



Jib Crane for Bucket Elevators

Installation and Operation Manual

PNEG-1783

Version: 2.0

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PNEG-1783

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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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.**



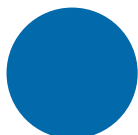
This symbol is used to address practices not related to personal injury.



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

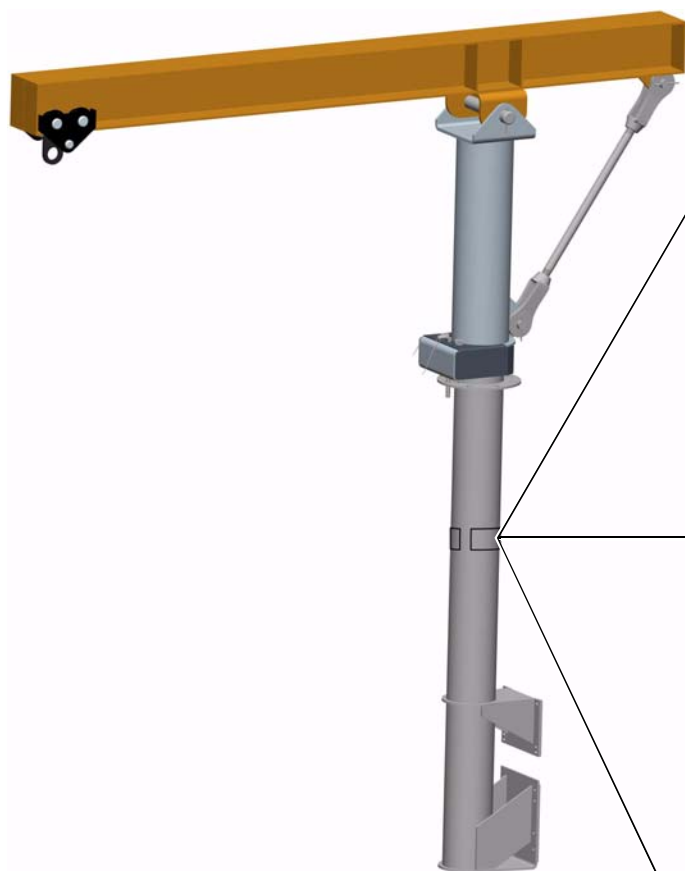
Below is a sign-off sheet that can be used to verify that all personnel have read and understood the safety instructions. This sign-off sheet is provided for your convenience and personal record keeping.


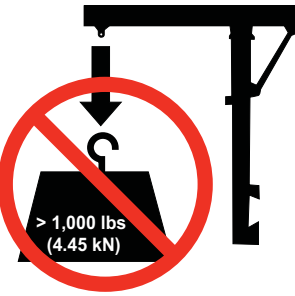
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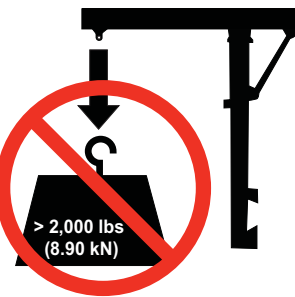
ST-0007


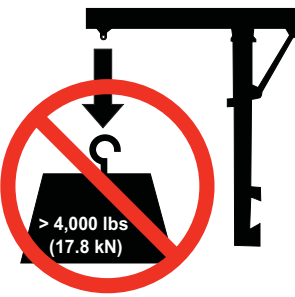
2. Safety Decals

The decals are located as shown below:



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

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

 WARNING	
	<p>DO NOT EXCEED JIB CRANE LOAD LIMIT</p> <p>Load Limit = 4,000 LBS. (17.8 kN)</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.)

