



1-TON GANTRY CRANE

Instruction Manual 21940



WARNING

**READ AND UNDERSTAND THIS INSTRUCTION MANUAL
PRIOR TO USING THIS PRODUCT. FAILURE TO DO SO MAY
RESULT IN SERIOUS INJURY OR DEATH.**

Keep this instruction manual for future reference.

This instruction manual is intended for your benefit. Please read and follow the safety, installation, maintenance and troubleshooting steps described within to ensure your safety and satisfaction. The contents of this instruction manual are based upon the latest product information available at the time of publication. The manufacturer reserves the right to make product changes at any time without notice. "Tool" in this manual refers to the product on the front page.

The safety instructions provided in this manual are not intended to cover all possible conditions and practices that may occur when operating, maintaining and/or cleaning.

Always use common sense and pay particular attention to all the DANGER, WARNING, CAUTION and NOTICE statements in this manual.

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	Addresses practices not related to personal injury.
CAUTION	

Maintain labels. Labels on this product, if applicable, carry important information. If unreadable or missing, contact Star-Asia USA, LLC for free replacement labels.

The label on your tool may include the following symbols. The symbols and their definition are as follows:

Symbol	Property or Statement	Symbol	Property or Statement
	Safety Alert Symbol		Wear ANSI approved (or applicable national standard) goggles or properly fitted protective glasses with top and side protection.
	Read and understand this instruction manual prior to using this product.		Crushing/Overhead Hazard

INTENDED USE

An essential tool for automotive enthusiasts, mechanics, and anyone with the need to safely and efficiently lift objects, the 1 Ton Gantry intended to be used for safely lifting and supporting objects with the use of a trolley and hoist. The Gantry offers portability, versatility, and better access because of its adjustable height. The Gantry has eight height adjustment settings and is held using two heavy duty pins that are designed to be locked in place with R-Pins. The Gantry is not intended to hold or support a load for extended period, and a proper support stand (i.e. worktable, engine or transmission stand) should be used to offer better safety and stability while performing work on the object.

SPECIFICATIONS

Specification	Value
Load Rating	1 Ton (2000 Lbs (910 kg))
Clearance Btwn Posts	118 in. (3000 mm)
Operating Distance Between Posts	102-3/4 in. (2610 mm)
Lifting Height	89 to 138 in. (2265 to 3510 mm)
Base Width	135.85 in. (3450 mm)
Min. Overall Height	99.5 in. (2525 mm)
Max. Overall Width	151.5 in. (3850 mm)
Min. Vert. Clearance (Under I-Beam)	94 in. (2385 mm)
Max. Vert. Clearance (Under I-Beam)	143 in. (3630 mm)

UNPACKING & INSPECTION



WARNING

This is a complex and dangerous machine. The Gantry and its components can be dangerous when assembled incorrectly. If you do not feel completely comfortable assembling it, then seek the services of a qualified technician to assemble it.



WARNING

Do not use this product if damaged during shipment, handling, or after misuse.

Do not use the product until the parts have been replaced or the fault rectified. Failure to do so may result in serious personal injury or property damage.

When unpacking, please inspect the product carefully to ensure the product is intact and undamaged. If any parts are missing or broken, please call 1-800-386-0191 as soon as possible.

Remove the parts and accessories from the packaging and inspect for damage. Make sure that all items in the contents are included.

- 1T Gantry (Refer to parts list)
- Instruction Manual
- 1T Trolley (Refer to parts list)

Package contents :

GENERAL SAFETY RULES



WARNING

READ ALL SAFETY WARNINGS AND ALL INSTRUCTIONS. Failure to follow the warnings and instructions may result in electric shock, serious injury and/or DEATH.

Save this instruction manual for future reference.

WORK AREA SAFETY

- Operate in a safe work environment. Keep your work area clean, well-lit and free of distractions. Place lights so you are not working in a shadow.
- Keep anyone not wearing appropriate safety equipment away from the work area.
- If working alone, always arrange to have someone check on you at pre-arranged, regular intervals.
- Store properly and in a safe and dry location to prevent corrosion or damage. Keep out of reach of children.

PERSONAL SAFETY

- Wear Personal Protective Equipment (PPE) approved by the American National Standards Institute (ANSI) or the Canadian Standards Association (CSA).
- Always wear impact safety goggles or eyewear that provide front and side protection for the eyes. Eye protection equipment should comply with ANSI Z87.1 or CSA Z94.3-07 standards based on the type of work performed.
- Control the tool, personal movement and the work environment to avoid personal injury or damage to the equipment.
- Do not operate this tool when tired or under the influence of drugs, alcohol, or medications.
- Avoid wearing clothes or jewelry that can become entangled with the moving parts of a tool. Keep long hair covered and bound.
- Wear gloves that provide protection based on the work materials or to reduce the effects of tool vibration.
- Do not overreach when using. Non-skid footwear is recommended to maintain proper footing and balance to enable better control in unexpected situations.
- Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.
- Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore safety principles. A careless action can cause severe injury within a fraction of a second.
- This product is not intended for use by persons (including children) whose physical, sensory, or mental capabilities are different or reduced, or lack experience or knowledge unless such persons receive supervision or training in the operation of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not use the device as a toy.

Note: Do not wear gloves when operating a tool that can snag the material and pull the hand into the tool.

SPECIFIC SAFETY



WARNING

DO NOT let comfort or familiarity with the product (gained from repeated use) replace strict adherence to the tool safety rules. If you use this tool unsafely or incorrectly, you may suffer serious personal injury.

- **Do not lift more than the rated load, and be aware of dynamic loading.** Sudden load movement may create brief loading that exceed the rated load causing product failure.
- **Do not operate the hoist when the load is not centered directly underneath the hoist and trolley.** Attempting to lift an un-centered load may cause unwanted dynamic loading.
- **Do not operate this equipment if any part is malfunctioning or damaged.** Inspect the gantry crane, trolley and all other attachments prior to each use.
- **Do not modify the equipment for non-manual operation.** Use only manual power to operate the gantry and trolley.
- **Do not remove or cover warning labels and/or tags.** Warning labels and tags convey important safety information. If missing or unreadable, please call 1-800-386-0191 for a replacement.
- **Use only on a hard, smooth and level surface** that is capable of withstanding the loads and forces created by the gantry crane with the rated load.
- Use in a location that has enough room for the operator to move and stay clear of the load.
- **Use warning signs and barriers on the floor beneath the gantry crane** where overhead maintenance work creates a hazard.
- **Use only as intended.** Do not use the gantry to handle molten material. Do not use for aircraft purposes.
- **Do not adjust height while under load.**
- **Do not move a loaded crane.**

ASSEMBLY SAFETY

- Assemble completely and in accordance with these instructions. Ensure Height Pins and R-pins are installed prior to use.
- Assemble and adjust the height of the gantry with the help of at least one other capable person.
- Do not assemble when tired or under the influence of drugs, alcohol, or medication.
- Follow all Safety Precautions and Warnings in this manual when assembling.

