WESTEEL

Farm Tube Bin Unload System

EasyFlow2 (100 Series)
Assembly & Installation Manual

This manual applies to:	
8” Tube Unload 10” Tube Unload	Bin Diameters: 24’, 27’, 30’, 33’, 36’, 39’, 42’, 45’, 48’, 54’, 60’

Original Instructions

Read this manual before using product. Failure to follow instructions and safety precautions can result in serious injury, death, or property damage. Keep manual for future reference.

Part Number: BU-0101704 R2
Revised: August 2017

AGI

New in this Manual

The following changes have been made in this revision of the manual:

Description	Section
Updated hardware to attach power head flighting to underfloor flighting.	Section 6.9. – Assemble the Horizontal Powerhead on page 45 Section 6.10. – Assemble the Incline Powerhead on page 48

CONTENTS

1. Introduction

This manual describes how to assemble a Westeel Farm Tube Bin Unload System.

Before assembling the bin unload, please read this manual. Familiarize yourself with the process and the necessary precautions for efficient and safe assembly.

Everyone present at the assembly site is required to be familiar with all safety precautions.

Keep this manual available for frequent reference and review it with new personnel. Call your local distributor or dealer if you need assistance or additional information.

2. Safety

2.1. Safety Alert Symbol and Signal Words

This safety alert symbol indicates important safety messages in this manual. When you see this symbol, be alert to the possibility of injury or death, carefully read the message that follows, and inform others.

Signal Words: Note the use of the signal words **DANGER**, **WARNING**, **CAUTION**, and **NOTICE** with the safety messages. The appropriate signal word for each message has been selected using the definitions below as a guideline.

DANGER Indicates an imminently hazardous situation that, if not avoided, will result in serious injury or death.

WARNING Indicates a hazardous situation that, if not avoided, could result in serious injury or death.

CAUTION Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.

NOTICE Indicates a potentially hazardous situation that, if not avoided, may result in property damage.

2.2. General Safety

The safety information in the safety section of this manual applies to all safety practices. Specific safety information (such as Operation Safety), can be found in the appropriate section.

YOU are responsible for the **SAFE** use and maintenance of your bin unload. **YOU** must ensure that you and anyone else who is going to work around the bin unload understands all procedures and related **SAFETY** information contained in this manual.

Remember, **YOU** are the key to safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program. All accidents can be avoided.

- It is the bin unload owner, operator, and maintenance personnel's responsibility to read and understand **ALL** safety instructions, safety decals, and manuals and follow them when assembling, operating, or maintaining the equipment.

- Owners must give instructions and review the information initially and annually with all personnel before allowing them to operate the bin unload. Untrained users/operators expose themselves and bystanders to possible serious injury or death.
- The bin unload is not intended to be used by children.
- Use the bin unload for its intended purposes only.
- Do not modify the bin unload in any way without written permission from the manufacturer. Unauthorized modification may impair the function and/or safety, and could affect the life of the bin unload. Any unauthorized modification of the bin unload will void the warranty.

2.3. Rotating Flighting Safety

DANGER

- KEEP AWAY from rotating flighting.
- DO NOT remove or modify flighting guards, doors, or covers. Keep in good working order. Have replaced if damaged.
- DO NOT operate the bin unload without all guards, doors, and covers in place.
- NEVER touch the flighting. Use a stick or other tool to remove an obstruction or clean out.
- Shut off and lock out power to adjust, service, or clean.

2.4. Rotating Parts Safety

WARNING

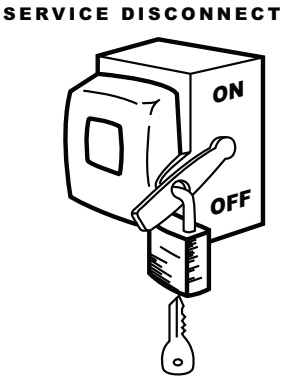
- Keep body, hair, and clothing away from rotating pulleys, belts, chains, and sprockets.
- Do not operate with any guard removed or modified. Keep guards in good working order.
- Shut off and remove key or lock out power source before inspecting or servicing machine.

2.5. Drives and Lockout Safety

Inspect the power source(s) before using and know how to shut down in an emergency. Whenever you service or adjust your equipment, make sure you shut down the power source and follow lockout and tagout procedures to prevent inadvertent start-up and hazardous energy release. Know the procedure(s) that applies to your equipment from the following power source(s). Ensure that only 1 key exists for each assigned lock, and that you are the only one that holds that key. Ensure that all personnel are clear before turning on power to equipment.

2.5.1 Electric Motor Safety

⚠ WARNING **Power Source**



- Electric motors and controls shall be installed and serviced by a qualified electrician and must meet all local codes and standards.
- A magnetic starter should be used to protect your motor.
- You must have a manual reset button.
- Reset and motor starting controls must be located so that the operator has full view of the entire operation.
- Locate main power disconnect switch within reach from ground level to permit ready access in case of an emergency.
- Motor must be properly grounded.
- Guards must be in place and secure.
- Ensure electrical wiring and cords remain in good condition; replace if necessary.
- Use a totally enclosed electric motor if operating in extremely dusty conditions.

Lockout

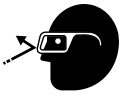
- The main power disconnect switch should be in the locked position during shutdown or whenever maintenance is performed.
- If reset is required, disconnect all power **before** resetting motor.

2.6. Personal Protective Equipment

The following Personal Protective Equipment (PPE) should be worn when assembling the equipment.

Safety Glasses

- Wear safety glasses at all times to protect eyes from debris.



Work Gloves

- Wear work gloves to protect your hands from sharp and rough edges.

Steel-Toe Boots

- Wear steel-toe boots to protect feet from falling debris.

Coveralls

- Wear coveralls to protect skin.

Hard Hat

- Wear a hard hat to help protect your head.

2.7. Safety Equipment

The following safety equipment should be kept on site:

Fire Extinguisher

- Provide a fire extinguisher for use in case of an accident. Store in a highly visible and accessible place.

First-Aid Kit

- Have a properly-stocked first-aid kit available for use should the need arise, and know how to use it.

Eyewash Kit

- Keep a portable eye wash kit available or make sure a permanent eyewash station is available should the need arise to flush materials from the eyes. Review instructions for use before working with the bin unload.

2.8. Safety Decals

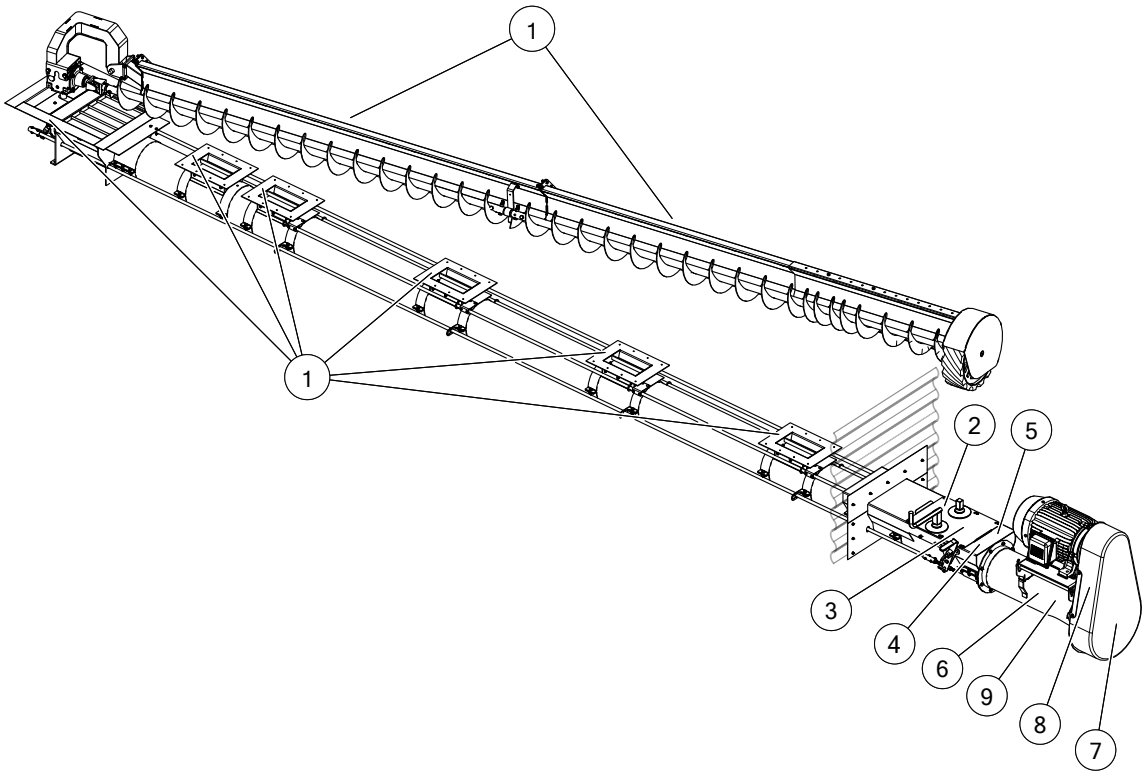
- Keep safety decals clean and legible at all times.
- Replace safety decals that are missing or have become illegible. See decal location figures that follow.
- Replaced parts must display the same decal(s) as the original part.
- Replacement safety decals are available **free of charge** from your distributor, dealer, or factory as applicable.

2.8.1 Decal Installation/Replacement

1. Decal area must be clean and dry, with a temperature above 50°F (10°C).
2. Decide on the exact position before you remove the backing paper.
3. Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.
4. Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.
5. Small air pockets can be pierced with a pin and smoothed out using the sign backing paper.

2.8.2 Safety Decal Locations and Details

Replicas of the safety decals that are attached to the bin unload and their messages are shown in the figure(s) that follow. Safe operation and use of the bin unload requires that you familiarize yourself with the various safety decals and the areas or particular functions that the decals apply to, as well as the safety precautions that must be taken to avoid serious injury, death, or damage.



Note

Decal locations same on incline discharge.

Table 1. Safety Decals

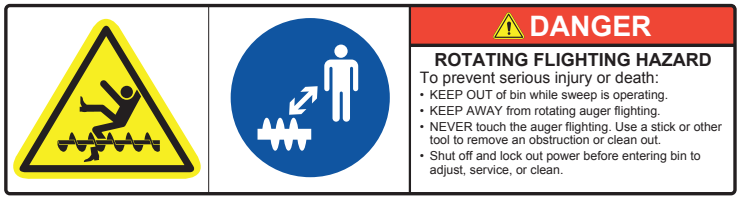
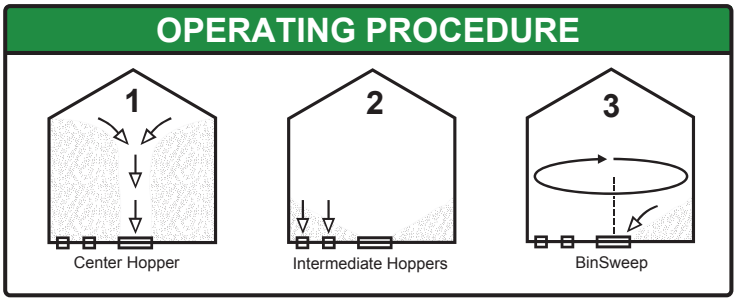
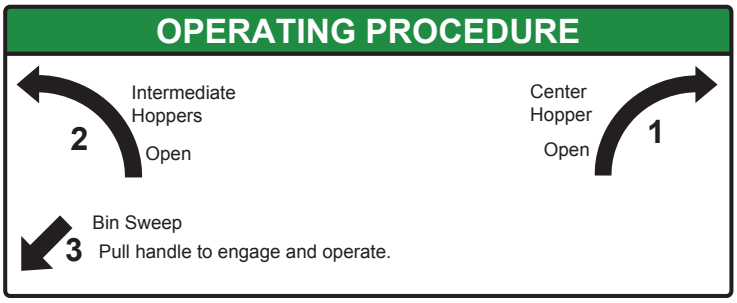
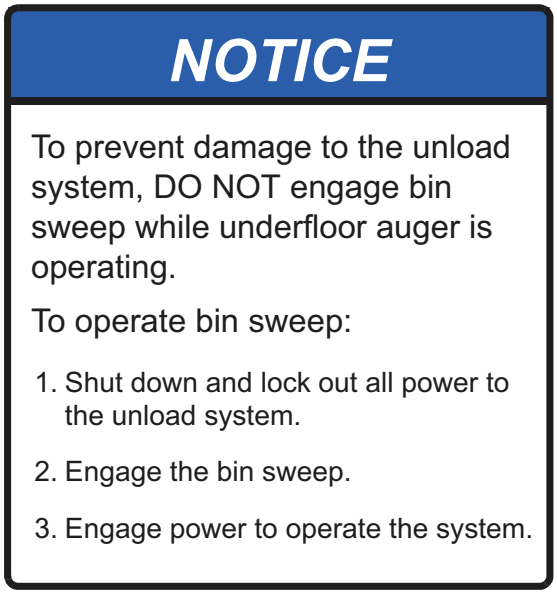
Item	Description	Part Number
1		BU-0100470
2		BU-0101800
3		BU-0100472
4		BU-0100476

Table 1 Safety Decals (continued)

Item	Description	Part Number
5		BU-0000002

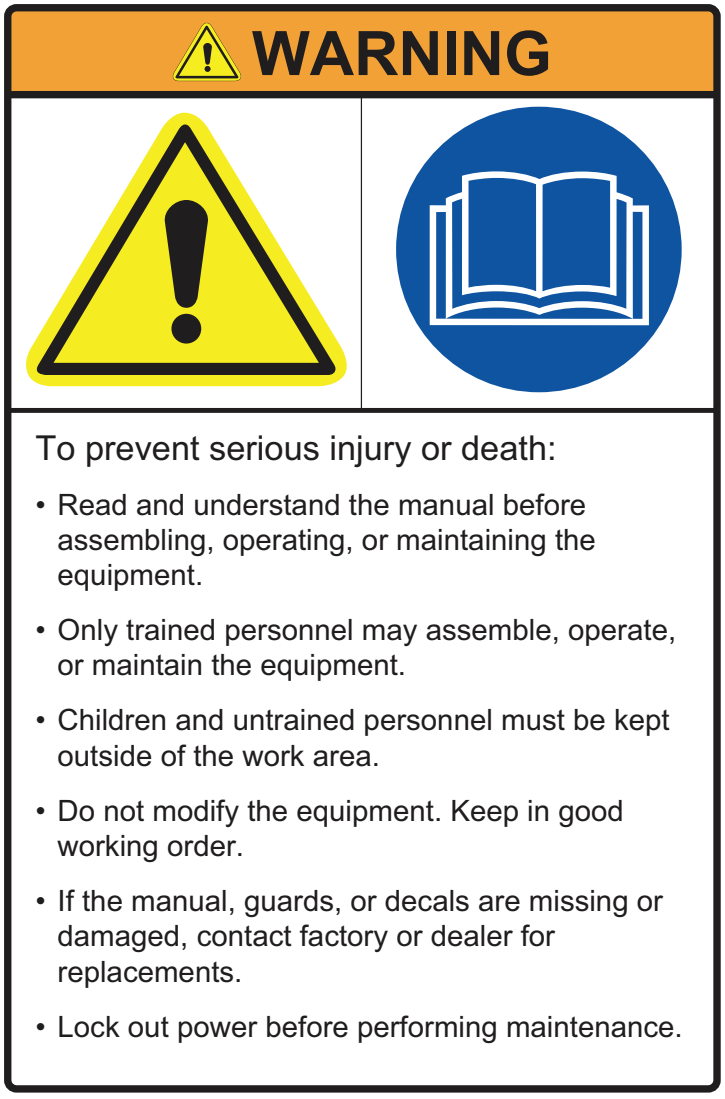
Table 1 Safety Decals (continued)

Item	Description	Part Number
6		20813

Table 1 Safety Decals (continued)

Item	Description	Part Number
7		20804
8		20803

Table 1 Safety Decals (continued)

Item	Description	Part Number
9		BU-0020807

3. Features

This section covers the main features of the Westeel Farm Tube Bin Unload System.

Figure 1. Typical Bin Unload System

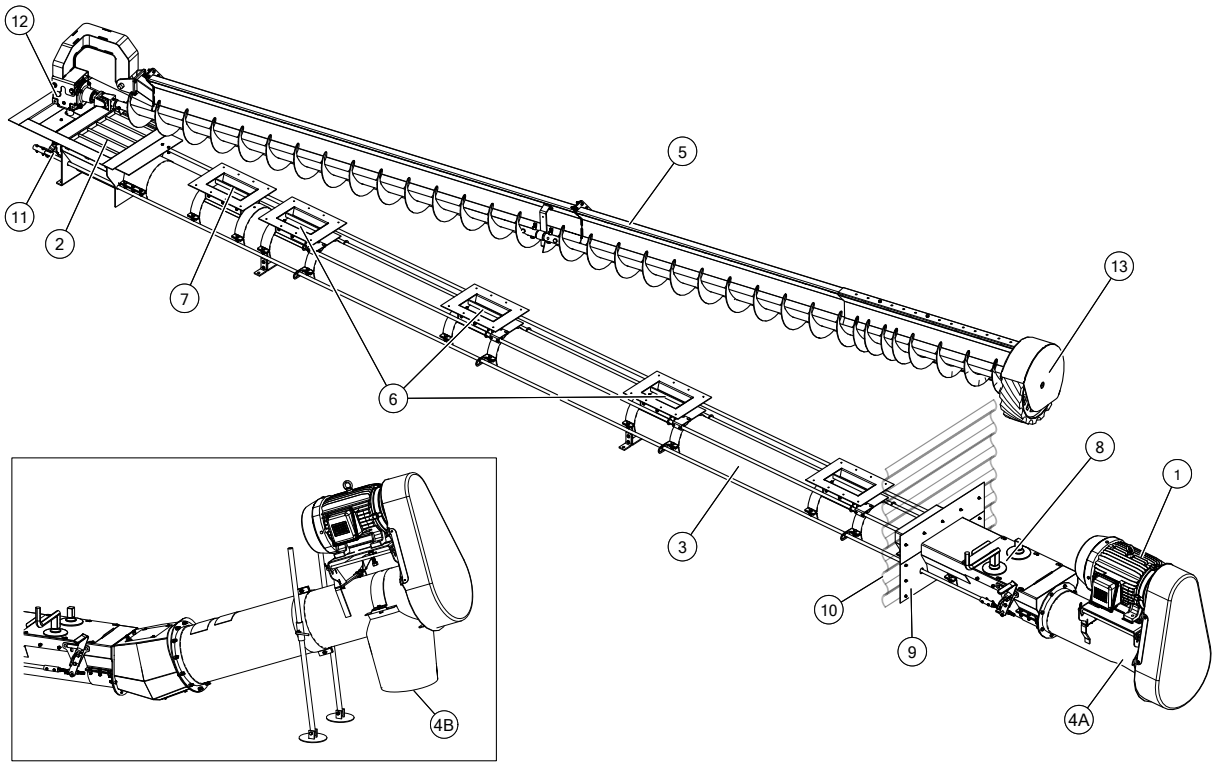


Table 2. Features

Item	Description	Item	Description
1	Electric Powerhead	8	Bin Unload Controls (for sump gates and sweep gearbox engagement)
2	Center Sump (Center Hopper)	9	Bin Adapter
3	Underfloor Auger	10	Bin Wall
4	Discharge Options: Horizontal (A), Incline (B)	11	Lower Gearbox
5	Bin Sweep	12	Upper Gearbox
6	Intermediate Sump (Intermediate Hopper)	13	Sweep Drive (includes gearbox and wheel)
7	Emergency Sump (E-Sump)		

4. Preparation

4.1. Diameter Tolerance

In order to use the Westeel Farm Tube Bin Unload System bin unload, the bin diameter must be within the tolerance in the following table.

Table 3. Bin Diameter Tolerances for Bin Unload Models

Bin Unload Model	Bin Diameter Tolerance
24’	23’6” - 25’6” (7.16 - 7.77 m)
27’	26’6” - 27’6” (8.08 - 8.38 m)
30’	29’6” - 30’6” (8.99 - 9.30 m)
33’	32’6” - 33’6” (9.91 - 10.21 m)
36’	35’6” - 36’6” (10.82 - 11.13 m)
39’	38’6” - 39’6” (11.73 - 12.04 m)
42’	41’6” - 42’6” (12.65 - 12.95 m)
45’	44’6” - 45’6” (13.56 - 13.87 m)
48’	47’6” - 48’6” (14.48 - 14.78 m)
54’	53’6” - 54’6” (16.31 - 16.61 m)
60’	59’6” - 60’6” (18.14 - 18.44 m)

4.2. Intended Floor Types

The unload system may be installed as part of a:

- full floor aeration system
- concrete form with an aeration pit
- trench in a full concrete foundation

The instructions in this manual are written for full floor aeration systems, however any type may be safely used noting the additional requirements below.

Concrete Form with an Aeration Pit

Install the tandem gearboxes in the center sump before positioning the underfloor auger in the trench to prevent clearance problems.

Connect the bin adapter pieces to the concrete form wall using eleven 1/4" x 1-1/4" self-tapping **concrete** screws (purchased separately).

Trench in a Full Concrete Foundation

The concrete floor must meet the dimensions in the figure below.

Install the tandem gearboxes in the center sump before positioning the underfloor auger in the trench to prevent clearance problems.

The bin adapter top piece may not fit against the underfloor auger and corrugated bin wall in the same way as the lower pieces. In this case, use another method to seal the top of the underfloor auger to the bin.

Connect the bin adapter pieces to the concrete foundation using six 1/4" x 1-1/4" self-tapping **concrete** screws purchased separately.