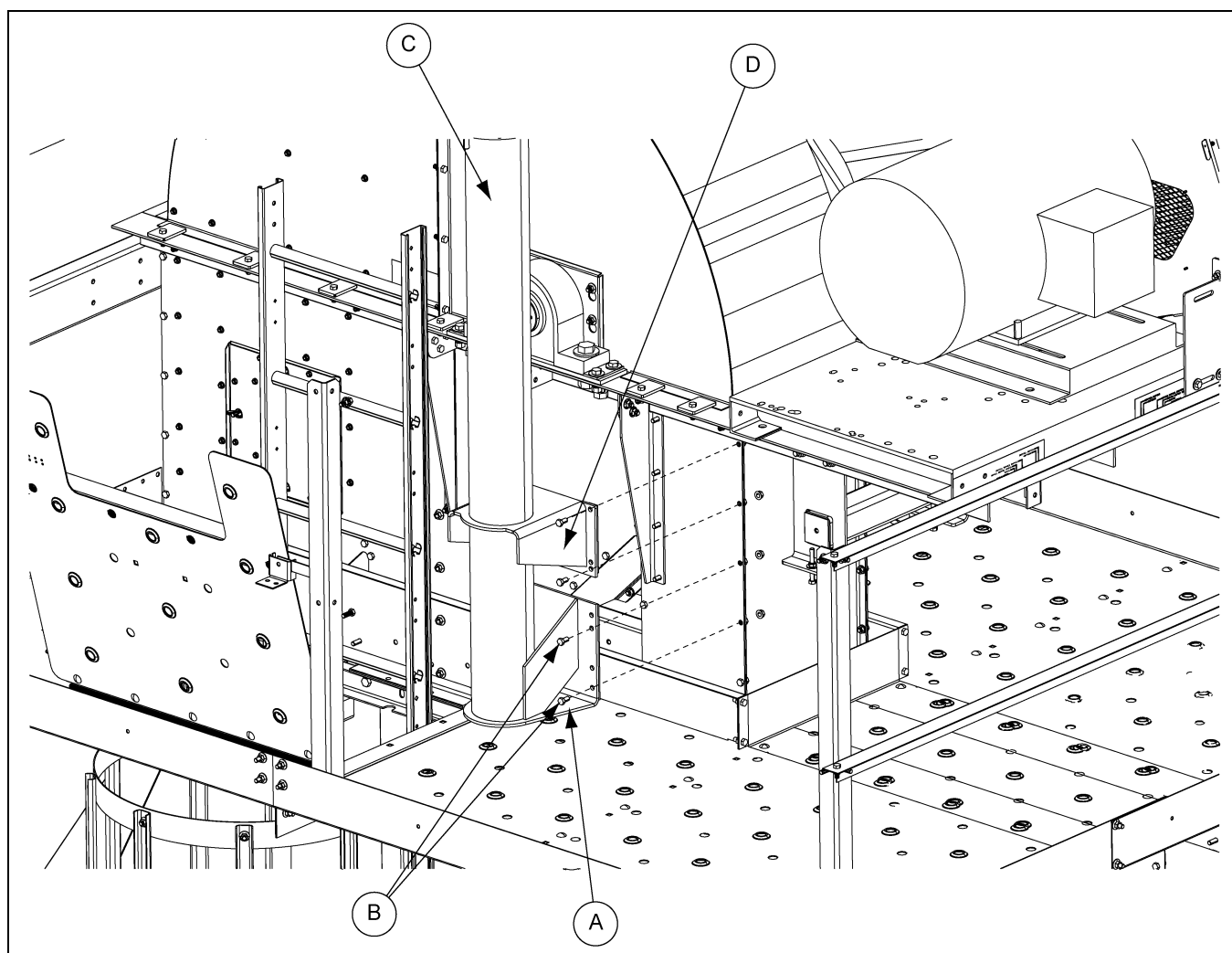


Figure 3A 16"-24" Bucket Elevator

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