ASSEMBLY



WARNING

The gantry crane is very heavy and will require the assistance of at least one other person. Mechanical advantaged lifting equipment (hoists, lifts, forklifts, etc.) is highly recommended.

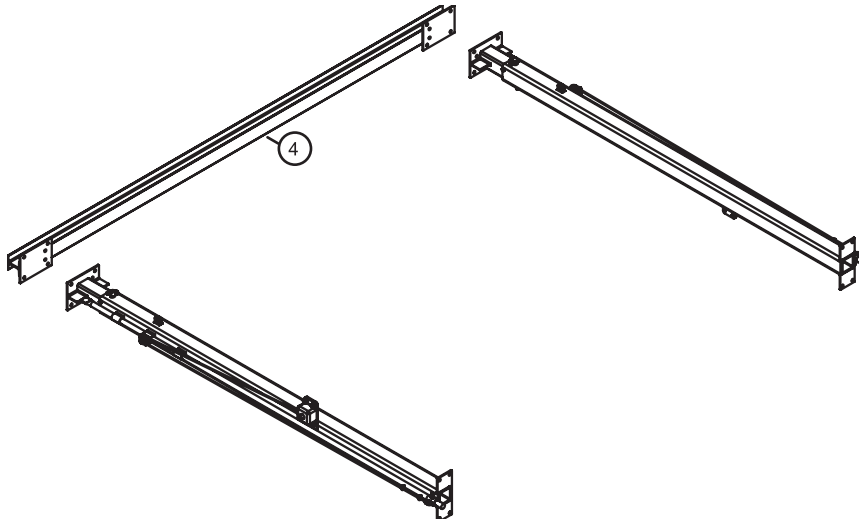


Fig. 1

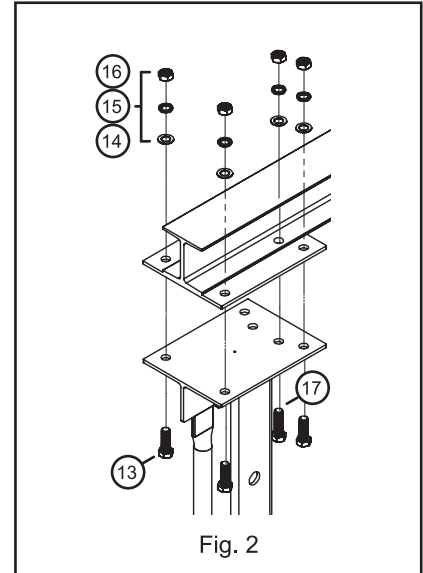


Fig. 2

Items in parenthesis (1), refer to the Parts List.

Step 1: Lay out the I-Beam and the Vertical Support Assemblies, Fig. 1. Select a flat, clean floor with enough space to layout, assemble, and move the Gantry Crane. Place the Vertical Support Assemblies on the floor with the Pulleys, Winch Box, and Guide Tubes on the outside, as shown in Fig. 1. Check that the mating surfaces between the Vertical Supports and I-Beam (4) are clean and free from debris. Place the I-Beam (4) at the top of the Vertical Support Assemblies.

Step 2: Bolt the Vertical Support Assemblies to the I-Beam, Fig. 2. *Hand-tighten* four M12x35mm Bolts (13), M12 Flat Washers (14), M12 Lock Washers, (15) and M12 Nuts (16) on the outside corners of the two flat plates. Place two M12x45mm Bolts (17), M12 Flat Washers (14), M12 Lock Washers, (15) and M12 Nuts (16) on the inside and which pass through the I-Beam.

Hand-tighten only. Repeat for the other Vertical Support Assembly. Once all fasteners are installed as shown in Fig. 2 and hand-tightened, use a torque wrench and tighten the fasteners to between 55 and 65 ft-lbs (75 to 88 Nm). Start with the two M12x45mm Bolts (17), then tighten the four M12x35mm Bolts (13) in a cross tightening X-pattern.

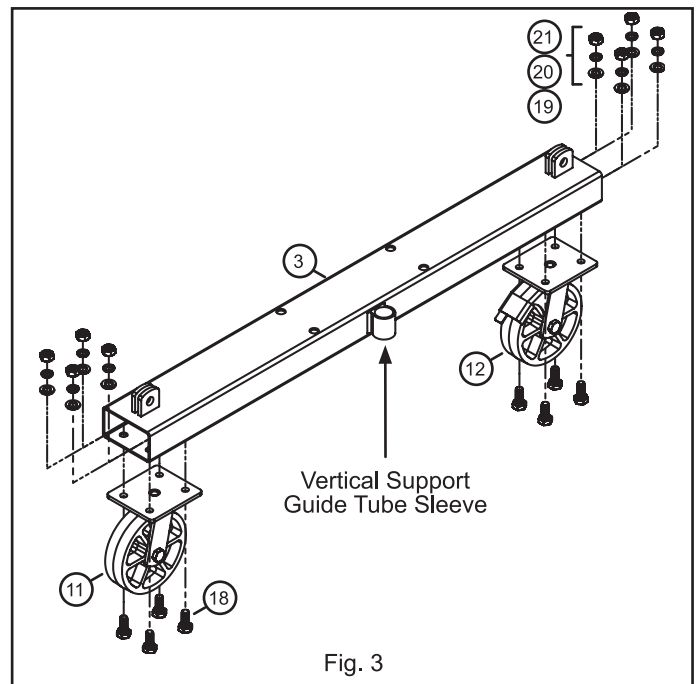


Fig. 3

Step 3: Assemble the Base Cross Tube, Fig. 3.

