# **CB SAFETY LADDER & PLATFORMS**



INSTALLATION MANUAL P/N 361043



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## WARNING AND SAFETY STATEMENT:



#### This symbol means "Attention! Be Alert! Your Safety Is at Stake!"

The safety alert symbol identifies safety messages for your storage structure. Ensure you are familiar with the messages identified for you with the safety alert symbol. When you see this symbol, be alert to the possibility of serious injury or death. Follow the safety instructions given in this manual and for your Grain Storage System.

**Danger:** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious bodily injury.

**Warning:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury and/or property damage.

**Caution:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

**WARNING:** Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

This manual is for the design, installation, operation and maintenance of Chief Standard Ladder Packages, Platforms and Eave Rail assemblies effective 7/1/2020.

© Chief Industries, Inc. 4400 East 39<sup>th</sup> Street · PO Box 848 Kearney, NE 68847 Phone 800.359.7600

For more information about Chief Industries, Inc. and additional products or services please visit our website www.agri.Chiefind.com

Chief industries, Inc.

### **MANUAL REVISIONS:**

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## **STANDARD LIMITED WARRANTY:**

#### Chief Grain Storage Products

- 1. <u>Definitions</u>: The following terms, when they appear in the body of this Standard Limited Warranty for Grain Bin Products in initial capital letters shall have the meaning set forth below:
  - A. <u>Accepted Purchase Order</u> shall mean the Purchase Order identified below.
  - B. <u>Chief</u> shall mean Chief Agri/Industrial, a division of Chief Industries, Inc.
  - C. <u>Original Owner</u> shall beam the original owner identified below.
  - D. <u>Product</u> shall mean the Agri/Industrial Equipment as described in the Accepted Purchase Order.
  - E. <u>Reseller</u> shall mean the authorized Chief Agri/Industrial Equipment dealer identified below.
- 2. <u>Limited Product Warranty</u>: Upon and subject to the terms and conditions set forth below, Chief hereby warrants to the Reseller and, if different, the Original Owner as follows:
  - A. All new Products delivered to the Reseller or the Original Owner by Chief pursuant to the Accepted Purchase Order will, when delivered, conform to the specifications set forth in the Accepted Purchase Order;
  - B. All new Products delivered pursuant to the Accepted Purchase Order will, in normal use and service, be free from defects in materials or workmanship; and
  - C. Upon delivery, Chief will convey good and marketable title to the Products, free and clear of any liens or encumbrances except for, where applicable, a purchase money security interest in favor of Chief.
- 3. <u>Duration of Warranty and Notice Requirements</u>: Subject to the Exceptions, Exclusions and Limitations set forth below, the warranties set forth in Section 2 above shall apply to all covered non-conforming conditions that are discovered within the first sixty (60) months following delivery of the Product to the carrier designated by the Reseller and/or the Original Owner at Chief's manufacturing facility in Kearney, Nebraska (the "Warranty Period") and are reported to Chief as provided in Section 4 below within thirty (30) days following discover (a "Notice Period).
- 4. <u>Notice Procedure</u>: In order to make a valid warranty claim, the Reseller and/or the Original Owner must provide Chief with a written notice of any nonconforming condition discovered during the Warranty Period within the applicable Notice Period specified in Section 3 above. Said notice must be in writing; be addressed to Chief Industries, Inc., Agri/Industrial Division, Customer Service Department, P.O. Box 848, Kearney, NE 68848; and contain the following:
  - A. The Customer's name and address
  - B. The Reseller's name and address
  - C. The make and model of the Product in question
  - D. The current location of the Product
  - E. A brief description of the problem with respect to which warranty coverage is claimed
  - F. The date on which the Product was purchased

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- 5. **Exceptions and Exclusions:** Anything herein to the contrary notwithstanding, the warranties set forth in Section 2 above do NOT cover any of the following, each of which are hereby expressly excluded:
  - A. Defects that are not discovered during the applicable Warranty Period
  - B. Defects that are not reported to the Chief Agri/Industrial Division Customer Service Department in conformity with the notice procedure set forth in Section 4 above within the applicable Notice Period specified in Section 3
  - C. Any used or pre-owned Products
  - D. Any Chief manufactured parts that are not furnished as a part of the Accepted Purchase Order
  - E. Any fixtures, equipment, materials, supplies, accessories, parts or components that have been furnished by Chief but are manufactured by a third party
  - F. Any Products which have been removed from the location at which they were originally installed
  - G. Any defect, loss, damage, cost or expense incurred by the Reseller or the Original Owner to the extent the same arise out of, relate to or result, in whole or in part, from any one or more of the following:
    - I. Usual and customary deterioration, wear or tear resulting from normal use, service and exposure;
    - II. Theft, vandalism, accident, war, insurrection, fire or other casualty;
    - III. Any damage, shortages or missing parts which result during shipping or are otherwise caused by the Reseller, the Original Owner and/or any third party;
    - IV. Exposure to marine environments, including frequent or sustained salt or fresh water spray;
    - V. Exposure to corrosive, chemical, ash, smoke, fumes, or the like generated or released either within or outside of the structure on which the Product is installed, regardless of whether or not such facilities are owned or operated by the Reseller, the Original Owner or an unrelated third party;
    - VI. Exposure to or contact with animals, animal waste and/or decomposition;
    - VII. The effect or influence the Product may have on surrounding structures, including, without limitation, any loss, damage or expense caused by drifting snow;
    - VIII. Any Product or portion thereof that has been altered, modified or repaired by the Reseller, the Original Owner or any third party without Chief's prior written consent;
    - IX. Any Product or portion thereof that has been attached to any adjacent structure without Chief's prior written approval;
    - X. Any Product to which any fixtures, equipment, accessories, materials, parts or components which were not provided as a part of the original Accepted Purchase Order have been attached without Chief's prior written approval;
    - XI. The failure on the part of the Reseller, the Original Owner or its or their third party contractors to satisfy the requirements of all applicable statutes, laws, ordinances rules, regulations and codes, (including zoning laws and/or building codes);
    - XII. The use of the Product for any purpose other than the purpose for which it was designed; and/or
    - XIII. The failure of the Reseller, the Original Owner and/or any third party to:

- a) Properly handle, transport and/or store the Product or any component part thereof;
- b) Properly select and prepare a site that is adequate for the installation and/or operation of the Product or any component part thereof;
- c) Properly design and construct a foundation that is adequate for the installation and/or operation of the Product or any component part thereof;
- d) Properly set up, erect, construct or install the Product and/or any component part thereof; and/or
- e) Properly operate, use, service and/or maintain the Product and each component part thereof.
- 6. <u>Resolution of Warranty Claims</u>: In the event any nonconforming condition is discovered within the Warranty Period and Chief is notified of a warranty claim as required by Section 4 prior to the end of the applicable Notice Period set forth in Section 3 above, Chief shall, with the full cooperation of the Reseller and the Original Owner, immediately undertake an investigation of such claim. To the extent Chief shall determine, in its reasonable discretion, that the warranty claim is covered by the foregoing Limited Product Warranty, the following shall apply:
  - A. Warranty Claims with Respect to Covered Non-Conforming Conditions Discovered Within the First Three Hundred Sixty-Five (365) Days and Reported to Chief Within Thirty (30) Days of Discovery: In the case of a warranty claim which relates to a covered non-conforming condition that is discovered during the first three hundred sixty five (365) days of the Warranty Period and is reported to Chief as required by Section 4 within thirty (30) days of discovery as required by Section 3, Chief will, as Chief's sole and exclusive obligation to the Reseller and the Original Owner, and as their sole and exclusive remedy, work in cooperation with the Reseller and the Original Owner to correct such nonconforming condition, and in connection therewith, Chief will ship any required replacement parts to the "ship to address" set forth in the Accepted Purchase Order FOB Chief's facilities in Kearney, Nebraska, and will either provide the labor or reimburse the Reseller or the Original Owner, as may be appropriate in the circumstances, for any out of pocket expense the Original Owner may reasonably and necessarily incur for the labor that is required to correct such non-conforming condition, provided that if work is to be performed by the Reseller or a third party contractor, Chief may require at least two competitive bids to perform the labor required to repair or correct the defect and reserves the right to reject all bids and obtain additional bids. Upon acceptance of a bid by Chief, Chief will authorize the necessary repairs.
  - B. <u>All Other Warranty Claims</u>: Except as is otherwise provided in subsection 6A above, in the case of all other warranty claims which relate to covered non-conforming conditions that are discovered during the Warranty Period and are reported to Chief as required by Section 4 within thirty (30) days following discovery, Chief will, as Chief's sole and exclusive obligation to the Reseller and the Original Owner, and as the Reseller's and the Original Owner's sole and exclusive remedy, ship any required replacement parts to the Original Owner at the "ship to address" specified in the Accepted Purchase Order FOB Chief's facilities in Kearney, Nebraska; and in such event, Chief shall have no

responsibility or liability to either the Reseller or the Original Owner for the cost of any labor required to repair or correct the defect.

- <u>Warranty Not Transferable</u>: This Warranty applies only to the Reseller and the Original Owner and is <u>not transferable</u>. As such, this Warranty does <u>NOT</u> cover any Product that is sold or otherwise transferred to any third party following its delivery to the Original Owner.
- 8. <u>Limitation on Warranties, Liabilities and Damages.</u> The Reseller and the Original Owner expressly agree that the allocation of the risk, liability, loss, damage, cost and expense arising from any Product that does not conform to the limited warranty given in Section 2 above are fair and reasonable and acknowledge that such allocation was expressly negotiated by the parties and was reflected in the Purchase Price of the Product. Accordingly, the Reseller and the Original Owner expressly agree as follows:
  - A. <u>Disclaimer of Implied Warranties.</u> EXCEPT AS IS OTHERWISE EXPRESSLY SET FORTH HEREIN, CHIEF MAKES NO OTHER REPRESENTATIONS OR WARRANTIES OF ANY KIND WHATSOEVER, WHETHER EXPRESS OR IMPLIED, BY OPERATION OF LAW, COURSE OF DEALING OR OTHERWISE WITH RESPECT TO THE PRODUCT, ANY COMPONENT PART THEREOF OR ANY OTHER GOODS OR SERVICES THAT CHIEF MANUFACTURES, FABRICATES, PRODUCES, SELLS OR PROVIDES TO THE DEALER OR THE ORIGINAL OWNER PURSUANT TO THE TERMS OF ANY ACCEPTED PURCHASE ORDER, INCLUDING WITHOUT LIMITATION ANY REPRESENTATION OR WARRANTY WITH RESPECT TO DESIGN, CONDITION, MERCHANTABILITY OR FITNESS OF THE PRODUCT OR ANY OTHER GOODS OR SERVICES FOR ANY PARTICULAR PURPOSE OR USE.
  - B. <u>Limitation on Liability</u>. EXCEPT AS IS OTHERWISE EXPRESSLY SET FORTH IN SECTION 6 ABOVE, CHIEF'S LIABILITY TO THE DEALER AND/OR THE ORIGINAL OWNER WITH RESPECT TO ANY DEFECTS IN ANY PRODUCTS OR FOR ANY OTHER GOODS OR SERVICES WHICH DO NOT CONFORM TO THE WARRANTIES SET FORTH ABOVE SHALL NOT, IN ANY EVENT, EXCEED THE ACTUAL COST OF SUCH NON-CONFORMING PRODUCT, GOODS OR SERVICES AS DETERMINED PURSUANT TO THE ACCEPTED PURCHASE ORDER; AND
  - C. <u>Limitation on the Nature of Damages</u>. EXCEPT AS EXPRESSLY PROVIDED IN SECTION 6 ABOVE, CHIEF SHALL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE TO THE DEALER, THE ORIGINAL OWNER OR ANY THIRD PARTY FOR ATTORNEY FEES COURT COSTS OR ANY OTHER SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL, LIQUIDATED OR PUNITIVE DAMAGES OF ANY NAME, NATURE OR DESCRIPTION AS A RESULT OF THE FAILURE OF ANY PRODUCT OR ANY OTHER GOODS OR SERVICES PURCHASED BY THE DEALER OR THE ORIGINAL OWNER FROM CHIEF PURSUANT TO THE ACCEPTED PURCHASE ORDER TO CONFORM TO THE LIMITED WARRANTIES SET FORTH IN SECTION 2 ABOVE.
- 9. <u>Applicable Law</u>: This Limited Product Warranty has been issued, accepted and entered into by the Reseller, the Original Owner and Chief in the State of Nebraska and shall be governed by, and construed in accordance with, the internal laws of the State of Nebraska. Any legal action or proceeding with respect to any goods or services furnished to the Original Owner by Chief in connection herewith, or any document related hereto shall be brought only in the district courts of Nebraska, or the United States District Court for the District of Nebraska, and, by execution and delivery of this Limited Product Warranty, the undersigned Original Owner hereby accept for themselves and with respect to their property, generally and unconditionally, the jurisdiction of the aforesaid courts. Further, the undersigned Original Owner hereby irrevocably waives any objection, including, without limitation, any forum non conveniens, which it may now or hereafter have to the bringing of such action or proceeding in such respective jurisdictions.