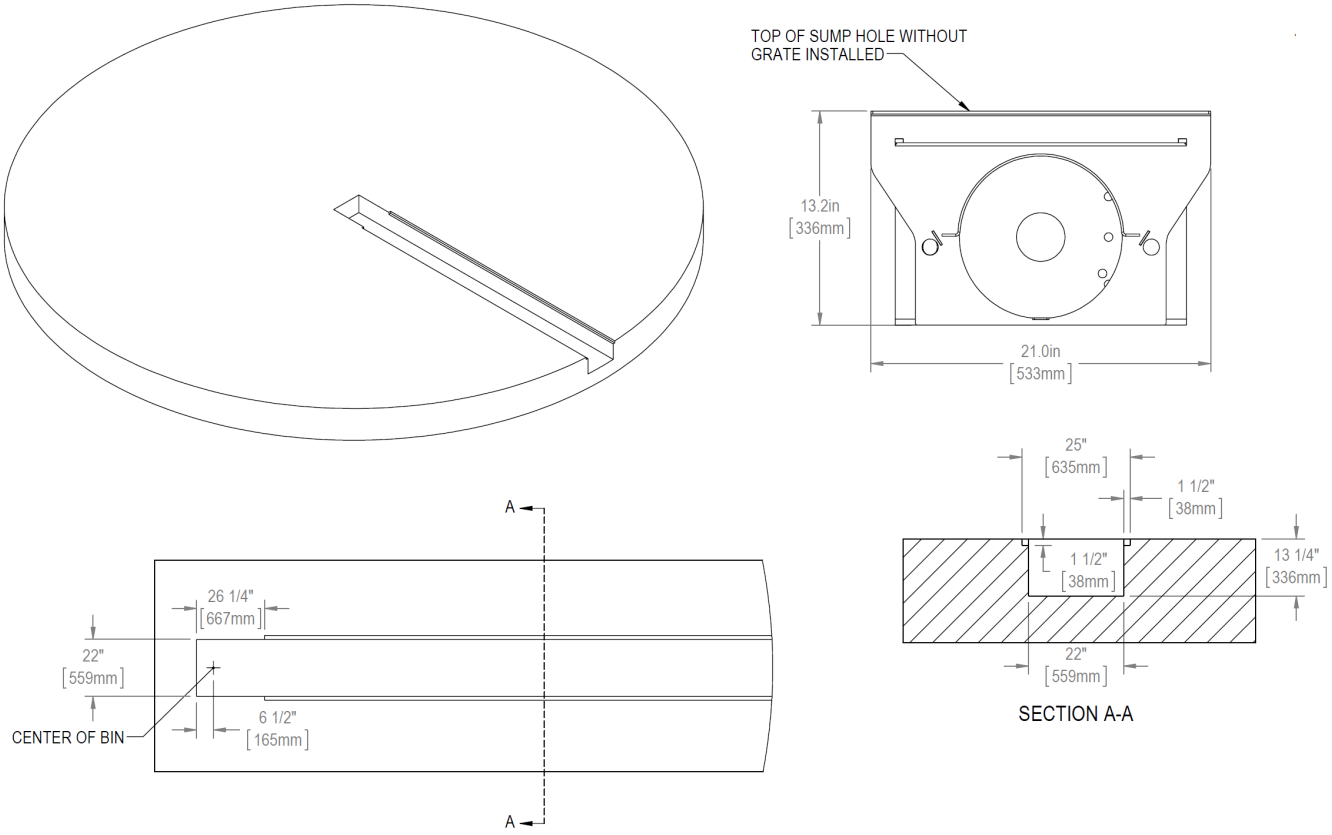
Cover the underfloor auger with 25" (635 mm) length steel planks, wood planks, or aeration planks (not supplied). The planks must be strong enough to support the weight of grain.

Use standard bin flashing (can be purchased through Westeel) to cover the small gaps where the planks meet the concrete foundation.

Table 4. Rating for 25” Floor Planks

Bin Unload Model (Bin Diameter)	Maximum Number of Bin Tiers
24’	12
27’	
30’	11
33’	10
36’	9
39’	
42’	
45’	8
48’	
54’	8
60’	7

Figure 2. Trench Dimensions for Concrete Foundation Floor



4.3. Bin Height

Follow the sections below for when installing in a full floor or partial floor aeration system.

Westeel Bins

➡ This section applies only to Westeel Bins.

The bin height requirements below must be met when installing a bin unload system into a Westeel bin. If your bin height exceeds the maximum height for a given diameter, contact Westeel.

Table 5. Maximum Bin Heights for Bin Unload System Use

Bin Diameter (FT)	Maximum Number of Tiers	
	10” Tube Unload 15” Floor Support Spacing	8” Tube Unload 14” Floor Support Spacing
24	17	18

Table 5 Maximum Bin Heights for Bin Unload System Use (continued)

Bin Diameter (FT)	Maximum Number of Tiers	
	10” Tube Unload 15” Floor Support Spacing	8” Tube Unload 14” Floor Support Spacing
27	17	18
30	17	18
33	17	18
36	17	18
39	16	17
42	15	17
45	15	16
48	14	15
51	13	15
54	13	14
60	12	13

Other Branded Grain Bins

➡ This section applies to bins branded not as Westeel.

The underfloor auger requires spacing of floor supports no less than the requirements in the table below to clear floor supports.

Table 6. Minimum Floor Support Spacing for Underfloor Auger

10" Unload System	8" Unload System
15" Floor Support Spacing	14" Floor Support Spacing

4.4. Floor Support Spacing

➡ Full Floor and Partial Floor Aeration systems only.

The underfloor auger requires clearance for spacing of floor supports no less than the requirements in the table below.

Table 7. Minimum Floor Support Spacing for Underfloor Auger

10" Unload System	8" Unload System
15" Floor Support Spacing	14" Floor Support Spacing

4.5. Bin Wall Cutout

An opening must be cut in the bin wall for the underfloor auger.

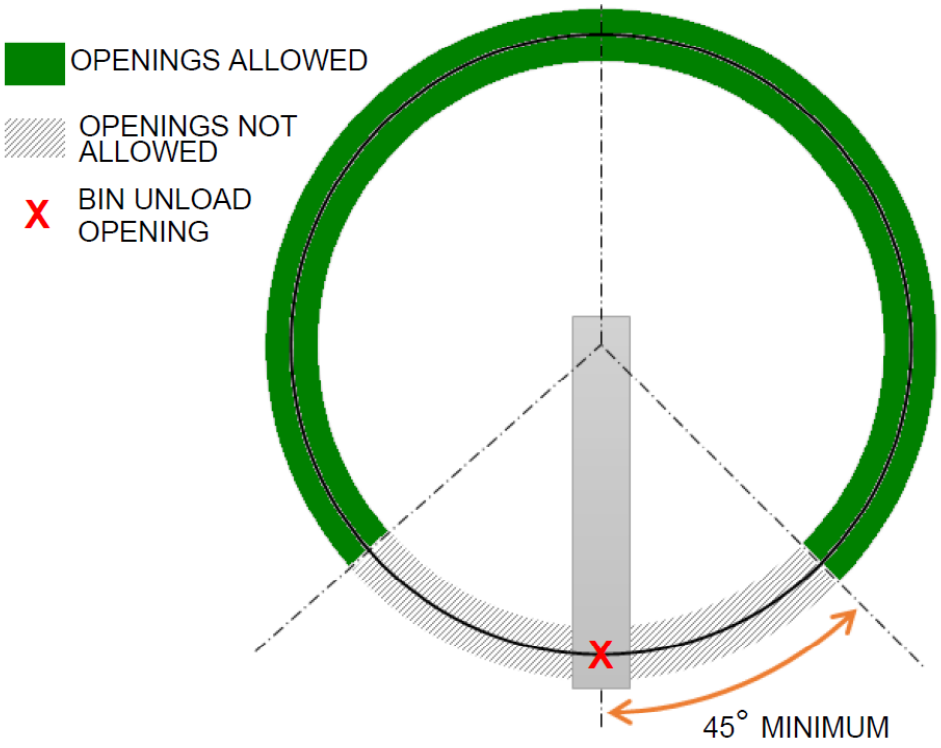
⚠ WARNING Cutting an opening in the bin can weaken the bin's structure and may lead to bin collapse if the instructions in this section are not accurately followed.

When installing the bin unload, consult the manufacturer for specific details on the bin wall cutout.

General points to consider are:

- Keep a minimum 45° angle between the center points of any two openings, such as an aeration fan (see Figure 3).

Figure 3. Minimum Angle Between Openings



- Center the opening in the middle of the bin sheet, between two vertical bolt seams.
- Do not cut an opening through a vertical bolt seam between two sheets or a stiffener position.
- Cut the opening in a bin sheet at a location designated for discharge (see Figure 4 and Table 8).

  Note

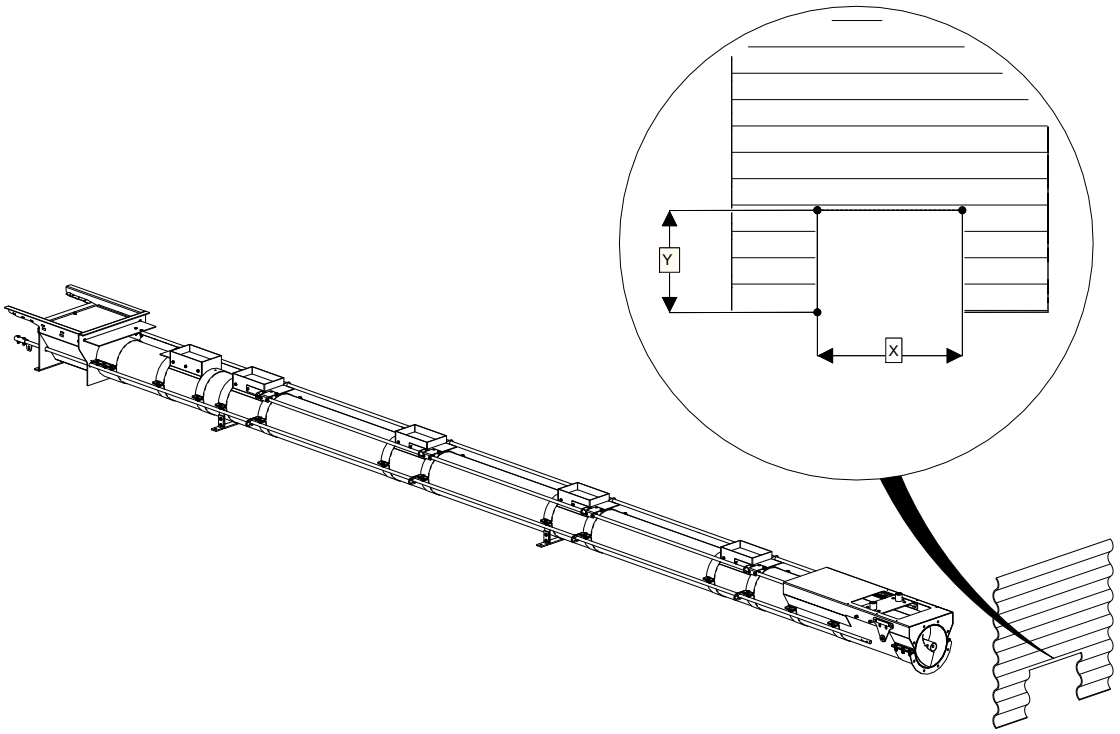
  When measuring the opening, measure the dimension for the height of the cutout from the bottom edge of the bin wall sheet.

- Cut the opening as tight as possible for the underfloor auger to pass through and do not have more than a 1/4" (6 mm) gap to the auger joint flange on any side.
- The vertical flange of the bottom bin angle may be cut flush to the sides of the opening to allow the underfloor auger to fit through the opening.

Table 8. Bin Wall Cutout Dimensions

Tube Diameter	Height of Opening (Y) (From the bottom the bin sheet)	Width of Opening (X)
8-in	11-3/4” (300mm)	15-1/4” (390mm)
10-in	12-1/2” (320mm)	15-1/4” (390mm)

Figure 4. Bin Wall Cutout



4.6. Retrofit Information

When retrofitting the unload system into an existing bin:

1. Clean up and remove all settled grain dust deposits and ensure the air is nearly free of dust.

   ⚠ WARNING Sparks from grinding and hammer strikes which contact settled grain dust deposits or dusty air present a risk of explosion.

2. Temporarily remove the floor planks (if equipped) which will be used to cover the bin unload from the bin wall cutout to past the bin center point.

4.7. Installation Planning

Site planning should be performed prior to assembly and installation, including a bin site layout drawing (with dimensions), structural analysis, and consideration of suitability of connected equipment. Proper foundation

design must be completed according to local building codes for full grain bin loading if the installer is planning to use the trench in the bin's concrete foundation floor as specified in this manual.

5. Pre-Assembly

Before continuing, ensure you have completely read and understood this manual's Safety section, in addition to the safety information in the section(s) below.

5.1. Check Shipment

Unload the bin unload parts at the assembly site and compare the packing slip to the shipment. Ensure that all items have arrived and that none are damaged.

Report missing or damaged parts immediately to ensure that proper credit is received from Westeel or your distributor/dealer, and to ensure that any missing parts can be shipped quickly to avoid holding up the assembly process.

Important

Do not assemble or install damaged components.

5.2. Before You Begin

Before you assemble the bin unload:

- Familiarize yourself with all the sub-assemblies, components, and hardware that make up the equipment.
- Have all parts and components on hand, and arrange them for easy access.
- Separate the hardware (bolts, nuts, etc.) and lay them out into groups for easier identification during assembly.

5.3. Required Materials

The materials below are not supplied and must be purchased separately. Contact your local dealer for assistance, if required.

- shim steel of various thicknesses
- four 1/2" concrete anchor bolts (for anchoring the underfloor auger to the floor) (see Figure 5 and Figure 6).

Figure 5. Wedge Concrete Anchor Bolt

Figure 6. Epoxy Bonding Concrete Anchor Bolt

- 2 corrugated sponge strips (for bin adapter)

- outdoor-rated, ultraviolet-resistant spray foam (for bin adapter)
- silicon sealant or neoprene rubber (for sealing around lip of each sump to floor planks across the underfloor auger)
- electric motor (including hardware) (see Table 12 on page 72 for horsepower requirements)
- motor pulley and belts (see Table 13 on page 72 for size recommendations)

5.4. Required Lifting Equipment

Use proper lifting equipment rated to lift the underfloor auger assembly (see weights in Table 9).

Figure 7. Underfloor Auger (As-Shipped)

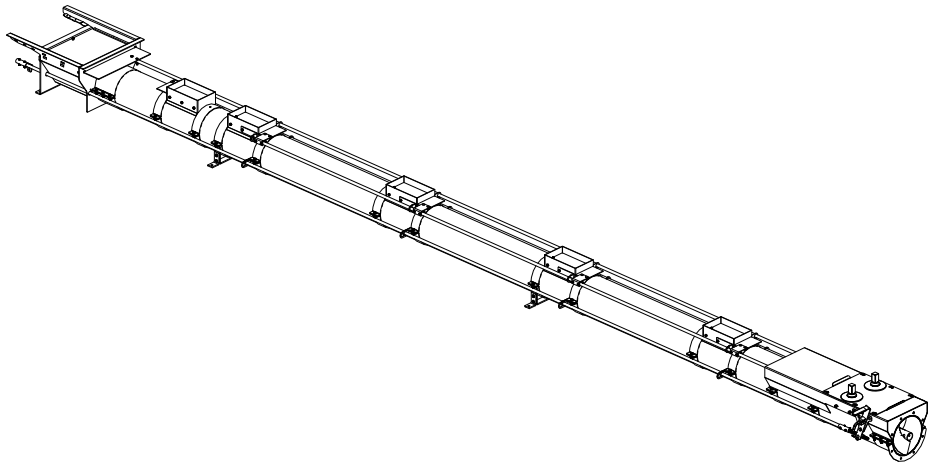


Table 9. Underfloor Auger Weight

Bin Unload Model (Bin Diameter)	Underfloor Auger Weight			
	8" Tube		10" Tube	
	lb	kg	lb	kg
24'	417	189	507	230
27'	436	198	532	241
30'	449	204	557	253
33'	490	222	605	274
36'	509	231	630	286
39'	528	239	655	297
42'	568	258	704	319
45'	587	266	728	330

Table 9 Underfloor Auger Weight (continued)

48'	613	278	753	342
54'	678	308	832	377
60'	717	325	882	400

5.5. Required Tools

The following tools are required to assemble the bin unload system:

- angle grinder with grinding disc (for cutting bin wall opening, sump openings in aeration planks)
- impact wrench (with full set of SAE sockets)
- set of SAE hand wrenches
- set of SAE Allen keys
- 40’ (12 m) tape measure
- hand tools (hammer, punches, etc.)
- one 25” (635 mm) straight edge
- five to ten 1/4” wood blocks
- work lights
- one floor dolly

6. Assembly

Before continuing, ensure you have completely read and understood this manual's Safety section, in addition to the safety information in the section(s) below.

6.1. Assembly Safety

WARNING

- Do not take chances with safety. The components can be large, heavy, and hard to handle. Always use the proper tools, rated lifting equipment, and lifting points for the job.
- Carry out assembly in a large open area with a level surface.
- Always have two or more people assembling the bin unload.
- Make sure you have sufficient lighting for the work area.
- Tighten all fasteners according to their specifications. Do not replace or substitute bolts, nuts, or other hardware that is of lesser quality than the hardware supplied by the manufacturer.

6.2. Bin Floor Preparation

1. Locate the center of the bin by measuring and drawing horizontal lines across the bin (see Figure 8).

   Important

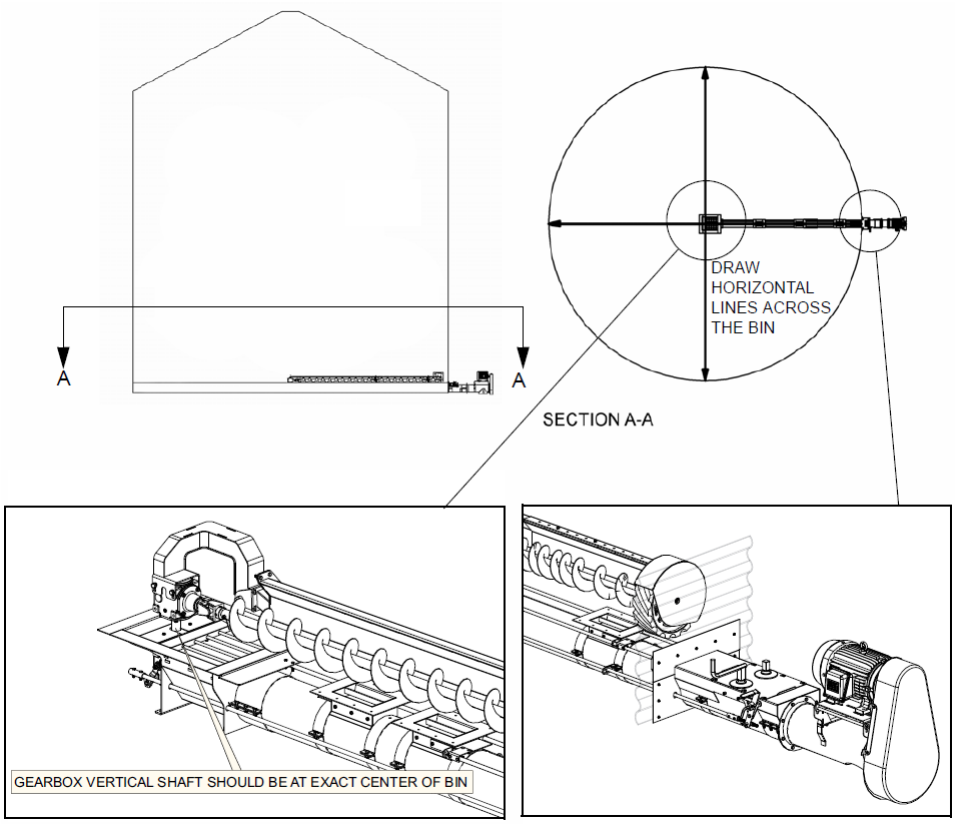
   The center point must be found accurately to ensure that the sweep does not interfere with the bin wall.

2. The vertical gearbox shaft in the center sump is aligned with the bin center point later in the assembly.

   Note

   The aeration floor planks should not be installed until the underfloor auger is installed.

Figure 8. Locating the Bin Center



6.3. Install the Underfloor Auger

If you are installing the underfloor auger **before** completion of the sidewall and anchoring the bin to the foundation:

- Move the underfloor auger into nearly its final position in the bin before the final sidewall tier is complete.
- Cut an opening in the appropriate bin sheet before the sheet is installed (see Section 4.5. – Bin Wall Cutout on page 21).
- After the bin sidewall has been completed and anchored to the foundation, according to the principles given in Section 6.3.1 – Install by Removing the Bin Sheet on page 28, perform final positioning and leveling of the underfloor auger, installing the anchor legs, and anchoring the underfloor auger.

If you are installing the underfloor auger **after** anchoring the bin sidewall to the foundation, follow either Section 6.3.1 – Install by Removing the Bin Sheet on page 28 or Section 6.3.2 – Install by Cutting a Bin Sheet in Place on page 30 according to the conditions given within those sections.

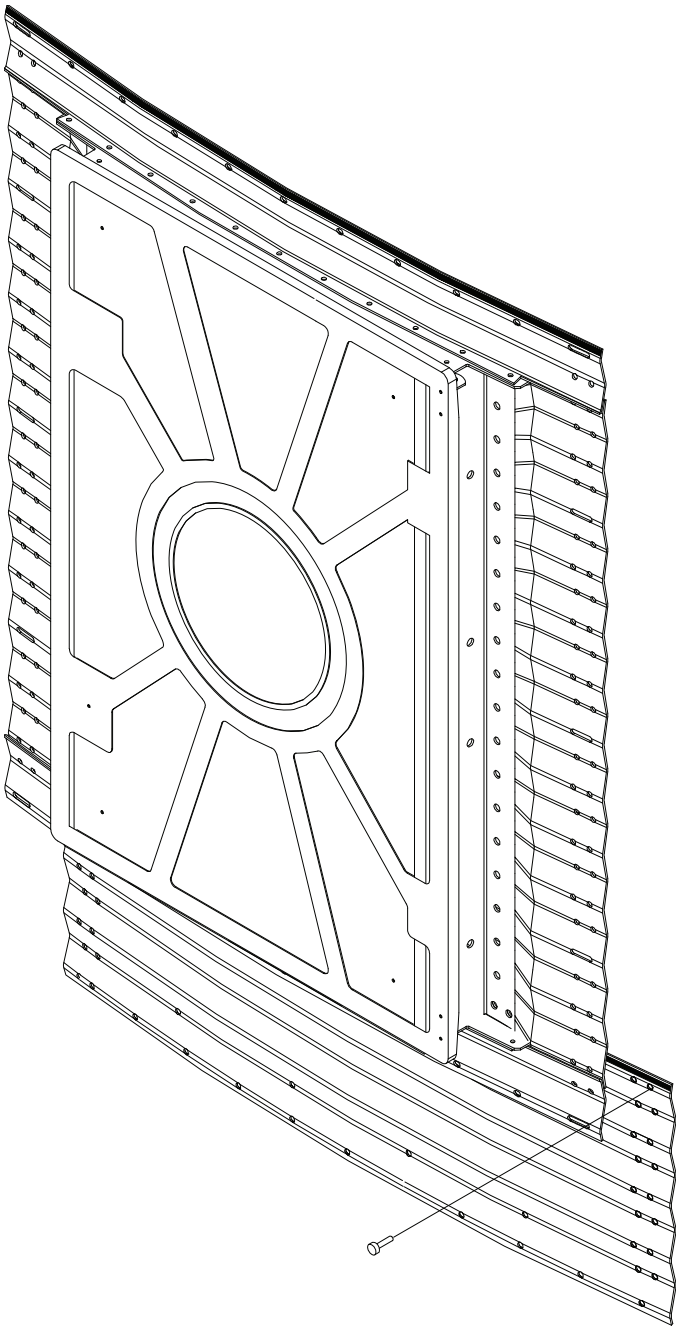
6.3.1 Install by Removing the Bin Sheet

This procedure describes removing a bin sheet after the bin sidewall has been anchored to the foundation and applies to the installation of the underfloor auger **below the main door in a Westeel or Twister bin only**. You **must receive written permission from your bin manufacturer** if you want to use this procedure for:

- removing sidewall sheets other than below the main door for Westeel or Twister bins, or
- removing any sidewall sheets for bin manufacturers other than Westeel or Twister.

