

# TMG-AGC06 PRODUCT MANUAL

v2024.05.15

# 1100-LB ADJUSTABLE HEIGHT ALL-STEEL GANTRY CRANE



#### **A WARNING**



- Please read and understand the product manual completely before assembly
- · Check against the parts list to make sure all parts are received
- · Wear proper safety goggles or other protective gears while in assembly
- Do not return the product to dealer. They are not equipped to handle your requests.

#### Missing parts or questions on assembly?

Please call: 1-877-761-2819 or email: cs@tmgindustrial.com

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# **INTENDED USE**

This 1100-Lb. Adjustable Gantry Crane is made of heavy-duty, all steel construction. It's ideal for shops where lifting is an essential part of the business. It goes where forklifts can't. Quick assembly and disassembly allow for easy transport within a jobsite or from site to site. Auto-lock feature keeps unit secure. Super-strong casters with rubber roll smoothly. Gantry crane is NOT to be moved while loaded.

# **TECHNICAL SPECIFICATIONS**

Property	Specification
Load Capacity	1100 lb.
I-Beam to Ground	95" to 142"
Width	47"
Distance between posts	95"
I-Beam Height	4"

# **IMPORTANT SAFETY INFORMATION**



#### WARNING

- · Read and understand all instructions. Failure to follow all instructions may result in serious injury or property damage.
- The warnings, cautions, and instructions in this manual cannot cover all possible conditions or situations that could occur. Exercise
  common sense and caution when using this tool. Always be aware of the environment and ensure that the tool is used in a safe and
  responsible manner.
- Do not allow persons to operate or assemble the product until they have read this manual and have developed a thorough understanding of how it works.
- Do not modify this product in any way. Unauthorized modification may impair the function and/or safety and could affect the life
  of the product. There are specific applications for which the product was designed.
- Use the right tool for the job. DO NOT attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this equipment was designed. This product will be safer and do a better job at the capacity for which it was intended. DO NOT use this equipment for a purpose for which it was not intended.
- · Industrial or commercial applications must follow OSHA requirements.



#### **WORK AREA SAFETY**

- Inspect the work area before each use. Keep work area clean, dry, free of clutter, and well-lit. Cluttered, wet, or dark work areas can result in injury. Using the product in confined work areas may put you dangerously close to cutting tools and rotating parts.
- · Do not use the product where there is a risk of causing a fire or an explosion, e.g., in the presence of flammable liquids, gases, or dust. The product can create sparks, which may ignite the flammable liquids, gases, or dust.
- Keep children and bystanders away from the work area while operating the tool. Do not allow children to handle the product.
- · Be aware of all power lines, electrical circuits, water pipes, and other mechanical hazards in your work area. Some of these hazards may be hidden from your view and may cause personal injury and/or property damage if contacted.



#### PERSONAL SAFETY

- Stay alert, watch what you are doing, and use common sense when operating the tool. Do not use the tool while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool may result in serious personal injury.
- Dress properly. Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Air vents on the tool often cover moving parts and should be avoided.
- Wear the proper personal protective equipment when necessary. Use ANSI Z87.1 compliant safety goggles (not safety glasses) with side shields, or when needed, a face shield. Use a dust mask in dusty work conditions. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate. This applies to all persons in the work area.
- Do not overreach. Always keep proper footing and balance.



#### PRODUCT USE AND CARE

- Do not force the product. Products are safer and do a better job when used in the manner for which they are designed. Plan your work and use the correct product for the job.
- · Check for damaged parts before each use. Carefully check that the product will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the product with a damaged part.
- Do not use a product with a malfunctioning switch. Any power tool that cannot be controlled with the power switch is dangerous and must be repaired by an authorized service representative before using.
- Disconnect the power/air supply from the product and place the switch in the locked or off position before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.
- Store the product when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the tool for good working condition prior to storage and before re-use.
- · Use only accessories that are recommended by the manufacturer for use with your product. Accessories that may be suitable for one product may create a risk of injury when used with another tool. Never use an accessory that has a lower operating speed or operating pressure than the tool itself.
- Keep guards in place and in working order. Never operate the product without the guards in place.
- · Do not leave the tool running unattended.

