

# 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.

**PITTSBURGH<sup>®</sup> AUTOMOTIVE**

**ITEMS 41188  
69513**

## *1 Ton Telescoping Gantry Crane*



REV 12e

Visit our website at: <http://www.harborfreight.com>  
Email our technical support at: [tech@harborfreight.com](mailto:tech@harborfreight.com)

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-800-444-3353 as soon as possible.

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### **▲WARNING**

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

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SAFETY

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

## IMPORTANT SAFETY INFORMATION

### ⚠ DANGER

**TO PREVENT SERIOUS INJURY AND DEATH:**

### Basic Safety Information

1. **Do not lift more than rated load. Be aware of dynamic loading!**  
Sudden load movement may briefly create excess load causing product failure.
6. **Do not operate with other than manual power.**
2. **Do not operate hoist when load is not centered under hoist.**
7. **Do not remove or cover warning labels and/or tags.**  
These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
3. **Do not operate hoist with twisted, kinked, or damaged chain or rope.**
8. The warnings, precautions, 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.
4. **Do not operate a damaged or malfunctioning gantry crane.**  
Inspect gantry crane carefully and test operation before every use.
5. **Do not lift people or lift loads over people.**  
Falling loads can injure or kill people.

## Assembly Specific Safety Information

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1. Assemble completely according to instructions and install Height Pins and R-pins before use. Improper assembly can create hazards.
2. Assemble or adjust height only with assistance.
3. Keep assembly area clean and well lit.
4. Keep bystanders out of the area during assembly.
5. Do not assemble when tired or when under the influence of drugs or medication.
6. Weight capacity and other product capabilities apply to properly and completely assembled product only.
7. Inspect the gantry crane as explained in Frequent Inspection on page 12 after assembly but before use.

## Operation Specific Safety Information

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1. Use on a hard, smooth, level surface only. The surface the gantry crane rests on must be designed to withstand the loads and forces imposed by the gantry crane for the rated load.
2. Use in location that allows the operator to move and stay clear of the load.
3. Wear ANSI-approved safety goggles, ANSI-approved hard hat, and steel-toed work boots during setup and use.
4. This product is not a toy. Do not allow children to play with or near this item.
5. Use as intended only. Do not use to handle molten material. Do not use for aircraft purposes.
6. Use crane at lowest height possible for the application.
7. Do not adjust height while under load.
8. Do not move loaded crane.

## Inspection, Testing, and Maintenance Specific Safety Information

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1. Perform a "Frequent Inspection" at least monthly, see page 12.
2. Perform a "Periodic (Thorough) Inspection" at least yearly, see page 12.
3. More frequent inspections are needed for gantry cranes that are used heavily.
4. Raise test loads only to the minimum extent needed and stay well clear of load at all times during testing.



**SAVE THESE INSTRUCTIONS.**

## Specifications

Model	41188	69513
Load Rating	1 Ton (2,000 lb.)	
Min. Height	99-1/2 IN.	100 IN.
Max. Height	148 IN.	147 IN.
Distance Between Posts	94 IN.	93 IN.
I-Beam	2-7/8 IN. W	3 IN. W

## 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.

### ⚠ WARNING



**TO PREVENT SERIOUS INJURY AND DEATH:**  
Wear ANSI-approved safety goggles, hard hat, heavy-duty work gloves, and steel-toed work boots during assembly and operation.

The correct bolts must be used during assembly. If any doubts arise regarding proper assembly, contact Harbor Freight at the number at the bottom of this page before use.

**Note:** For additional information regarding the parts listed in the following pages, refer to *Parts List and Diagram* on page 14.

## Assembly Setup

1. Use a large, clean and uncluttered area for assembly.
2. The Gantry Crane is large and heavy; lay out parts on their sides and tighten and erect entire assembly once complete.
3. More than one person will be needed for assembly.
4. Use saw horses (not included) to support larger items such as Posts and I-Beam during assembly.
5. The Post Insert (1) and Post Sleeve (2) are pre-assembled.