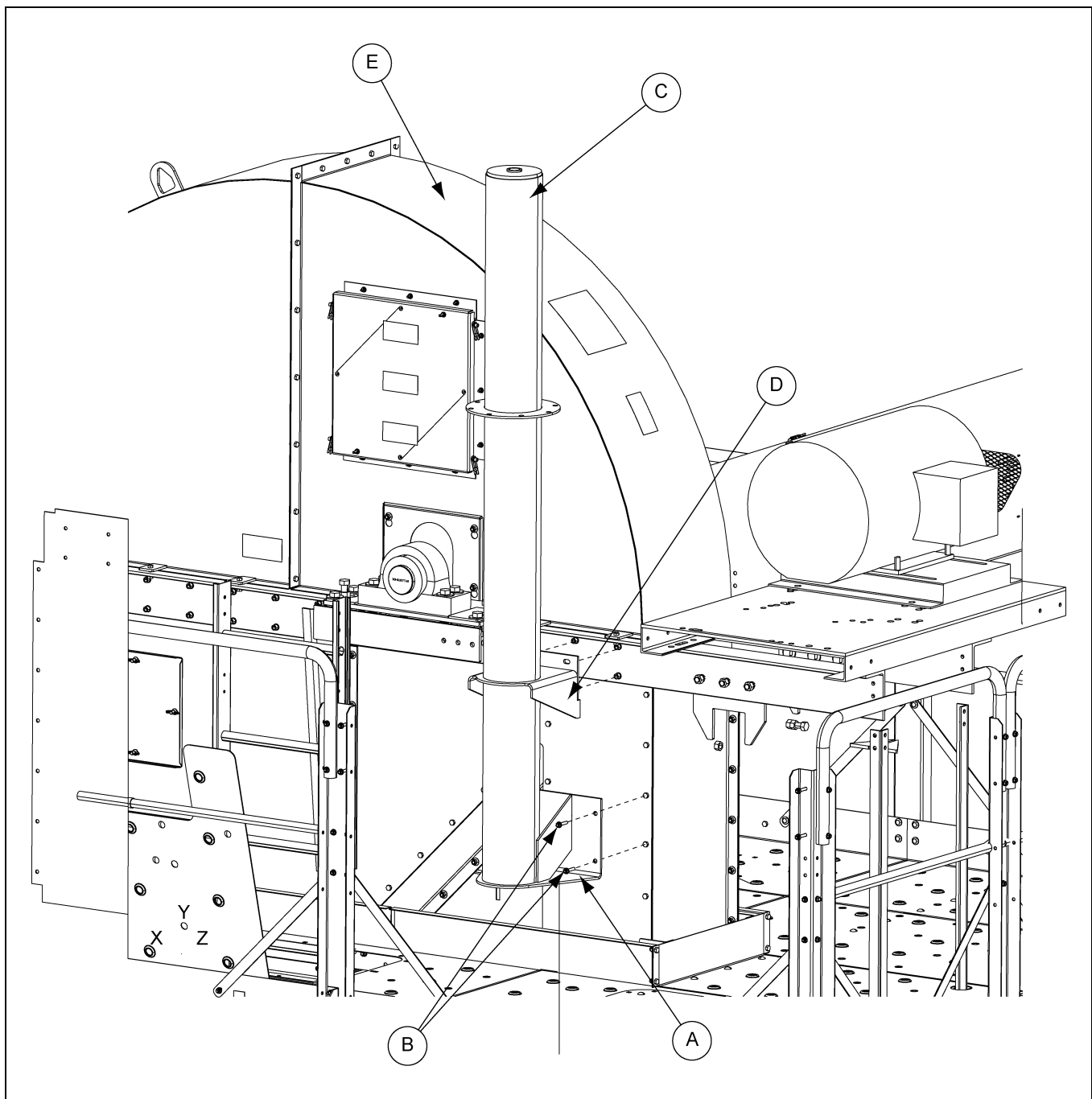


Figure 3B 30" and 36" Bucket Elevator

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

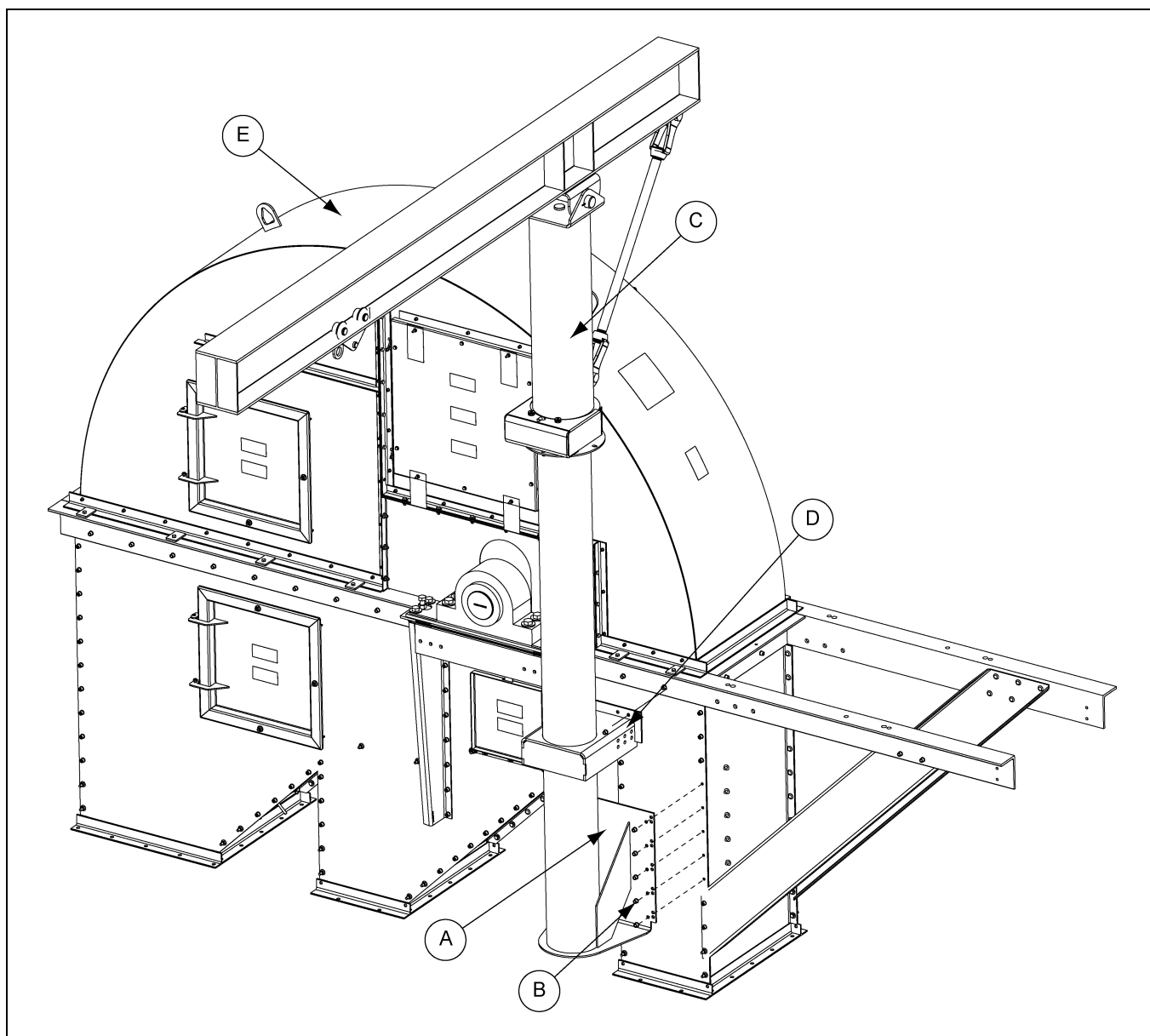


