



# Jib Crane for Bucket Elevators

## Installation and Operation Manual

PNEG-1783

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PNEG-1783

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42" Pulley with 14 x 22 and 14 x 26 Trunking

48" Pulley with 14 x 26 Trunking

**All information, illustrations, photos, and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.**

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## Contents

<b>Chapter 1 Safety .....</b>	<b>4</b>
Safety Guidelines .....	4
Cautionary Symbols Definitions .....	5
Safety Cautions .....	6
Safety Sign-Off Sheet .....	9
<b>Chapter 2 Safety Decals .....</b>	<b>10</b>
<b>Chapter 3 Installation .....</b>	<b>11</b>
Introduction .....	11
Attach Jib Mounting Column to the Bucket Head .....	12
Jib Crane Shim Details .....	15
Attach the Jib Crane Turret to the Mounting Column .....	16
Attach Rollers and Roller Guard to Turret .....	17
Attach Boom Assembly to the Turret .....	18
Attach Adjustable Tie Rod to the Boom and Turret .....	18
Trolley .....	18
<b>Chapter 4 Jib Crane Operation .....</b>	<b>19</b>
<b>Chapter 5 Warranty .....</b>	<b>21</b>

### Safety Guidelines

Safety guidelines are general-to-specific safety rules that must be followed at all times. This manual is written to help you understand safe operating procedures and problems that can be encountered by the operator and other personnel when using this equipment. Save these safety guidelines for future reference.

As owner or operator, you are responsible for understanding the requirements, hazards, and precautions that exist and to inform others as required. Unqualified persons must stay out of the work area at all times.

Alterations must not be made to the equipment. Alterations can produce dangerous situations resulting in **SERIOUS INJURY or DEATH**.

This equipment must be installed in accordance with the current installation codes and applicable regulations, which should be carefully followed in all cases. Authorities having jurisdiction must be consulted before installations are made.

When necessary, you must consider the installation location relative to electrical, fuel and water utilities.

Personnel operating or working around equipment must read this manual. This manual must be delivered with equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.

**ST-0001-2**

## Cautionary Symbols Definitions

Cautionary symbols appear in this manual and on product decals. The symbols alert the user of potential safety hazards, prohibited activities and mandatory actions. To help you recognize this information, we use the symbols that are defined below.



This symbol indicates an imminently hazardous situation which, if not avoided, **will result in serious injury or death.**



This symbol indicates a potentially hazardous situation which, if not avoided, **can result in serious injury or death.**



This symbol indicates a potentially hazardous situation which, if not avoided, **can result in minor or moderate injury.**



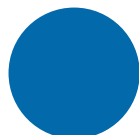
This symbol is used to address practices not related to personal injury.



This symbol indicates a general hazard.



This symbol indicates a prohibited activity.



This symbol indicates a mandatory action.

ST-0005

### Safety Cautions

#### Use Personal Protective Equipment

- Use appropriate personal protective equipment:

**Eye Protection**



**Respiratory Protection**



**Foot Protection**



**Hearing Protection**



**Head Protection**



**Fall Protection**



**Hand Protection**



- Wear clothing appropriate to the job.
- Remove all jewelry.
- Tie long hair up and back.

ST-0004-1

#### Follow Safety Instructions

- Carefully read all safety messages in this manual and safety signs on your machine. Keep signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from the manufacturer.
- Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.
- If you do not understand any part of this manual or need assistance, contact your dealer.



ST-0002-1

**Maintain Equipment and Work Area**

- Understand service procedures before doing work. Keep area clean and dry.
- Never service equipment while it is operating. Keep hands, feet, and clothing away from moving parts.
- Keep your equipment in proper working condition. Replace worn or broken parts immediately.



ST-0003-1

**Sharp Edge Hazard**

- This product has sharp edges, which can cause serious injury.
- To avoid injury, handle sharp edges with caution and always use proper protective clothing and equipment.



ST-0036-1

**Fall Hazard**

- Keep access door closed while on platform to avoid falls.
- Always use proper personal protective equipment and proper clothing when using equipment. Failure to follow safety precautions may result in severe injury or death.



ST-0042-1

**Platform Load Limit**

- The platform load limit is 500 LBS (2.25 kN). Do not exceed this weight.
- Excessive load will damage the platform and cause platform to fall. Severe injury or death will result.



ST-0044-1

## 1. Safety

### Stay Clear of Hoisted Equipment

- Always use proper lifting or hoisting equipment when assembling or disassembling equipment.
- Do not walk or stand under hoisted equipment.
- Always use sturdy and stable supports when needed for installation. Not following these safety precautions creates the risk of falling equipment, which can crush personnel and cause serious injury or death.



ST-0047-1

### Fall Hazard

- Ladders, stairways and platforms are for use by competent and trained personnel only. Do not allow children or other unauthorized persons to have access to the equipment.
- Access to the equipment must be restricted by the use of security fencing and lockable gates.
- Lower sections of ladders must be fitted with a lockable safety gate to prevent unauthorized access.
- Make sure that hot surfaces have had adequate time to cool before working on or in the equipment.
- Lock out and tag out power supplies and fuel supplies to all equipment.
- Do not attach lifting equipment to ladders or platforms.
- Do not go outside of the safety rails provided on elevated platforms.
- Do not work at heights during high winds, rain, snow, or ice storms.