## Assembly Instructions

1. Attach each Post Insert (1) to the I-Beam (4) using four Beam Bolts (29), Washers (19), Spring Washers (15), and Nuts (16). The Post Assemblies must be turned so that the Pulley Boxes (6) face outward. See Figure A.
2. Attach two Casters (9) to each Base Assembly (3) using Caster Bolts (11), Spring Washers (12), and Nuts (13). See Figure B.

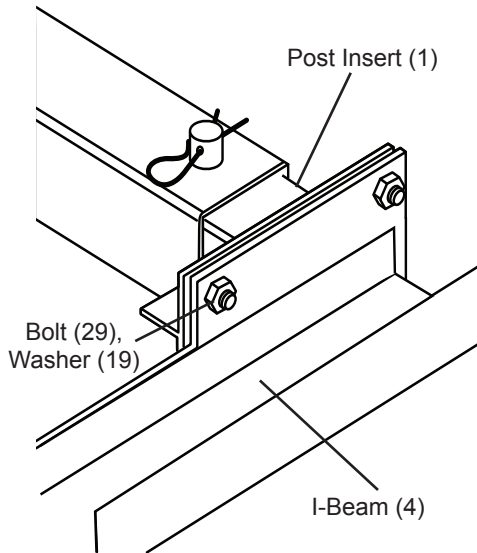


Figure A

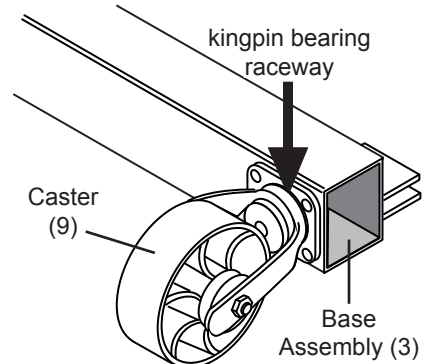


Figure B

**NOTE:** Before attaching the Bases to the Posts, apply grease to the kingpin bearing raceway in each Caster. It is easier to grease the Casters at this point as opposed to when the Gantry Crane is complete. See Figure B.

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- Attach each Vertical Post Assembly to each Base Assembly, making certain that each Pulley Assembly (6) is to the outside of the Crane. See Figure C.

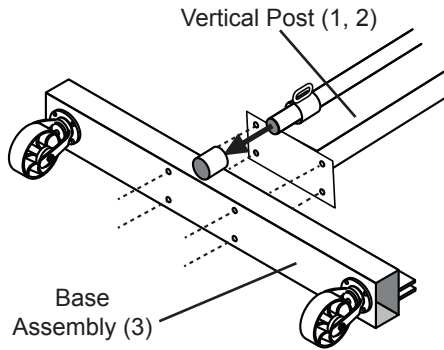


Figure C

- From the top, insert four Bolts (17) through the base of the Vertical Post Assembly and into Base Assembly. Slip on Washer (19), Spring Washer (15) and secure by tightening on Nuts (16).
- Attach two Struts (5) to each Vertical Post Assembly and Base Assembly. Each Strut is attached to the one eyelet on the side of the Vertical Post. See Figure D.

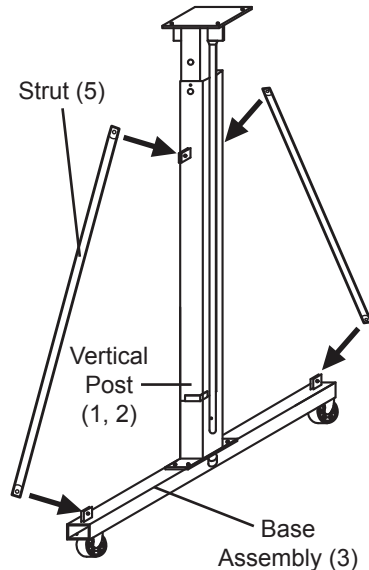


Figure D

- Insert a Frame Bolt (14) through the top of the Strut. Slip on a Washer (19), Spring Washer (15) and secure with the Nut (16). Repeat for all four Struts.
- Insert a Frame Bolt (14) through the bottom of the Strut also. Slip on a Washer (19), Spring Washer (15) and secure with the Nut (16). Repeat this also for all four Struts.

