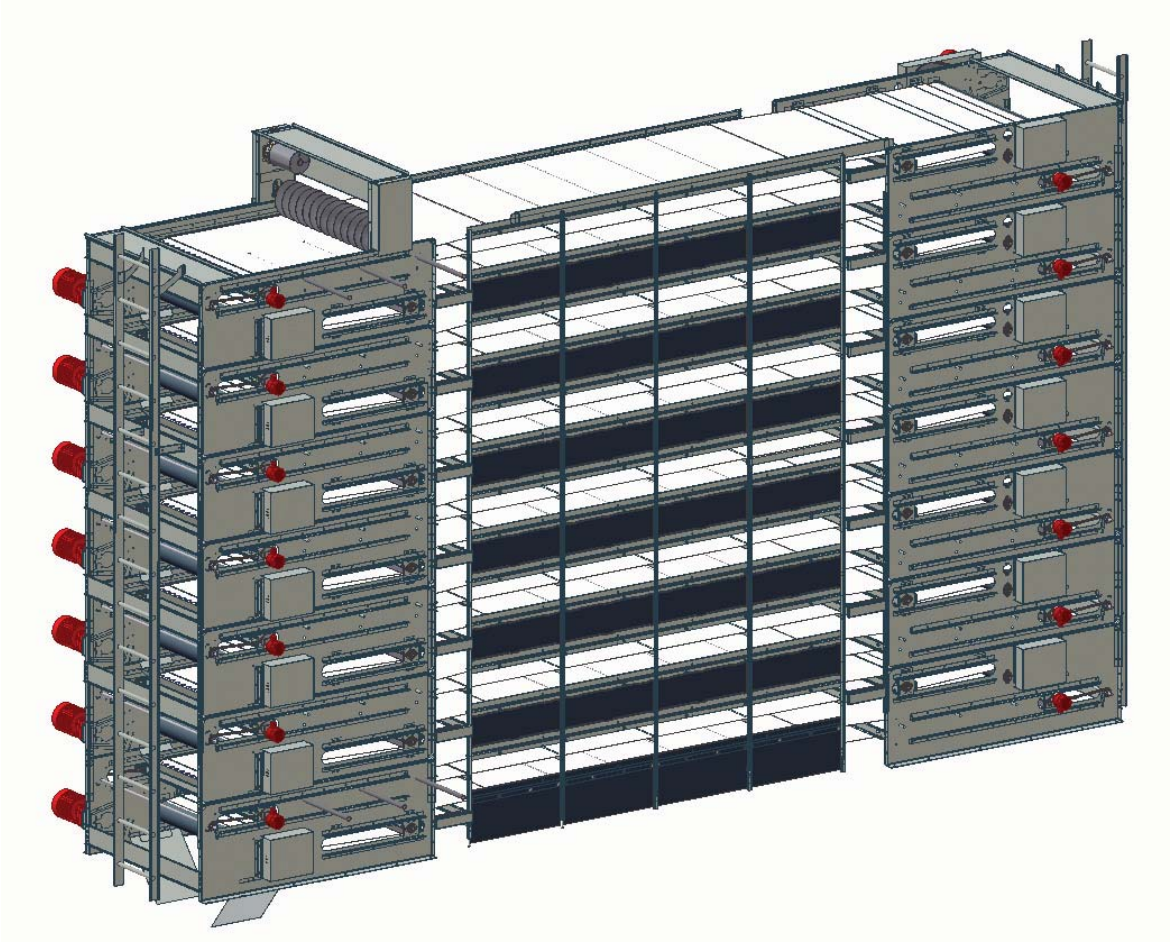
CHORE-TIME®

MDS (Manure Drying System)
Installation Instruction Manual



January 2011 ME2363A

Chore-Time Warranty

Chore-Time Equipment ("Chore-Time") warrants each new Chore-Time product manufactured by it to be free from defects in material or workmanship for **one year** from and after the date of initial installation by or for the original purchaser. If such a defect is found by the Manufacturer to exist within the one-year period, the Manufacturer will, at its option, (a) repair or replace such product free of charge, F.O.B. the factory of manufacture, or (b) refund to the original purchaser the original purchase price, in lieu of such repair or replacement. Labor costs associated with the replacement or repair of the product are not covered by the Manufacturer.

Conditions and Limitations

1. The product must be installed by and operated in accordance with the instructions published by the **Manufacturer or Warranty will be void**.
2. Warranty is void if **all components** of the system are not original equipment supplied by the **Manufacturer**.
3. This product must be purchased from and installed by an authorized distributor or certified representative thereof or the Warranty will be void.
4. Malfunctions or failure resulting from misuse, abuse, negligence, alteration, accident, or lack of proper maintenance shall not be considered defects under the Warranty.
5. This Warranty applies only to systems for the care of poultry and livestock. Other applications in industry or commerce are not covered by this Warranty.

The **Manufacturer** 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 product. **"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.*

THIS WARRANTY CONSTITUTES THE MANUFACTURER'S ENTIRE AND SOLE WARRANTY AND THIS MANUFACTURER EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, EXPRESS AND IMPLIED WARRANTIES AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSES SOLD AND DESCRIPTION OR QUALITY OF THE PRODUCT FURNISHED HEREUNDER.

Chore-Time Distributors are not authorized to modify or extend the terms and conditions of this Warranty in any manner or to offer or grant any other warranties for Chore-Time products in addition to those terms expressly stated above. An officer of CTB, Inc. must authorize any exceptions to this Warranty in writing. The Manufacturer reserves the right to change models and specifications at any time without notice or obligation to improve previous models.

Effective: **January 2011**

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Thank You

The employees of CTB Inc. would like to thank your for your recent Chore-Time purchase. If a problem should arise, your Chore-Time representative can supply the necessary information to help you.

Contents

* Legend: C = Customer (end user), D = Distributor (sales), I = Installer of equipment

Contents - continued

General

Support Information

The Chore-Time MDS System is to be used to dry poultry manure in caged Layer or Pullet House. Using this equipment for any other purpose or in a way not within the operating recommendations specified in this manual will void the warranty and may cause personal injury.

This manual is designed to provide comprehensive planning, installation, safety, operation, and parts listing information. The Table of Contents provides a convenient overview of the information in this manual. The Table of Contents also specifies which pages contain information for the sales personnel, installer, and consumer (end user).

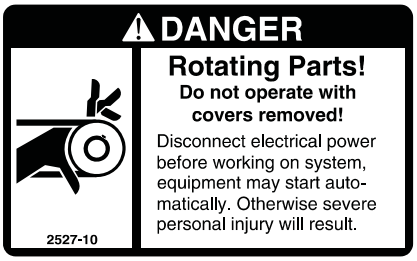
Safety Information

Caution, Warning and Danger Decals have been placed on the equipment to warn of potentially dangerous situations. Care should be taken to keep this information intact and easy to read at all times. Replace missing or damaged safety decals immediately.

Using the equipment for purposes other than specified in this manual may cause personal injury and/or damage to the equipment.

DANGER: Rotating Parts

Severe personal injury will result, if the equipment is operated **without covers** properly installed.



DANGER: Electrical Hazard

Disconnect electrical power before inspecting or servicing equipment Ground all electrical equipment for safety. All electrical wiring must be done by a qualified electrician in accordance with local and national electric codes. Ground all non-current carrying metal parts to guard against electrical shock. With the exception of motor overload protection, electrical disconnects and over current protection are not supplied with the equipment.

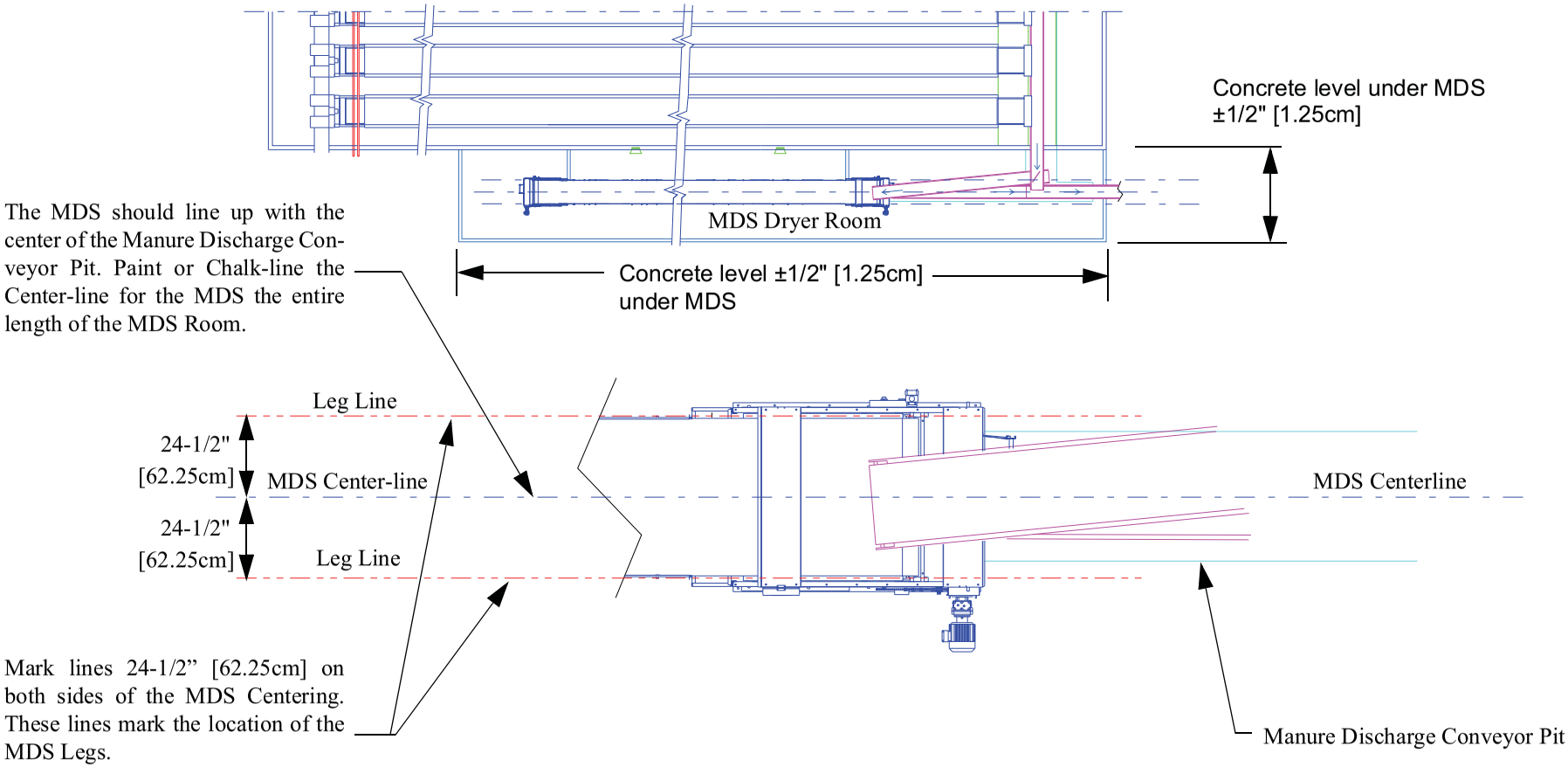
Tools Needed

1) Forklift
2) Pallet Jack
3) 2 Scissor Lifts (approximately 30" wide)
4) Cordless Electric Impact tools and Cordless Drills
5) 5/16, 7/16, 1/2, 9/16, and 3/4 Sockets, Nut Drivers, and Open End Wrenches
6) T-handled Allen Wrench Set
7) 5/16 Nut Driver Bit for Cordless Drill
8) Concrete Drill
9) Dead Blow Plastic Hammer, and a Steel Hammer
10) Tape Measure and Square
11) Long and Short Level
12) Contractor Grade Laser Level
13) Welding equipment
14) Table Saw
15) Metal Chop Saw
16) Pry Bars and Claw Hammers
17) Roller Later Belt Splicing Tool
18) Stands for supporting Manure Belt
19) Belt Pulling Tool
20) Never-Seize / WD-40
21) Grinder
22) Utility Knife
23) Rolling Scaffold

Site Planning

Site Planning

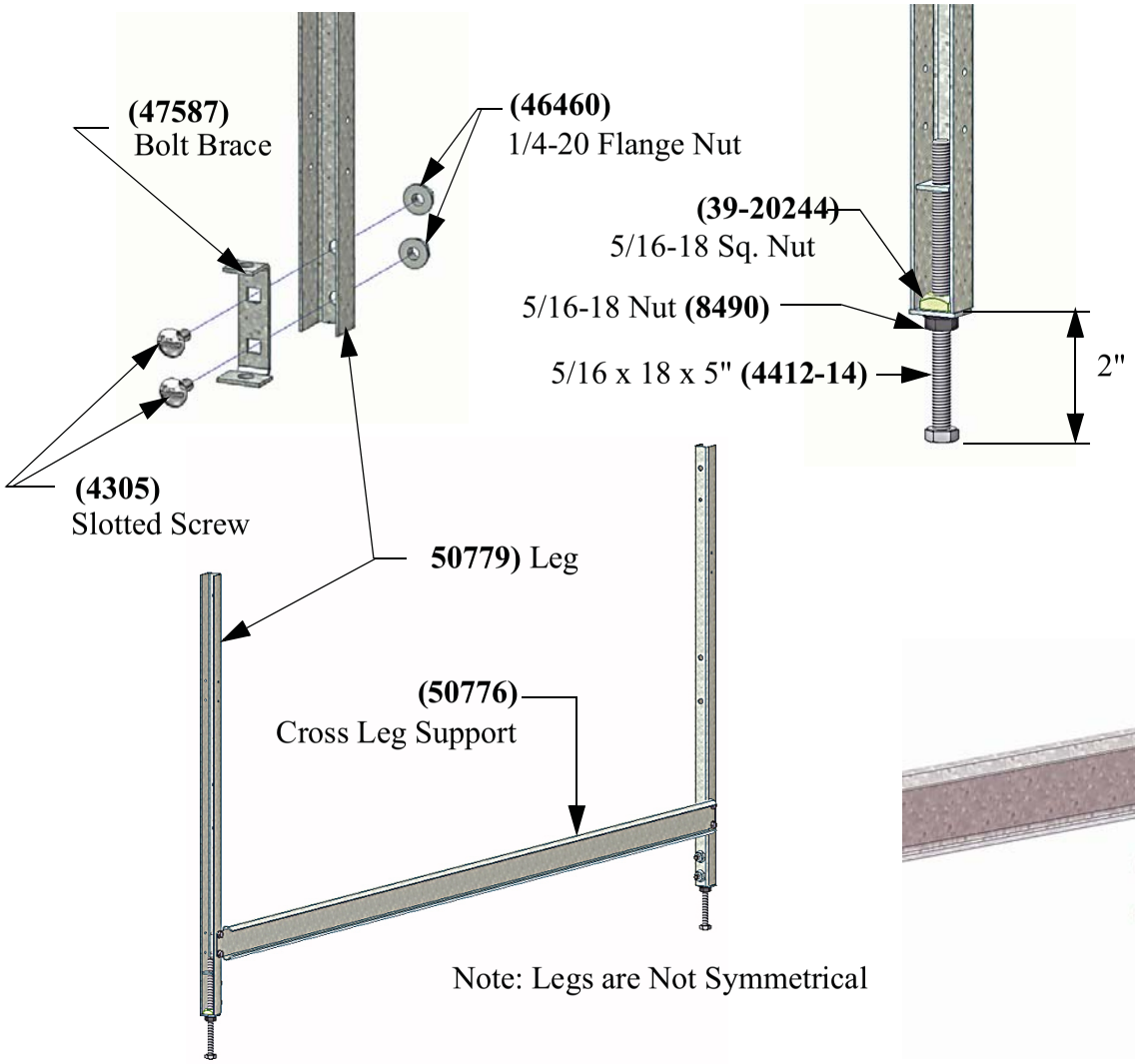
1. Site **must be Clear** of debris and Construction materials.
2. Concrete Floor in MDS Room must be level ±1/2" [1.25cm] end to end and side to side and be fully cured.
3. Floors under MDS Belt Drives **Must be Level**.
4. MDS should be covered to keep the weather out.



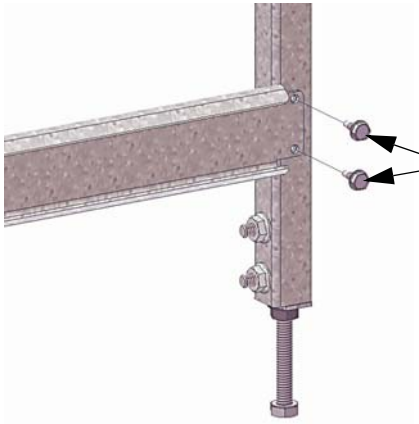
Sub-Assemblies

To speed up Assembly of the MDS it is best to build up the following Sub-Assemblies.

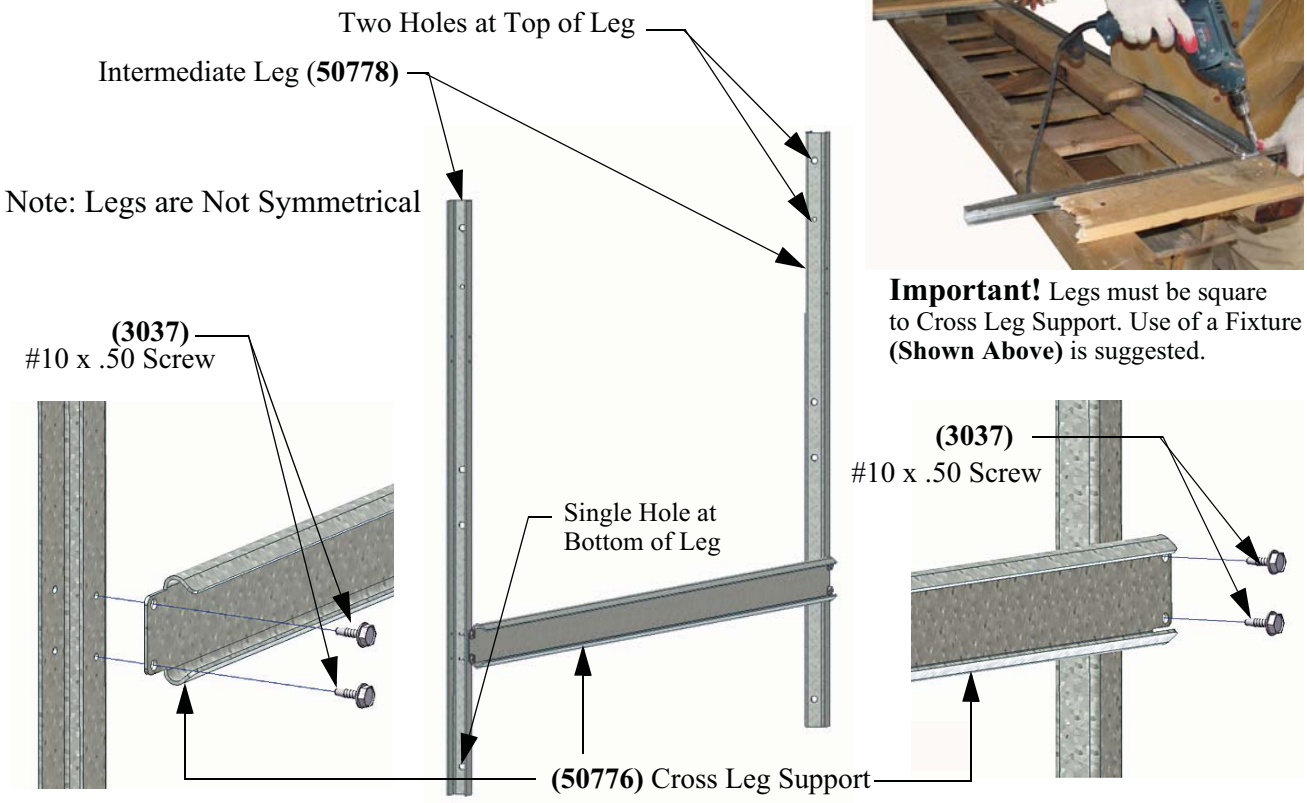
Bottom Leg Sub-Assembly



Important! Legs must be square to Cross Leg Support. Use of a Fixture **(Shown Above)** is suggested.

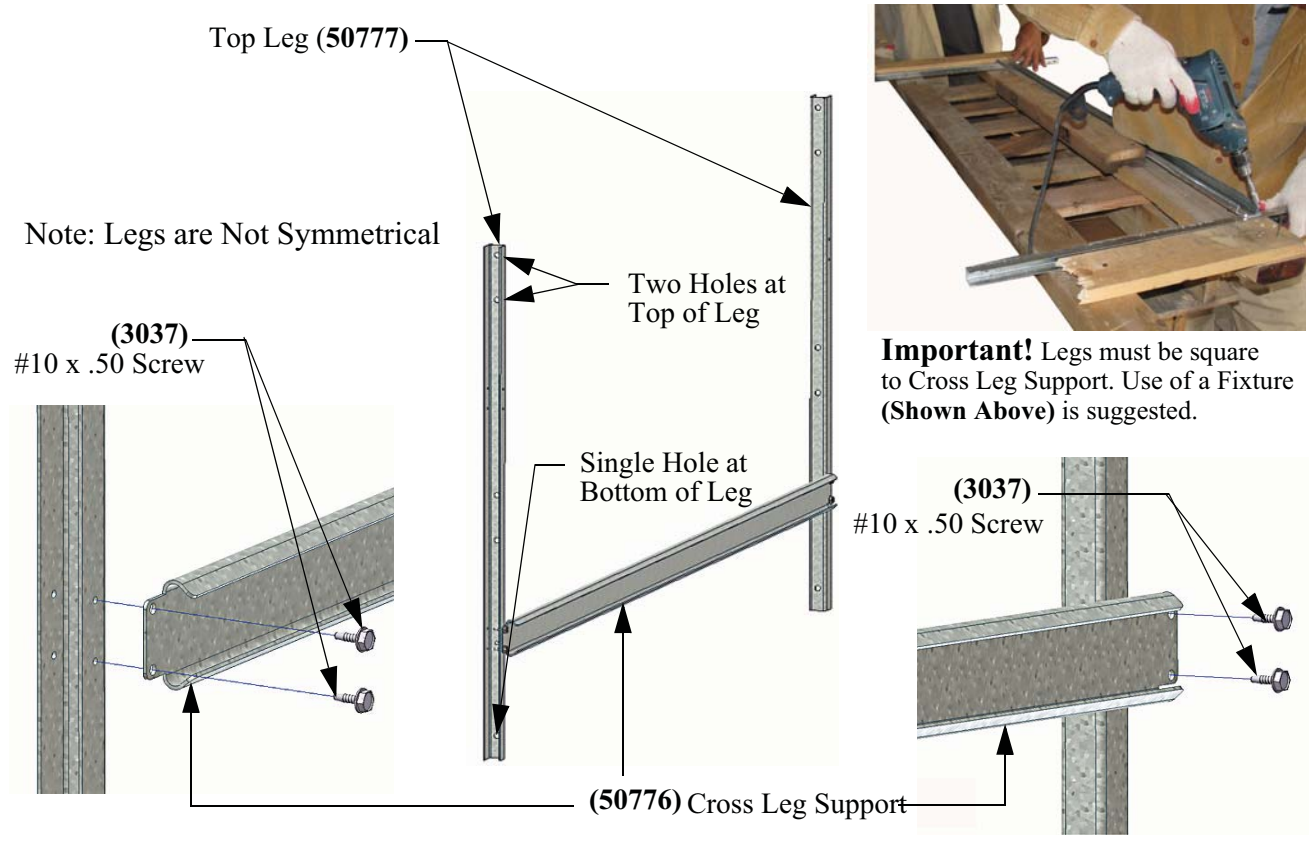


Intermediate Leg Sub-Assembly



Important! Legs must be square to Cross Leg Support. Use of a Fixture **(Shown Above)** is suggested.

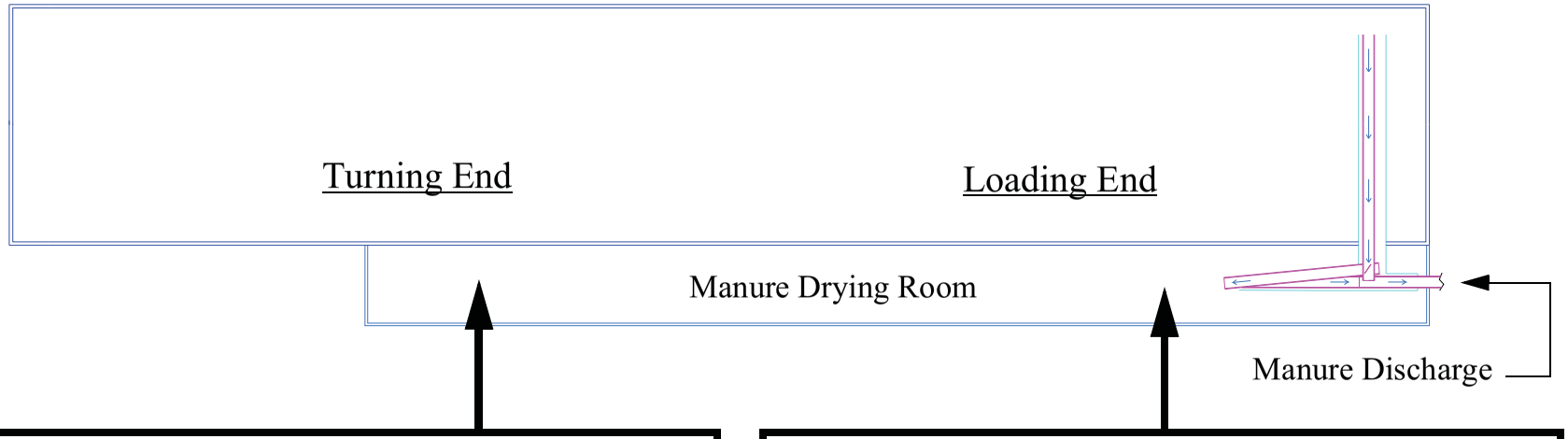
Top Leg Sub-Assembly



Important! Legs must be square to Cross Leg Support. Use of a Fixture **(Shown Above)** is suggested.

Placing Parts for ease of Assembly

Before beginning the assembly of the MDS arrange the parts within the building as shown below. In some situations it may become difficult to move these parts once the MDS assembly is underway.



MDS Turning End

Part Number	Qty.	Description
52355	(One Crate)	Assy, MDS Drive Side Panel (2 High)
52400	(One Crate)	Kit, MDS Manure Drive Ashy.
52356	(One Crate)	Assy, MDS Access Side Nil. (2 High)
52378	1	Assy, MDS Bottom Turn (2 High)
51950	1 Per Tier	Kit, MDS Drive Set
52402	1 Per Tier	Kit, MDS Drive Stack
51987	1	Panel, MDS Drive Top
52404	1 Kit	S-Idler Spring
52526	1 Per Tier	Deflector, MDS Manure

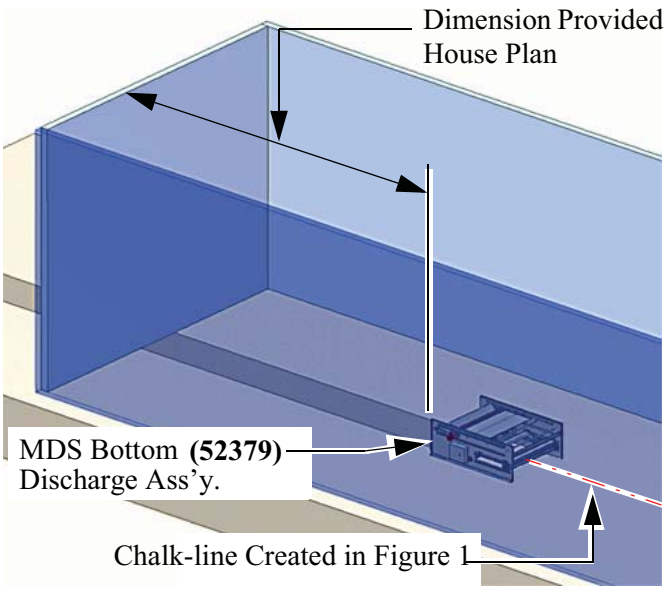
MDS Loading End

Part Number	Qty.	Description
52355	(One Crate)	Assy, MDS Drive Side Panel (2 High)
52400	(One Crate)	Kit, MDS Manure Drive Ashy.
52356	(One Crate)	Assy, MDS Access Side Nil. (2 High)
52379	1	Assy, MDS Bottom Discharge (2 High)
51950	1 Kit,	MDS Drive Set
52052	1 Kit	MDS Spreading Auger
52402	1 Per Tier	Kit, MDS Drive Stack
52401	1	Pad, MDS Manure Landing Top
51987	1	Panel, MDS Drive Top
52404	1 Per Tier	Kit, S-Idler Spring
52526	1 per Tier	Deflector, MDS Manure
52580	1 Kit	MDS Discharge

Assembly

Drive Set- Loading End

Step 1. At the Loading end of the MDS Room, Position the MDS Bottom Discharge Assembly (52379) according to the CTB. Inc. house plan provided. Center the Assembly on the Chalk-line that was created earlier in Figure

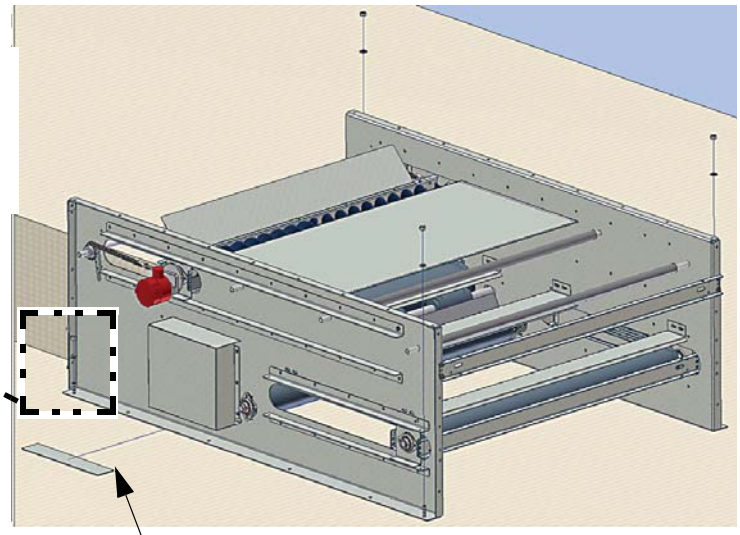


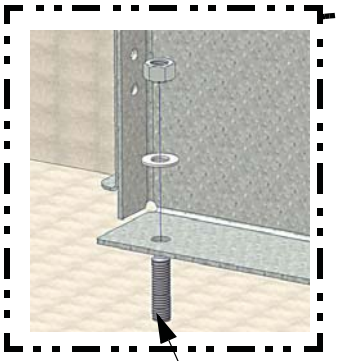
WARNING! Not placing the MDS Bottom Discharge according to the CTB House Plan may effect other dimensions. Installer makes modifications at his/her own risk.

IMPORTANT! A Steel Frame may be used to span an oversized pit but it must be engineered to support the load called out on the CTB Inc. House Plan provided. Framework must be Welded to the MDS Drive and **fastened to the concrete** with Concrete Anchors.

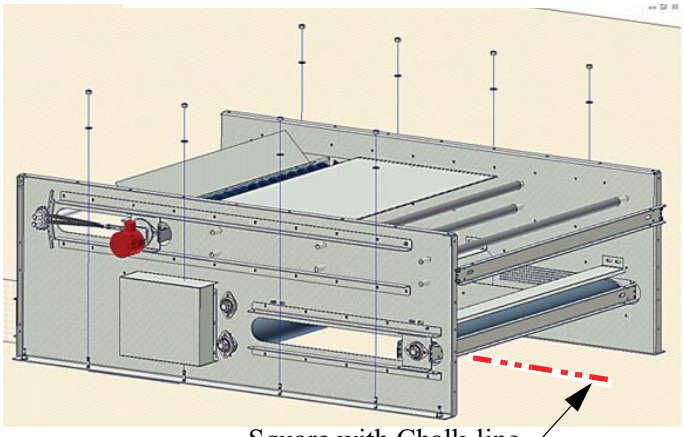
DANGER! Not Properly securing the MDS Drive Column to the concrete could create a very Dangerous Situation.

Step 2. Level the Bottom Discharge Assay using Shims **(Provided in Kit 51950)** and Fasten it to the Floor at each of the four corners with Con-



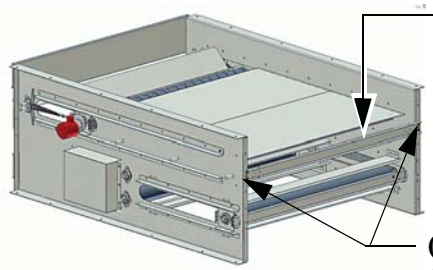


Step 3. Check to make sure the Bottom Discharge Assay is level, plumb, and square with the Chalk-line and finish fastening with eight more Concrete Anchors.

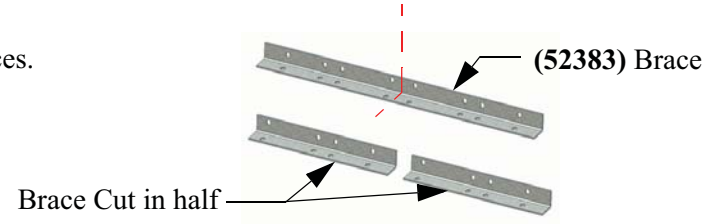


Framework- Bottom Tier

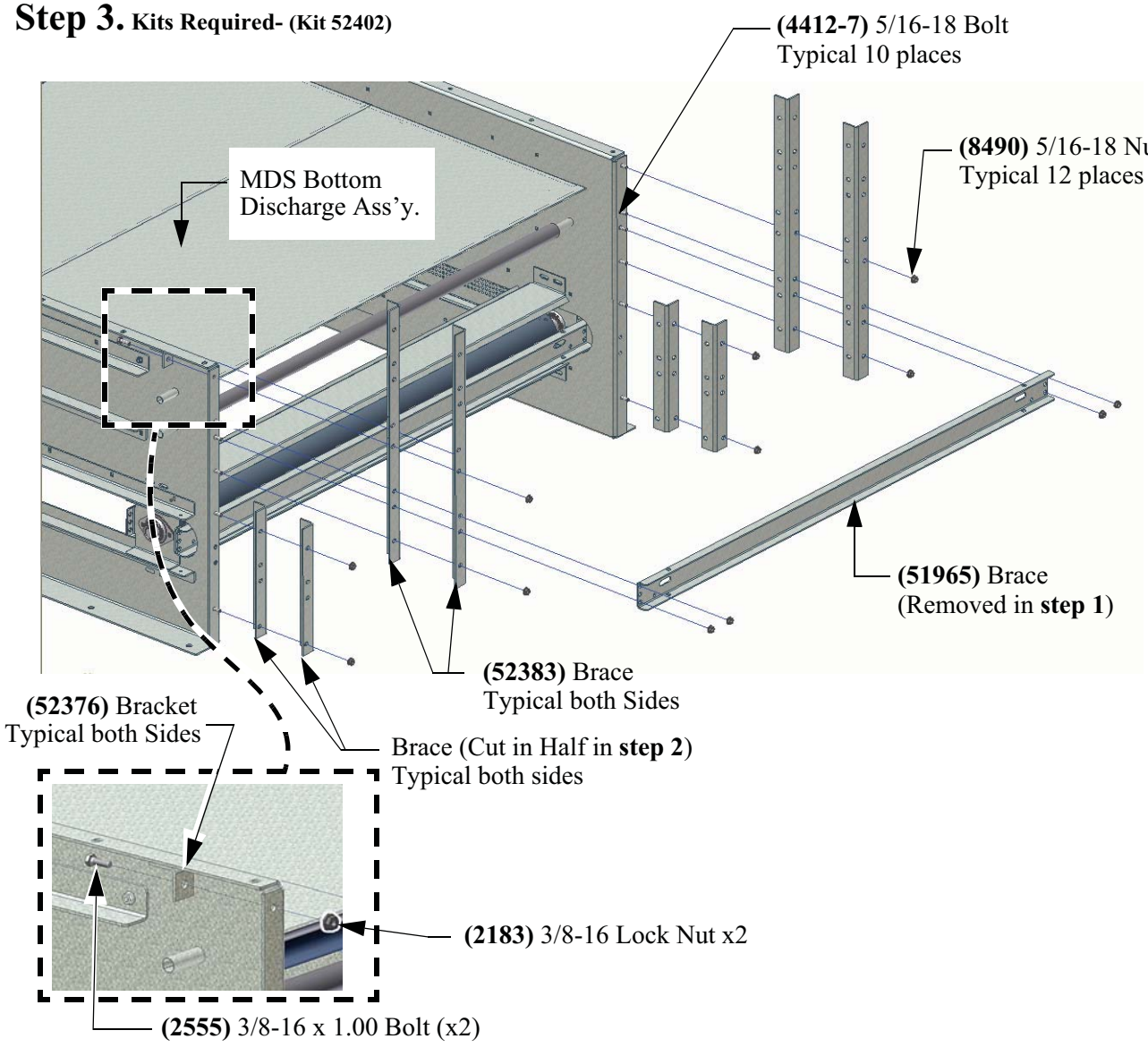
Step 1. Remove four 5/16-18 Bolts and remove the Brace from the front of the Bottom Discharge Assembly. Set the Brace and hardware aside to re-install later.



Step 2. **Kits Required- (Kit 52402)**
Cut (2) 52383 Braces in half to make (4) Braces.