ST-0056-1



## Safety Sign-Off Sheet

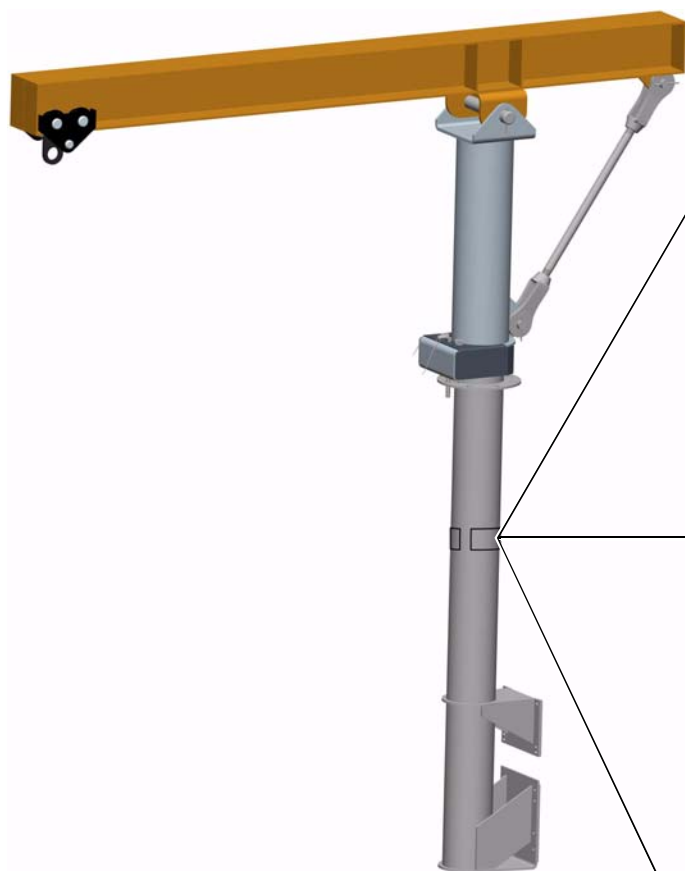
Below is a sign-off sheet that can be used to verify that all personnel have read and understood the safety instructions. This sign-off sheet is provided for your convenience and personal record keeping.


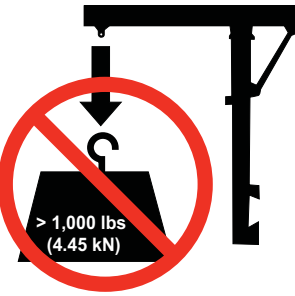
[illegible]


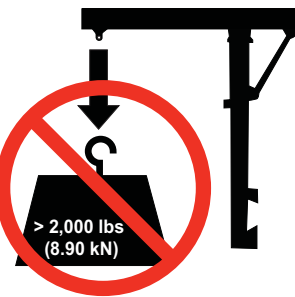
**ST-0007**


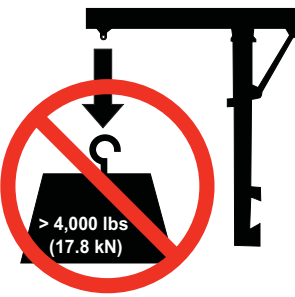
## 2. Safety Decals

The decals are located as shown below:



 <b>WARNING</b>	
	<p><b>DO NOT EXCEED JIB CRANE LOAD LIMIT</b></p> <p><b>Load Limit = 1,000 LBS. (4.45 kN)</b></p> <p>Excessive load could damage jib crane and cause injury.</p> <p>DC-2148</p>

 <b>WARNING</b>	
	<p><b>DO NOT EXCEED JIB CRANE LOAD LIMIT</b></p> <p><b>Load Limit = 2,000 LBS. (8.90 kN)</b></p> <p>Excessive load could damage jib crane and cause injury.</p> <p>DC-2149</p>

 <b>WARNING</b>	
	<p><b>DO NOT EXCEED JIB CRANE LOAD LIMIT</b></p> <p><b>Load Limit = 4,000 LBS. (17.8 kN)</b></p> <p>Excessive load could damage jib crane and cause injury.</p> <p>DC-2150</p>

### Introduction

The Bucket Elevator jib is designed to assist in the lifting and lowering of large replacement components, such as motors, to and from the top of the Bucket Elevator. ***The elevator platform itself is not intended to support the weight of the replacement components handled by the jib.*** The weight of the components must be supported by the jib through final installation. The jib will be provided by GSI while the cable, winch will be supplied by the customer. The jib can swivel 360° and can be parked in position by the user with the pin when not in use. Do not use the pin while under load. ***The winch should be permanently installed on the jib, winching from the ground is not advised. The jib is for vertical lifting only.***

### Intended Use

The Bucket Elevator jib is designed to assist in the lifting and lowering of large replacement components, such as motors, to and from the top of the Bucket Elevator. Any other use is considered a misuse of the equipment.

### Winch, Pulley and Cable

All lifting components such as the winch, pulley and cable used with the hoist must have a load rating equal to or greater than the load rating of the jib. Winch should be permanently installed on the jib. Winching from the ground is not advised. The jib is for vertical lifting only.

### Maintenance

Before operation, inspect that all lifting components and equipment are secure and not damaged.

### 3. Installation

## Attach Jib Mounting Column to the Bucket Head



**DO NOT mount the jib to any structure unless you are sure the structure can safely support the loads imposed upon the structure.**

Before attaching the upper bracket base plate (D) to the head, you need to drill out or knock off the heads of the four (4) existing huck bolts on the 30" and 36". Jibs are designed to be mounted on the non-drive side. When the bolts are removed, use 3/8" x 1-1/4" bolts (B) to attach the upper bracket and lower bracket base plate (D and A) to the bucket head on the 42" and 48" elevators. Four (4) huck bolts will need to be removed from the head bearing angle as well as from the lower head for the lower bracket. All will need to be drilled out for 1/2" hardware. (See Figure 3A below, Figure 3B on Page 13 and Figure 3C on Page 14.)

