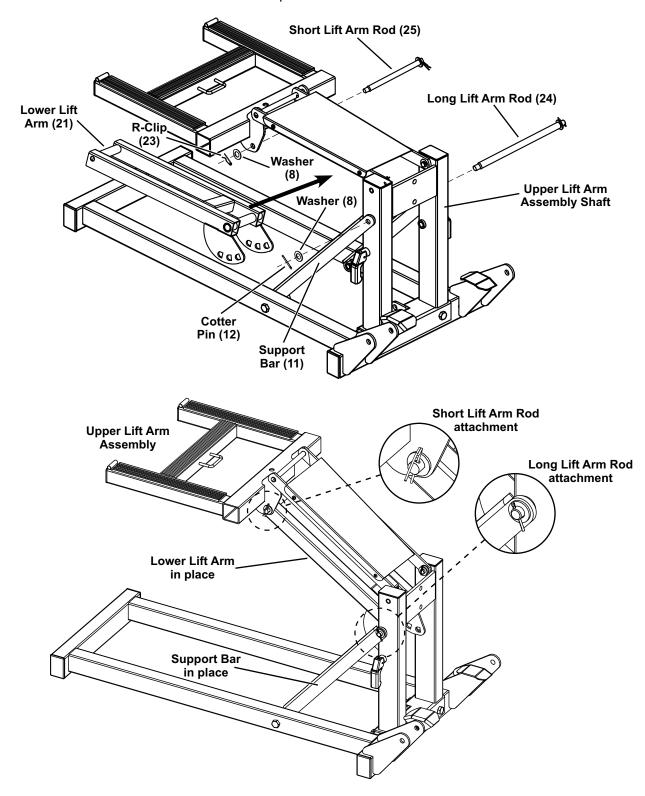
3. Remove the R-Clip (23) and Flat Washer (8) from one end of the Short Lift Arm Rod (25). Remove the Cotter Pin (12) and Flat Washer (8) from one end of the Long Lift Arm Rod (24).

Place the Lower Lift Arm (21) in position, then insert the Short Lift Arm Rod through the bracket on the Upper Lift Arm Assembly (26) and the front end of the Lower Lift Arm.

Replace the Washer over the end of the Short Lift Arm Rod and use an R-Clip to secure the Rod in place.

Raise up the previously installed Support Bars. Insert the Long Lift Arm Rod through the Support Bar, the shaft of the Upper Lift Arm Assembly, the rear end of the Lower Lift Arm, and the other Support Bar.

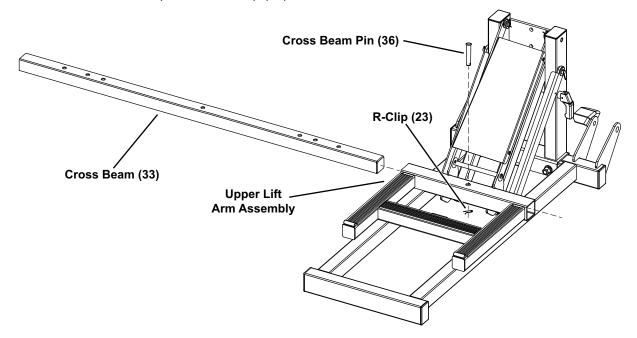
Replace the Washer over the end of the Long Lift Arm Rod and insert the Cotter Pin and bend it over to secure the Rod in place.



Step 3: Attach Lower Lift Arm to Upper Lift Arm Assembly and Support Bars

Insert Cross Beam (33) through the bracket on the Upper Lift Arm Assembly as shown and align bolt holes.
 Insert Cross Beam Pin (36) through center of bracket and Cross Beam.

Secure Cross Beam Pin in place with R-Clip (23).