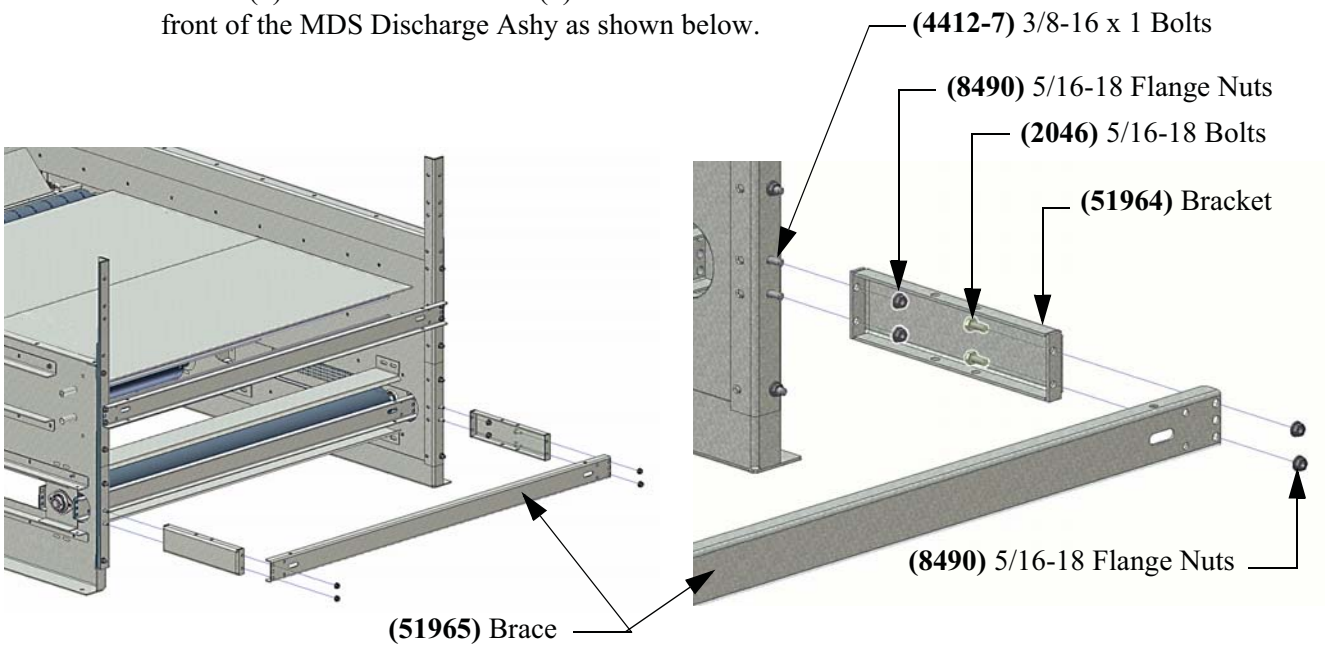


Step 3. **Kits Required- (Kit 52402)**

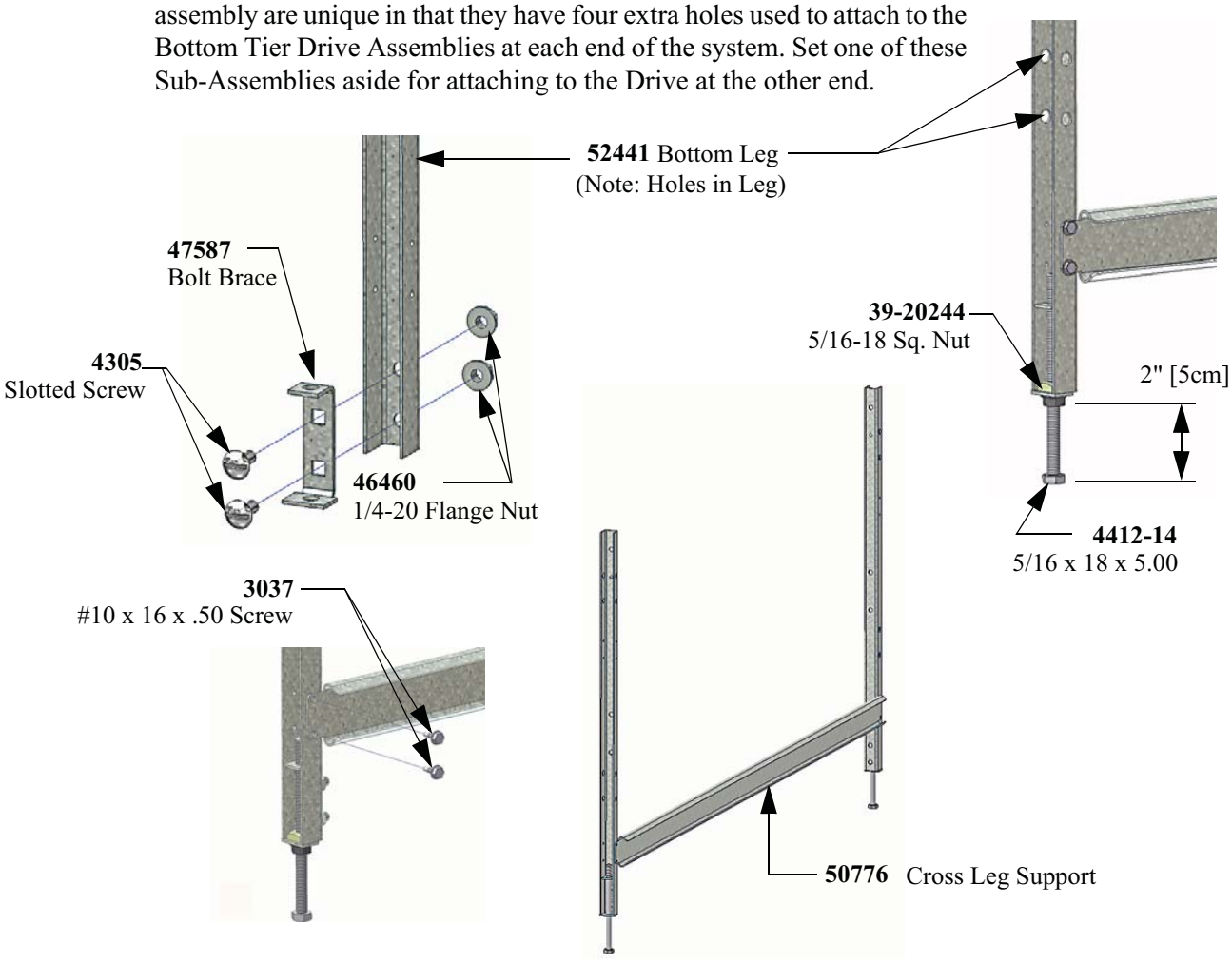


Step 4. Kits Required- (Kit 52550)

Attach (2) 51964 Brackets and (1) 51965 Brace to the front of the MDS Discharge Ashy as shown below.

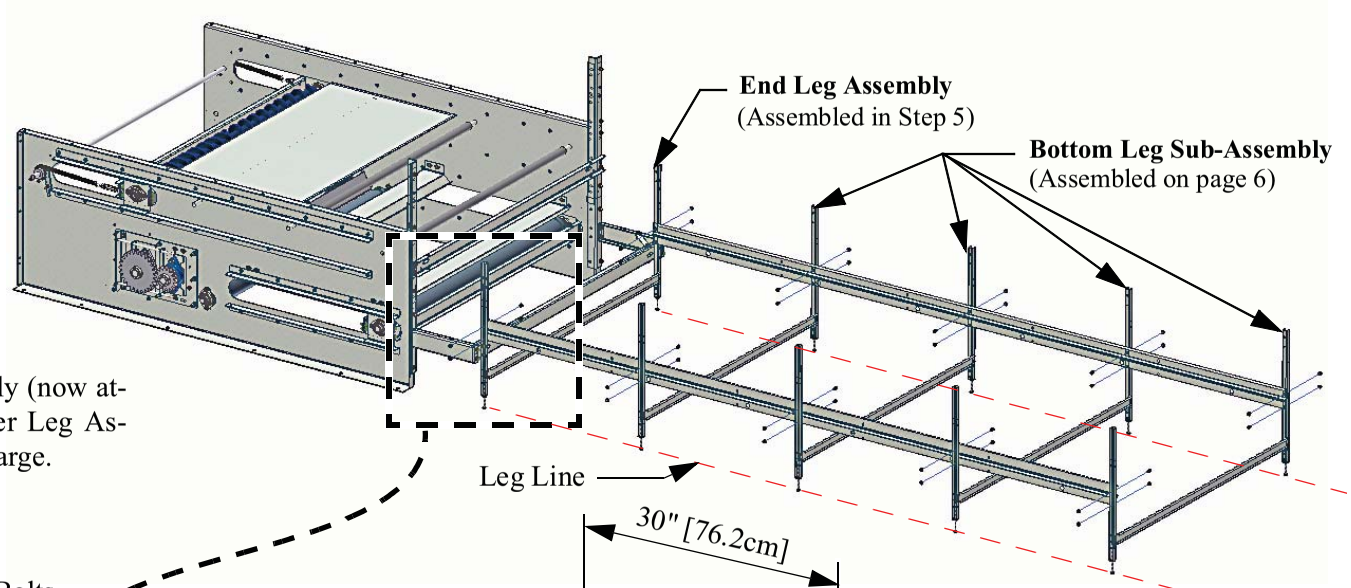


Step 5. Build **two** leg Sub-Assemblies as shown below. The legs **(52441)** in these assembly are unique in that they have four extra holes used to attach to the Bottom Tier Drive Assemblies at each end of the system. Set one of these Sub-Assemblies aside for attaching to the Drive at the other end.

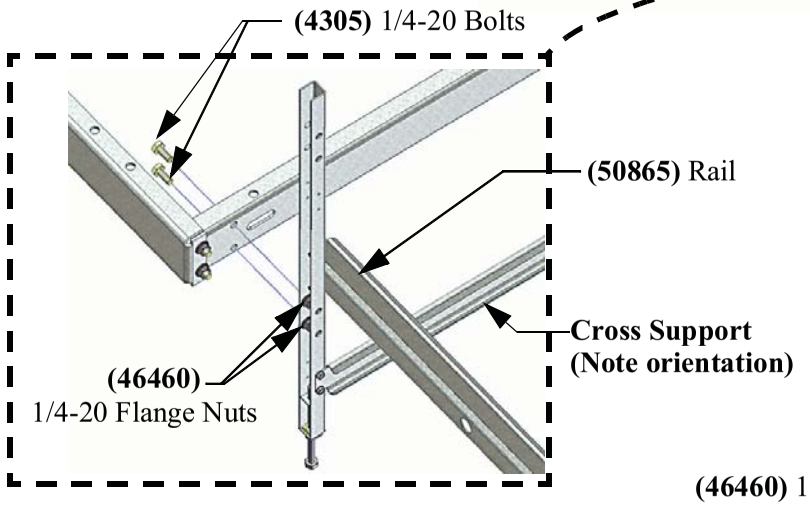


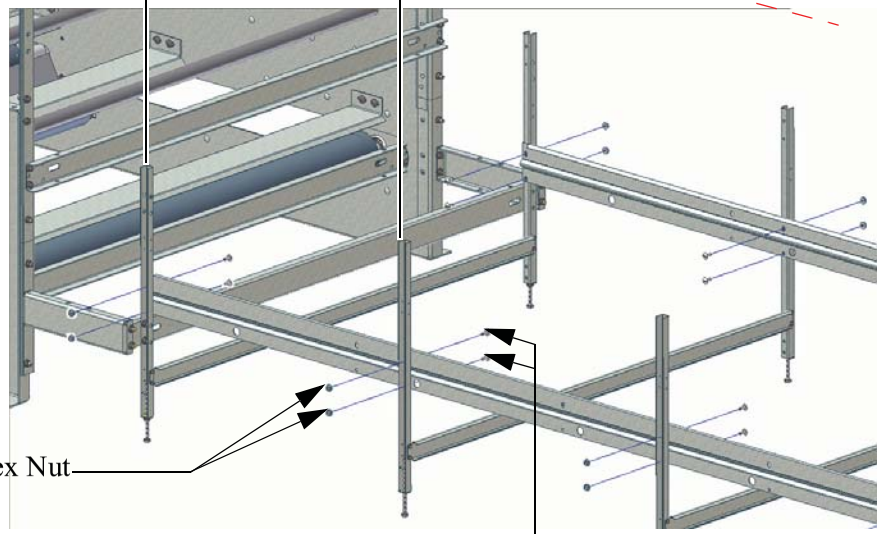
Step 6. Assemble the End Leg Assembly, (4) Bottom Sub-Assemblies, and (2) **50865** Rails. Do not tighten Hardware at this time. **Note** The direction of the Sub-Assembly Cross Supports. There are extra holes in the Rails. Use the holes that space the Legs at 30" [76.2cm] as shown.

Note: 50865 Rails appear similar to 50427 Rails used in Manure Belt Cage Construction. They are not the same and **should not** be interchanged.

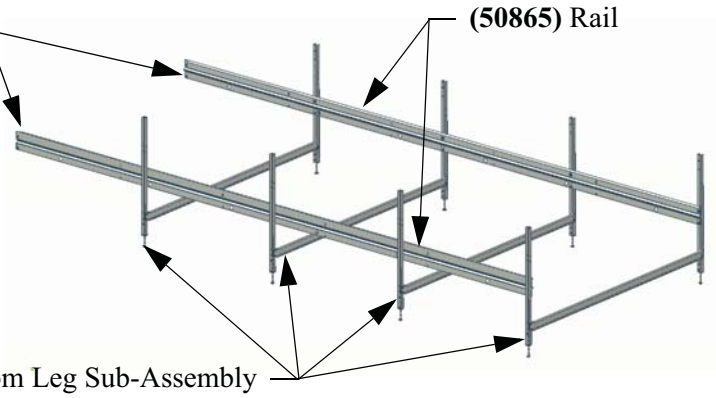


Step 7. Attach the End Leg Assembly (now attached to the Rails and other Leg Assemblies) to the MDS Discharge.





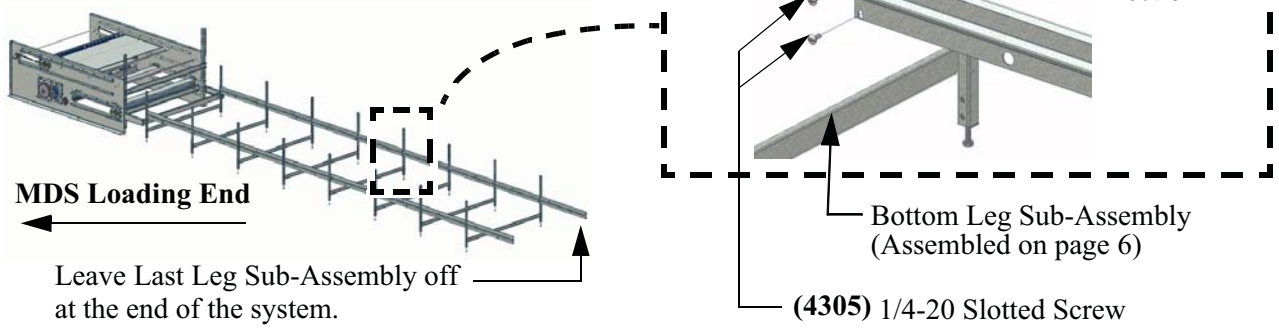
No Legs toward MDS Loading End



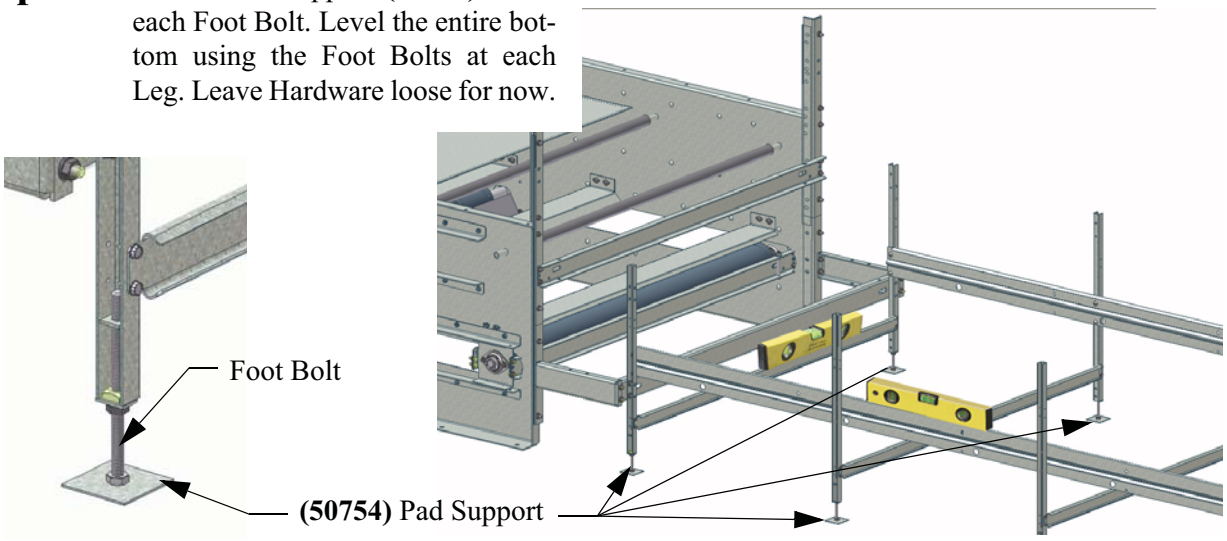
Step 8. Assemble another section of Bottom Tier using four Bottom Leg Sub-Assemblies and two Rails leaving the end leg closest to the MDS Discharge off as shown.

Step 9. Continue building the bottom tier until the MDS reaches its full length. Line up each leg with the Leg Line created on **page 6**. Overlap the Rails as shown to avoid snags in the Belt. At the end of the system leave the last Leg Sub-Assembly off for attaching later.

WARNING! There may be extra Bottom Legs. Do not build past the desired system length.



Step 10. Place a Pad Support **(50754)** under each Foot Bolt. Level the entire bottom using the Foot Bolts at each Leg. Leave Hardware loose for now.

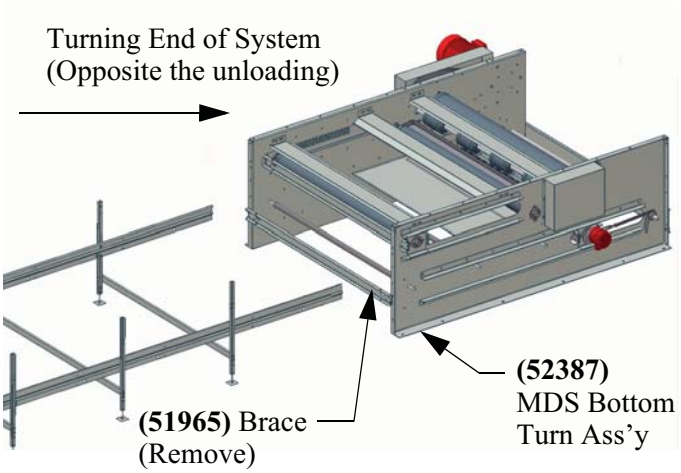


Drive Set (Turning End)

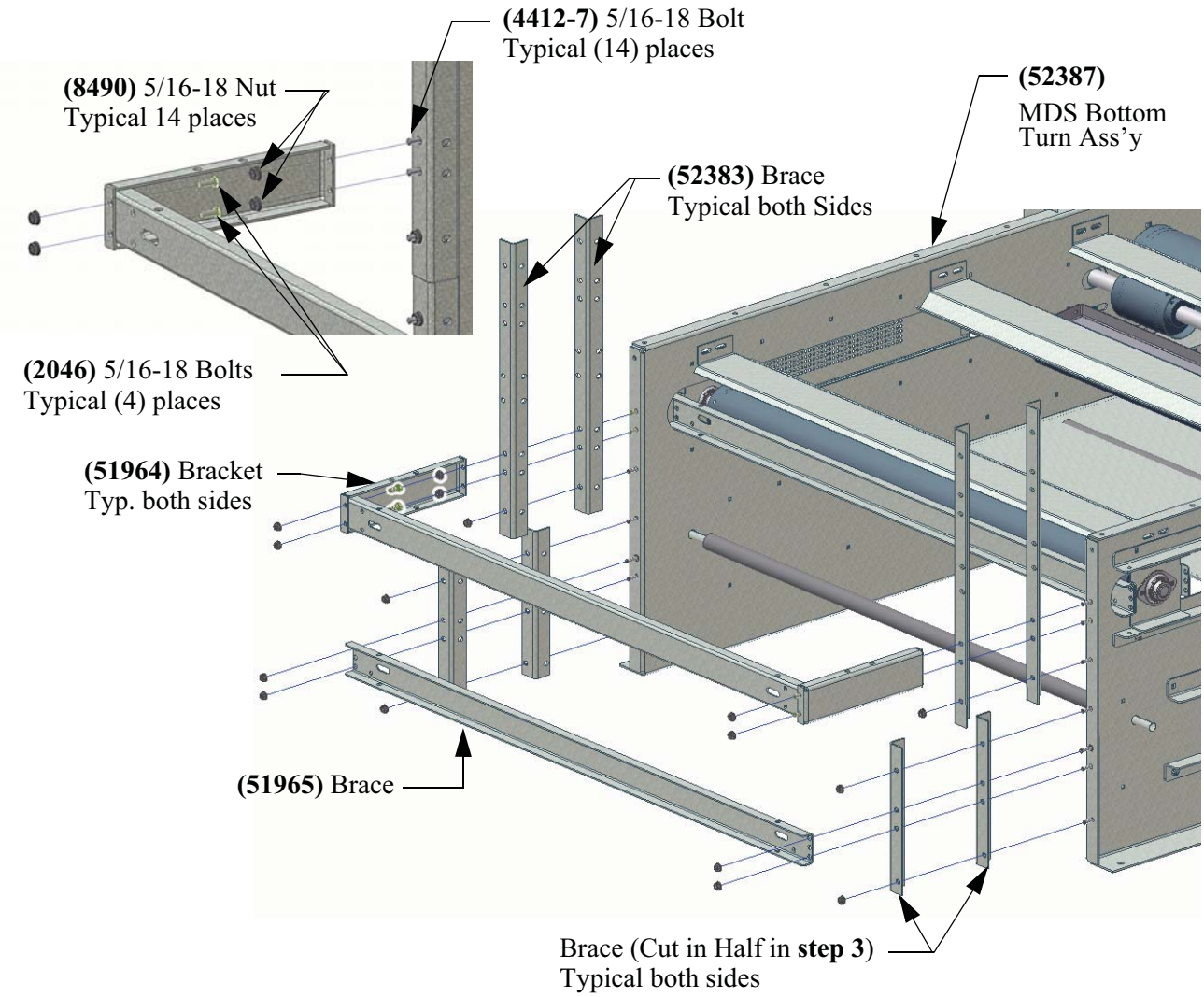
Step 1. Locate a **(52387)** MDS Bottom Turn Assembly and position it at the turning end of the system.

Step 2. Remove the **(51965)** Brace.

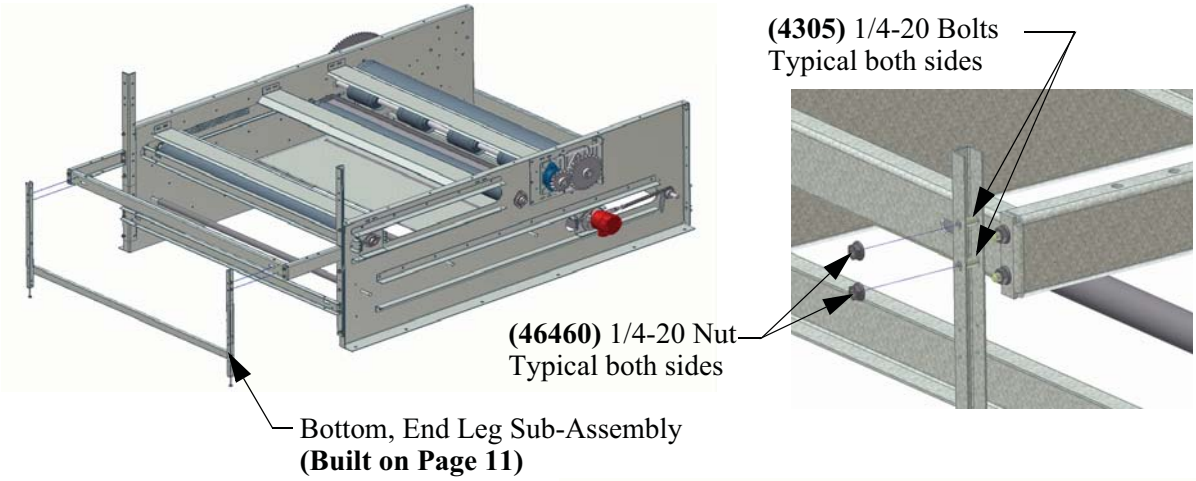
Step 3. Cut (2) **52383** Braces in half to make (4) Braces. **(See page 11, Step 2).**



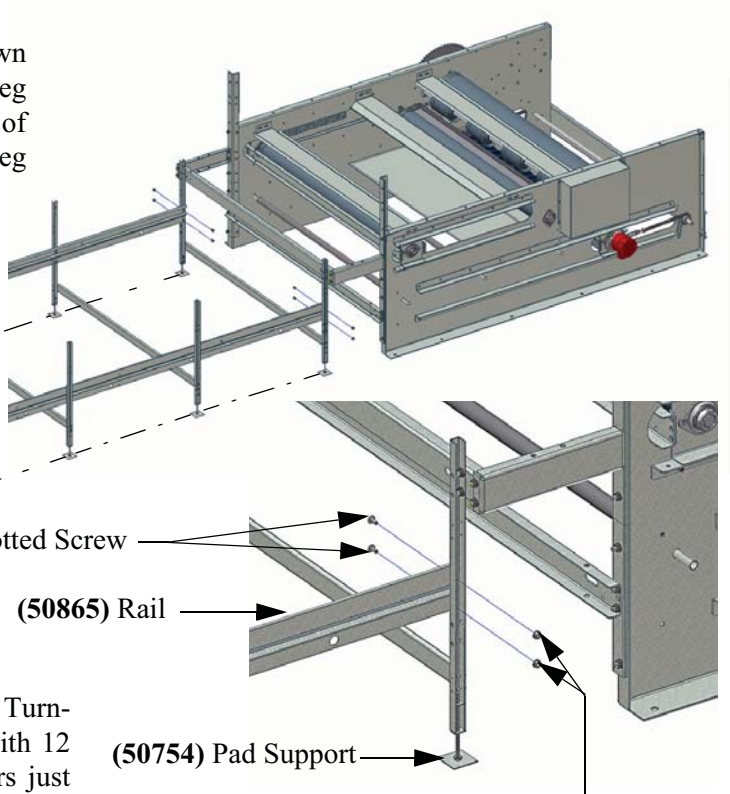
Step 4. Assemble **as shown below**. **Kits Required- (Kit 52404)**



Step 5. Attach the Bottom Leg Sub-Assembly **(assembled on page 11)** to the MDS Bottom Turn Assembly as shown.

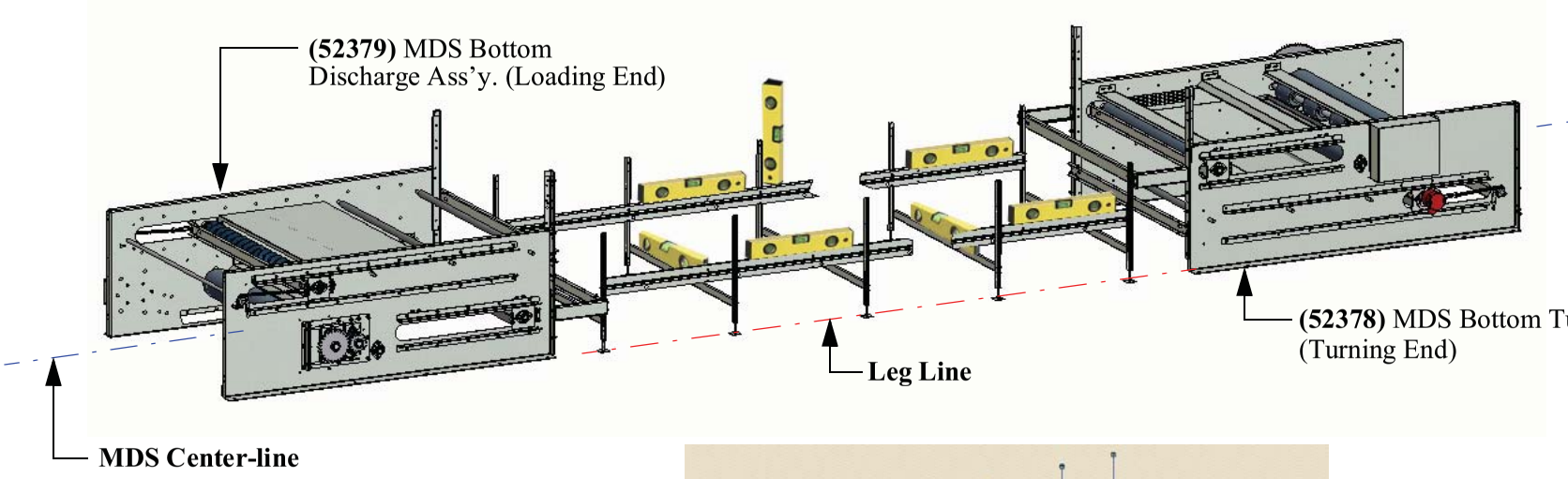


Step 6. Attach the Legs to the Rails as shown and place Pad Supports under the Leg Adjustment Bolts. Check that all of the Adjustment Bolts are on the Leg Lines.

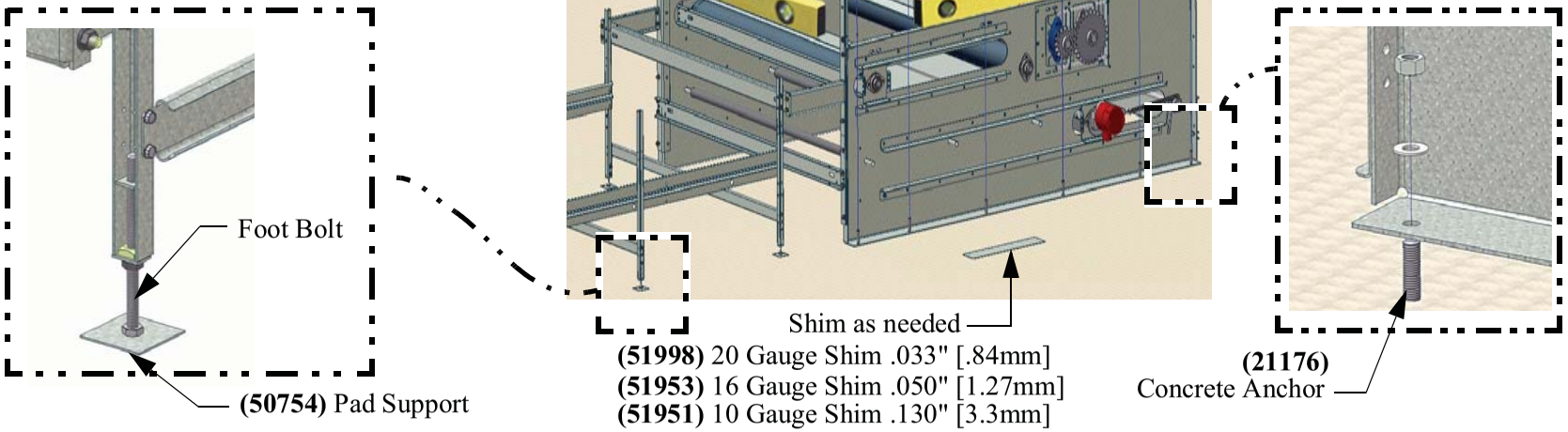


Step 7. Shim, Level and attach the Bottom Turn-MDS Assembly to the Concrete with 12 21176 .50 x 4.5" Concrete Anchors just like the MDS Bottom Discharge Assembly at the other end of the system **(See Page 9).**

Step 8. Level the first Tier Frame and tighten all hardware. Check that the Leg Adjustment Bolts are on the Leg Lines and both MDS Bottom Assemblies are Centered on the MDS Centerline created on the Floor. **The use of a Laser Level is highly recommended.**



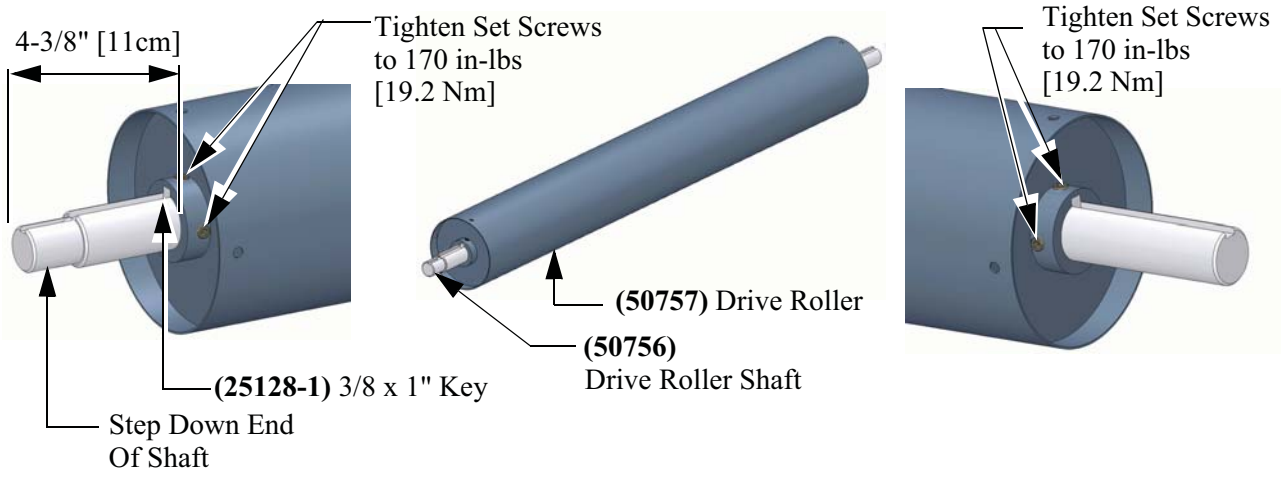
Step 9. **(Use Kit 51950)** Shim, Level and attach the Bottom Turn MDS Ass'y to the Concrete just like the MDS Bottom Discharge Ass'y at the other end of the system **(See Page 9).**



Drive Column Construction (Kits required 52400)

Assemble the following Drive Column Sub-Assemblies. Sub-Assemblies may be different at each end of the MDS system. Differences will be noted in manual. **Note: If assembled Drives were ordered, (PN's 52909-1, 52909-2) then skip to page 31.**

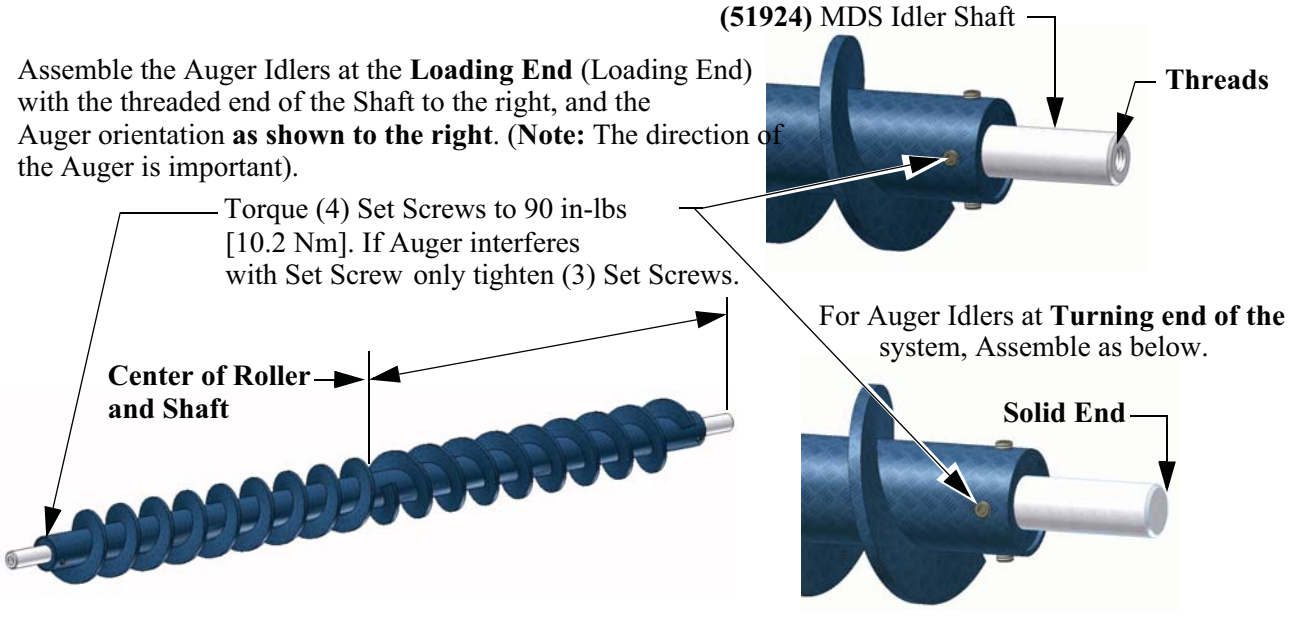
Step 1. Drive Roller (Kits required 52400)



Step 2. Solid Rollers (Kits required 52400)

Step 3. Auger Idlers (Loading End Varies from the Turning End) (Kits required 52400)

Assemble the Auger Idlers at the **Loading End** (Loading End) with the threaded end of the Shaft to the right, and the Auger orientation **as shown to the right**. (**Note:** The direction of the Auger is important).