Assemble the Swivel Casters (11) and Locking Swivel Casters (12) to the Base Cross Tube (3), as shown in Fig. 3. Place a Swivel Caster (11) onto the bottom of the Base Cross Tube (3) and use four M10x25mm Bolts (18), M10 Flat Washers (19), Lock Washers (20), and an M10 Nut (21) to secure it to the Base Cross Tube (3). Tighten these fasteners to between 28 and 32 ft-lbs (38 to 43 Nm). Repeat these steps to install the Locking Swivel Caster (12) onto the Base Cross Tube (3). Repeat for the other Base Cross Tube (3).

NOTE: Ensure the Locking Swivel Casters (12) are installed so that when assembled onto the Vertical Supports the Locking Swivel Casters (12) will be on the SAME SIDE and NOT on opposite corners.

Using Fig. 3 as an example, the Locking Swivel Caster (12) is shown on the right side in relation to the Vertical Support Guide Tube Sleeve. When assembling the second Base Cross Tube (3), the Locking Swivel Caster (12) will be on the left side in relation to the Vertical Support Guide Tube Sleeve.

Apply Grease to the swivel bearing in each caster prior to use. This will allow smooth operation and ensure a longer life of the bearing. Wipe away any excess grease from the casters.

Step 4: Assemble the Base Cross Tube to the Vertical Support Assemblies. A method to make assembly simple and safe, use a pair of sawhorses to prop up the ends of the Vertical Supports as shown in Fig. 4.

With the Vertical Supports propped up on the sawhorses, align the Vertical Support Guide Tube Sleeve, referenced in Fig. 3, to the Guide Tube on the Vertical Support, and align the four holes at the bottom of the Vertical Support flange with the holes in the Base Cross Tube (3), as shown in Fig. 5. Place four M12x110 Bolts (23) through the Vertical Support flange and Base Cross Tube (3), then place an M12 Flat Washer (14), M12 Lock Washer (15), and M12 Nut (16) on each bolt. Use a torque wrench and tighten the fasteners to between 55 and 65 ft-lbs (75 to 88 Nm).

Repeat for the other Vertical Support and Base Cross Tube Assembly.

STEP 5: Stand the Gantry Crane in the upright position.



WARNING

DO NOT attempt to stand the gantry crane upright alone.

Request the assistance of at least one other person. Use of a mechanical assisted lifting device such as a hoist, forklift, crane, etc. is recommended, if available.

With the help of at least one other person, lift the vertical supports and remove the sawhorses. Gently rest the Base Cross Tubes on the floor, then lift upward at the top of the gantry while pivoting on the Base Cross Tubes to carefully rest the wheels onto the floor.

STEP 6: Install the Brace Supports, Fig 6. Install the Brace Supports (5) between the Vertical Supports and the Base Cross Tube as shown in Fig 6. Place a Brace Support (5) between the ears on the Vertical Support and align the holes. Place an M12x50mm Bolt (24) with an M12 Flat Washer (14) through the holes and add an M12 Lock Washer (15) and **hand-tighten** an M12 Nut (16) on the opposite side. Place the other end of the Brace Support (5) between the ears on the Base Cross Tube and align the holes. Place an M12x50mm Bolt (24) with an M12 Flat Washer (14) through the holes and add an M12 Lock Washer (15) and an M12 Nut. Tighten the fastener at the top and bottom of the Brace Support (5) to between 55 and 65 ft-lbs (75 to 88 Nm).

Repeat for the remaining three Brace Supports (5).