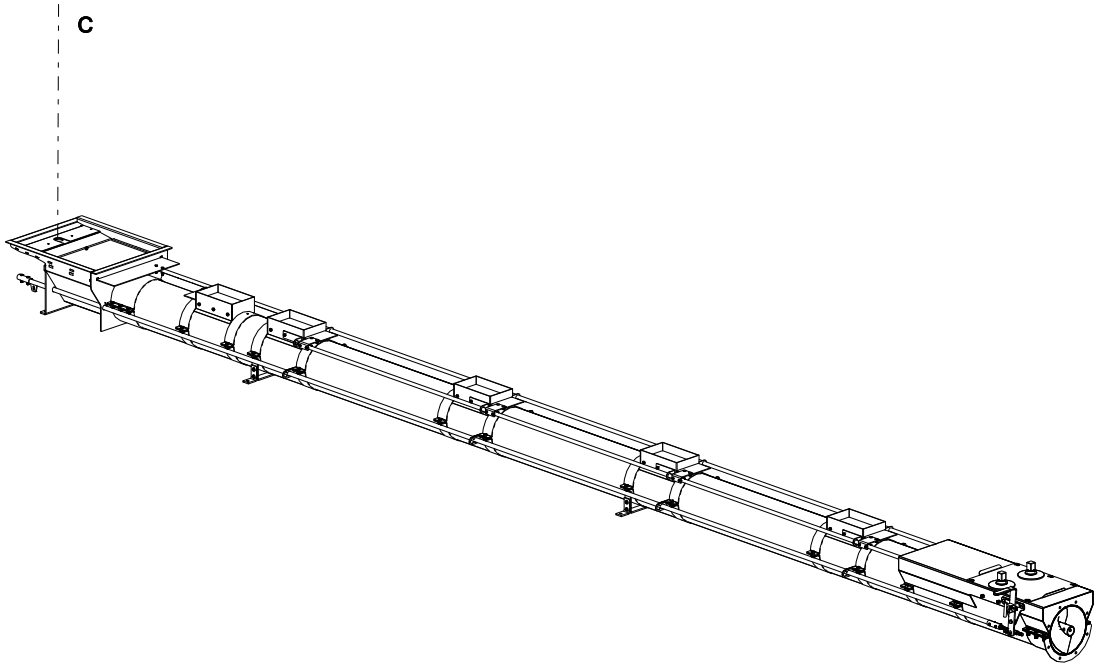
1. With the bin secured to the foundation, remove the bottom spacer sheet below the door by removing the 3/8” x 1–1/2” bolts and nuts (see Figure 9).

Figure 9. Spacer Sheet



2. Slide the underfloor auger through the space underneath the bin door and align the center sump vertical gearbox shaft hole exactly at the bin center point (C) (see Section 6.2. – Bin Floor Preparation on page 27). Insert the top and bottom access panels in the center sump temporarily to aid positioning (see Figure 10).

Figure 10. Install Underfloor Auger in Position



3. Level the underfloor auger using shims (not supplied) at every floor mount bracket. The underfloor auger must be level within 1/4” (6 mm) per 10’ (3048 mm) of span or not more than 1/2” (13 mm) for whole underfloor auger. This will prolong life and ensure smooth operation.
4. Anchor the underfloor auger to the bin floor using concrete anchor bolts through the holes in the factory-installed anchor legs. The anchor bolts are purchased separately according to type (see Section 5.3. – Required Materials on page 24).
   a. Install two concrete anchor bolts in the anchor legs nearest the center sump.
   b. Install the remaining concrete anchor bolts in the anchor legs at equal intervals along the remainder of the underfloor auger.
5. Cut an opening in the bottom spacer sheet (refer to Section 4.5. – Bin Wall Cutout on page 21).
6. Slide the spacer sheet over top of the unload and re-attach to the bin door using the existing 3/8” x 1–1/2” bolts and nuts.

Go to Section 6.4. – Install the Bin Adapter on page 34.

6.3.2 Install by Cutting a Bin Sheet in Place

This procedure describes cutting the opening for the underfloor auger with the sheet in place after the bin sidewall has been anchored to the foundation. This procedure requires some disassembly and reassembly of components in order to install the underfloor auger. This procedure is allowed for use with all bin manufacturers and for any appropriate sidewall sheet at the bin bottom (under the door and elsewhere).

Position the Underfloor Auger on the Bin Floor

Lift the underfloor auger and place it on the bin floor. Use proper lifting equipment (see Section 5.4. – Required Lifting Equipment on page 25).

Note

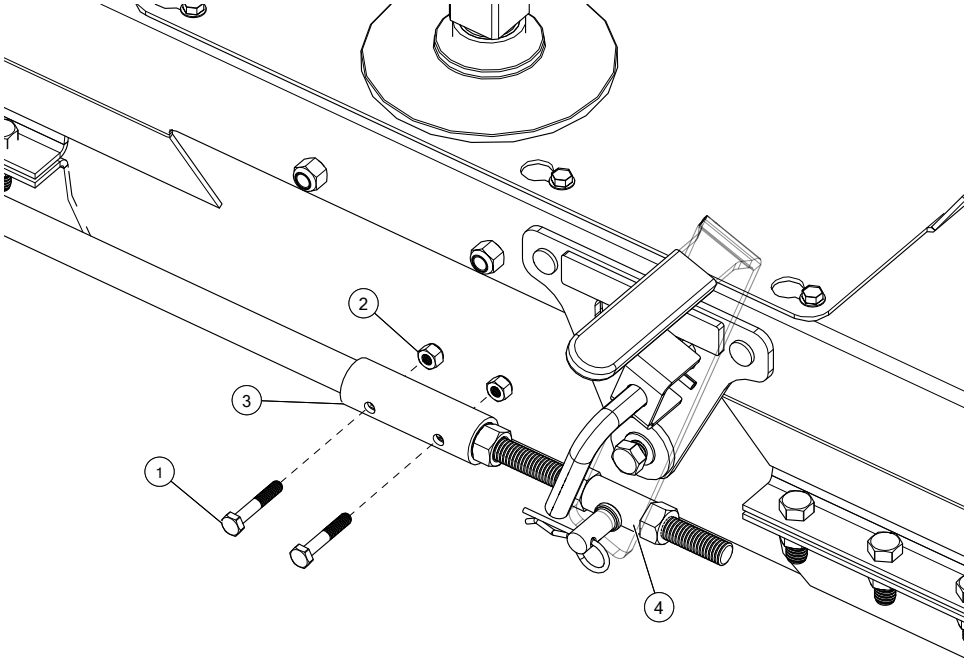
The bin unload does not need to be located at the center point of the bin at this stage of assembly.

Remove the Lower Gearbox Controls

Remove the lower gearbox controls to allow for the underfloor auger to clear the bin wall cutout and to enable the bin adapter to slide over the lower gearbox control rod.

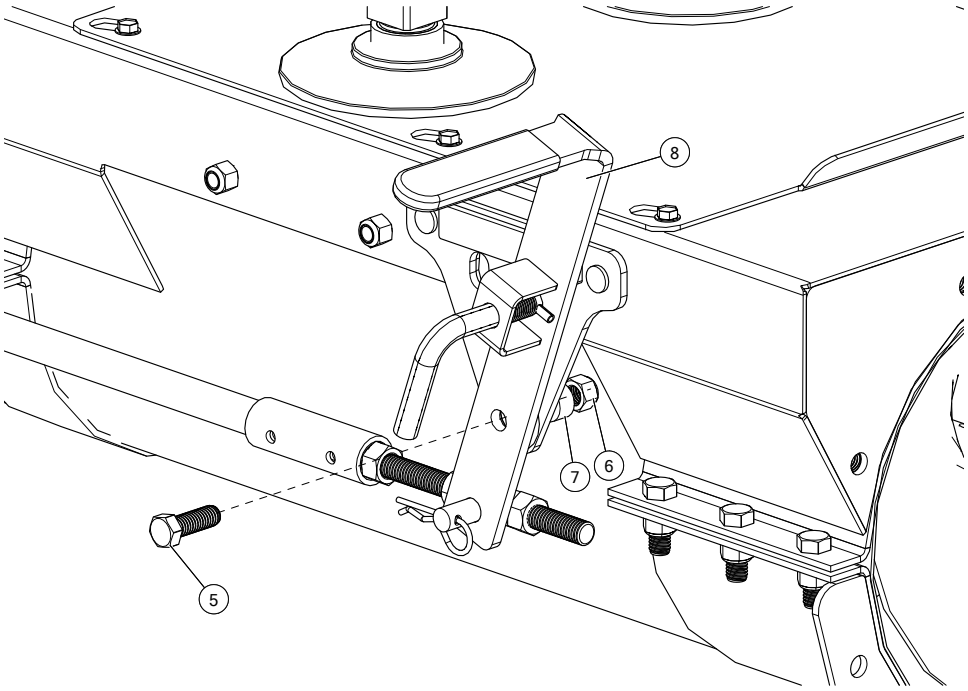
1. Remove the 1/4” x 1-1/2” bolts (1) and nylon locknuts (2) from the coupler (3) of the lower gearbox control rod (see Figure 11).

Figure 11. Unfasten the Coupler from the Gearbox Control Rod



2. Remove the 7/16” x 1–1/4” bolt (5), locknut (6), and bushing (7). Remove the gearbox shift lever (8) from the underfloor auger (see Figure 12).

Figure 12. Disconnect the Coupler from the Gearbox Control Rod

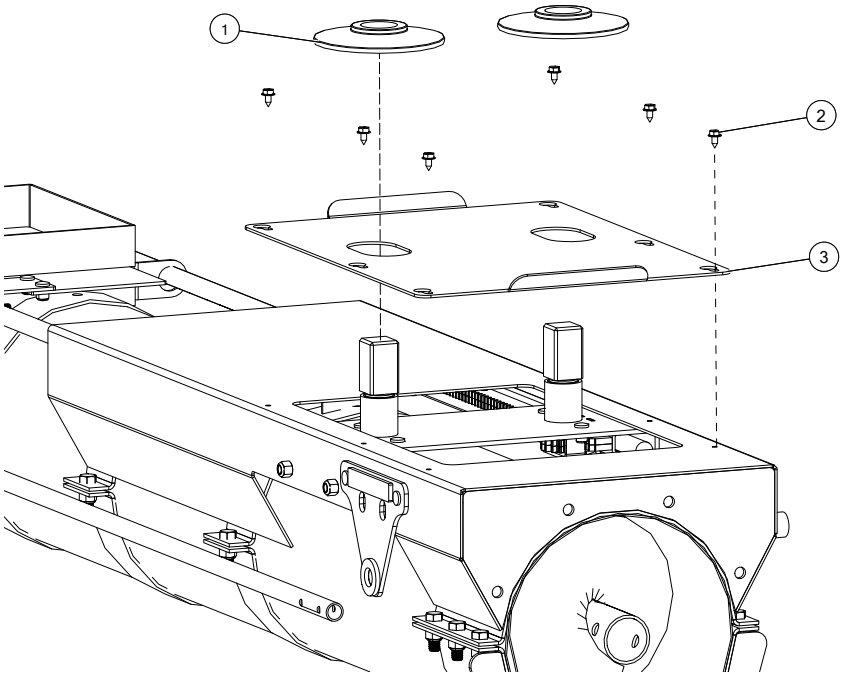


Remove the Sump Controls

Removing the Sump Controls allows sufficient clearance for the underfloor auger to slide out through the bin wall cutout.

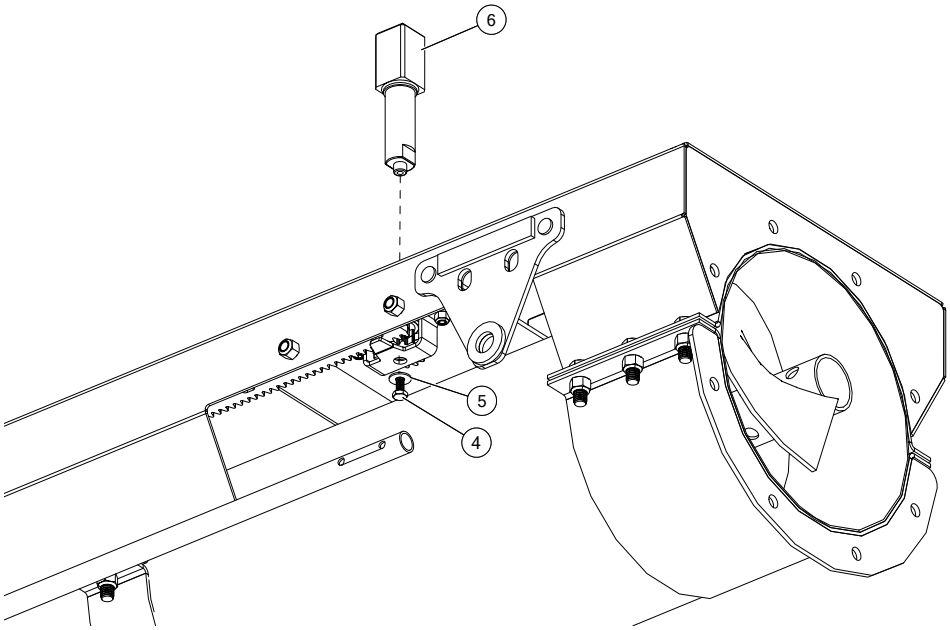
1. Remove the dust seals (1), six #14 x 1/2” self-tapping screws (2), and control cover (3) (see Figure 13).

Figure 13. Control Cover Disassembly



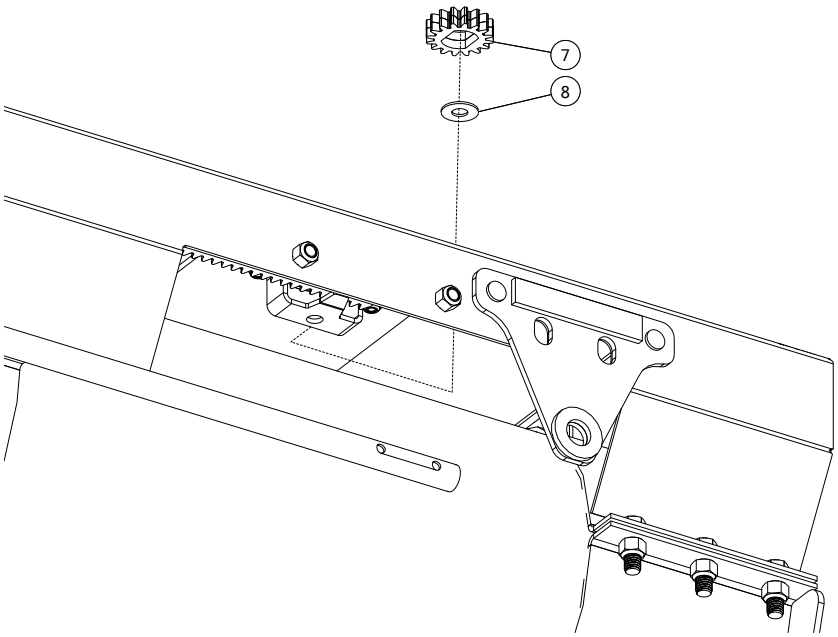
2. Remove the 1/4” x 3/4” bolt (4) and washer (5), and the control shaft (6) (see Figure 14). Do this for both control shafts.

Figure 14. Remove the Sump Control Shafts



3. Remove the pinion gears (7) and washers (8) for each control shaft (see Figure 15).

Figure 15. Remove the Pinion Gears

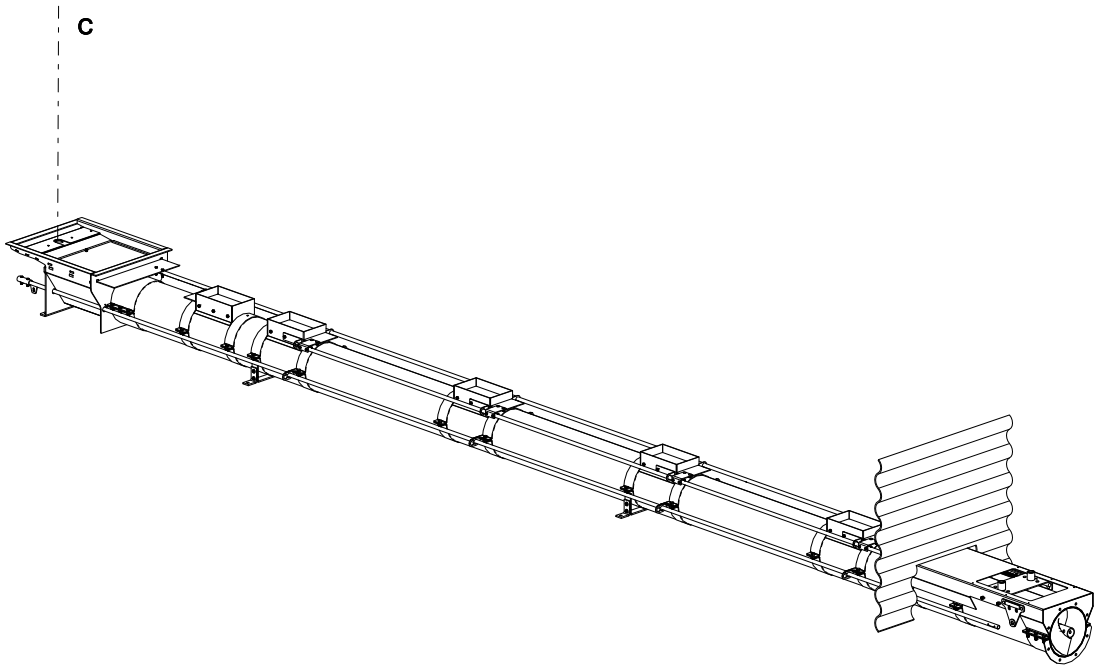


Install the Underfloor Auger in its Final Position

1. Cut an opening in the appropriate bin sheet (see Section 4.5. – Bin Wall Cutout on page 21).

2. Slide the underfloor auger through the bin wall cutout and align the center sump vertical gearbox shaft hole exactly at the bin center point (C) (see Section 6.2. – Bin Floor Preparation on page 27). Insert the top and bottom access panels in the center sump temporarily to aid positioning (see Figure 16).

Figure 16. Install Underfloor Auger in Position



3. Level the underfloor auger using shims (not supplied) at every floor mount bracket. The underfloor auger must be level within 1/4” (6 mm) per 10’ (3048 mm) of span or not more than 1/2” (13 mm) for whole underfloor auger. This will prolong life and ensure smooth operation.
4. Anchor the underfloor auger to the bin floor using concrete anchor bolts through the holes in the factory-installed anchor legs. The anchor bolts are purchased separately according to type (see Section 5.3. – Required Materials on page 24).
   a. Install two concrete anchor bolts in the anchor legs nearest the center sump.
   b. Install the remaining concrete anchor bolts in the anchor legs at equal intervals along the remainder of the underfloor auger.

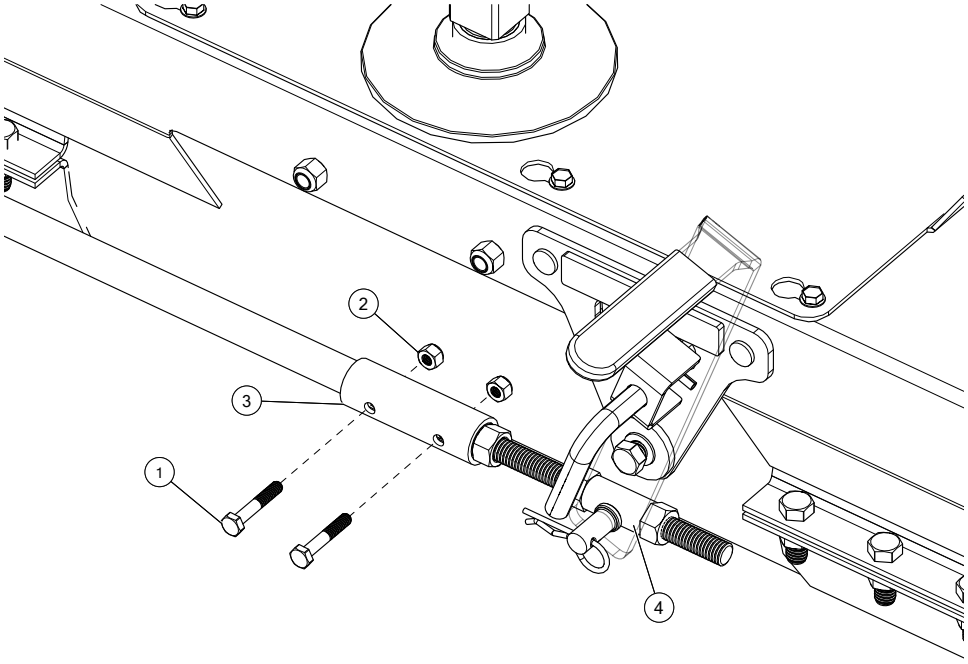
6.4. Install the Bin Adapter

Note

The bin adapter creates a seal to minimize aeration and heat losses (when applicable) and keeps snow and rodents out.

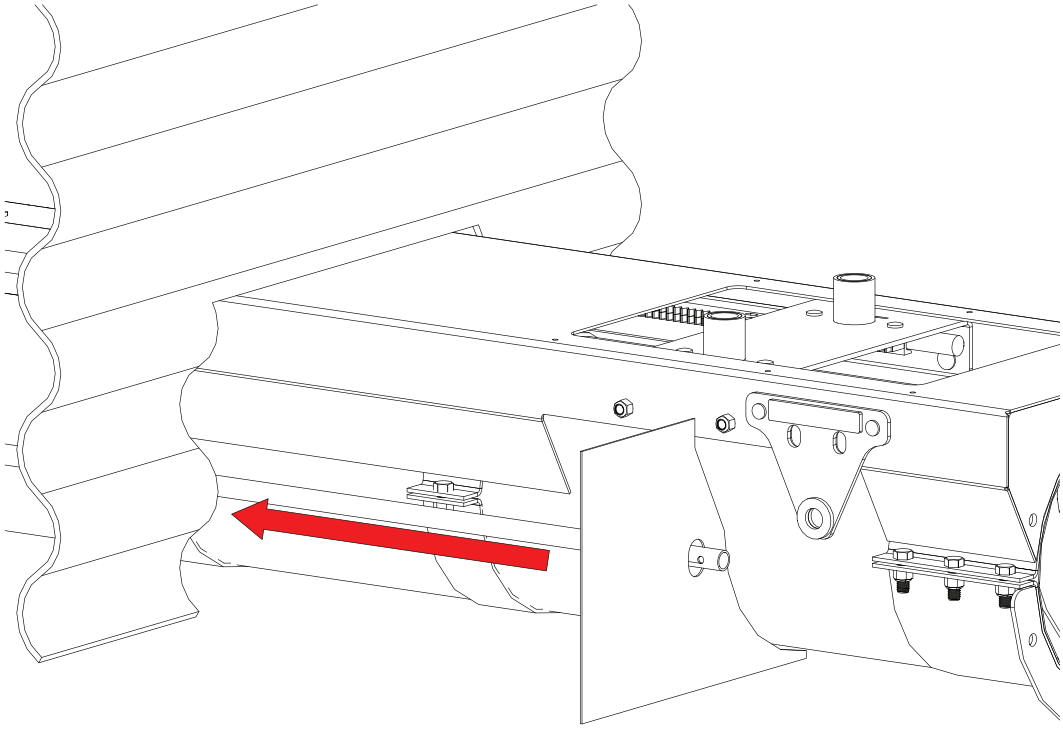
1. **For a Westeel or Twister bin:** If not done so already, remove the 1/4” x 1-1/2” bolts (1) and nylon locknuts (2) from the coupler (3) of the lower gearbox control rod (see Figure 17).