Figure 3C 42"-48" Bucket Elevator

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

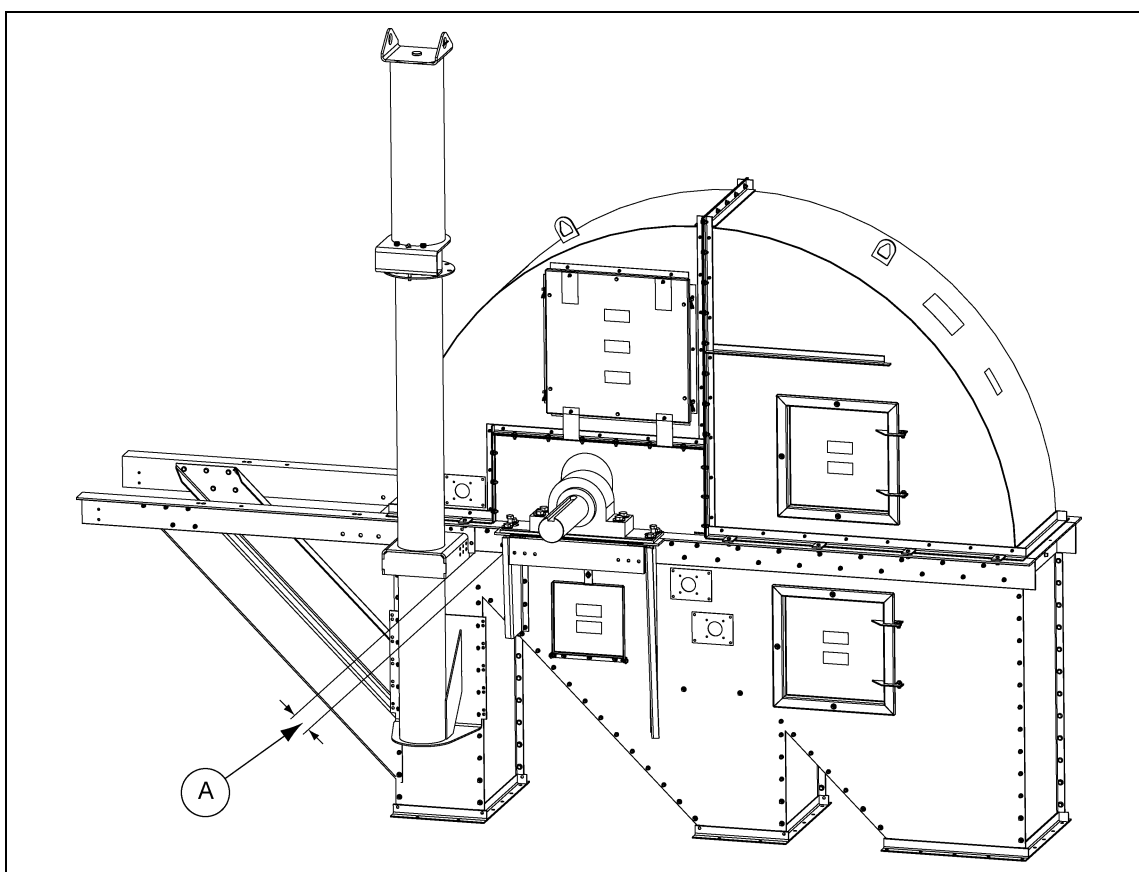


Figure 3D

Ref #	Description
A	Shim gap between jib and head bearing angle as specified in the above 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