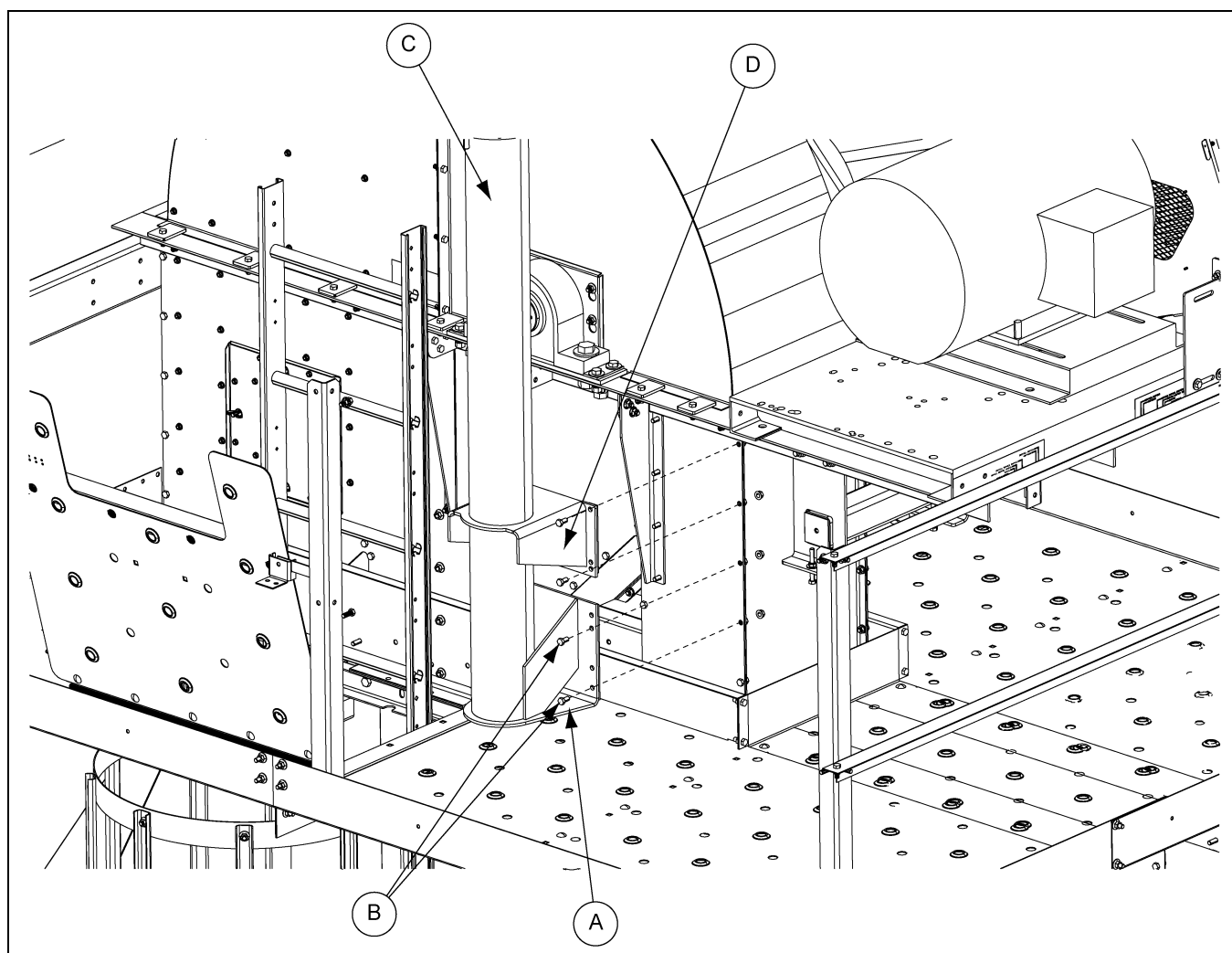
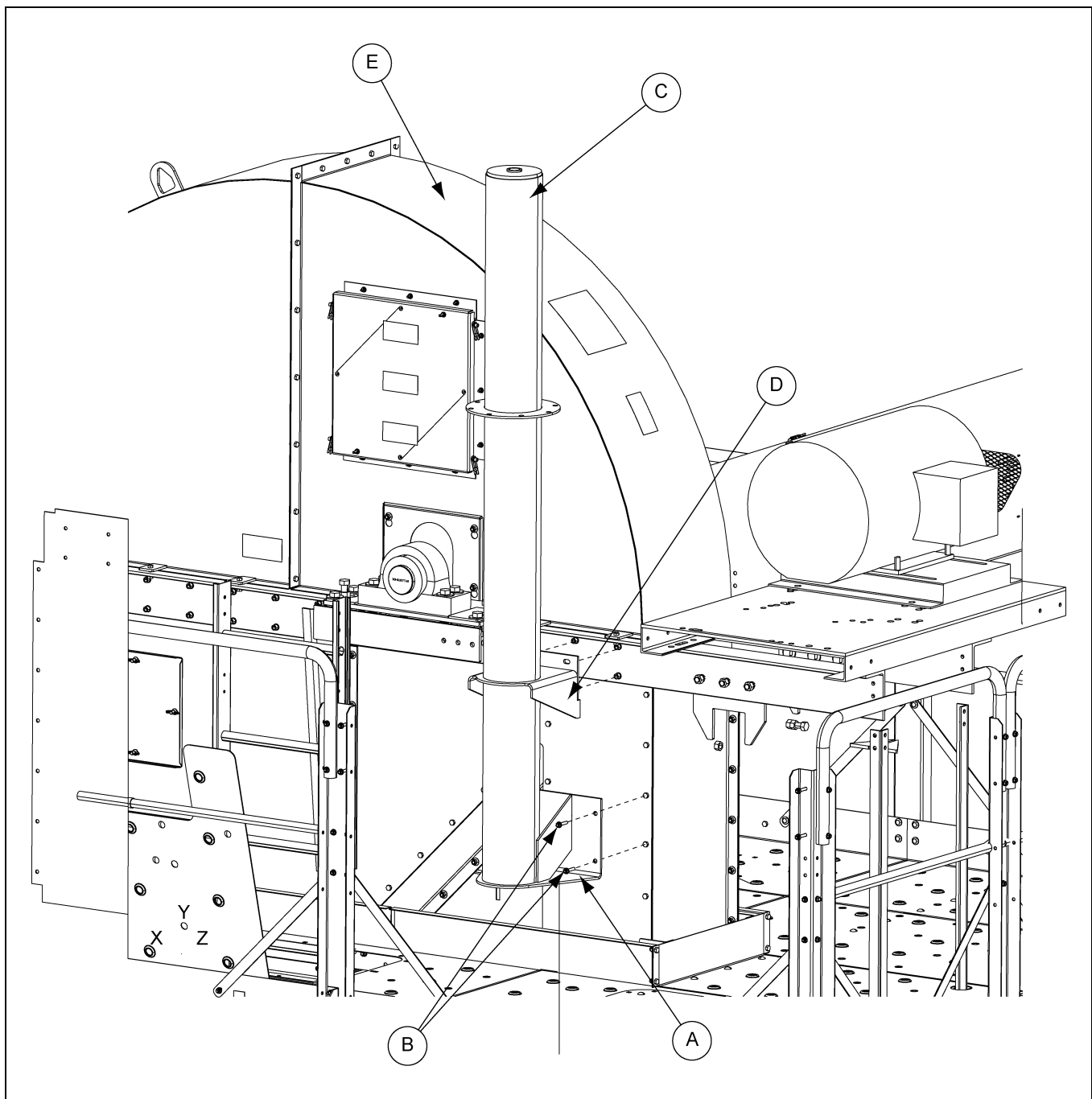