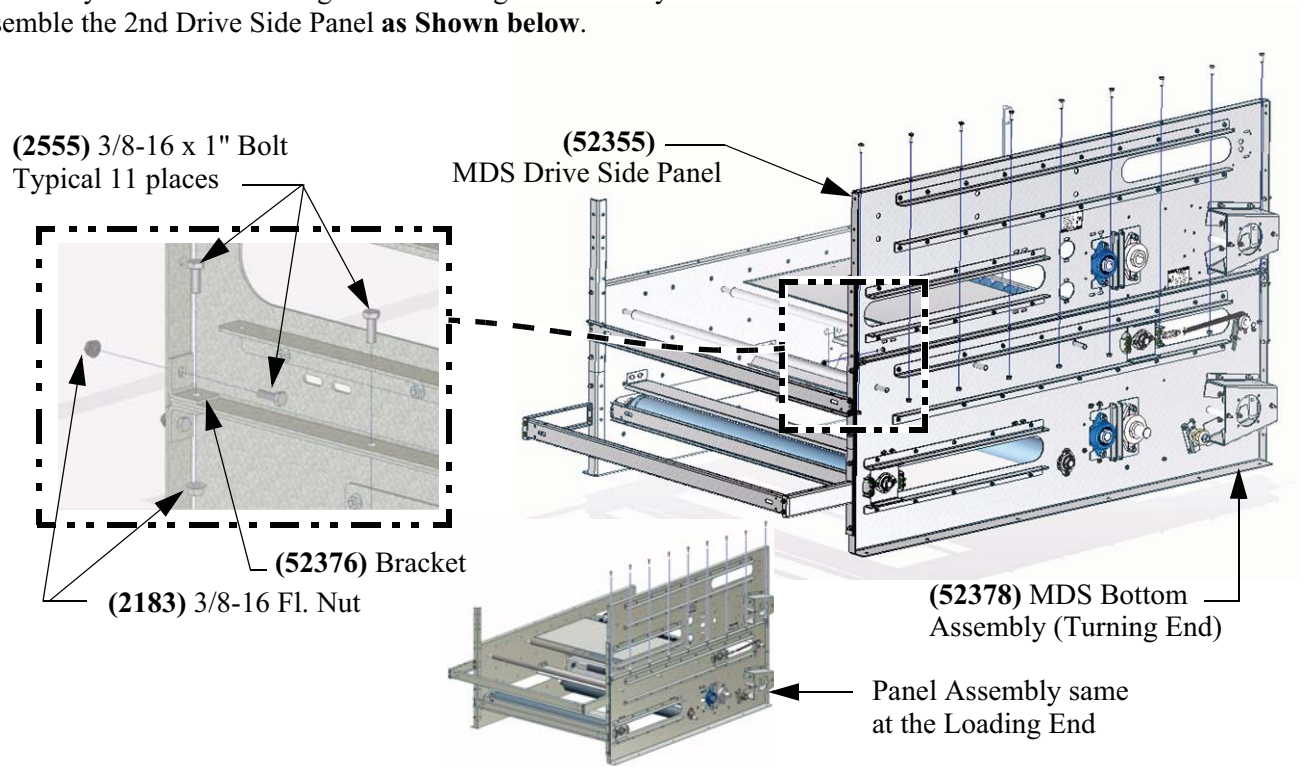


Important! Before continuing with Assembly, Check to make sure entire bottom Tier is Level and the Foot Bolts are on the Leg Lines. **Use of a Laser Level is highly recommended**.

Note: Drive Column Construction may start at either end of the MDS System. Assembly of the Drives is very similar at both ends of the system. Match the direction of the bottom Drive Unit.

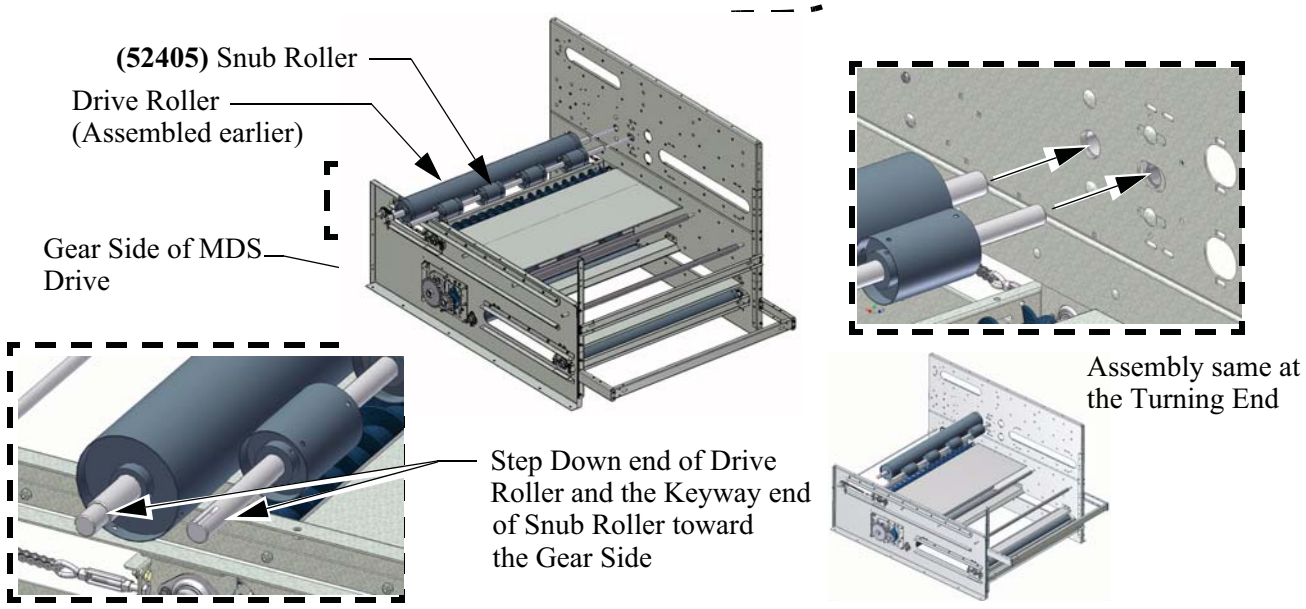
Step 4. Attaching Drive Side Panel (Loading and Turning End)

You may start at the Loading or the Turning end of the System. The Panels attach the same at either end. Assemble the 2nd Drive Side Panel **as Shown below**.



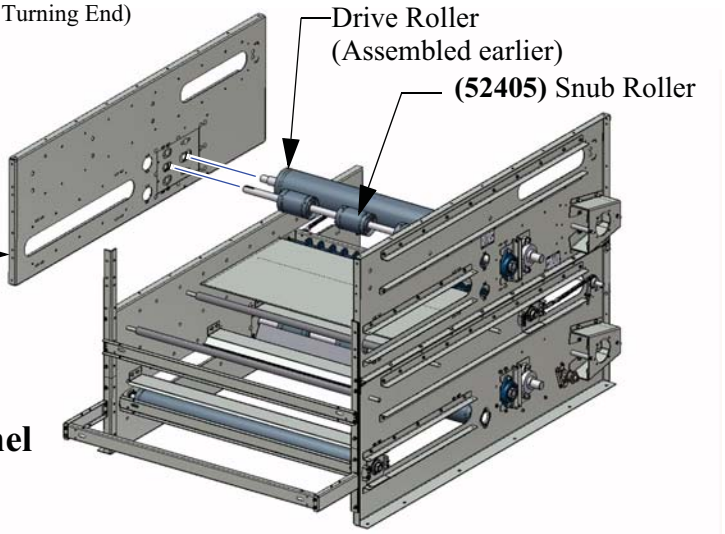
Step 5. Snub Roller and Drive Roller (Loading and Turning End)

Insert the Drive Roller and the Snub Roller Shafts into the appropriate Bearings in the Side Panel. (**Note the orientation of the Shafts**.)



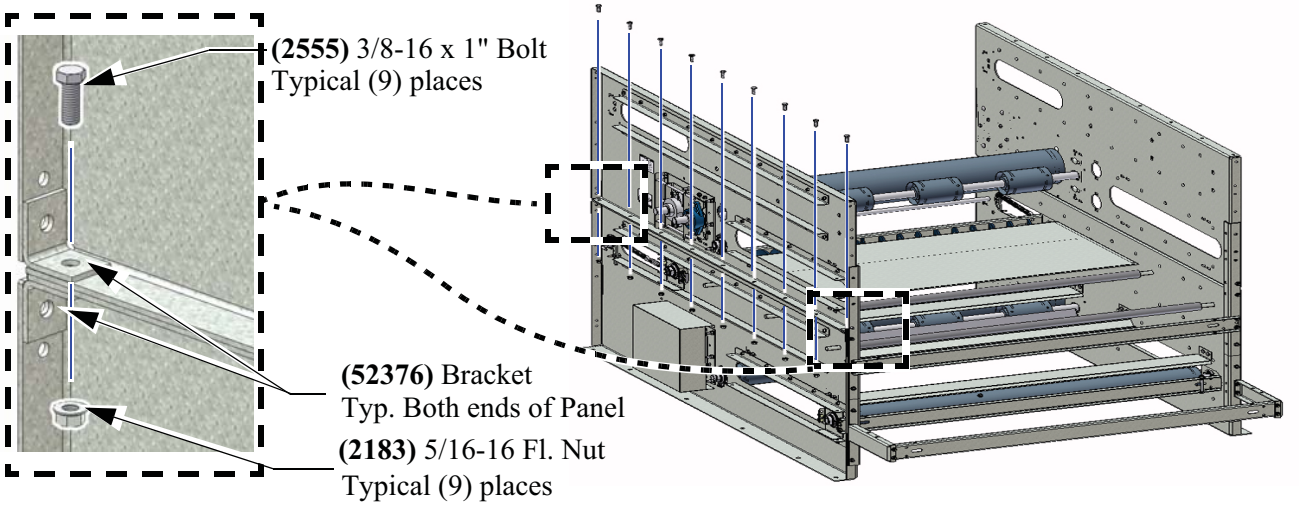
Step 6a. Gear Side Panel (Loading and Turning End)

Locate the Gear Side Panel and insert the Snub Roller and Drive Roller Shafts in the appropriate Bearings. **(Assembly is the same at Turning end except the Rollers will be at the top of the Panels.)**



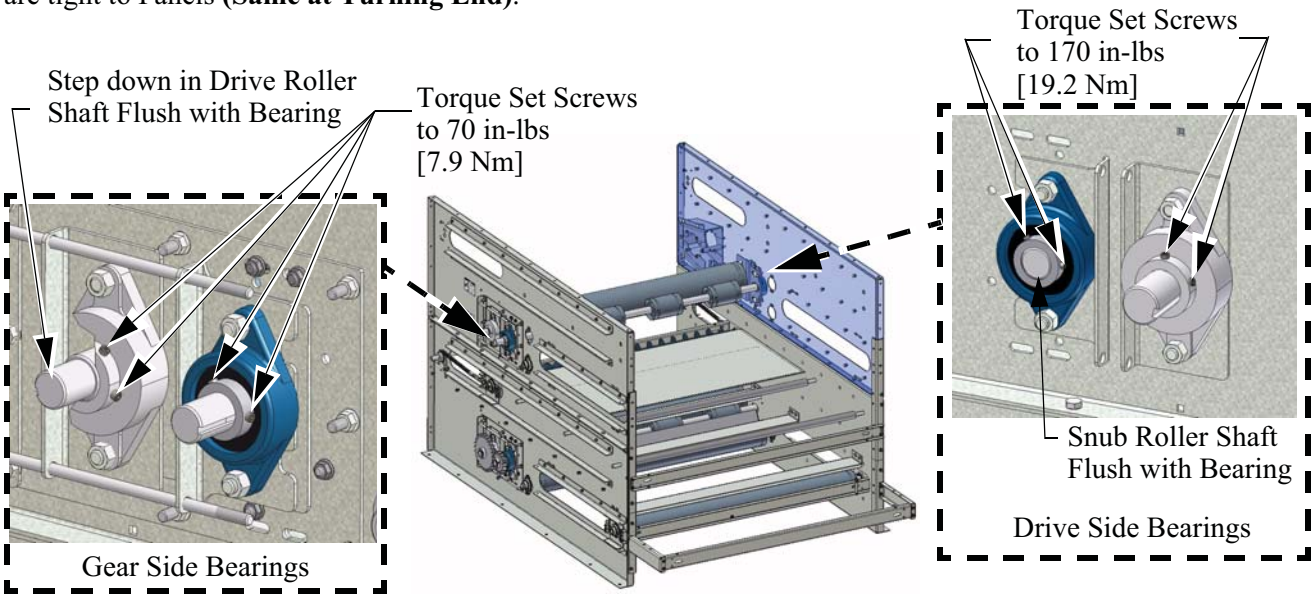
Step 6b. Attaching Gear Side Panel

(Loading and Turning End)



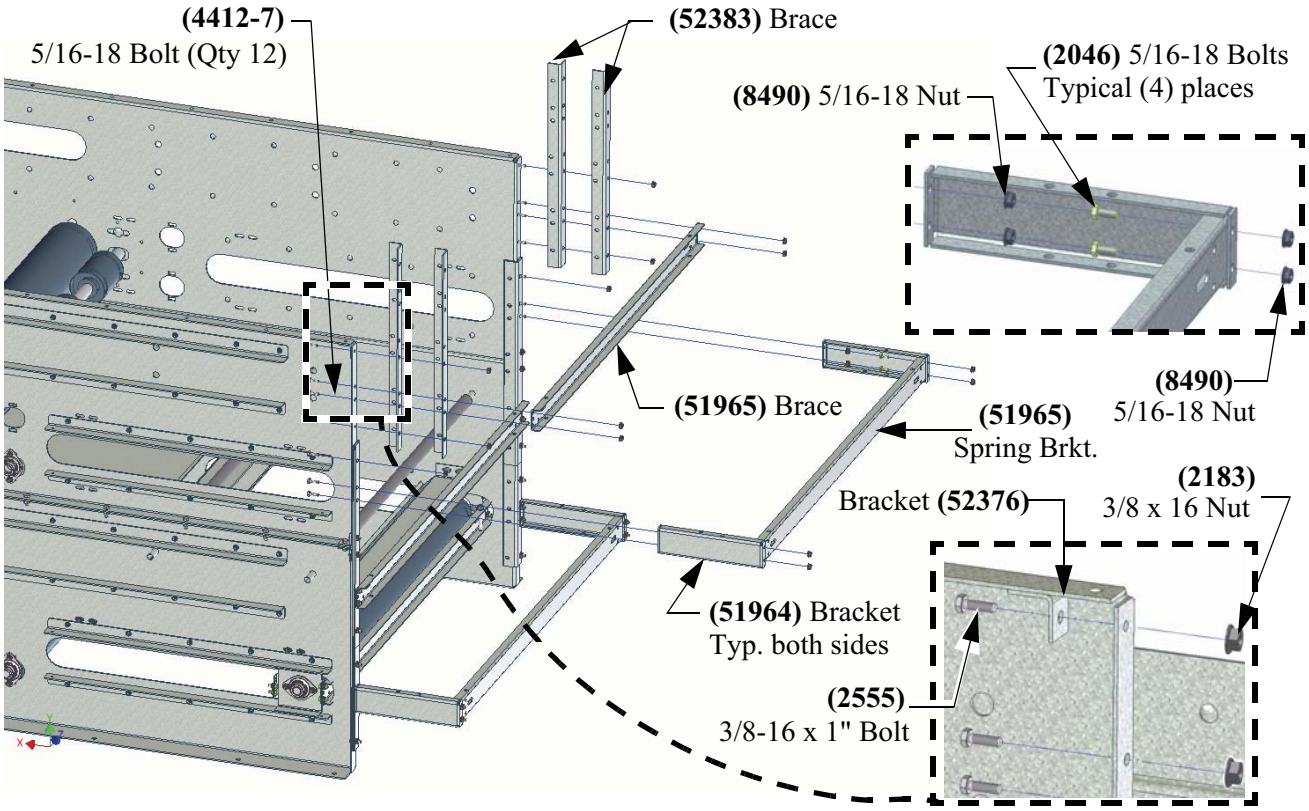
Step 7. Attaching Gear Side Panel (Loading and Turning End)

Flush Shafts to Bearings as shown and tighten Set Screws. Check to make sure Bearings are tight to Panels **(Same at Turning End)**.



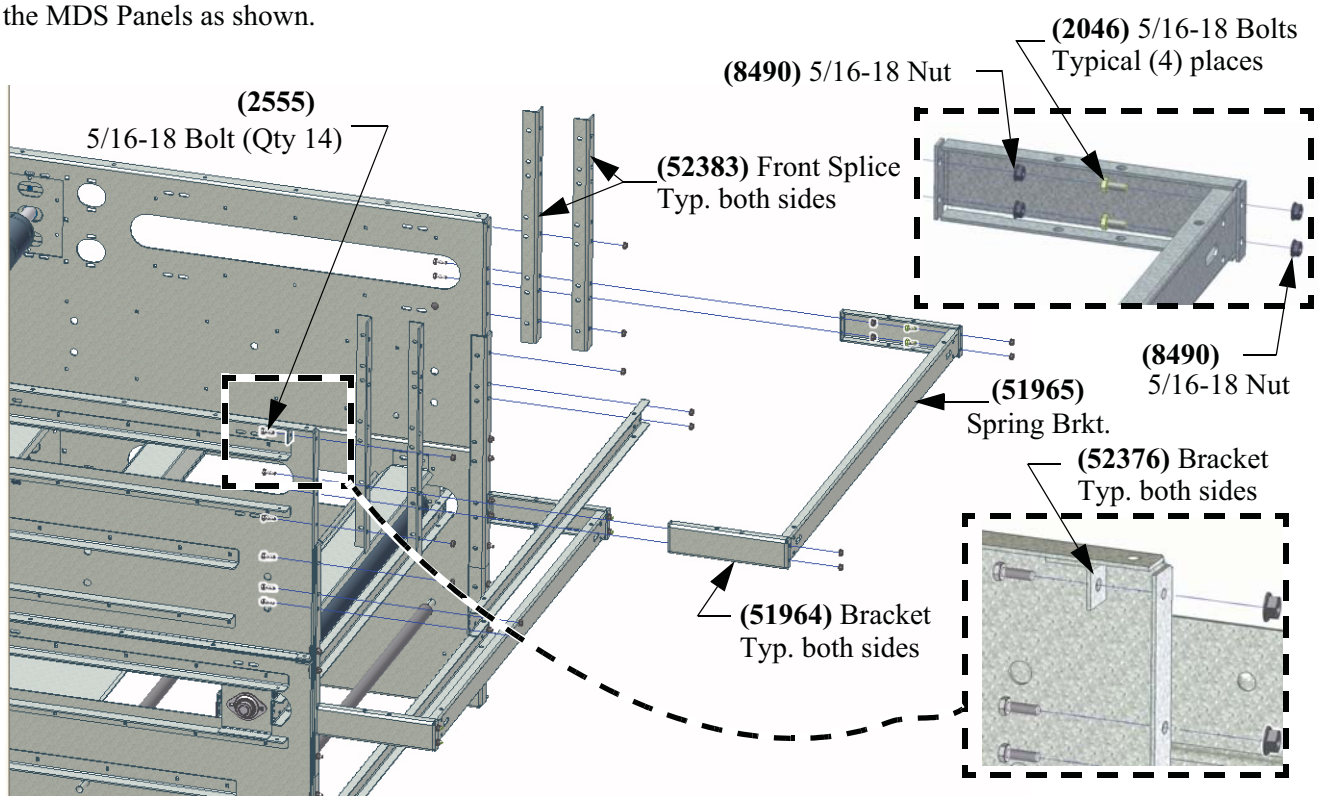
Step 8a. Idler Spring Mount and Front Splices (Turning End) Kits required- 52404, 52550

Attach (1) 51965 Front Brace, (4) 52383 Braces, (2) 51964 Spring Brackets and (1) 51966 to the front of the MDS Panels as shown.



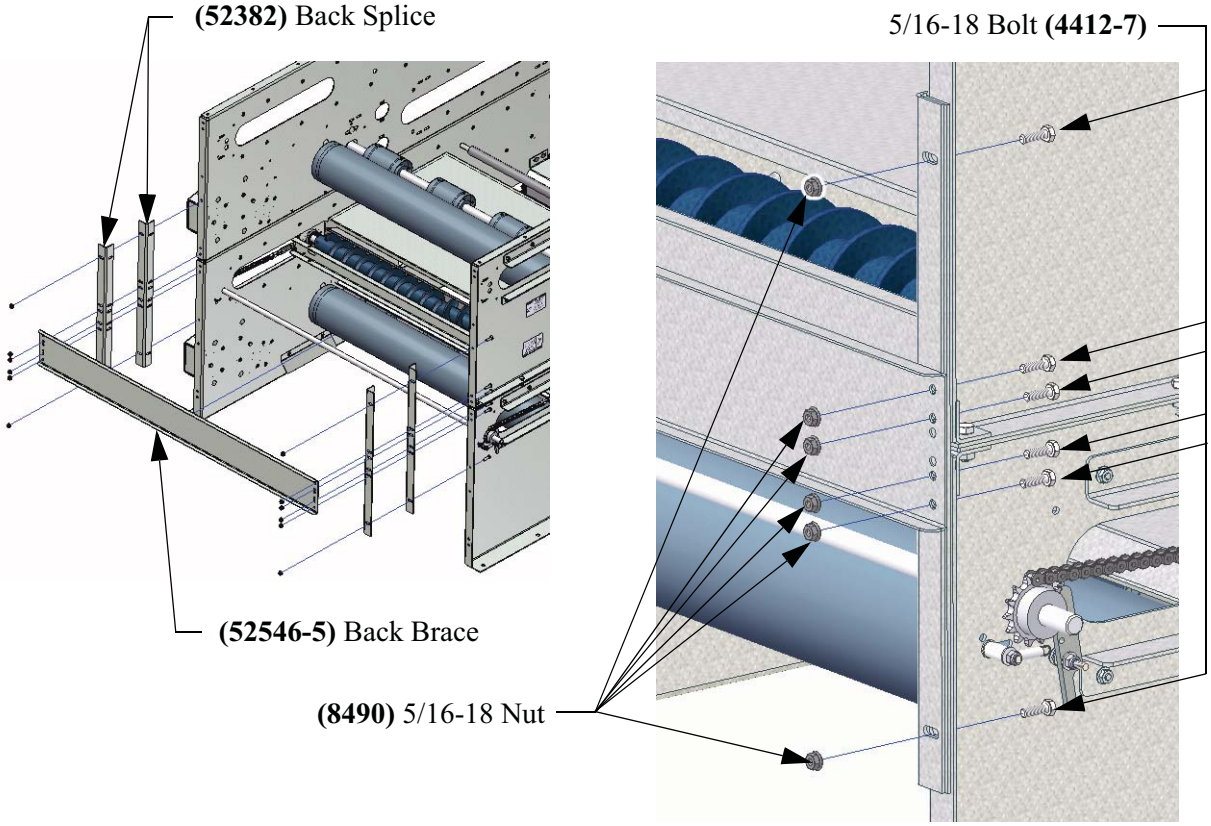
Step 8b. Idler Spring Mount and Front Splices (Loading End) Kits required- 52404, 52550

Attach (1) 51965 Front Brace, (4) 52383 Front Splices, (2) 51964 Spring Brackets and (1) 51966 to the front of the MDS Panels as shown.



Step 9. Back Brace (Loading and Turning End) Kits required- 52404, 52550

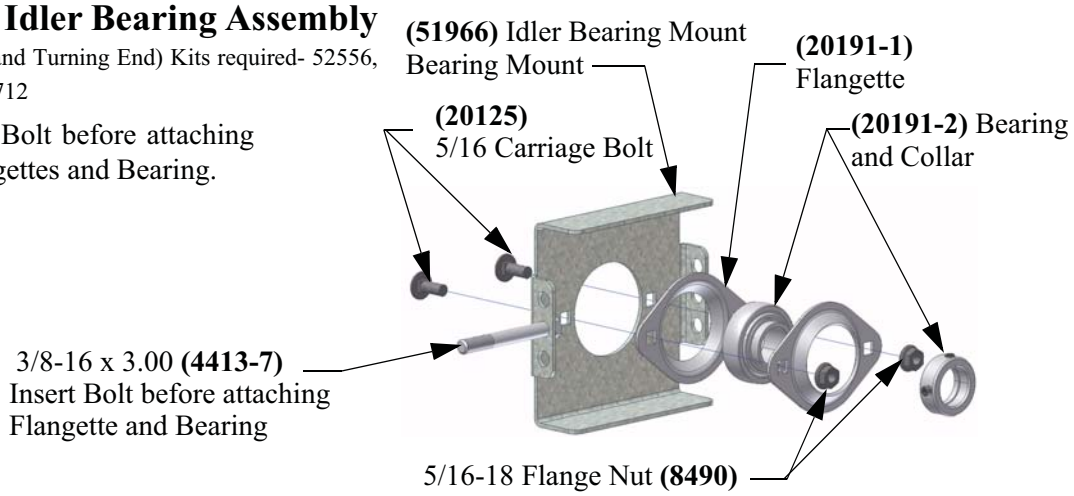
Attach (1) 52546-5 Back Brace and (4) 52382 Back Splices to the Back of the MDS Panels as shown.



Step 10. Auger Idler Bearing Assembly

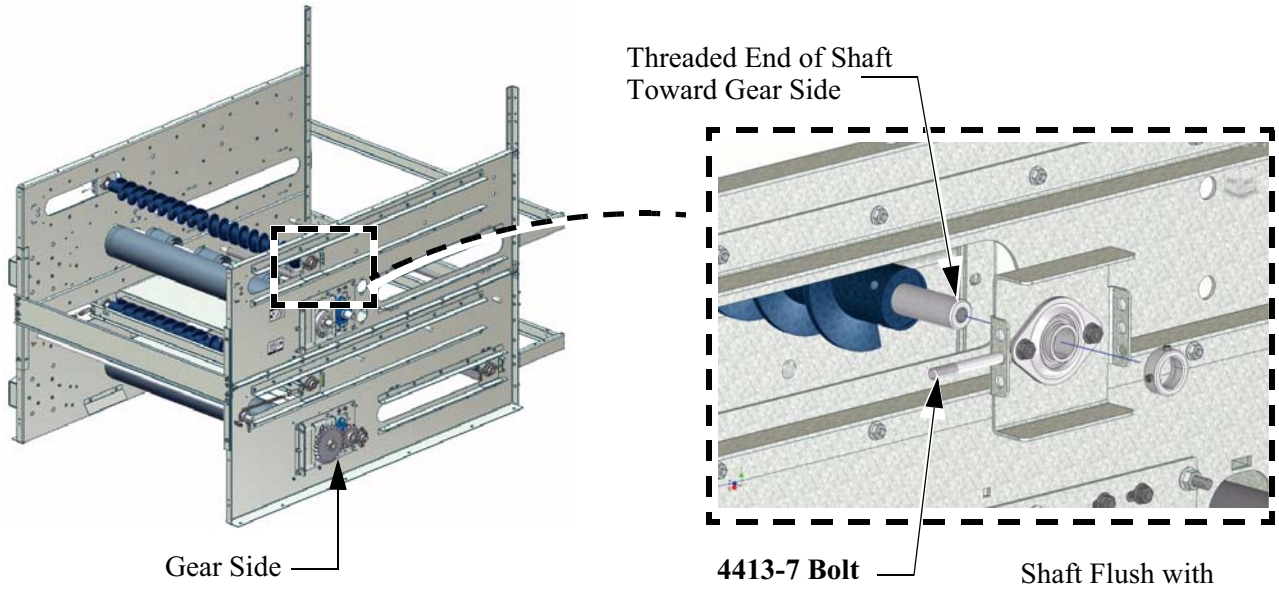
(Loading and Turning End) Kits required- 52556, 52555, 51712

Note: Insert 4413-7 Bolt before attaching the Flangettes and Bearing.



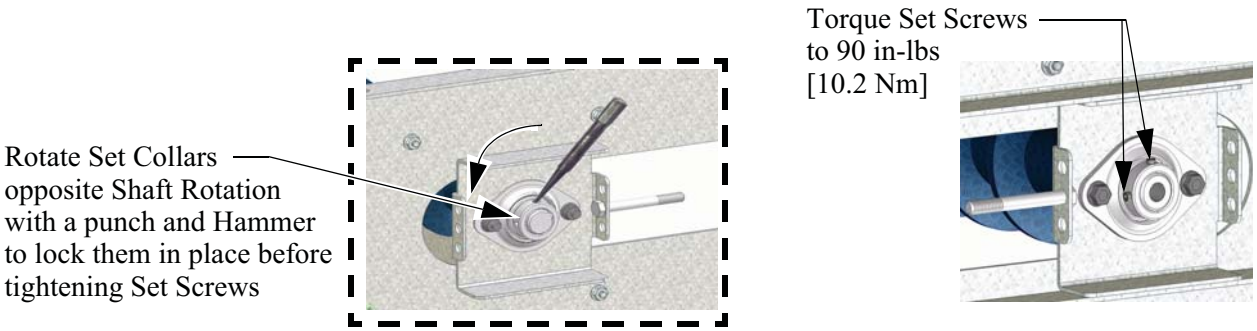
Step 11. Auger Idler (Loading and Turning End) Kits required-52400

Insert the Threaded end of the Auger Idler Shaft into the Bearing on the Gear side of the system with the 4413-7 Bolt pointing away from the center of the system **(See bottom MDS Assembly)**



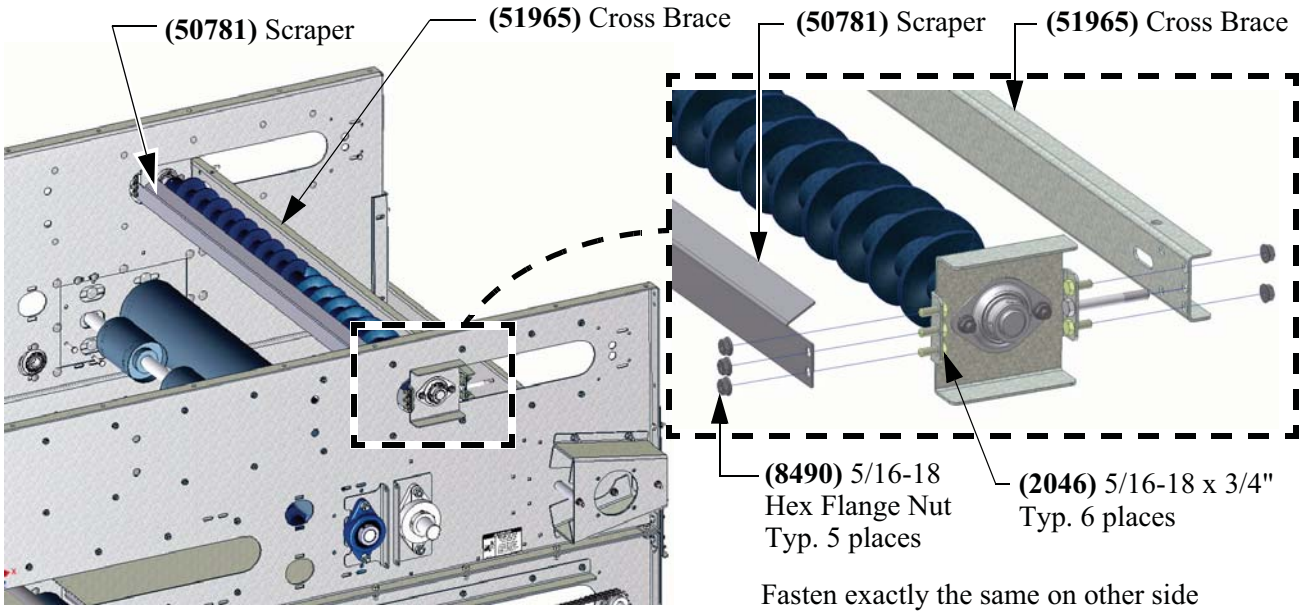
Step 12. Auger Idler

Center the Auger Shaft and Lock the Set Collars in place using a punch as shown. Rotate the Set Collars opposite the direction that the Spreading Auger will rotate.



Step 13. Auger Idler Brace and Scraper (Loading and Turning End) Kits required-52400

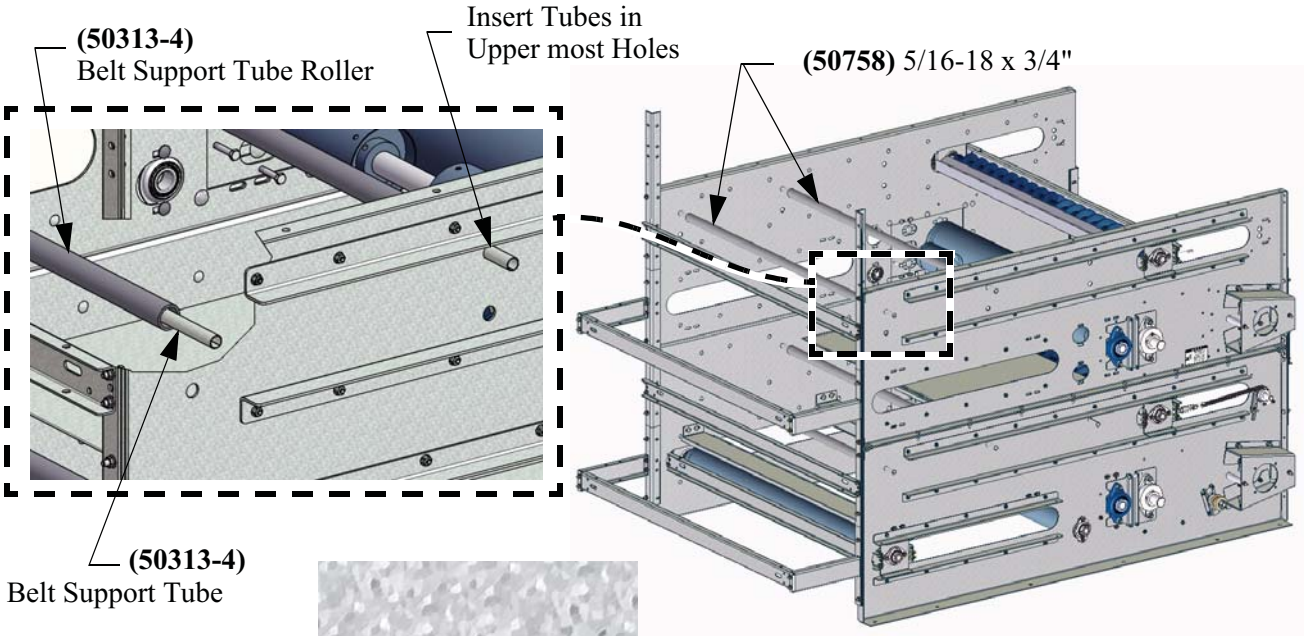
Attach a **(50781)** Scraper, and a **(51965)** Cross Brace to the Auger Idler Bracket as shown.

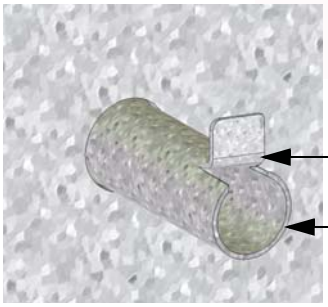


Step 14. Belt Support and Roller Tubes

(Loading and Turning End) Kits required- 52400

Install a Belt Support Tube and a Roller Tube in the proper holes **(upper set of holes) as shown below**. Notch both ends of each Tube and bend up **as shown** to keep Tubes in place. See Bottom MDS Drive Assembly for example.

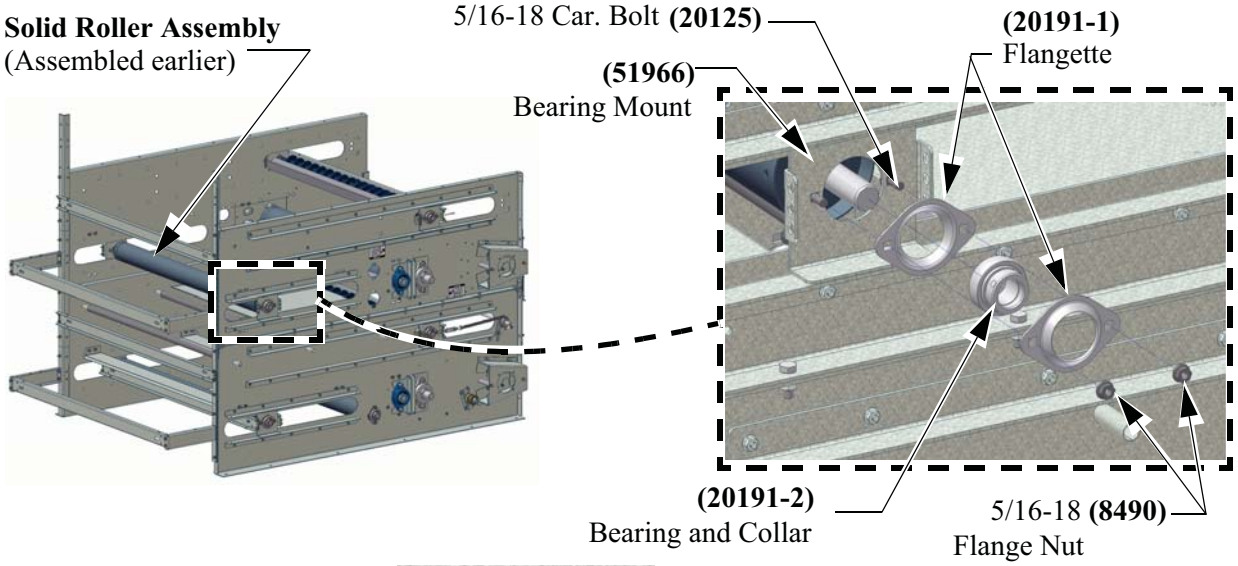


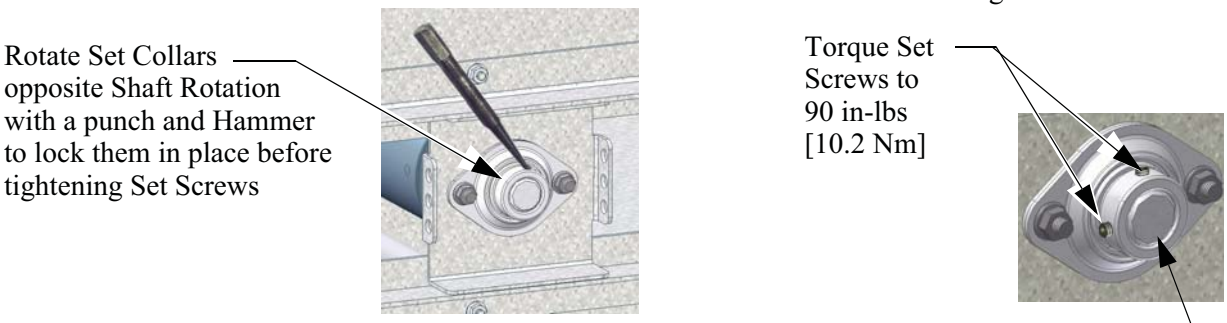


Step 15. Solid Idler Roller

(Loading and Turning End) Kits required- 52404

Install a Solid Roller **(Assembled earlier)** in the Slot as shown below.

