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® AUTOMOTIVE

ITEMS
41188 69513

1 Ton Telescoping Gantry Crane



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

REV 14I

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	
⚠	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

⚠ 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.
2. **Do not operate hoist when load is not centered under hoist.**
3. **Do not operate hoist with twisted, kinked, or damaged chain or rope.**
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.
6. **Do not operate with other than manual power.**
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.
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.

Assembly Specific Safety Information

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 14 after assembly but before use.

Operation Specific Safety Information

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. 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, ANSI-approved hard hat, and steel-toed work boots during setup and use.
5. This product is not a toy. Do not allow children to play with or near this item.
6. Use as intended only.
   Do not use to handle molten material.
   Do not use for aircraft purposes.
7. Use crane at lowest height possible for the application.
8. Do not adjust height while under load.
9. Do not move loaded crane.

Inspection, Testing, and Maintenance Specific Safety Information

1. Perform a “Frequent Inspection” at least monthly, see page 14.
2. Perform a “Periodic (Thorough) Inspection” at least yearly, see page 14.
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

Load Rating	2,000 lb
Minimum Overall Height	99"
Maximum Overall Height	147-1/2"
Overall Width	128"
Minimum Vertical Clearance* (under I-Beam)	94"
Maximum Vertical Clearance* (under I-Beam)	142-1/2"
Clearance Between Posts	93-11/16"
I-Beam	3″W x 5″H

* Factor in size of beam trolley and hoist when determining required clearance.

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.

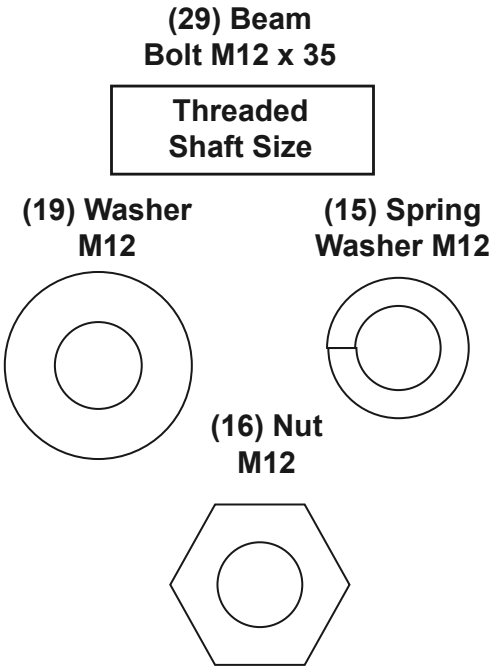
Note: For additional information regarding the parts listed in the following pages, refer to *Parts List and Assembly Diagram* on page 18.

Assembly Setup

1. More than one person will be needed for assembly.
2. Use a large, clean and uncluttered area for assembly.
3. Consider vertical clearance when choosing operation area. Assemble close to operation area.
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.

Attaching Posts to I- Beam

Hardware - 8 each:



1. Lay I-Beam (4) on the ground. Lay left and right Post Assemblies on the ground so Pulleys and cables are facing out.

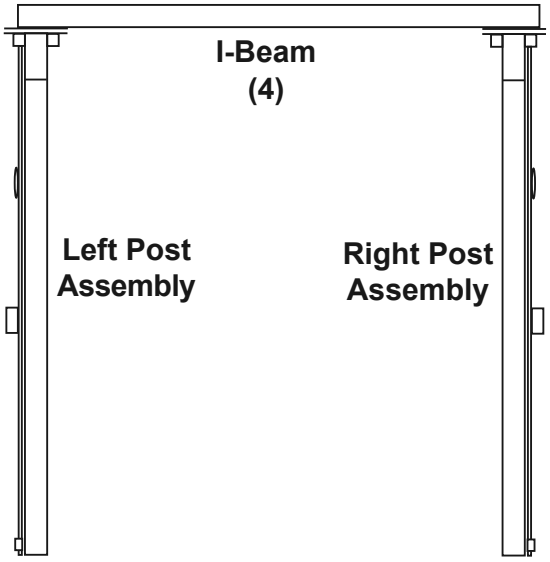


Figure A

2. Attach Left Post Assembly to I-Beam using four Beam Bolts (29), Washers (19), Spring Washers (15), and Nuts (16).
3. **Tighten connections securely.**
4. Repeat for right Post Assembly.