# **SPECIFIC OPERATION WARNINGS**

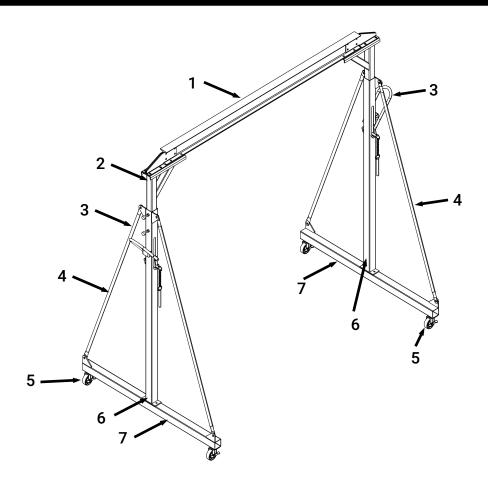
# **WARNING**

- · To prevent serious injury or property damage, read and understand the owner's manual before use.
- · Do not exceed the rated load capacity.
- · Operate on a hard, level surface.
- · Do not operate crane if the beam is not level.
- · Be sure the trolley stoppers have been fixed to both ends of the beam.
- · Ensure the load is centered before lifting.
- · Do not use to lift people or animals.
- · Keep persons and property clear from under the load.
- · Do not leave loads suspended when the gantry crane is unattended.
- · Do not allow the load to swing or roll against the support members.
- · Inspect the crane for damaged parts and loose bolts before each use.
- · Do not use the crane if there are damaged parts. Replace damaged parts before continuing use.
- · Do not adjust height or disassemble crane while loaded.
- Secure trolley and hoist in the center of the beam when adjusting height.
- · Do not push or pull crane with a forklift or other vehicle.
- Never push the load when trying to move the crane. Always push the crane.
- When moving crane while loaded, keep the load close as close to the floor as possible and position the load in the center of the beam.
- · Do not anchor the legs to the floor.
- · Secure the trolley and hoist in the center of the beam when adjusting the height.

#### **SAFETY SIGNS**



# **MAIN PARTS OF CRANE**



Reference	Subassembly	
1	I-Beam	
2	Post Insert	
3	Handle	
4	Post Support	
5	3.5" Locking Swivel Caster	
6	Post Sleeve	
7	Base	

# **ASSEMBLY INSTRUCTIONS**

# **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 Northern Tool +
  Equipment before use.

#### **ASSEMBLY SET-UP**

- 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 sawhorses (not included) to support larger items such as Posts and I-Beam during assembly.
- 5. The Post Insert (21) and Post Sleeve (23) are pre-assembled.

#### Attaching Posts and Connector Plate A & B to I-Beam



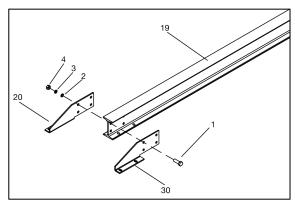


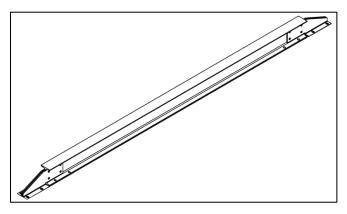




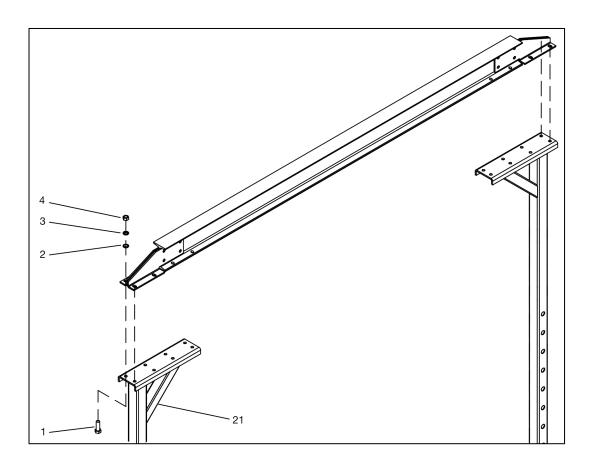
- (1) Bolt M12 x 35
- (2) Washer ø12
- (3) Spring Washer ø12
- (4) Nut M12

- 1. Lay I-Beam (19) on the ground.
- 2. Attach Left Connector Plate A (20) and Left Connect Plate B (30) to I-Beam (19), using Bolts (1), Washers (2), Spring washers (3), and Nuts (4).
- 3. Repeat for Right Connector Plate Assembly.





- 4. Lay left and right Post Assemblies on the ground.
- 5. Attach Left Post Insert (21) to I-Beam (19), using Bolts (1), Washers (2), Spring Washers (3), and Nuts (4). Each Bolt (1) needs 1 washer (2).
- 6. Tighten connections securely
- 7. Repeat for Right Post Assembly.