4843-5948-9057, v. 1

Chief industries, Inc.

## WARNING

## **A**WATER SENSITIVE MATERIALS - READ THIS NOTICE CAREFULLY

Items must be inspected and carrier advised <u>immediately</u> if damage is noted. <u>White rust is a corrosion</u> <u>attack of the zinc coating resulting from the presence of water</u>. Anywhere rust is found will result in a reduction of the life of the galvanized steel.

If water has entered a bundle or if condensation has formed between items, the package must be opened, the items separated and all surfaces dried.

#### If items are to be installed within 10 days:

Store bundled items off the ground high enough to allow air circulation beneath bundle and to prevent water from entering. Store 1 end at least 8" (20.32cm) higher than the opposite end. Support long bundles in the center. Prevent rain from entering the bundle by covering with a tarpaulin, making provision for air circulation between the draped edges and the ground.

DO NOT wrap in plastic.

#### If items are not to be installed within 10 days:

Provide inside dry storage. Storage beyond 6 months is not recommended. If white rust is apparent upon receipt of shipment, notify Chief immediately. Damage to items, resulting from improper storage, is the responsibility of the receiver.

## **1. BEFORE YOU BEGIN:**

Read this manual thoroughly before you install this Chief Ladder Package System with your Chief Grain Storage System. Keep this manual in a location for quick access and reference.

The installation of the Chief Ladder Package System may require field fastening for some components. When using a cutting torch or welding galvanized material, the possibility of developing toxic fumes will exist. Provide adequate ventilation and respiratory protection when using this type of equipment during installation.

Special Service Note: If you are unable to remedy any service problem after thoroughly studying this manual, contact the dealer from whom you purchased the unit. Your dealer is your first line of service. The following information is required for service:

- 1. Bin Model Number: \_\_\_\_\_
- 2. Diameter & Eave Height: \_\_\_\_\_
- 3. Grain Depth: \_\_\_\_
- 4. Type of Grain: \_\_\_\_\_
- 5. Dealer Purchased from: \_\_\_\_
- 6. Dealer Address & Phone: \_\_\_\_\_
- 7. Date Purchased: \_\_\_\_
- 8. Service Contractor:
  - a. Name: \_\_\_\_\_
  - b. Address: \_\_\_\_\_
  - c. Phone: \_\_\_\_\_\_

#### A. INTRODUCTION:

Thank you for purchasing a Chief Ladder Package System for use with your Chief Grain Storage Unit. Proper installation and operation will ensure you the best overall experience with your storage unit and ladder assembly and will guarantee smooth use and operation.

This proprietary information is loaned with the expressed agreement that the drawings and information therein contained are the property of Chief Industries, Inc. and will not be reproduced, copied, or otherwise disposed of, directly or indirectly, and will not be used in whole or in part to assist in making or to furnish any information for the making of drawings, prints or other reproduction hereof, or for the making of additional products or equipment except upon written permission of Chief Industries, Inc. first obtained and specific as to each case. The acceptance of this material will be construed as an acceptance of the foregoing agreement.

The technical data contained herein is the most recent available at the time of publication and is subject to modification without notice. Chief Industries, Inc. reserves the right to modify the construction and method of operation of their products at any time without any obligation on their part to modify any equipment previously sold and deliver

## **2. SAFETY AND PRECAUTIONS:**

Your safety and the safety of others is a primary concern to Chief Industries, Inc. This manual was written to assist in the safe installation and operation of the grain bin.

It is your responsibility as the owner, builder, operator, or supervisor to know what specific requirements, precautions and hazards exist and to make these known to all personnel working with equipment or on the jobsite so that they can observe any necessary safety precautions.

All personnel, including the installation crew, must read and understand the information contained in this manual before starting construction. Chief Industries, Inc. is not responsible or liable for the misuse of equipment or operation of personnel or equipment in an unsafe manner.

Chief Industries, Inc. assumes no liability with respect to proper construction and inspection, assembly, or use of its products established under applicable laws, all of which is the sole responsibility of the purchaser and those authorized for the installation.

Follow all local and federal safety laws and regulations. Verify that all equipment and personnel conform to any applicable jurisdiction regulations.

#### A. WORK AREA SAFETY STATEMENT:

To ensure the safety of all individuals in the work area, only authorized and trained persons shall install, and maintain the Grain Storage System.

Under no circumstances should unauthorized individuals be allowed to trespass or be present in the work area.

It shall be the duty of all operators to ensure that the work area is clean, organized and kept free of all debris and tools that might cause an accidental tripping or falling hazard.

Special care should be taken when working from unsafe heights. Common sense dictates that when conditions such as rain or wind prohibit the safe use of equipment, the installation be discontinued.

Chief Industries, Inc. strongly recommends that equipment meeting the current specifications be used, whether the individual operator is required by law to do so or not. Proper climbing equipment and a secured safety harness should be used at all times when performing operations work, installation or maintenance.

Field modifications without the authorization of the manufacturer may present unknown dangers to the operator and must be avoided.

#### **B. AUXILIARY EQUIPMENT SAFETY:**

You may decide to purchase and install "auxiliary equipment" made by other manufacturers. Chief Industries, Inc. has no control over the design and manufacture of this equipment. In view of this, at a minimum, we suggest you do the following:

- 1. Obtain, read and understand the instructions and safety cautions of the auxiliary equipment manufacturer. Be certain that all equipment is installed in agreement with those instructions.
- 2. Check with Chief Industries, Inc. to verify that your system is designed to support any additional loads supplied by the auxiliary equipment.
- 3. Obtain any applicable safety decals from the manufacturer and make certain they are displayed in a visible location.
- 4. Make certain that all electrical equipment is properly installed and grounded by a qualified electrician.
- 5. Check availability and operation of electrical lock out and emergency stop systems.
- 6. Be certain that all guards and shields are securely in place.
- 7. Store all operation / maintenance manuals in a safe place for future use.

Accessory equipment may be installed however certain limitations and special considerations must be followed in order to maintain the warranty. All accessory equipment should be installed and maintained in accordance with each individual supplier's installation and operation instructions. However, if any sidewall penetrations or other modifications to the Chief standard design are required, contact Chief for special recommendations.

**Note:** Do not modify the storage structure design without Chief approval. It is the responsibility of the general contractor to verify that all equipment is properly installed and that the equipment is compatible with the intended use. A qualified electrician should be contracted to complete all electrical wiring and servicing.

#### **Grain Storage Safety**



Chief industries, Inc.

#### **Grain Storage Safety**



### **3. GENERAL CONTRACTOR RESPONSIBILITIES:**

It is the responsibility of the general contractor to verify that the complete storage structure system is constructed in a quality workmanship manner and that all equipment is installed per the respective manufacturer's instructions. This includes the following:

- Bin
- Foundation
- Base sealing
- Grain transport equipment
- Aeration equipment
- Accessory equipment

In addition, the general contractor is responsible for the fitness of use of any system which he constructs. All accessory equipment incorporated into the system, from each respective equipment manufacturer, should be approved for the intended use.

#### FIELD MODIFICATIONS AND INSTALLATION DEFECTS:

Chief Industries, Inc. assumes no responsibility for field modifications or installation defects which result in structural damage or storage quality problems. If any field modifications are necessary which are not specifically covered by the contents of the installation manual, contact Chief for approval. Any unauthorized modification or installation defect which affects the structural integrity of the grain bin will void the warranty.

## 4. PRE-ASSEMBLY:

Chief does not assume any responsibility from parts damaged due to faulty or improper installation procedures.

#### A. CHECKING SHIPMENT:

For your convenience steel components will be color coded, individual items labeled with an appropriate part number and packages labeled. Hardware, including bolts, nuts, screws and other small clips or brackets may be divided into smaller packages for ease of use and identification. Check your shipment at the time of delivery against the packing list provided with the shipment. If any items are missing or any damaged material is evident, note such shortage or damage on the freight bill before you sign the shipment paperwork.

Claims of shortages will not be honored after 30 days from receipt of shipment. Parts that are missing or damaged are the responsibility of the delivering carrier, not the manufacturer or dealer. It is advisable to reorder damaged or missing parts immediately so that there will be no delay in the bin installation. After receiving the invoice for the reordered material, file a claim with the delivering carrier immediately.

#### **B. KNOWING HARDWARE AND SPECIFICATIONS:**

All components are assembled using SAE grade bolts with corresponding washers and nuts. Bolts are marked with radial lines on the bolt head as shown in the following illustration.



## Do not substitute any other bolt type or grade. Use only the bolts supplied by Chief. The substitution of bolts from other sources is not permitted and will void the warranty.

When installing hardware, the minimum and maximum torque values shown below must be followed. All hardware must seat tight against the corresponding bin component.

BOLT DIAMETER	MINIMUM TORQUE	MAXIMUM TORQUE
5/16"	22 FTLBS.	28 FTLBS.
7/16"	60 FTLBS.	75 FTLBS.

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Please note the following wrench / socket size to be used on the corresponding hardware:

SWS TO SWS W/ TOOLS

BOLT SIZE	HEAD SIZE	NUT SIZE
5/16"	1/2" WRENCH	1/2" WRENCH
7/16"	5/8" WRENCH	11/16" WRENCH
1/2"	3/4" WRENCH	3/4" WRENCH
5/8"	15/16" WRENCH	15/16" WRENCH

#### C. SUGGESTED EQUIPMENT FOR ASSEMBLY:

Chief recommends the following equipment and tools needed for the construction/installation of all Chief Ladder Packages, Roof Rails, Roof Platforms and Rest Platforms:

- Impact wrenches and sockets Crescent wrenches Alignment punches Level Drill bits Metal saw Ladders
- Box-end wrenches Vice-grip pliers Rubber mallets Drills Screw guns Extension cords Telescopic crane

STANDARD LADDER ASSEMBLY INSTRUCTION MANUAL

#### **D. PART IDENTIFICATION:**

Use the following illustrations to help to identify parts used during the ladder package assembly.