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8. Insert the Height Pin (7) through the Vertical Post Assembly so that it goes all the way through. Slide the R-Pin (18) through the hole in the Height Pin to secure the Inner Vertical Post into place. Repeat for the second Vertical Post Assembly.
9. Tighten down all of the Nuts and Bolts and make certain that the entire Telescoping Gantry Crane Assembly is tight and secure.
10. With assistance, tilt the Gantry Crane up and set it onto its base.  
**WARNING!** More than one person is needed for this procedure. See Figure E.

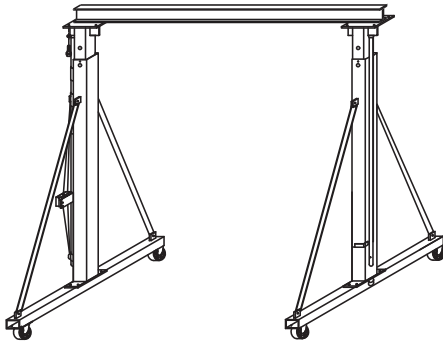


Figure E

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

11. Attach a Handle (8) to each Pulley (6). See Figure F.

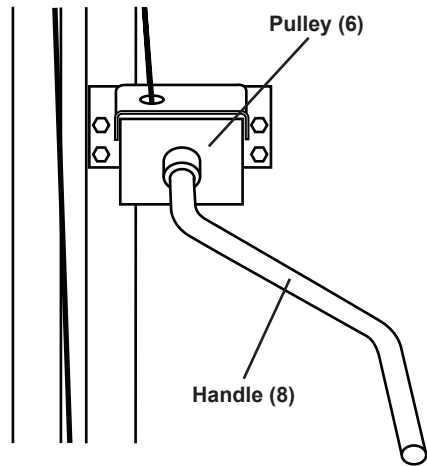


Figure F

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## Operation

### **⚠ DANGER**

**TO PREVENT SERIOUS INJURY and DEATH:** The use of gantry cranes is subject to certain hazards that cannot be met by mechanical means, but only by the exercise of intelligence, care, common sense, and experience in anticipating the motions that will occur as a result of operating the controls.



Wear ANSI-approved safety goggles, hard hat, heavy-duty work gloves, and steel-toed work boots during operation.

Do not use without Locking Pins (7) in place and secured with R-Pins (18).

Do not exceed 1 Ton (2000 lb.) capacity.

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

The Gantry Crane can be used with a Push Trolley (ITEM 97392) and a hoist offered by Harbor Freight Tools. Install trolley and hoist (both sold separately) according to manual instructions before operation.

## Adjusting I-Beam Height

**CAUTION!** Use two people to adjust the I-Beam height.

1. Remove the R-Pins (18) from the Height Pins (7) and slide out Height Pins.
2. Once the Height Pins have been removed, turn the Handles on both Pulley Assemblies clockwise to raise the I-Beam. Turn both counterclockwise to lower I-Beam.