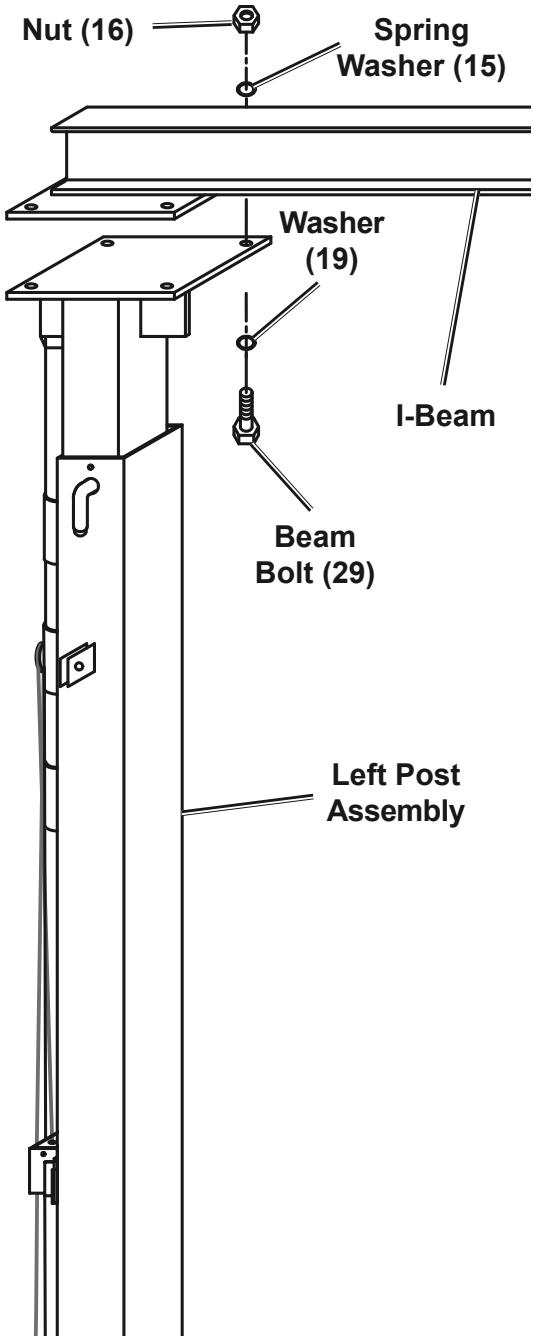
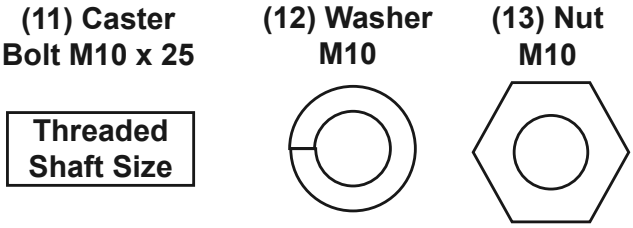


Figure B

Attaching Casters to Bases

Hardware - 16 each:



1. Attach one Swivel Caster (9a) to one end of Base (3) using four sets of Caster Bolts (11), Spring Washers (12) and Nuts (13).
2. Attach one Locking Swivel Caster (9b) to other end of Base using four sets of Caster Bolts (11), Spring Washers (12) and Nuts (13).
3. **Tighten connections securely.**