#### 1. EXTERIOR LADDER PARTS:





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#### 2. INTERIOR LADDER PARTS:



**INTERIOR LADDER PARTS** 

#### 3. LADDER CAGE COMPONENTS:



LADDER CAGE COMPONENTS

9342613 - LADDER SAFETY ENTRY CAGE HOOP

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4. EAVE RAIL ASSEMBLY COMPONENTS:





5. ADJUSTABLE COMMERCIAL PLATFORM ASSEMBLY:

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6. ADJUSTABLE FARM PLATFORM ASSEMBLY:





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7. ADJUSTABLE REST PLATFORM CAGE ASSEMBLY:



#### ADJUSTABLE REST PLATFORM CAGE ASSEMBLY (9360655)

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8. ADJUSTABLE EAVE PLATFORM CAGE ASSEMBLY:

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#### 9. COMMERCIAL PLATFORM SAFETY GATE:





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## 5. OUTSIDE LADDER STACKING LAYOUTS:

**Important Note:** Refer to the following for all labels on the Ladder Stacking Layout Illustrations.

2R = 2 RING LADDER 1R = 1 RING LADDER 12", 35", 43", 53" & 85" = CAGE STRAP LENGTH









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# 6. OUTSIDE LADDER ASSEMBLY:

**Important Note:** Prior to starting the ladder installation it is very important to plan ahead by verifying order and location of all bin components including:

- Roof vents, manholes and roof ladders
- Wind rings
- Bin entry doors
- Side draw uploads
- Aeration components
- Auxiliary equipment

**Important Note:** Both inside and outside ladders, safety cages, eave rail/platform and rest platforms should be installed as the storage structure ring sections are being lifted.

**Important Note:** When attaching Ladder Brackets, Ladder/Hoop Brackets, J-Post Ladder Brackets, Eave Brackets or Eave Platform Support Brackets to the outside sidewall, flat washers and sealing washers are required to correctly seal the connection between the bracket and bin sidewall.

**Important Note:** Also, when attaching components to the outside sidewall it will be required that fasteners be installed so that the Bin Bolt is installed from the INSIDE and the Whiz Nut from the OUTSIDE. This installation pattern will be used at ALL locations where a ladder or ladder accessory connection to the outside sidewall occurs.

**Important Note:** When a Bracket is to be mounted over a vertical sidewall seam be sure to use the INSIDE hole, or the hole closest to the centerline of the ladder section.



(Fastener Installation for Sidewall to Ladder and Ladder Accessories) 5, Inc. Manual P/N 361043

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BOLT ACCESSOR IMG

## A. GENERAL OUTSIDE LADDER ASSEMBLIES:

## 1. LADDER TO SIDEWALL CONNECTIONS:

When installing the first section of ladder to any Grain Bin whether it be unstiffened, fully two stiffened or fully three stiffened the ladder's left side mounting brackets will need to have 1/2" holes drilled directly under the second single punched hole to the left of the vertical seam. The ladder's right side mounting brackets will be located directly over the vertical seam and will make use of the sidewall sheet holes and hardware.



LADDER INSTALL DIAGRAM

### (Illustration of Each First Section Ladder Installation Position)

Not taking into account the top ladder section, you will attach each ladder bracket to the sidewall horizontal seam using the existing hardware from the sidewall assembly making note to re-insert the hardware with the Bin Bolt from the INSIDE of the Grain Bin and the Whiz Nut on the OUTSIDE. The use of flat washers and sealing washers is required to correctly seal the connection between the bracket and bin sidewall.



(Standard Ladder Clip to Sidewall Connection Details)

#### 2. CAGE TO LADDER STAND OFF CONNECTIONS:

At certain locations the ladder safety cage hoop will need to tie back to the Outside Sidewall Ladder at a location other than a horizontal seam. In these situations, it will require the use of a ladder stand-off bracket depending on the type of ladder safety cage hoop used at that location.



(Installing Ladder Safety Cage Stand-off Brackets)

#### 3. CONNECTING BACK TO THE LADDER SECTIONS:

When connecting any hardware to the Outside Ladder Assembly it will be required to use a Ladder Clip Bolt Assy (9342512) to make that connection along with (1) one 5/16" Whiz Nut. Insert the "clip" portion of the Ladder Clip Bolt Assy into the handrail and then align the bolt of the clip through the hole of the component that you are attempting to attach. Fasten with the 5/16" Whiz Nut and tighten until the clip portion deforms to form a solid connection.



(Using the Ladder Clip Bolt Assy to Fasten Components to the Sidewall Ladder Assembly)

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#### 4. CONNECTING LADDER SECTIONS:

When two ladder sections meet, it is required to connect the ladder sections together. Use (2) two  $3/8" \times 1.00"$  hex bolts and (2) two 3/8" hex nuts and (1) one Ladder Connection Strap (9440073) on both sides of the (2) two ladder sections to make the connections.



(Ladder Connection Strap Between Two Ladder Sections)

5. GENERAL CAGE HOOP ASSEMBLY:

For a typical installation of Ladder Hoops and Cage Straps is Ladder Hoop connects back to Ladder Section and (7) Cage Straps of varying lengths will be connect to the Ladder Hoops, upper overlapping lower with bolt heads in the interior of the cage assembly and nuts on the outside of the hoops.

In situations where there is an opening to a new run of Safety Cage Assembly, the first Safety Cage Hoop will be a Ladder Safety Cage Entry Hoop (9342613). In all other cases use a Ladder Safety Cage Hoop (9342605).





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#### 6. INSTALLATION OF EXTERIOR ACCESS DOOR:

Standard Ladder Assemblies come with a Two Door Safety Access assembly that allows the end user to lock out access to the ladder when not in use for safety purposes.

Start by locating the (4) four Ladder Access Door Hinge Brackets (9396255). You will use these brackets on the last two horizontal seams, at approximately 7' and 3' -6'' from the ground, in order to mount the ladder assembly back to the sidewall in the same manner as the other ladder brackets.

After you have the (4) four ladder Access Door Hinge Brackets mounted to the Grain Storage System, go ahead install the Ladder Access Door Hinges (9349963) by connecting them all back to the ladder using (2) two Ladder Clip Bolt Assy (9342512) for each bracket. Do not fully tighten the fasteners at this time.



Locating and Installing the Ladder Access Door Hinge Brackets)

After the Ladder Access Door Hinge Straps and Door Hinges are fastened back to the ladder, connect the Ladder Access Double Door Covers making sure to square up all the parts so as to make certain that the doors function as intended and then tighten all fasteners used in the assembly. Finally, apply the safety warning labels to the surface of the Ladder Access Double Door Covers.





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## B. EAVE RAIL ASSEMBLY:

After the Roof and the first (2) two rings of the Sidewall Stack have been put together, begin by determining the position that the Ladder Package will be installed by locating the roof manhole. After you've located the correct placement for the ladder assembly begin by drilling a  $1/2^{"}$  hole thru the sidewall. The hole should be drilled on the second corrugation, directly below the second single punched hole left of the vertical seam nearest the left side of the roof manhole.



(Detailed View of Where to Drill Holes for Ladder/Hoop Brackets for Eave Rail Assy)

Attach the First Ladder/Hoop Bracket to the sidewall through the drilled 1/2" hole using a 7/16" Bin Bolt and 7/16" Whiz Nut.

The other Ladder/Hoop Bracket will be attached to the sidewall on the second corrugation down directly over the vertical sidewall seam using the existing hardware and hole. Both Ladder/Hoop Brackets should be spaced so that the holes used to mount the bracket to sidewall are approximately 19-1/2" apart.

Next, drill two more 1/2" holes in the second and third corrugations directly below the fourth single punched hole to the right of the vertical seam. Connect the Sidewall Eave Bracket (9389884) to the Grain Bin using (2) two 7/16" Bin Bolts and 7/16" Whiz Nuts.



Once both Ladder/Hoop Brackets and the Sidewall Eave Bracket are in place begin to put together the Eave Hand Rail Assembly. Using 5/16" x 1.00" hex bolts and 5/16" hex nuts, connect together the (2) two Ladder Eave Rails to the Ladder Eave Post. Attach the Ladder Eave Wall Post to the other end of the Ladder Eave Rails and then loosely fasten the Ladder Eave Brace to the Ladder Eave Wall Post to form the Eave Hand Rail Assembly.



(View of Eave Rail Assembly Both Left and Right Handed)

**Important Note:** The Eave Rail Assembly is interchangable and can be installed either on the right hand orleftr hand side of the Ladder Package simply by flipping the ladder Eave Wall Post and the Side Wall Eave Backet.

Assemble the other Ladder Eave Post to the remaining Ladder Eave Brace finger tightening the fasteners as well.



(Remaining Left and Right Handed Ladder Eave Post/Brace Assemblies)

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After both sides of the Eave Rail Assembly are complete begin mounting the Ladder Eave Posts to the Ladder/Hoop Brackets (9396242) and install the first Ladder Safety Cage Hoop (9342605) to both Ladder/Hoop Brackets. Next, attach the Ladder Wall Post to the Sidewall Eave Bracket. Allow both Ladder Eave Braces from both sides to rest on the roof.



(Views of Eave Handrail connections to Sidewall)

While ensuring that the Ladder Eave Post connected to the Ladder Eave Brace is perpendicular to the ground mark and drill a 1/2" hole in the roof rib where the hole of Ladder Eave Brace is located. Do the same with the Ladder Eave Brace connected to the Ladder Wall Post on the opposite side.

Connect the free ends of the Ladder Eave Braces to the roof rib of the roof through the drilled holes in the roof using a 7/16" Bin Bolt from the INSIDE of the Grain Bin and a 7/16" Whiz Nut from the OUTSIDE and completely tighten. When inserting the hardware be certain to use the sealing washer and flat washer as previously indicated. Finish the build by tightening all of the fasteners thus far.



(Detail of Installion of First Cage Straps in Eave Rail Assembly) Chief industries, Inc. Manual P/N 361043

Next, install a second Ladder Safety Cage Hoop (9342605) at the top of each of the (2) two Ladder Eave Posts making sure to install the bolts from the inside of the cage outward. After the top Ladder Safety Cage Hoop is in place begin installing the 53" Eave Safety Cage Straps (9399347) along the very top Ladder Safety Cage Hoop making sure to install the bolts from inside of the cage and nut on the outside. Leave the cage strap fasteners just finger tightened for now and do not install the fasteners along the bottom of the 53" Eave Safety Cage Straps at this time.

**Important Note:** It is recommended that before proceeding with the full completion of the Eave Rail Assembly that you install the top most section of the ladder assembly at this time.

Remove the previously installed fasteners in the two holes in the horizontal seam (formed by the overlap of Ring #1 and Ring #2) directly below the first (2) two installed Ladder/Hoop Brackets. Install (2) two additional Ladder/Hoop Brackets (9396242) directly below the first pair of Ladder/Hoop brackets, re-using the same nut/bolts that you just removed previously from the horizontal seam. When reinserting the hardware be certain to use the sealing washer and flat washer as previously indicated and install the Bin Bolt from the inside of the bin.

Examine the <u>OUTSIDE LADDER STACKING LAYOUT</u> for your particular grain storage assembly and determine whether your top most Ladder Section is a 1 Ring Ladder Section (887450) or a 2 Ring Ladder Section (887452). Locate your top most Ladder Section, (2) two Ladder Clip Bolt Assy (9342512) and (2) two 5/16" Whiz Nuts.

Position your first Ladder Section so that the CENTERLINE of bottom ladder rung (1 Ring Ladder Section) or the fourth rung from the top (2 Ring Ladder Section) measures approximately 10" from the horizontal seam at the overlap of Sidewall Ring #1 and Ring #2.