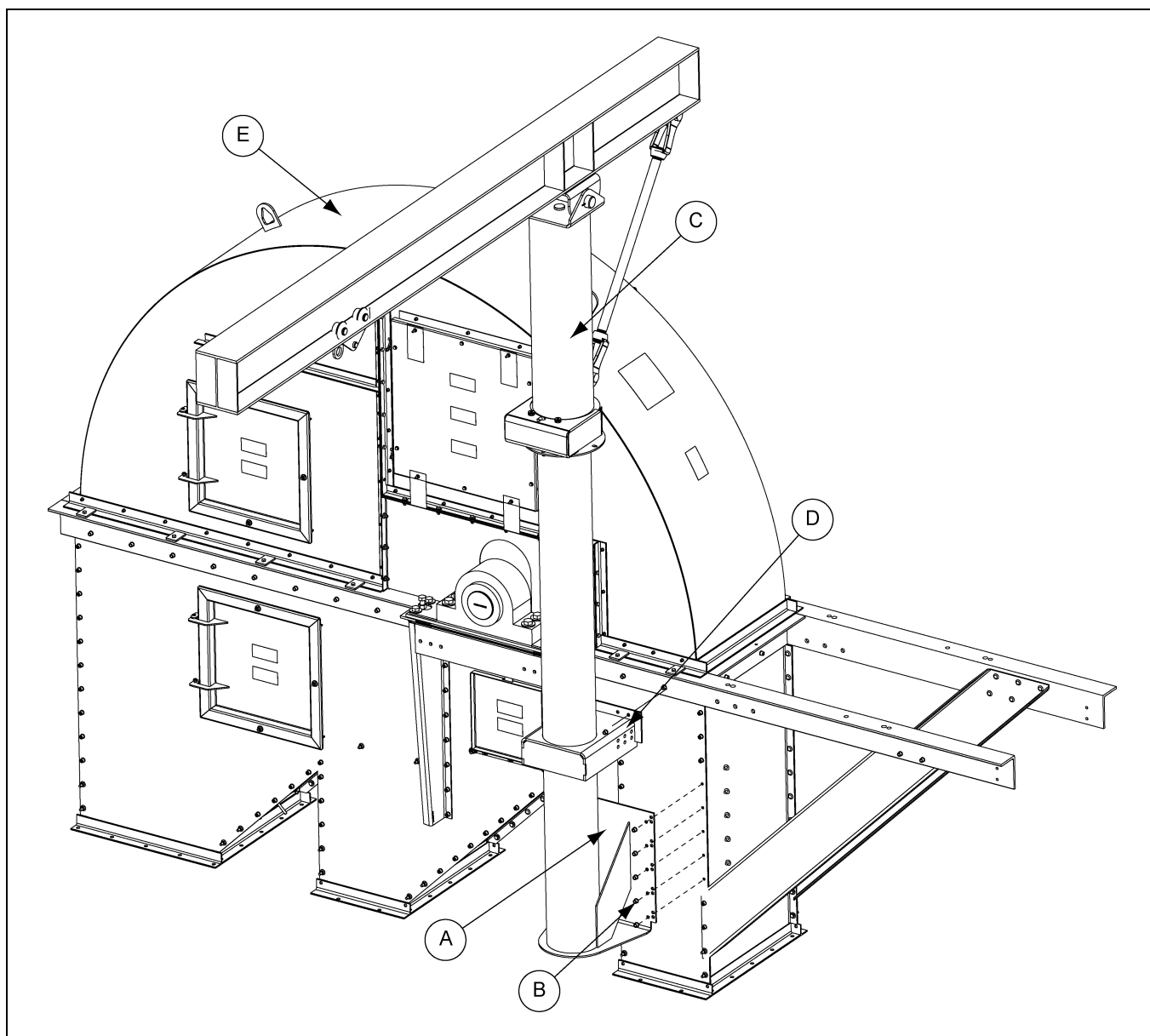
Figure 3A 16"-24" Bucket Elevator

Ref #	Description
A	Lower Bracket Base Plate
B	3/8" x 1-1/4" Bolts
C	Jib Crane Mounting Column
D	Upper Bracket Base Plate