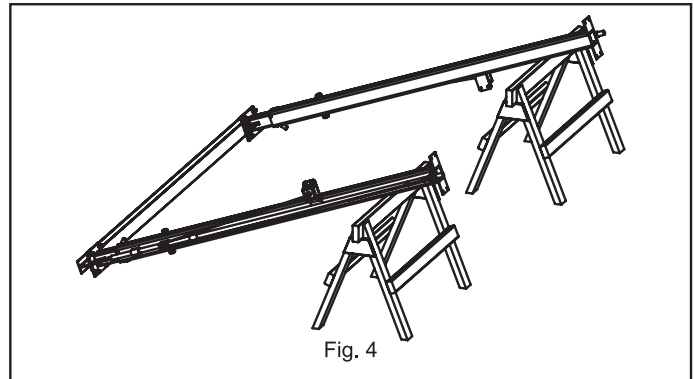


Fig. 4

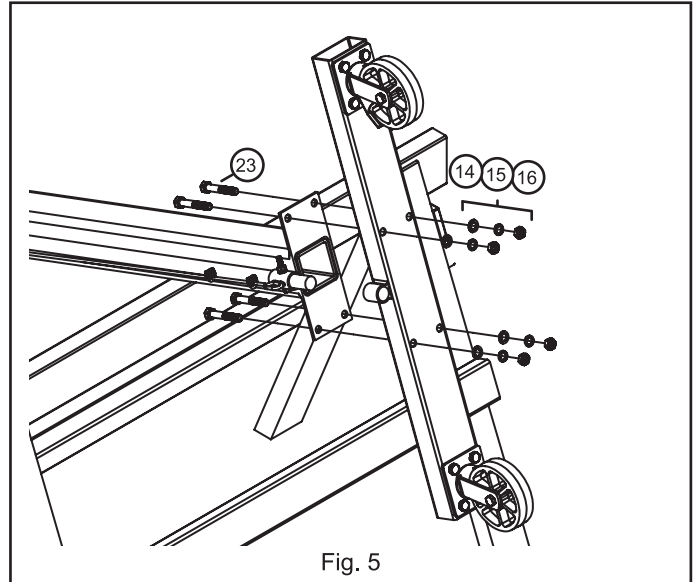


Fig. 5

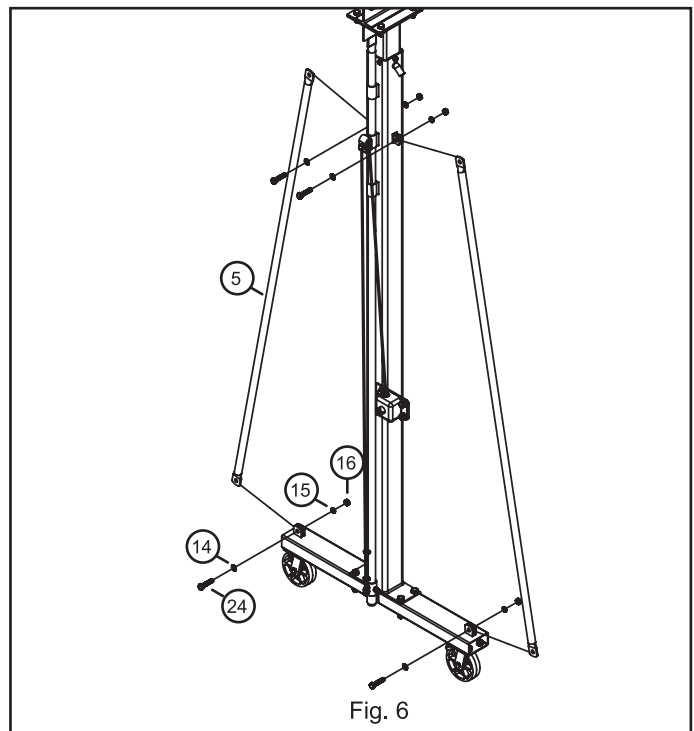


Fig. 6

STEP 7: Install the Height Adjustment Crank

Handles, Fig. 7. Loosen the Setscrew (46) on the Winch Box, then insert the Height Adjustment Crank Handle (8) into the hole on the Winch Box (9), aligning the drive pin with groove on the gearbox as shown in Fig. 7. Tighten the Setscrew to fasten the handle and ensure it does not fall out.

STEP 8: Install the Trolley, Fig. 8. Place one of the Trolley Roller Assemblies onto the I-Beam (4), Fig. 8. Insert the Suspension Pin (45) through the hole at the bottom of the Trolley Roller Assembly. Place two Spacer Washers (41), the Suspension Plate (44), two more Spacer Washers, and the second Trolley Roller Assembly onto the Suspension Pin (45). While holding the two Trolley Roller Assemblies together by hand, move the trolley back and forth to check that there is enough clearance for the trolley to move along the I-Beam (4) without binding. Also check to see that the trolley is not too loose on the I-Beam (4) and that there is not excessive space between the rollers.

To ensure the Trolley operates smoothly, eliminate binding or excessive space between the rollers by adding or removing Spacer Washers (41) between the Trolley Roller Assemblies, as necessary. Place the remaining Spacer Washers (41) on the Suspension Pin (45) and outside of the Trolley Roller Assemblies. Fasten the two Trolley Roller Assemblies together using the Castle Nuts (42) on each end of the Suspension Pin (45). Thread one Castle Nut (42) so that the Cotter Pin (43) can be inserted between the grooves on the Castle Nut (42) and through the hole on the Suspension Pin (45). On the opposite side, tighten the Castle Nut (42) until the nut stops. Insert the Cotter Pin (43) between the grooves on the Castle Nut (42) and through the hole on the Suspension Pin (45). If the groove on the Castle Nut (42) does not align, turn the nut counter-clockwise until the next groove aligns, then insert the Cotter Pin (43) through the hole. Bend the ends of the Cotter Pins (43) on both sides to prevent them from backing off.

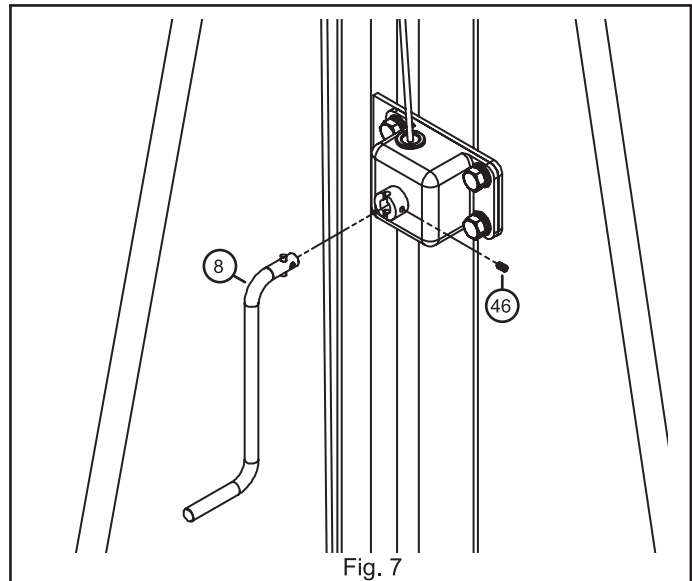


Fig. 7

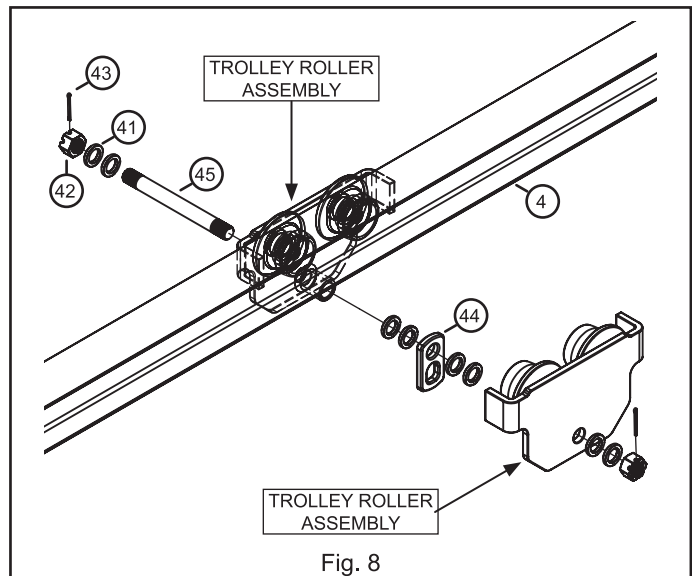


Fig. 8

OPERATION

! DANGER Ensure all persons performing operation of the Gantry Crane are qualified, with the appropriate education, training, experience, skill, and physical fitness, as necessary, and are competent and capable to perform the functions necessary for safe operation of the Gantry Crane.