Figure 17. Unfasten the Coupler from the Gearbox Control Rod



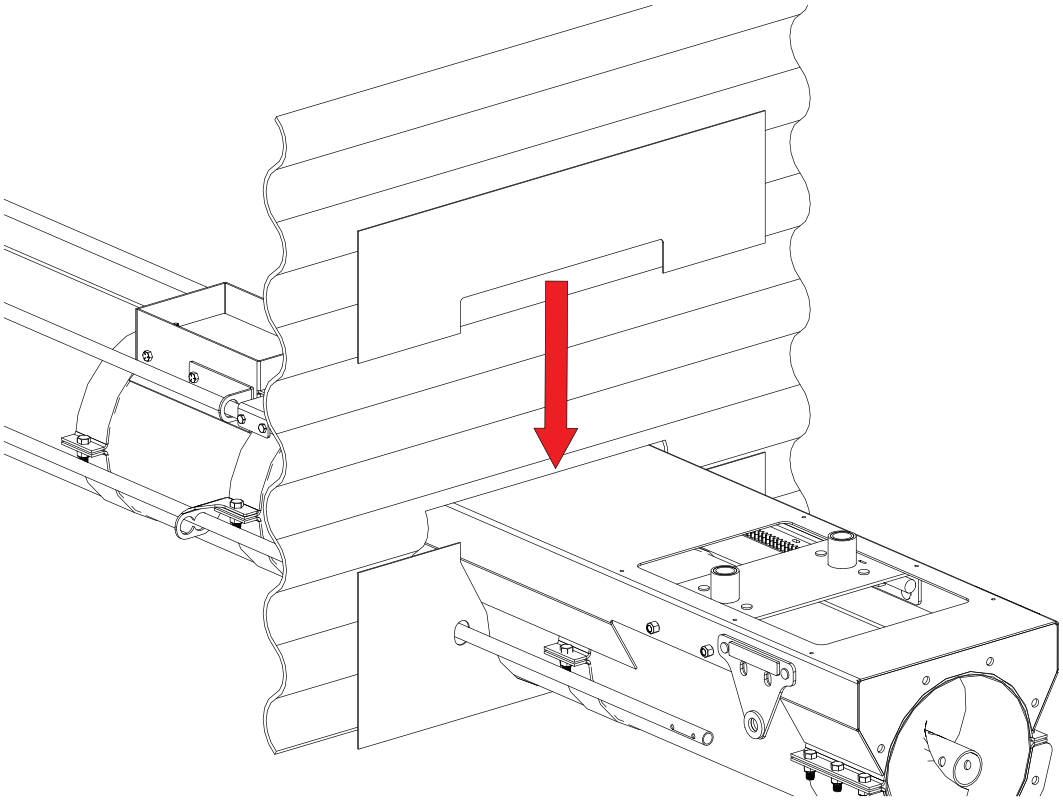
2. Slide the bin adapter piece onto the lower gearbox control rod and up against the bin wall (see Figure 18).

Figure 18. Slide Bin Adapter Piece on Lower Gearbox Control Rod



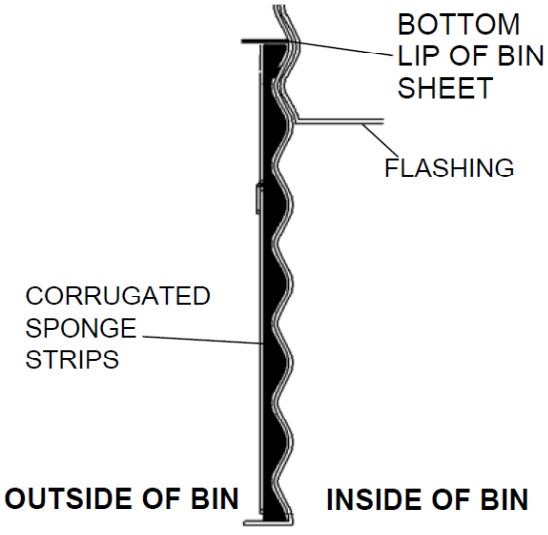
3. Place the other bin adapter side on the side of the tube and up against the bin wall.
4. Place the top piece behind the bin adapter lower pieces (see Figure 19).

Figure 19. Position Bin Adapter Top Piece



5. Push the bin adapter pieces up against the bin wall. Two corrugated sponge strips (not supplied) can be arranged as shown in Figure 20.

Figure 20. Sponge Strips

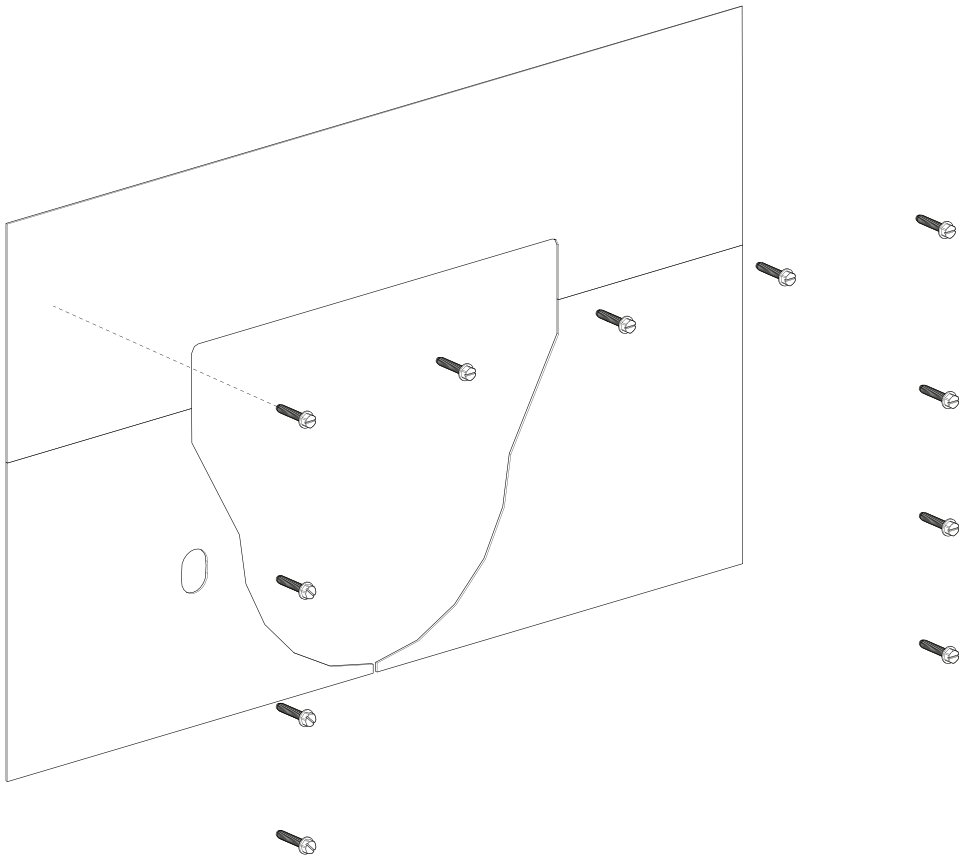


Important

Ensure that center sump, e-sump, intermediate sumps, and bin adapter are all level with each other during installation.

6. Securely fasten the bin adapter pieces to the bin wall using the eleven 1/4” self-tapping screws provided (see Figure 21). Fasten the screws to the “hills” in the corrugations on the bin wall sheet.

Figure 21. Bin Adapter Pieces



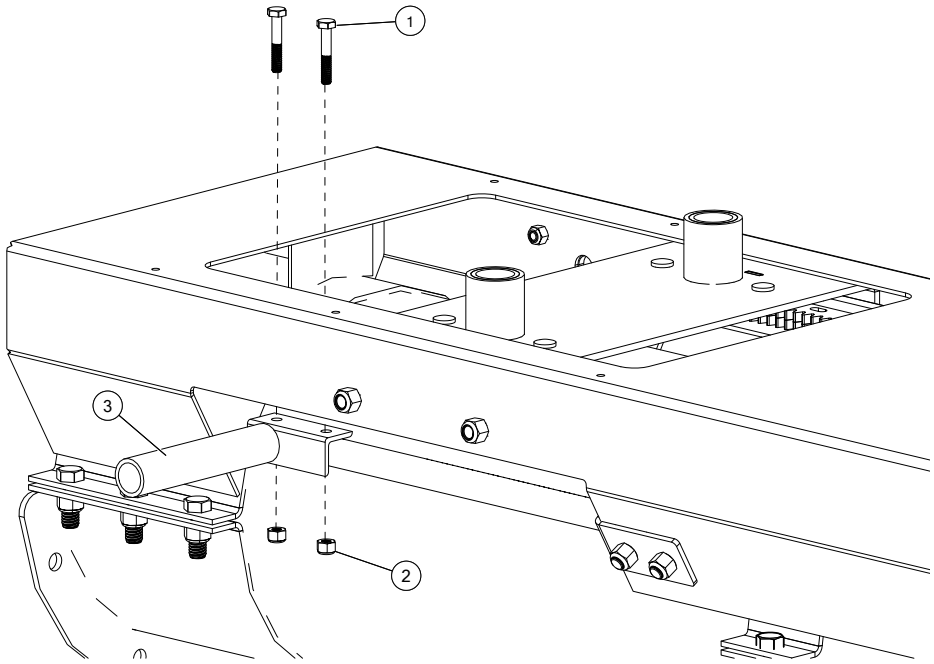
7. Apply spray foam (purchased separately) in the following locations for sealing:
   - Along the top and bottom seams of the bin adapter where it meets the bin wall.
   - If necessary, along the sides for further sealing in addition to the corrugated sponge strips.
   - Along the seam of the underfloor auger cover where it meets the bin adapter top piece.
   - Along the seam of the underfloor auger where it meets the bin adapter lower pieces.

6.5. Install the E-Sump Controls

This procedure describes how to install the e-sump controls on the underfloor auger.

1. Connect the handle (3) to the control rod with two 1/4” x 1-1/2” bolts (1) and nylon locknuts (2) (see Figure 22).

Figure 22. Install the E-Sump Control Handle

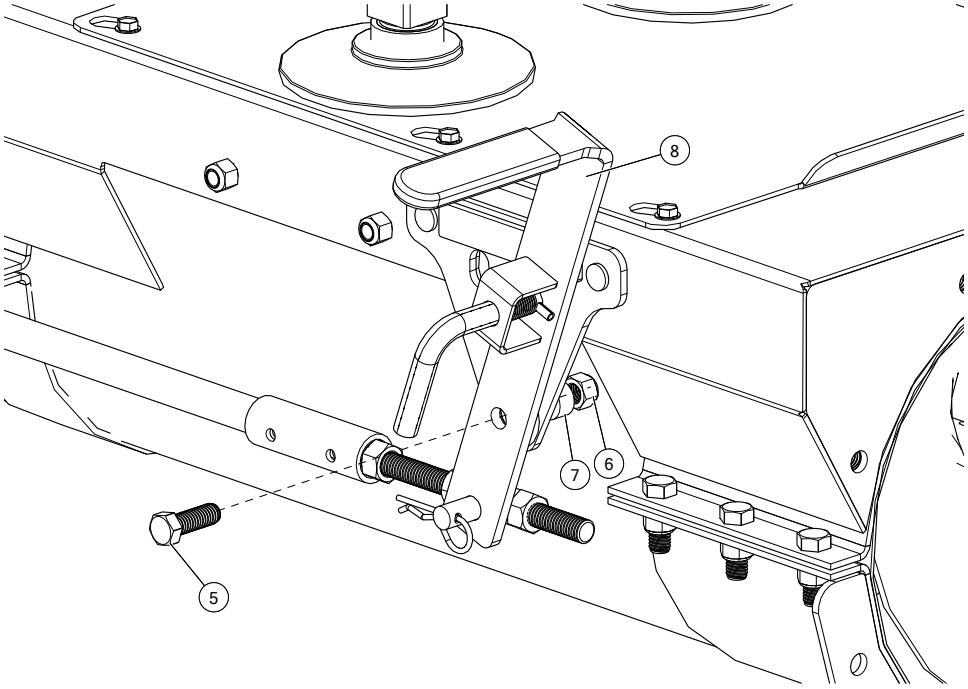


6.6. Re-Install the Lower Gearbox Controls

This section explains how to re-install the lower gearbox controls on the underfloor auger after it has been installed in the bin.

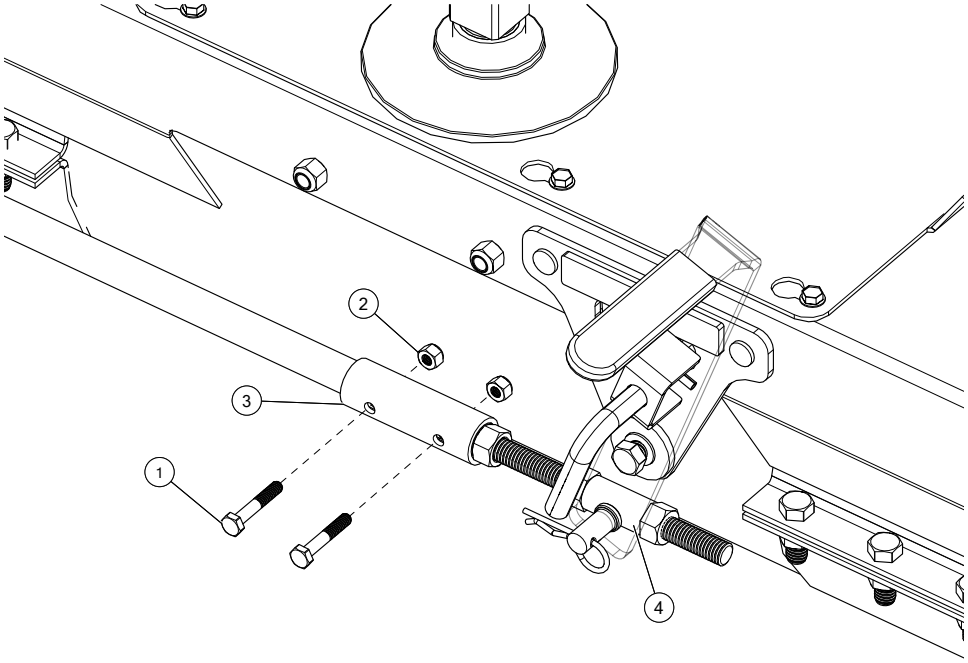
1. Connect the gearbox shift lever (8) to the underfloor auger with the previously removed 7/16” x 1–1/4” bolt (5), locknut (6), and bushing (7) (see Figure 23).

Figure 23. Connect the Gearbox Control Rod



2. Connect the coupler (3) to the lower gearbox control rod with the previously removed 1/4” x 1-1/2” bolts (1) and nylon locknuts (2) (see Figure 24).

Figure 24. Fasten the Coupler to the Gearbox Control Rod



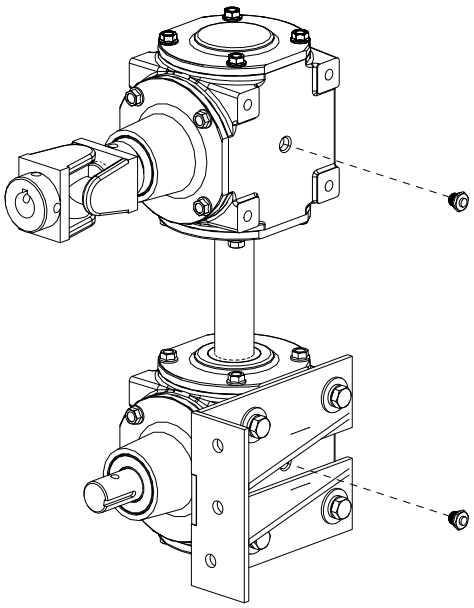
6.7. Install Tandem Gearboxes in the Center Sump

1. Confirm each gearbox is filled with gear oil.

   Note

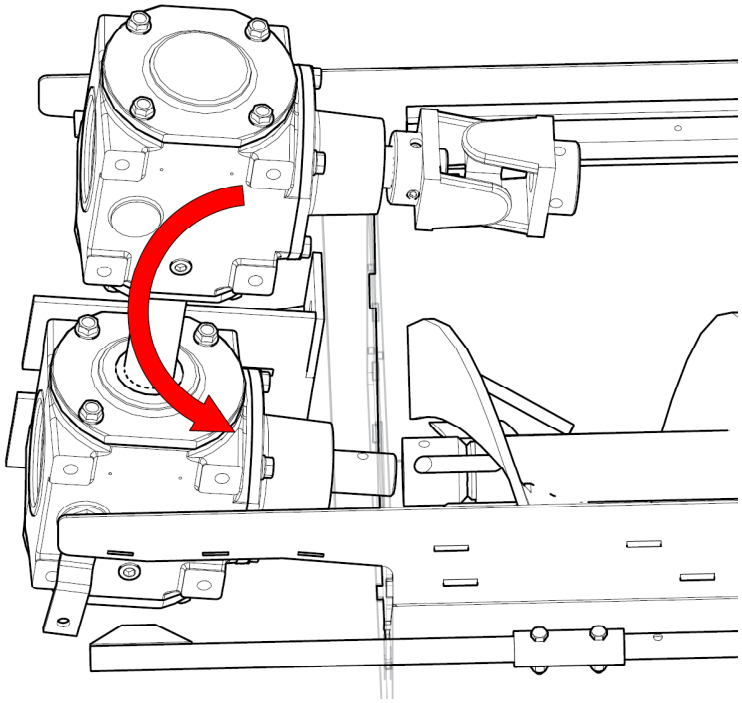
   Gearboxes are supplied from the factory with EP90 gear oil up to the vented fill plug. Keep the tandem gearboxes level when filling or checking the oil level, as shown in Figure 25.

Figure 25. Check the Oil Level



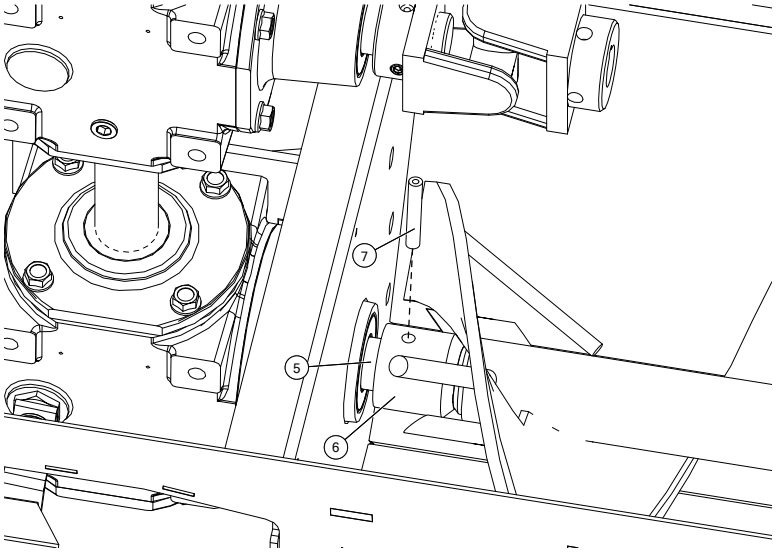
2. Fully open the center sump gate and tilt the tandem gearboxes into the center sump and insert the lower gearbox shaft through the hole in the center sump divider wall (see Figure 26).

Figure 26. Install the Tandem Gearboxes



3. Secure the lower gearbox shaft (5) to the flighting coupler (6) with a 1/4” x 1-1/2” key (not shown) and spring pin (7) (see Figure 27).

Figure 27. Attach Flighting to Lower Gearbox

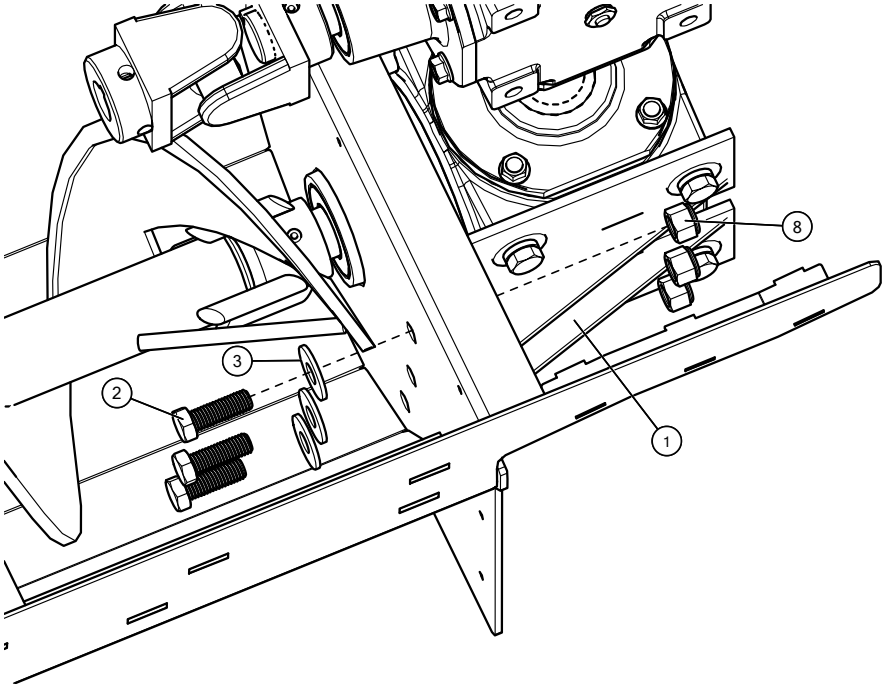


4. Fasten the gearbox mount bracket (1) to the center sump divider wall using three 1/2” x 1-1/2” bolts (2), flat washers (3), and nylon locknuts (8) (see Figure 28).