(Locating the First Ladder Section)

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(Detailed Views of Ladder Rail to Ladder/Hoop Bracket Connection)

Check the orientation of the rung drip holes and make sure they're facing toward the ground. Slide one Ladder Clip Bolt Assy into the Hand Rail portion of the Ladder Section and connect to the Ladder/Hoop Bracket by pushing the bolt portion of the Ladder Clip Bolt Assy through the hole in the Ladder/Hoop Bracket and fastening a 5/16" Whiz Nut on the inside face of the Ladder/Hoop Bracket.

Tighten the nut but do not over-tighten, repeat this process for the other side of the ladder and twice again for the upper set of Ladder/Hoop Brackets that were installed. When finished tightening the Ladder Clip Bolt Assy it should deform and lock into the Hand Rail of the Ladder Section.

Once you've installed the first Ladder Section complete the Eave Rail Assembly. Locate the (7) seven 35" Safety Cage Straps (9344503) and using 5/16" Bin Bolts and 5/16" Whiz Nuts connect them through the bottoms of the 53" Eave Safety Cage Straps (9399347) to the Ladder Safety Cage Hoop (9342605) that is mounted at (2) two corrugations below the Eave of the bin and then install the (7) seven 12" Safety Cage Straps (9360974) to the bottom of the 35" Safety Cage Straps fixing them to the second Ladder Safety Cage Hoop.



(View of Final Step of Eave Rail Assembly with both 1 Ring and 2 Ring Ladders)

This completes the Eave Rail Assembly portion of the standard Ladder Package.

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# C. FARM PLATFORM EAVE ASSEMBLY

The following is a step by step detail of how to assemble a Farm Eave Platform Assembly for use with your Ladder Package installed with your Chief Grain Storage System.

After the Roof and the first (2) two rings of the Sidewall Stack have been put together, begin by determining the position that the Ladder Package will be installed by locating the roof manhole. After you've located the correct placement for the ladder assembly begin by drilling (2) two 1/2" holes thru the sidewall. The hole should be drilled on the first and third corrugations, directly below the second single punched hole left of the vertical seam nearest the left side of the roof manhole. Attach (2) two J-Post ladder brackets to the bin thru the 1/2" drilled holes using 7/16" Bin Bolts and 7/16" Whiz Nuts making certain to use the sealing washer and flat washer as previously indicated and install the Bin Bolt from the inside of the bin.

Next, remove the previously installed Bin Bolt and Whiz nut from the vertical seam immediately under the single punched hole to the left of the manhole on the second corrugation and then fasten a Ladder Bracket (9396240) to the sidewall.

Next, remove (2) two fasteners from the First Horizontal seam. One will be located directly below the (2) two drilled 1/2" holes and the other located at the bottom of the vertical seam. Install (2) two more Ladder Brackets (9396240) at these locations. Again, make sure to use the sealing and flat washers and to re-insert the same fasteners that you removed but with the Bin Bolt installed from the inside.



(Detailed View of J-Post and Ladder Bracket Installation)

Next, begin to position the Adjustable Platform Sidewall Supports to Ring #1 of the Sidewall Stack. Start by drilling 1/2" holes through the Sidewall Sheet. Holes should be drilled at the Third, Sixth and Eighth corrugations directly above the **SECOND** and **EIGHTH** hole of the horizontal seam to the right of the left-hand vertical seam.

**Important Note:** If installing the Adjustable Farm Eave Platform Assembly on a fully stiffened bin you will need to install the Adjustable Platform Sidewall Support closest to the ladder over the stiffener

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using the same fasteners used in the stiffener channel. The other Adjustable Platform Sidewall Support will need to be installed (6) six double punched holes away from the first.

The top hole of the Adjustable Platform Sidewall Support will fasten in a hole in the line of single punched holes across the top of the top ring. You will need to drill the (3) three remaining 1/2" holes under that top hole in the third, sixth and eighth corrugations.



(Height Positioning for Adjustable Platform Supporting Components)

Install the right side Adjustable Platform Sidewall Support to the bin sidewall using (4) four 7/16" Bin Bolts and 7/16" Whiz Nuts making sure to remember to install the Bin Bolt from the inside and to use the sealing washer and flat washer as previously indicated.

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To install the Adjustable Platform Sidewall Support over the stiffener you must remove the previously installed fasteners in the channel of the stiffener located over the First, Second, Sixth and Eight Corrugations.

Attach the Adjustable Platform Sidewall Support to the stiffener, through the sidewall with these same fasteners remembering to install the Bin Bolt from the inside and to use the sealing washer and flat washer as previously indicated.

Once the Adjustable Platform Sidewall Support Brackets are in place attach the Adjustable Platform Tread Sheet Supports into the second hole from the top of the Sidewall Support Bracket (Position 4) with 5/16" Bin Bolts and 5/16" Whiz Nuts.

**Important Note:** If the Adjustable Farm Eave Platform is going to be installed in POSITION 3 you will need to install the Adjustable Platform Angle Kicker Support Brackets to the bottom set of holes on the Adjustable Platform Sidewall Support.

Square the Adjustable Platform Tread Sheet Supports to the Adjustable Platform Sidewall Support Brackets and then attach the Adjustable Platform Angle Kicker Supports using 5/16" Bin Bolts and 5/16" Whiz Nuts so that one end of the Angle Kicker Support is fastened to the Tread Sheet Support and the other end is attached to the Sidewall Support Bracket.



(Assembly View for Adjustable Platform Sidewall, Tread Sheet & Angle Kicker Supports)

**Important Note:** The Adjustable Eave Platform Assembly is interchangeable and can be installed either on the right hand or left hand side of the Ladder Package simply by flipping the orientation of the Adjustable Platform Tread Sheet and assembling the Platform Handrails, Platform Handrail Posts and Adjustable Platform Post Supports accordingly.

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Now construct the Adjustable Platform assembly using 5/16" Bin Bolts and Whiz Nuts, separate from the Grain Storage Assembly. Once the Adjustable Platform Assembly is together, lift the platform into place aligning the smaller slotted holes in the Tread Sheet to the holes in the Tread Sheet Supports and connect them with 5/16" fasteners.



(Left and Right Hand Assemblies of Adjustable Farm Platform)

Make note if your installation requires you to install your platform in an "over stiffener" position so you can be sure to use the appropriate holes when completing the installation. When fastening your Adjustable Platform assembly to the Adjustable Platform Tread Sheet Supports you will want to align the leading edge of the Tread Plate so that it is normal to the sidewall.

The Tread Sheet may not connect to the same holes on the Tread Sheet Supports. This may be due to the size of the bin that it is being installed on and/or one of the Sidewall Supports being located over a stiffener.



(Detail of Platform Support Bracketing Position with Wind-Ring and Stiffeners)

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(Detail of Left and Right Tread Plate Slot Locations for Installation)

Once you have the Adjustable Platform in place and mounted to the supporting brackets locate the Eave Platform Ladder J-Post. Fasten the J-Post to the J-Post Ladder Brackets previously installed using 5/16" Bin Bolts and Whiz Nuts. After the J-Post is securely fastened in place install the Ladder Hand Rail Bracket to the Adjustable Platform Hand Rail Post also using a 5/16" Bin Bolt and Whiz Nut.

Locate the Adjustable Platform Eave Cage Post and fasten it to the Adjustable Platform Hand Rail Post on the side of the Adjustable Platform closest to the ladder. For most "Eave Platform" installations use the "Position #4" location. Find the P4-T, P4-M and P4-B markings on the Adjustable Platform Eave Cage Post and align these holes to the holes in the Platform Hand Rail Post and use 5/16" Bin Bolts and 5/16" Whiz Nuts to connect them.



(Installation Diagram for Eave Platform J-Post, Ladder Hand Rail Bracket & Platform Eave Cage Post)

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**Important Note:** It is recommended that before proceeding with completing the Eave Rail Assembly that you install the top section of the ladder assembly at this time.



(Assembly View of Eave Platform Adjustable Cage Post Connection)

Examine the **OUTSIDE LADDER STACKING LAYOUT** for your particular grain storage assembly and determine whether your top most Ladder Section is a 1 Ring Ladder Section (887450) or a 2 Ring Ladder Section (887452). Locate your top most Ladder Section, (2) two Ladder Clip Bolt Assy (9342512) and (2) two 5/16" Whiz Nuts. Position your first Ladder Section so that the CENTERLINE of bottom ladder rung (1 Ring Ladder Section) or the fourth rung from the top (2 Ring Ladder Section) measures approximately 10" from the horizontal seam at the overlap of Sidewall Ring #1 and Ring #2.



(Detail of Ladder Section Installation for 1 Ring and 2 Ring Ladder Sections for Eave Platform Assembly)Chief industries, Inc.Manual P/N 36104370

Check the orientation of the rung drip holes and make sure they're facing toward the ground. Slide one Ladder Clip Bolt Assy into the Hand Rail portion of the Ladder Section and connect to the Ladder Bracket by pushing the bolt portion of the Ladder Clip Bolt Assy through the hole in the Ladder Bracket and fastening a 5/16" Whiz Nut on the inside face of the Ladder Bracket.

After the Eave Platform Cage Post is secured locate (3) three of the Adjustable Platform Half Cage Hoops (9360656) in your Eave Platform Assembly kit.

Connect the small angled jogged end of the Adjustable Platform Half Cage Hoop directly to the Eave Platform Ladder J-Post through one of the (3) three holes in the top group of holes located on the front face using 5/16" fasteners so that the TOP edge of the Adjustable Platform Half Cage Hoop is parallel to the ground and even with the top of the Eave Platform Assembly Hand Rail.



(Connection Diagram for First Adjustable Platform Half Cage Hoops)

Fasten the other end of the Adjustable Platform Half Cage Hoop to the Eave Platform Adjustable Cage Post at the corresponding location through the large elongated slot on the outer face. Leave the fasteners for the Half Cage Hoop loose for the time being.





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**Important Note:** It is recommended that fasteners used during the assembly of the Eave Platform Adjustable Cage Package be left "finger tightened" until the end to help facilitate in the completion of the assembly.

Continue with the installation of the second and third Adjustable Platform Cage Half Hoops in the same manner as the first. It is important that each Half Cage Hoop is installed using the same holes on the aft end of the Half Hoops so additional parts installed later in the assembly will properly line up.



(View of Second and Third Adjustable Platform Half Cage Hoops)

The Eave Platform Adjustable Cage package will include (5) five Adjustable Platform 86" Cage Straps that will attach to the Adjustable Platform Half Cage Hoops through the stand alone holes around and near the "rounded portion" of the Half Hoops. Insert the 5/16" fasteners in such a way that the bolt head is INSIDE of the cage assembly with the nuts on the OUTSIDE.



(How to Determine Top/Bottom and Inside/Outside Orientation of Cage Straps)

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The Adjustable Platform 86" Cage Straps have a subtle centerline bend. When installing the straps make certain that the bend is facing OUTWARD away from the Grain Storage System. Be certain to correctly orientate the Adjustable Platform 86" Cage Straps. The **SECOND** hole from the **TOP** is **22 INCHES** from the **TOP END**. The second hole from the bottom will only measure 18-3/4" from the bottom end.

**Important Note:** It is recommended to only finger tighten the fasteners at this stage until the rest of the Eave Platform Cage Assembly is complete.



(Detail of Installation of Adjustable Platform 86" Cage Straps)

Install the remaining (2) two Adjustable Platform Cage Half Hoops. Start by inserting the 5/16" Bin Bolts through the bottom most holes of the previous installed 86" Adjustable Platform Cage Strap and then through the Fifth Adjustable Platform Cage Half Hoop making sure to orientate the Half Hoop in the same manner as first three Half Hoops. Repeat this process for the Fourth Adjustable Platform Cage Half hoop leaving the fasteners "finger tightened".