**Figure 3B** 30" and 36" Bucket Elevator

Ref #	Description
A	Lower Bracket Base Plate
B	3/8" x 1-1/4" Bolts
C	Jib Crane Mounting Column
D	Upper Bracket Base Plate
E	Bucket Head



**Figure 3C** 42"-48" *Bucket Elevator*

Ref #	Description
A	Lower Bracket Base Plate
B	1/2" Hardware
C	Jib Crane Mounting Column
D	Upper Bracket Base Plate
E	Bucket Head

## Jib Crane Shim Details

### JIB-422000-H - Jib Crane Assembly

Trunking Size	Lower Head Assembly Number	Blocks/Shim Quantity Requirements			
		Gap between Bearing Mounting Plate to Jib	JIB-422004-HA 6x4 Block	JIB-0522 1" Shim	JIB-0523 0.13" Shim
14 x 22	BE423601UL	8.0	2		
14 x 22	BE423602UL	3.2		3	2
14 x 26	BE4823601UL	10.0	2		
14 x 26	BE4823602UL	5.2	1	1	1

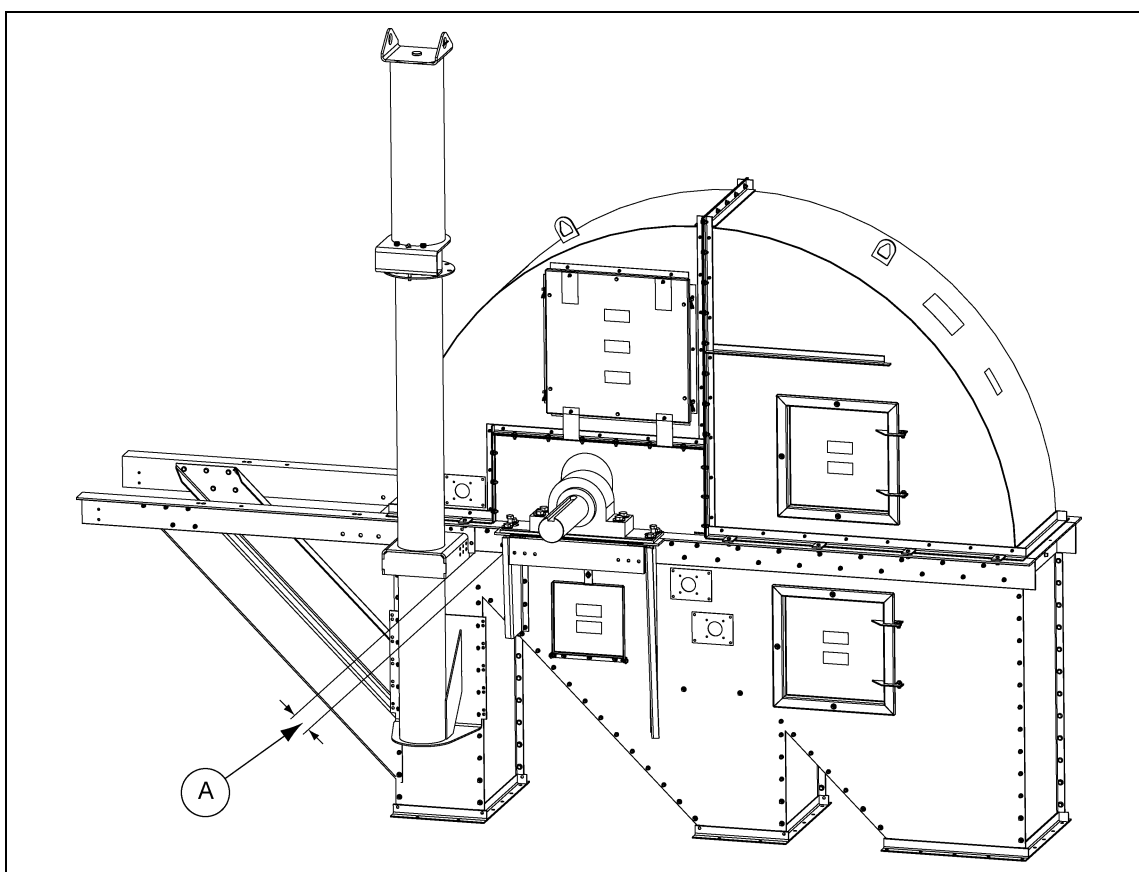


Figure 3D

Ref #	Description
A	Shim gap between jib and head bearing angle as specified in the <a href="#">above</a> table.

Shim List	
JIB-0522	1" Shim - Jib Heavy
JIB-0523	0.130" (10 Gauge) Shim - Jib Heavy
JIB-0524	0.375" Shim - Jib Heavy
JIB-422004-HA	Block, Upper Column Connection 42" and 48" Two (2) Ton

3. Installation

Attach the Jib Crane Turret to the Mounting Column

Slide jib crane turret (A) over mounting column (B) as shown in *Figure 3E*.