Note

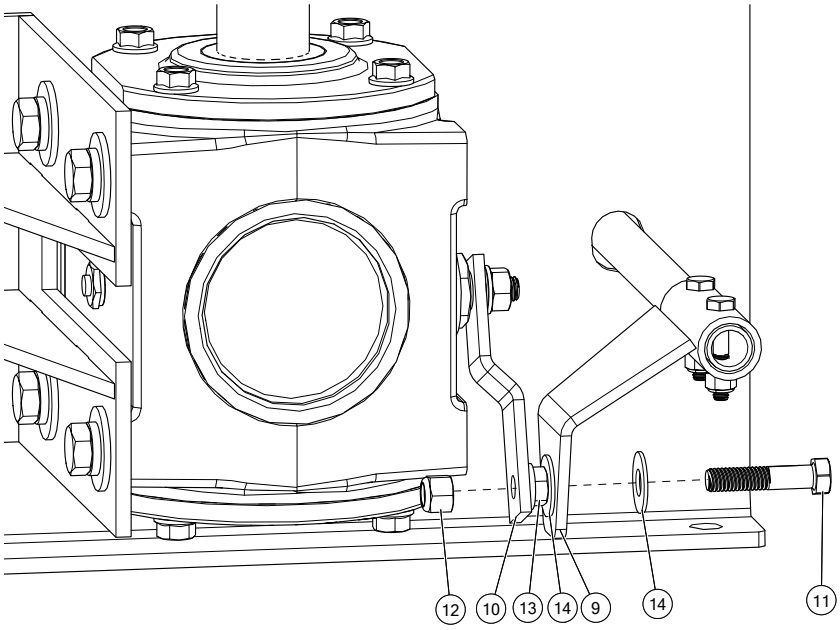
For the bottom mount hole, there are two sets of micro-jointed holes, depending on the size of tube unload. For an 8” unload, punch out the lowest hole. For a 10” unload, punch out the upper offset hole.

Figure 28. Attach Gearbox Mount Bracket to Center Sump Divider Wall



5. Ensure the tandem gearboxes are vertically aligned. If the gearboxes are not vertically aligned, loosen the bolts holding the mount bracket to the gearbox, align the gearboxes vertically, and fully tighten the bolts.
6. Connect the shifter control rod bracket (9) to the lower gearbox linkage (10) with a 3/8” x 1-3/4” bolt (11), a nylon locknut (12), and a serrated flange nut (13) and two flat washers (14) (see Figure 29).

Figure 29. Connect Lower Gearbox Shifting Linkage to Control Rod

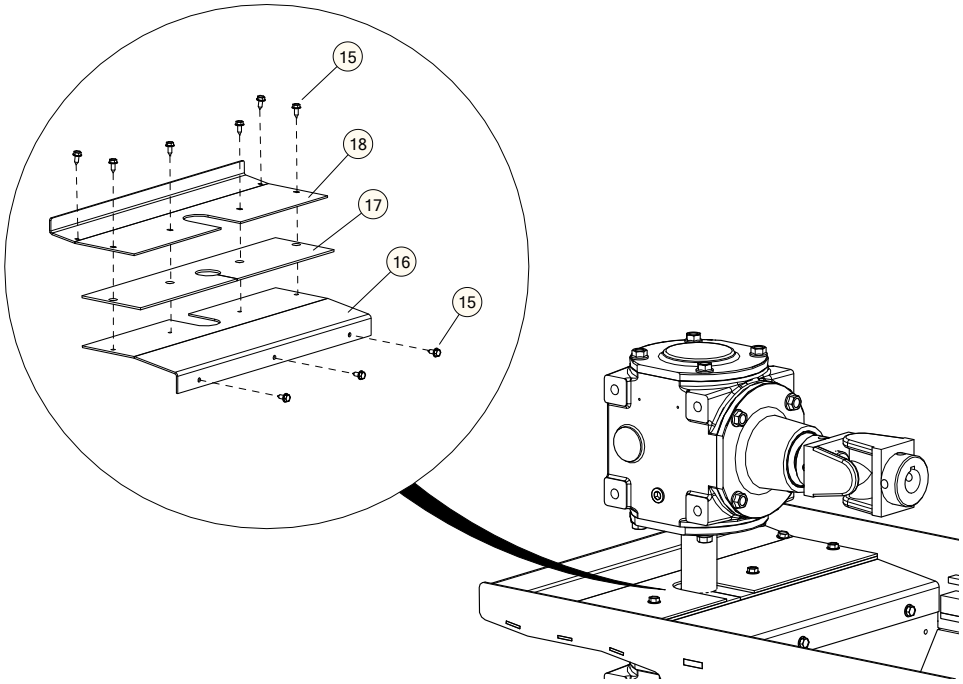


7. Install the bottom access panel (16), rubber seal (17), and top access panel (18) with six #14 x 5/8” self-tapping screws (15) (see Figure 30).

Note

The seam of the rubber seal (17) in must be oriented as shown to ensure grain leakage is avoided.

Figure 30. Install Access Panels and Seal over Lower Gearbox



6.8. Floor Plank Completion and Sump Grates

1. Before installing the floor planks, check that all bolts and nuts on the underfloor auger are tight.
2. Install floor planks at a right angle across the top of the underfloor auger. While installing the floor planks, periodically check the function of the center sump gate, e-sump gate (when equipped), intermediate sump gates, and lower gearbox engagement to ensure no control mechanisms interfere with the floor supports. If there is interference, slightly adjust the position of the floor support(s).
3. Cut the planks as necessary around the center sump, e-sump (when equipped), and intermediate sumps.
4. Apply silicon sealant or neoprene rubber (not supplied) around the edge of each sump and screw the top surfaces of each sump grate to the floor planks using the #14 x 5/8” self-tapping screws provided (see Figure 31 and Figure 32).

Figure 31. Install Center Sump Grate

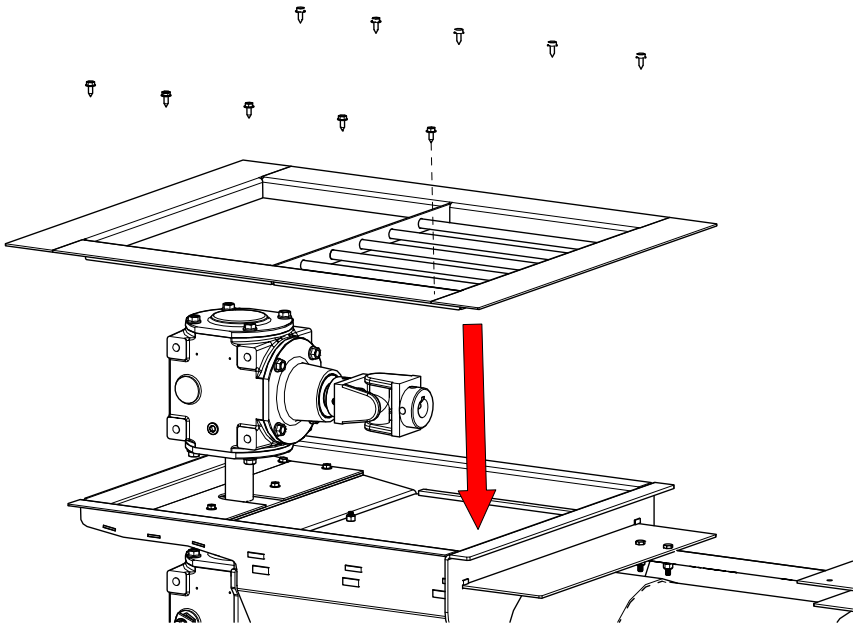
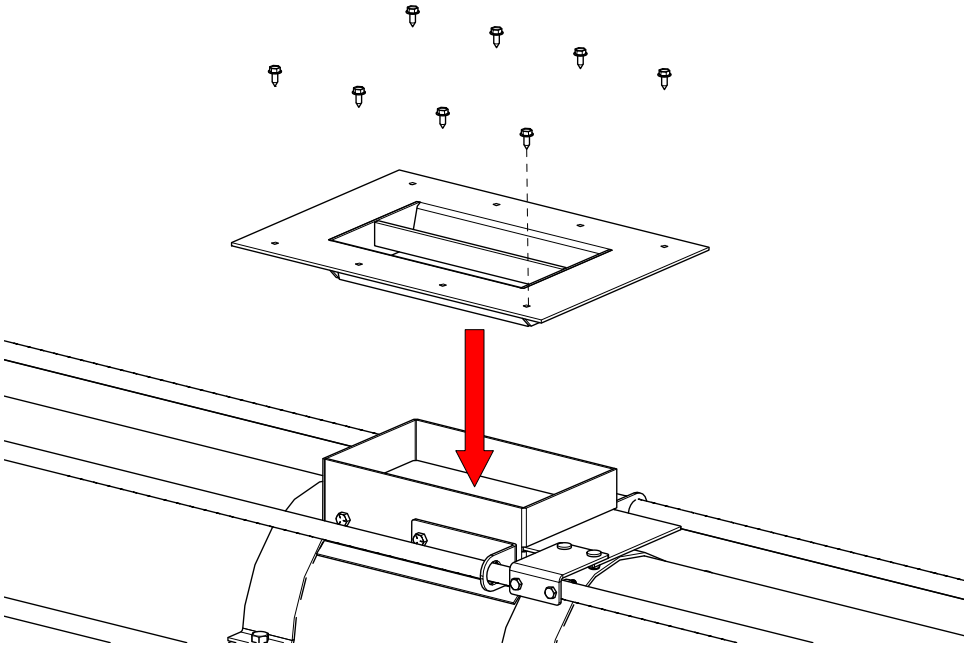


Figure 32. Install Grate(s) for Intermediate Sump(s) and E-Sump (when equipped)

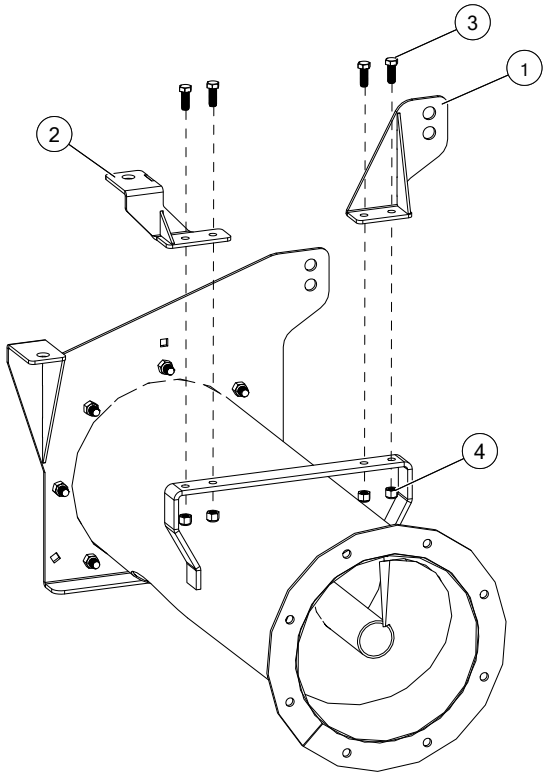


6.9. Assemble the Horizontal Powerhead

➡ When equipped with a horizontal powerhead:

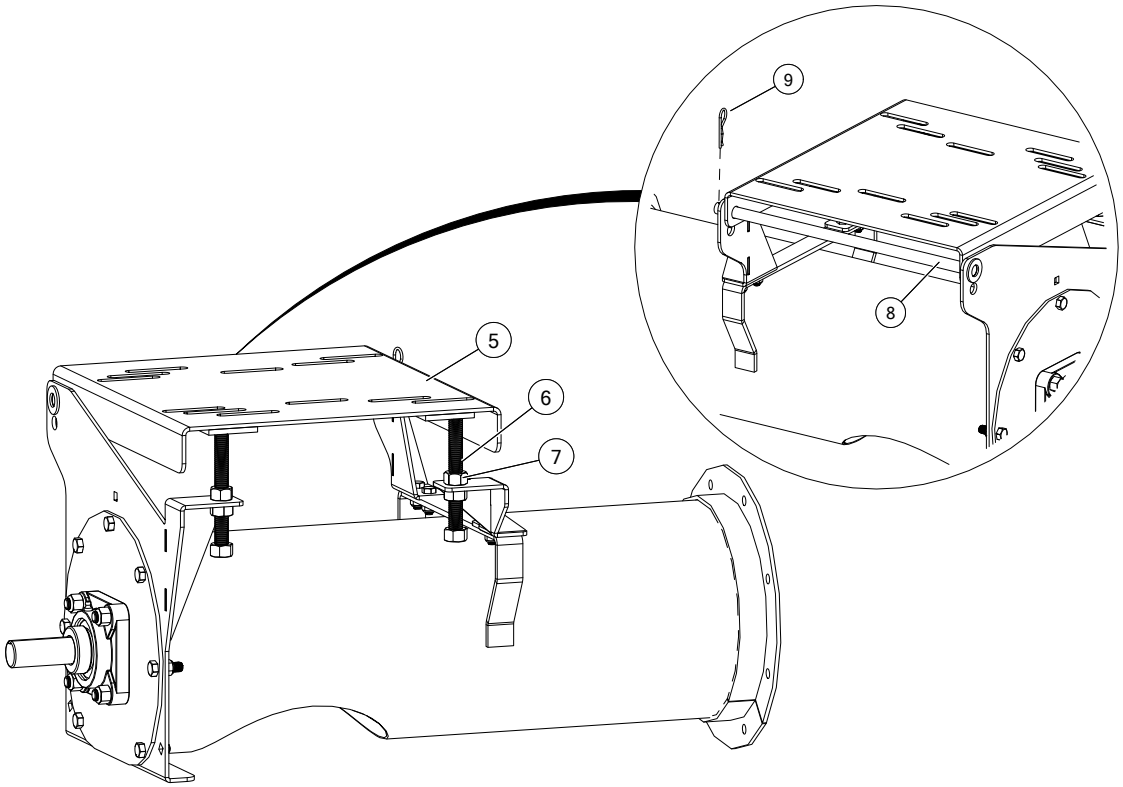
1. Install the rear mount plate (1) and support bracket (2) onto the powerhead using four 3/8” x 1” bolts (3) and nylon locknuts (4) (see Figure 33).

Figure 33. Rear Mount Plate and Support Bracket Installation



2. Install the motor mount plate (5) onto the powerhead by inserting a hinge pin (8) through the flange and plate on the powerhead, through the motor mount plate holes, and through the rear mount plate (see Figure 34). Secure the hinge pin with a cotter pin (9). On the other side of the mount plate, install two 5/8” adjustment bolts (6) and secure with four hex nuts (7).

Figure 34. Install the Motor Mount Plate



3. Pull out the underfloor flighting (10) far enough to access the two holes in the end of flighting. Fasten the discharge flighting (11) onto the underfloor flighting (10) with the following hardware (see Figure 35):

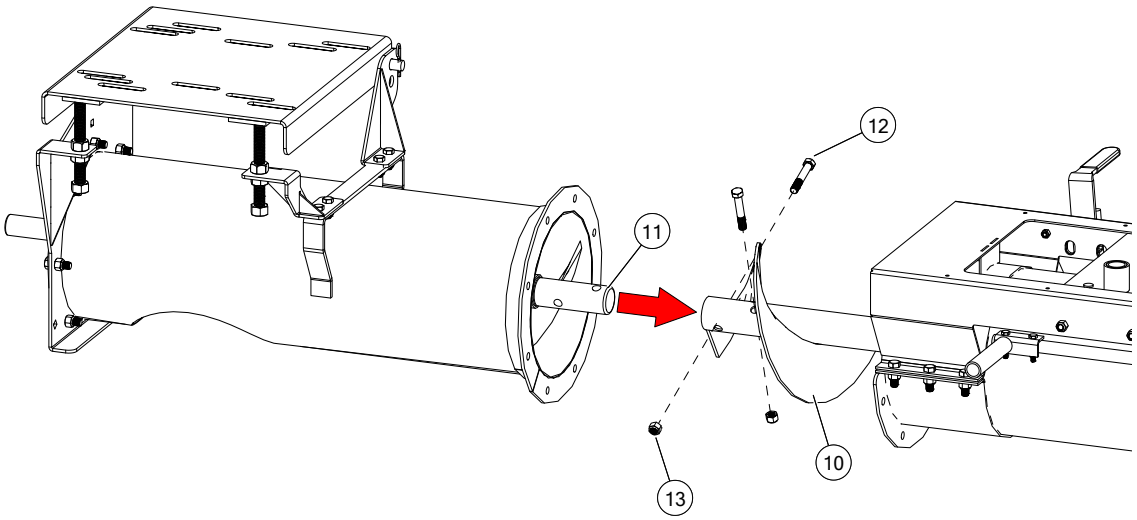
   8" Tube Unload: two 7/16” x 2-1/4” bolts (12) and nylon locknuts (13)

   10" Tube Unload: two 1/2” x 2-3/4” bolts (12) and nylon locknuts (13)

   Important

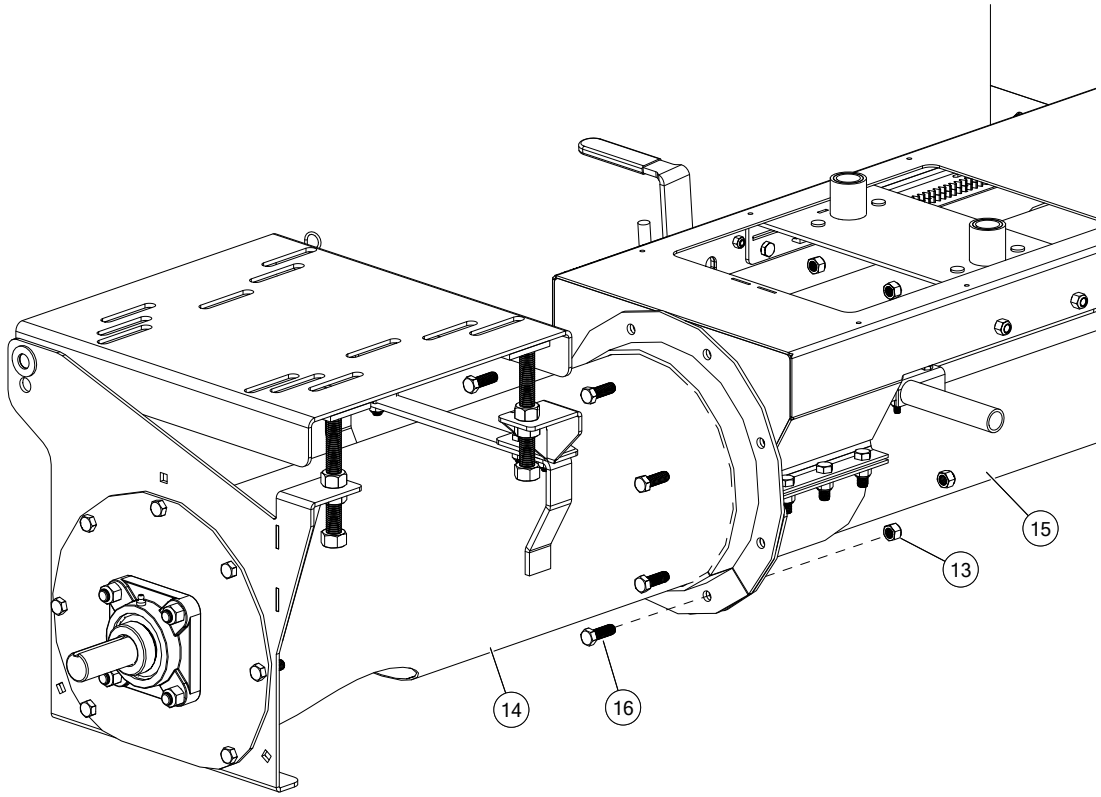
   Make sure that the discharge flighting is bolted onto the underfloor flighting so that the flightings are synchronized (the helical pattern continues across the bolted connection). If the connection is bolted a half-rotation out of position, it will not result in proper/optimum grain flow performance during operation.

Figure 35. Fasten Discharge Flighting onto Underfloor Auger Flighting



4. Push the underfloor flighting all the way back into the underfloor auger, ensuring that the opposite end of the flighting is securely fitted onto the flighting coupler connected to the lower gearbox shaft in the center sump (see Figure 27 on page 41).
5. **For a Westeel or Twister bin:** If not done so already, remove the dust seals, six #14 x 1/2” self-tapping screws, and control cover (see Figure 13 on page 32).
6. Mount the powerhead (14) onto the underfloor auger (15) with eight 7/16” x 1-1/4” bolts (16) and nylon locknuts (13) (see Figure 36).

Figure 36. Mount Powerhead on the Underfloor Auger



6.10. Assemble the Incline Powerhead

➡ When equipped with an incline powerhead:

1. Pull out the underfloor flighting (1) far enough to access the two holes in the end of flighting. Install the transition stub shaft (2) with the following hardware, and tighten securely (see Figure 37).

   8" Tube Unload: two 7/16" x 2-1/4" bolts (3) and nylon locknuts (4)

   10" Tube Unload: two 1/2" x 2-3/4" bolts (3) and nylon locknuts (4)

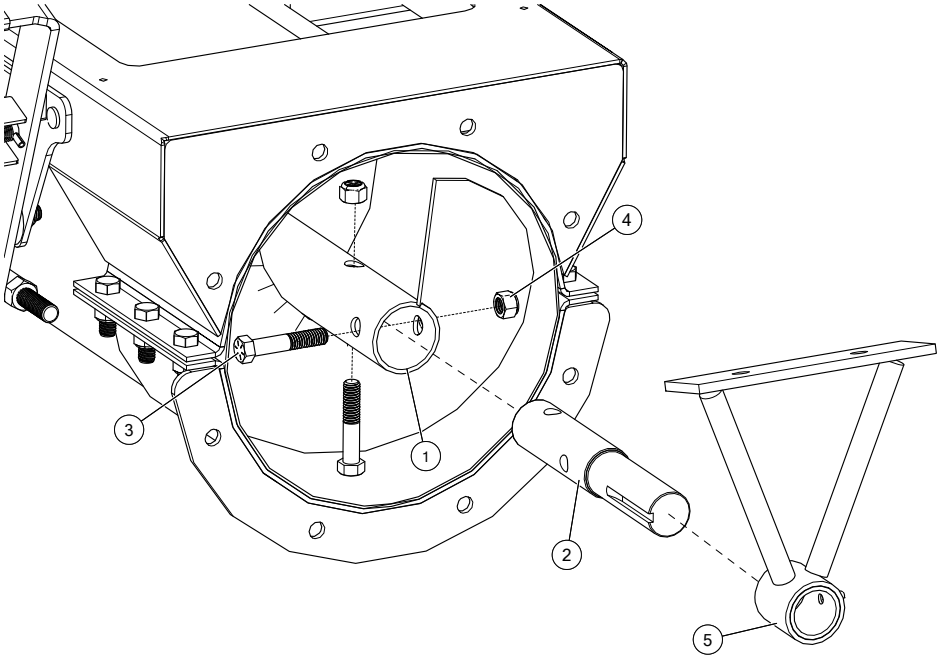
2. Push the underfloor flighting all the way back into the underfloor auger, ensuring that the opposite end of the flighting is securely fitted onto the flighting coupler connected to the lower gearbox shaft in the center sump (see Figure 27 on page 41).