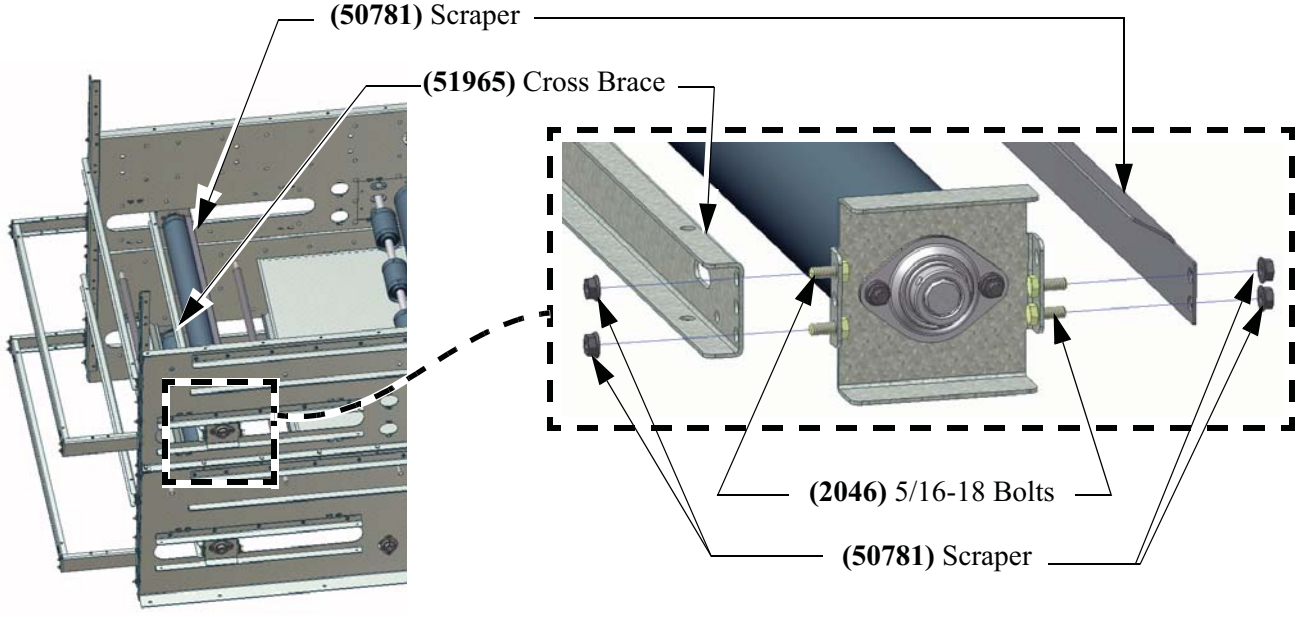




Step 16. Solid Idler Cross Brace and Scraper

(Loading and Turning End) Kits required- 52404

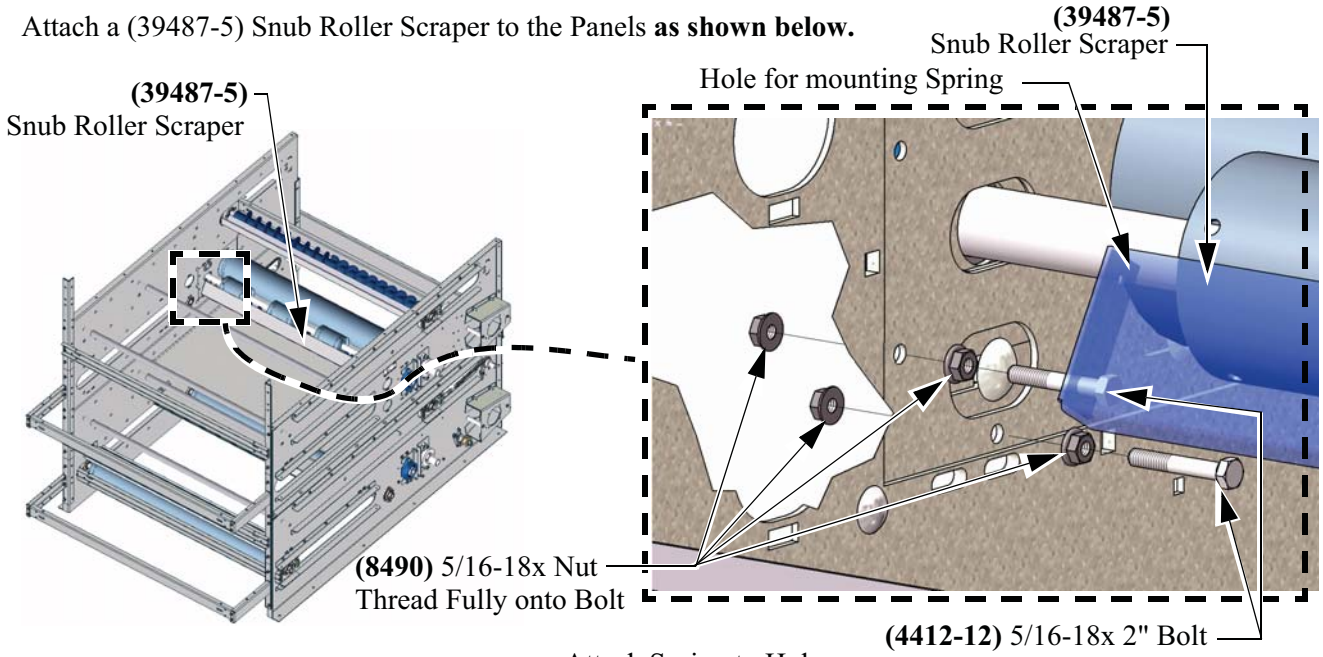
Attach a Cross Brace (51965) and a Idler Scraper to the Solid Roller Bearing Mount **as shown.**

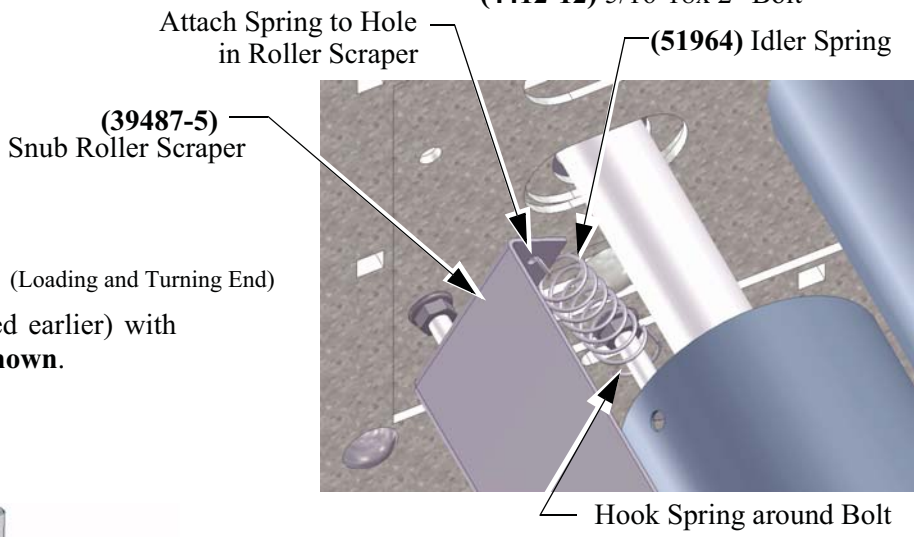


Step 17. Snub Roller Scraper

(Loading and Turning End) Kits required 52400, 52555,52404

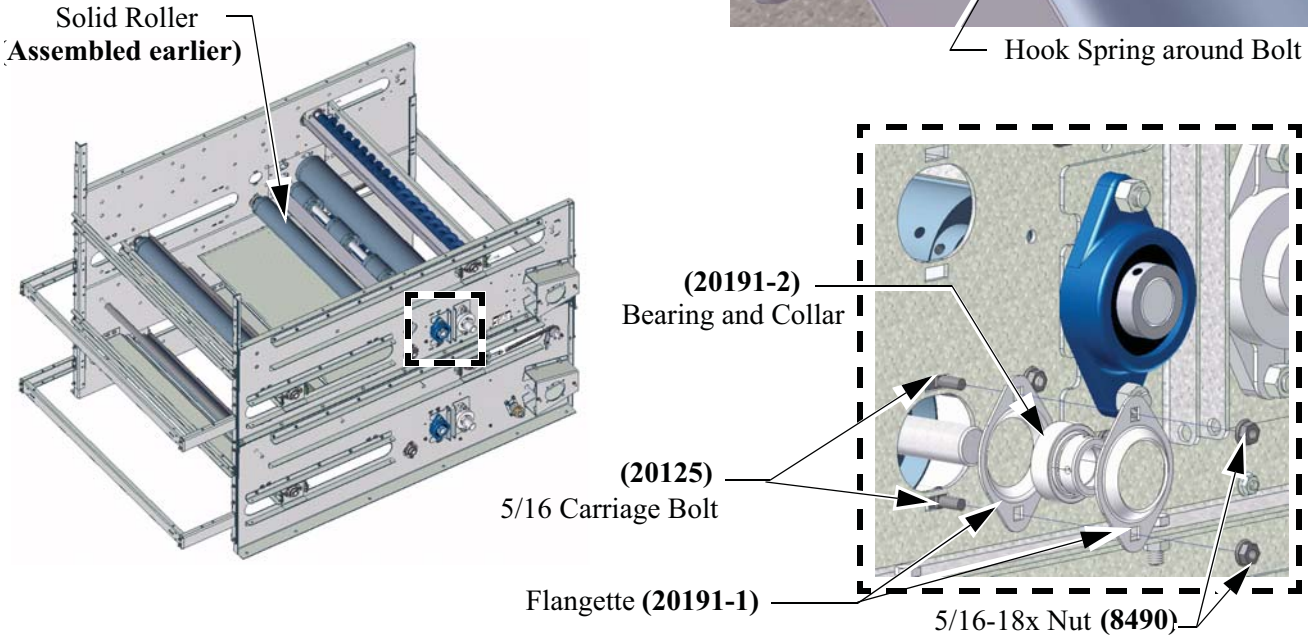
Attach a (39487-5) Snub Roller Scraper to the Panels **as shown below.**





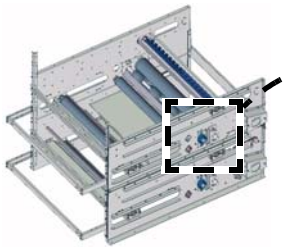
Step 18a. Solid Roller (Loading and Turning End)

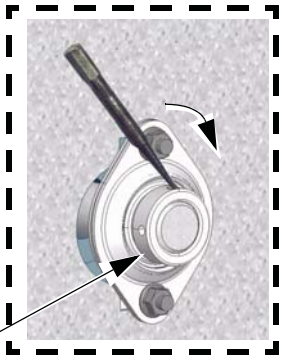
Attach a Solid Roller (Assembled earlier) with Bearings and Bearing Plates **as shown**.

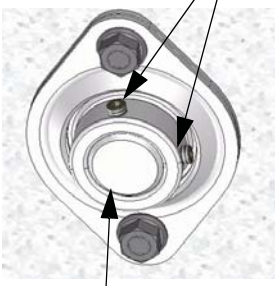


Step 18b. Solid Roller Set Screws

Lock the Set Collars in place using a punch as shown. Rotate the Set Collars opposite the direction that the Spreading Auger will rotate.

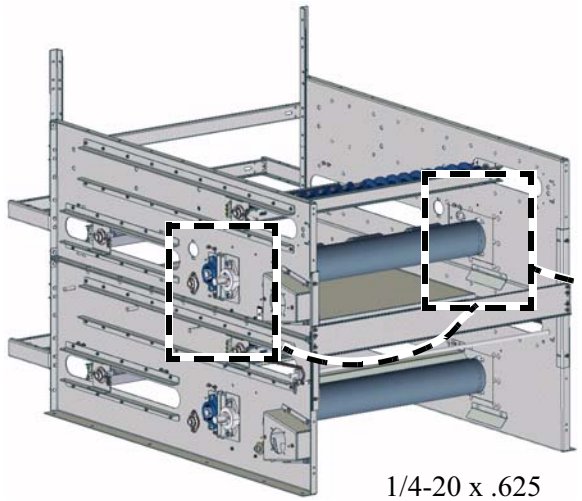


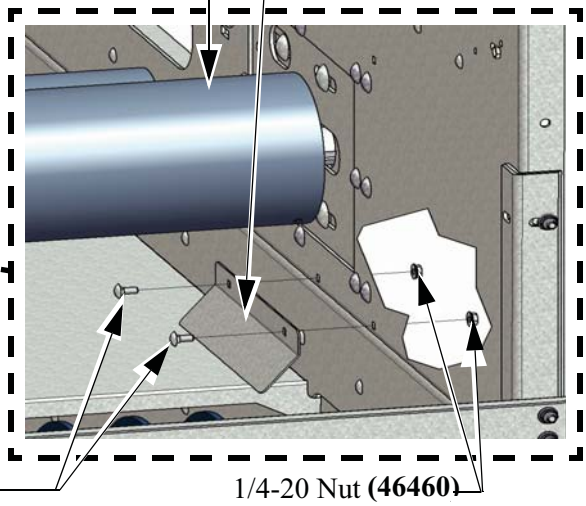




Step 19. Drive Roller Deflector (Loading and Turning End)

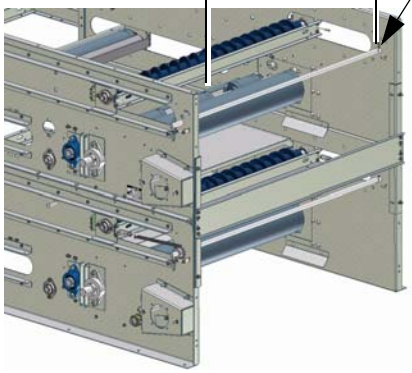
Attach Deflector Plates below the Drive Roller **as shown**.

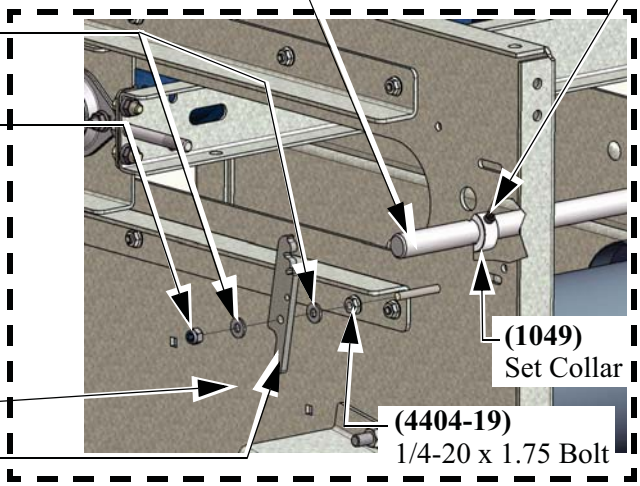




Step 20a. Chain Idler Assembly (Loading and Turning End) Kits required 52400, 51712

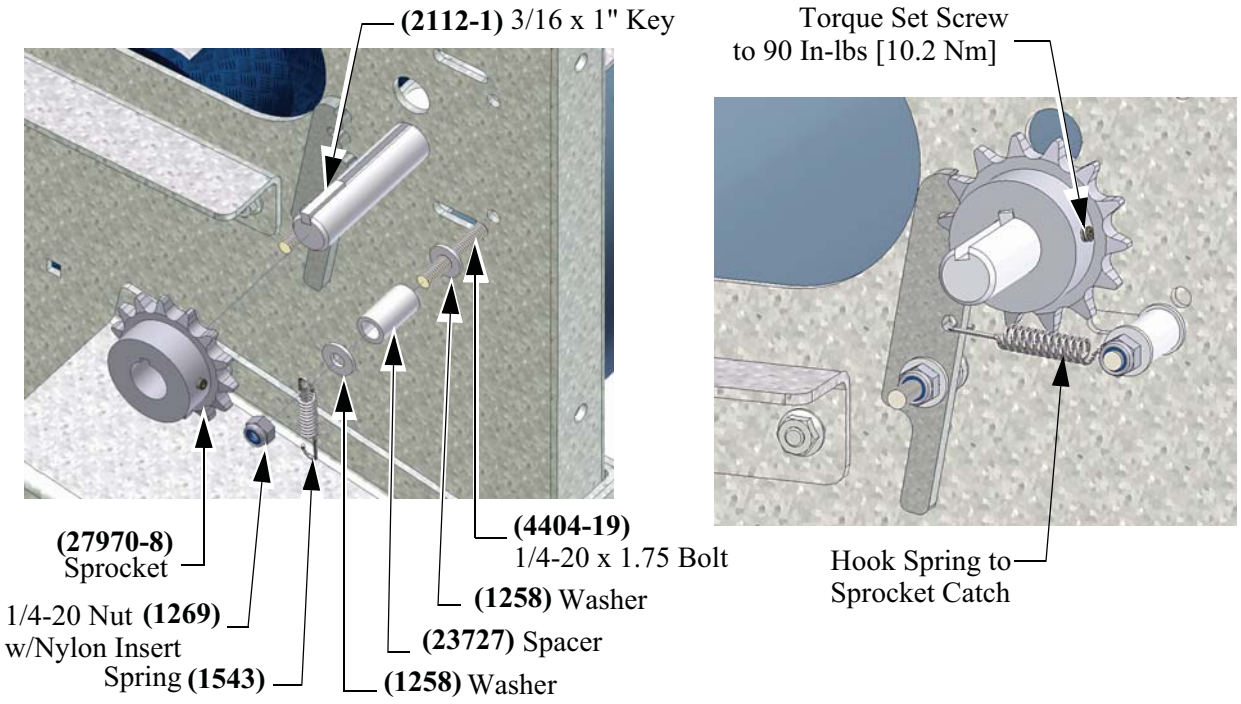
Install Chain Idler parts as shown below.





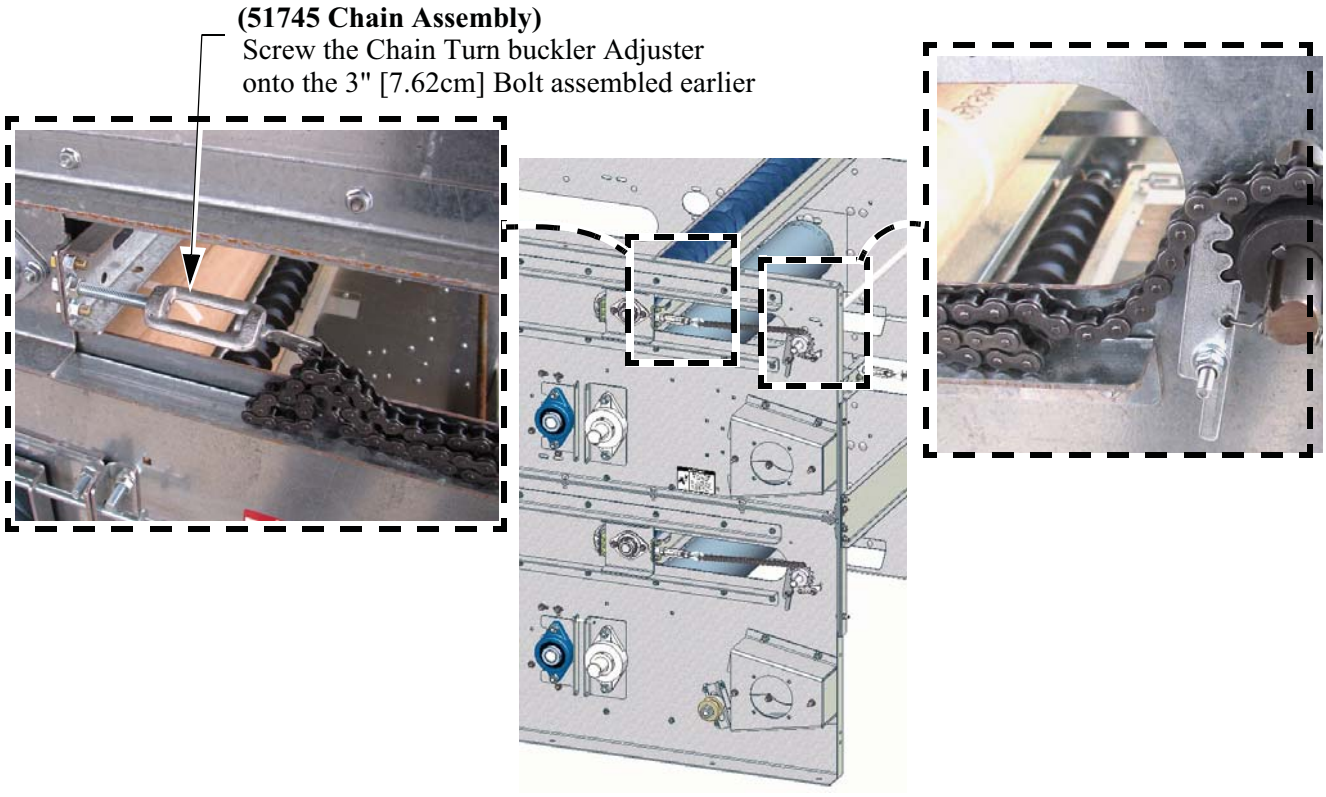
Step 20b. Chain Idler Assembly (Loading and Turning End) Kits required 52400, 51712

Install Chain Idler parts as shown below.



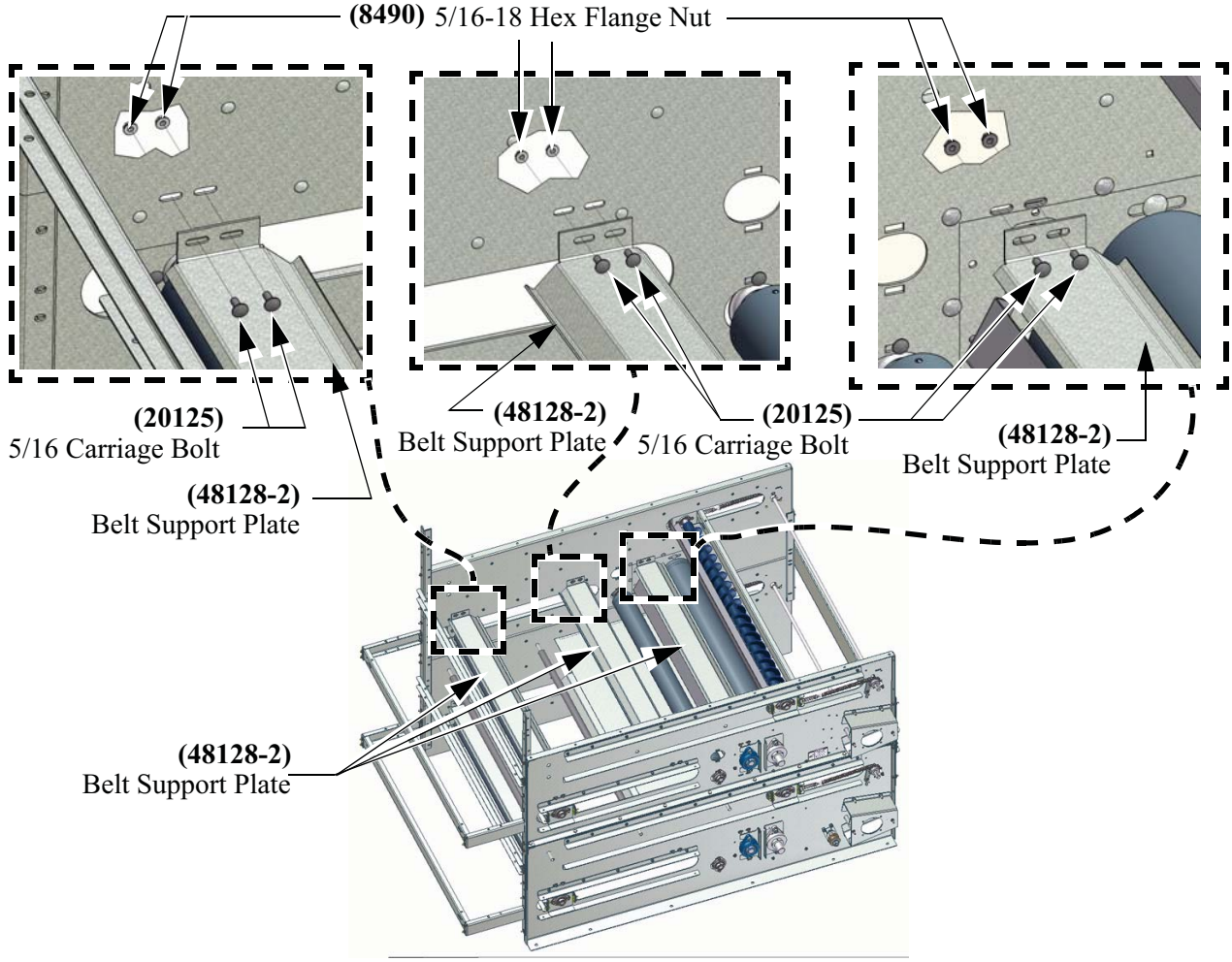
Step 20c. Chain Idler Assembly (Loading and Turning End) Kits required 52400, 51712

Install Chain Idler parts as shown below.



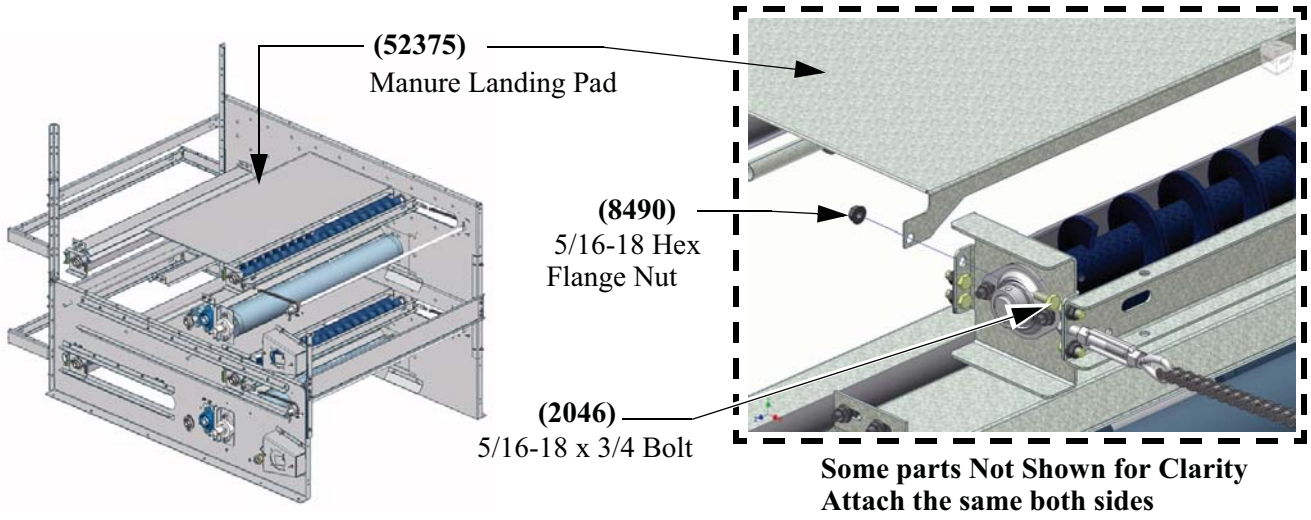
Step 21. Belt Support Plates (Loading and Turning End) Kits required 52400

Install (3) Belt Support Plates (48128-2) **as shown.** Note that the orientation of each Plate varies.



Step 22. Manure Landing Pad (Loading and Turning End) Kits required 52400

Install the Manure Landing Pad (52375) **as shown below**.

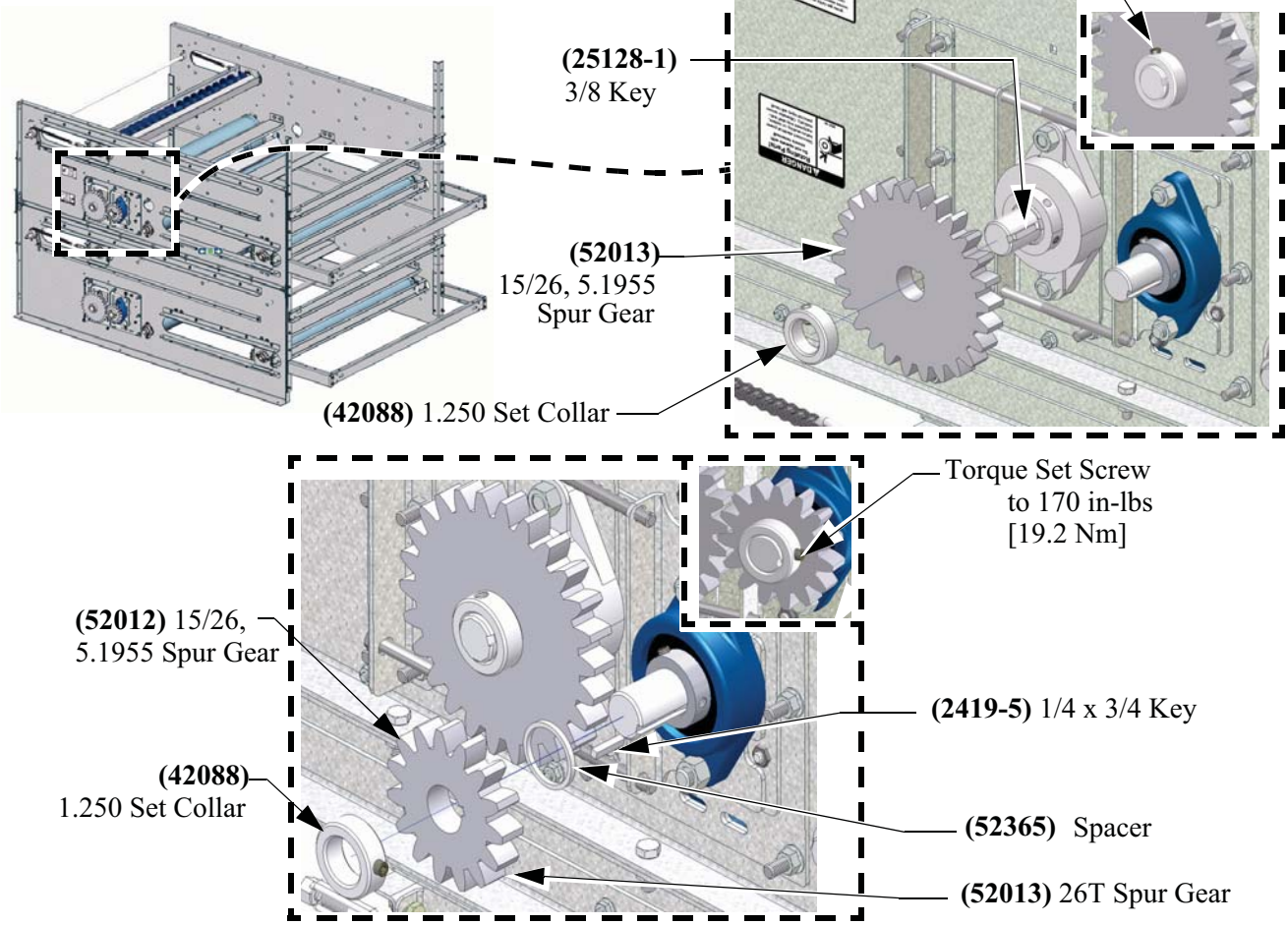


Some parts Not Shown for Clarity
Attach the same both sides

Step 23. Snub Roller and Drive Shaft Gear

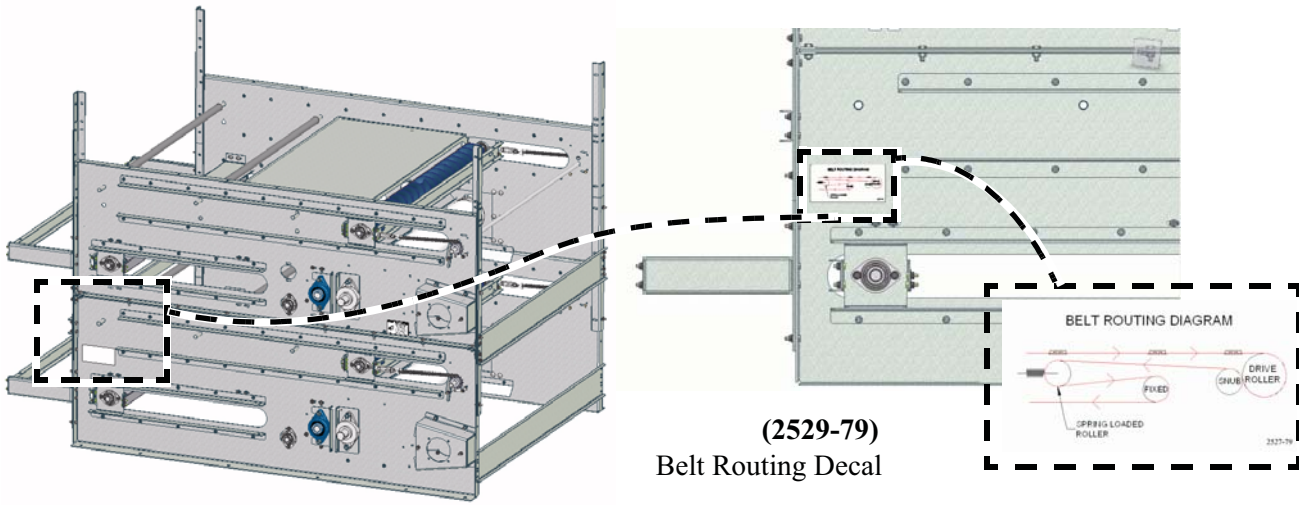
(Loading and Turning End) Kits required 52400, 52555

Install the Snub Roller Gear **(52375)** and the Drive Gear (**as shown below**.



Step 24. Belt Routing Decal (2527-79) (Loading and Turning End) Kits required 52400

Install a Belt Routing Decal (2527-79), one on each, Drive as shown.

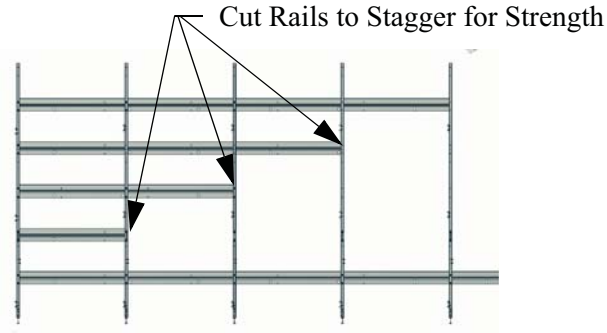


This completes the Drive Assembly for now; Continue stacking Units until all Tiers are complete.

Intermediate Tier Framework

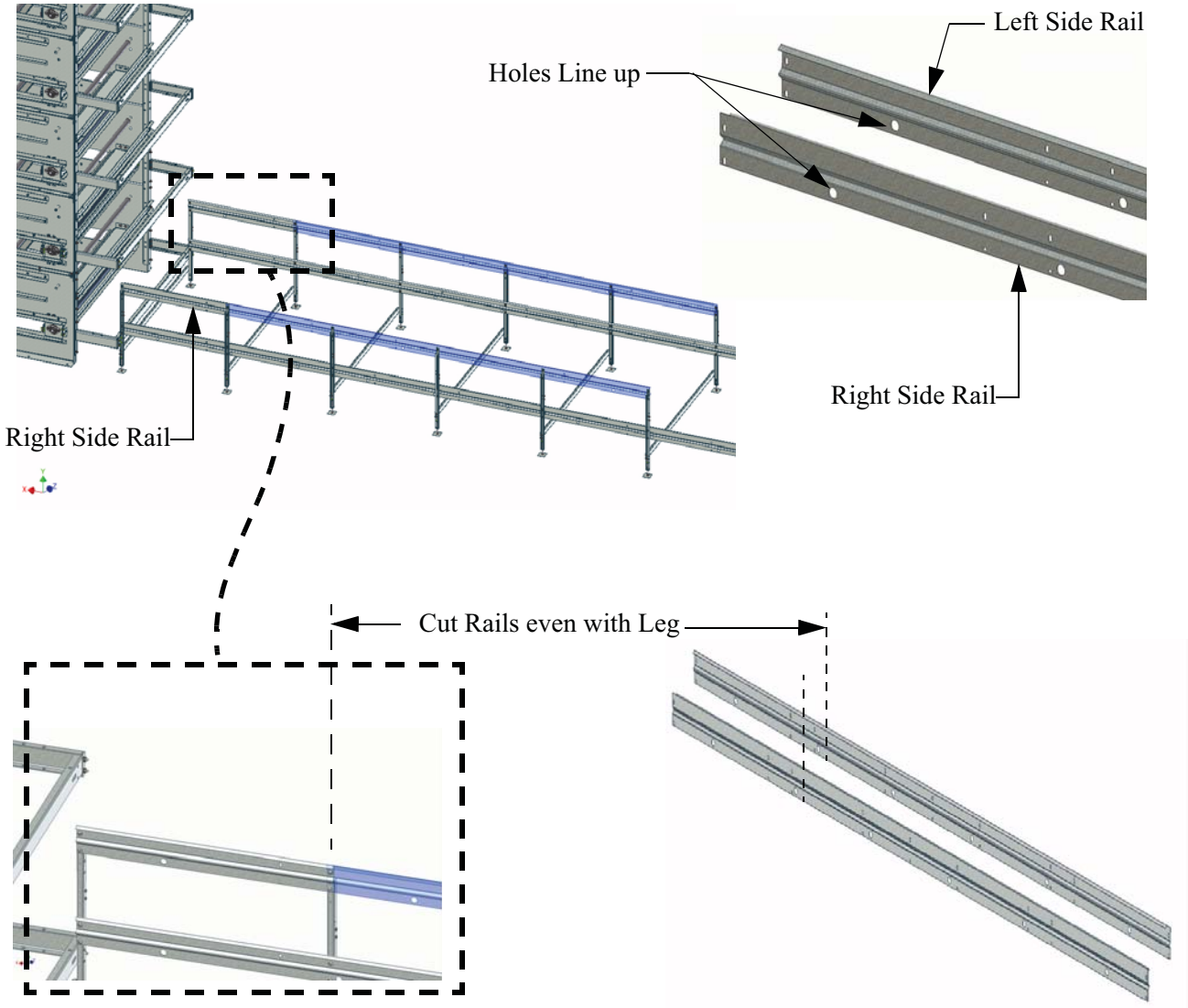
.

When adding tiers of framework, Rails need to be Cut and Staggered for Strength. Every fourth Tier will start with a full length Rail.