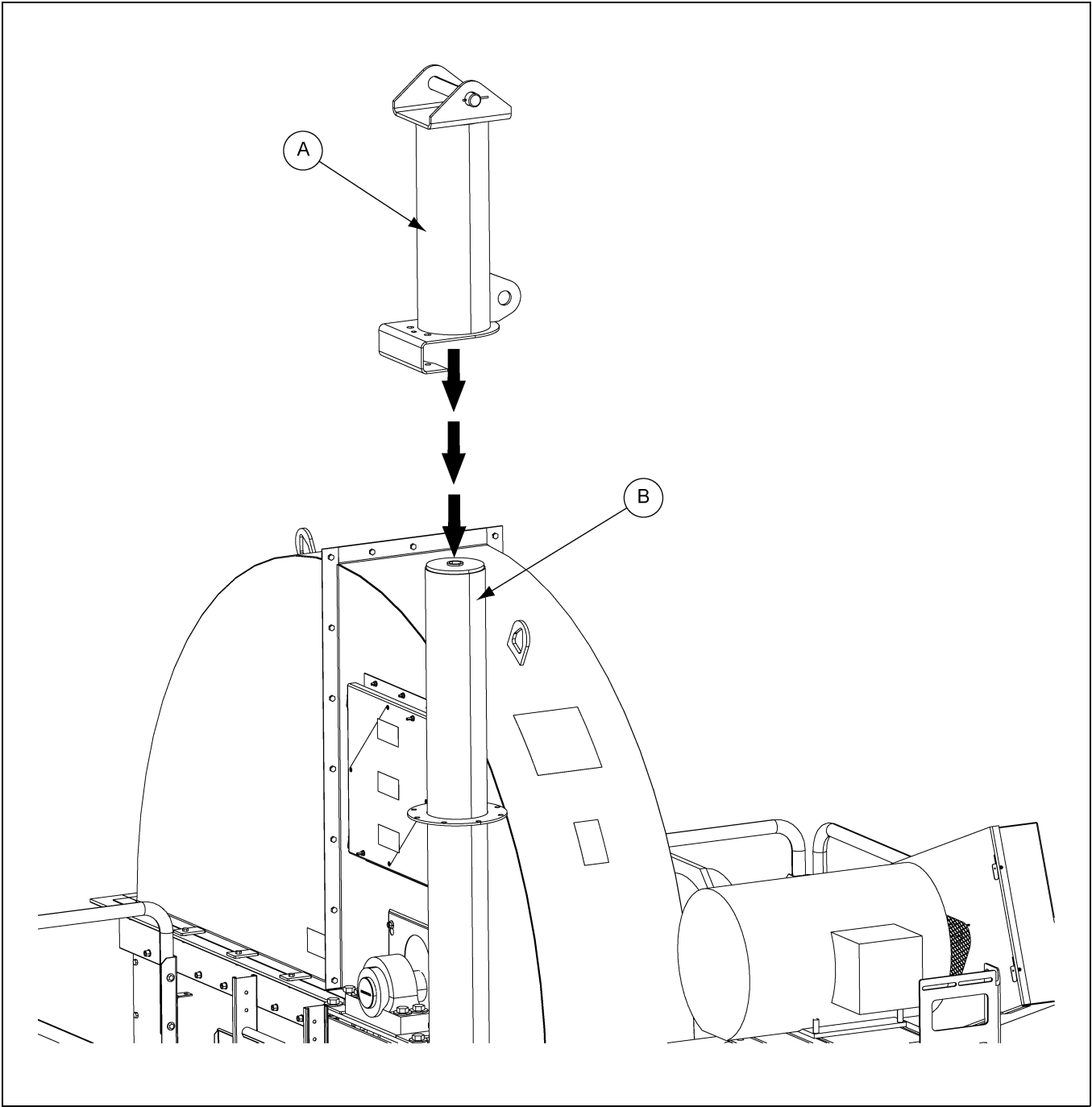


Figure 3E

Ref #	Description
A	Turret
B	Mounting Column



## Attach Rollers and Roller Guard to Turret

Attach rollers (F) and roller guard (B) to the turret using the shoulder bolts (A) and 5/8" nuts as shown. Slide the pin tether cable (C) through the holes in the roller guard (B) and pin (D). Fasten in place with provided cable clamp. Insert the 90° pin constraint through the turret and the constraint plate (E) to lock turret in place as shown in [Figure 3F](#) and [Figure 3G](#).