3. Slide the support bushing (5) onto the transition stub shaft (2).

   Important

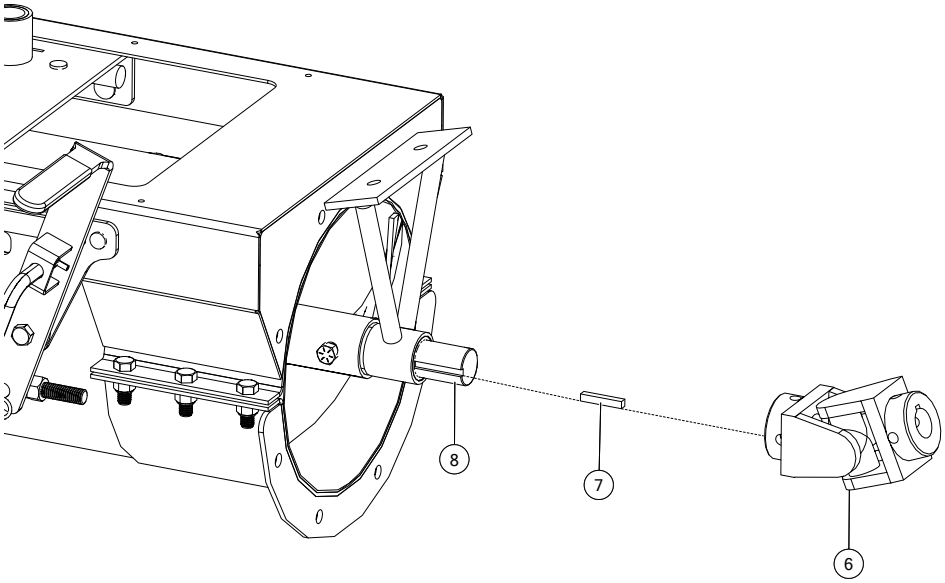
   Clean off all debris from the stub shaft and the inside of the bushing before fitting them together.

Figure 37. Install Transition Stub Shaft



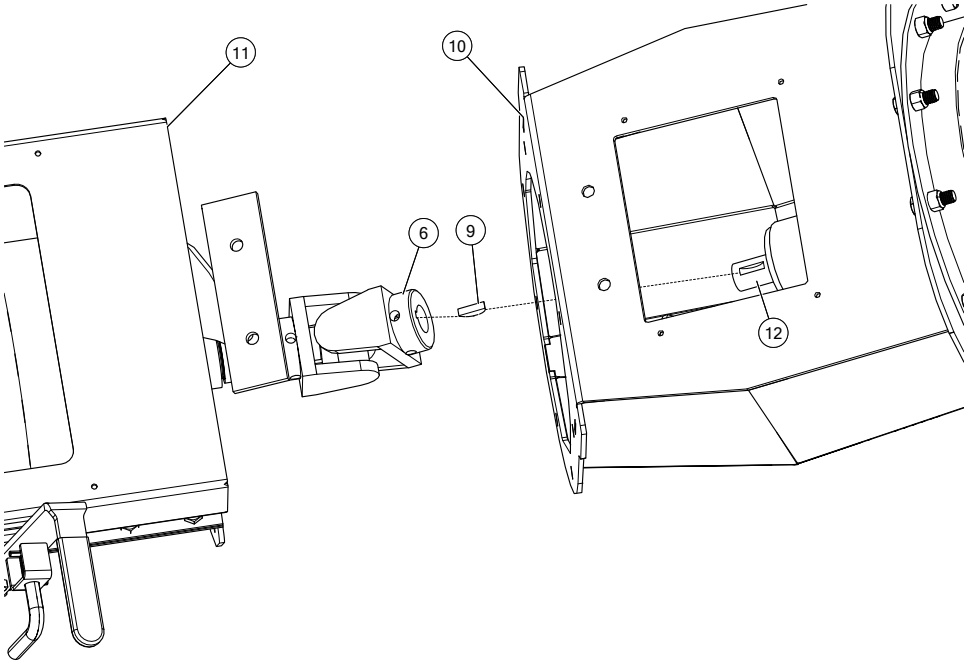
4. Slide the universal joint (6) and 1/4” square key (7) onto the remainder of the transition stub shaft (8) (see Figure 38 on page 49). Leave the universal joint loose, in preparation for later adjustment.

Figure 38. Connect Universal Joint onto Transition Stub Shaft



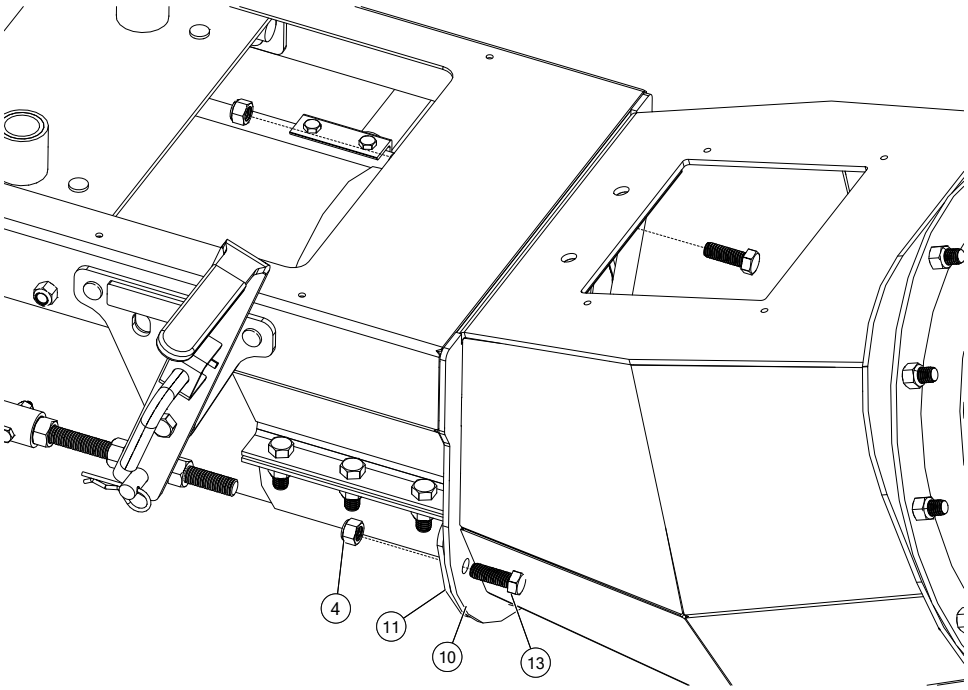
5. Slide the incline assembly (10) to the underfloor auger (11) while sliding the stub shaft of the incline flighting (12) and 1/4” Woodruff key (9) into the universal joint (6) (see Figure 39).

Figure 39. Connect Incline Assembly to Underfloor Auger



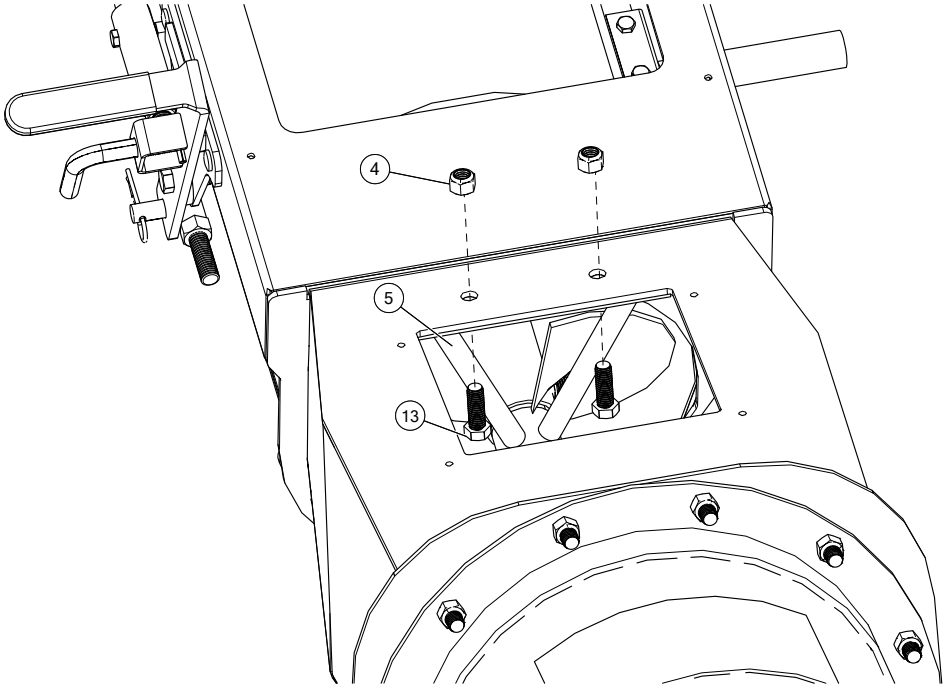
6. Fasten the flange of the incline assembly (10) to flange of the underfloor auger (11) using eight 7/16” x 1-1/4” bolts (13) and nylon locknuts (4) (see Figure 40).

Figure 40. Fasten the Incline Assembly to the Underfloor Auger



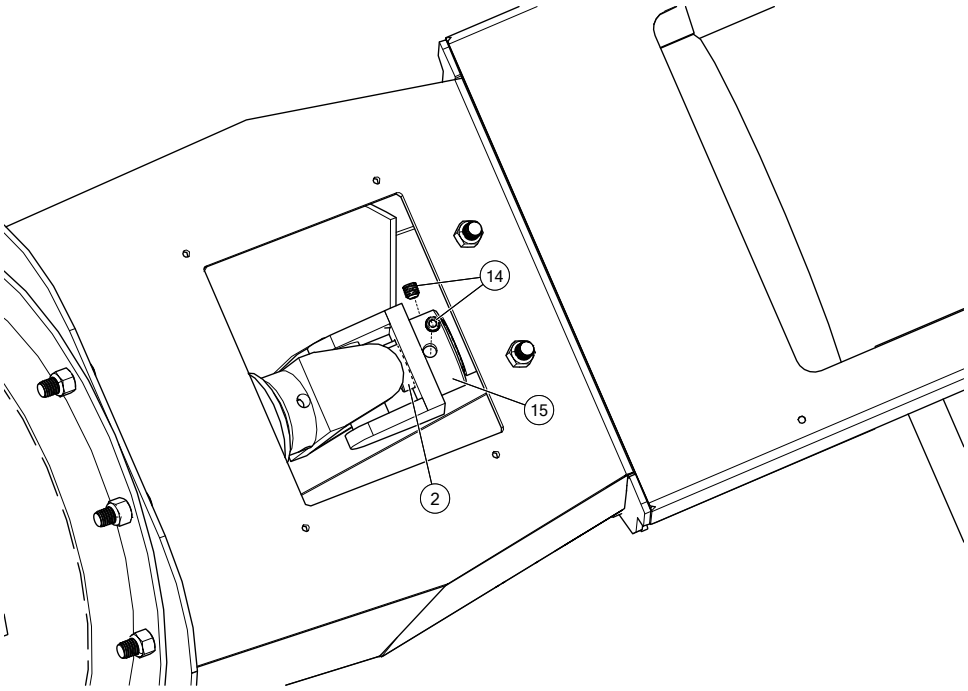
7. Fasten the support bushing (5) into the holes of the transition of the incline auger using two 7/16” x 1-1/4” hex bolts (13) and nylon locknuts (4) (see Figure 41).

Figure 41. Fasten the Support Bushing



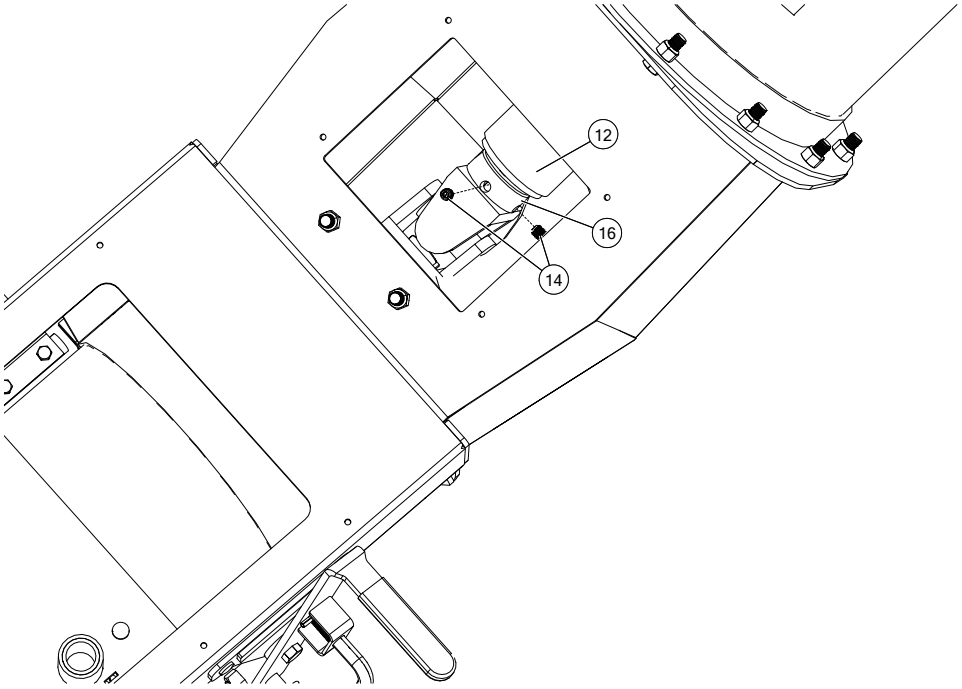
8. Tighten two 3/8” set screws (14) in the two threaded holes of the universal joint end (15) which is connected to the transition stub shaft (2) (see Figure 42).

Figure 42. Secure Set Screws in Universal Joint for Transition Stub Shaft



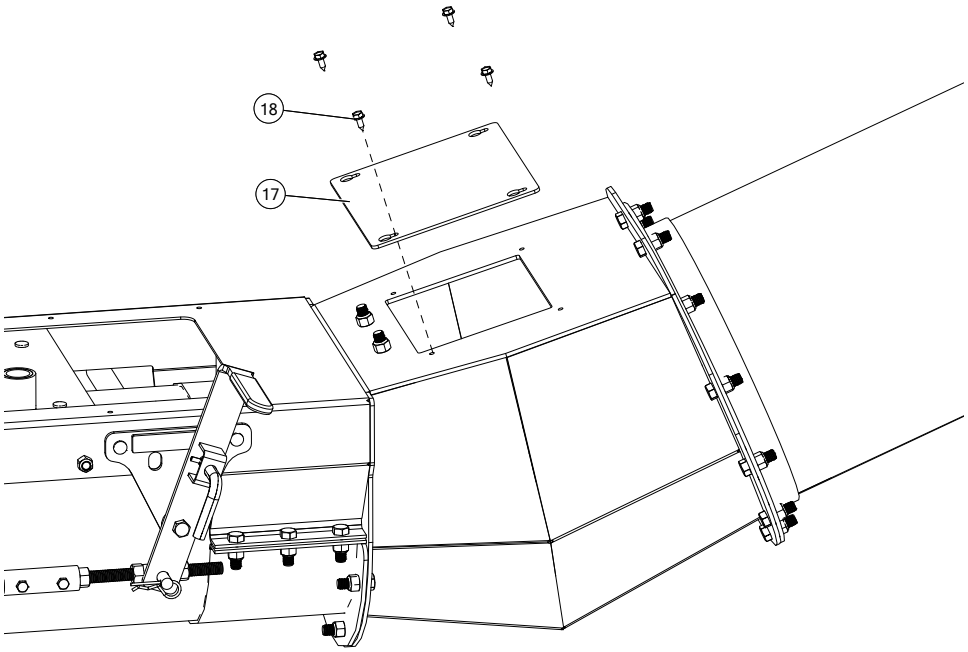
9. Tighten two 3/8” set screws (14) in the two threaded holes of the universal joint end (16) which is connected to the incline flighting stub shaft (12) (see Figure 43).

Figure 43. Secure Set Screws in Universal Joint for Incline Flighting



10. Attach the inspection door (17) to the incline assembly using the #14 x 5/8” self-tapping screws (18) provided (see Figure 44).

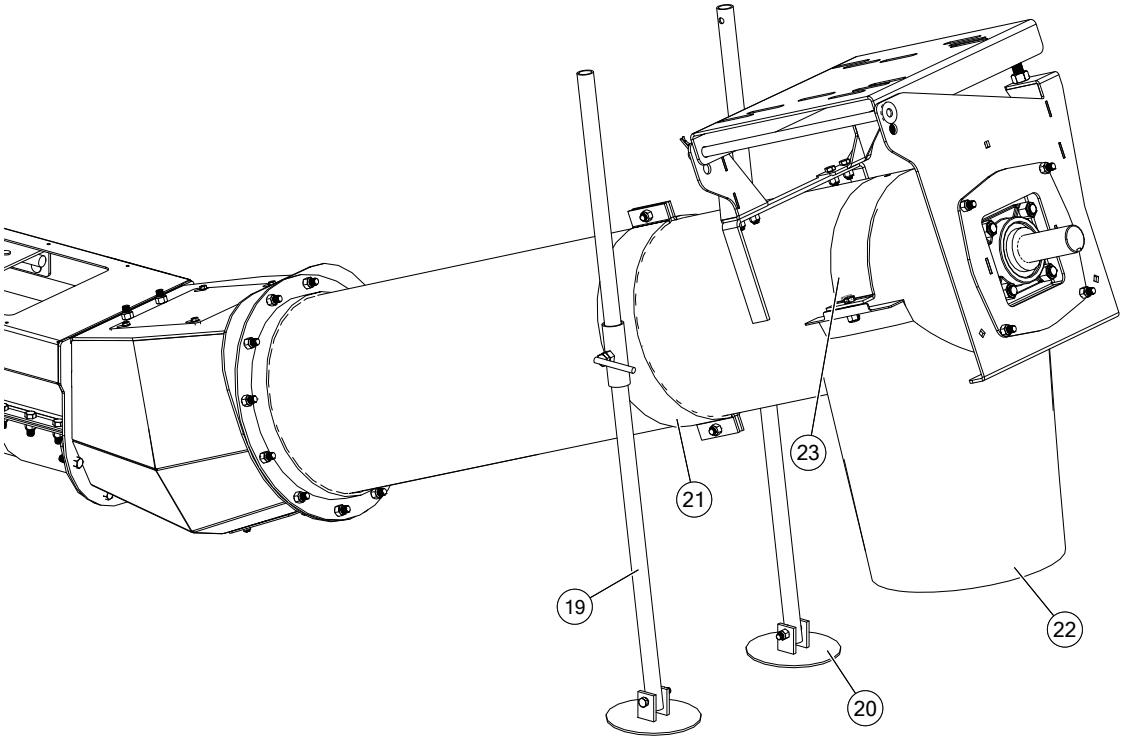
Figure 44. Attach Inspection Doors



11. Attach the incline adjust legs (19) to the incline adjust bases (20) using two 3/8” x 2–1/2” bolts and locknuts (see Figure 45).
12. Mount the incline adjust clamps (21) to the powerhead tube using two 7/16” x 1–1/4” bolts and locknuts.

13. Slide the incline adjust legs through the incline adjust clamp tubes to the desired height and secure using two incline adjust bolts.
14. Mount the spout (22) to the powerhead tube using a half clamp (23) and two 7/16” x 1–1/4” bolts and locknuts.

Figure 45. Assembled Incline



6.11. Reassemble Sump Control Shafts

To reassemble the sump control shafts, follow the reverse order of the steps in Remove the Sump Controls on page 32, and ensure all bolts and nuts are tight.

6.12. Electric Motor Installation / Alignment

1. Place the electric motor (1) onto the motor mount (2) and secure with the motor mounting hardware (see Figure 46 on page 55). Ensure that the motor shaft is parallel to and centered on the discharge end. Align the ends of the motor shaft and flighting shaft with a straight edge.
2. Have a qualified electrician perform the electrical connections and wiring to the electric motor. Ensure the requirements in 2.5.1 Electric Motor Safety on page 8 are met. See also Table 12 on page 72.
3. Attach the pulley guard backplate (3) to the face of the powerhead using three 3/8” x 1” bolts (4), flat washers (5), and nylon locknuts (6). The backplate should sit flush with the head plate. Do not tighten bolts/nuts at this time; the backplate will need to be aligned later on.
4. **For two-piece drive pulleys only:** Install the drive pulley (7A) (see Table 13 on page 72 for available pulley sizes, depending on desired flighting speed) using a 3/8” x 3” square key (8), hub (9), three bolts (11), three

lock washers (10), and set screw (12). Align the drive pulley face flush with the end of the motor shaft and tighten. Do not tighten set screw until belts are aligned.

5. **For finished bore drive pulleys only:** Install the drive pulley (7B) (see Table 13 on page 72 for available pulley sizes, depending on desired flighting speed) using a 3/8” x 3” square key (8) and set screw (12). Align the drive pulley face flush with the end of the motor shaft and tighten. Do not tighten set screw until belts are aligned.
6. Install the large unload pulley (13) onto the flighting shaft using a 1/4” x 2-1/2” square key (14) (see Table 13 on page 72 for available pulley sizes, depending on desired flighting speed). DO NOT tighten set screws (not shown).
7. Place the belts (15) on the pulleys (7, 13).
8. Align the two pulleys using a straight edge, ensuring that the large unload pulley is flush against the bearing lock collar.
9. To tension the belts, adjust the motor mount hinge pin (17) to the hole position that will keep the motor level and fully tension the belts. The hole selected will depend on the pulley diameters and the motor size (height between motor shaft and motor legs). Rotate the 5/8” threaded rod (19) until the belts have approximately 1/4" – 1/2" (6 mm – 13 mm) deflection when a 5 lb (22 N) force is applied at the belt center.

   Note

   The correct operating tension is the lowest tension at which the belts will not slip under peak load conditions.

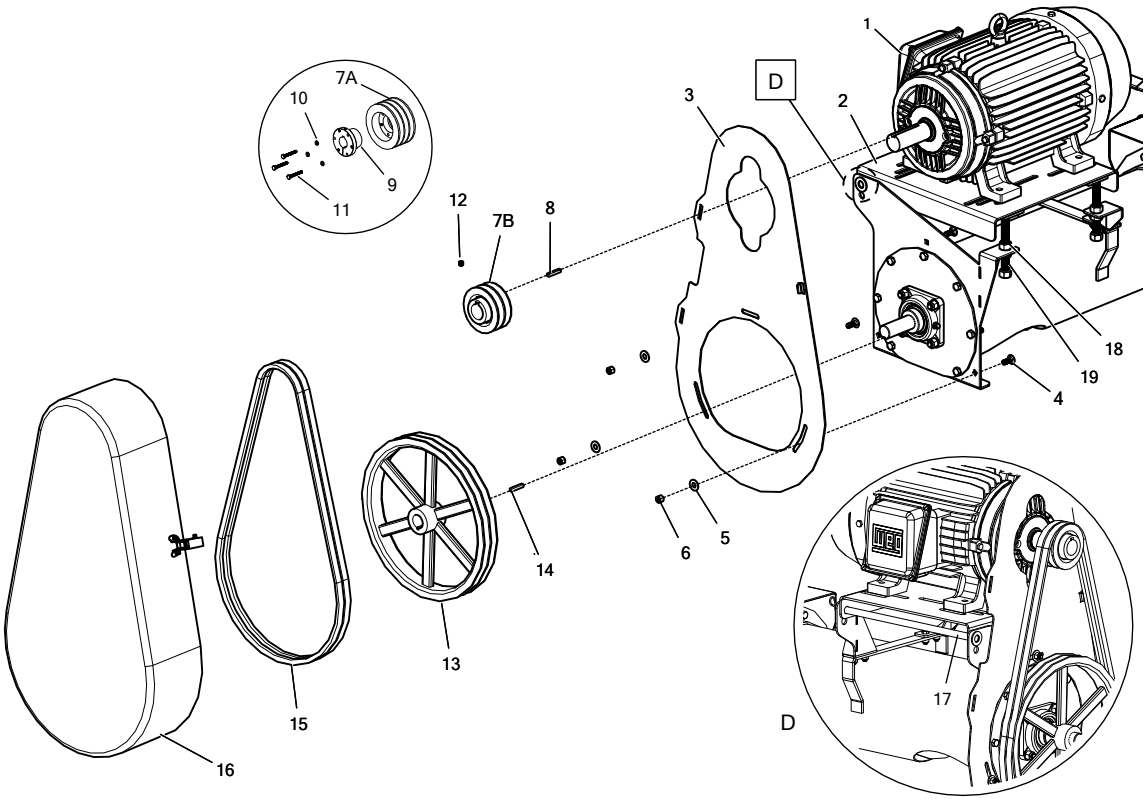
10. Tighten all the set screws on the pulleys.