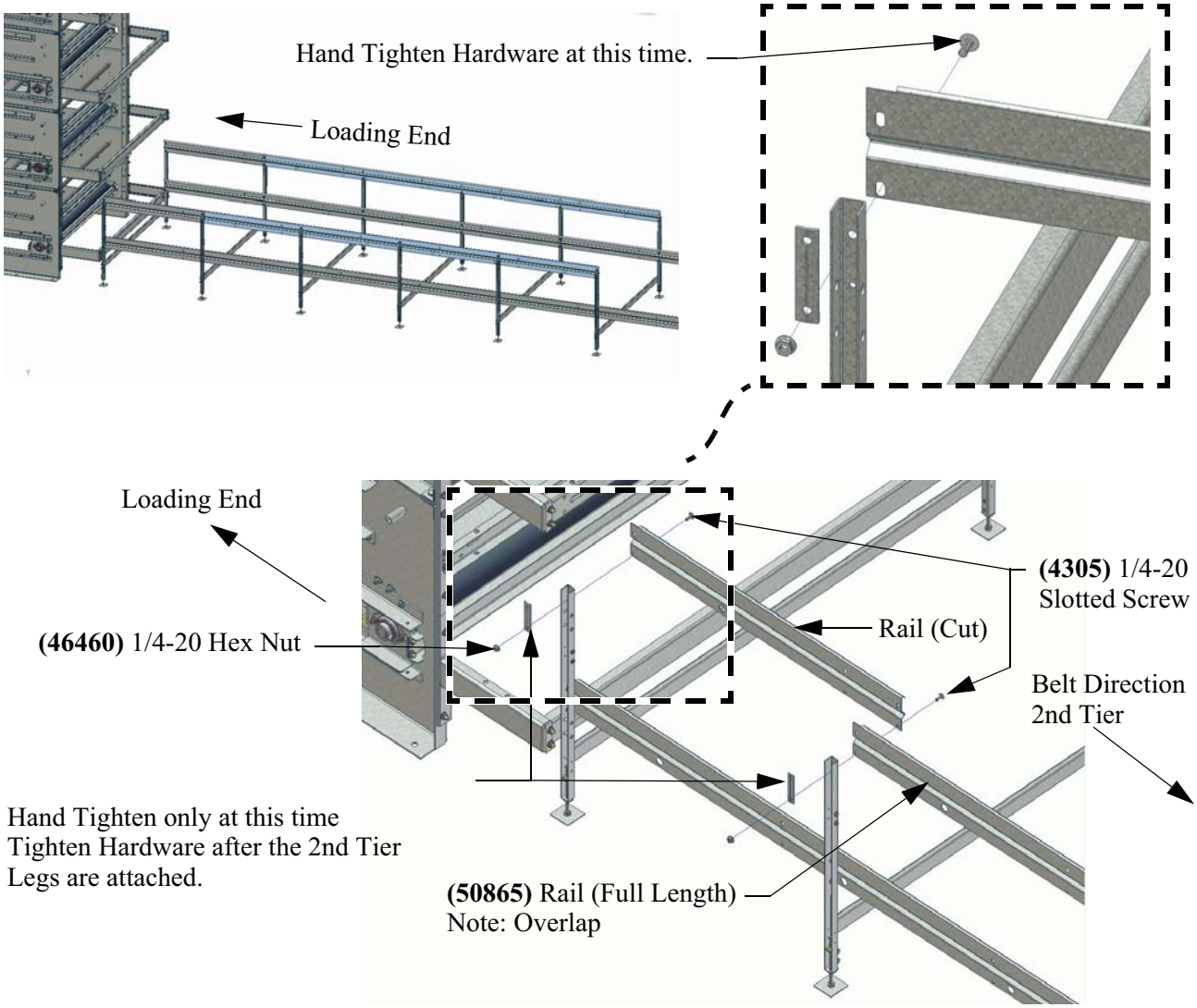
Step 1. Cut the first Rail on each Tier (Loading and Turning End) Kits required 52400

When starting each Tier, Cut the first Rails **(50865)** even with the Leg edges as shown. When cutting Rails it is **very important** that the holes in the Rails directly across from each other line up as shown, so orient the Rails as shown below and cut accordingly. **See following Steps for attaching Rails.**



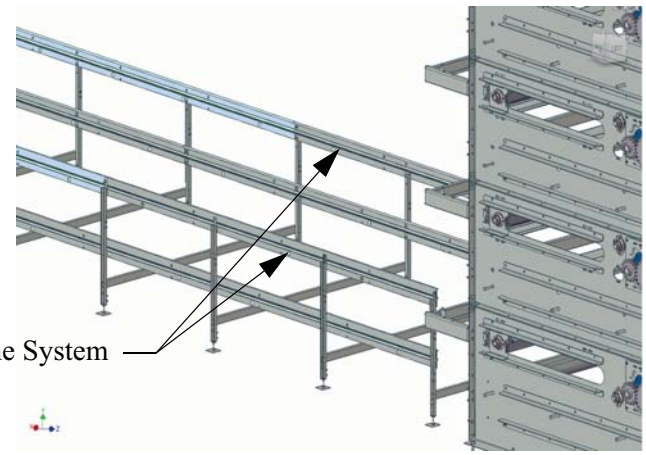
Step 2. Attaching Rails (Loading and Turning End) Kits required 52400

Attach the Rails to the Legs as shown. Rails should overlap as shown below according to direction of Belt Movement. (On the first Tier the Belt will move towards the Loading end of the system and then each Tier above alternates direction.)



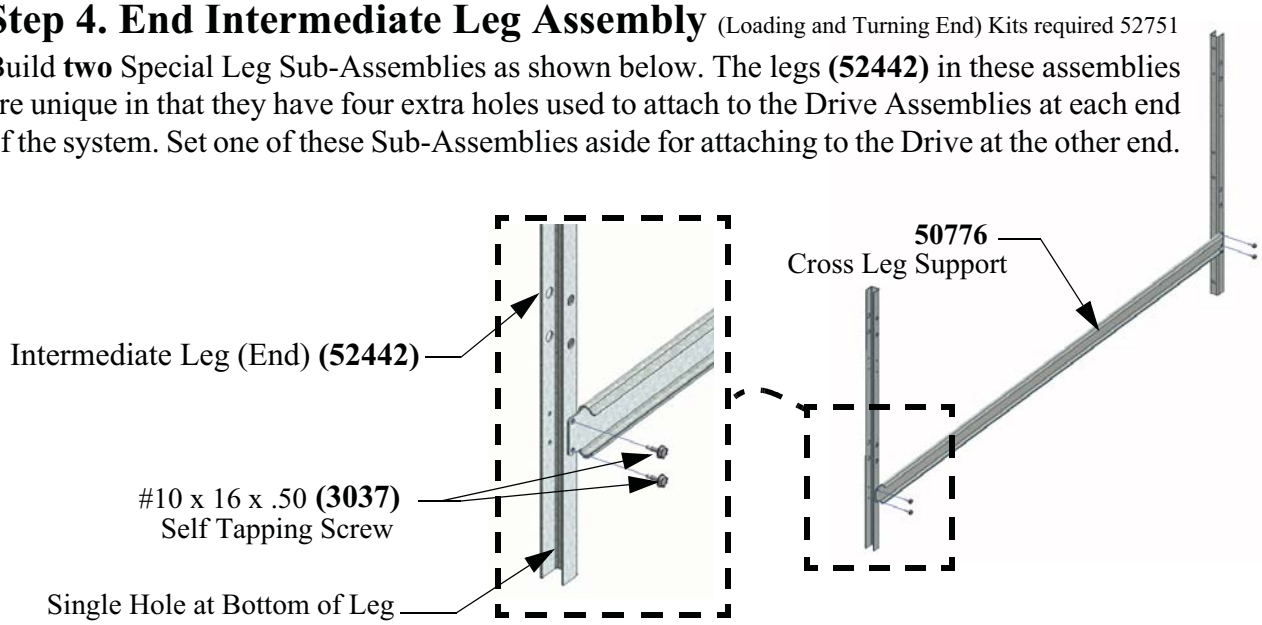
Step 3. Continuing Attaching Rails

Continue attaching all the Rails **(Hand Tighten only)** to the end of the system. Cut the last Rails as necessary.



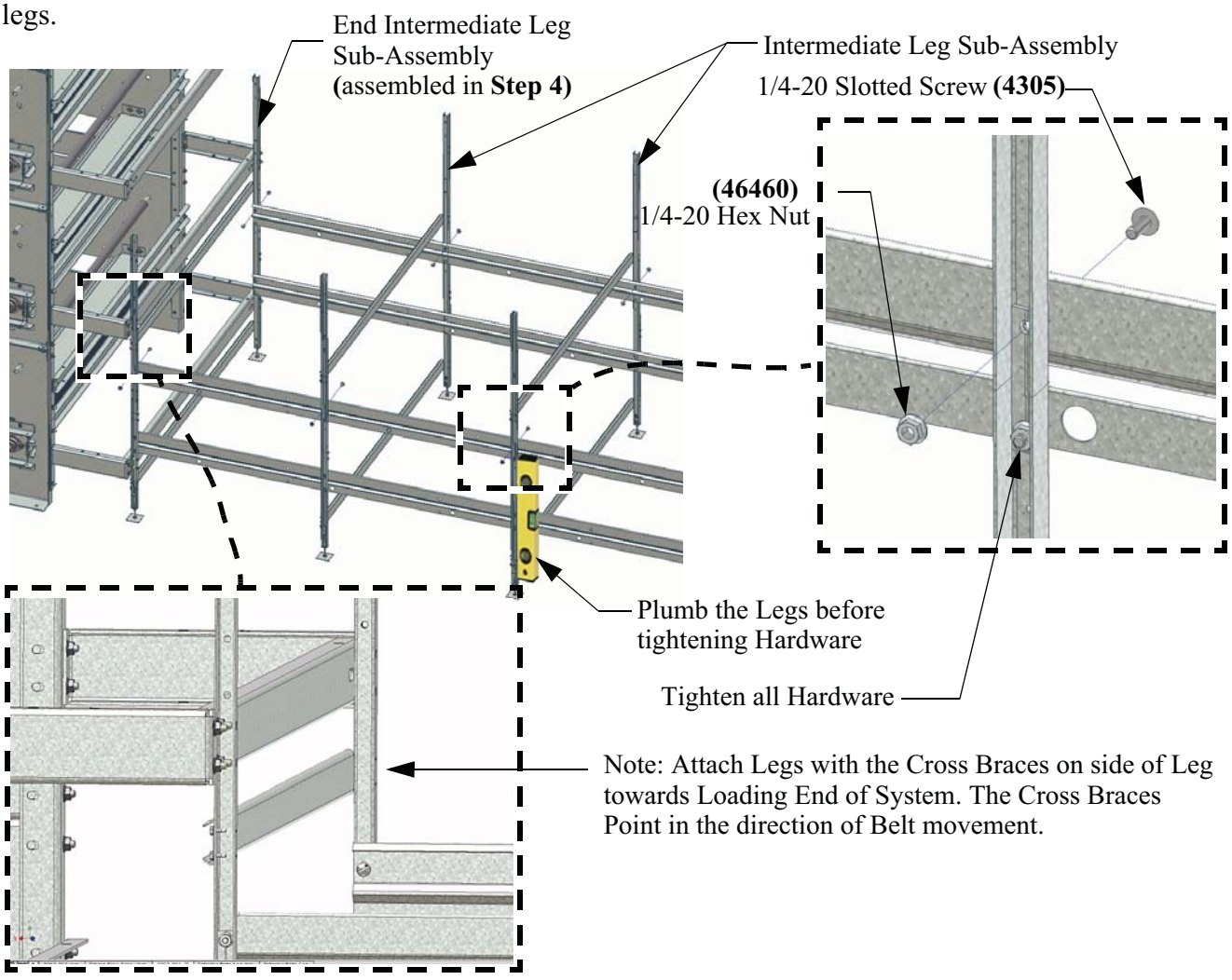
Step 4. End Intermediate Leg Assembly (Loading and Turning End) Kits required 52751

Build **two** Special Leg Sub-Assemblies as shown below. The legs **(52442)** in these assemblies are unique in that they have four extra holes used to attach to the Drive Assemblies at each end of the system. Set one of these Sub-Assemblies aside for attaching to the Drive at the other end.



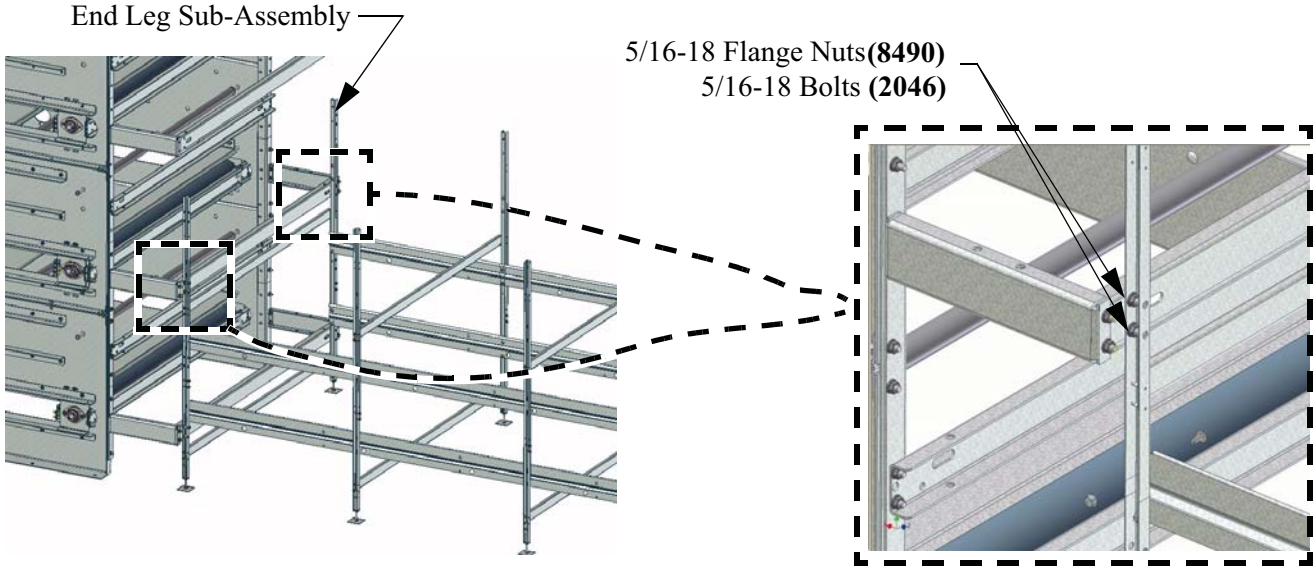
Step 5. Attaching Intermediate Leg Sub-Assemblies Kits required 52400

Attach Intermediate Leg Sub-Assemblies to the Rails (Assembled earlier) **as shown below**. Make sure the Legs are Plumb and Tighten all the Hardware (only hand-tightened earlier) holding the Rails to the legs.



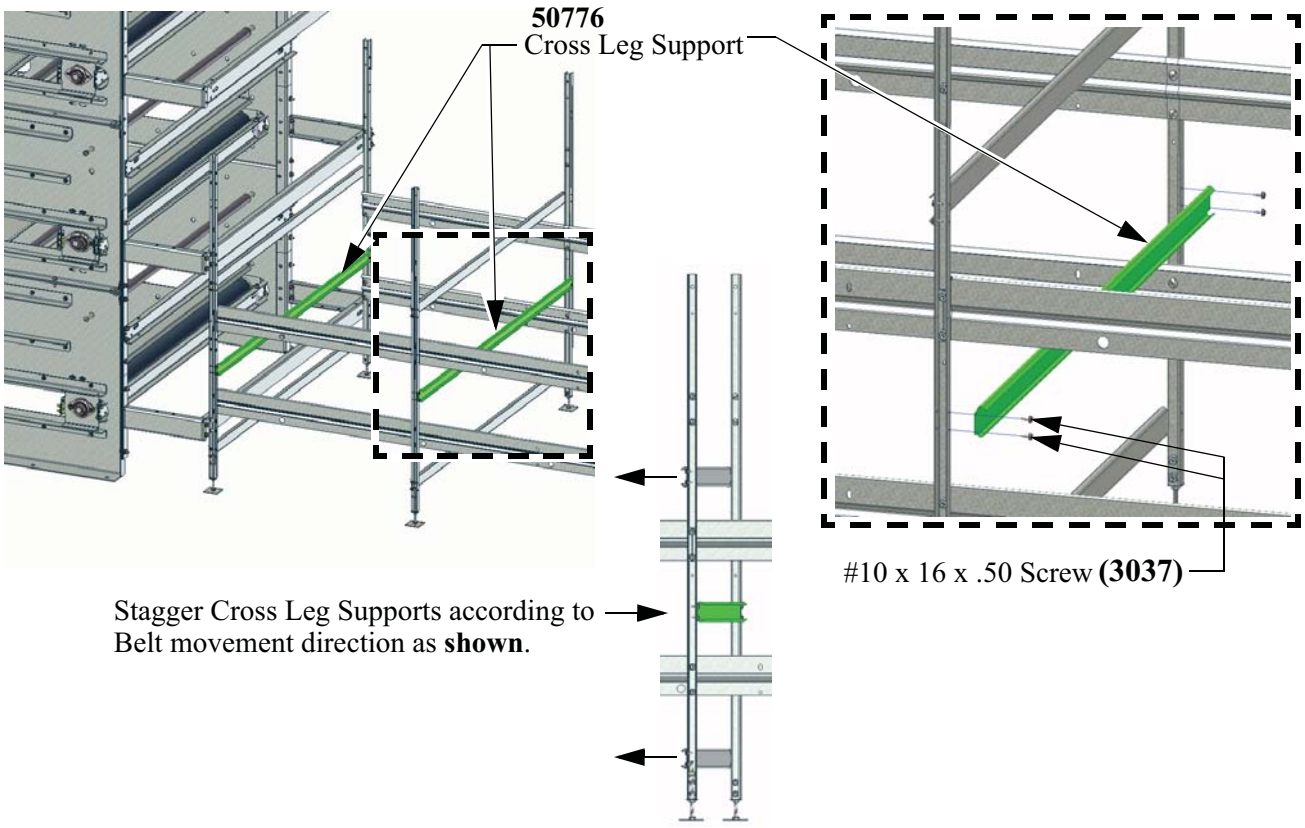
Step 6. Attaching End Leg Sub-Assemblies to Drive Units Kits required 52400

Attach the special End Sub-Assemblies built in Step 4 to the Drives at both ends of the System **as shown below.**



Step 7. Attaching Cross Leg Supports Kits required 52400

Attach Cross Leg Supports **(50776) as shown below.**



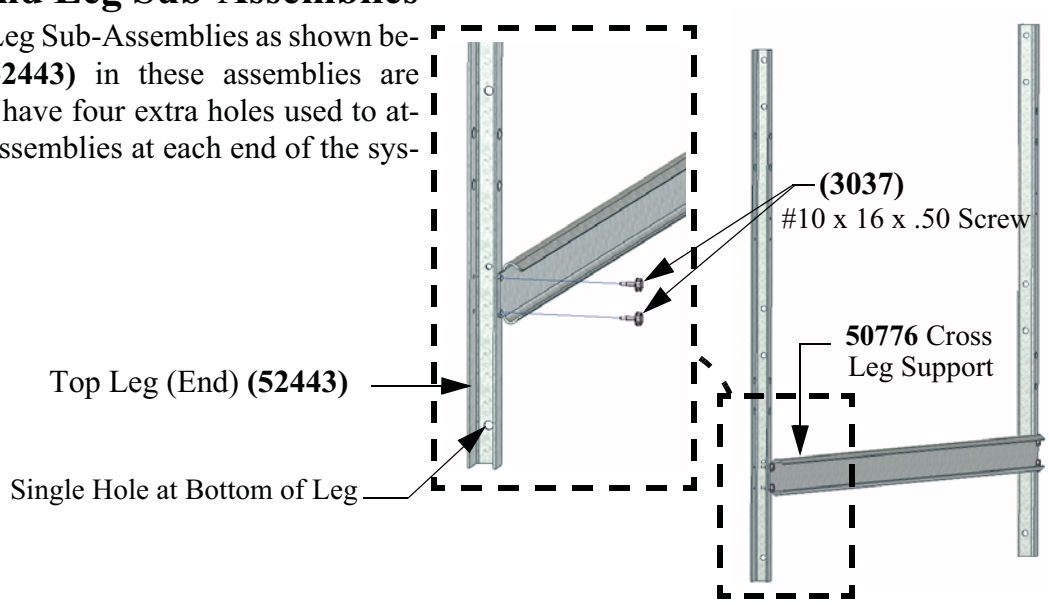
Continue Attaching Intermediate Leg Sub-Assemblies, Rails, and Cross Leg Supports until you reach the Top Tier. Top Tier Frame Assembly is shown in the next Section of this Manual....

Top Tier Framework

.

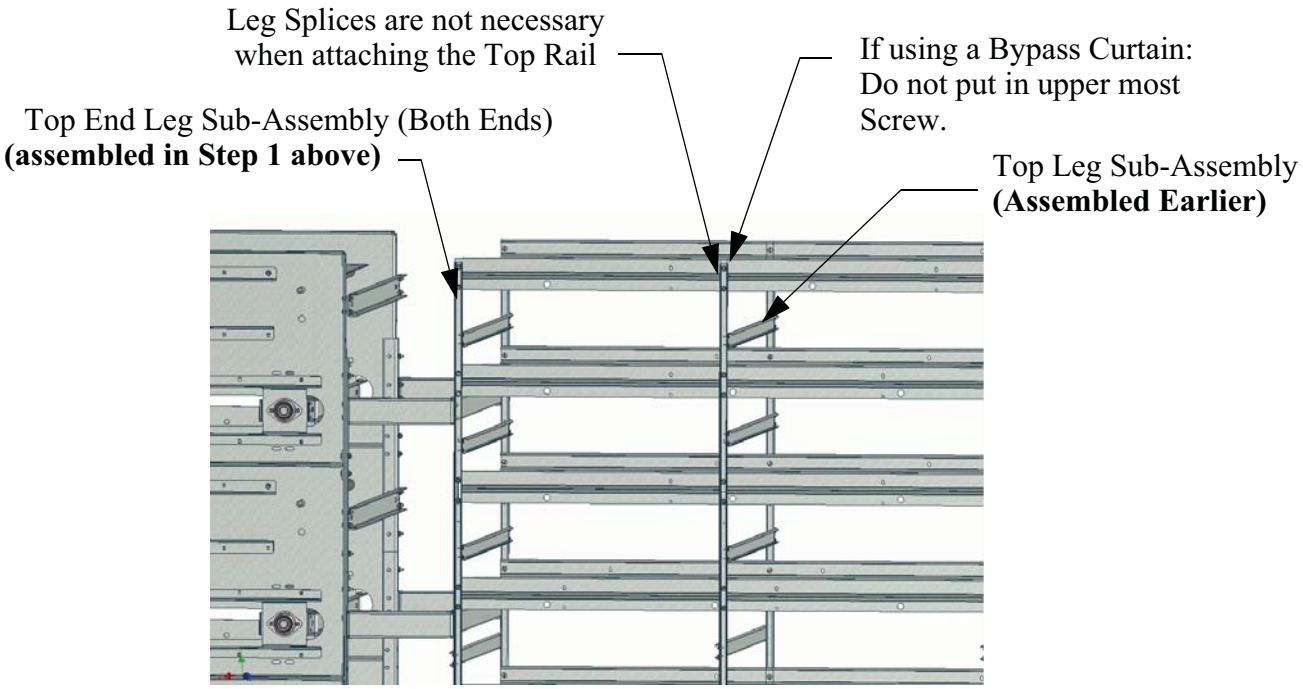
Step 1. Top End Leg Sub-Assemblies

Build **two** Special Leg Sub-Assemblies as shown below. The Legs **(52443)** in these assemblies are unique in that they have four extra holes used to attach to the Drive Assemblies at each end of the system.



Step 2. Assemble the Top Tier (Loading and Turning End) Kits required 52400

Assemble the Top Tier just as the Intermediate Tiers except use Top End Leg Sub-Assemblies at both ends and Top Leg Sub Assemblies **(Assembled earlier)**. Attach the end Legs to the Drive units at both ends just as the Bottom and Intermediate End Legs. **Note: If a Bypass Curtain is being used; Leave the upper most Screw and Flange Nut out and proceed to Step 6a.**



Top Drive Unit Assembly

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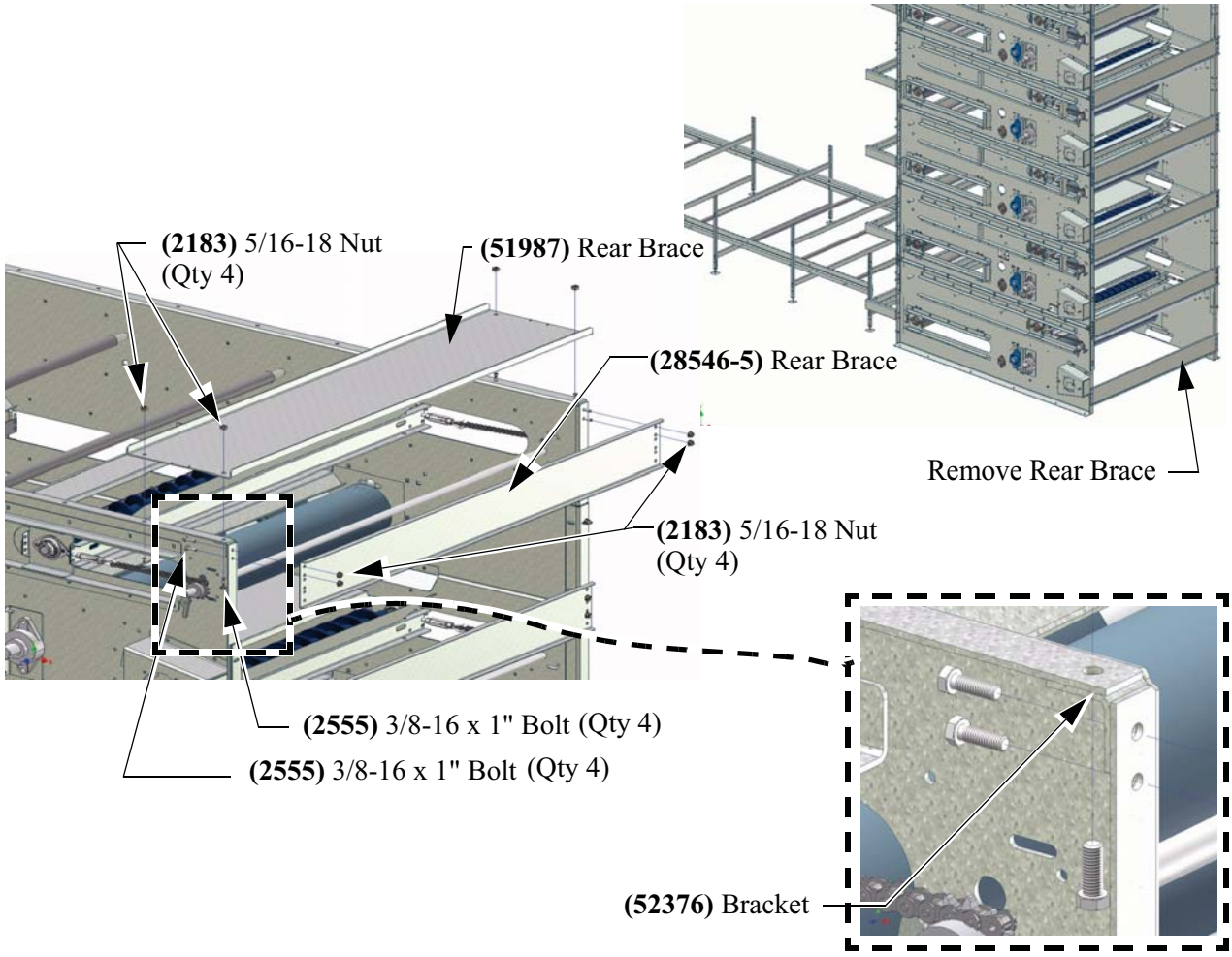
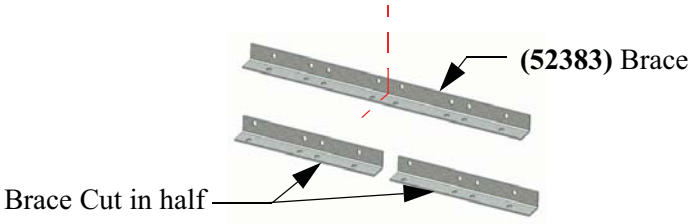
Step 1. Drive Top

Remove the Rear Brace from the Bottom Drive Unit and re-attach to the Top Drive Side Panels **as shown**.

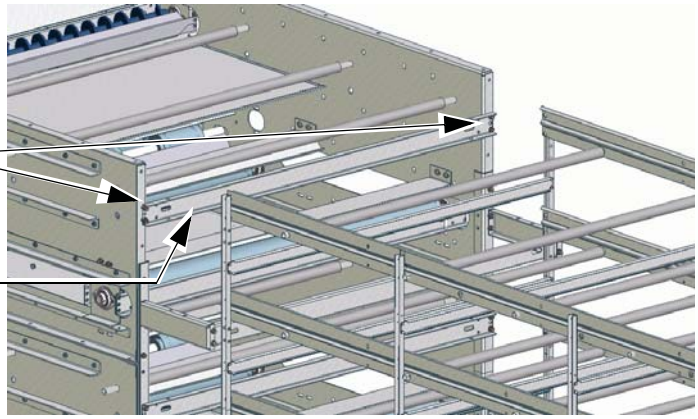


Step 2. **Kits Required- (Kit 52402)**

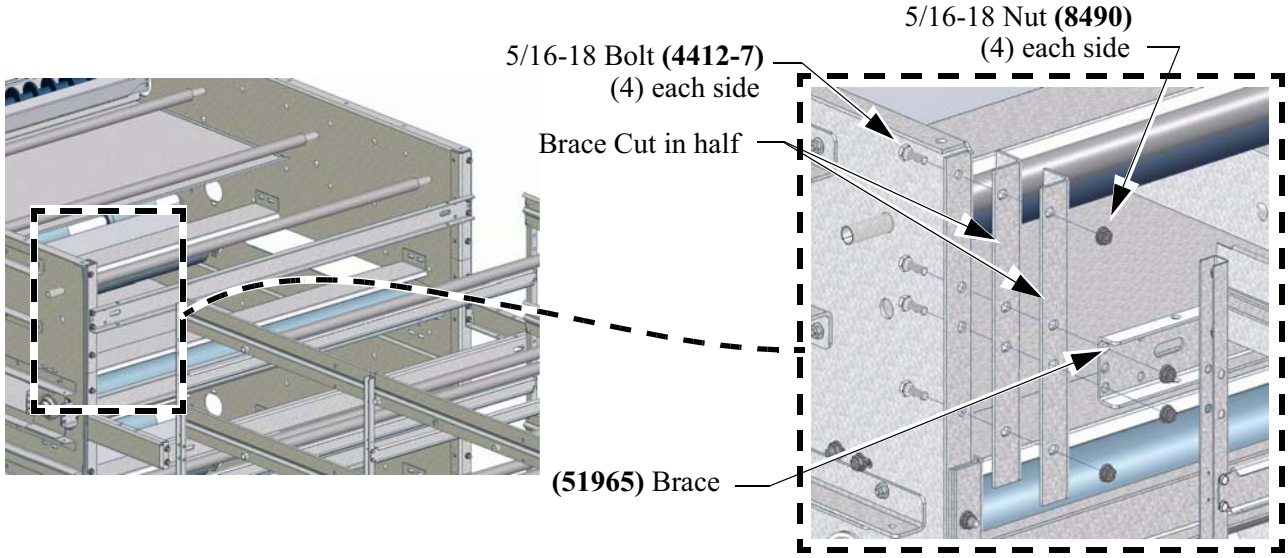
Cut (2) 52383 Braces in half to make (4) Braces.



Step 3. Remove four 5/16-18 Bolts and remove the Brace (51965) from the front of the Bottom Discharge Assembly. Set the Brace and hardware aside to re-install in **Step 5**.

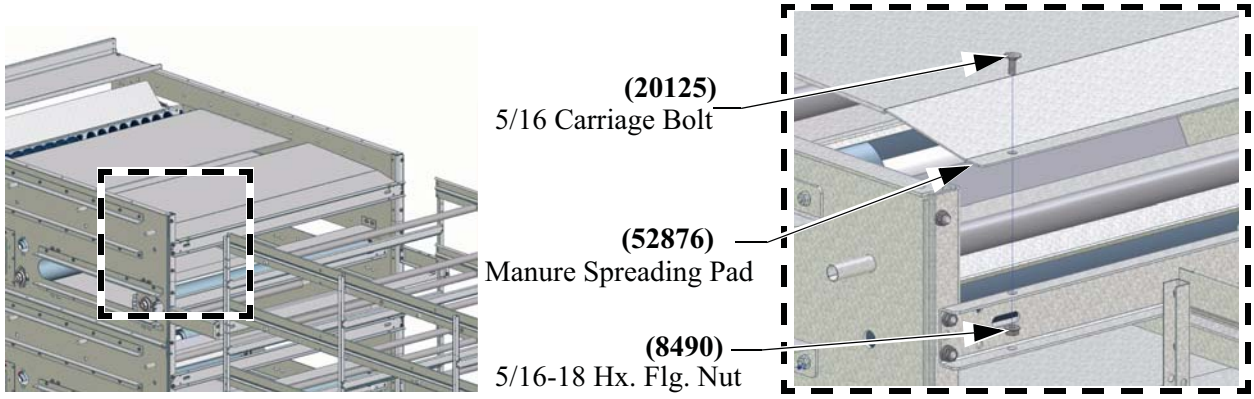


Step 4. **Kits Required- (Kit 52402)**
Attach four Top Braces **(Cut in half Step 2)** and a 51965 Brace **(removed in step 3) as shown**.



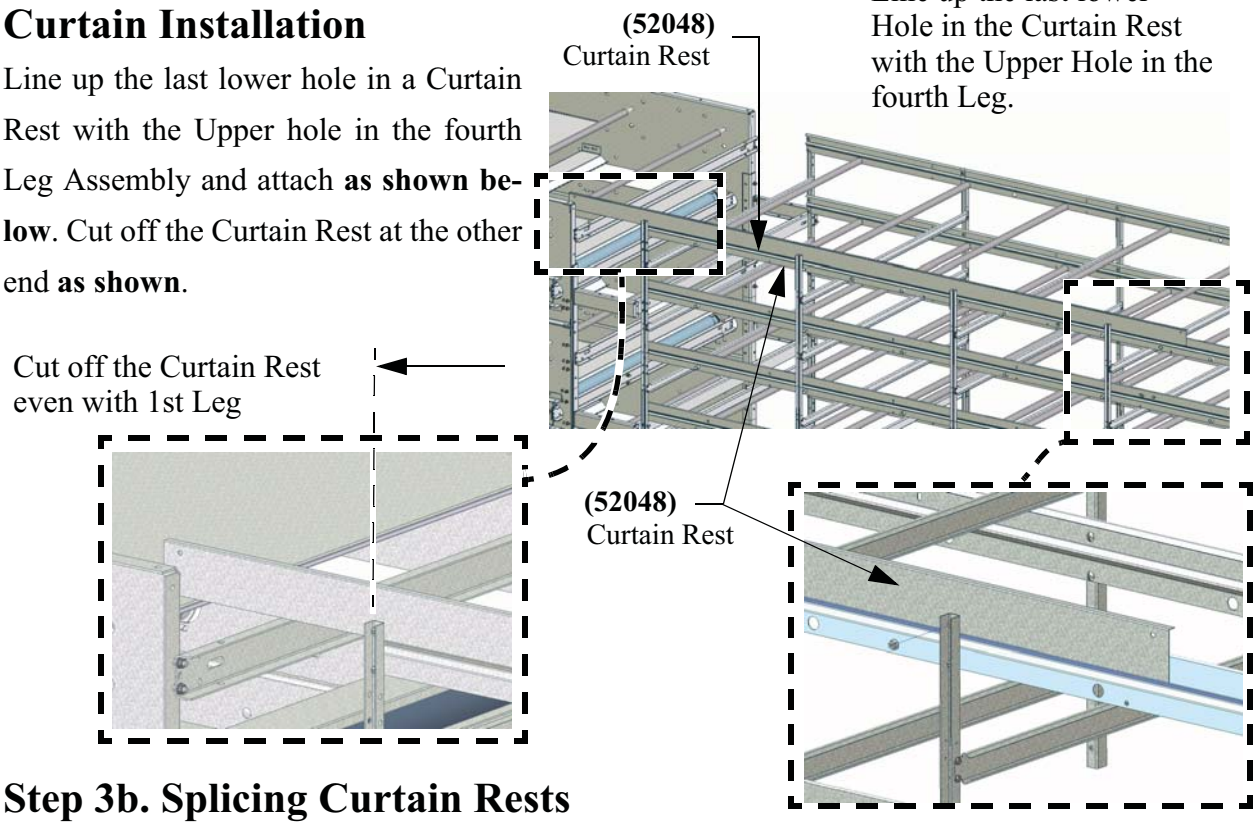
Step 5. Manure Spreading Pad (Loading and Turning End)

Attach a Manure Spreading Pad (52876) to the Top Drive **Unit as shown**.