Step 4: Attach Cross Beam

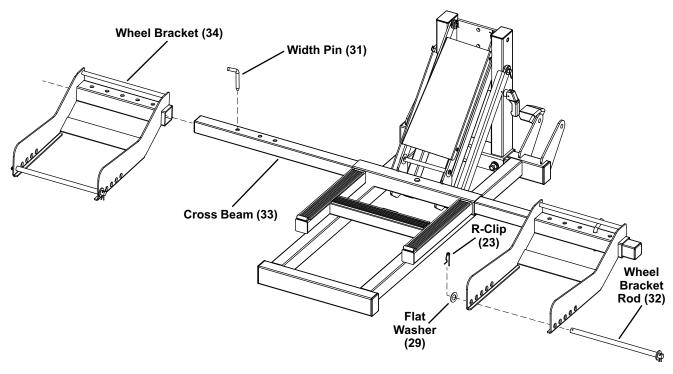
5. Slide one Wheel Bracket (34) over each end of the Cross Beam (33).

Insert Width Pins (31) to secure them in place.

Remove the R-Clip (23) and Flat Washer (29) from one end of each Wheel Bracket Rod (32).

Insert one Wheel Bracket Rod through the holes on each Wheel Bracket.

Replace the R-Clip and Flat Washer on the end of each Wheel Bracket Rod to secure the Rods in place.



Step 5: Install Wheel Brackets and Attach Wheel Bracket Rods

6. Insert the Foot Pedal (40) into its holder on the Ram (43).

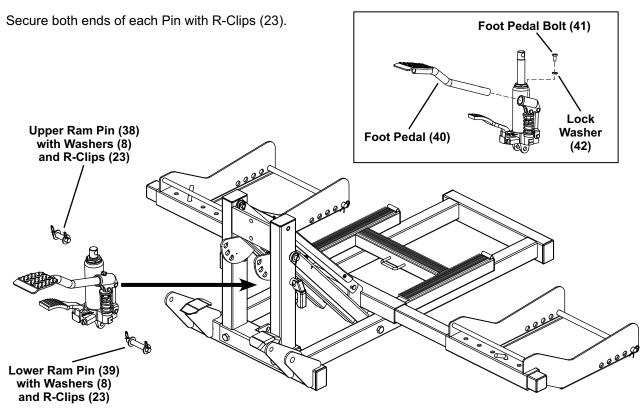
Secure the Foot Pedal in place using the Lock Washer (42) and Foot Pedal Bolt (41) through the side of its holder.

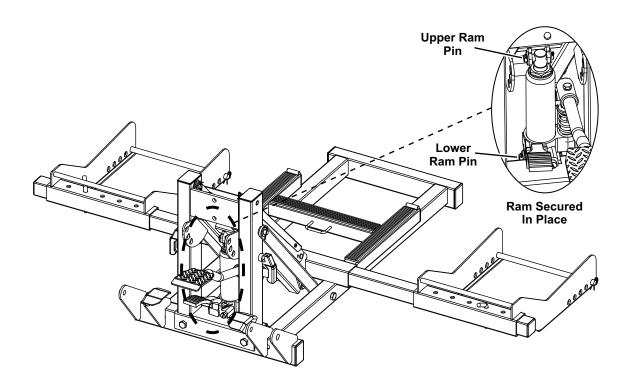
Position the Ram in Upper Lift Arm/Shaft Assembly as shown.

Slide Lower (Long) Ram Pin (39) through the shaft bracket and the clevis base of the Ram.

Slide Upper (Short) Ram Pin (38) through the bracket on the Lower Lift Arm (21) and the top of the Ram.

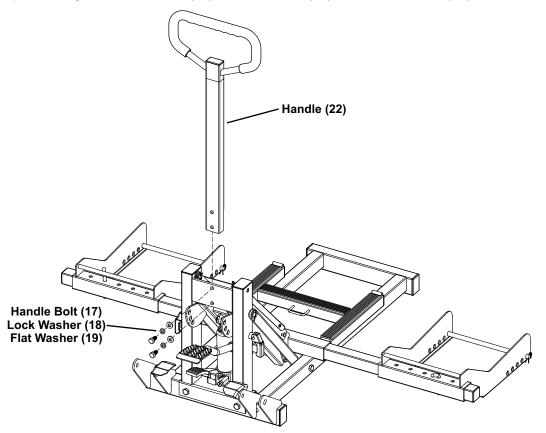
Place a Washer (8) over both ends of each Pin.