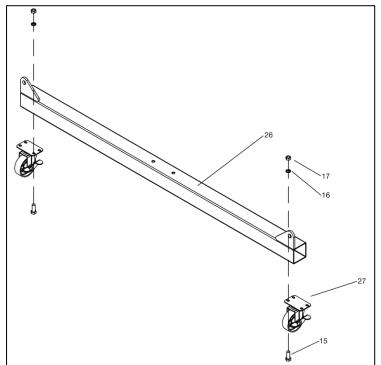
#### **Attaching Casters to Bases**

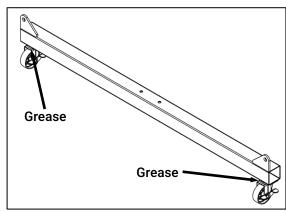


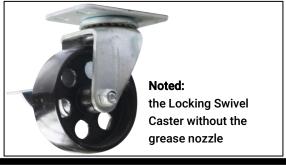




- (15) Bolt M8×16
- (16) Spring Washer ø8
- (17) Nut M8
- 1. Attach one Locking Swivel Caster (27) to one end of the Base (26) using four sets of Bolts (15), Spring Washers (16) and Nuts (17).
- 2. Repeat assemblies for the other three casters.
- 3. Tighten connections securely.
- 4. Apply grease to each Caster bearing.

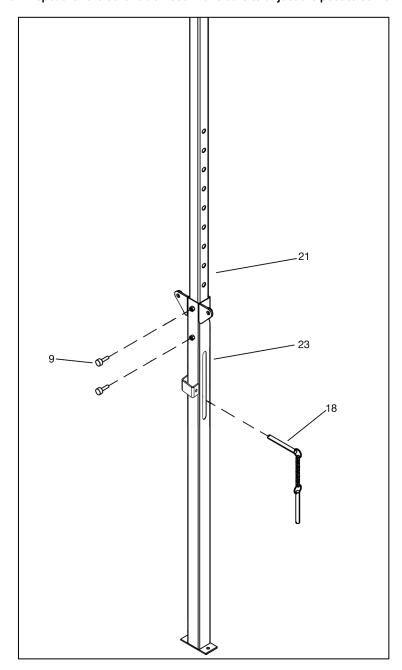


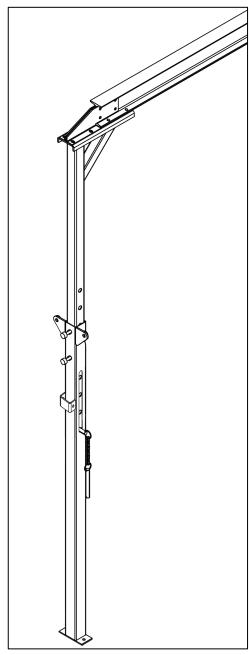




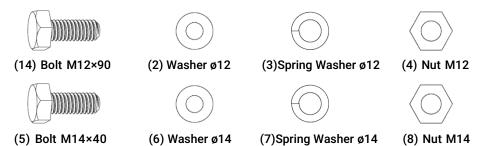
#### **Attaching Post Insert to Post Sleeve**

- 1. Place the Post Insert (21) into the Post Sleeve (23) with an Insert Pin (18).
- 2. Place the Lock Bolt (9) into the Post Sleeve (23), then lock it manually.
- 3. Repeat for the other side Post. Make sure to adjust the post to some height.

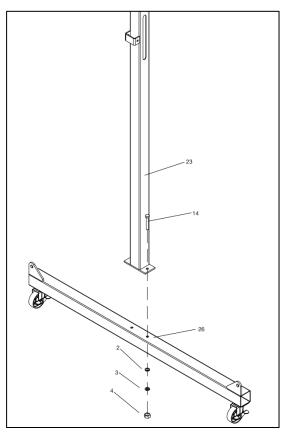


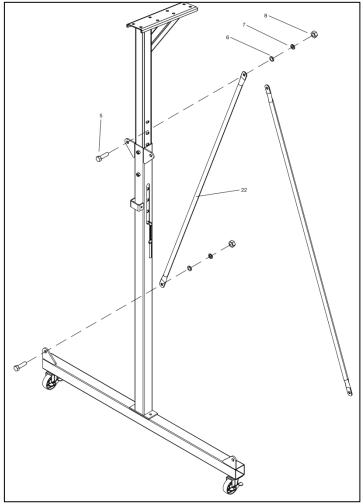


#### **Attaching Post Supports to Base and Post Sleeve**



- 1. With help, lift the Crane to the upright position.
- 2. Attach Post Sleeve (23) to Left Base (26) and assemble using Bolts (14), Washers (2), Spring Washers (3), and Nuts (4).
- 3. Attach Post Supports (22 to Left Base and Post Sleeve (23) using Bolts (5), Washers (6), Spring Washers (7), and Nuts (8).
- 4. Tighten connections securely.
- 5. Repeat for Right Base and Post Assemblies.