Attach the Jib Crane Turret to the Mounting Column

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

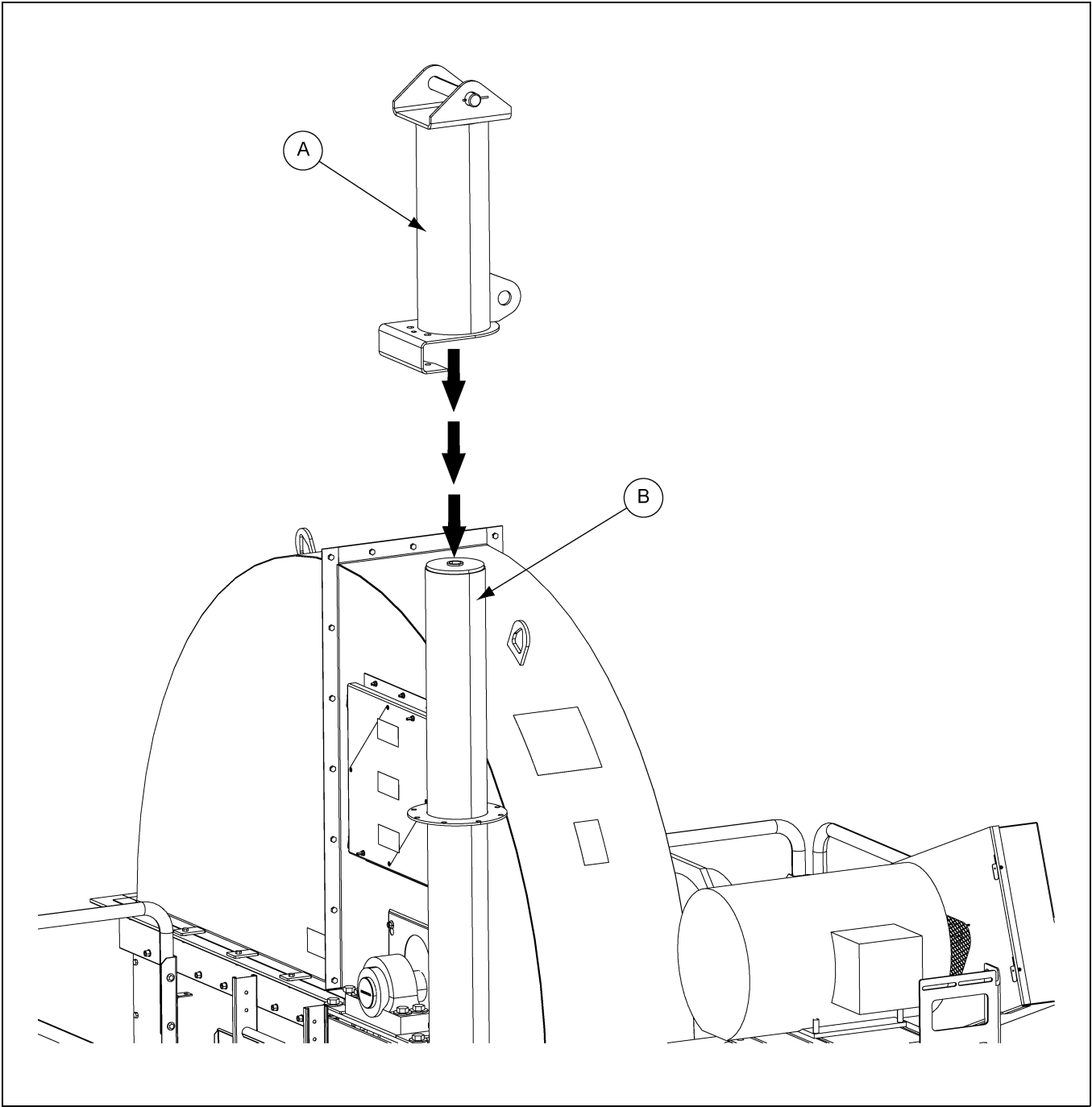


Figure 3E

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](#).