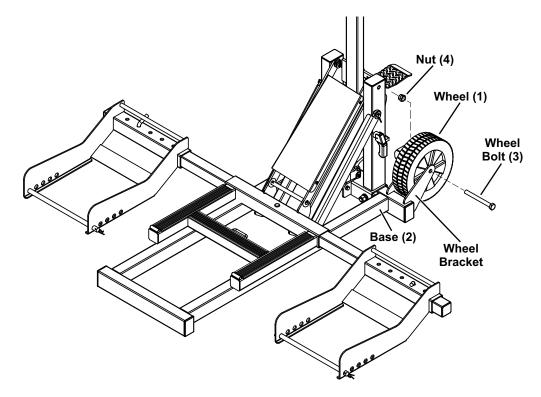
Step 6: Attach Foot Pedal and Install Ram

7. Insert the Handle (22) into the bracket on the Lift Arm/Shaft Assembly and align the upper and lower holes. Secure in place using two Handle Bolts (17), Lock Washers (18), and Flat Washers (19).

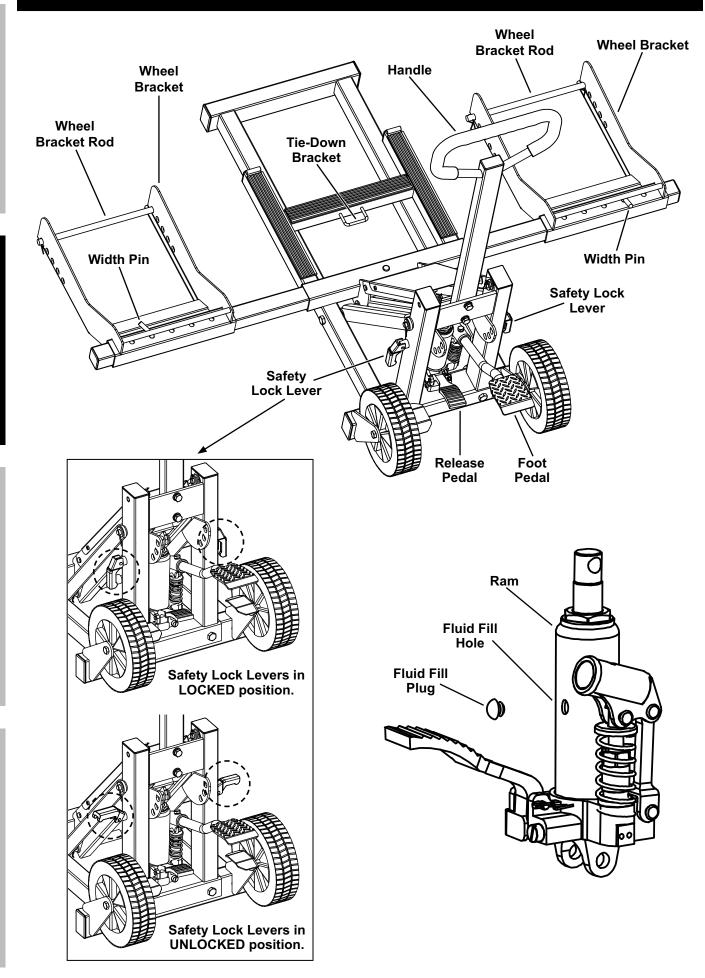


Step 7: Install Handle

8. Insert the Wheels (1) into the wheel brackets on the rear of the Base (2) and align the holes. Secure Wheels in place using Wheel Bolts (3) and Nuts (4).



Step 8: Attach Wheels



Operating 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.

Bleeding

IMPORTANT! Before first use, check for proper hydraulic fluid level in the Ram. Then thoroughly test the Lift for proper operation prior to its actual use. If the Lift appears *not* to be working properly, it may be necessary to *bleed* its hydraulic system of excess air.

- 1. Have an assistant hold the Release Pedal down.
- 2. Pump the Foot Pedal quickly several times.
- Test the Lift several times for proper operation before attempting to lift a load. If the Lift still does not appear to be working properly after bleeding, do not use the Lift until it has been repaired by a qualified service technician.