    Note

    Once all bolts and set screws are tightened, re-check alignment. Proper alignment will prolong belt life.

11. Once belt alignment is complete, move the backplate (3) to a position where the motor shaft will cause the least interference. Tighten the backplate bolts (4) securely.
12. Close and lock the plastic pulley guard (16) using the quick-clip.

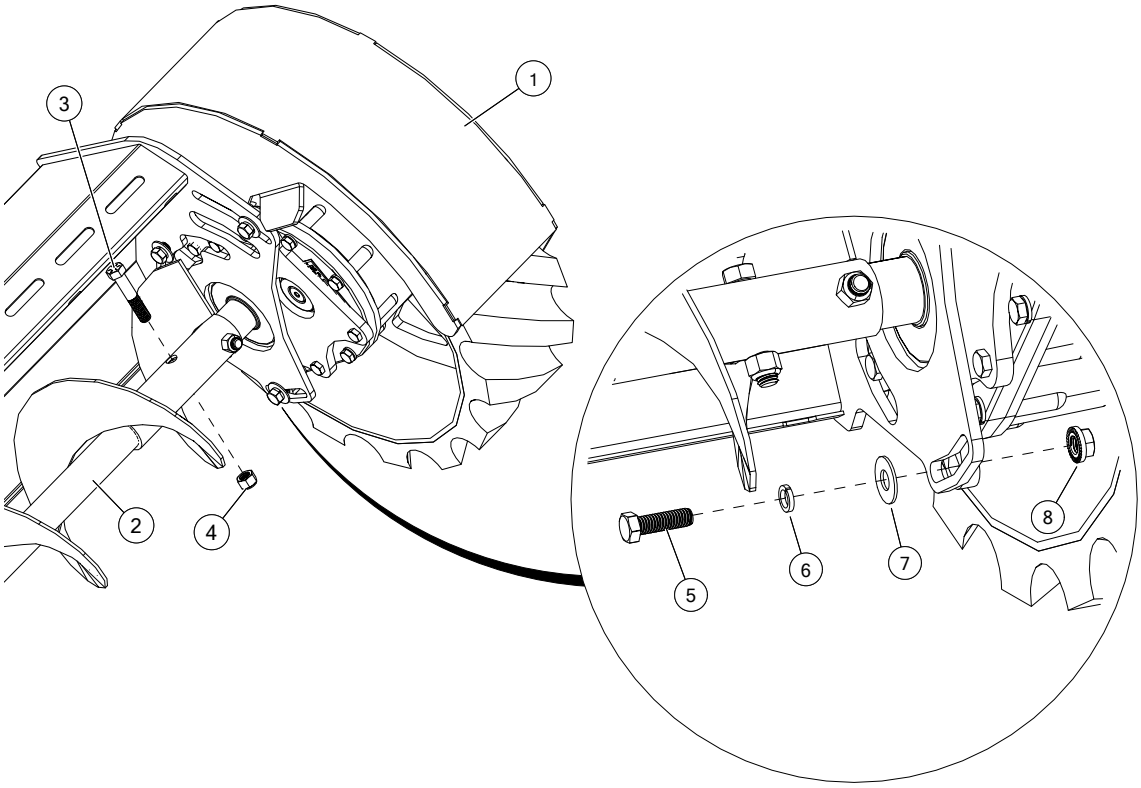
Figure 46. Assembly of Pulleys and Belts



6.13. Install the Sweep End Wheel, Flighting, and Backboard

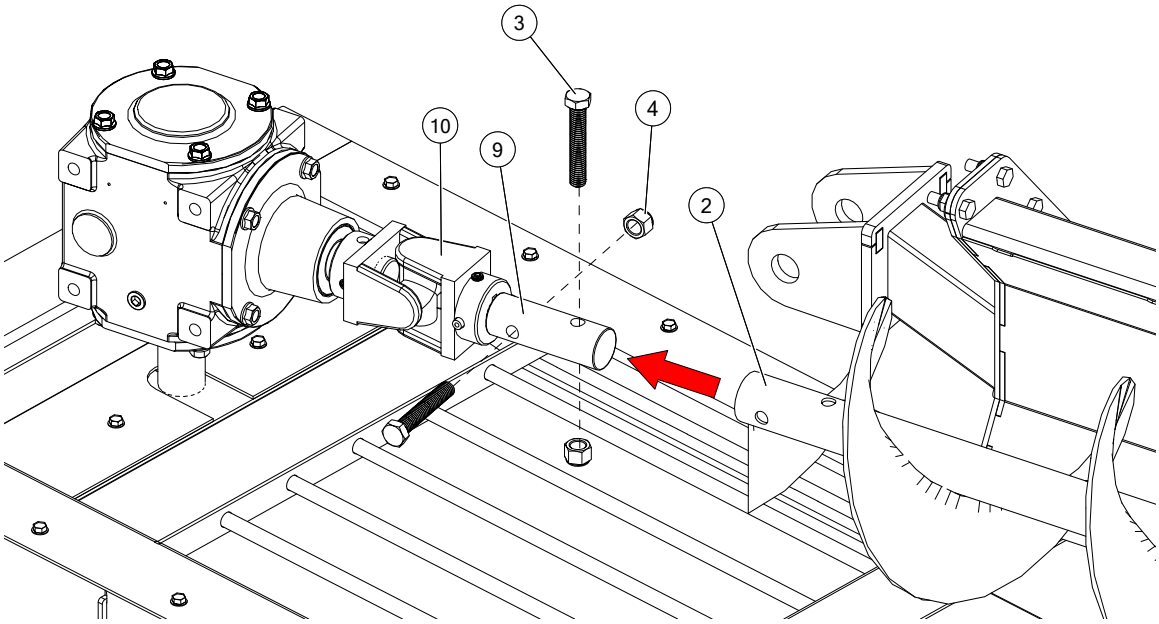
1. Install the end wheel sub-assembly (1) onto the end of the backboard with three 3/8” x 1–1/4” bolts (5), lock washers (6), flat washers (7), and serrated nuts (8) (see Figure 47). At the same time, secure the two 7/16” x 2–1/4” bolts (3) and nylon locknuts (4) to connect the sweep flighting (2) to the end wheel gearbox.

Figure 47. Install End Wheel Sub-Assembly



2. Attach the sweep flighting (2) to the yoke (9) in the universal joint (10) with two 7/16” x 2–1/4” bolts (3) and nylon locknuts (4) (see Figure 48).

Figure 48. Connect Sweep Flighting to Upper Gearbox

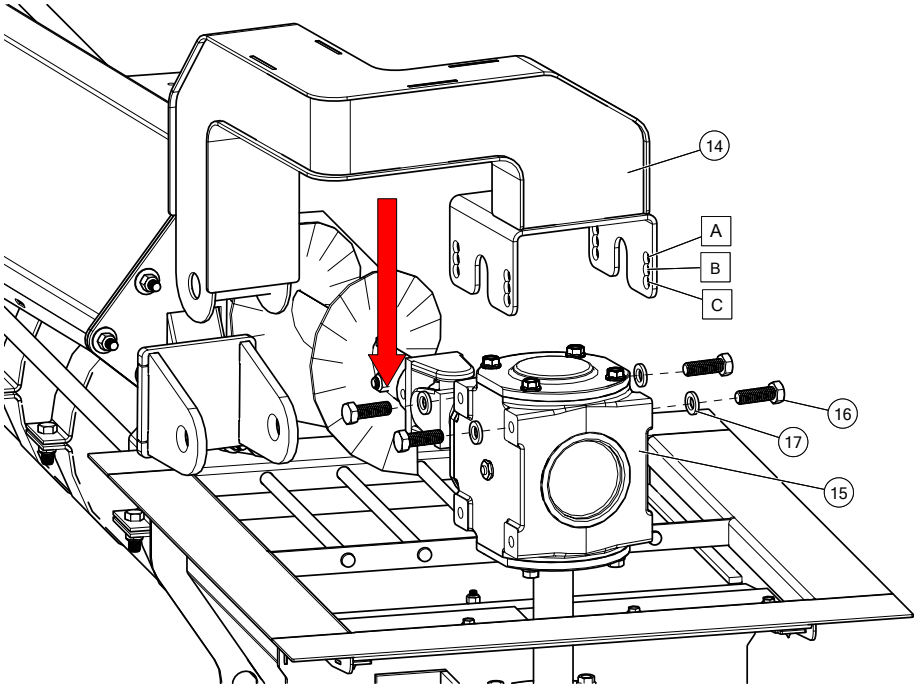


3. Fasten the backboard mounting bracket (14) to the upper gearbox (15) with four 1/2” x 1-1/2” bolts (16) and lock washers (17) (see Figure 49). Do not fully tighten bolts at this time.

Note

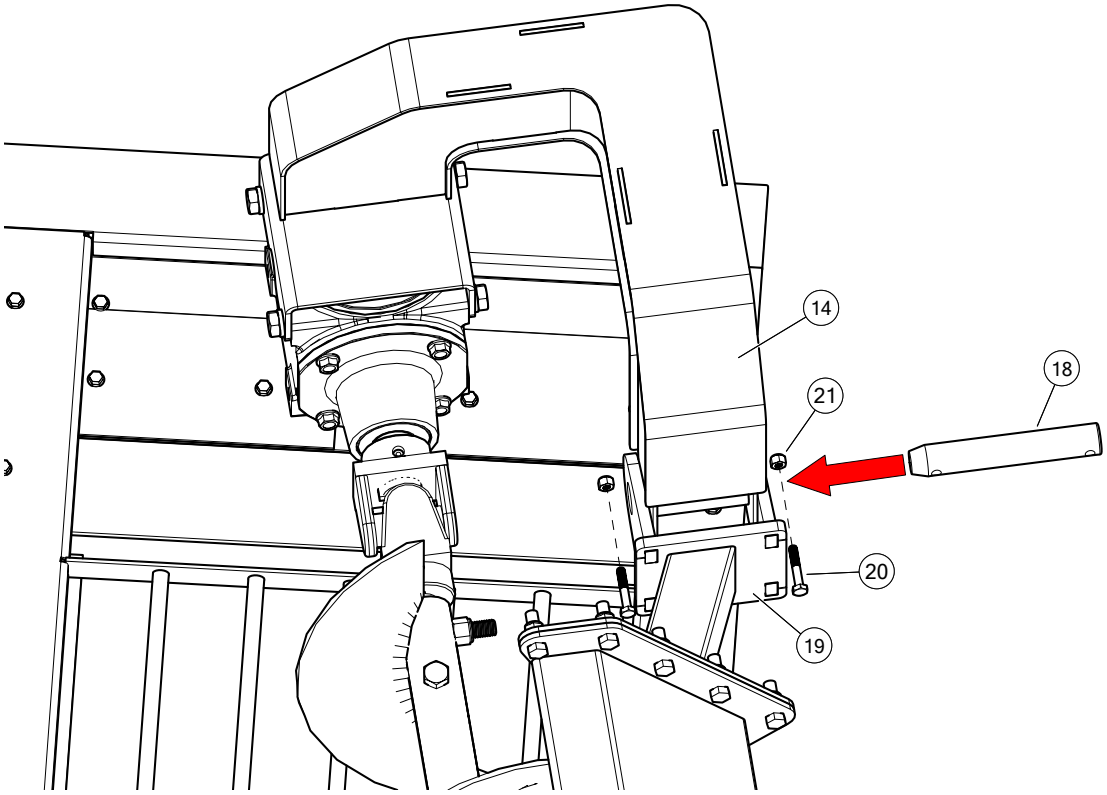
Position A is the standard setting for all flighting. Positions B and C are secondary to adjust so the flighting does not hit the floor.

Figure 49. Attach Backboard Mounting Bracket on Upper Gearbox



4. Secure the backboard pivot pin (18) between the backboard mounting bracket (14) and backboard connector (19) with two 1/4” x 1-1/2” bolts (20) and nylon locknuts (21) (see Figure 50).

Figure 50. Connect Backboard Mounting Bracket to Backboard Connector

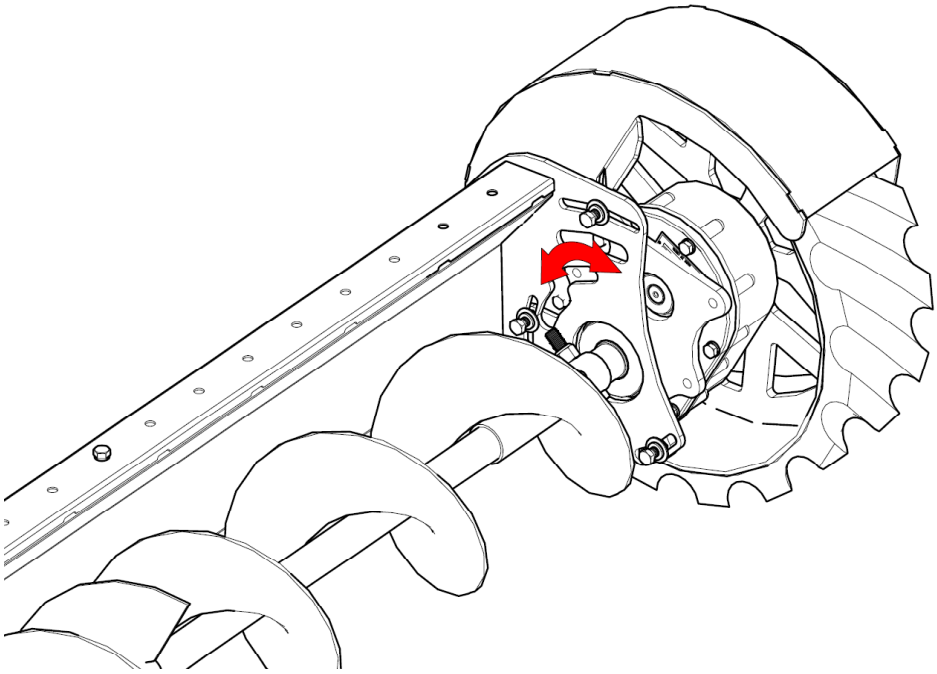


5. Fully tighten the four bolts (16) that fasten the backboard mounting bracket to the upper gearbox (see Figure 49).

6.14. Set Backboard Clearance

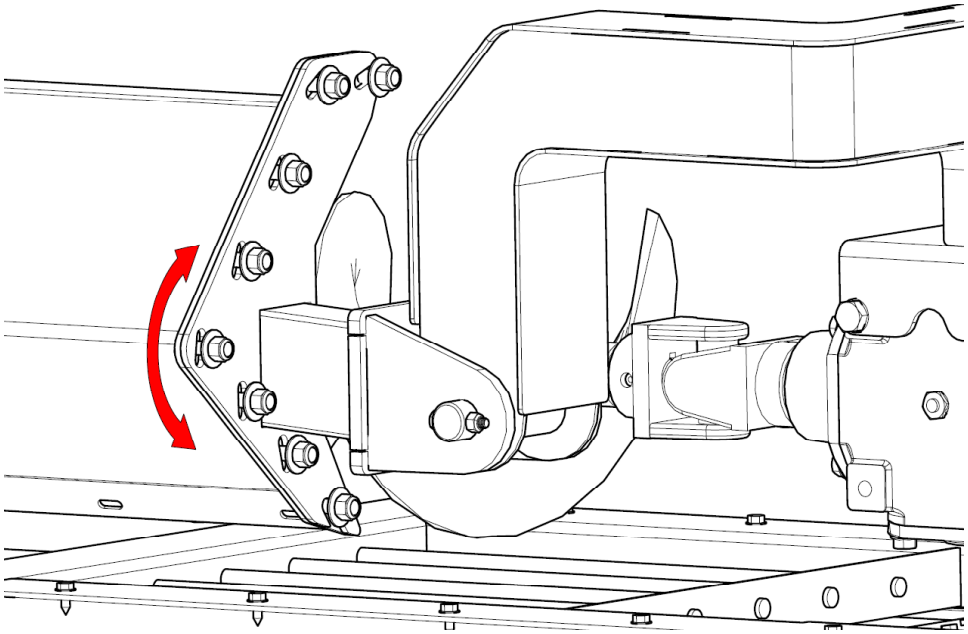
1. Slightly loosen the three 3/8” bolts on the backboard pivot mount plate with slotted holes nearer the sweep drive wheel (see Figure 51).

Figure 51. Adjusting Sweep Backboard Height at Sweep Drive Wheel



2. Slightly loosen the eight 3/8” bolts on the backboard pivot mount plate with slotted holes near the center sump (see Figure 52).

Figure 52. Adjusting Sweep Backboard Height near Center Sump



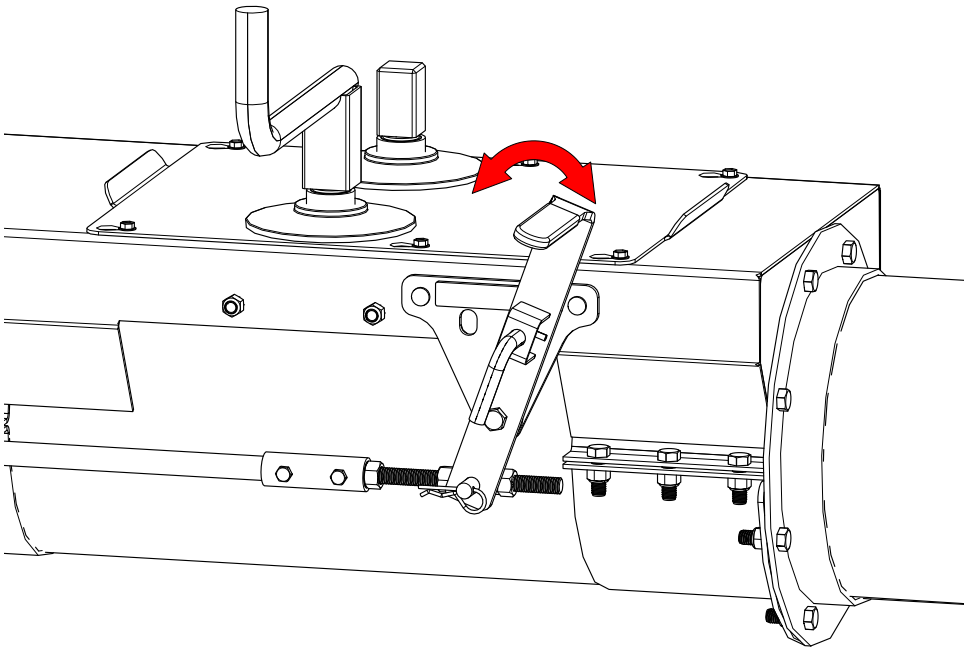
3. Rotate the backboard so that its lower scraper is resting on 1/4” wood blocks which are placed underneath the backboard scraper every 3’ (0.9 m). This sets the required clearance between the backboard scraper and the bin floor.
4. Retighten all the bolts which were loosened.

6.15. Testing

1. Ensure that the power to the bin unload system is shut down and locked out.
2. Ensure that there are no obstructions in the sumps, sweep flighting, or sweep path along the bin floor.
3. Engage the gearbox by pulling the gearbox shift handle away from bin wall (see Figure 53).

NOTICE Use the locking pin to lock the gearbox shift handle into the engaged or disengaged position at all times. Failure to do so will result in damage to gearbox.

Figure 53. Lower Gearbox Engagement & Disengagement for Sweep



4. Turn on power to bin unload system. The underfloor auger and sweep should both be rotating.

   DANGER KEEP AWAY from rotating flighting. Do not perform adjustments on the equipment while it is being tested.

5. Disengage the gearbox shift handle by pushing the handle toward the bin wall and ensure the lower gearbox comes fully out of gear with no grinding (see Figure 53). Then shut down the bin unload system.

   - If grinding occurred when disengaging the gearbox shift handle: Lock out whole bin unload system. Adjust the gearbox shift adjust tube as noted in the Maintenance chapter of the Operator's Manual.
   - If grinding did not occur: With the unload system shut down, re-engage the gearbox. Restart the electric powerhead so that underfloor auger flighting and sweep flighting are both rotating.

     NOTICE To prevent damage to the unload system, DO NOT engage bin sweep while underfloor auger is operating.

6. Perform a test-run of the bin sweep (one full revolution around bin). During testing, check the general function of the system and monitor the following:

   a. Ensure that the bushings (between sweep sections) are not interfering with the sweep flighting.

   b. Ensure sweep backboard does not catch on high spots on the aeration floor. If necessary, consult bin or aeration floor assembly manual to level.

   c. Observe the end of the bin sweep around the bin and note the position in its revolution which has the minimum clearance to the bin wall. This minimum clearance will later be used to adjust the sweep extender.

7. After the bin sweep has completed its test-run, ensure the sweep is in its "start/park position" (directly over the intermediate sumps), and then shut down and lock out bin unload system.

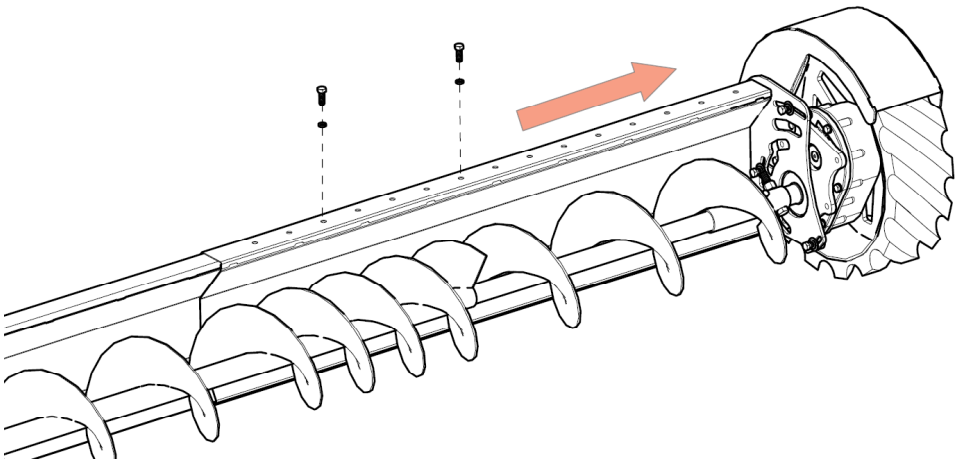
   NOTICE Failure to park the bin sweep over the intermediate sumps could result in damage to the bin sweep when it is next operated.