Before to each use, perform an inspection of the Gantry Crane, Trolley, Hoist, and all rigging. On the Gantry and Trolley:

- Check that there are no overhead obstructions such as hanging lights, power cords, air hoses, etc. Remove any obstructions before attempting to move the Gantry Crane.
- Visually inspect the Gantry Crane structure for damage such as cracks, deformations, and signs of corrosion.
- Check that all fasteners are tight.
- Check that the locking casters operate correctly and that they are locked prior to attempting lifting of any load.
- Check that the Height Pins (7) are fully installed and the R-Pins (31) are fully engaged and prevent the Height Pins (7) from being moved.
- Visually check the Trolley for damage such as cracks, deformations, and signs of corrosion.
- Check that the trolley castle nuts (42) are tight and that the cotter pins are properly installed.
- Check any hoist or rigging attached to the trolley per the safety information regarding that item.
- Any necessary adjustments, repairs, or defects must be made before use. Tag out any gantry crane that is unsafe to use as "DO NOT OPERATE", along with the reason for tag-out, and remove all hoists or rigging until all adjustments, repairs or defects are corrected and until the crane has been tested as safe to use.
- Provide adequate lighting with no glare; supply additional local lighting for hazardous procedures to ensure increased vision and reduced eye strain and fatigue.
- Ensure there is a clear and wide path for safe

movement around, below, and above the Gantry Crane, around the item being lifted, and especially in areas where tools and parts will be carried.



WARNING

Additional safety precautions during use that, if not followed,

may result in serious personal injury or damage to the machine or property include:

- DO NOT exceed the rated 1 Ton (2000 lbs (910kg)) capacity of the Gantry Crane & Trolley, or the LOWEST RATED CAPACITY of any hoist or rigging attached to the trolley.
- Use the Gantry, Trolley, and any added hoist or rigging only for the task for which it was designed.
- Keep all guards and safety devices in place and functional. ALWAYS lock the casters prior to attempting to lift any load.
- Use appropriate Personal Protective Equipment (PPE) including eye protection, gloves, footwear, and head wear (such as helmets and face shields, when necessary).
- Keep the area under the Gantry clean and free from slipping or tripping hazards.
- Ensure all bystanders are a safe distance from work being performed. DO NOT allow children or pets in the work area.
- DO NOT allow any person underneath a lifted load at any time.
- NEVER attempt to lift a person, or object with a person on it.
- **Prior to lifting a load:**
 1. Verify that the load DOES NOT exceed the rated capacity of 1 Ton (2000 lbs (910kg)), or the lowest rated capacity of any attached hoist or rigging.
 2. Adjust the I-Beam height (see section about adjusting the I-Beam height) to the lowest position necessary so that the hoist can operate correctly.
 3. Do not attempt to lift a load from the side or with the hoist at an angle. Ensure the load is centered directly below the trolley and hoist to avoid swinging the load.
 4. Lock the Casters so the crane is stationary.
 5. Verify all slings, hooks, hardware, etc. are appropriate for the load being lifted, are in good working order, and that all angles for the slings are appropriate and will not be cut or damaged by sharp edges.
 6. Ensure all persons are clear from the load.
 7. Ensure all loose materials, parts, blocking and packing have been removed from the load.
 8. Remove any slack from the sling and hoisting ropes.
 9. Check that the lifting device (such as a sling or chain) is properly seated in the saddle of the hoist hook.
 10. Lift the load a small amount to verify everything is functioning correctly, that the load or Gantry will not shift while lifting, and that the load is balanced.
- **When lifting a load:**
 1. Ensure the load is lifting straight up without possibility of the load swinging or shifting.
 2. Lift the load only high enough to complete the task

and so that it will clear all obstacles.

3. Keep the load under control. Avoid abrupt, jerky movements.
4. Follow signals or commands from only one designated person. However, always follow a STOP signal or command no matter who gives it.
5. Ensure nothing links, catches, or obstructs movement on the load while raising or traveling.

• **When lowering a load:**

1. Lower the load slowly to maintain control of the load while ensuring there are no obstructions underneath.
2. Never lower a load so it is resting on the rigging. Attach the load on an appropriate stand made for long term lifting, such as an engine or transmission stand, or place the load onto appropriately spaced blocking.
3. Once the load is lowered completely, check that the load will not shift BEFORE carefully removing any straps, chains, or other rigging.

• **Before leaving the Gantry Crane:**

1. Do not leave a suspended load unattended.
2. Ensure the load is landed by lowering the hoist completely so that there is no tension on the hoist, trolley, or rigging.
3. Remove and store all rigging.
4. Raise the hoist to at least the mid-position or higher, or remove the hoist so as not to be an overhead hazard.
5. Move the Gantry out of the way of any other work that will be performed in the area.

ADJUSTING THE I-BEAM HEIGHT



WARNING

I-Beam height adjustment requires two people. Never attempt to adjust the I-Beam height alone.



WARNING

BEFORE REMOVING THE R-PINS (31), check that the Wire Rope (33) lifting cables have slight tension but not enough tension to prevent movement or removal of the Height Pins (7). IF THERE IS TOO MUCH SLACK in the Wire Rope (33) lifting cables, there is a potential for the I-Beam to drop when the height pins are removed. Rotate the Height Adjustment Crank (8) clockwise until there is slight tension on the Wire Rope (33) lifting cables and the Height Pins can be moved.

To Adjust the I-Beam Height:

1. Ensure any load is removed. Check the lifting cable tension as described in the warning above, then remove R-Pins (31) from the Height Pins (7).
2. Remove the Height Pins (7).
3. With a second person operating the other side, rotate both Height Adjustment Cranks (8) **AT THE SAME TIME:**
 - Clockwise will raise the I-Beam, and
 - Counterclockwise will lower the I-Beam.
4. Rotate in the desired direction until the desired height is reached and a hole on the Vertical Support Outer Tube is aligned with a hole on the Vertical Support Inner Tube.
5. Reinstall the Height Pins (7) and R-Pins (31)

CARE & MAINTENANCE



WARNING

Only qualified service personnel should repair this equipment. An improperly repaired device may present a hazard to the user and/or others.



WARNING

DO NOT MAKE MODIFICATIONS TO, OR WELD ON, ANY PART OF THE GANTRY OR TROLLEY. Cutting, drilling, welding, or heating will weaken the structural integrity of the machine and could result in serious personal injury or damage to property.

To keep your machine looking optimal and running smoothly for many years, proper periodic maintenance is recommended.