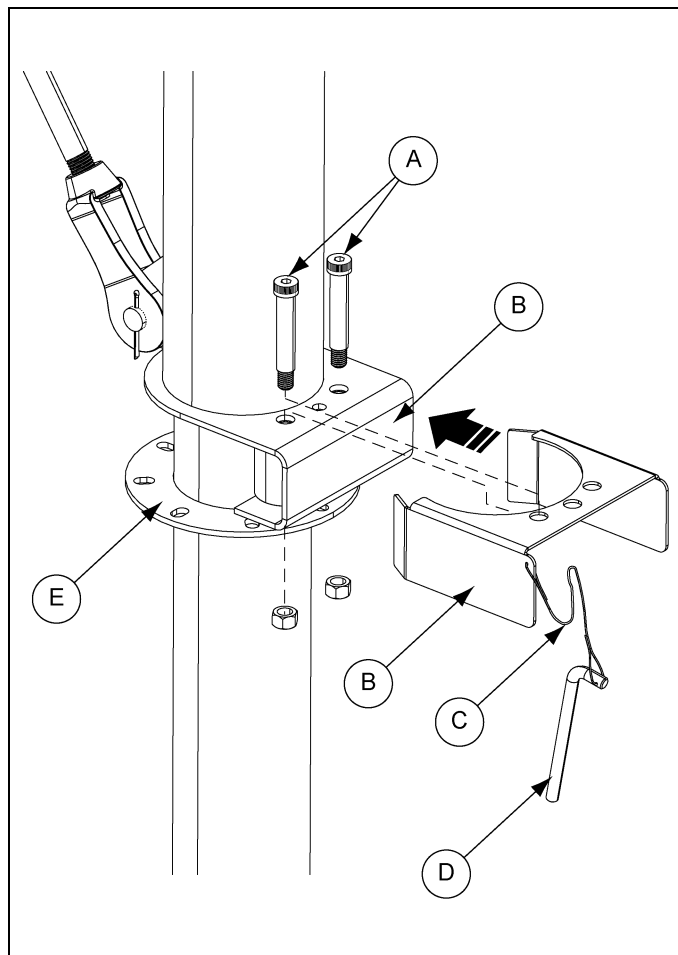


Figure 3F

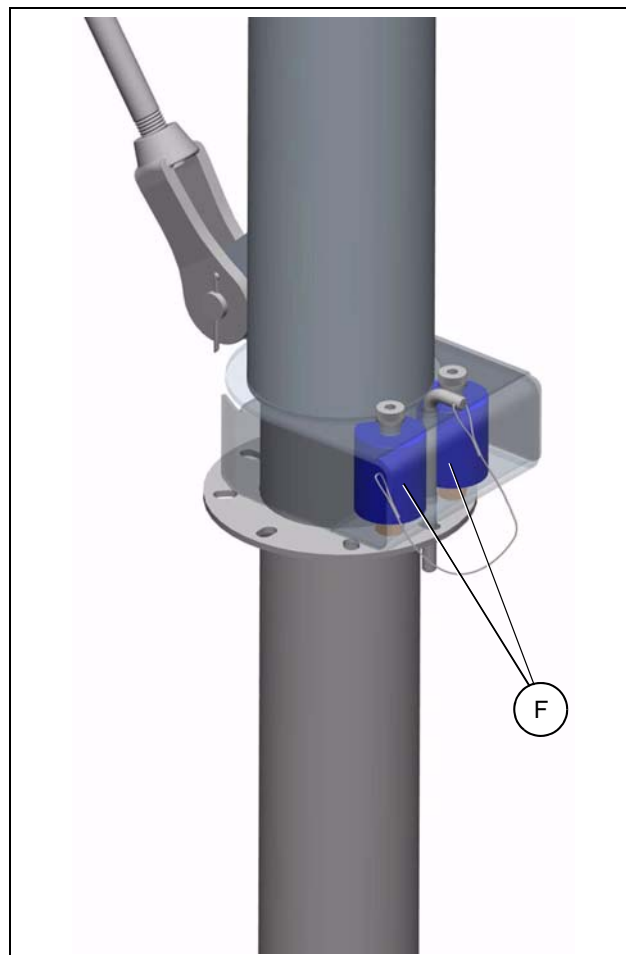


Figure 3G

Ref #	Description
A	Shoulder Bolts
B	Roller Guard
C	Pin Tether Cable
D	Pin
E	Constraint Plate
F	Rollers

### 3. Installation

## Attach Boom Assembly to the Turret

Insert pivot pin through the turret (A) and the boom (E) assembly and fasten in place with the cotter pins (B) as shown in [Figure 3H](#).

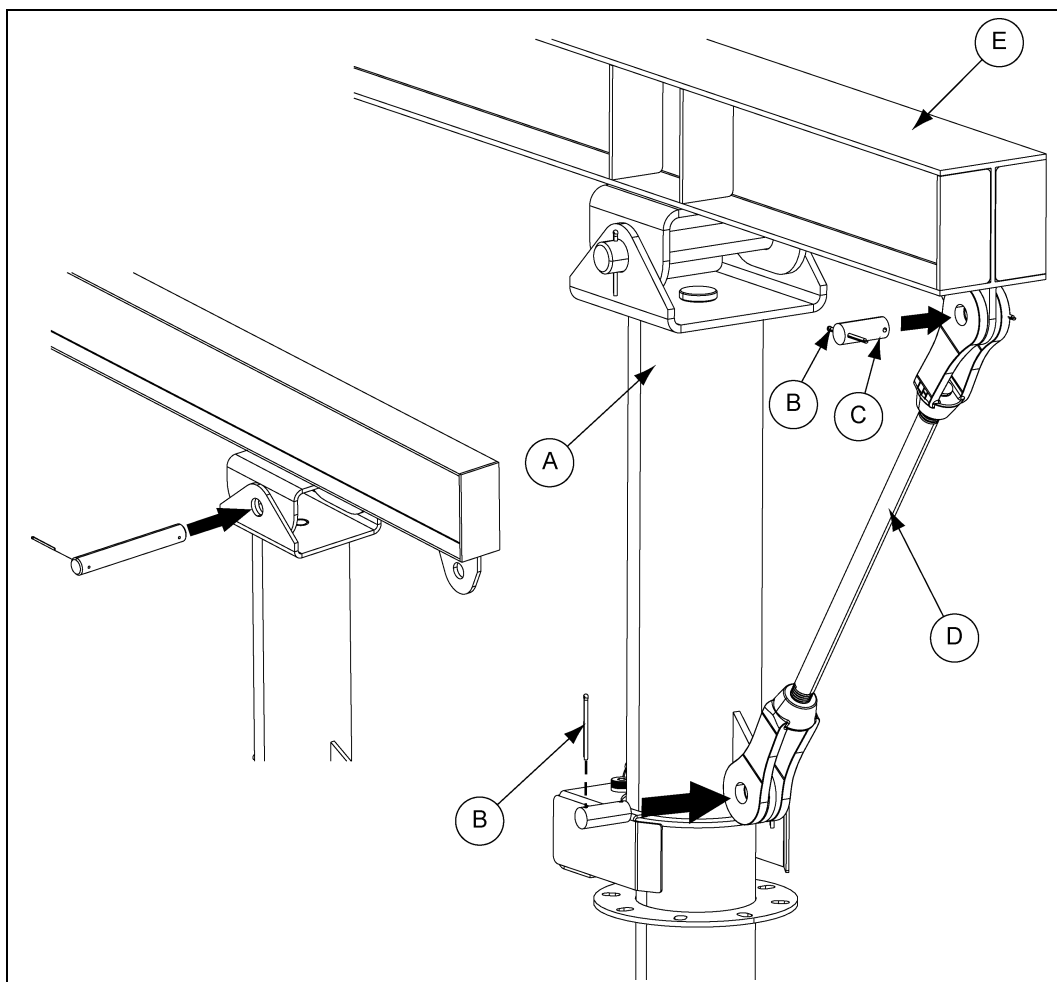


Figure 3H

Ref #	Description
A	Turret
B	Cotter pin
C	Clevis pin
D	Tie rod
E	Boom

## Attach Adjustable Tie Rod to the Boom and Turret

Install clevis pin through the tie rod arm and turret bracket. Place other clevis pin through the tie rod arm and boom bracket. Fasten both clevis pins in place with a cotter pin on each side.