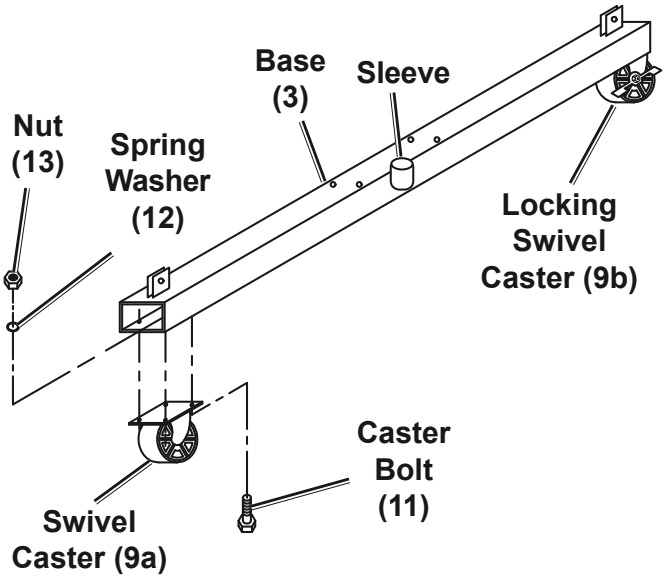


Figure C

4. Repeat for other Base, making sure that Sleeves are to the outside and Locking Swivel Casters are on the same end.

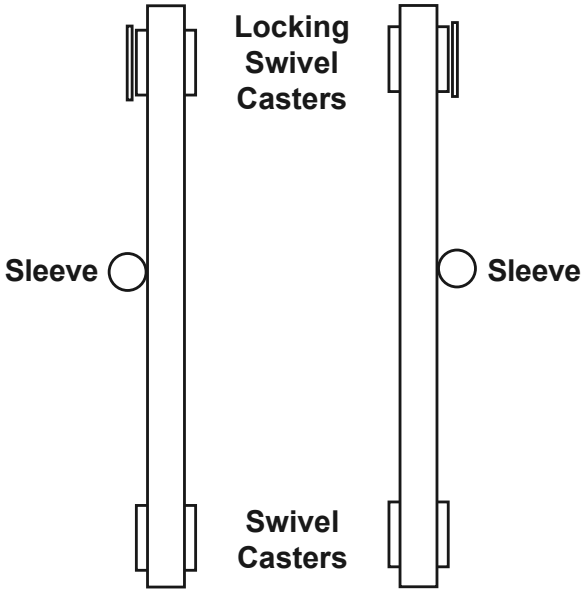


Figure D

5. Apply grease to each Caster bearing.

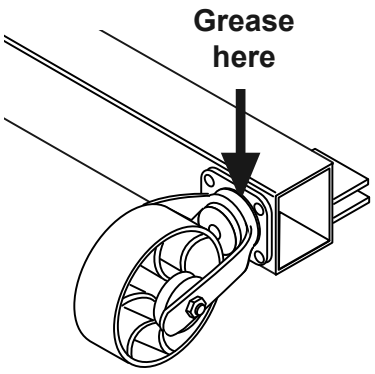


Figure E

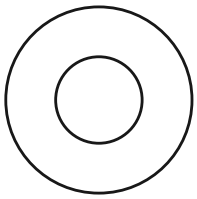
Attaching Base Assemblies to Post Assemblies

Hardware - 8 each:

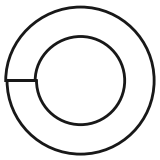
(17) Post Bolt M12 x 110

Threaded Shaft Size

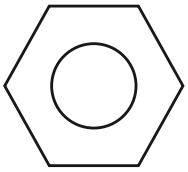
(19) Washer M12



(15) Spring Washer M12



(16) Nut M12



1. Using helpers, raise Base Plate ends of Post Assemblies onto sawhorses or other suitable means of support.

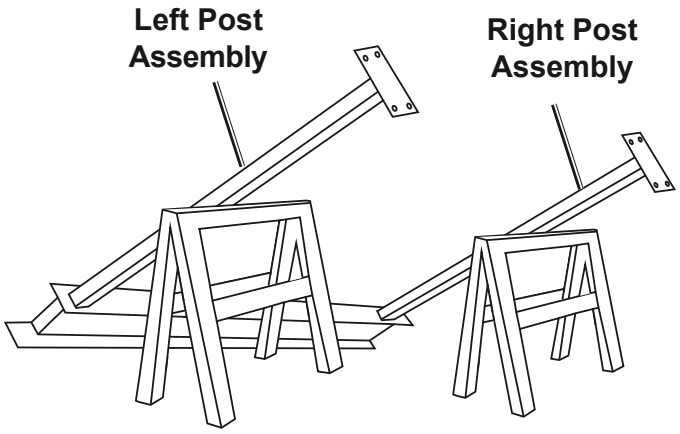


Figure F

2. Attach Left Base Assembly to Left Post Assembly by inserting Tube into Sleeve and using four sets of Post Bolts (17), Washers (19), Spring Washers (15), and Nuts (16).
3. **Tighten connections securely.**

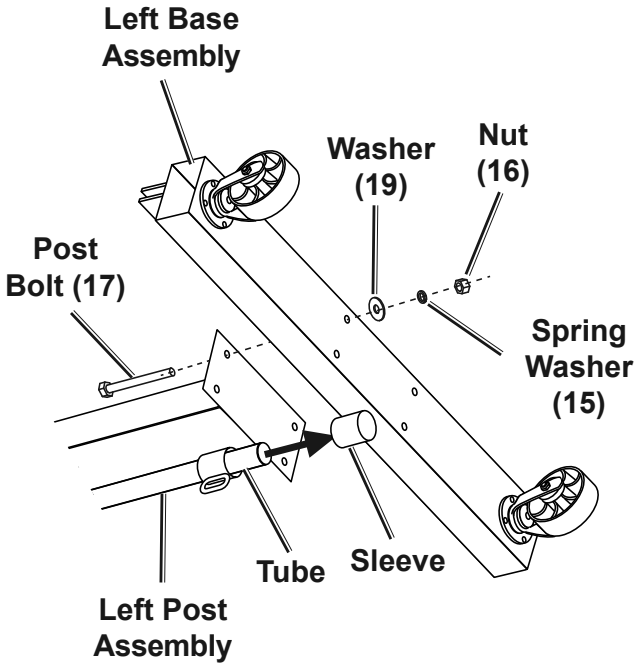
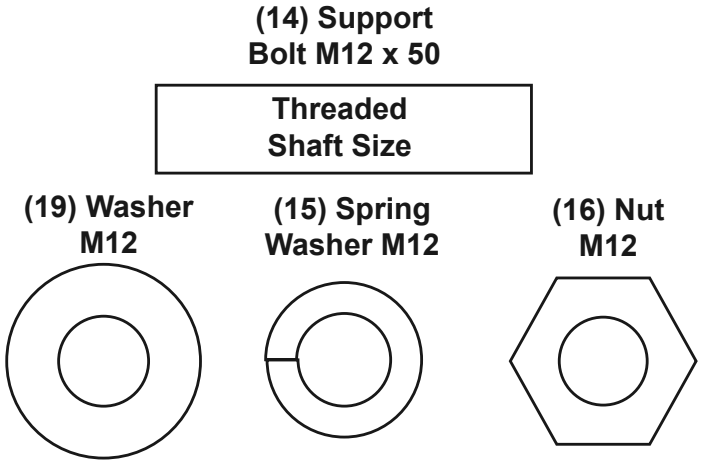


Figure G

4. Repeat for Right Base Assembly and Right Post Assembly.

Attaching Post Supports

Hardware - 8 each:



1. Using helpers, lift Crane to upright position.
2. Attach Post Supports (5) to Left Base and Post Assemblies using Post Support Bolts (14), Washers (19), Spring Washers (15) and Nuts (16).
3. **Tighten connections securely.**
4. Repeat for Right Base and Post Assemblies.