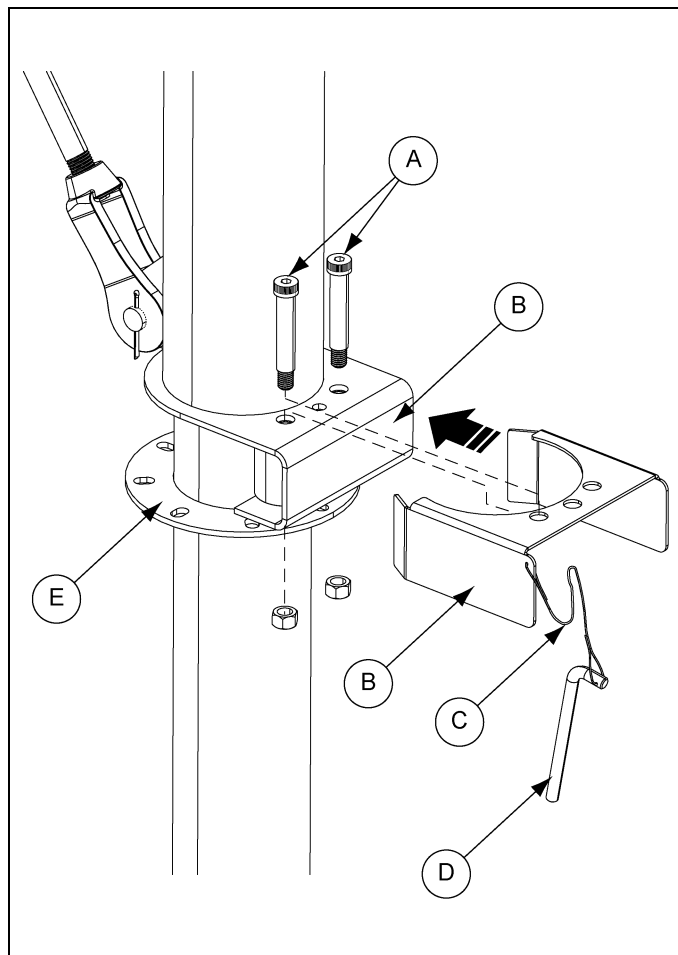


Figure 3F

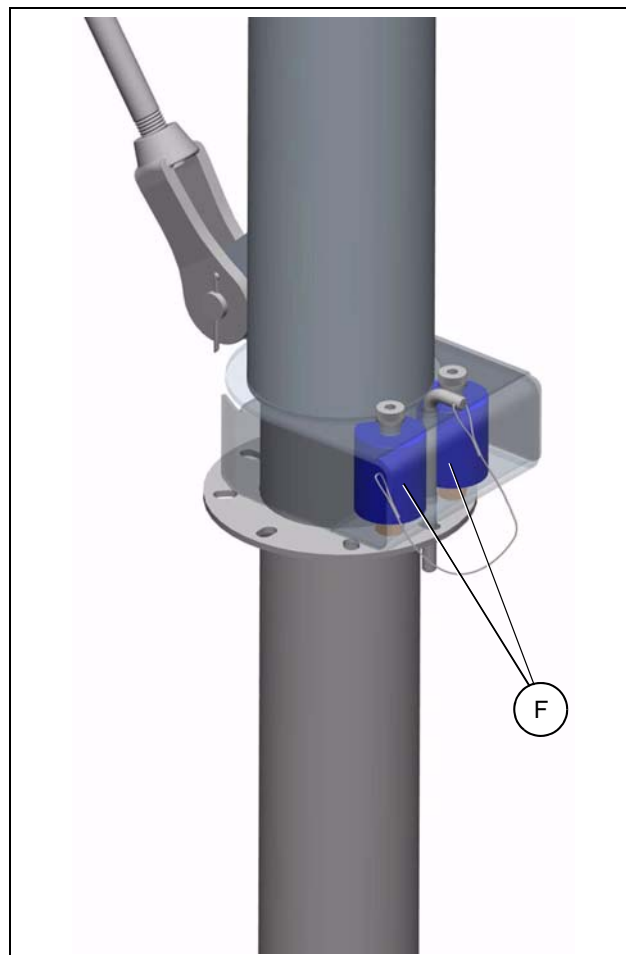


Figure 3G

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](#).