**CAUTION!** To reduce the risk of tipping, use crane at lowest height possible for the application.

**WARNING!** Do not adjust the legs to different heights.

3. Once the desired height has been reached, reinsert the Height Pins and secure in place with the R-Pins.

**NOTE:** The Vertical Post Assembly has nine different stop positions. See Figure G.

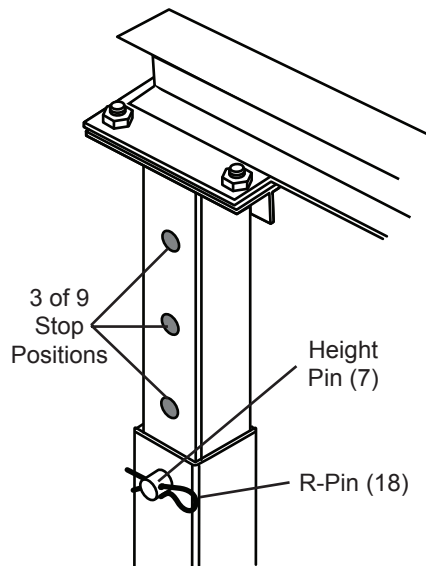


Figure G



## Before Operating Hoist

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1. Familiarize yourself with all operating controls of the hoist and with the operation(s) to be performed. Instructions include, the warnings on the hoist, and the safety and operating instructions portion of this manual.
2. **⚠️ WARNING! TO PREVENT SERIOUS INJURY FROM HOIST FAILURE:  
Do not use damaged equipment.  
If adjustments or repairs are necessary, or any defects are known, have the problem corrected before further use.**
3. Do not operate a hoist with an out-of-order sign.
4. Only a qualified technician should perform maintenance to the hoist.
5. Designate a work area that is clean and well-lit.  
The work area must not allow access by children or pets to prevent distraction and injury.
6. There must not be objects, such as utility lines, nearby that will present a hazard while working.
7. Inspect the hoist as explained in Frequent Inspection on page 12 after assembly but before use.

SAFETY

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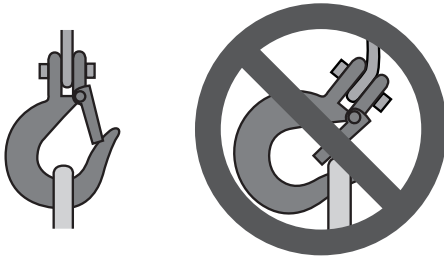
MAINTENANCE

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**WARNING! Follow all safety warnings and instructions for the trolley and hoist you will use with this gantry crane. Additional selected operation points follow:**

## Applying the Load

1. Attach the load to the load hook securely by properly rated, suitable means, such as chains, shackles, hooks, lifting slings, etc. Load must be attached to prevent accidental disconnection.



**Figure H: — Correct and incorrect load hook attachment**

2. Properly seat the sling or other device in the base (bowl or saddle) of the hook (see the left side diagram on Figure H). Do not allow the hook hitch to support any part of the load.
3. Do not apply the load to the point of the hook (shown in Figure H on the right side diagram).
4. Do not operate the hoist unless the hoist unit is centered over the load.
5. Do not pick up a load in excess of the rated load appearing on the hoist or load block, except during properly authorized tests. Do not use a hoist overload limiting device to measure the maximum load to be lifted.
6. Give specific attention to load balancing and hitching or slinging to prevent load slipping.

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## Moving the Load

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1. Do not engage in any activity which will divert the operator's attention while operating the hoist.
2. Respond to signals from a designated person only. However, always obey a stop signal, no matter who gives it.
3. Do not lift or lower a load with the hoist until the operator and all other personnel are clear of the load.
4. Make sure the load and hoist will clear all obstacles before moving or rotating the load.
5. Do not lift a load more than a few inches until it is well balanced in the sling or lifting device.
6. Each time a load approaching rated capacity is handled, check hoist brake action by lifting the load just clear of supports and continuing only after verifying that the brake system is operating properly.
7. **WARNING! Do not carry any load over any person.**
8. **WARNING! Do not carry personnel on the hook or the load.**
9. Avoid swinging the load or load hook when traveling the hoist.
10. Avoid contact between trolleys and between trolleys and stops.
11. Do not use the upper (or lower, if provided) limit devices as a normal means of stopping the hoist. These are emergency devices only.

SAFETY

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## Parking the Load

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1. Do not leave a suspended load unattended unless specific precautions have been instituted and are in place.
2. Position the load block above head level for storage when the hoist is not in use.
3. Exercise care when removing a sling from under a landed and blocked load.

OPERATION

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## Inspection, Testing, and Maintenance



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

### **⚠ DANGER**

**TO PREVENT SERIOUS INJURY AND DEATH:**

**Before any inspection, testing or maintenance procedure:**

1. Move the gantry crane to a location where it will cause the least interference with other cranes and operations in the area.
2. Land any load that is attached to the gantry crane.
3. Use warning signs and barriers on the floor beneath the gantry crane where overhead maintenance work creates a hazard.
4. Wear ANSI-approved safety goggles, hard hat, heavy-duty work gloves, and steel-toed work boots during operation.