Lifting

<u>AWARNING!</u> Set Lift and vehicle on a flat, level, hard, ground surface safely away from oncoming traffic. Turn off vehicle's engine. Also place the vehicle's transmission in "PARK" (if automatic) or in its lowest gear (if manual). Set the vehicle's emergency brake. Then, block the wheels that are *not* being lifted.

- Determine the wheel width of the vehicle, and adjust the Wheel Bracket supports to match that width. Lock them in place using the Width Pins. WARNING! TO PREVENT SERIOUS INJURY: Adjust them so that they are equally distant from the center of the Lift, or else the Lift will be unstable and might tip.
- Examine the bottom of each vehicle wheel that is touching the floor. Set the depth of both Wheel Brackets to be slightly larger than that distance by adjusting the Wheel Bracket Rods.
- 3. Press the Release Pedal to lower the Lift. Once the Lift is fully lowered, release the Release Pedal.
- 4. Use the vehicle's steering to straighten its wheels. Use wheel chocks (sold separately) to block the wheels on the opposite side of the vehicle.

- Press the fronts of the Wheel Brackets straight against the fronts of the vehicle's wheels.
 Push the Wheel Brackets under the wheels until both wheels rest in the center of the Wheel Bracket.
- 6. WARNING! TO PREVENT SERIOUS INJURY AND DEATH: Place the two Safety Lock Levers in the closed, locked position to enable the locking mechanism. Refer to Components on page 8.
- 7. WARNING! TO PREVENT SERIOUS INJURY AND DEATH: Use tie-down straps (sold separately) to secure the load to the Tie-Down Bracket. Hold the Handle and pump the Foot Pedal. Use smooth, full strokes for best results.
- 8. Raise the vehicle to the desired height. As the load is lifted the locking mechanism will automatically engage to lock the Lift Arm in one of three positions.
- Make sure the Lift Arm is locked in one of the three available positions before working on the vehicle.

Lowering

- 1. Remove all tools, parts, etc. from under the vehicle.
- 2. Pump the Foot Pedal slightly to remove weight from the locking mechanism.
- Place the two Safety Lock Levers in the horizontal, unlocked position to disengage the locking mechanism. Refer to Components on page 8.
- 4. Keep clear while pressing the Release Pedal slowly to lower the vehicle.
- Once the Lift is completely lowered, remove the tie-down straps and remove the Lift from under the vehicle.
- 6. When not in use, store Lift in a safe, dry location out of reach of children.

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 the Lift. Check for:
 - broken, cracked, or bent parts
 - · loose or missing parts
 - any other condition that may affect its safe operation.

If a problem occurs, have the problem corrected before further use. **Do not use damaged equipment.**

 Before each use, thoroughly test the Lift for proper operation prior to its actual use.
 If the Lift appears not to be working properly, follow Bleeding instructions on page 9.

- 3. Change the hydraulic fluid at least once every three years:
 - a. With the Lift fully lowered, remove the Fluid Fill Plug on the side of the Ram housing.
 - With assistance, tip the Lift to allow the old hydraulic fluid to drain out of the Ram housing completely, and dispose of the old hydraulic fluid in accordance with local regulations.
 - c. With the Lift upright, completely fill the Ram housing with a high quality hydraulic fluid (not included) until the fluid just begins to run out of the Fluid Fill Hole.
 - d. Then reinstall the Fluid Fill Plug.
- Clean with a clean cloth with a detergent or mild solvent. Store the Lift in a safe, dry location out of reach of children.

Troubleshooting

AWARNING

TO PREVENT SERIOUS INJURY: 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 it and lowering it fully, checking for proper operation, BEFORE RETURNING THE JACK TO OPERATION.

DO NOT USE A DAMAGED OR MALFUNCTIONING JACK!

POSSIBLE SYMPTOMS						
Jack will not lift at its weight capacity	Lift Arm lowers under load	Pump stroke feels spongy	Lift Arm will not lift all the way	Pedal moves up when jack is under load	Fluid leaking from fill plug	PROBABLE SOLUTION (Make certain that the jack is not supporting a load while attempting a solution.)
X	X					Check that Release Pedal is not stuck and raises completely.
						Valves may be blocked and may not close fully. To flush the valves, with assistance:
x	X			X		Lower the Lift Arm and release the Release Pedal.
	^ ^		^	^		Manually lift the Lift Arm several inches.
						Press the Release Pedal and force the Lift Arm down quickly.
x x x		V			Ram may be low on fluid. Check the fluid level and refill if needed.	
		X	X			Ram may require bleeding – refer to <i>Bleeding</i> on page 9.
					X	Unit may have too much hydraulic fluid 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.