#### **Attaching Handles**

(10) Bolt M10×180



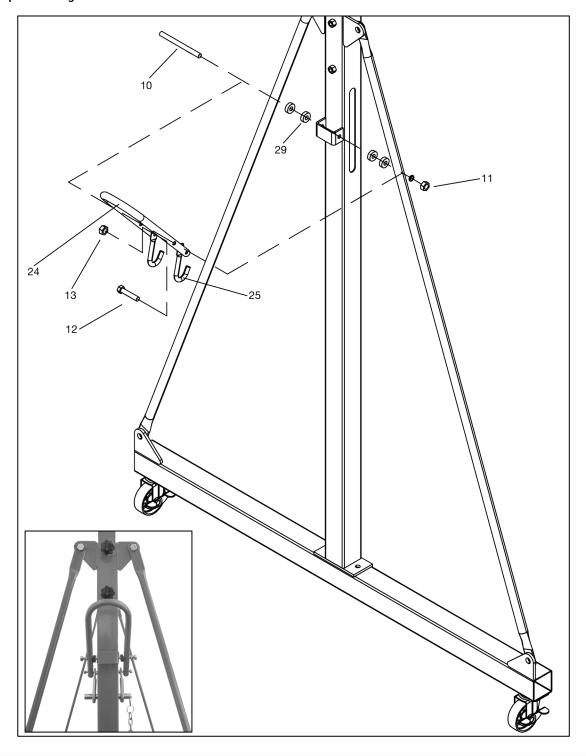


(28) Washer ø10

- 1. Attach one hook (25) to the Left Handle (24) using a Bolt (12) and Nut (13).
- 2. Place Bolt (10) through the Left Handle (24), Plastic Spacer Bush (29), using Plain Washer (28) and Nut (11) tighten.

(11) Nut M10

- 3. Tighten connections securely.
- 4. Repeat for Right Handle Assemblies.



# **BEFORE EACH USE**

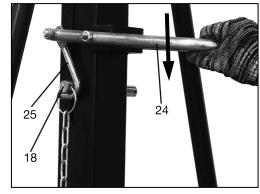
### A

#### **WARNING**

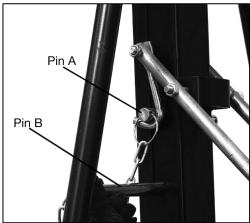
- TO PREVENT SERIOUS INJURY AND DEATH: The use of cranes is subject to certain hazards that cannot be met by
  mechanical means, but only by the exercise of intelligence, care, common sense, and experience in anticipating the motions
  that will occur because of operating the controls.
- · Wear ANSI Z87.1 compliant safety goggles, hard hat, heavy-duty work gloves, and steel-toed work boots during operation.
- Do not use without Height Pins in place.

#### **Adjusting I-Beam Height**

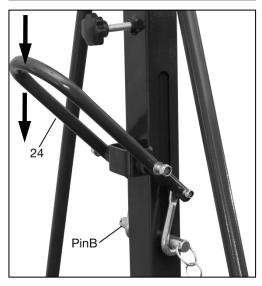
1. Make sure the hook (25) holds insert pin A (18). Press the handle (24) to lift.



2. With the handle remaining, insert the Pin B (18) to the hole beneath Pin A. Then the height will be locked in place.



3. Put the hook(25) holds the insert pin B, and then pull out the pin A. Press the handles(23) to lift.



Repeat the above procedure until desired height is achieved.

#### **Before Operating**

1. Familiarize yourself with all operating controls of the crane and with the operation(s) to be performed. Instructions include the warnings on the crane, and the safety and operating instruction portion of this manual.