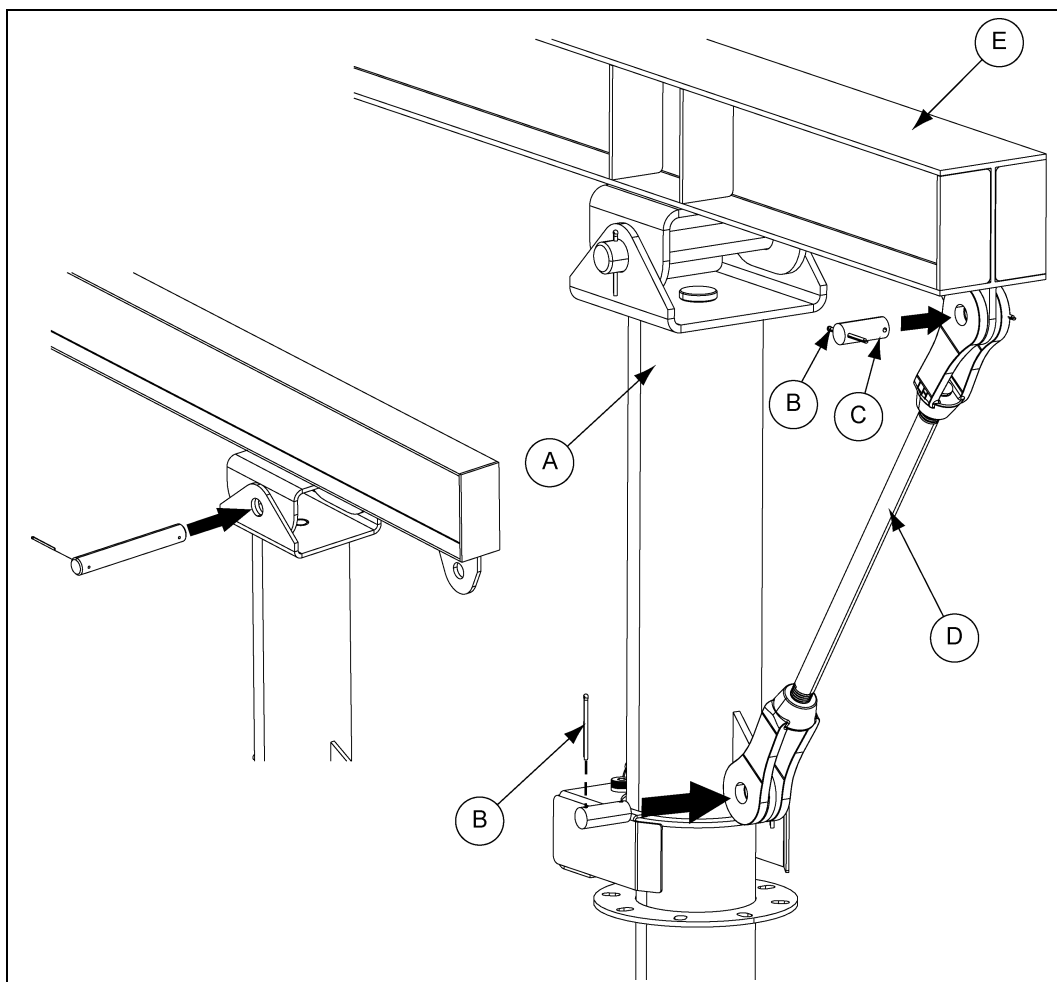


Figure 3H

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

GSI Group, LLC Limited Warranty

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 after sale to the original end-user or if a foreign sale, 14 months from arrival at port of discharge, whichever is earlier. The end-user's sole remedy (and GSI's only obligation) is to repair or replace, at GSI's option and expense, products that in GSI's judgment, contain a material defect in materials or workmanship. Expenses incurred by or on behalf of the end-user without prior written authorization from the GSI Warranty Group shall be the sole responsibility of the end-user.

Warranty Extensions:

The Limited Warranty period is extended for the following products:

	Product	Warranty Period	
AP Fans and Flooring	Performer Series Direct Drive Fan Motor	3 Years	* Warranty prorated from list price: 0 to 3 years - no cost to end-user 3 to 5 years - end-user pays 25% 5 to 7 years - end-user pays 50% 7 to 10 years - end-user pays 75%
	All Fiberglass Housings	Lifetime	
	All Fiberglass Propellers	Lifetime	
AP and Cumberland	Flex-Flo/Pan Feeding System Motors	2 Years	** Warranty prorated from list price: 0 to 3 years - no cost to end-user 3 to 5 years - end-user pays 50%
Cumberland Feeding/Watering Systems	Feeder System Pan Assemblies	5 Years **	
	Feed Tubes (1-3/4" and 2.00")	10 Years *	
	Centerless Augers	10 Years *	
	Watering Nipples	10 Years *	
Grain Systems	Grain Bin Structural Design	5 Years	† Motors, burner components and moving parts not included. Portable dryer screens included. Tower dryer screens not included.
Grain Systems Farm Fans Zimmerman	Portable and Tower Dryers	2 Years	
	Portable and Tower Dryer Frames and Internal Infrastructure †	5 Years	

GSI further warrants that the portable and tower dryer frame and basket, excluding all auger and auger drive components, shall be free from defects in materials for a period of time beginning on the twelfth (12th) month from the date of purchase and continuing until the sixtieth (60th) month from the date of purchase (extended warranty period). During the extended warranty period, GSI will replace the frame or basket components that prove to be defective under normal conditions of use without charge, excluding the labor, transportation, and/or shipping costs incurred in the performance of this extended warranty.

Conditions and Limitations:

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION SET FORTH ABOVE. SPECIFICALLY, GSI MAKES NO FURTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH: (I) 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.

GSI shall not be liable for any direct, indirect, incidental or consequential damages, including, without limitation, loss of anticipated profits or benefits. The sole and exclusive remedy is set forth in the Limited Warranty, which shall not exceed the amount paid for the product purchased. 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.

GSI assumes no responsibility for claims resulting from construction defects or unauthorized modifications to products which it manufactured. Modifications to products not specifically delineated in the manual accompanying the equipment at initial sale will void the Limited Warranty.

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. This Limited Warranty extends solely to products manufactured by GSI.

Prior to installation, the end-user has the responsibility to comply with federal, state and local codes which apply to the location and installation of products manufactured or sold by GSI.

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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