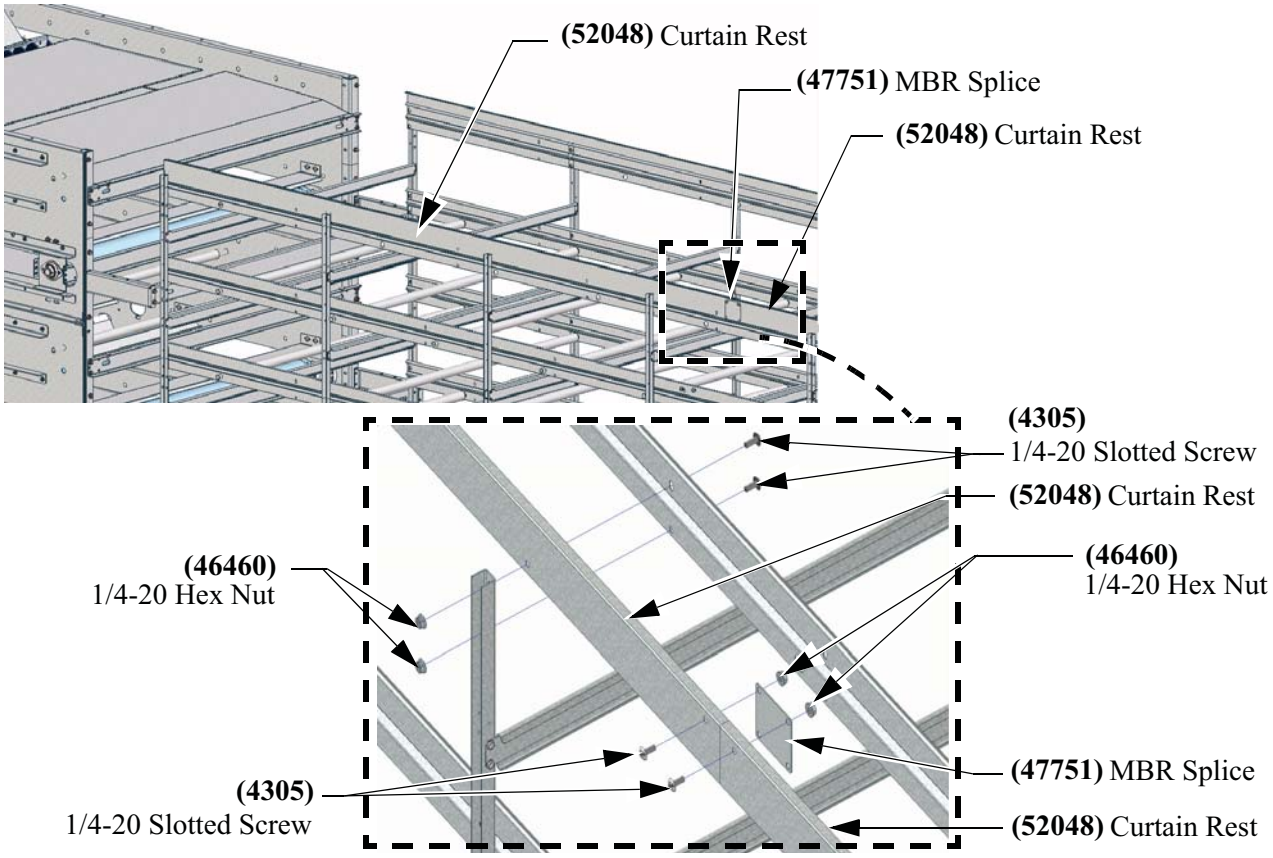
Step 6a. Optional Bypass Curtain Installation

Line up the last lower hole in a Curtain Rest with the Upper hole in the fourth Leg Assembly and attach **as shown below**. Cut off the Curtain Rest at the other end **as shown**.



Step 3b. Splicing Curtain Rests

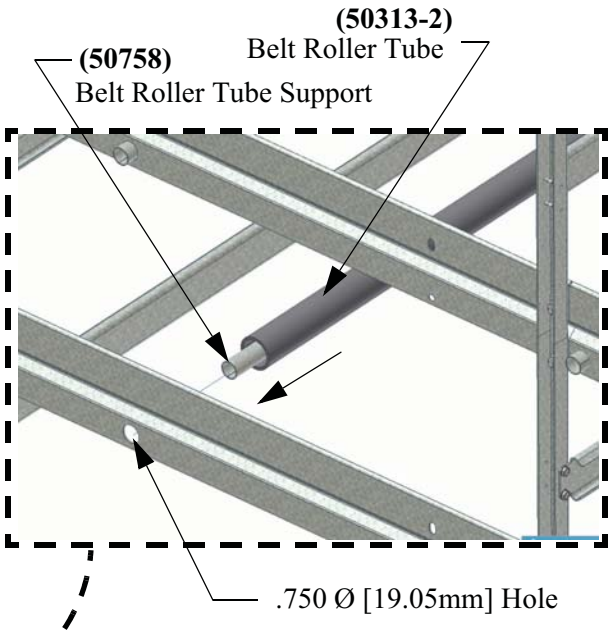
Attach and Splice Curtain Rests **(52048)** together **as shown**.

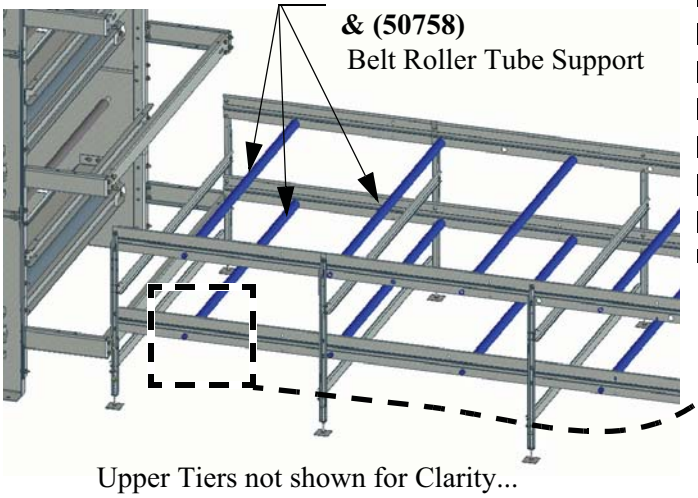


Belt Support Tubes and Leg Protection

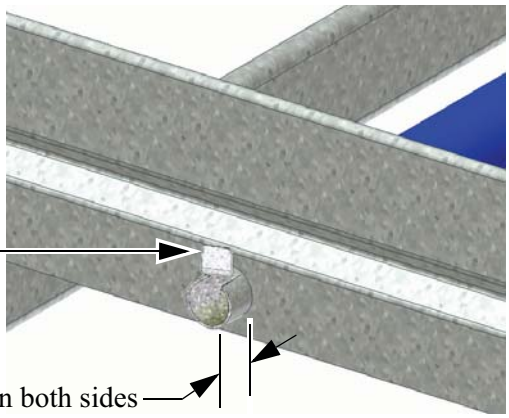
Step 1. Installing Belt Support Tubes

Insert a Belt Support Tube (50313-2) into a Belt Support Roller Tube (50758). Then insert the assembled Tubes in each of the .750" [19.05mm] dia. Holes in the Rails. Crimp the Tubes **as shown**.



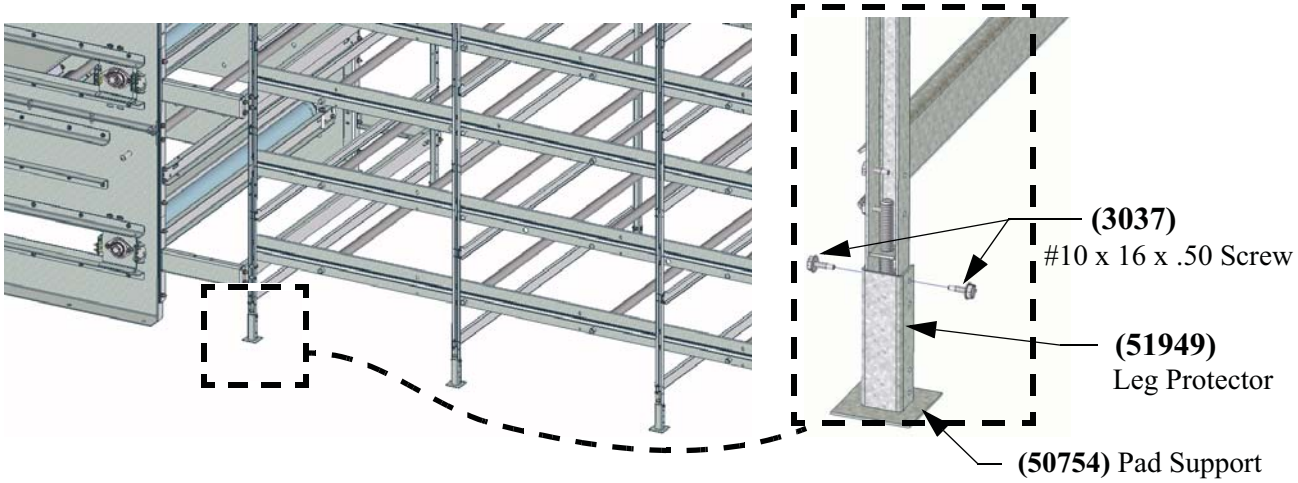


Upper Tiers not shown for Clarity...



Step 2. Installing Leg Bolt Protectors

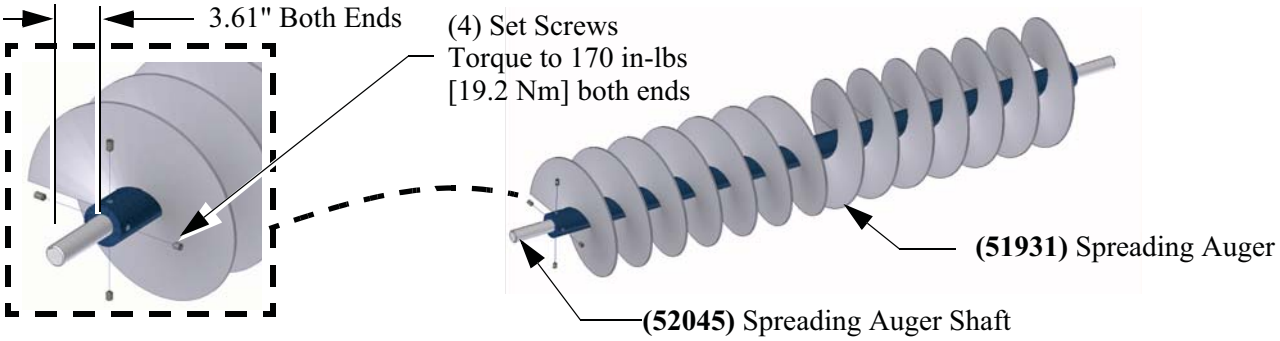
Install Leg Bolt Protectors (51949) over each Leg Adjustment Bolt **as shown.** Set the Leg Protector down on top of the Pad Support (50754) and use two Self Tapping #10 x 16 x .50 Screws (3037) to attach it to each Leg.



Spreading Auger Assembly and Installation Kits required- 52553,52052

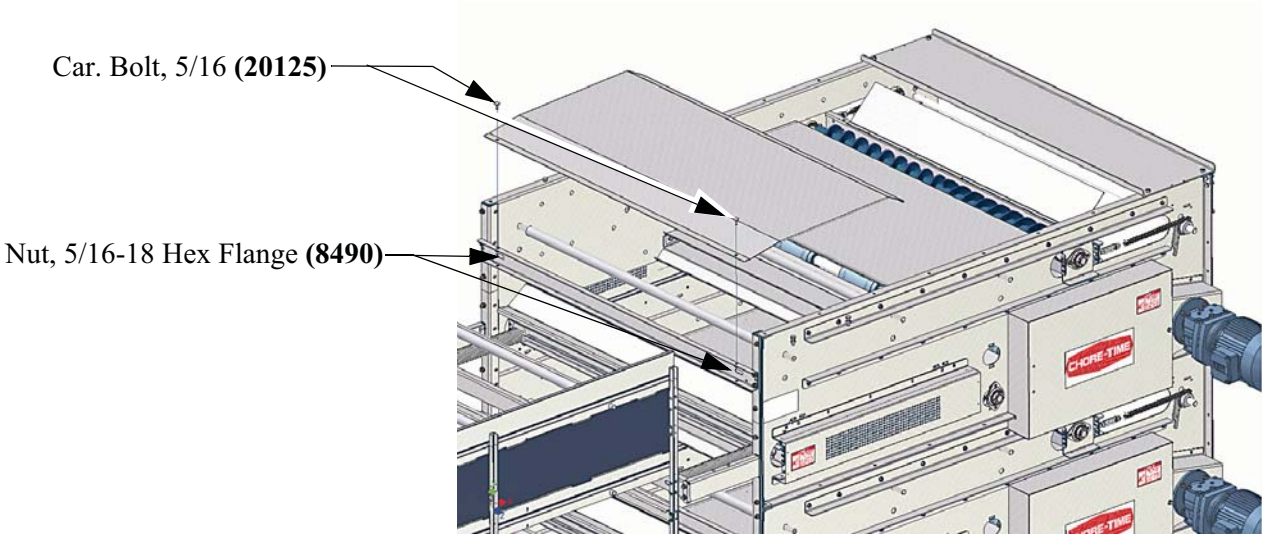
Step 1. Auger Assembly

Insert a Spreading Auger Shaft (52045) into an Auger (51931) and tighten Set Screws **as shown**. If a Set Screw is not accessible because the Auger is in the way, leave it loose.



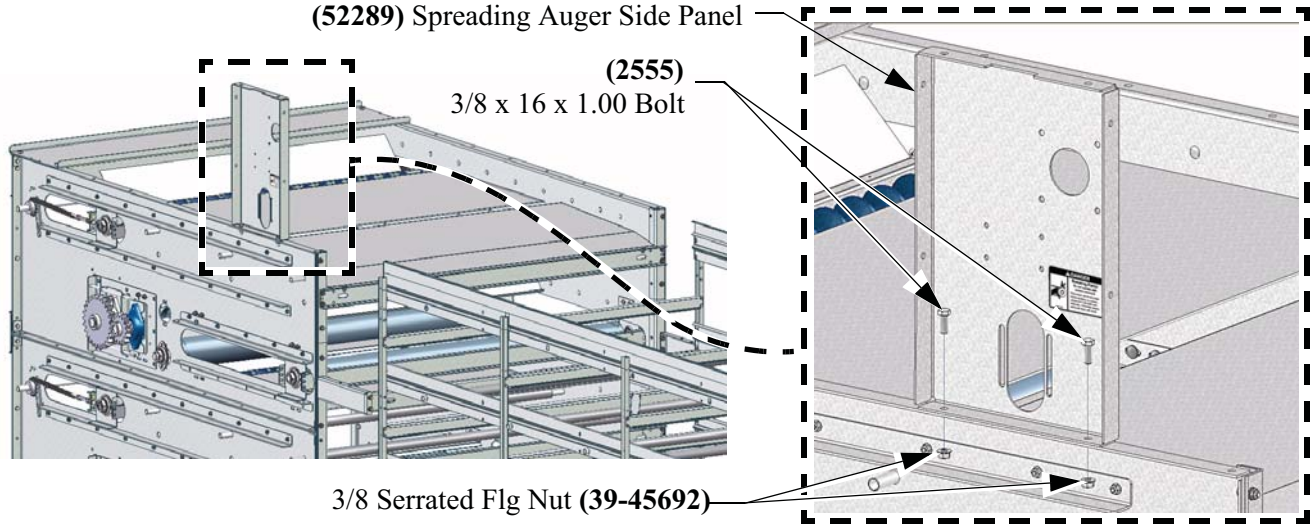
Step 2. Landing Pad

Fasten a Top Spreading Auger Landing Pad to the Top Support Brace as shown.



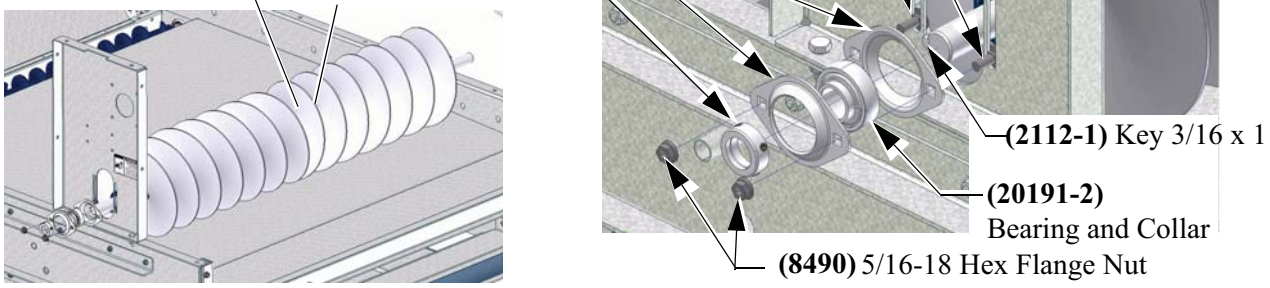
Step 3. Attach a Spreading Auger Side Panel

Attach a Spreading Auger Side Panel (52289) to the Top of the Drive Unit as shown.



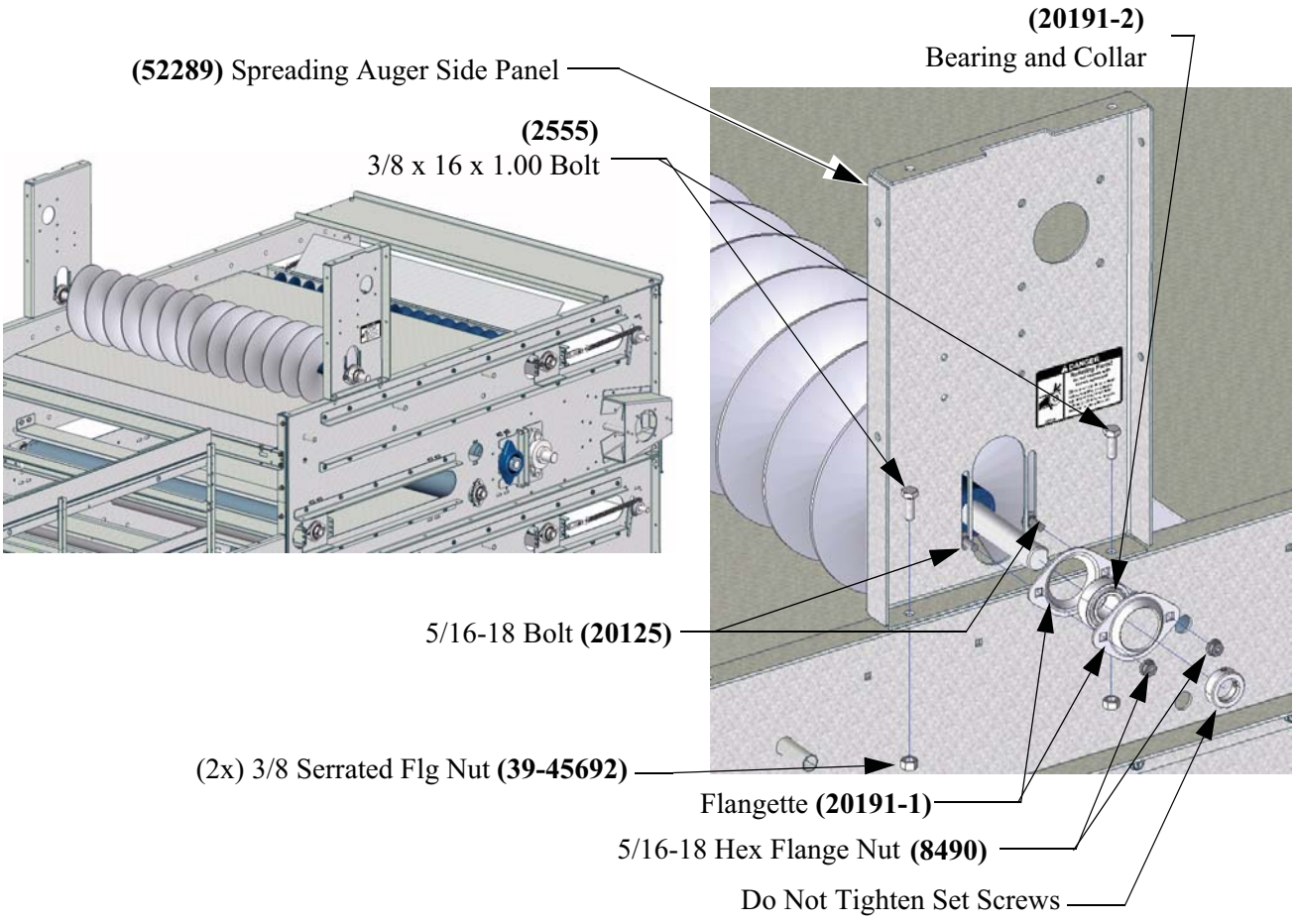
Step 4. Bearings and Auger Spreading Auger Installation

Assemble Bearing and Flangettes and insert Auger shaft as shown. **Important: V in Auger points down as shown.**



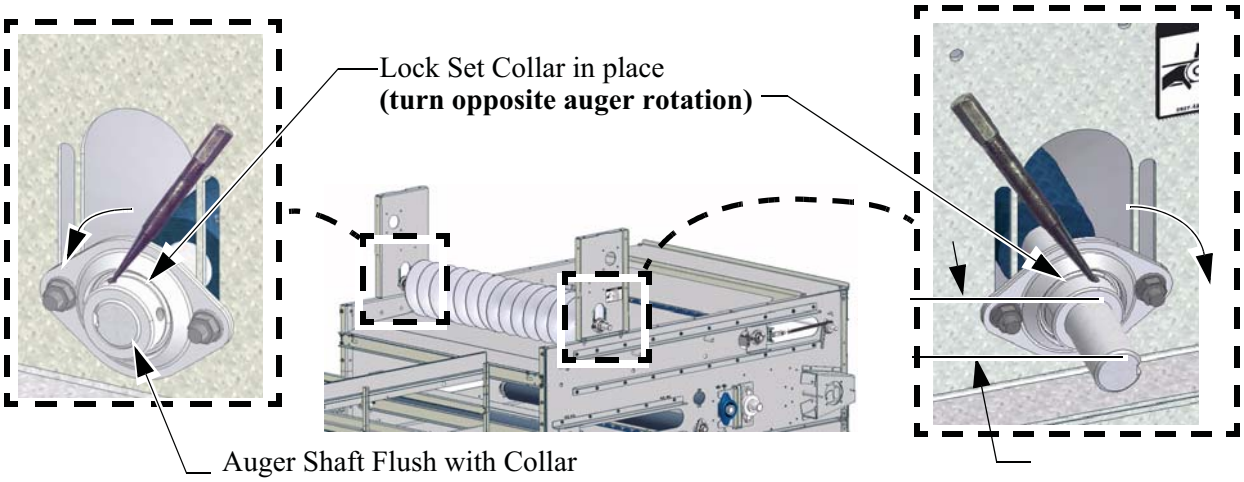
Step 5. 2nd Side Panel

Insert the end of the Spreading Auger Shaft into the other Side Panel and attach as **shown.** Assemble Flangettes and Bearings as shown and attach them to the Side Panel, but **do not** tighten down any Set Screws on the Set Collar this time. They will be tightened down in the next step.



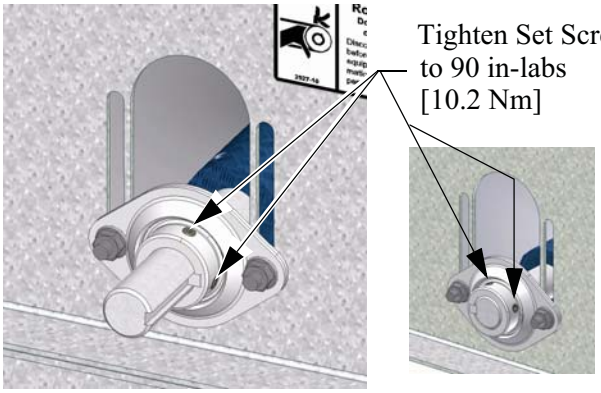
Step 6. Lock Set Collars in Place

Adjust the Spreading Auger Shaft according to the dimensions below and lock the Set Collars in place using a punch as shown. Rotate the Set Collars opposite the direction that the Spreading Auger will rotate.



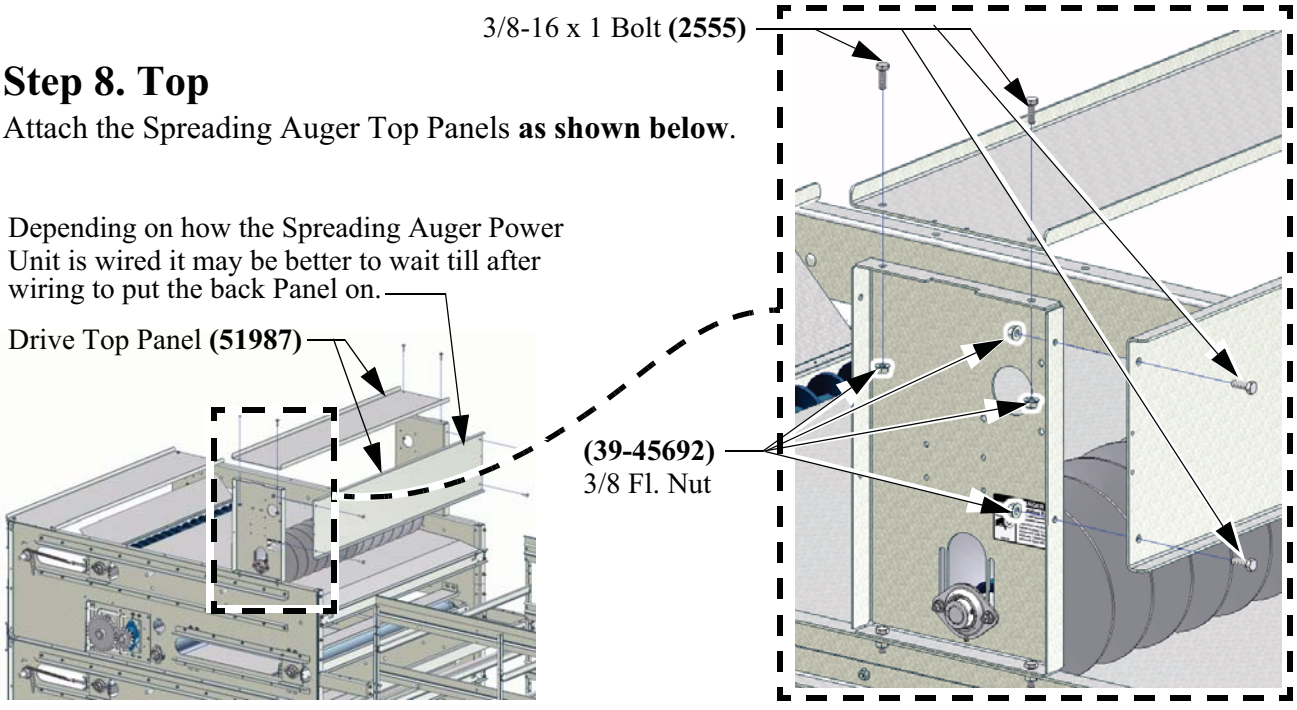
Step 7. Tighten Set Collars

Insert Keys and Tighten Set Screws to as shown.



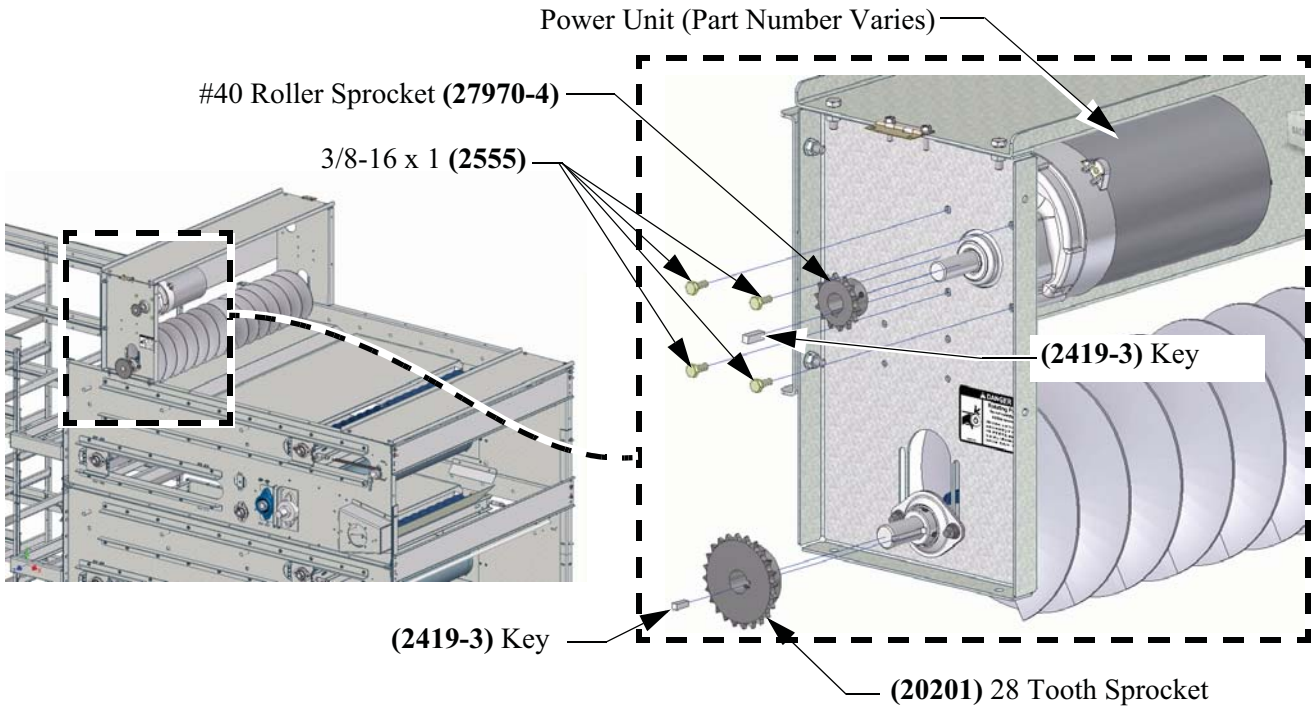
Step 8. Top

Attach the Spreading Auger Top Panels **as shown below**.



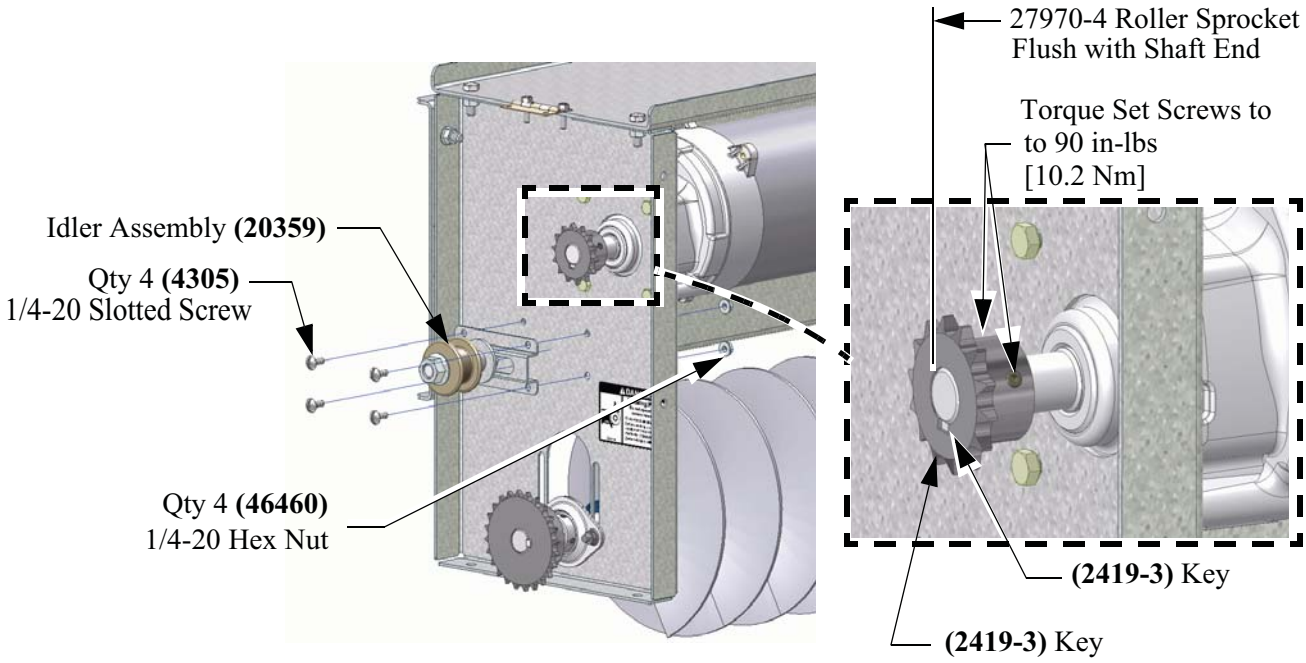
Step 9. Attaching Motor and Sprockets

Attach the Power Unit. Install the Roller Sprocket and Key, and the 28 Tooth Sprocket and Key **as shown (Do not tighten Set Screws yet)**.



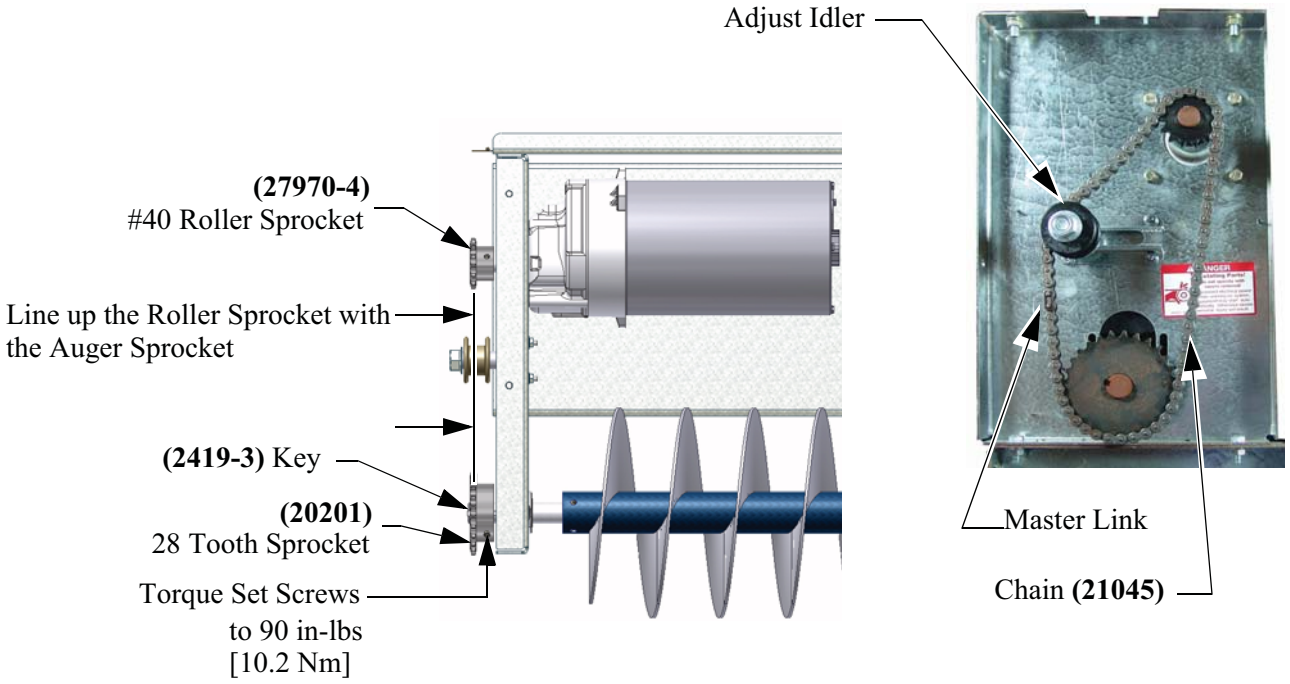
Step 9b.

Position the #40 Roller Sprocket Flush with the end of the Power Unit Shaft and tighten Set Screws **as shown**. Attach the Idler Assembly.



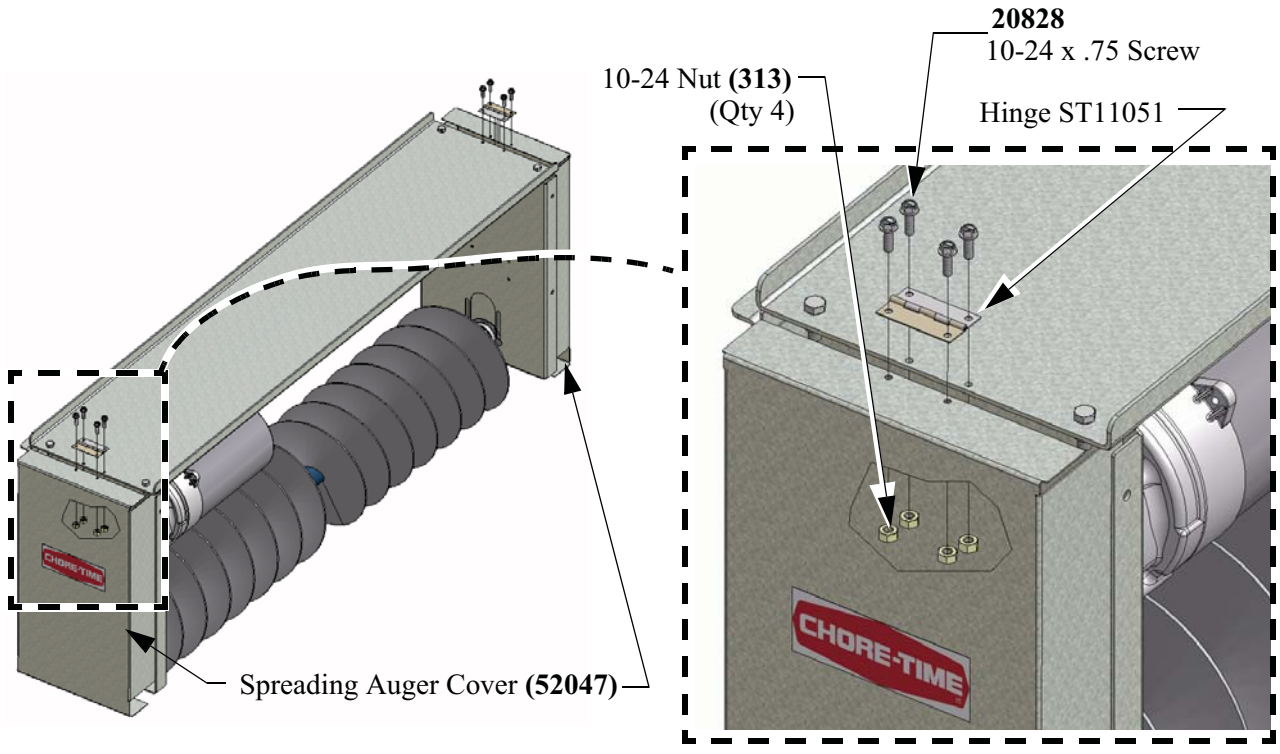
Step 10. Align Sprockets

Align the Sprockets as shown and tighten down Set Screws.



Step 11. Covers

Attach Covers (52047) to each side of the Spreading Auger Assembly as shown.