## Frequent Inspection

**Perform the procedures in this section BEFORE INITIAL USE and AT LEAST MONTHLY. Inspection is needed more often for heavily used cranes.**

1. Check operating mechanisms for proper operation, proper adjustment, and unusual sounds.
2. Check upper limit device(s) of attached cranes, if equipped, according to manufacturer's documentation.
3. Check hooks and hook latches (if used), according to manufacturer's documentation.
4. Check attached hoists, according to manufacturer's documentation.

## Periodic (Thorough) Inspection

**A qualified technician should perform the procedures in this section AT LEAST YEARLY. Inspection is needed more often for heavily used cranes.**

Remove or open access covers to allow inspection of components.

1. First, follow all Frequent Inspection procedures. Additionally:
2. Check for deformed, cracked, or corroded members.
3. Check for loose or missing bolts, nuts, pins, or rivets.
4. Check for other worn, cracked, or distorted parts such as pins, bearings, wheels, shafts, gears, rollers, locking and clamping devices, bumpers, and stops.
5. Check attached hoists, according to manufacturer's documentation.

## Storage Inspection

1. A gantry crane that has been idle for a period of a month or more, but less than a year, must be inspected before being placed in service according to the Frequent Inspection requirements.
2. A gantry crane that has been idle for a period of a year or more, must be inspected before being placed in service according to the Periodic Inspection requirements, and then tested according to the procedure in the Testing section below.

## Maintenance

**⚠️ WARNING! TO PREVENT SERIOUS INJURY FROM GANTRY CRANE FAILURE:**

**Do not use damaged equipment. If any defect or damage is noted, have the problem corrected before further use.**

1. Repair or replacement of gantry crane components must be performed only by a qualified technician using only identical replacement parts with the same rating.
2. Some components may require adjustment. The following are examples:
  - a. operating mechanisms
  - b. limit switches
  - c. control systems
  - d. brakes
3. Note the following regarding specific components:
  - a. Replace damaged or worn hooks. Do not repair them by welding or reshaping.
  - b. Replace or repair all critical parts that are cracked, broken, bent, excessively worn, or missing.
4. Do not repair load-sustaining members by welding. Replace them as needed.
5. **Lubrication:**
  - a. Immobilize gantry crane before lubrication by blocking casters.
  - b. Lubricate all moving parts regularly using grease. Lubricate kingpin bearing raceway on each caster, as shown in Figure B.
6. After maintenance work is completed and before restoring the crane to normal operation:
  - a. reinstall guards;
  - b. reactivate safety devices;
  - c. remove replaced parts and loose material;
  - d. remove maintenance equipment.

## Testing

1. Test repaired cranes and cranes that have not been used for a year or more, before being used.
2. First, with the crane unloaded, check all functions of the crane, including:
  - a. lifting and lowering;
  - b. trolley travel;
  - c. bridge travel;
  - d. limit, locking and indicating devices (if provided).
3. After testing in the unloaded state, attach up to a 2,000 lb. total load (including trolley and hoist weight, do not exceed trolley or hoist capacity) and carefully retest to check proper load control and to check brake operation along the full length of the bridge.

## Parts List and Diagram

SAFETY

### 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

### Parts List

OPERATION

Part	Description	Qty
1	Post Insert	2
2	Post Sleeve	2
3	Base	2
4	I-Beam	1
5	Strut	4
6	Pulley	2
7	Height Pin	2
8	Handle	2
9	Caster	4
10	Cable	2
11	Caster Bolt (M10 x 25)	16
12	Spring Washer	16
13	Nut (M10)	16
14	Frame Bolt (M12 x 50)	8
15	Spring Washer	24

Part	Description	Qty
16	Nut (M12)	24
17	Post Bolt (M12)	8
18	R-Pin	2
19	Washer	24
20	Pulley	2
21	Pulley Bolt (M10 x 30)	2
22	Bracket	2
23	Inner Support	4
24	Support Bolt (M6)	8
25	Bracket Bolt (M8)	2
26	Spring Washer	2
27	Nut (M8)	2
28	Cable Clamp	4
29	Beam Bolt (M12 x 35)	8