- Always observe the operation of the machine during operation. Immediately stop all operations if there are any abnormal sounds or movements. Carefully inspect for any hazards and determine if a more detailed inspection is required.
- Maintain the Gantry Crane and Trolley with care. A machine in good condition is efficient, easier to control and will have fewer problems.
- Inspect the Gantry Crane and Trolley components periodically, at least every six-months and prior to each use. Repair or replace damaged or worn components. Use only identical replacement parts when servicing.
- Keep the surfaces clean, dry and free from oil/grease at all times.
- Maintain the Crane's labels and name plates. These carry important information. If unreadable or missing, contact Star-Asia LLC for replacements.

MONTHLY INSPECTION:

1. Check that the R-Pins(31) are present and that the Height Adjustment Pins (7) have not been deformed or damaged. A deformed Height Adjustment Pin may indicate the Gantry Crane has experienced excessive loading.
2. Check that the Wire Rope (33) lifting cables are free from corrosion and add a light coat of machine oil or grease to prevent corrosion. Wipe away any excess.
3. Inspect all operating mechanisms for correct operation and adjustment. Check for abnormal sounds or movements and adjust or repair, as necessary.
4. Follow the instructions included with any lifting device attached to the Trolley, including proper safety warnings, operation, and inspection.
5. Check all rigging (hooks, slings, etc.), as necessary and according to the manufacturer's documentation.

ANNUAL INSPECTION:

1. Perform the monthly inspection as described.
2. Check that there are no overhead obstructions such as hanging lights, power cords, air hoses, etc. Remove any obstructions before attempting to move the Gantry Crane.
3. Visually inspect the Gantry Crane structure for damage such as cracks, deformations, and signs of corrosion. Repair or replace, as necessary.
4. Check all fasteners, pins, bearings, wheels, shafts, rollers, and caster locks on both the Gantry Crane and Trolley to ensure they are not damaged, distorted, or missing. Repair or replace, as necessary.

5. Verify the torque of all fasteners
6. Grease the casters. Use a grease gun that can attach to the grease zerk fitting in each Caster and apply a high quality EP, or molybdenum EP grease. Wipe away any excess grease to prevent dust or dirt from collecting on the joint.

GANTRY OPERATIONAL TESTING:



WARNING

DO NOT EXCEED the 1 Ton (2000 lbs (910kg)) capacity of the Gantry Crane & Trolley, or the LOWEST RATED CAPACITY of any hoist or rigging attached to the trolley.

Operational testing the Gantry Crane and Trolley should only be done by designated and properly qualified personnel.

Test the following features for normal operation:

1. Raising and lowering of the I-Beam, per the section "Adjusting the I-Beam Height."
2. Movement of the Gantry Crane Structure.
3. Locking feature of the Casters.
4. Trolley Travel.
5. Lifting and lowering of any hoist and its limiting devices (if applicable).

If desired, load testing should only be done on new, reinstalled, or repaired cranes. To perform a load test:

1. Perform an operational test as described above.
2. Ensure the combined weight of the hoist, any rigging, plus the load does not exceed the rated 1 Ton (2000 lbs (910kg)) capacity.
3. Place the load at the center, between the vertical uprights and directly beneath the hoist.
4. Lock the Casters.
5. Carefully raise the load with the hoist about 6" (150mm) from the floor and ensure the hoist brake is holding the load.
6. Slowly transport the load the full length of the I-Beam.
7. Return the load to the center position and lower the load.
8. Make a record of the test and note the date and any observations.

RUST AND CORROSION:

Although the Gantry Crane and Trolley has been treated to help eliminate rust and corrosion, it may be necessary to protect the Gantry Crane and Trolley from the elements by moving it into a garage, or storing it under a tin roof or carport to help prevent weathering from rain and snow. It is recommended to apply car wax to painted surfaces at least once a year. Use a rust inhibiting paint in areas where the color coating may have chipped or become deeply scratched.

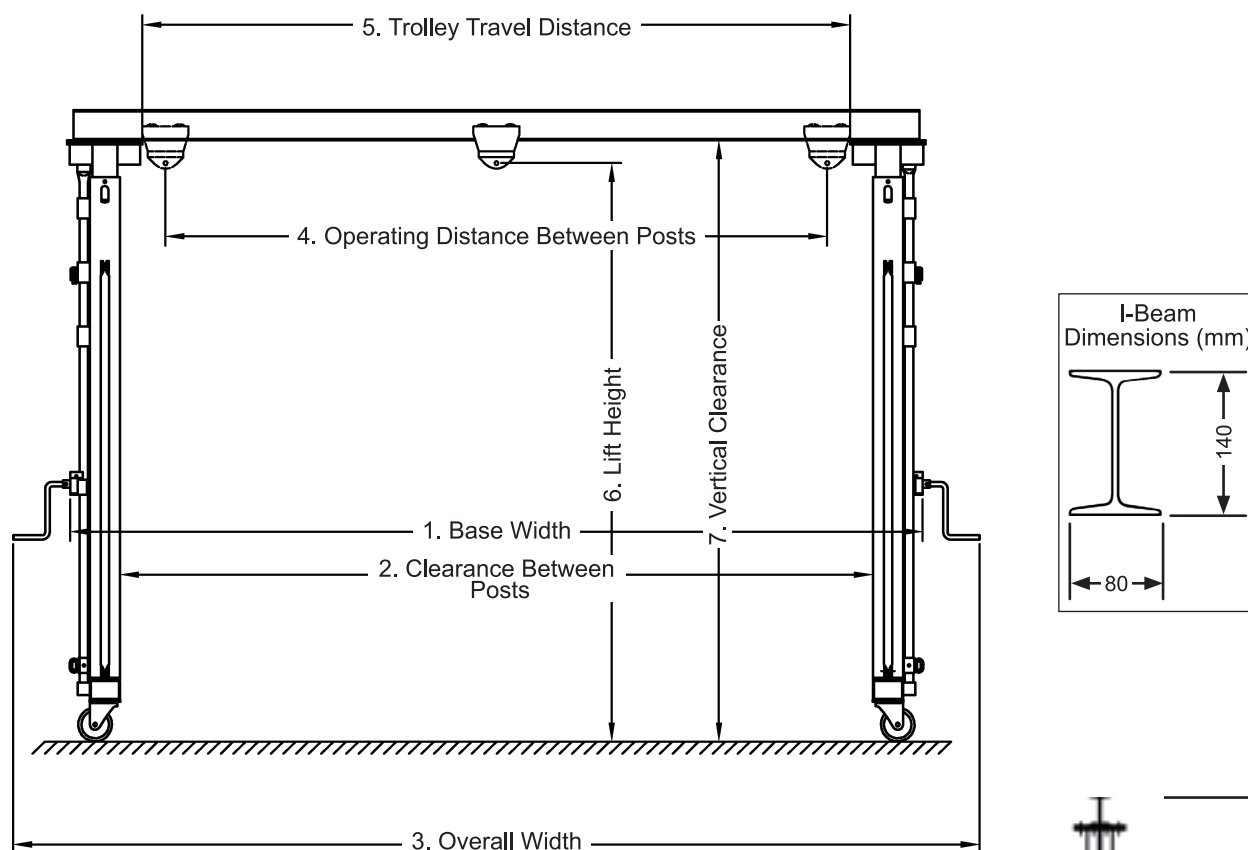
Apply a coat of lithium grease on all exposed threads, adjustment bolts, and inside nuts or threaded holes that are not being used.