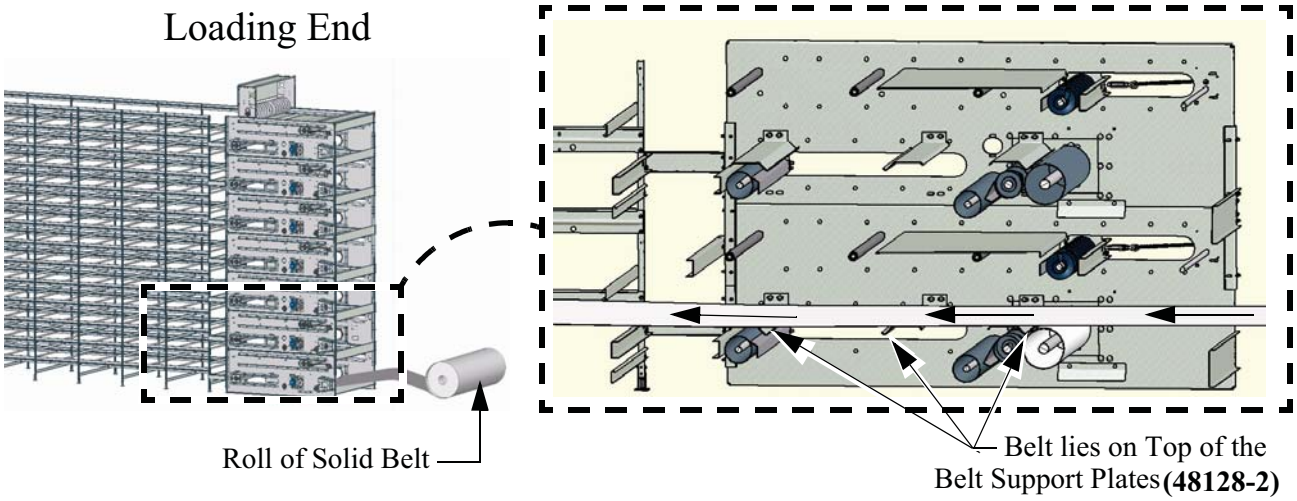
Belt Installation

Belt Routing

The Belt on the Bottom Tier is Solid. All the other Tiers have perforated Belt.

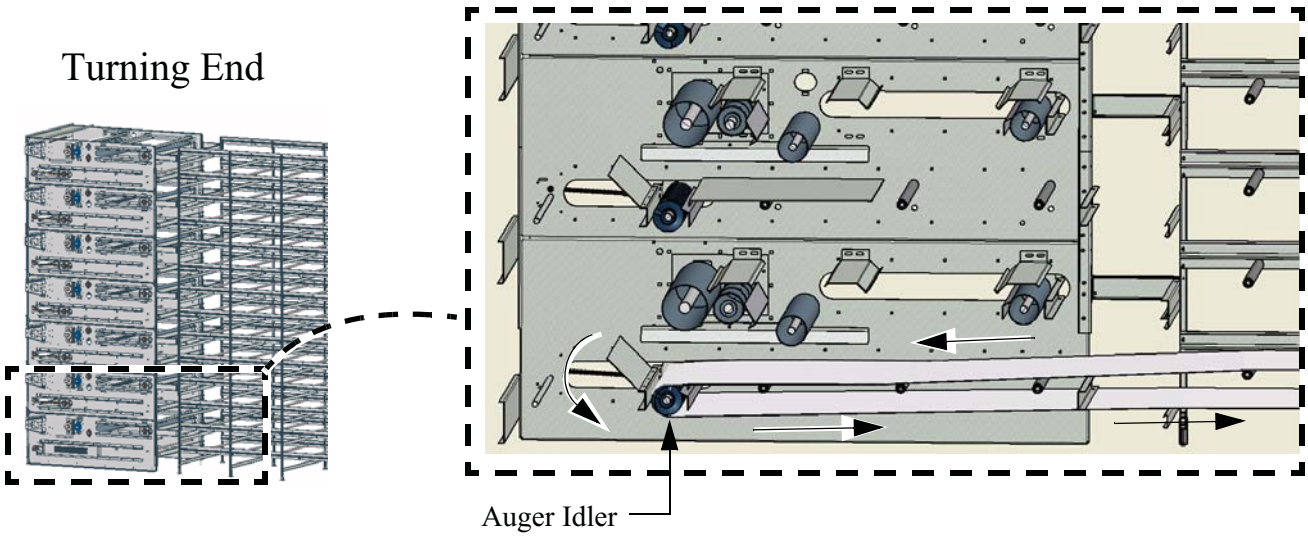
Step 1. Feed Belt into the Loading End Drive Unit

Feed the Solid Belt into the Bottom Tier at the Loading end as shown. Feed the Belt through the Frame to the Turning End Drive Unit.



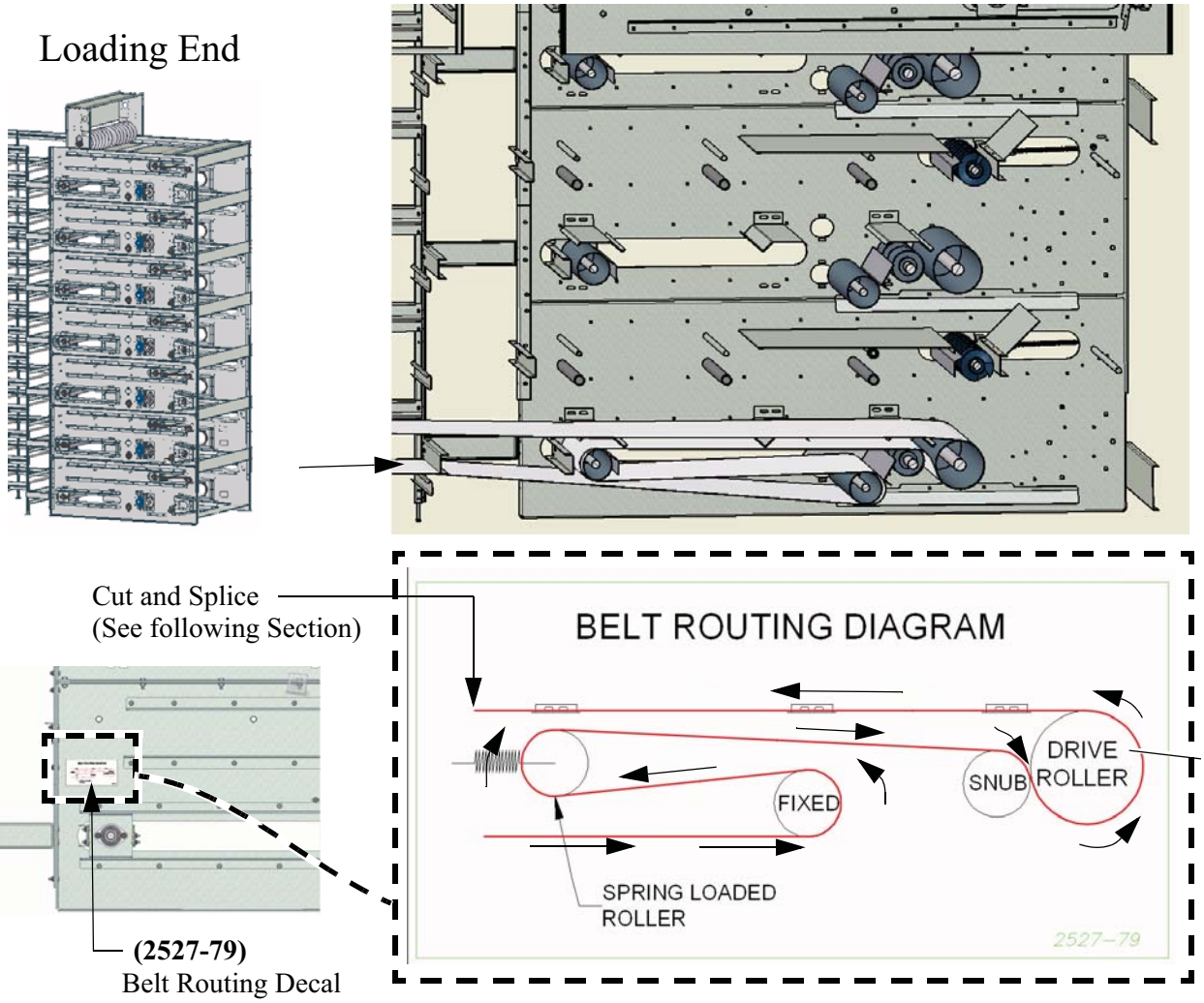
Step 2. Belt Routing at the Turning End

Feed the Belt around the Auger Idler and back toward the Loading End as shown below.



Step 3. Belt Routing at the Loading End

Feed the Belt back into the Loading end Drive and Route it according to the Decal that is located on the side of the Drive **(See Below)**.



Step 4. Upper Tier Belt Installation

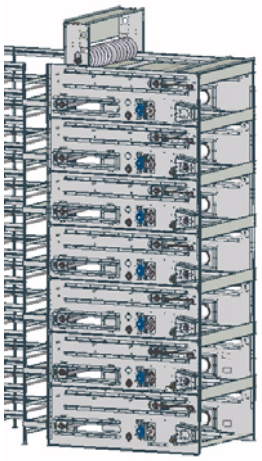
Belt Installation is the same for the remaining Tiers except that the Belt is perforated.

Belt Splicing

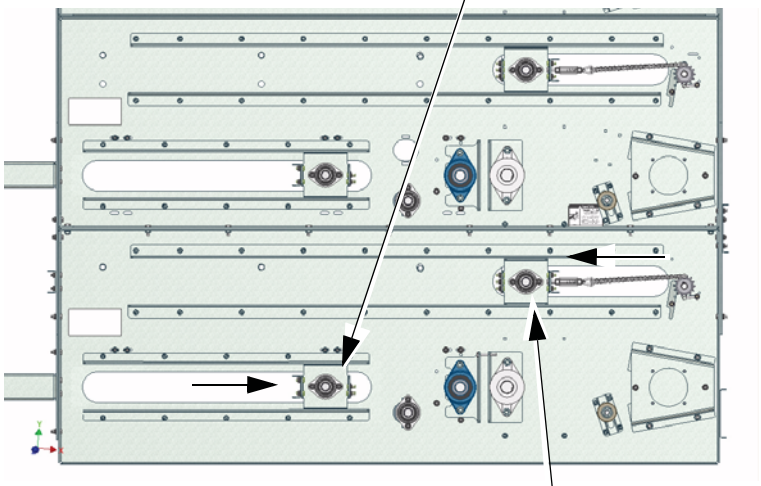
Step 1. Positioning Rollers before Cutting the Belt

In order to get proper Belt Tension, it is necessary to position the Rollers as shown below before cutting the Belt to length.

Loading End

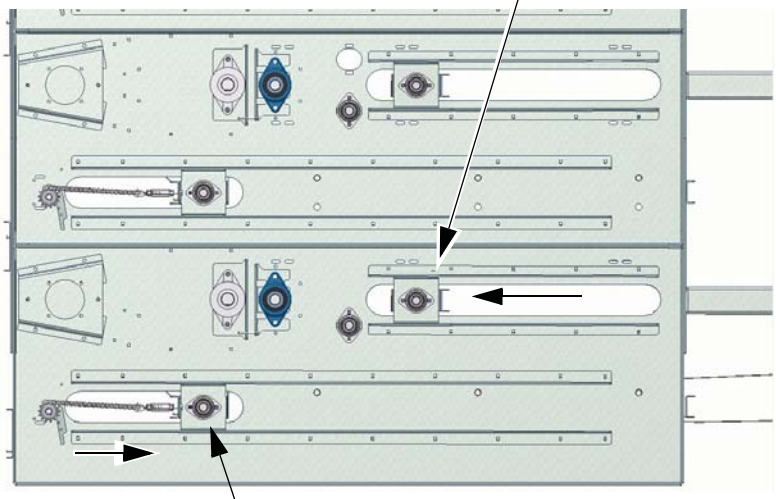


Move Solid Roller all the way toward the Solid Roller at the Loading End.



Move Auger Idler toward the Solid Roller as far as possible

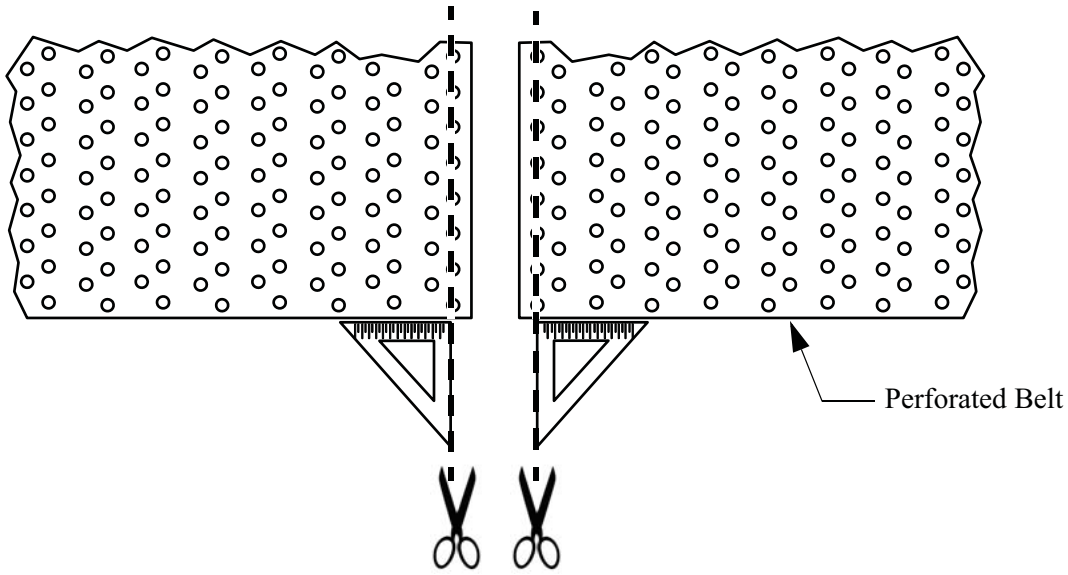
Turning End



Move Auger Idler toward the Solid Roller as far as possible

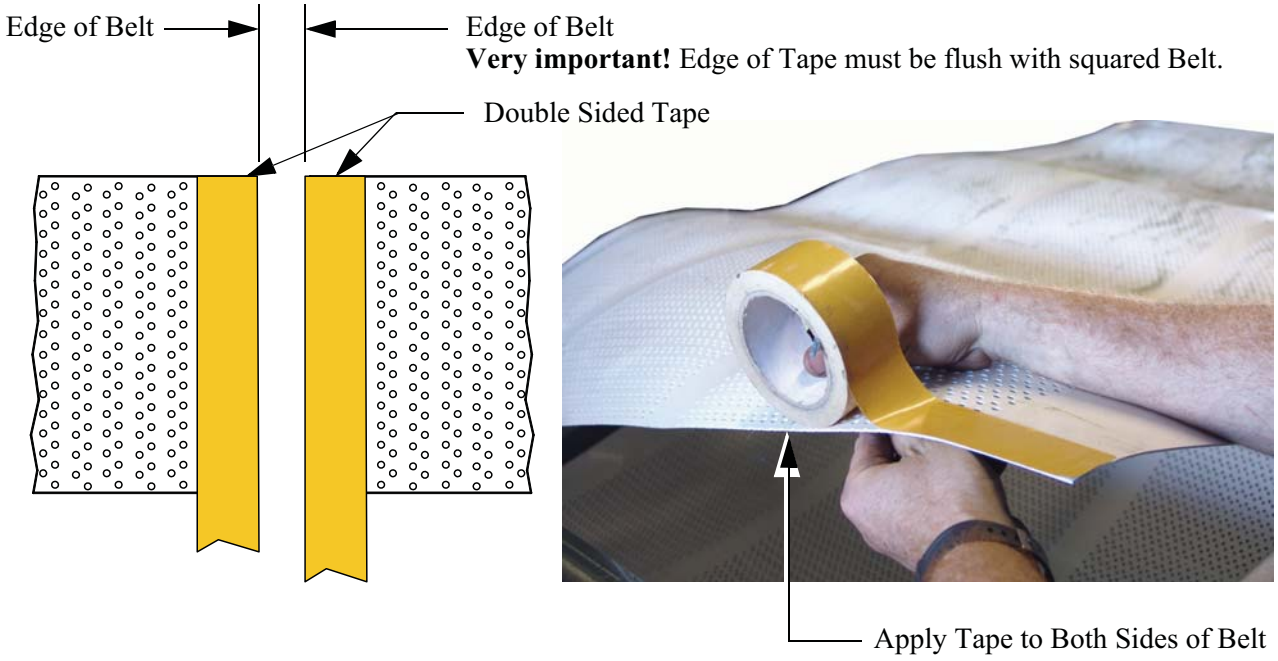
Step 2. Cut Belt Ends

Cut and Square both Belt Ends. It is very important that the Belt is square. Failure to square the Belt properly could result in the Belt coming apart.For perforated Belt, use the holes as a guide.



Step 3. Double Sided Tape

Apply Double Sided Tape to **both sides** of each Belt end Edge **as shown.**

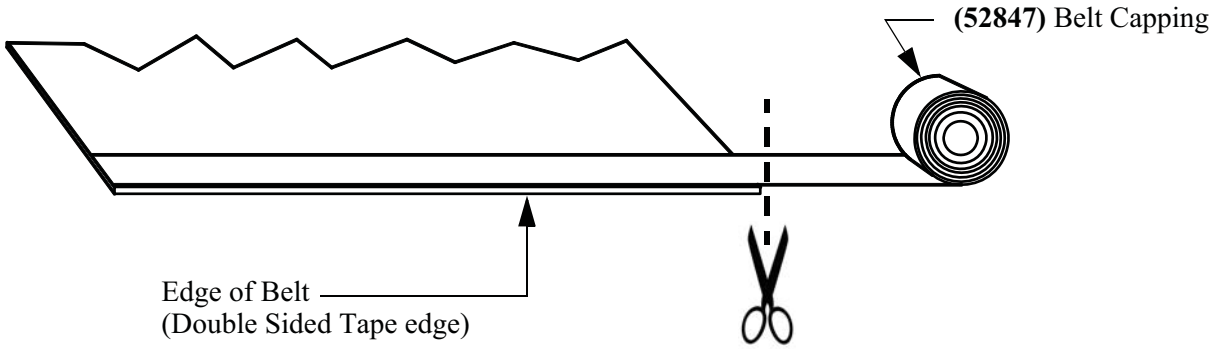


Step 4. Belt Capping

Belt Capping is applied over the Double Sided Tape. The It is very important that once the Belt Capping is applied to the Double Sided Tape the edge is straight and square. Follow the steps below to prepare and attach the Belt Capping to the double sided tape.

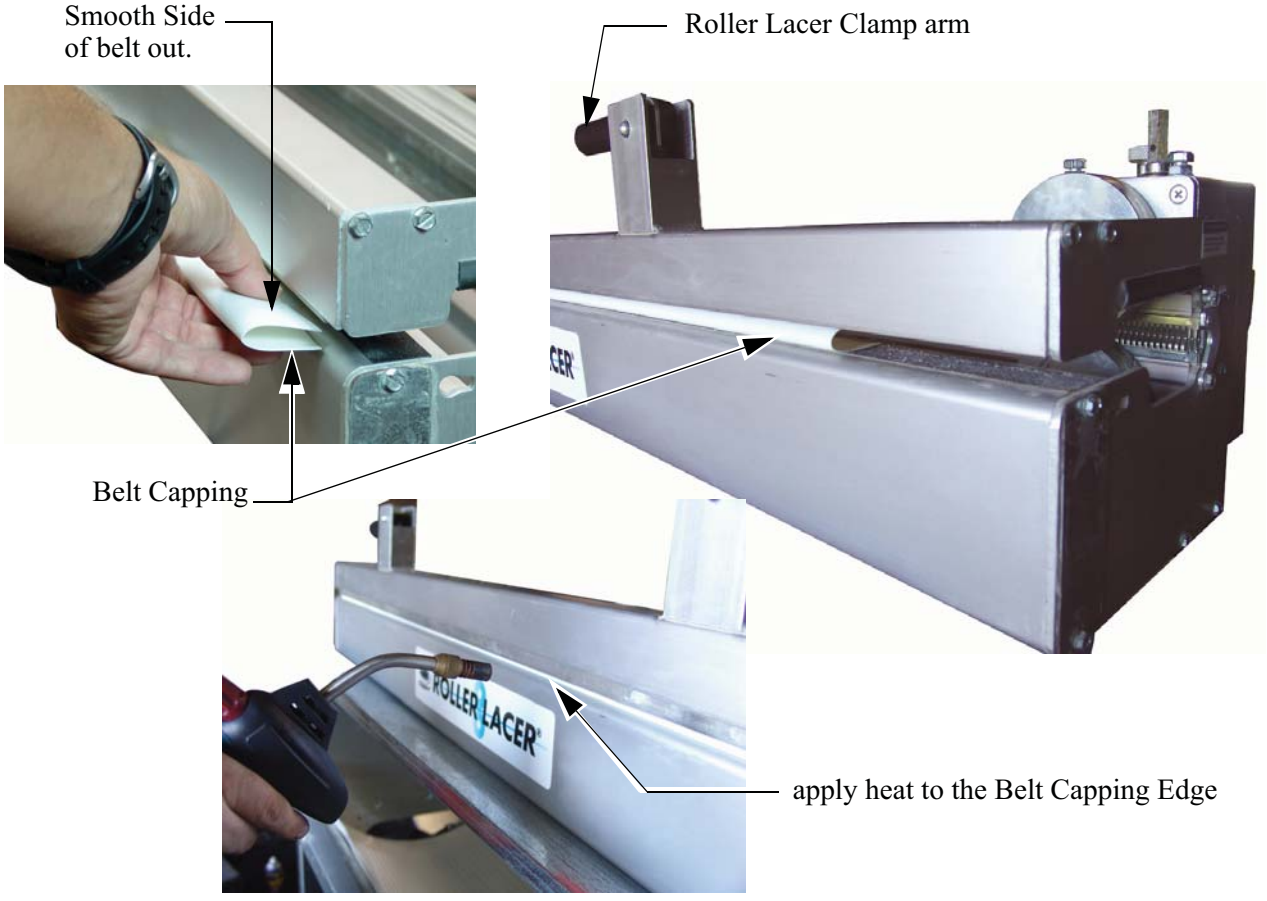
Step 4a.

Obtain a roll of Belt Capping (52847) and cut off a piece equal to the width of the Manure Belt.



Step 4b.

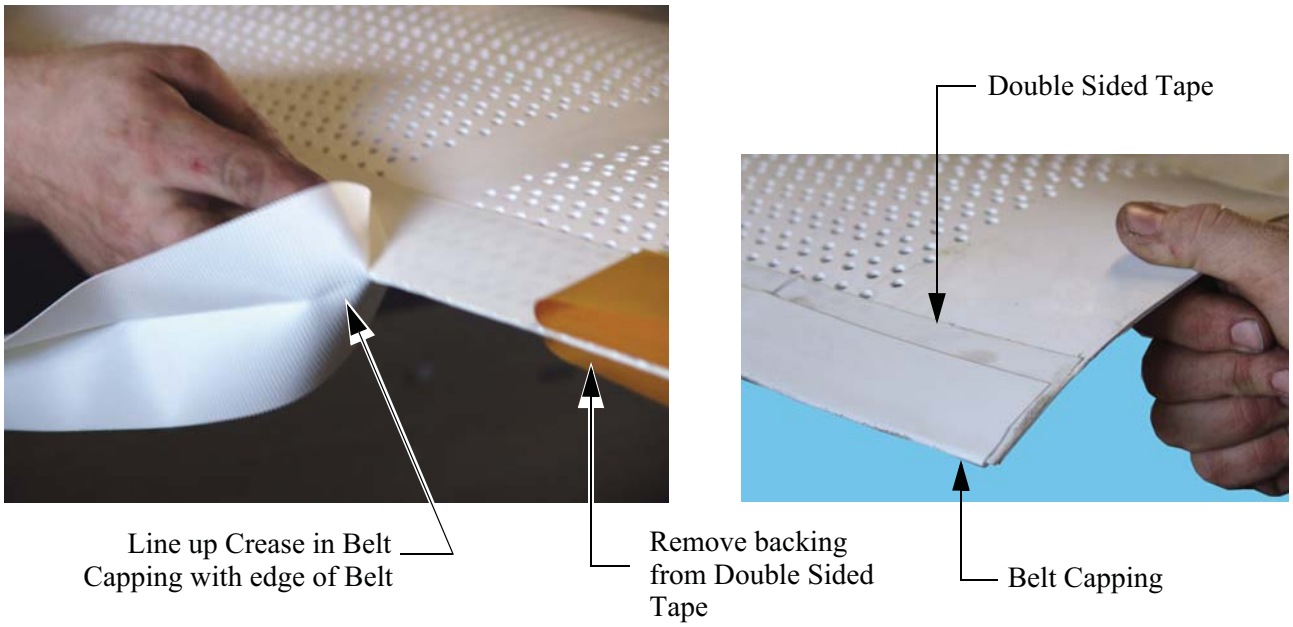
Fold the Belt Capping in half (Smooth Side out) and insert it into the Roller Lacer **as shown.** Slide the Belt Capping into the Roller Lacer and clamp down on it to put a crease in the center of the belt its entire length. Use a torch to heat the edge of the Capping. This helps form a good crease.



Step 4c.

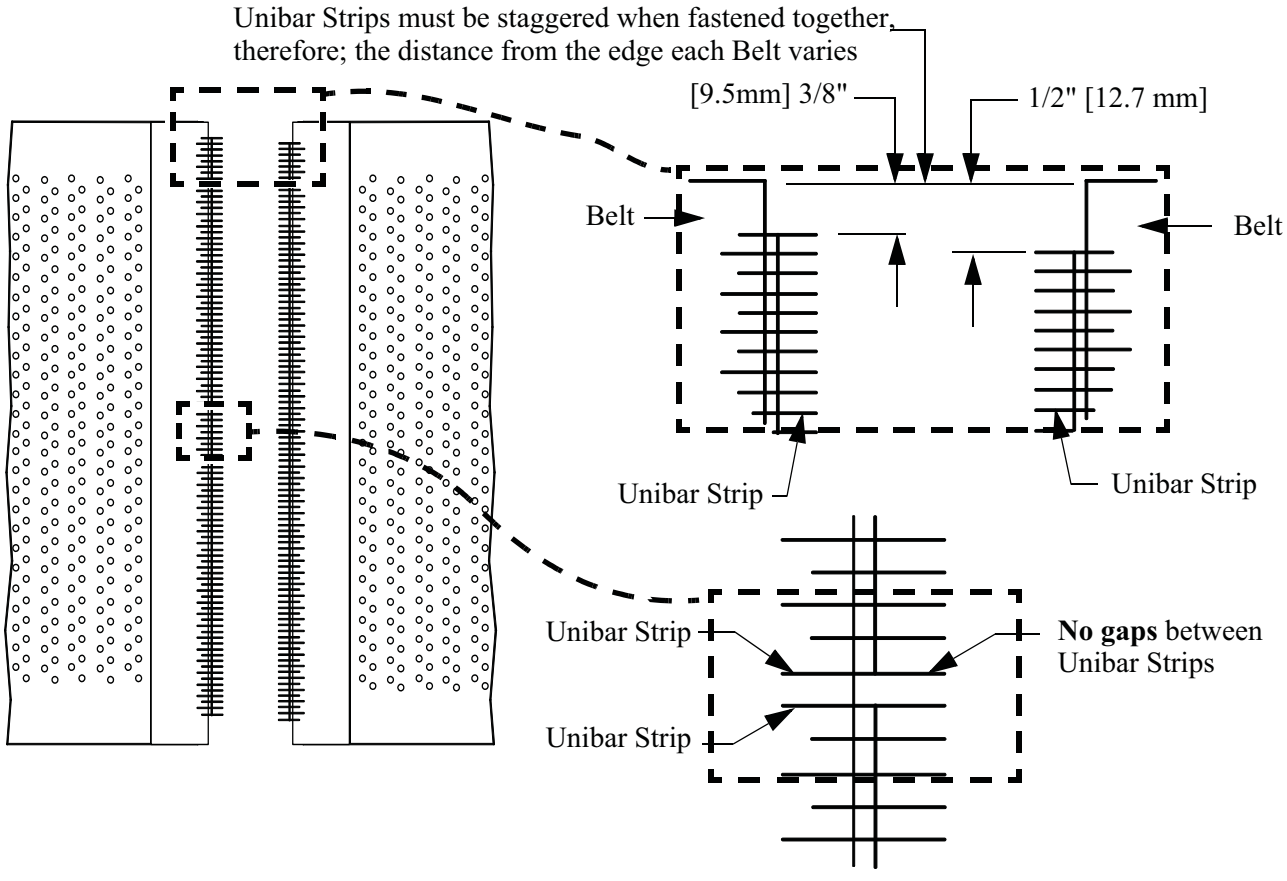
Remove the cover from the Double sided Tape and apply the Belt Capping **as shown**.

Important!! Make Sure the Belt Capping Edge is tight against the Belt Edge!



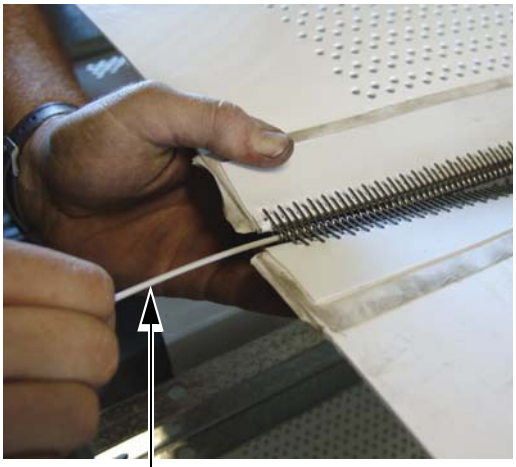
Step 4d.

Refer to the Flexco Manual to splice the Belt together. **Step 4d and the following steps should be used in conjunction with the Flexco Manual.**

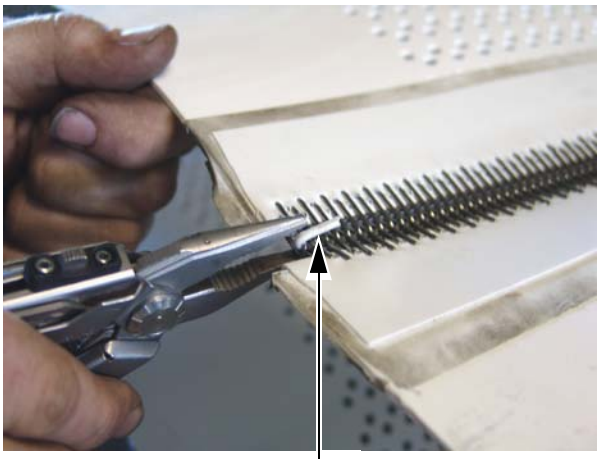


Step 4e. Belt Pin (Wire that holds Belt together)

Install Belt Pin (52846-20) as shown below. Make sure that edges of the belt line up.



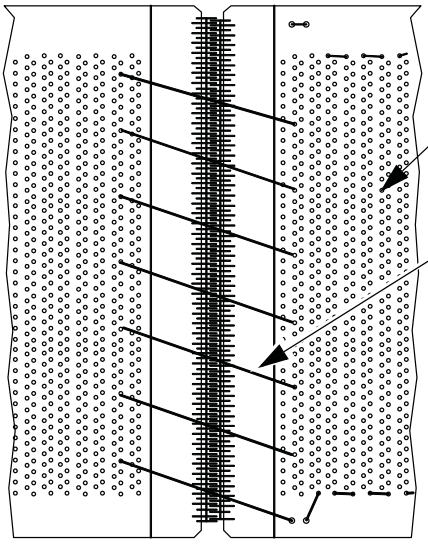
(52846-20) Belt Pin



Bend ends of Belt Pin

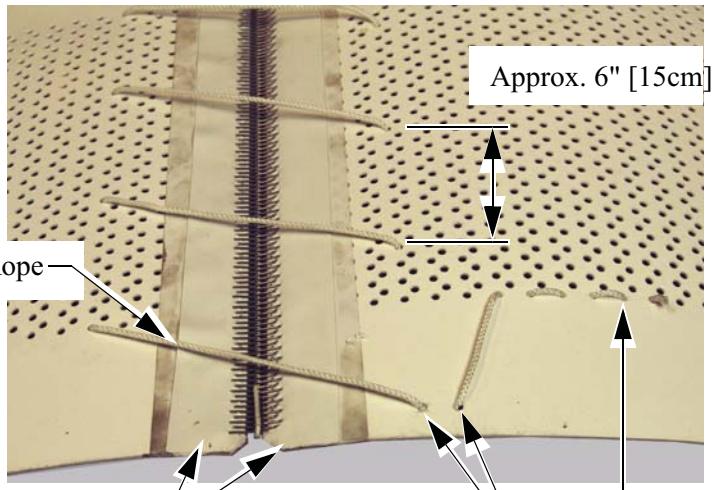
Step 4f. Belt Rope

Install Nylon Rope (9247) at each Belt Splice **as shown**. A Soldering Iron works well for putting holes in the Belt. Clip the corners of the belt **as shown**.



Belt

Nylon Rope (9247)

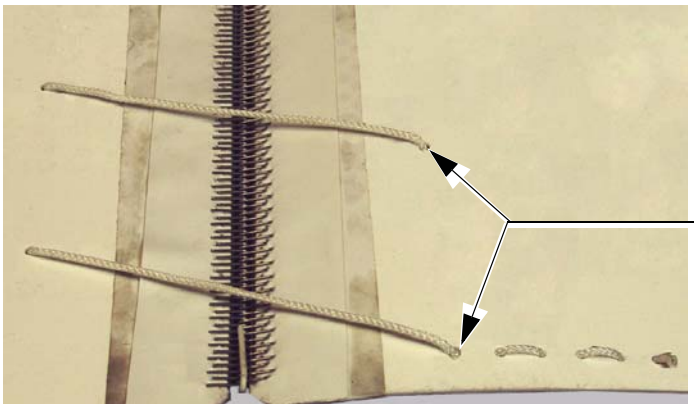


Approx. 6" [15cm]

Clip Corners of Belt

Cut Holes in Belt to allow for Nylon Rope.

Weave Nylon Rope through Holes in Belt

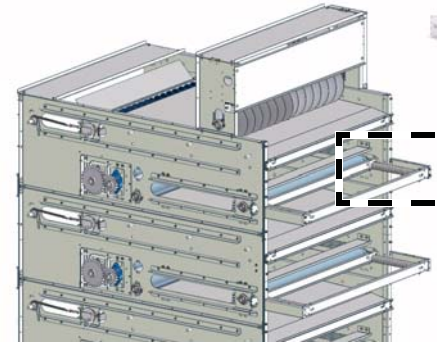


Cut all holes in solid Belt. A Soldering Iron works well for putting holes in the Belt.

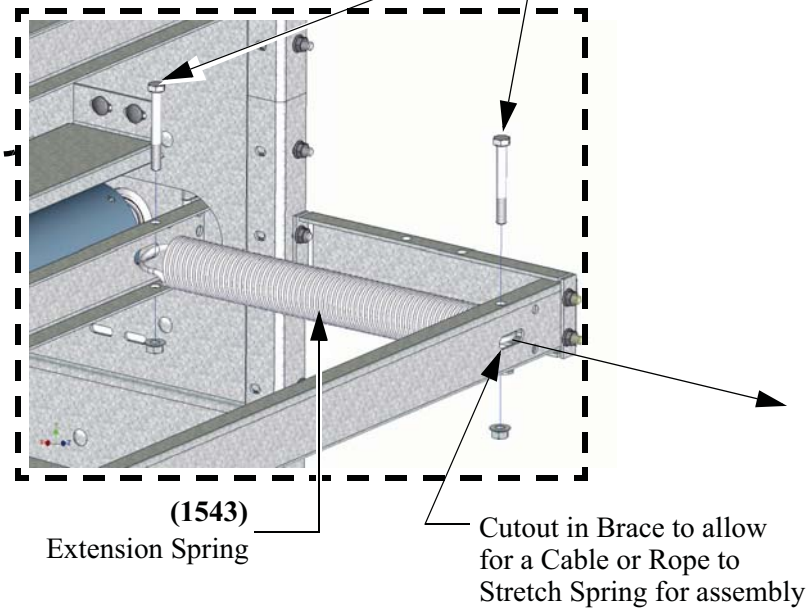
Idler Spring Attachment

Step 1. Attaching Idler Springs to Drive Units

Attach two Idler Springs to each Drive Unit **as shown**.



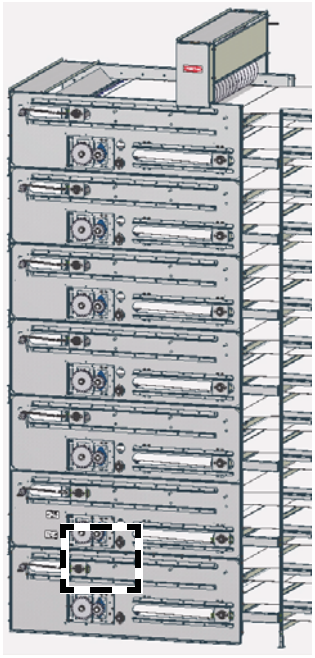
Danger! Spring is under Great tension.
Use Extreme Caution!