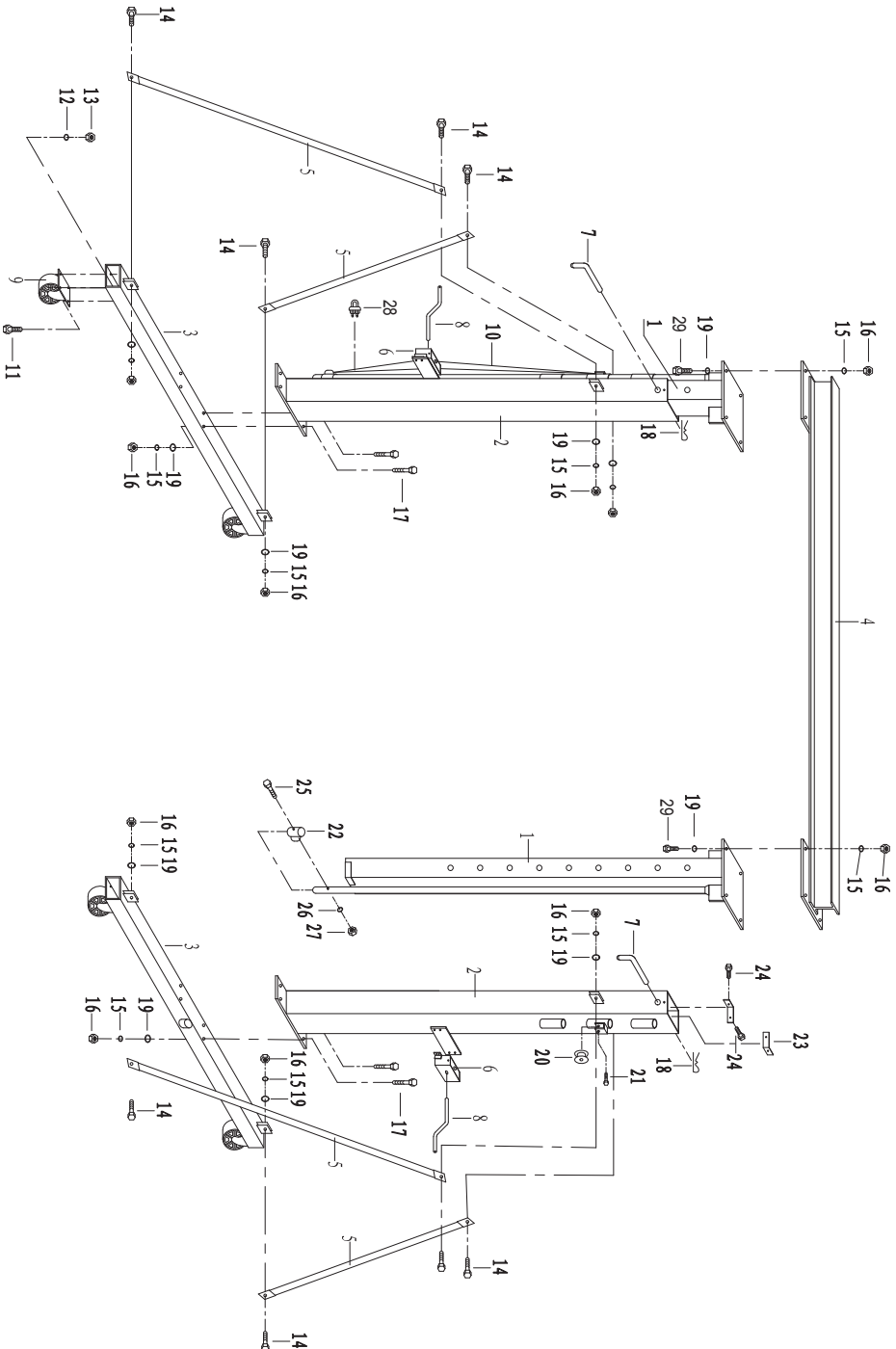
MAINTENANCE

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.

# Assembly Diagram



## 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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