### **WARNING**

- TO PREVENT SERIOUS INJURY FROM EQUIPMENT FAILURE: Do not use damaged equipment. If adjustments or repairs are necessary, or any defects are known, have the problem corrected before further use.
- 2. Do not operate a crane with an out-of-order sign.
- 3. Only a qualified technician should perform maintenance to the crane.
- 4. 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.
- 5. There must not be objects, such as utility lines, nearby that will present a hazard while working.
- 6. Lock Casters before lifting a load.
- 7. Adjust I-Beam to horizontal level.

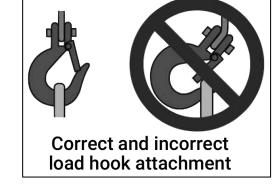
# **OPERATING INSTRUCTIONS**

# **WARNING**

- 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.
- · Always have a least 2 people operating crane at any time.
- · Operate on a hard, level surface.
- · Do not operate crane if the beam is not level.
- · Do not use to lift people or animals.
- · Keep persons and property clear from under the load.
- Do not allow the load to swing or roll against the support members.

#### **Applying the Load**

- 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.
- 2. The hook hitch to support any part of the load.
- 3. Do not apply the load to the point of the hook.
- 4. Do not operate the crane unless the unit is centered over the load.
- Do not pick up a load in excess of the rated load appearing on the crane or load block, except during properly authorized tests.
   Do not use a crane overload limiting device to measure the maximum load to be lifted.



6. Properly seat the sling or other device in the base (bowl or saddle) of the hook . Do not allow Give specific attention to load balancing and hitching or slinging to prevent load slipping.

#### **Moving the Load**

- 1. Do not engage in any activity which will divert the operator's attention while operating the crane.
- 2. Respond to signals from a designated person only. Always obey a stop signal.
- 3. Do not lift or lower a load with the crane until the operator and all others are clear of the load.
- 4. Make sure the load and crane 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 the crane brake action by lifting the load just clear of supports and continuing only after verifying that the brake system is operating properly.
- 7. Do not carry any load over any person.
- 8. Do not carry people on the hook or the load.
- 9. Avoid swinging the load or load hook when moving the crane.
- 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 crane.

These are emergency devices only

12. Do not move the crane while loaded.

### **A** WARNING

- · Do not use to lift people or animals.
- Keep persons and property clear from under the load.
- · Do not allow the load to swing or roll against the support members.
- · Do not carry any load over any people.

#### 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 crane is not in use.
- 3. Exercise care when removing a sling from under a landed and blocked load.

### **AFTER EACH USE**

- 1. Lock casters and adjust the crane at the lowest height. Insert Height Pins.
- 2. Position the load block above head level for storage when the crane is not in use.
- 3. Move the crane to a location where it will create the least interference with other cranes or objects.
- 4. Keep the crane in a place where it's clean, well-lit, and safe. Do not allow access by children or pets to prevent injury.

# **MAINTENANCE**

### WARNING

- TO PREVENT SERIOUS INJURY FROM CRANE FAILURE: Do not use damaged equipment. If any defect or damage is noted, have the problem corrected before further use.
- Repair or replacement of crane components must be performed only by a qualified technician using only identical replacement parts with the same rating.

Maintain the product by adopting a program of conscientious repair and maintenance in accordance with the following recommended procedures. It is recommended that the general condition of any tool be examined before it is used. Keep your tool in good repair. The following chart is based on a normal operation schedule.

Maintenance Interval	Maintenance Point
	Some components may require adjustment. The following are examples:     A. Operating mechanisms    B. Brakes
	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.
Daily before operating	3. Do not repair load-sustaining members by welding. Replace them as needed.
	Lubrication:     A. Immobilize crane before lubrication by blocking casters.
	B. Lubricate all moving parts regularly using grease.
	After maintenance work is completed and before restoring the crane to normal operation:     A. Reinstall guards and reactivate safety devices;
	B. Remove replaced parts and loose material; Remove maintenance equipment.
After the first 20 operating hours	Check operating mechanisms for proper operation, proper adjustment, and unusual sounds.
	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.
	Check attached cranes, according to manufacturer's documentation.
	Follow all monthly maintenance procedures.
After the first 50 operating hours or every week	Check for deformed, cracked, or corroded parts and replace.
	2. Make sure all bolts, nuts, pins, or rivets are attached securely.
	<ol><li>Check for other worn, cracked, or distorted parts such as pins, bearings, wheels, shafts, gears, rollers, locking and clamping devices, bumpers, and stops.</li></ol>
	4. Check attached cranes, according to manufacturer's documentation.