Once the Fourth and Fifth Adjustable Platform Cage Half Hoops are connected to the 86" Cage Straps located the (2) two Eave Platform Half Hoop Clips (9360065) and connect them to the short jogged end of the Half Hoops through the hole on the long side of the clip by using a 5/16" Bin Bolt and 5/16" Whiz nut so that the short side of the clip aligns with the Ladder Section. Fasten the short end of the clip to the Ladder Section using the Ladder Clip Bolt Assy (9342512) and 5/16" Whiz nut.

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Connect the other end of the Adjustable Platform Cage Half Hoops to the elongated slots on the outward face of the Eave Platform Adjustable Cage Post using a 5/16" Bin Bolt and 5/16" Whiz Nut.

**Important Note:** If your ladder assembly has a 1 Ring Ladder Section at the top you will have to wait in order to fasten the (2) two Eave Platform Half Hoop Clips until after the next Sidewall Ring is assembled and the next Ladder Section is installed.



(Completing the Installation of the Remaining Half Cage Hoops)

Once all of the Half Hoops and Cage Straps are in place proceed to square up the Eave Platform Cage Assembly. Go on and tighten all fasteners used thus far in the assembly in order to prepare for the final step in the Farm Eave Platform Cage Assembly. Finish the Eave Platform Adjustable Cage package by locating the (4) four remaining pieces of the assembly, the (2) two Eave Platform Adjustable Cage Half Hoop B and (2) two 20" Cage Straps.



(Detail of How to Install Eave Platform Adjustable Cage Half Hoop B and 20" Cage Straps)

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Connect the (2) two Eave Platform Adjustable Cage Half Hoop B to the 2 Ring Ladder Section by mounting the shorter joggled end to the Ladder Section using (2) Ladder Clip Bolt Assy and 5/16" Whiz Nuts.

The bottom Half Hoop B you will simply need to back the nut off of the Ladder Clip Bolt Assy already holding the Ladder Section to the Ladder Bracket at the horizontal seam of Ring #1 and Ring #2. The (2) two Eave Platform Adjustable Cage Half Hoop B should mount to the Cage Assembly so that they coincide with the mounting positions of the Fourth and Fifth Adjustable Platform Cage Half Hoops and mount to the inside surface of the Eave Platform Adjustable Cage Post.

Once both Eave Platform Adjustable Cage Half Hoop B are in place finish the assembly and install the (2) two 20" Cage Straps to the slots located on the long straight center portion of both of the Platform Adjustable Cage Half Hoop B with 5/16" fasteners. Once all fasteners are in place complete the assembly and tighten all remaining fasteners.

This completes the installation of the Adjustable Farm Eave Platform and Eave Platform Cage Assembly.

# D. FARM REST PLATFORM & REST PLATFORM CAGE

**Important Note:** Farm Grain Storage Bins with an Eave Height greater than 24 feet will require a Rest Platform & Rest Platform Cage Assembly. If your Farm Grain Storage Bin does not have an Eave Height of 24 feet you may skip this step.

On Farm Grain Storage Bins with an Eave Height greater than 24 feet, Ladder Packages will come equipped with a Farm Rest Platform Assembly and a Rest Platform Cage Assembly. Once you've completed the upper portion of your particular Ladder Package you will need to install your Rest Platform and Rest Platform Cage Assemblies.

First, start by locating all the pieces and hardware needed to assemble your Rest Platform and make them readily available to be assembled. At the bottom of your last installed ladder section connect to the bottom of the ladder the Tower/Ladder Ground Bracket (9623250) using (4) four Ladder Clip Bolt Assy (9342512), two on each side. Leave the nuts only partially tightened until later in the assembly.



(Installing the Tower/Ladder Ground Bracket for Rest Platform)

Next, locate the (2) two Adjustable Platform Sidewall Support Brackets (9393607). Start by drilling (3) three 1/2" holes on the Third, Sixth and Eighth corrugations. For the First hole, remove the fastener in the horizontal seam one double punched hole to either side of the seam below the last set of installed Ladder Brackets located on the previous horizontal seam above.

**Important Note:** If installing the Adjustable Rest Platform on a bin with stiffeners, you will need to shift the ladder side Adjustable Platform Sidewall Support to mount over the stiffener and the far side Adjustable Platform Sidewall Support will mount to the sidewall directly below the ladder bracket located one horizontal seam above it.



FARM REST PLAT STEP 2

(Positioning the Adjustable Platform Sidewall Supports for Rest Platform)

Once you have the Adjustable Platform Sidewall Supports securely mounted in place locate the (2) two Adjustable Platform Tread Sheet Supports and the (2) two Adjustable Platform Angle Kicker Supports.

Fasten one end of the Adjustable Platform Tread Sheet Support to the Adjustable Platform Sidewall Support. The holes on the Adjustable Platform Sidewall Support are spaced for the (4) four possible height adjustment positions for the any Adjustable Platform Assembly.

Square the Adjustable Platform Tread Sheet Supports to the Adjustable Platform Sidewall Support Brackets and then attach the Adjustable Platform Angle Kicker Supports using 5/16" Bin Bolts and 5/16" Whiz Nuts so that one end of the Angle Kicker Support is fastened to the Tread Sheet Support and the other end is attached to the Sidewall Support Bracket.

The typical installation position for the Adjustable Farm Rest Platform Assembly is "Position 1" however in some situations it may be necessary to use a different platform position to ensure a safe installation and use of the platform.

**Important Note:** It is MANDATORY that when installing and positioning your platform that the distance between any two platforms, a platform and the ground or a platform and the eave cannot measure greater than 24 feet.



(Height Positioning for Adjustable Platform Supporting Components)

**Important Note:** If the Adjustable Farm Eave Platform is going to be installed in POSITION 3 you will need to install the Adjustable Platform Angle Kicker Support Brackets to the bottom set of holes on the Adjustable Platform Sidewall Support.

Now construct the Adjustable Platform assembly using 5/16" Bin Bolts and Whiz Nuts, separate from the Grain Storage Assembly. Once the Adjustable Platform Assembly is together, lift the platform into place aligning the smaller slotted holes in the Tread Sheet to the holes in the Tread Sheet Supports and connect them with 5/16" fasteners.



(Installation Diagram for Adjustable Platform Tread Supports and Angle Kicker Supports) Chief industries, Inc. Manual P/N 361043

**Important Note:** The Adjustable Eave Platform Assembly is interchangeable and can be installed either on the right hand or left hand side of the Ladder Package simply by flipping the orientation of the Adjustable Platform Tread Sheet and assembling the Platform Handrails, Platform Handrail Posts and Adjustable Platform Post Supports accordingly.



(Left and Right Hand Assemblies of Adjustable Farm Platform)

Make note if your installation requires you to install your platform in an "over stiffener" position so you can be sure to use the appropriate holes when completing the installation. When fastening your Adjustable Platform assembly to the Adjustable Platform Tread Sheet Supports you will want to align the leading edge of the Tread Plate so that it is normal to the sidewall.

The Tread Sheet may not connect to the same holes on the Tread Sheet Supports. This may be due to the size of the bin that it is being installed on and/or one of the Sidewall Supports being located over a stiffener. After you've bolted the Adjustable Farm Rest Platform assembly into place fasten the Tower/Ladder Ground Bracket to the Tread Plate of the Platform assembly through the elongated slots.



(Detail of Platform Support Bracketing Position with Wind-Ring and Stiffeners)

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(Detail of Left and Right Tread Plate Slot Locations for Installation)

Before beginning to assemble the Rest Platform Cage it is a good idea to begin installing the first two sections of the Lower Ladder assembly. Reference the appropriate Ladder Package Illustration for your particular Grain Storage System.

After the first two ladder sections of the Lower Ladder assembly are in place begin assembling the Rest Platform Cage. Start by locating the Adjustable Rest Platform Cage Ladder Post (9360664) and attach it to the furthest ladder hand rail from the platform on the first section of the Lower Ladder assembly using (2) two Ladder Clip Bolt Assy (9342512) and position it so that the top Half Hoop connection hole is level with the holes in the top hand rail of the Adjustable Farm Rest Platform.



FARM REST PLAT STEP 4

(Installation Illustration of the First Portion of the Next Lower Ladder Assembly)

Next, find and install the Adjustable Rest Platform Cage Ladder Post (9360660) to the outer Adjust Platform Handrail Post using 5/16" hardware in such a way that a short portion of the Cage Ladder

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Post will protrude down below the Tread Plate of the Rest Platform approximately 6-3/4" inches and the top of the Adjustable Rest Platform Cage Post is relatively flush with the top Handrail of the Adjustable Rest Platform.



(How and Where to Install the Adjustable Platform Cage Ladder Post and Cage Post)

**Important Note:** It is recommended that fasteners used during the assembly of the Rest Platform Adjustable Cage Package be left "finger tightened" until the end to help facilitate in the completion of the assembly.

Once the Adjustable Rest Platform Ladder Cage Post and the Adjustable Rest Platform Cage Post are installed locate and install the (3) three Adjustable Platform Half Cage Hoops (9360656).



(Detail Installing the Adjustable Farm Rest Platform Cage Half Hoops)

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Connect the small angled jogged end of the first Adjustable Platform Half Cage Hoop directly to the Adjustable Rest Platform Cage Ladder Post through the top hole on the front face using 5/16" fasteners so that the TOP edge of the Adjustable Platform Half Cage Hoop is parallel and roughly even with the top of the Rest Platform Assembly Top Hand Rail.



(Fastening the Outer End of the Half-Cage Hoop)

Fasten the other end of the Adjustable Platform Half Cage Hoop to the Adjustable Rest Platform Cage Post through the large elongated top slot on the outer face. Finger tighten the fasteners for the Half Cage Hoop for now.

Repeat the same steps for the middle and bottom Adjustable Platform Half Cage Hoops. Remember to leave the fasteners finger tightened at this time.



FARM REST PLAT STEP 8

(Positioning the Adjustable Farm Rest Platform Cage Half Hoops)

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The next step will be to connect the (5) five Adjustable Rest Platform 47" Cage Straps to the Adjustable Platform Cage Half Hoops through the stand alone holes around and near the "rounded portion" of the Half Hoops. Insert the 5/16" fasteners in such a way that the bolt head is INSIDE of the cage assembly with the nuts on the OUTSIDE.

The Adjustable Rest Platform 47" Cage Straps will have a subtle centerline bend. When installing the straps make certain that the bend is facing OUTWARD away from the Grain Bin. The straps are symmetrical from end to end so they can't be installed upside down.



(Install Adjustable Farm Rest Platform 47" Cage Straps)

Finally, after all the Rest Platform Cage Straps and Half Hoops are in place, square up the assembly making certain that the top Cage Half Hoop is parallel and even with the Platform Top Hand Rail and tighten up all the fasteners of the Rest Platform Cage Assembly.



(Final View of Rest Platform & Platform Cage Assembly)

This completes the installation of the Adjustable Farm Rest Platform and Cage Assembly.

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# E. COMMERCIAL EAVE PLATFORM:

The following is a step by step detail of how to assemble a Commercial Eave Platform Assembly for use with your Ladder Package installed with your Chief Grain Storage System.

After the Roof and the first (2) two rings of the Sidewall Stack have been put together, begin by determining the position that the Ladder Package will be installed by locating the roof manhole. After you've located the correct placement for the ladder assembly begin by drilling (2) two 1/2" holes thru the sidewall. The first (2) two holes should be drilled on the first and third corrugations, directly below the sixth single punched hole left of the vertical seam nearest the left side of the roof manhole.