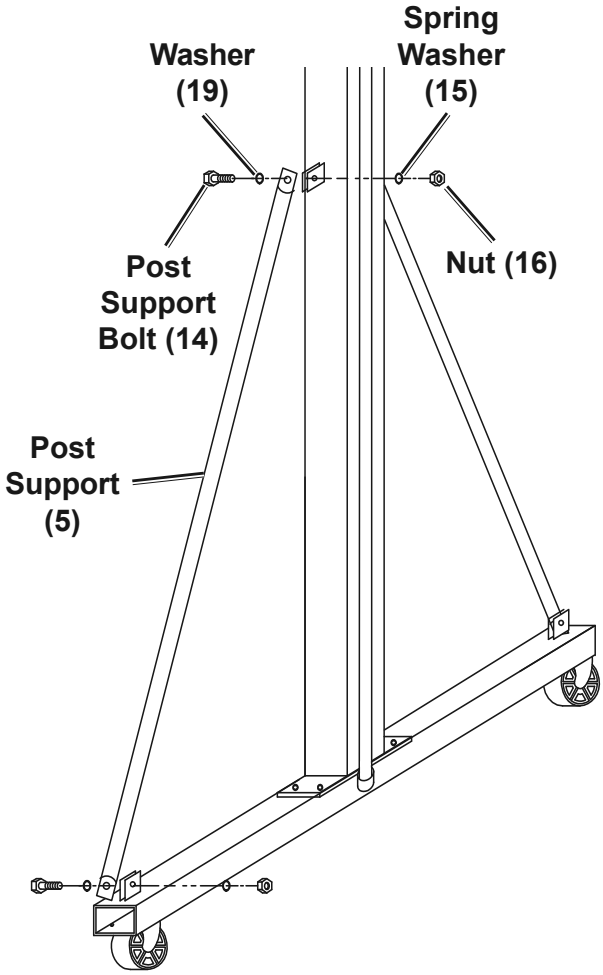


Figure H

Attaching Handles

1. Insert Handle (8) into Left Winch Box (6), then tighten Set Screw securely.
2. Repeat for Right Winch Box.

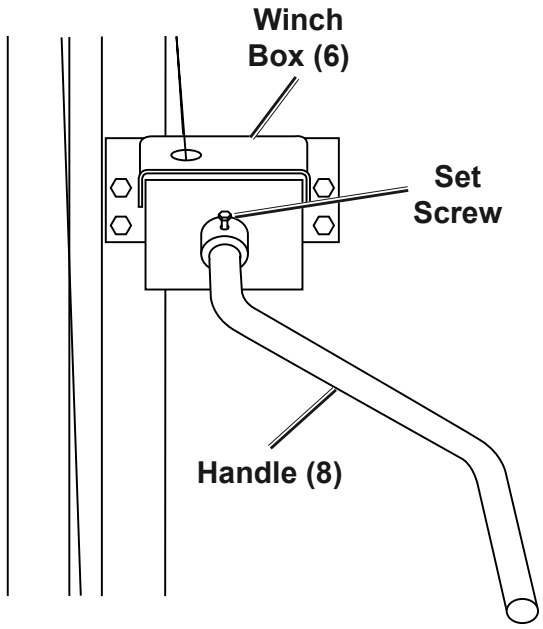


Figure I

3. **Once assembly is complete, confirm that Gantry Crane is solid and level, with all 4 casters on the floor and the I-Beam perfectly level. As needed, loosen one set of connections at a time and make small adjustments with the help of an assistant to make the Gantry Crane completely level. Tighten every connection fully before moving on to another connection.**
4. Locate Gantry Crane on a solid, level surface, capable of supporting the weight of Gantry Crane and load.

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⚠ 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 Height Pins in place and secured with R-Pins.
Do not exceed 1 Ton (2000 lb.) capacity.

The Gantry Crane can be used with a Beam Trolley 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 R-Pins (18) from Height Pins (7), then remove Height Pins.
2. Turn the Handles on both Winch Boxes **at the same time:**
   a. Clockwise to raise I-Beam.
   b. 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 Height Pins and secure in place with R-Pins.