# **TROUBLESHOOTING**

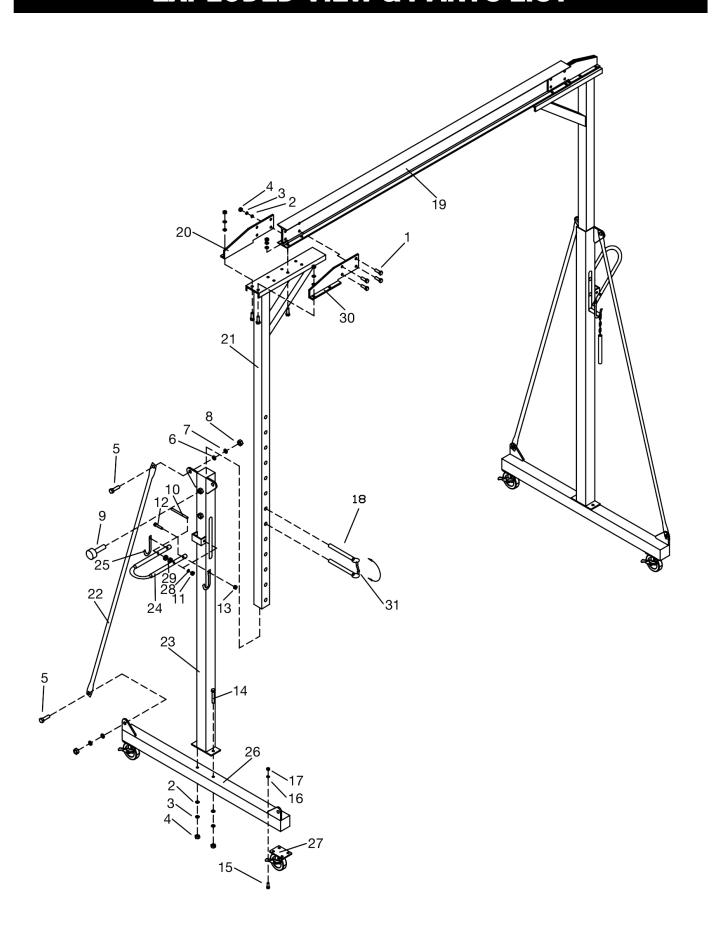
# **WARNING**

- TO PREVENT SERIOUS INJURY FROM EQUIPMENT FAILURE: Do not use damaged equipment. If any defect or damage is noted, have the problem corrected before further use.
- Repair or replacement of crane components must be performed only by a qualified technician using only identical replacement parts with the same rating.

Use the table below to troubleshoot problems before contacting service personnel or your local dealer. If the problem continues after troubleshooting, call your local dealer for assistance.

Failure	Possible Cause	Corrective Action
Crane doesn't move flexibly	Caster(s) are locked	Loosen the caster brake
	Foreign objects stuck in caster(s)	Remove the foreign objects from caster, and apply grease to each caster bearing
I-Beam (19) leans to other side, not staying horizontal	Inspect the Post Inserts and be sure both are inserted into same level holes (12 different level holes)	Adjust two sides Post Insert (21) to same level hole
The handle doesn't move flexibly	Inspect the assembly of each handle (#12, #13, #25) to see if assembled correctly	Reassembly if not assembled correctly
	Under heavy loading, the handle will not work	Press the handle under free loading.  After raising, free the handle and insert a Pin (18)

# **EXPLODED VIEW & PARTS LIST**



#### **Parts List**

PART NO.	DESCRIPTION	QTY	PART NO.	DESCRIPTION	QTY
1	Bolt M12x35	24	17	Nut M8	16
2	Plain washer ø12	28	18	Inserted pin ø19X160	4
3	Spring washer ø12	28	19	I-Beam	1
4	Nut M12	28	20	Connector plate A	2
5	Bolt M14x40	8	21	Post insert	2
6	Plain washer ø14	8	22	Post support	4
7	Spring washer ø14	8	23	Post sleeve	2
8	Nut M14	8	24	Operation handle	2
9	Lock bolt M12	4	25	Hook	4
10	Bolts M10x180	2	26	Base assembly	2
11	Nut M10	4	27	3.5" locking swivel caster	4
12	Bolts M8x40	4	28	Plain washer ø10	4
13	Nut M8	4	29	Plastic spacer bush	8
14	Bolts M12x90	4	30	Connector plate B	2
15	Bolts M8x16	16	31	Connect chain	2
16	Spring washer ø8	16			