Attach (2) two J-Post Ladder Brackets to the bin thru the 1/2" drilled holes using 7/16" Bin Bolts and 7/16" Whiz Nuts making certain to use the sealing washer and flat washer as previously indicated and install the Bin Bolt from the inside of the bin.

Next, drill (1) one 1/2" hole just below the fourth single punched hole left of the vertical seam nearest the left side of the roof manhole on the second corrugation. Attach (1) one standard Ladder Bracket (9396240) to the bin thru the 1/2" drilled hole using a 7/16" Bin Bolt and 7/16" Whiz Nut making certain to use the sealing washer and flat washer as previously indicated and install the Bin Bolt from the inside of the bin.

Next, remove (2) two fasteners from the First Horizontal seam. One will be located directly below the (2) two drilled 1/2" holes and the other directly below the single drilled 1/2" hole1. Install (2) two more Ladder Brackets (9396240) at these locations. Again, make sure to use the sealing and flat washers and to re-insert the same fasteners that you removed but with the Bin Bolt installed from the inside.



(Detailed View of J-Post and Ladder Bracket Installation)

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Next, you will need to attach the (4) four Adjustable Platform Sidewall Supports to Ring #1 of the Sidewall Stack. To do so, you must start by drilling 1/2" holes through the Sidewall Sheet. The left pair and right pair of Adjustable Platform Sidewall Supports will be spaced (2) two single punched holes apart from one another and the two pairs will be separated by (3) three single punched holes.

First, drill the 1/2" holes for the left, inside Adjustable Platform Sidewall Support. These holes will be located directly under the first single punched hole to the left of the vertical sidewall seam. Drill the (3) holes on the Third, Sixth and Eighth corrugations.

**Important Note:** The top hole of **ALL** Adjustable Platform Sidewall Supports will fasten in a hole in the line of single punched holes across the top of the top ring used to connect to the roof assembly.

Next you will need to remove the fastener in the first single punched hole to the left of the vertical seam then mount the Adjustable Platform Sidewall Support using (4) four 7/16" Bin Bolts and 7/16" Whiz Nuts through the (3) three drilled holes and the single punched hole at the top of the First Sidewall Sheet.

**Important Note:** If installing the Adjustable Commercial Eave Platform Assembly on a fully stiffened bin you will need to install the outer Adjustable Platform Sidewall Support closest to the ladder over the stiffener using the same (4) four fasteners used in the stiffener channel.

To install an Adjustable Platform Sidewall Support over the stiffener you must remove the previously installed fasteners in the channel of the stiffener located over the First, Second, Sixth and Eight Corrugations. The other Adjustable Platform Sidewall Supports will follow normal mounting procedures.



(Locating and Installing the Adjustable Platform Sidewall Supports)

For a normal installation of the left outer Adjustable Platform Sidewall Support, drill (3) three holes on the Third, Sixth and Eighth corrugations directly under the Third single punched hole left of the vertical sidewall seam.

Next you will need to remove the fastener in the first single punched hole to the left of the vertical seam and then mount the Adjustable Platform Sidewall Support using (4) four 7/16" Bin Bolts and 7/16" Whiz Nuts through the (3) three drilled holes and the single punched hole at the top of the First Sidewall Sheet.

To install the right hand pair of Adjustable Platform Sidewall Supports you will drill (3) three 1/2" holes on the Third, Sixth and Eighth corrugations under the **SECOND** and **FOURTH** single punched holes to the **RIGHT** of the vertical seam located closest to the roof manhole.

You will need to remove the fasteners in the second and fourth single punched holes to the right of the vertical seam nearest the manhole and then mount the right hand pair of Adjustable Platform Sidewall Supports using (4) four each 7/16" Bin Bolts and 7/16" Whiz Nuts per support through the (3) three 1/2" drilled holes and the single punched hole at the top of the First Sidewall Sheet.

Once again, with all fasteners penetrating through the sidewall used to connect ladder and platform components to the sidewall of the bin, make sure to use the sealing and flat washers and to insert all those fasteners with the Bin Bolt located on the inside of the bin.

The top hole of the Adjustable Platform Sidewall Support will fasten in a hole in the line of single punched holes across the top of the top ring used to connect to the roof assembly.

Once you have the Adjustable Platform Sidewall Supports securely mounted in place locate the (4) four Adjustable Platform Tread Sheet Supports and the (4) four Adjustable Platform Angle Kicker Supports.

Fasten one end of the Adjustable Platform Tread Sheet Support to the Adjustable Platform Sidewall Support. The holes on the Adjustable Platform Sidewall Support are spaced for the (4) four possible height adjustment positions for the any Adjustable Platform Assembly.





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Square the Adjustable Platform Tread Sheet Supports to the Adjustable Platform Sidewall Support Brackets and then attach the Adjustable Platform Angle Kicker Supports using 5/16" Bin Bolts and 5/16" Whiz Nuts so that one end of the Angle Kicker Support is fastened to the Tread Sheet Support and the other end is attached to the Sidewall Support Bracket.



(Height Positioning for Adjustable Platform Supporting Components)

**Important Note:** The Adjustable Commercial Eave Platform Assembly is interchangeable and can be installed either on the right hand or left hand side of the Ladder Package simply by flipping the orientation of the Adjustable Platform Tread Sheet and assembling the Platform Handrails, Platform Handrail Posts and Adjustable Platform Post Supports accordingly.

Now construct the Adjustable Commercial Platform Assembly using 5/16" Bin Bolts and Whiz Nuts, separate from the Grain Storage Assembly. Once the Adjustable Platform Assembly is together, lift the platform into place aligning the smaller slotted holes in the Tread Sheet to the holes in the Tread Sheet Supports and connect them with 5/16" fasteners.

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**Important Note:** The Ladder side opening of the Adjustable Commercial Platform Assembly will use (2) two Eave Platform Hand Rail posts stacked on top of each other. This assembly is intended for use with a Platform Safety Gate installation.

Make note if your installation requires you to install your platform in an "over stiffener" position so you can be sure to use the appropriate holes when completing the installation. When fastening your Adjustable Platform assembly to the Adjustable Platform Tread Sheet Supports you will want to align the leading edge of the Tread Plate so that it is normal to the sidewall.





ITEM	QTY	PART NO.	DESCRIPTION
6	2	9391293	RAIL HAND X 29.813", BACKSTRAP SLOTS, SW
7	2	9391294	RAIL HAND X 77.875" SW
8	2	9391301	RAIL HAND X 44" SW
9	2	9391296	SUPPORT, EAVE PLATFORM, HANDRAIL SPPT

RIGHT HAND ASSEMBLY

#### (Right and Left Hand Assemblies of Adjustable Commercial Platforms)

Once you have fastened the Tread Sheet to all (4) four Tread Sheet Supports, ensure that the assembly is square and tighten all the fasteners used in the assembly of the platform in order to move on to the Adjustable Commercial Platform Cage Assembly.

After the Adjustable Commercial Eave Platform is assembled and attached to the Grain Storage System, install the Eave Platform Ladder J-Post. Fasten the J-Post to the J-Post Ladder Brackets previously installed using 5/16" Bin Bolts and Whiz Nuts.



(Assembly Image of J-Post Ladder Bracket & Eave Platform Ladder Handrail Bracket) Chief industries, Inc. Manual P/N 361043

After the J-Post is securely fastened in place install the Ladder Hand Rail Bracket (9391300) to the Adjustable Platform Hand Rail Post also using a 5/16" Bin Bolt and Whiz Nut.

Locate the Adjustable Platform Eave Cage Post and fasten it to the Adjustable Platform Hand Rail Post on the side of the Adjustable Platform closest to the ladder and furthest from Grain Bin. For most "Eave Platform" installations use the "Position #4" location.

Find the P4-T, P4-M and P4-B markings on the Adjustable Platform Eave Cage Post and align these holes to the holes in the Platform Hand Rail Post and use 5/16" Bin Bolts and 5/16" Whiz Nuts to connect them.



(Detail of Fastener Location for Installation of Adjustable Platform Eave Cage Post)

**Important Note:** Before you begin to assemble the Commercial Eave Platform Cage Assembly it is recommended that you install the first section of the Standard Ladder Package.

Examine the **OUTSIDE LADDER STACKING LAYOUT** for your particular grain storage assembly and determine whether your top most Ladder Section is a 1 Ring Ladder Section (887450) or a 2 Ring Ladder Section (887452).

Locate your top most Ladder Section, (3) three Ladder Clip Bolt Assy (9342512) and (3) three 5/16" Whiz Nuts. Position your first Ladder Section so that the CENTERLINE of bottom ladder rung (1 Ring Ladder Section) or the fourth rung from the top (2 Ring Ladder Section) measures approximately 10" from the horizontal seam at the overlap of Sidewall Ring #1 and Ring #2.

Be certain to check the orientation of the rung drip holes to make sure they're facing toward the ground. Use (3) three Ladder Clip Bolt Assy (9342512) with 5/16" Whiz Nut to fasten the ladder to the Grain Storage System through the Ladder Bracket (9396240) on the right and the (2) two J-Post Ladder Brackets on the left side.

Slide one Ladder Clip Bolt Assy into the Hand Rail portion of the Ladder Section and connect to the Ladder Bracket by pushing the bolt portion of the Ladder Clip Bolt Assy through the hole in bracket that was previously attached to the Grain Storage System. Tighten the nut but do not over-tighten, repeat this process for the other side of the ladder through the J-Post Ladder Brackets.

When you have finished tightening the Ladder Clip Bolt Assy it should deform and lock into the Hand Rail of the Ladder Section.



(Detail of Ladder Section Installation for 1 Ring and 2 Ring Ladder Sections for Eave Platform Assembly)

**Important Note:** It will be necessary at every horizontal seam to repeat the process of connecting the ladder back to the Grain Storage System in some manner for both sides of the ladder.

Once you've installed the top Ladder Section, locate (3) three of the Adjustable Platform Half Cage Hoops (9360656) in your Eave Platform Assembly kit.

Connect the first at the small angled jogged end of the Adjustable Platform Half Cage Hoop directly to the Eave Platform Ladder J-Post through one of the (3) three holes in the top group of holes located on the front face using 5/16" fasteners.



(Alignment Diagram for First Adjustable Platform Half Cage Hoop)

Fasten the other end of the Adjustable Platform Half Cage Hoop to the Eave Platform Adjustable Cage Post at the corresponding location through the top large elongated slot on the outer face. The TOP edge of the Adjustable Platform Half Cage Hoop should be parallel to the Adjustable Platform Tread Sheet.

Continue with the installation of the second and third Adjustable Platform Cage Half Hoops in the same manner as the first. It is important that each Half Cage Hoop is installed using the same holes on the aft end of the Half Hoops so additional parts installed later in the assembly will properly line up.



COMM PLAT EAVE STEP 8

(Assembly Diagram for Second and Third Adjustable Platform Half Cage Hoops)

The Commercial Eave Platform Adjustable Cage package will include (5) five Adjustable Platform 86" Cage Straps that will attach to the Adjustable Platform Half Cage Hoops through the stand alone holes around and near the "rounded portion" of the Half Hoops. Insert the 5/16" fasteners in such a way that the bolt head is INSIDE of the cage assembly with the nuts on the OUTSIDE.

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(How to Determine Top/Bottom and Inside/Outside Orientation of Cage Straps)

The Adjustable Platform 86" Cage Straps have a subtle centerline bend. When installing the straps make certain that the bend is facing OUTWARD away from the Hopper Tank. Be certain to correctly orientate the Adjustable Platform 86" Cage Straps. The **SECOND** hole from the **TOP** is **22 INCHES** from the **TOP END**. The second hole from the bottom will only measure 18-3/4" from the bottom end.