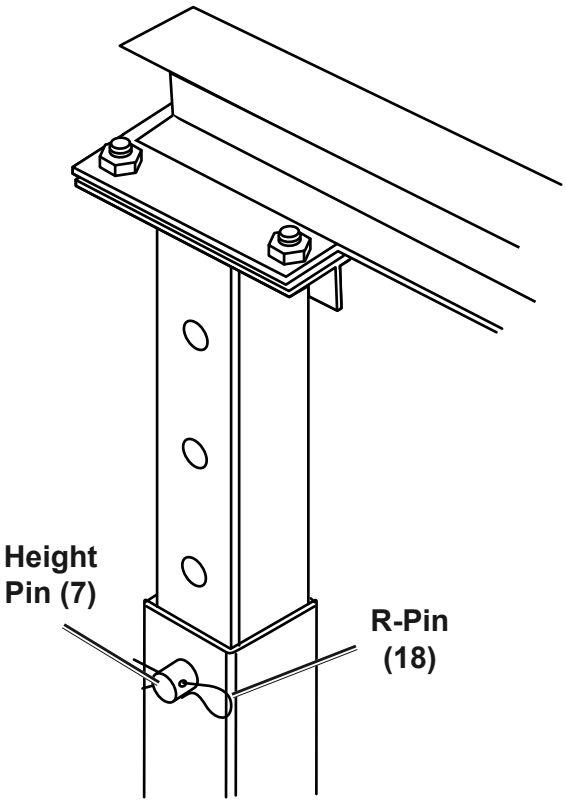


Figure J

Before Operating Hoist

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 14 after assembly but before use.**
8. Lock Casters before lifting a load.

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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

⚠ DANGER

TO PREVENT SERIOUS INJURY AND DEATH:



Use warning signs and barriers on the floor beneath the gantry crane where overhead maintenance work creates a hazard.
Wear ANSI-approved safety goggles, hard hat, heavy-duty work gloves, and steel-toed work boots during operation.

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.

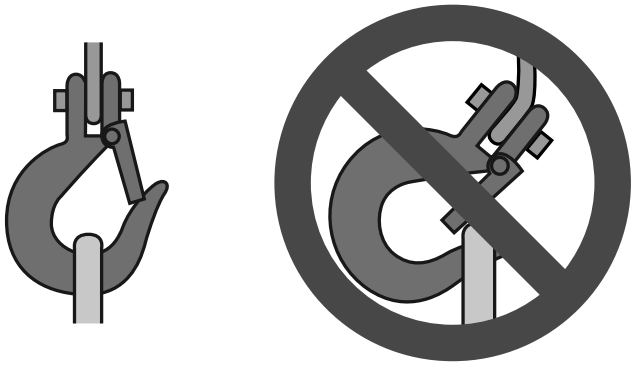


Figure K: — Correct and incorrect load hook attachment

2. Properly seat the sling or other device in the base (bowl or saddle) of the hook (see the left side diagram on Figure K). 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 K 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

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
12. **Do not move the Crane while loaded.**

Parking the Load

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.

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. **Park 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 Casters, as shown in ***Attaching Casters to Bases on page 6.***
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.

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.

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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.