## Trolley

Refer to manufacturers instructions supplied with trolley.



***Before operation, inspect that all jib crane parts are secure and not damaged.***



***Do not exceed jib crane load limit. Jib crane failure could result.***



***Do not exceed platform load limit. Excessive load will damage platform and cause platform to fall. Injury or death will result.***

Secure existing part being replaced to winching cable before detaching from elevator.

Detach part from elevator by loosening bolts.



***Do not work under a suspended load. Make sure the area below the load is marked clearly and made inaccessible.***

Remove pivot pin from turret. Winch part up and rotate part over the side of the platform.



***Cable should not rub against the railing. Rubbing could cause damage to cable and weaken the cable.***

Hoist original part to the ground making sure the cable does not rub against the railings or other equipment.

Detach original part onto ground and attach new part to cable.



***Do not work under a suspended load. Make sure the area below the load is marked clearly and made inaccessible.***

Make sure all personnel are clear of working area before hoisting replacement part. Hoist replacement part into final installation location. **DO NOT** place on platform.

Rotate part into installation position. Fasten new part in place and then remove cable from part.

Rotate boom into parked position and lock in place with pivot pin.

# NOTES

## Limited Warranty — N.A. Grain Products

The GSI Group, LLC. ("GSI") warrants products which it manufactures, to be free of defects in materials and workmanship under normal usage and conditions for a period of 12 months from the date of shipment (or, if shipped by vessel, 14 months from the date of arrival at the port of discharge). If, in GSI's sole judgment, a product is found to have a defect in materials and/or workmanship, GSI will, at its own option and expense, repair or replace the product or refund the purchase price. This Limited Warranty is subject to extension and other terms as set forth below.

**Warranty Enhancements:** The warranty period for the following products is enhanced as shown below and is in lieu of (and not in addition to) the above stated warranty period. (Warranty Period is from date of shipment.)

	Product	Warranty Period
Storage	Grain Bin Structural Design	5 Years
	• Sidewall, roof, doors, platforms and walkarounds • Flooring (when installed using GSI specified floor support system for that floor) • Hopper tanks (BFT, GHT, NCHT, and FCHT)	
Conditioning	Dryer Structural Design – (Tower, Portable and TopDry) • Includes (frame, portable dryer screens, ladders, access doors and platforms)	5 Years
	All other Dryer parts including: • Electrical (controls, sensors, switches and internal wiring)	2 Years
	All Non-PTO Driven Centrifugal and Axial Fans	3 Years
	Bullseye Controllers	2 Years
Material Handling	Bucket Elevators Structural Design	5 Years
	Towers Structural Design	5 Years
	Catwalks Structural Design	5 Years
	Accessories (stairs, ladders and platforms) Structural Design	5 Years

### Conditions and Limitations:

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION SET FORTH HEREIN; SPECIFICALLY, GSI DISCLAIMS ANY AND ALL OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH: (I) ANY PRODUCT MANUFACTURED OR SOLD BY GSI, OR (II) ANY ADVICE, INSTRUCTION, RECOMMENDATION OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF GSI REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCTS.

The sole and exclusive remedy for any claimant is set forth in this Limited Warranty and shall not exceed the amount paid for the product purchased. This Warranty only covers the value of the warranted parts and equipment, and does not cover labor charges for removing or installing defective parts, shipping charges with respect to such parts, any applicable sales or other taxes, or any other charges or expenses not specified in this Warranty. GSI shall not be liable for any other direct, indirect, incidental or consequential damages, including, without limitation, loss of anticipated profits or benefits. Expenses incurred by or on behalf of a claimant without prior written authorization from the GSI warranty department shall not be reimbursed. This warranty is not transferable and applies only to the original end-user. GSI shall have no obligation or responsibility for any representations or warranties made by or on behalf of any dealer, agent or distributor. Prior to installation, the end-user bears all responsibility to comply with federal, state and local codes which apply to the location and installation of the products.

This Limited Warranty extends solely to products sold by GSI and does not cover any parts, components or materials used in conjunction with the product, that are not sold by GSI. GSI assumes no responsibility for claims resulting from construction defects, unauthorized modifications, corrosion or other cosmetic issues caused by storage, application or environmental conditions. Modifications to products not specifically delineated in the manual accompanying the product at initial sale will void all warranties. This Limited Warranty shall not extend to products or parts which have been damaged by negligent use, misuse, alteration, accident or which have been improperly/inadequately maintained.

#### Notice Procedure:

In order to make a valid warranty claim a written notice of the claim must be submitted, using the RMA form, within 60 days of discovery of a warrantable nonconformance. The RMA form is found on the OneGSI portal.

#### Service Parts:

GSI warrants, subject to all other conditions described in this Warranty, Service Parts which it manufactures for a period of 12 months from the date of purchase unless specified in Enhancements above.

(Limited Warranty - N.A. Grain Products\_ revised 01 October 2020)

This equipment shall be installed in accordance with the current installation codes and applicable regulations, which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.



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