Use a tarp to cover the Gantry Crane and Trolley when stored for an extended period.

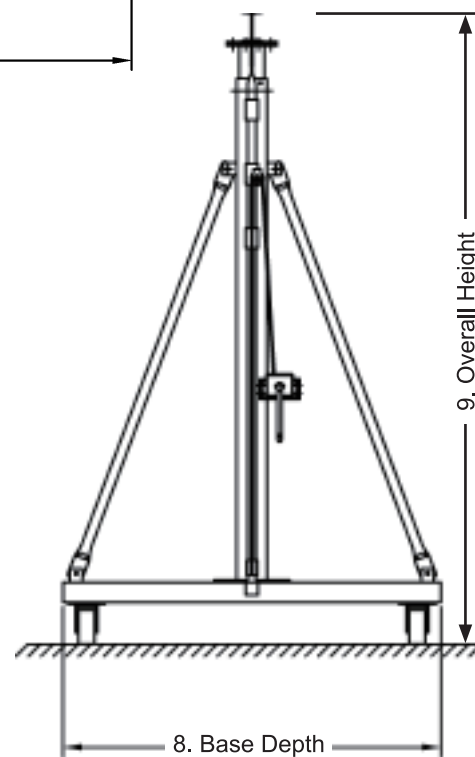
DISPOSAL

Recycle a Gantry Crane and/or parts that have been damaged beyond repair at the appropriate facility. Contact your local municipality for a list of disposal facilities or by-laws for electronic devices, batteries, oil or other toxic liquids.

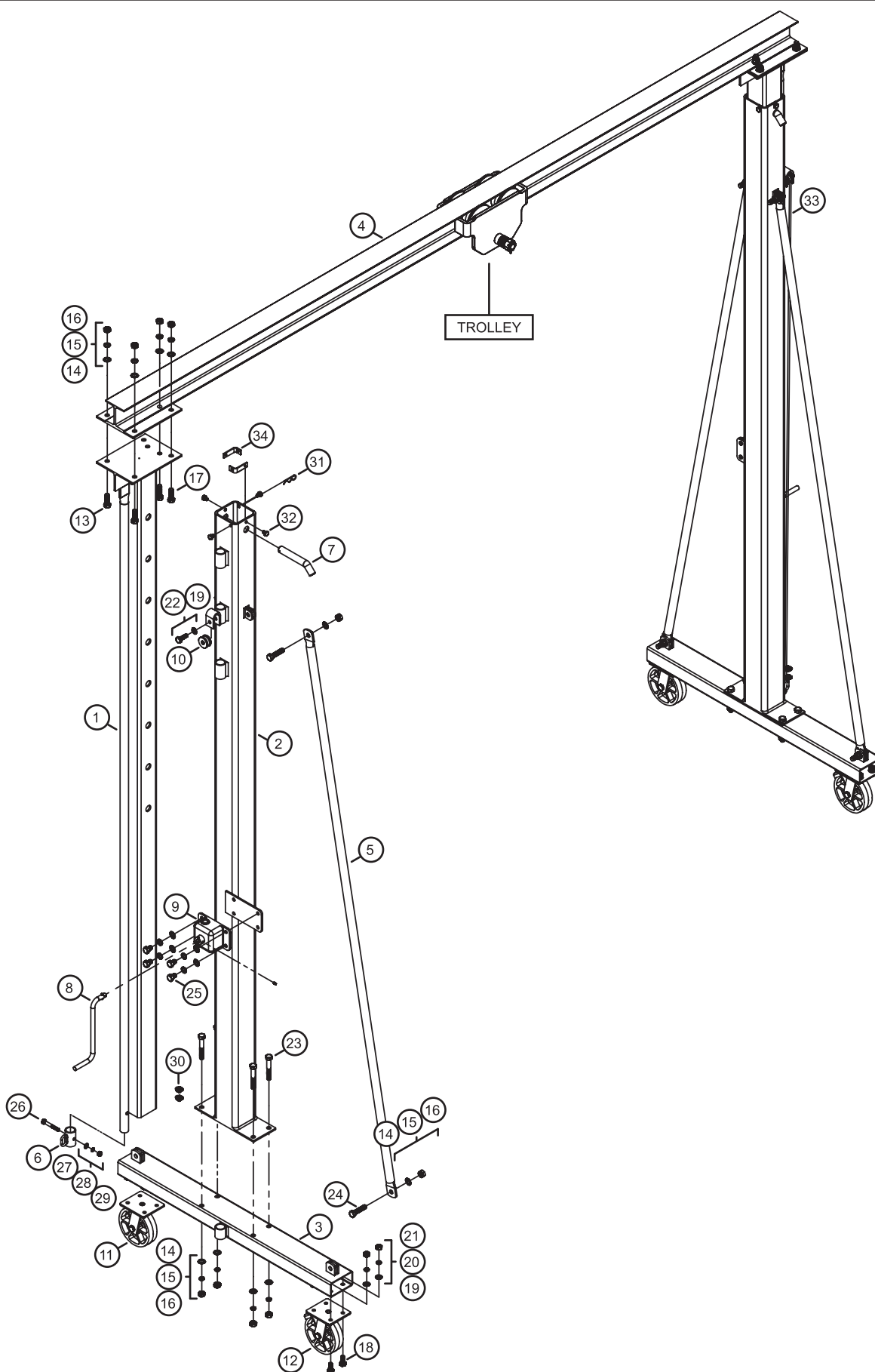
IMPORTANT! DO NOT pollute the environment by allowing uncontrolled discharge of waste oil.