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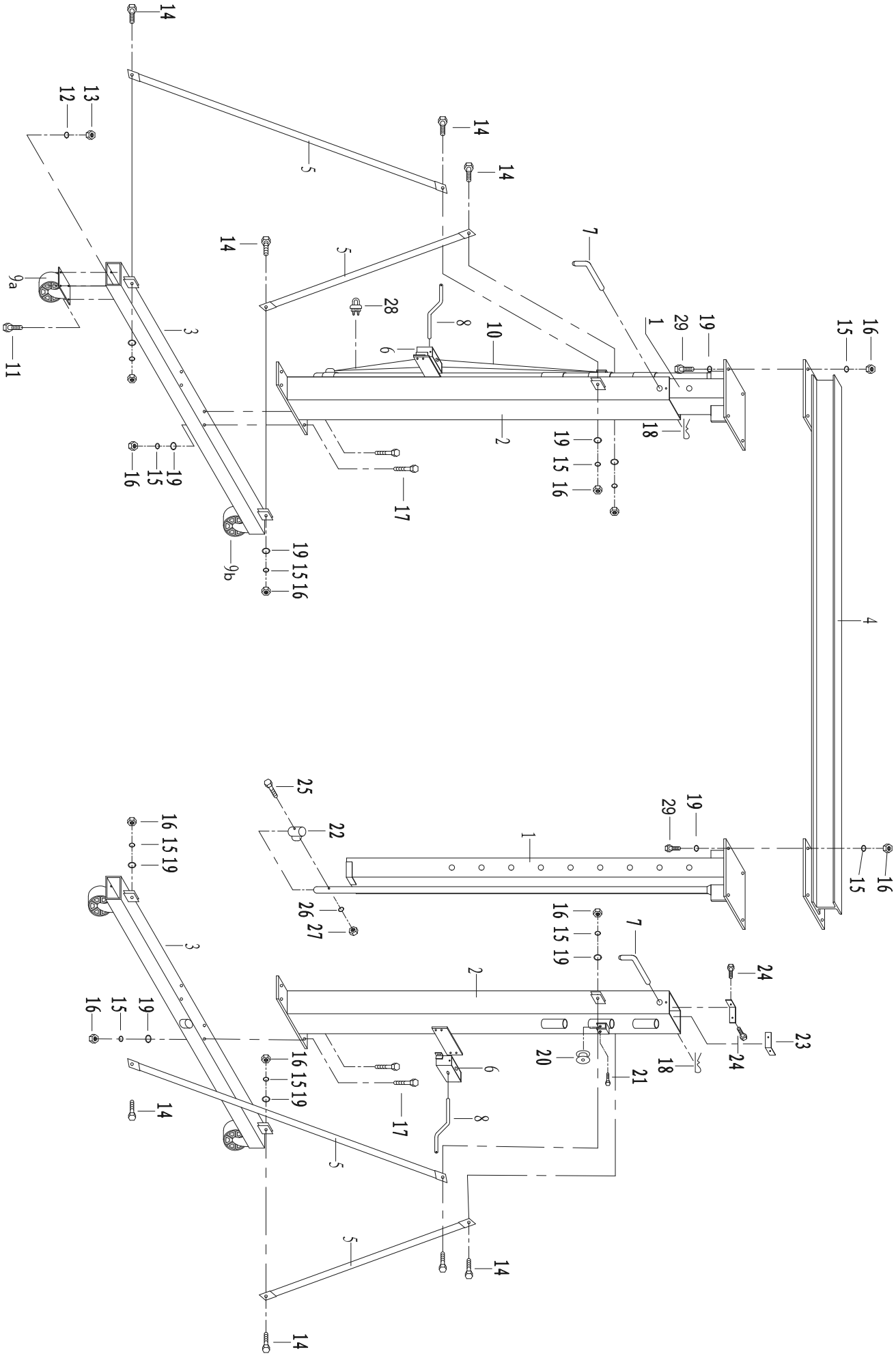
Parts List and Assembly Diagram

Parts List

Part	Description	Qty
1	Post Insert	2
2	Post Sleeve	2
3	Base	2
4	I-Beam	1
5	Post Support	4
6	Winch Box	2
7	Height Pin	2
8	Handle	2
9a	Swivel Caster	2
9b	Locking Swivel Caster	2
10	Cable	2
11	Caster Bolt (M10 x 25)	16
12	Spring Washer (M10)	16
13	Nut (M10)	16
14	Post Support Bolt (M12 x 50)	8

Part	Description	Qty
15	Spring Washer (M12)	24
16	Nut (M12)	24
17	Post Bolt (M12 x 110)	8
18	R-Pin	2
19	Washer (M12)	24
20	Pulley	2
21	Pulley Bolt (M10 x 30)	2
22	Bracket	2
23	Inner Support	4
24	Support Bolt (M6 x 8)	8
25	Bracket Bolt (M8 x 50)	2
26	Spring Washer	2
27	Nut (M8)	2
28	Wire Rope Clamp	4
29	Beam Bolt (M12 x 35)	8

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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