**Important Note:** It is recommended to only finger tighten the fasteners at this stage until the rest of the Eave Platform Cage Assembly is complete.



(Installation Detail of Adjustable Platform 86" Cage Straps)

Install the remaining (2) two Adjustable Platform Cage Half Hoops. Start by attaching the rounded portion of the Adjustable Platform Cage Half Hoop to the bottom holes of the 86" Cage straps using the 5/16" Bin Bolts and 5/16" Whiz Nuts. Repeat this process for the Fourth Adjustable Platform Cage Half Hoop.

Once the (2) two remaining Half Hoops have been attached to the (5) five 86" Cage Straps locate the (2) two Eave Platform Half Hoop Clips. Attach the (2) two Half Hoop Clips to the short jogged ends of the Fourth and Fifth Adjustable Platform Cage Half Hoops through the hole on the longer leg of the clips with 5/16" Bin Bolts and 5/16" Whiz Nuts.

Then, attach the Half Hoop clips to the ladder using (2) two Ladder Clip Bolt Assy (9342512) and tighten them as has been previously shown. Finish the installation of the final (2) two Adjustable Platform Cage Half Hoops by connecting the long straight end of the Cage Hoops to the Eave Platform Adjustable Cage Post through the elongated slot on the outside of the post.

Once all of the Half Hoops and Cage Straps are in place proceed to square up the Commercial Eave Platform Cage Assembly and then tighten all fasteners used thus far in the assembly.



(Locate and Install the Remaining Adjustable Platform Cage Half Hoops)

Finish the Eave Platform Adjustable Cage package by locating the (4) four remaining pieces of the assembly, the (2) two Eave Platform Adjustable Cage Half Hoop B and (2) two 20" Cage Straps.



(Detail of Platform Support Bracketing Position with Wind-Ring and Stiffeners)

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(Installing the Adjustable Eave Platform Cage Half Hoop B)

Connect the (2) two Eave Platform Adjustable Cage Half Hoop B to the 2 Ring Ladder Section by mounting the shorter joggled end to the 2 Ring Ladder Section using Ladder Clip Bolt Assy and a 5/16" Whiz Nuts. The bottom Half Hoop B you will simply need to back the nut off of the Ladder Clip Bolt Assy already holding the 2 Ring Ladder Section to the Ladder Bracket at the horizontal seam of Ring #1 and Ring #2 of the Sidewall Stack.

The (2) two Eave Platform Adjustable Cage Half Hoop B should mount to the Cage Assembly so that they coincide with the mounting positions of the Fourth and Fifth Adjustable Platform Cage Half Hoops and mount to the inside surface of the Eave Platform Adjustable Cage Post.

Once both Eave Platform Adjustable Cage Half Hoop B are in place finish the assembly and install the (2) two 20" Cage Straps to the slots located on the long straight center portion of both of the Platform Adjustable Cage Half Hoop B with 5/16" fasteners. Once all fasteners are in place complete the assembly and tighten all remaining fasteners.

This completes the installation of the Medium Duty Hopper Tank Adjustable Eave Platform and Eave Platform Cage Assembly.

# F. COMMERCIAL REST PLATFORM & REST PLATFORM CAGE:

# **Important Note:** Only Grain Storage Systems with an Eave Height greater than 24 feet require a Rest Platform & Rest Platform Cage Assembly. If your Grain Storage System does not have an Eave Height greater than 24 feet you may skip this step.

On Commercial Grain Storage Systems with an Eave Height greater than 24 feet, Ladder Packages will come equipped with a Commercial Rest Platform Assembly and Rest Platform Cage Assembly. Once you've completed the upper portion of your particular Ladder Package you will need to install your Commercial Rest Platform and Rest Platform Cage Assemblies.

First, start by locating all the pieces and hardware needed to assemble your Adjustable Commercial Rest Platform and make them readily available to be assembled. At the bottom of your last installed ladder section connect to the bottom of the ladder the Tower/Ladder Ground Bracket (9623250) using (4) four Ladder Clip Bolt Assy (9342512), two on each side. Leave the nuts only partially tightened until later in the assembly.



(Installing the Tower/Ladder Ground Bracket for Rest Platform)

Next, locate the (4) four Adjustable Platform Sidewall Support Brackets (9393607). Start by removing the fasteners previously installed in the horizontal seam on both sides of the upper ladder, (2) two double punched holes to either side of the double punched hole located directly on the centerline of the ladder section.

Then you will need to drill (3) three 1/2" holes on the Third, Sixth and Eighth corrugations directly below both holes that you have removed the fasteners from on the horizontal seam on both sides of the ladder.

**Important Note:** If installing the Adjustable Rest Platform on a bin with stiffeners, you will need to shift the ladder side Adjustable Platform Sidewall Support to mount over the stiffener, inside the stiffener channel.

Connect (2) two of the Adjustable Platform Sidewall Supports (9393607) to the sidewall below the upper ladder section. Position the Sidewall Supports by mounting the top hole of the bracket to one of the holes you removed the fasteners from on the horizontal seam.

Use 7/16" Bin Bolts and 7/16" Whiz Nuts in the remaining holes and repeat the process for both brackets remembering that the Bin Bolts must be installed from INSIDE the bin and make certain to use the sealing and flat washers.



(Installing the First Set of Sidewall Support Brackets for Commercial Adjustable Rest Platform)

The second set of (2) two Adjustable Platform Sidewall Support Brackets will be installed in the same manner as the first two. If the upper ladder section is located over what will be the right hand side of the platform (Right Hand Install) the second set of brackets will need to be installed to the left of the first set of brackets.

Count over (6) six double punched holes left of the left hand Sidewall Support of the first set of installed supports and remove the fastener in that hole on the same horizontal seam. Count over (4) four more holes and remove this fastener as well. Drill (3) three 1/2" holes on the Third, Sixth and Eighth corrugations below both holes that you removed fasteners from.

Fasten the remaining (2) two Adjustable Platform Sidewall Supports (9393607) to the sidewall in the same manner as you installed the first set. Position the Sidewall Supports by mounting the top hole of the support to one of the holes you removed the fasteners from on the horizontal seam and reuse those fasteners installing the Bin Bolts from the INSIDE and using the sealing and flat washers.

Use 7/16" Bin Bolts and 7/16" Whiz Nuts in the remaining holes and repeat the process for both brackets remembering that the Bin Bolts must be installed from the INSIDE the Grain Storage System and to make certain to use the sealing and flat washers.



(Installing the Second Set of Sidewall Support Brackets for Commercial Adjustable Rest Platform)

Following the Adjustable Platform Sidewall Support installation, assemble the (4) four Tread Sheet Supports and (4) four Angle Kicker supports to the Sidewall Brackets in preparation to support the Adjustable Commercial Rest Platform Assembly. Connect the Angle Kicker Supports to both the Sidewall Support Brackets and Tread Supports.



(Detail of Installation for Adjustable Platform Angle Kicker Supports and Tread Sheet Supports)

Square the Adjustable Platform Tread Sheet Supports to the Adjustable Platform Sidewall Support Brackets and then attach the Adjustable Platform Angle Kicker Supports using 5/16" Bin Bolts and 5/16" Whiz Nuts so that one end of the Angle Kicker Support is fastened to the Tread Sheet Support and the other end is attached to the Sidewall Support Bracket. The typical installation position for the Adjustable Farm Rest Platform Assembly is "Position 1" however in some situations it may be necessary to use a different platform position to ensure a safe installation and use of the platform.

**Important Note:** It is MANDATORY that when installing and positioning your platform that the distance between any two platforms, a platform and the ground or a platform and the eave cannot exceed 24 feet.



(Height Positioning for Adjustable Platform Supporting Components)

**Important Note:** If the Adjustable Commercial Rest Platform Assembly is going to be installed in POSITION 3 you will need to install the Adjustable Platform Angle Kicker Support Brackets to the bottom set of holes on the Adjustable Platform Sidewall Supports.

Now construct the Adjustable Commercial Rest Platform Assembly using 5/16" Bin Bolts and Whiz Nuts, separate from the rest of the Grain Storage Assembly. Once the Adjustable Commercial Rest

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Platform Assembly is together, lift the platform into place aligning the smaller slotted holes in the Tread Sheet to the holes in the Tread Sheet Supports and connect them with 5/16" fasteners.

**Important Note:** The Adjustable Commercial Rest Platform Assembly is interchangeable and can be installed either on the right hand or left hand side of the Ladder Package simply by flipping the orientation of the Adjustable Commercial Platform Tread Sheet and assembling the Platform Handrails, Platform Handrail Posts and Adjustable Platform Post Supports accordingly.



RIGHT HAND ASSEMBLY

(Right and Left Handed Adjustable Commercial Platform Assemblies)

Take note if your installation requires you to install any of your Sidewall Supports in an "over stiffener" position so you can be sure to use the appropriate holes when completing the platform installation. When fastening your Adjustable Commercial Rest Platform Assembly to the Adjustable Platform Tread Sheet Supports you will want to align the leading edge of the Tread Plate so that it is normal to the sidewall.



(Detail of Platform Support Bracketing Position with Wind-Ring and Stiffeners)

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The Tread Sheet may not connect to the same holes on all of the Tread Sheet Supports. This may be due to the size of the bin that it is being installed on and/or one of the Sidewall Supports being located over a stiffener.

After you've bolted the Adjustable Commercial Rest Platform Assembly into place fasten the Tower/Ladder Ground Bracket to the Tread Plate of the Platform assembly by drilling holes through the tread sheet plate and using 7/16" Bin Bolts and 7/16" Whiz Nuts to finish the connection.

Before you begin to assemble the Rest Platform Cage it is a good idea to begin installing the first ladder section of the Lower Ladder Assembly. Reference the appropriate <u>OUTSIDE LADDER STACKING</u> <u>LAYOUT</u> for your particular Grain Storage System.



COMM REST PLTFRM STEP 5

(Setting the First Ladder Section of the Succeeding Ladder Assembly for Rest Platform Cage)

After you've installed the first section of the succeeding Lower Ladder Assembly, locate the Adjustable Rest Platform Cage Ladder Post (9360664) and attach it to the furthest ladder hand rail from the platform on the first section of the Lower Ladder Assembly.

The bottom connection of the Adjustable Rest Platform Cage Ladder Post will connect back to the ladder at the outside ladder bracket at the horizontal seam at roughly the same horizontal location as the Adjustable Commercial Rest Platform Tread Sheet.

Use an additional Ladder Clip Bolt Assy (9342512) to connect the top of the Adjustable Rest Platform Cage Ladder Post to the top section of the Lower Ladder Assembly.

#### STANDARD LADDER ASSEMBLY INSTRUCTION MANUAL



(Installation of Adjustable Rest Platform Cage Post and Adjustable Rest Platform Cage Ladder Post)

Next locate and connect the Adjustable Rest Platform Ladder Post (9360660) and connect it to the Lower Ladder Assembly side of the Adjustable Commercial Rest Platform on the outside Adjustable Platform Post (9382531) using 5/16" Bin Bolt and 5/16" Whiz Nuts.

**Important Note:** It is recommended that fasteners used during the assembly of the Rest Platform Adjustable Cage Package be left "finger tightened" until the end to help facilitate in the completion of the assembly.

Once the Adjustable Rest Platform Ladder Cage Post and the Adjustable Rest Platform Cage Post are installed locate and install the (3) three Adjustable Platform Half Cage Hoops (9360656).