Dim No.	Dimension Name	Min Value	Max Value
1	Base Width	-	135.85 in. 3450 mm
2	Clearance Btwn Posts	-	118.11 in. 3000 mm
3	Overall Width	-	151.57 in. 3850mm
4	Operating Dist. Btwn Posts	-	102.76 in. 2610mm
5	Trolley Travel Dist.	-	111.02 in 2820mm
6	Lift Height	89.17 in. 2265mm	138.19 in. 3510mm
7	Vertical Clearance	93.90 in. 2385mm	142.91 in. 3630mm
8	Base Depth	-	59.05 in. 1500mm
9	Overall Height	99.41 in. 2525mm	148.43 in. 3770mm

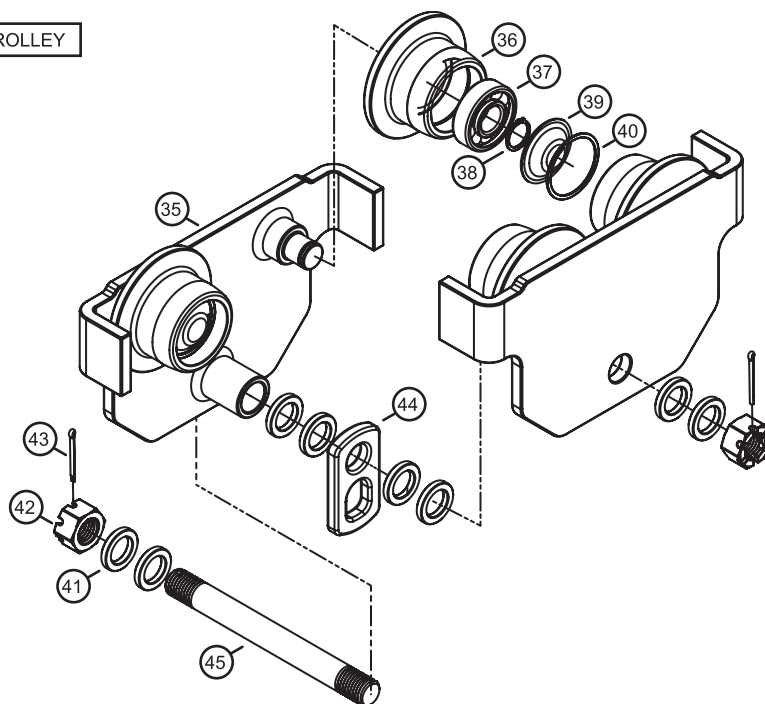


PARTS LIST



PARTS LIST

TROLLEY



Item	Description	Qty
1	Vert. Support Inner Tube	2
2	Vert. Support Outer Tube	2
3	Base Cross Tube	2
4	I-Beam	1
5	Brace, Vert. Support	4
6	Endcap, Lifting	2
7	Clevis Pin, Height Adj.	2
8	Crank Handle, Height Adj.	2
9	Winch Box	2
10	Pulley	2
11	Swivel Caster	2
12	Locking Swivel Caster	2
13	Bolt, M12x35	8
14	Washer, Flat M12	36
15	Washer, Lock M12	36
16	Nut, M12	28
17	Bolt, M12x40	4
18	Bolt, M10x25	16
19	Washer, Flat M10	18
20	Washer, Lock M10	16
21	Nut, M10	16
22	Bolt, M10x30	10
23	Bolt, M12x110	8

Item	Description	Qty
24	Bolt, M12x50	8
25	Bolt, M12x16	16
26	Bolt, M8x60	2
27	Washer, Flat M8	2
28	Washer, Lock M8	10
29	Nut, M8	2
30	Wire Rope Clamp	4
31	R-Pin	2
32	Bolt, M8x10	8
33	Wire Rope	2
34	Shims, Tube	4
35	Side Plate, Trolley	2
36	Driven Wheel	4
37	Bearing	4
38	Retaining Ring	4
39	Bearing Cap	4
40	Bearing Ring	4
41	Spacer Washer	8
42	Castle Nut	2
43	Cotter Pin	2
44	Suspension Plate	1
45	Suspension Pin	1
46	Setscrew	2

90 DAY LIMITED WARRANTY

Star Asia-USA, LLC (hereinafter "seller") warrants to the original purchaser only, that this product will be free from defects in material or workmanship for a period of 90 days from date of purchase for home domestic use.

Warranty Performance

Warranty coverage is conditioned upon purchaser furnishing seller or its authorized service center with adequate written proof of the original purchase date. Products returned, freight prepaid and insured, to our factory or to an Authorized Service Center will be inspected and repaired or replaced, at seller's option, free of charge if found to be defective and subject to warranty. Defective parts not subject to normal wear and tear will be repaired or replaced, at our option during the above stated warranty periods. In any event, reimbursement is limited to the purchase price paid. Other than the postage and insurance requirement, no charge will be made for repairs or replacements covered by this warranty. Under no circumstances shall the manufacturer bear any responsibility for loss of the unit, loss of time or rental, inconvenience, commercial loss or consequential damages, There are no warranties which extend beyond the description of the face hereof.

Exclusions

This warranty does not cover parts damaged due to normal wear, abnormal conditions, misapplication, misuse, abuse, accidents, operation at other than recommended pressures or temperatures, improper storage of freight damage. Parts damaged or worn by operation in dusty environments are not warranted. Failure to follow recommended operating and maintenance procedures also voids warranty. Additional items not covered under warranty: product failure caused by rain, excessive humidity, corrosive environments or other contaminants; cosmetic defects that do not interfere with product's functionality. This warranty shall not apply when: the product has been used for commercial or rental purposes; defects in materials or workmanship or damages result from repairs or alterations which have been made or attempted by others or the unauthorized use of nonconforming parts; this damage is due to abuse, improper maintenance, neglect or accident; or the damage is due to use of the product after partial failure or use with improper accessories. Warranty does not apply to accessory items. Seller will not be liable for: labor charges, loss or damage resulting from improper operation, maintenance or repairs made by persons other than a Star Asia-USA, LLC Authorized Service Center. The use of other than genuine Star Asia-USA, LLC repair parts will void warranty.

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P.O. Box 58399, Renton, WA 98058
Consumer Service: 800-386-0191
e-mail: info@titan-us.com
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