8. Close all sump gates.

6.16. Adjust the Bin Sweep Extension

1. Remove the two 3/8” x 1” bolts and lock washers on the top of backboard extension (see Figure 54).
2. Move the extension outward to the same length as the minimum clearance between the end of the sweep and the bin wall (and attached parts), as observed during the full test-run revolution. Pull and twist the sweep flighting to extend it.
3. Re-fasten the bolts on the backboard extension.

Figure 54. Adjust Bin Sweep Extension



6.17. Attach the Westeel Brand Logo Decal

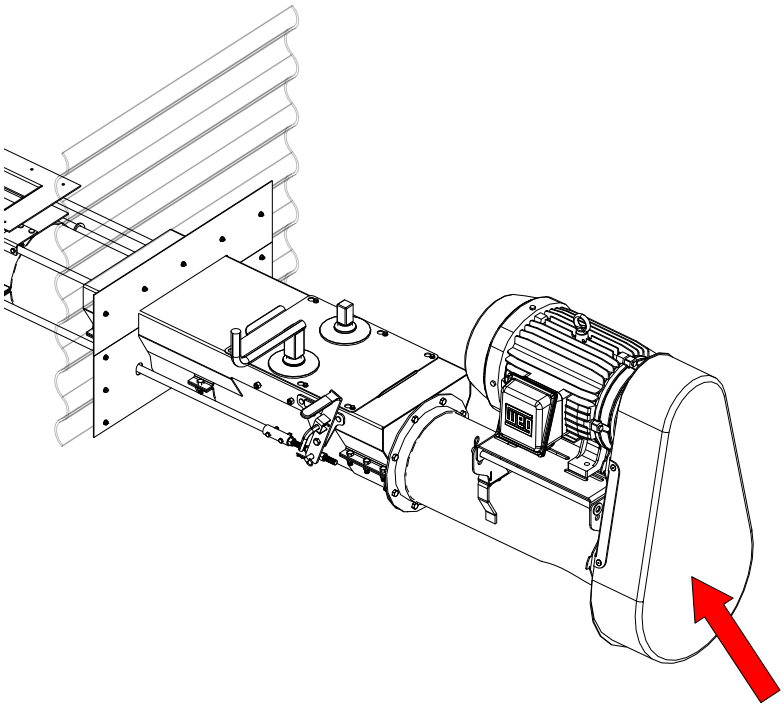
1. Apply the brand logo decal to the pulley guard (see Figure 55 on page 63).

   Important

   Do not cover any existing safety or instruction decals with the brand logo decal.

2. Refer to Section 2.8.1 – Decal Installation/Replacement on page 9 for specific instructions on applying decals.

Figure 55. Placement for the Brand Logo Decal



7. Specifications

7.1. Dimensions

Figure 56. 8” Horizontal Tube Unload

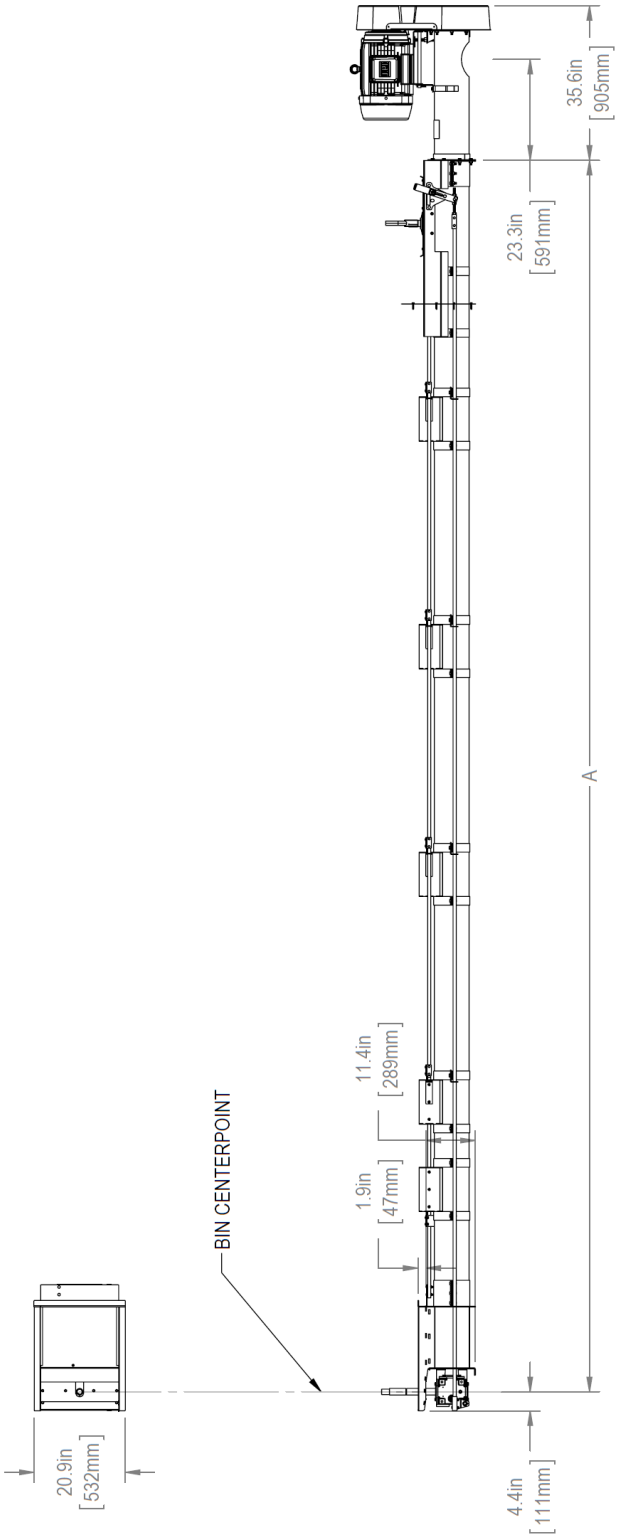


Figure 57. 8” Incline Tube Unload

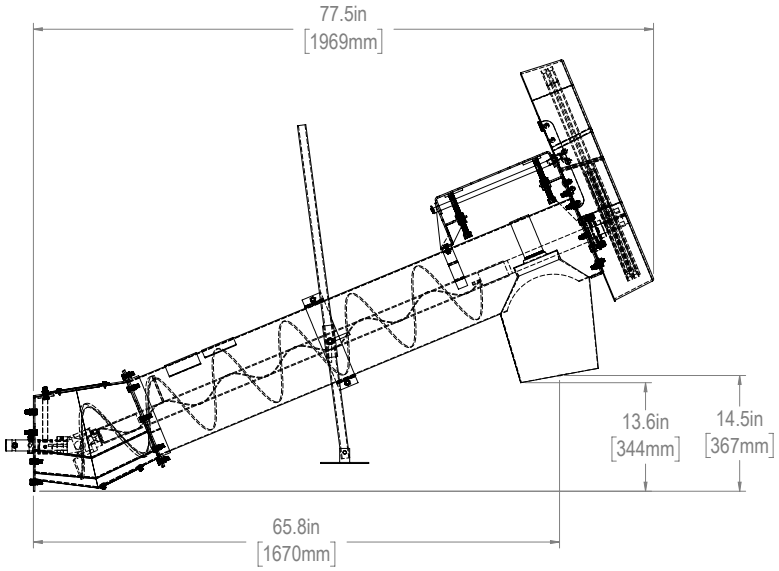


Table 10. 8” Tube Unload

Bin Unload Model (Bin Diameter)	Dimension "A"	
	inches	millimeters
24'	175.3	4453
27'	193.3	4910
30'	211.3	5367
33'	229.3	5824
36'	247.3	6281
39'	265.3	6739
42'	283.3	7196
45'	301.3	7653
48'	319.3	8110
54'	355.3	9025
60'	391.3	9939
Underfloor Flighting Diameter (Actual)	**Sweep Flighting Diameter (Actual)**	
7" (178 mm)	6" (152 mm)	
Incline Section Tube Diameter	**Incline Section Flighting Diameter (Actual)**	
10" (254 mm)	9" (229 mm)	

Figure 58. 10” Horizontal Tube Unload

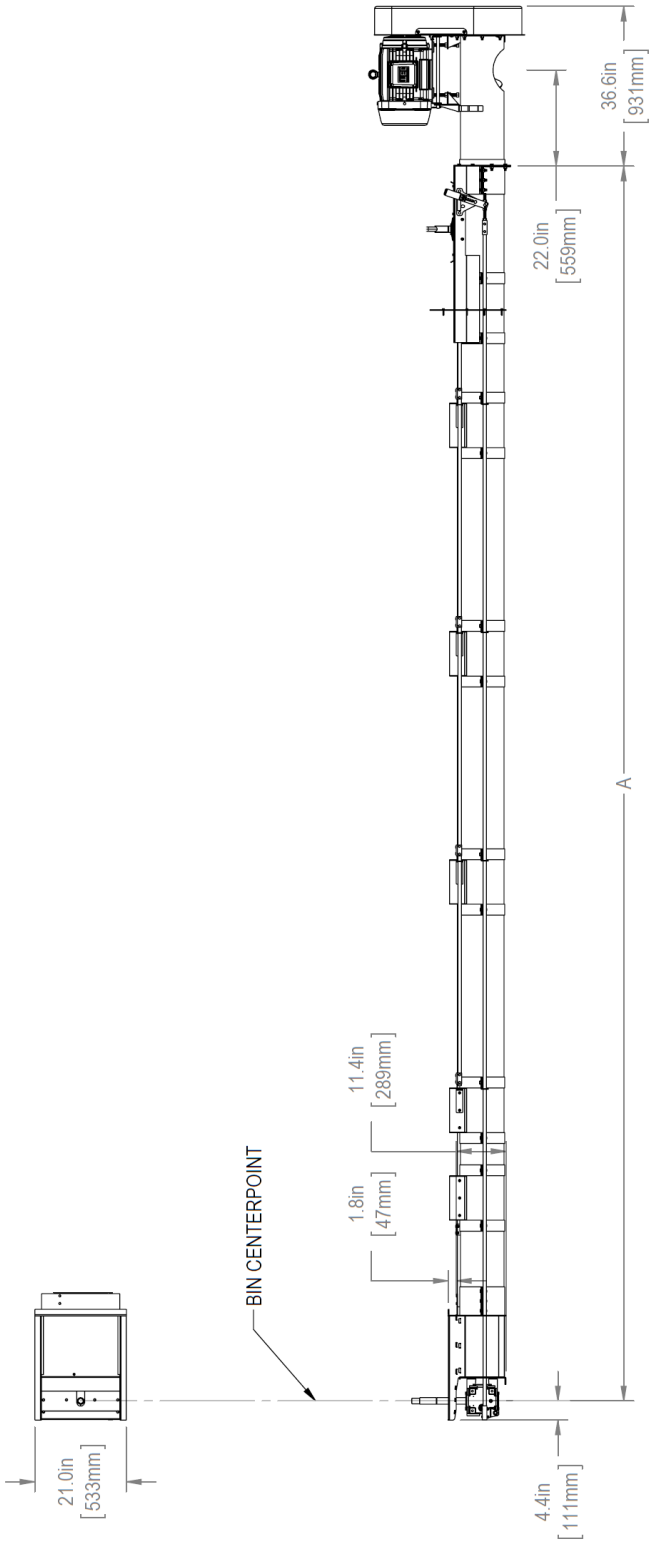


Figure 59. 10” Incline Tube Unload

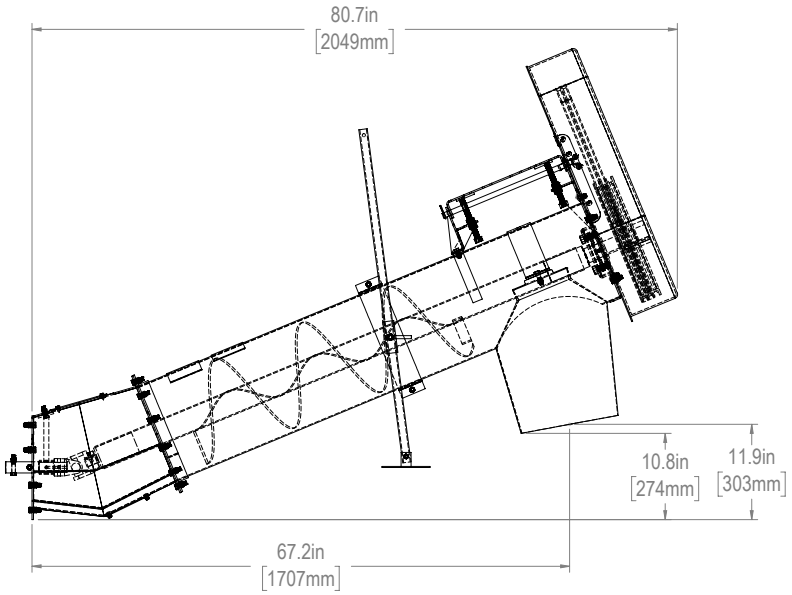


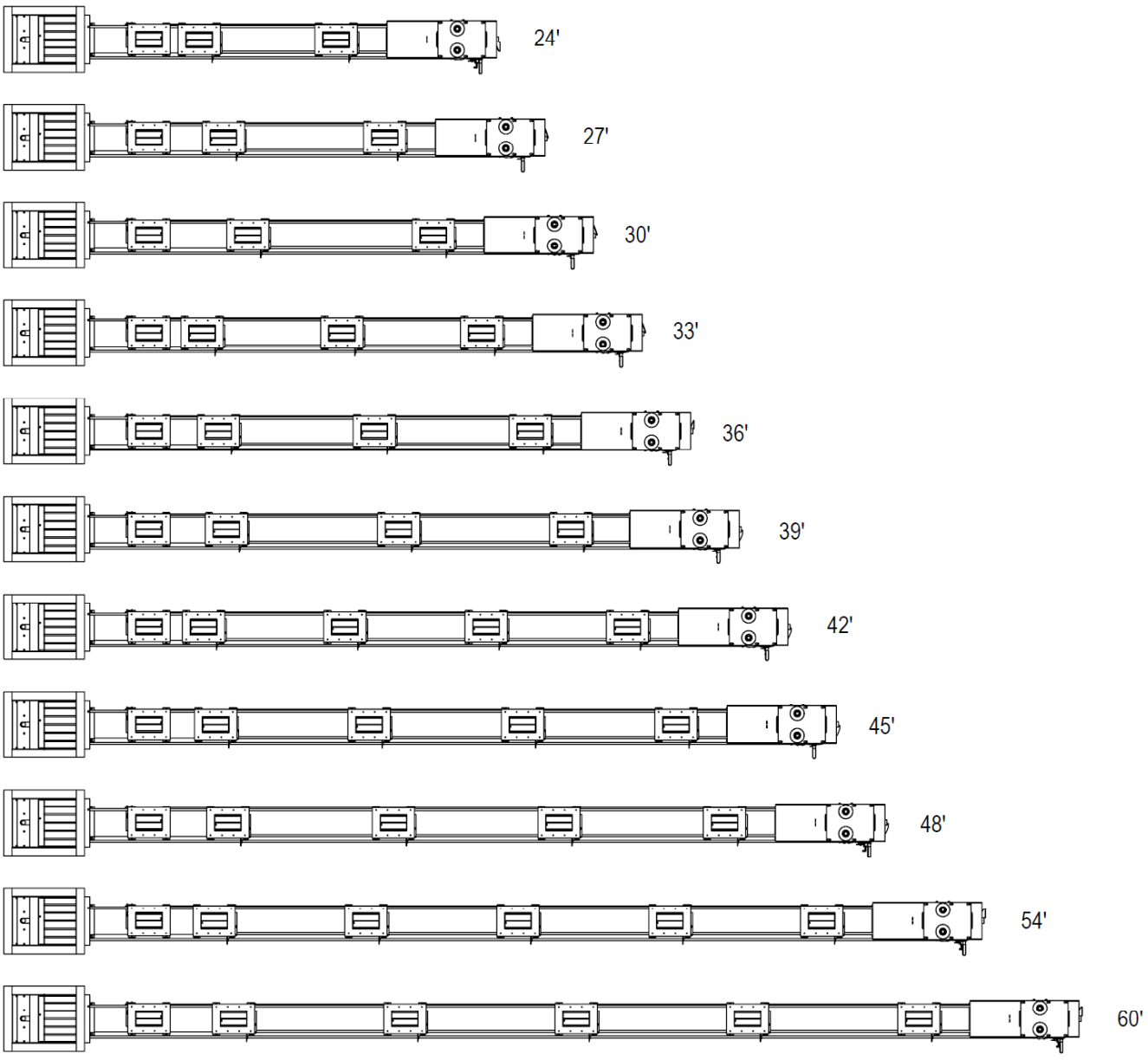
Table 11. 10” Tube Unload

Bin Unload Model (Bin Diameter)	Dimension "A"	
	inches	millimeters
24'	175.3	4453
27'	193.3	4910
30'	211.3	5367
33'	229.3	5824
36'	247.3	6281
39'	265.3	6739
42'	283.3	7196
45'	301.3	7653
48'	319.3	8110
54'	355.3	9025
60'	391.3	9939

Underfloor Flighting Diameter (Actual)	Sweep Flighting Diameter (Actual)
9" (229 mm)	7" (178 mm)

Incline Section Tube Diameter	Incline Section Flighting Diameter (Actual)
13" (330 mm)	11.75" (298 mm)

7.2. Models



7.3. Power Requirements

Table 12. Electric Motor Requirements

<table>
<tr><th rowspan="2">Bin Diameter</th><th colspan="2">8" Tube Unload (With Sweep)</th><th colspan="2">10" Tube Unload (With Sweep)</th></tr>
<tr><th>Horizontal (HP)</th><th>Incline (HP)</th><th>Horizontal (HP)</th><th>Incline (HP)</th></tr>
<tr><td>24'</td><td rowspan="4">5</td><td rowspan="4">7.5</td><td>7.5</td><td rowspan="3">10</td></tr>
<tr><td>27'</td><td rowspan="4">10</td></tr>
<tr><td>30'</td></tr>
<tr><td>33'</td><td rowspan="5">15</td></tr>
<tr><td>36'</td><td rowspan="3">7.5</td><td rowspan="4">10</td></tr>
<tr><td>39'</td></tr>
<tr><td>42'</td><td rowspan="2">15</td></tr>
<tr><td>45'</td><td rowspan="3">10</td></tr>
<tr><td>48'</td><td rowspan="3">20</td></tr>
<tr><td>54'</td><td rowspan="2">15</td><td rowspan="2">20</td></tr>
<tr><td>60'</td></tr>
</table>

Table 13. Recommended Pulley Size Combinations

<table>
<tr><th>Discharge Type</th><th>Unload Pulley</th><th>Motor Pulley</th><th>Pulley Type</th><th>Belt Size</th><th>Flighting Speed (rpm)</th></tr>
<tr><td rowspan="2">8" Horizontal</td><td rowspan="2">12.7"</td><td>3.375"</td><td rowspan="9">Double Groove</td><td rowspan="2">B54</td><td>465</td></tr>
<tr><td>3.875"</td><td>534</td></tr>
<tr><td rowspan="3">8" Incline</td><td rowspan="6">15"</td><td>3.375"</td><td rowspan="6">B62</td><td>394</td></tr>
<tr><td>3.75"</td><td>438</td></tr>
<tr><td>4.75"</td><td>554</td></tr>
<tr><td rowspan="3">10" Horizontal</td><td>3.375"</td><td>394</td></tr>
<tr><td>3.75"</td><td>438</td></tr>
<tr><td>4.75"</td><td>554</td></tr>
<tr><td rowspan="3">10" Incline</td><td rowspan="3">16"</td><td>3.375"</td><td rowspan="3">Triple Groove</td><td rowspan="3">B67</td><td>369</td></tr>
<tr><td>3.75"</td><td>410</td></tr>
<tr><td>4.75"</td><td>520</td></tr>
</table>

Flighting Speed is calculated using a 1750 rpm electric motor. To determine flighting speed (rpm), divide the motor speed (rpm) by the outside diameter of the large unload pulley, then multiply by the outside diameter of the small motor pulley. Example: 1750 rpm / 15” x 4-3/4” = 554 rpm.
If a slower flighting speed is desired, install a smaller motor pulley.

8. Bin Unload Limited Warranty

Ag Growth International (“AGI”) warrants all new equipment manufactured by it or one of its divisions, and purchased from an authorized dealer or distributor, to be free from defects in materials or workmanship for a period of two (2) years from the date of original purchase or initial installation (“Warranty Period”).

AGI’s obligation under this warranty is limited to repairing, replacing, or refunding defective part(s) during the Warranty Period. Labor costs associated with the repair of the warrantied equipment are not covered by AGI. Any defects must be reported to AGI before the expiry of the Warranty Period and defective parts identified during the Warranty Period must be returned to the factory, or an authorized AGI dealer or distributor, with transportation charges prepaid.

Bin Unload systems are designed for use with free flowing, properly conditioned grains and are not warranted for use with other substances. Any other use is considered misuse. Malfunctions or failure resulting from misuse, abuse, negligence, alteration, accident, or lack of proper maintenance shall not be considered defects under this warranty. This warranty shall be void if components of the system are not original equipment supplied by AGI, or if the equipment has not been assembled, installed, operated, and maintained in accordance with instructions published by AGI.

The total liability of AGI on any claim, whether in contract, tort or otherwise, arising out of, connected with, or resulting from the manufacture, sale, delivery, repair, replacement or use of the equipment or any part thereof, shall not exceed the price paid for the equipment. AGI shall not be liable for any consequential or special damage which any purchaser may suffer or claim to suffer as a result of any defect in the equipment. Consequential or special damages as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs and operational inefficiencies.

The warranty provisions herein constitute the full extent of the warranties supplied by AGI for the equipment. Without limiting the generality of the foregoing and to the extent permitted by law, AGI EXPRESSLY DISCLAIMS AND EXCLUDES ALL WARRANTIES AND CONDITIONS OF MERCHANTABILITY & FITNESS FOR PURPOSE OR PERFORMANCE, WHETHER EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE.

Notwithstanding anything contained herein to the contrary, the foregoing sets out the purchaser’s sole and exclusive remedies for breach of warranty by AGI in respect of the equipment.

Dealers are not authorized to make any modifications on behalf of AGI, to any of the terms, conditions or limitations of this warranty.

AGI reserves the right to change models and specifications at any time without notice or obligation to improve previous models.

450 Desautels Street
P.O. Box 792
Winnipeg, Manitoba, R3C 2N5 Canada
Phone: (866) 299-4312
Fax: (204) 235-0796

Website: www.westeel.com
Email: info@westeel.com

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