Connect the small angled jogged end of the first Adjustable Platform Half Cage Hoop directly to the Adjustable Rest Platform Cage Ladder Post through the top hole on the front face using 5/16" fasteners so that the TOP edge of the Adjustable Platform Half Cage Hoop is parallel and roughly even with the top of the Rest Platform Assembly Top Hand Rail.



(Fastening the Outer End of the Half-Cage Hoop)

Fasten the other end of the Adjustable Platform Half Cage Hoop to the Adjustable Rest Platform Cage Post through the large elongated top slot on the outer face. Finger tighten the fasteners for the Half Cage Hoop for now. Repeat the same steps for the middle and bottom Adjustable Platform Half Cage Hoops. Remember to leave the fasteners finger tightened at this time.



COMM REST PLTFRM STEP 8

### (Positioning the Adjustable Platform Half Cage Hoops)

Next, connect the (5) five Adjustable Rest Platform 47" Cage Straps to the Adjustable Platform Cage Half Hoops through the stand alone holes around and near the "rounded portion" of the Half Hoops. Insert the 5/16" fasteners in such a way that the bolt head is INSIDE of the cage assembly with the nuts on the OUTSIDE.

#### STANDARD LADDER ASSEMBLY INSTRUCTION MANUAL



(Installing the 47" Rest Platform Cage Straps)

The Adjustable Rest Platform 47" Cage Straps will have a subtle centerline bend. When installing the straps make certain that the bend is facing OUTWARD away from the Grain Bin. The straps are symmetrical from end to end so they can't be installed upside down.



(Final View of Rest Platform & Platform Cage Assembly)

Finally, after all the Rest Platform Cage Straps and Half Hoops are in place, square up the assembly making certain that the top Cage Half Hoop is parallel and even with the Platform Top Hand Rail and tighten up all the fasteners of the Rest Platform Cage Assembly.

This completes the installation of the Adjustable Farm Rest Platform and Cage Assembly.Chief industries, Inc.Manual P/N 361043

# 6. COMMERCIAL PLATFORM SAFETY GATE:

On commercial platforms, both rest and eave platforms, it will be necessary to install a safety gate at the entry point of EVERY platform throughout the entire Outside Ladder Assembly. The Commercial Platform Safety Gate is designed to be installed on either right or left handed platform installations.

Start by locating the (2) two Safety Gate Door Hinges (9144099) and the Platform Safety Gate Fixed Door (9144097). Attach the hinges through the vertical slots using 5/16" x 1.00" Hex Bolts, 5/16" Hex Nuts and 5/16" Flat Washers.



SAFETY GATE STEP 1



Next, fasten the (2) two Safety Gate Door Stops (9144095) to the Platform Safety Gate Adjustable Door (9144096) using (4) four 5/16" x 1.00" Hex Bolts and 5/16" Hex Nuts. The door stops should be installed so that one is attached at the middle pair of holes on the edge of the Platform Safety Adjustable Door and the other to the upper pair of holes determined by the installation location.

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(Attaching Safety Gate Door Stops to Safety Gate Adjustable Door)

Once the two different portions of the Platform Safety Gate are done you will need to assemble both halves together to form the Platform Safety Gate Assembly. The Safety Gate Fixed Door should fit inside of the Safety Gate Adjustable Door. Attach the two halves together using 5/16" Hex Bolts, 5/16" Hex Nuts and 5/16" Flat Washers.



(Assembling the Two Halves of the Safety Gate)

Finally, fasten the Platform Safety Gate Assembly to the OUTSIDE Platform Hand Rail Post on the Platform Assembly (Eave or Rest) using 5/16" Hex Bolts and 5/16" Hex Nuts through the (2) two sets of vertical slots on the Hand Rail Post and the (2) two vertically placed holes in the Safety Gate Door Hinges. The hinge comes equipped with a "U-Bolt" that is not necessary for this installation and it can be discarded.



(Left Hand Installation of Platform Safety Gate Assembly)

This completes the installation of the Commercial Platform Safety Gate Assembly.

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## 7. INSIDE LADDER ASSEMBLY:

The standard Grain Storage Inside Ladder Assembly is to be located directly under the Roof Top Manhole. The Ladder Assembly will be installed as one continuous straight ladder from top to the bottom and will terminate approximately (1) one sidewall ring from the bottom of the Grain Bin.

First, attach (2) Inside Ladder Brackets (9396241) on two double punched sidewall holes to either side of the centerline from the Roof Top Manhole. Do NOT remove the existing hardware in the horizontal seam between Ring #1 and Ring #2. Simply attach the Inside Ladder Bracket over the already installed Bin Bolt and Whiz Nut through the TOP hole of the Inside Ladder Bracket ONLY.

**Important Note:** All Inside Ladder Brackets will be installed in the same manner as the first set. Both Inside Ladder Brackets will be installed over the existing hardware through the TOP hole of the Inside Ladder Bracket ONLY at EVERY horizontal sidewall seam two double punched holes to either side of a centerline from the Roof Top Manhole.

**Important Note:** Size of Whiz Bolt used to attach the Inside Ladder Bracket will be determined by the location on the bin. Hole sizes in the sidewall sheets are either 3/8" or 1/2" and will use 5/16" or 7/16" Fasteners respectively.



(Locating and Installing the First Inside Ladder Brackets)

Then, drill (2) two 1/2" holes on the Fourth INSIDE corrugation from the top directly ABOVE the two previously installed Inside Ladder Brackets. Once you have the holes drilled install (2) two Ladder Brackets (9396240) using 7/16" Bin Bolts and 7/16" Whiz Nuts remembering to install the Bin Bolt from the INSIDE of the bin and the Whiz Nut from the OUTSIDE and remembering to install the flat washers and sealing washers to correctly seal the connection between the bracket and bin sidewall.

Next, install the next two Inside Ladder Brackets on the SECOND horizontal seam directly below the first set of Inside Ladder Brackets. Again, remember that it is not necessary to install a fastener in the bottom hole of the face of the Inside Ladder Bracket that fastens to the sidewall and the top hole of the bracket will mount OVER the bin bolt currently in place.



(How to Install the Second Set of Inside Ladder Brackets)

The first ladder section that you will install will be dependent on the number of "rings" your particular bin has. If your bin possesses an even number of rings you will need to install a 1 Ring Ladder Section at the very top. If your bin has an odd number of sidewall rings you will not have the need to install any 1 Ring Ladder Sections.



(Installing the First Inside Ladder Section)

After the second set of Inside Ladder Brackets are installed, install the Ladder Section of your particular Grain Bin using (1) one Ladder Clip Bolt Assy (9342512) each for the (2) two Ladder Bracket (9396240) and (2) two Ladder Clip Bolt Assy (9342512) per each Inside Ladder Bracket (9396241) needed for your first ladder section installation.
Last, you will need to prepare for the installation of the next ladder section of your Inside Ladder Assembly. Besides attaching each ladder section back to the sidewall it is also necessary to connect each ladder section together using (2) two Inside Ladder Connection Straps (9623780).

Simply slide the strap inside both ladder section handrails at the bottom of the ladder section and fasten the strap to the handrail using a 3/8" x 1.00 Hex Bolt and 3/8" hex nut. When you go to install the next ladder section you will simply slide the next ladder section hand rails over the portion of the Inside Ladder Connection Strap protruding from the bottom of the previously installed ladder section.



(Connecting the Inside Ladder Connection Straps to Ladder Section Handrail)

Once the first section of the Inside Ladder Assembly is installed it is simply a matter of repeating the process for every 2 Ring Ladder Section necessary to complete the process. With every two additional sidewall rings added to the sidewall of the Grain Bin you will need to install an additional 2 Ring Ladder Section and the necessary Inside Ladder Brackets at each horizontal sidewall seam.

For inside ladders to prevent grain from getting inside the ladder rungs plugs are provided. These plugs are to be installed when the ladder is being attached to the sidewall sheets. Ladders will require (2) two plugs per rung.



(Illustration of How to Install Ladder Rung Plugs)

This completes the Inside Ladder Package Assembly.

## 7. CHT BASE STRUCTURE LADDER & PLATFORM:

Commercial hopper tank sidewall ladders, with safety cage and platforms are installed as previously described for the standard CB bins. Installation of items from the bottom sidewall ring down to ground level are referred to as the CHT base ladder.

## 1. CHT BASE STRUCTURE LADDER LAYOUT:

Refer to the following CHT base ladder layouts for proper arrangement of items.









## 2. PLATFORM INSTALLATION:

Base platforms are located at the base ring of the hopper tank. The base platform is designed to allow personnel to access the bin sidewall door.

Locate and attach the posts, hand rails and top braces to the platform base using  $5/16'' \times 3/4''$  bolts.



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Attach the assembled platform to the bottom stiffener as shown in the following illustration using 7/16" bolts.

**Important Note:** Platform bolting clip and support tube attachment to the bin sidewall requires field drilling.



If the hopper tank sidewall door uses a door stiffener, install the platform mounting brackets as shown in the following illustration using  $7/16'' \times 1''$  bolts.



Attach the ladder support brackets and channels on the shopper leg supports at the pre-defined locations and attach as shown in the following illustration. Hardware to attach bracket with 3/8" bolts.



At the CHT base platform location, attach walk thru handrail brackets to the platform posts and attach the ladder handles to the handrail brackets as shown in the following illustration.

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Attach the very bottom of the walk thru ladder handles to the first section of full length ladder using  $5/16'' \times 3/4''$  bolts. Verify that the top ladder rung is flush with the platform floor surface.



Working towards the foundation level, continue to attach ladder sections together with ladder connection straps using  $3/8" \times 1"$  bolts.

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**Important Note:** The bottom ladder section that is attached to the foundation is field cut to match site requirements.



Attach brackets to the ladder sections as required using  $5/16'' \times 3/4''$  bolts. Standard brackets (9389887) are used on ladder sections with no safety cage. Ladder hoop brackets (9389886) are used on ladder sections with safety cage.



Safety cages are attached after ladder installation. The safety cages start/end 2 rings above the foundation. The safety cage rings are attached as shown in the following illustration with  $5/16'' \times 3/4''$  inch bolts.

Important Note: The first safety cage ring directly above the foundation will be extended to allow for ease of entry into the safety cage section.



Safety cage straps are attached after the cage installation. The safety cages' straps are fastened to the interior of the cage as shown in the following illustration with  $5/16'' \times 3/4''$  bolts. Insert fastener so that the bolt head is on the interior of the safety cage.



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FIELD DRILL 7/16 HARDWARE CHT LADDER CHNL 9396378-LADDER BRACKET CHT LADDER 9396240 ATTACH WITH 3/8" CHNL BRACKET HARDWARE 9396379 LADDER CLIP 5/16" NUT-LADDER CLIP ANCHOR BRACKET 5/16" NUT-9623250

At the foundation level attach, the foundation bracket to the foundation as shown in the following illustration.

The Safety Cage Entry comes standard with a locked safety gate that is installed as shown in the following illustration. Installation instructions will be provided with shipment.



## 8. SIDE DRAW ACCESS PLATFORM:

Access platforms are located at the side draw locations on the bin sidewall. The platform is designed to allow personnel to access the side draw for operation and maintenance.

Locate and install the rest platform, access ladder and safety cage as shown in the following illustrations and as previously described for sidewall ladder and rest platforms.

Important Note: Verify the position of the right hand floor grating. Platform for a 2 stiffened bin will be located off to the side of the stiffener while 3 stiffened bins will locate the platform directly on the stiffener see images below for reference.



(Two Stiffened Platform Location)

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Should you have any questions concerning assembly instructions, parts or drawings please feel free to contact us at any of the following:

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