Record Product's Serial Number Here:_

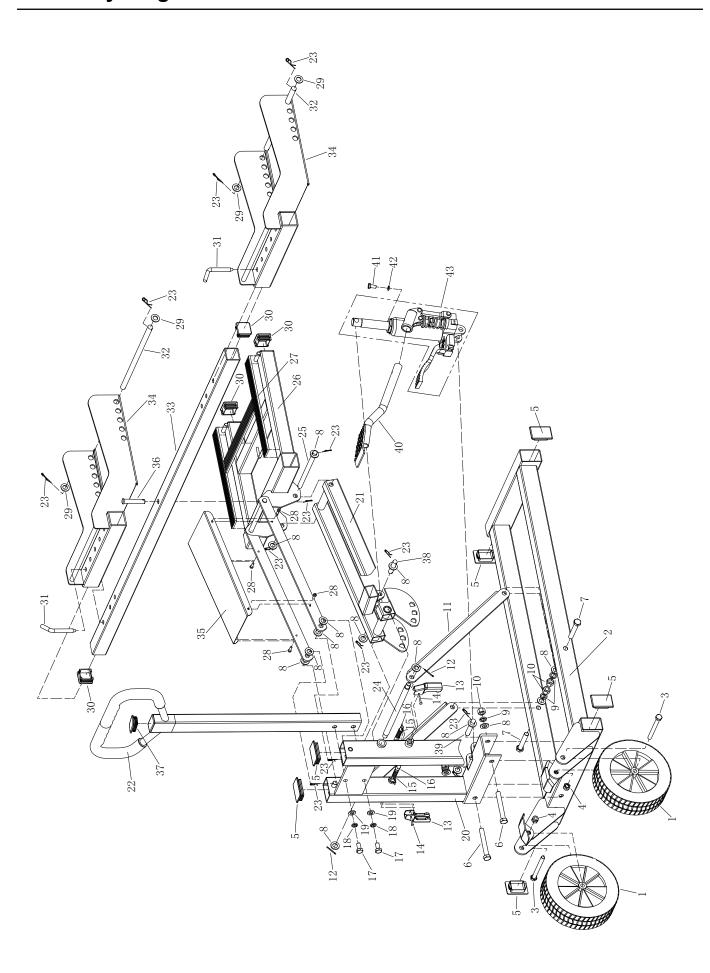
Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts. Specify UPC 193175474797 when ordering parts.

Parts List

Part	Description	Qty
1	Wheel	2
2	Base	1
3	Wheel Bolt M12x100	2
4	Nut M12	2
5	Large End Cap	6
6	Bolt M12x95	2 2
7	Bolt M12x65	
8	Flat Washer	15
9	Lock Washer	4
10	Nut M12	4
11	Support Bar	2
12	Cotter Pin	2
13	Safety Lock Lever	2
14	Rivet	2
15	Spring	2
16	Pin	2
17	Handle Bolt M10x20	2 2 2 2 2 2 2 2 2 2
18	Lock Washer	2
19	Flat Washer	2
20	Shaft	1
21	Lower Lift Arm	1
22	Handle	1

Part	Description	Qty
23	R-Clip	13
24	Long Lift Arm Rod	1
25	Short Lift Arm Rod	1
26	Upper Lift Arm	1
27	Rubber Pad	3
28	Screw	4
29	Flat Washer	4
30	Small End Cap	4
31	Width Pin	2
32	Wheel Bracket Rod	2
33	Cross Beam	1
34	Wheel Bracket	2
35	Plate	1
36	Cross Beam Pin	1
37	Handle End Cap	1
38	Upper Ram Pin	1
39	Lower Ram Pin	1
40	Foot Pedal	1
41	Foot Pedal Bolt M8x16	1
42	Lock Washer	1
43	Ram	1



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.