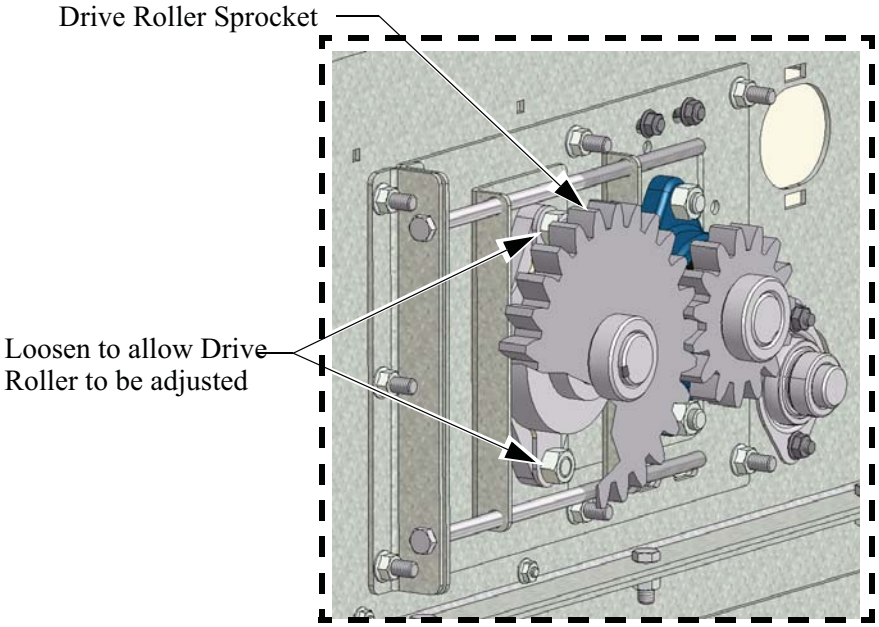


MDS Drive Setup (Adjusting for Proper Belt Tracking)

Step 1a. Drive Roller Adjustment

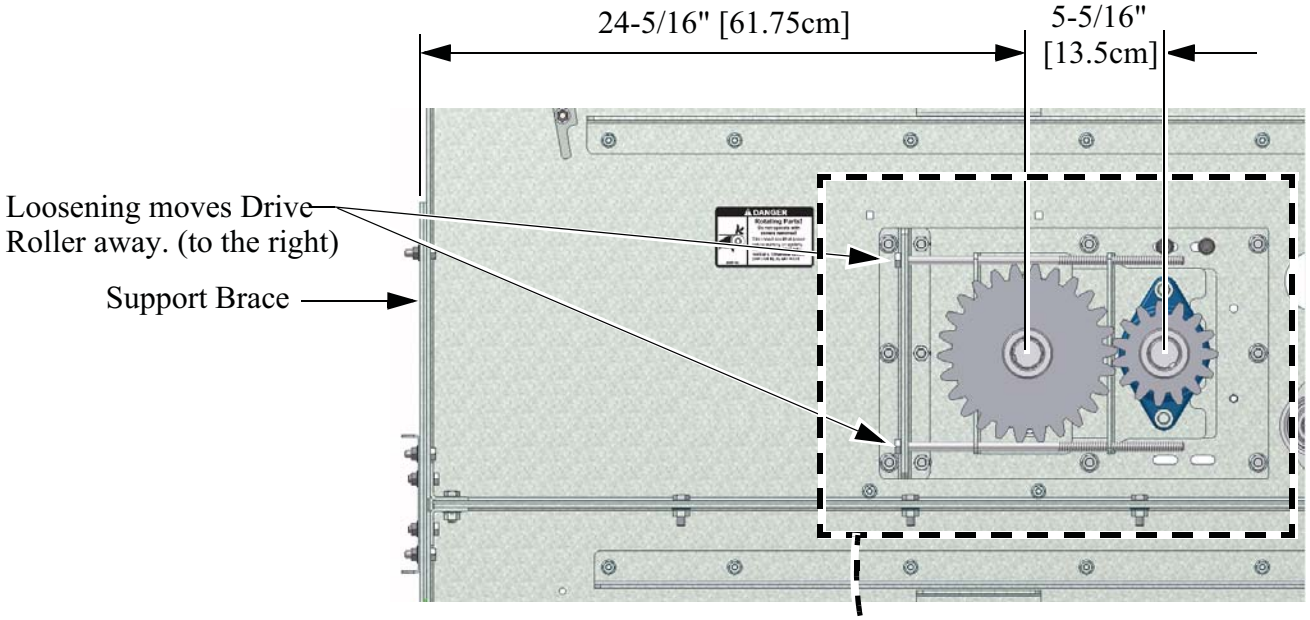
Loosen the Bolts on the Drive Roller Bearings (Opposite the Power Unit) to allow the Drive Roller to slide.





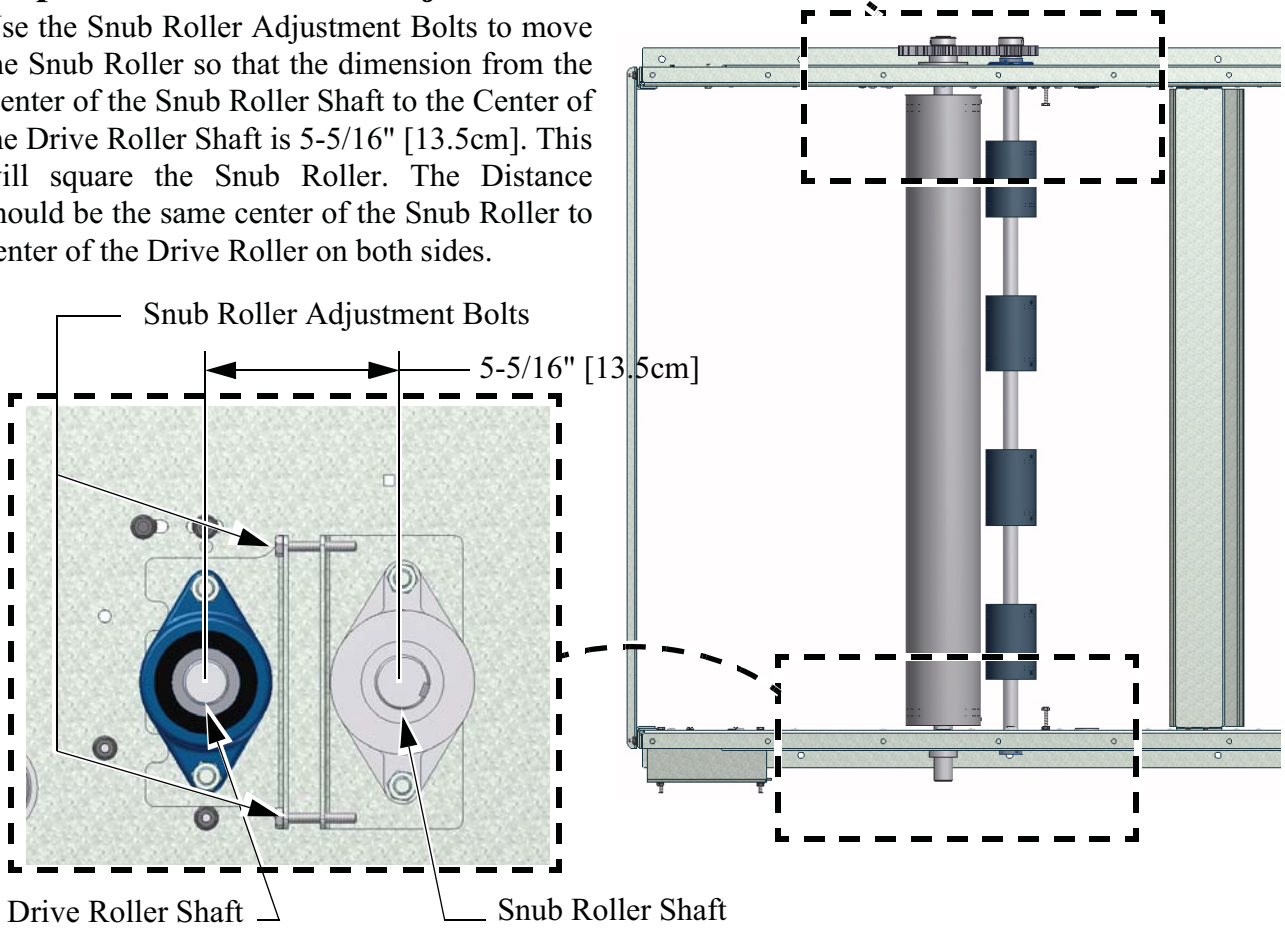
Step 1b. Drive Roller Adjustment

Use the Drive Roller Adjustment Bolts to move the Drive Roller so that the dimension from the Back of the Unit (outside of Support Braces) to the Center of the Drive Roller Shaft is 24-5/16 [61.75cm]. This will square the Drive Roller.



Step 1c. Drive Roller Adjustment

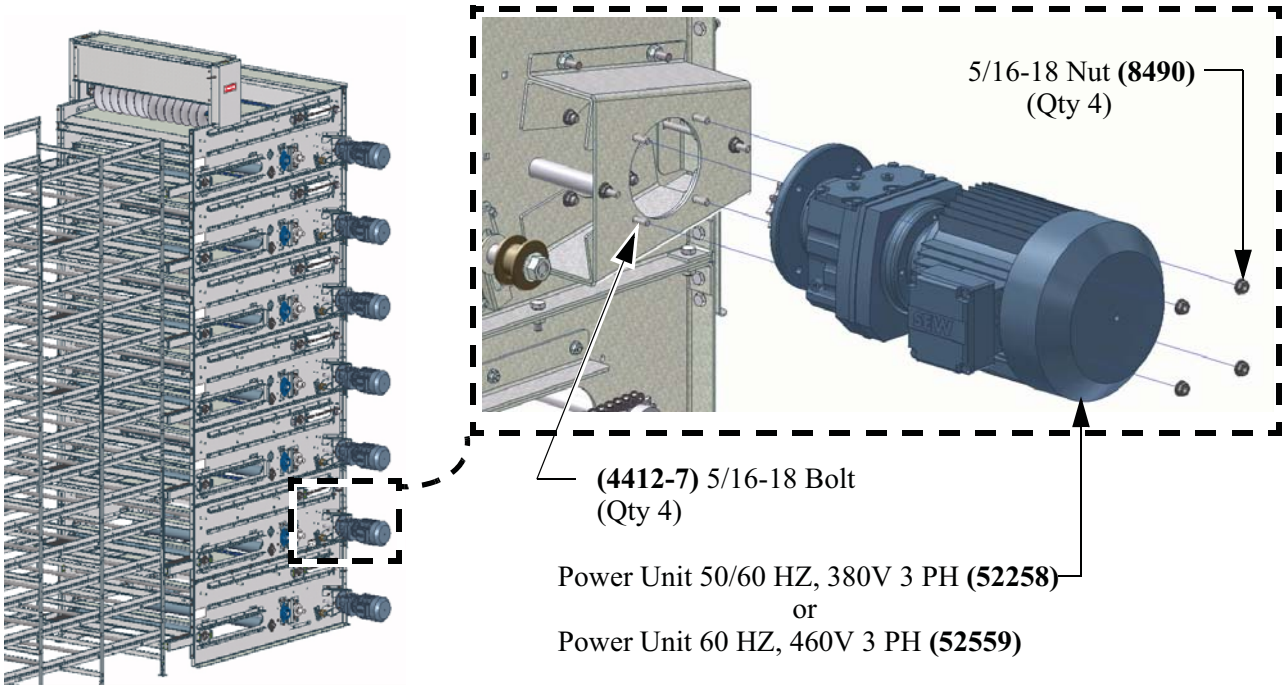
Use the Snub Roller Adjustment Bolts to move the Snub Roller so that the dimension from the Center of the Snub Roller Shaft to the Center of the Drive Roller Shaft is 5-5/16" [13.5cm]. This will square the Snub Roller. The Distance should be the same center of the Snub Roller to center of the Drive Roller on both sides.



Driveling (Power Unit, Sprocket, and Chain) Installation

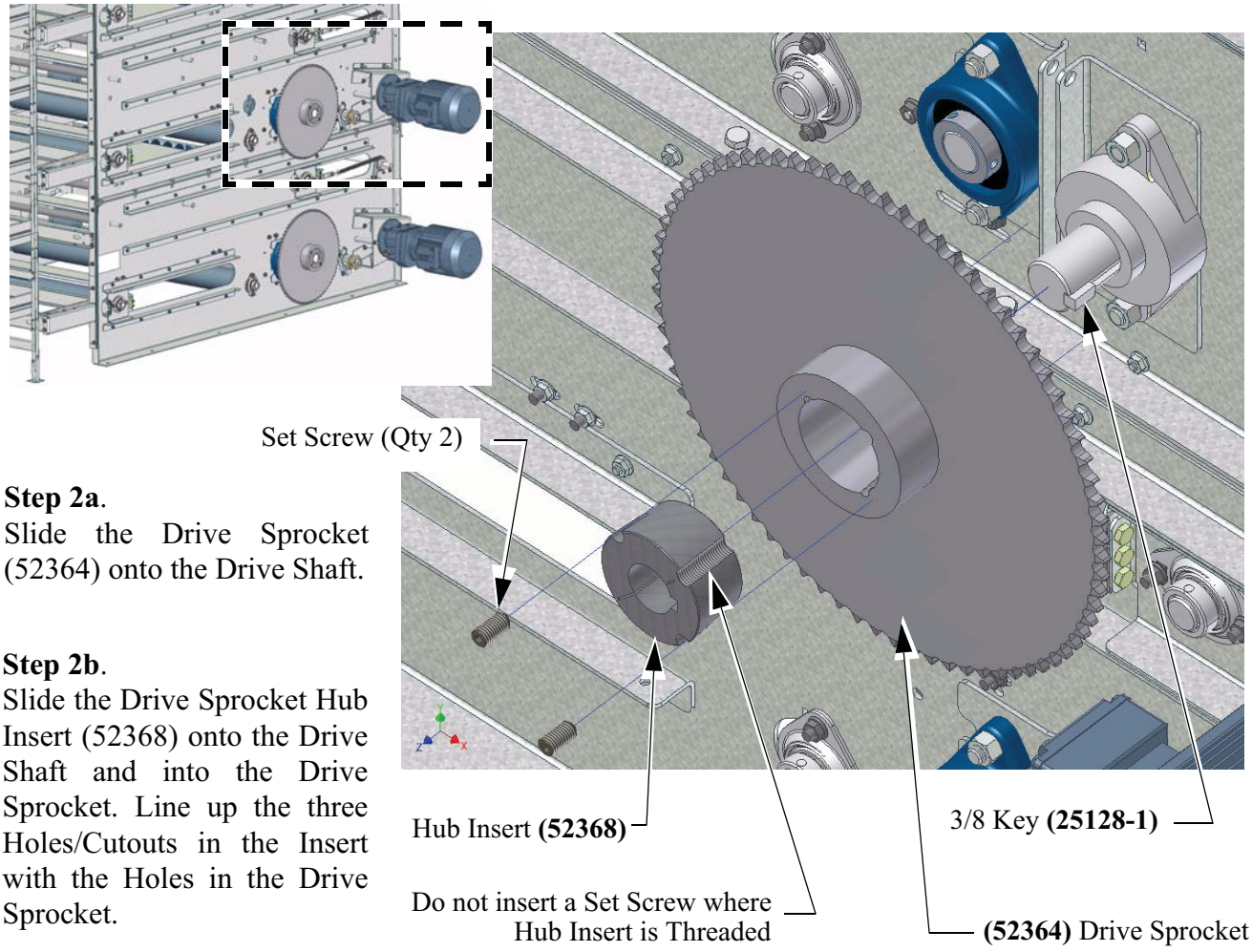
Step 1. Attaching Power Unit Kits required- 52403,52552

Attach a Power Unit to each Drive Unit as shown.



Step 2. Drive Sprocket

Attach a Drive Sprocket to each Drive Unit as shown.

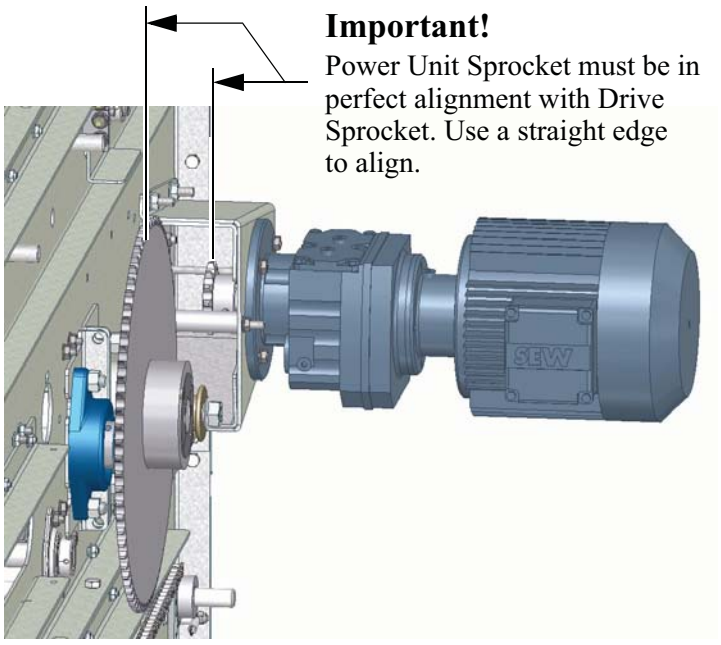


Step 2a.
Slide the Drive Sprocket (52364) onto the Drive Shaft.

Step 2b.
Slide the Drive Sprocket Hub Insert (52368) onto the Drive Shaft and into the Drive Sprocket. Line up the three Holes/Cutouts in the Insert with the Holes in the Drive Sprocket.

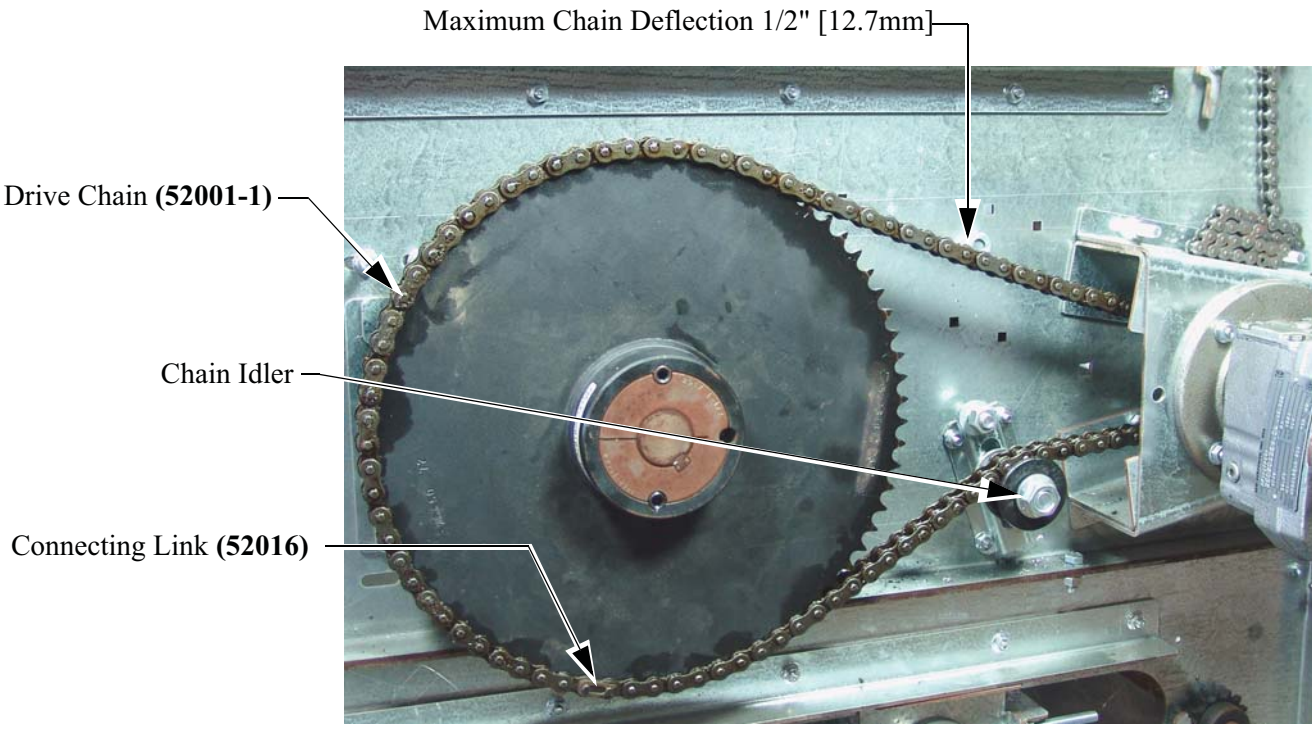
Step 2c.
Line up the Key Slot in the Insert with the Key Slot in the Drive Shaft and Insert a 3/8 Key (25128-1).

Step 2d.
Start inserting Set Screws (supplied with Hub Insert) in the two holes. Line up the Drive Sprocket with the Gear on the Motor Shaft **(See Figure at right)** and torque Set Screws to 108 in-lbs. [12.2 Nm]
It is very important that the Drive Sprocket be in perfect alignment with the Motor Sprocket



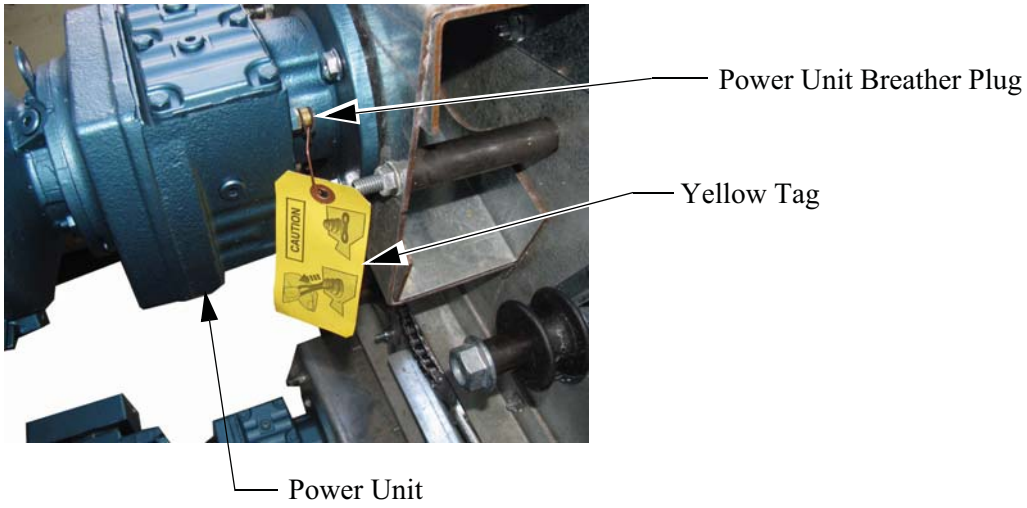
Step 3. Drive Chain

Install a 65" [165cm] Drive Chain (52001-1) to each Drive as shown. Adjust the Chain Idler to remove Slack from Chain. **Important! Use a straight edge to Check for perfect Chain alignment.**



Step 4. Power Unit Plug

Remove the Power Unit Breather Plug from each Power Unit. (Identified by a Yellow Tag **as shown**).

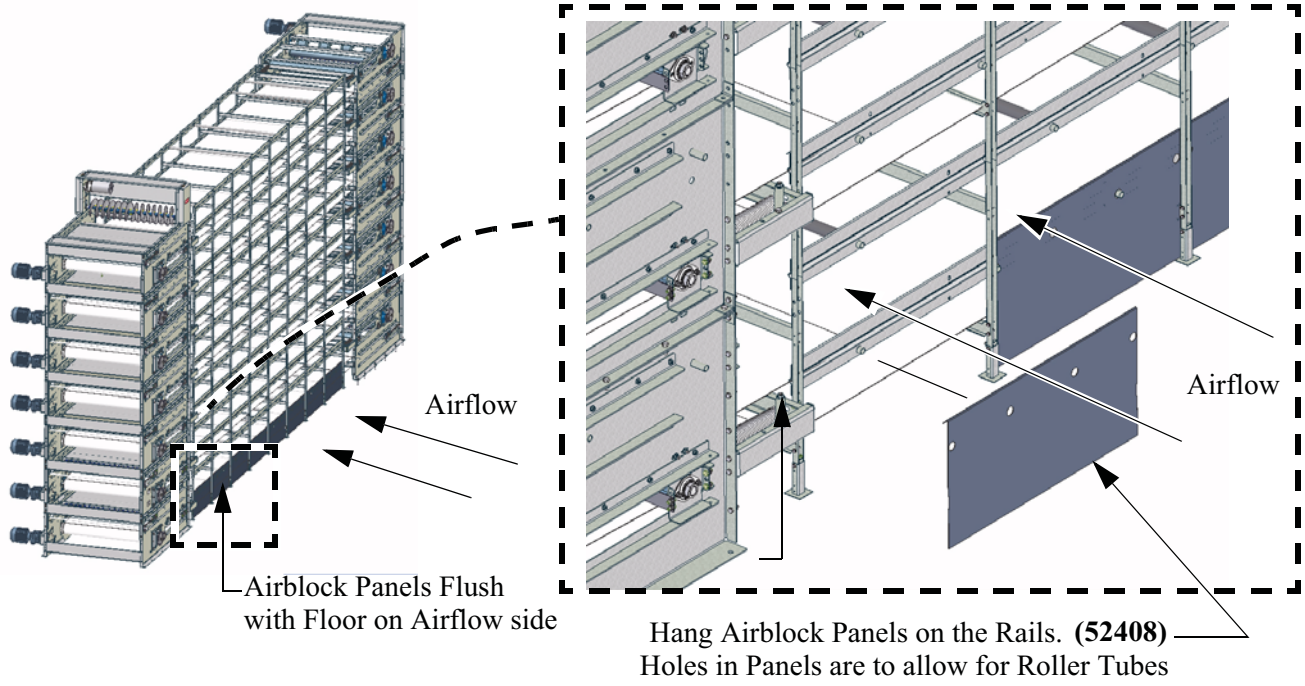


Rollback for Proper Air Flow Installation

Step 1. Install (Bottom) Airblock Panels

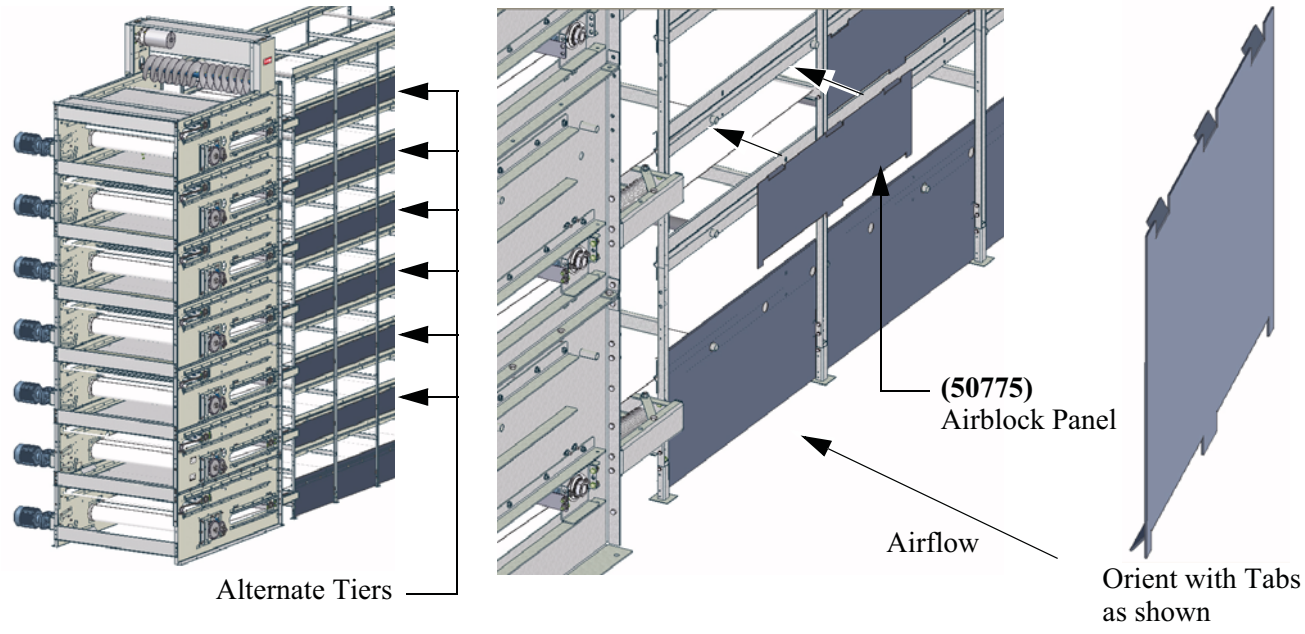
Bottom Tier Airblock Panels (52408) are used to direct air through the MDS so maximum drying can occur. Bottom Tier Airblock Panels are installed on the side of the System airflow is coming from.

Direction of airflow is optional. On the side of the MDS receiving air, Install Bottom Airblock Panels on the bottom most tier **(Block panels may need to be cut flush with the Floor).**



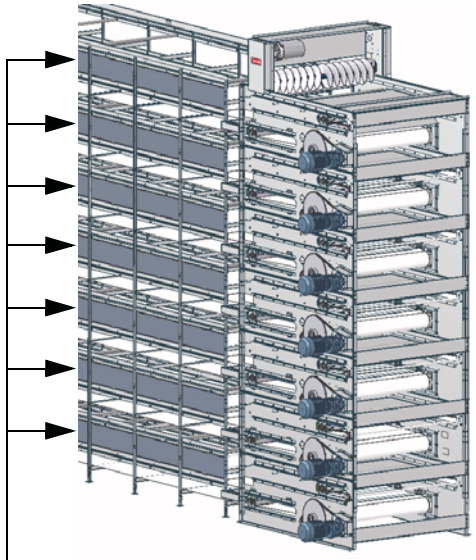
Step 2. Install Airblock Panels (Airflow Side)

Install Airblock Panels (50775), above the Bottom Panels, alternating Tiers as shown. The Panels Snap onto the Rails.

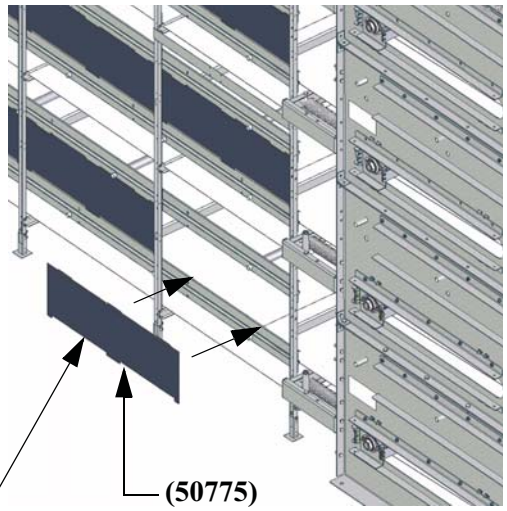


Step 3. Install Airblock Panels (Exhaust side)

Install Airblock Panels (50775), starting at the second tier, and alternating Tiers above as shown. The Panels snap onto the Rails.

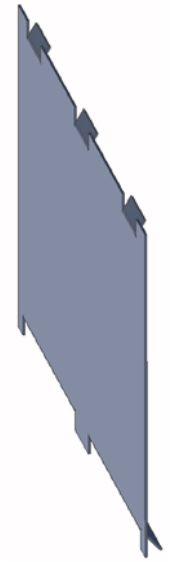


Alternate Tiers



(50775)
Airblock Panels

On the exhaust side, start installing Airblock Panels on the Second Tier. Then Alternate Tiers above.



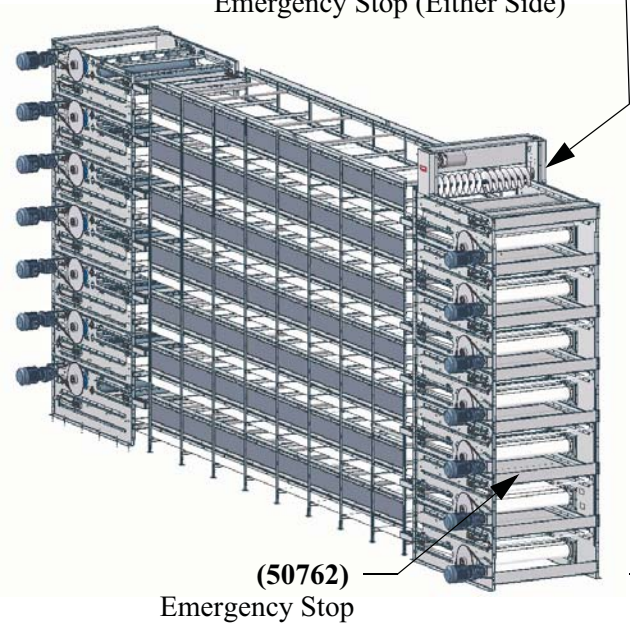
Orient with Tabs as shown

Emergency Stop Button (50762) Installation

Important!

Emergency Stop Buttons must be installed at each end of the MDS System. The Buttons must be Maximum 5’ [152.4cm] from the ground. One Button must also be installed within 2’ [61cm] from the Spreading Auger on the side of the system most likely serviced.

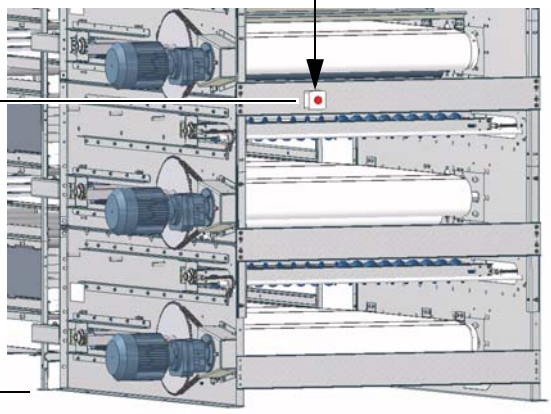
(50762)
Emergency Stop (Either Side)



(50762)
Emergency Stop

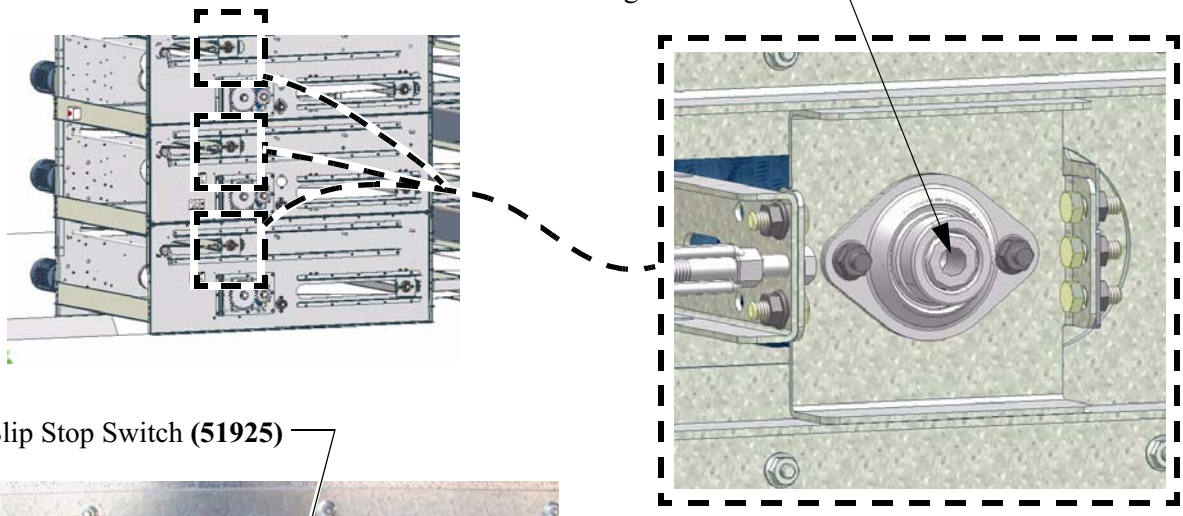
Maximum distance
5’ [152.4cm] to the ground

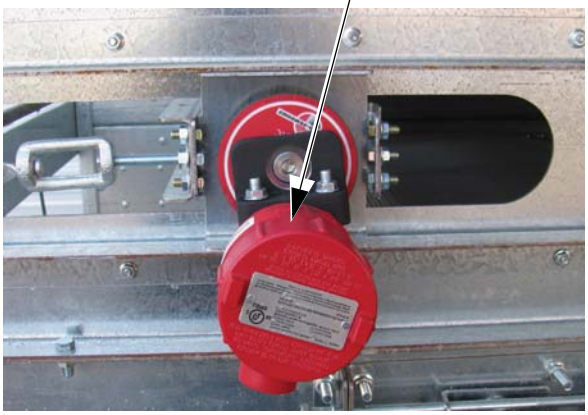
(50762)
Emergency Stop



Slip Switch Installation

Install Slip Stop Switches (51925) on the threaded end of the Auger Idler Shafts as shown. **See Instruction included with the Slip Stop Switch for assembly and attachment details.**



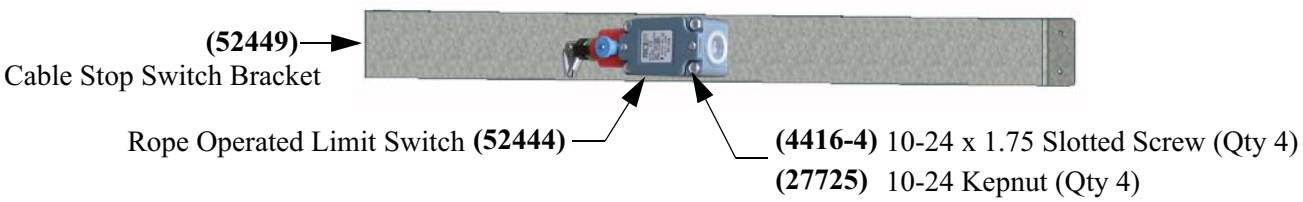


Note: Slip Switches should be Calibrated.
(See Instruction included with the Switch)

Emergency Stop Cable Switch installation

Step 1. Attaching Rope Operated Limit Switches

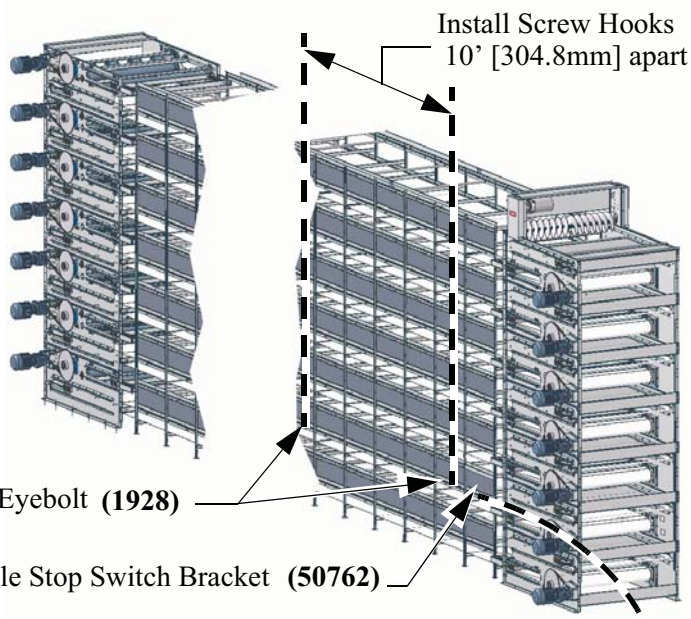
Obtain two Cable Stop Switch Brackets (52449) and Two Rope Operated Limit Switches (52444). Attach the Switches to the Brackets as shown.



Important! Cable operated Emergency Stop Switches (52444) are installed on both sides of the MDS System it can be stopped at any time from anywhere on either side.

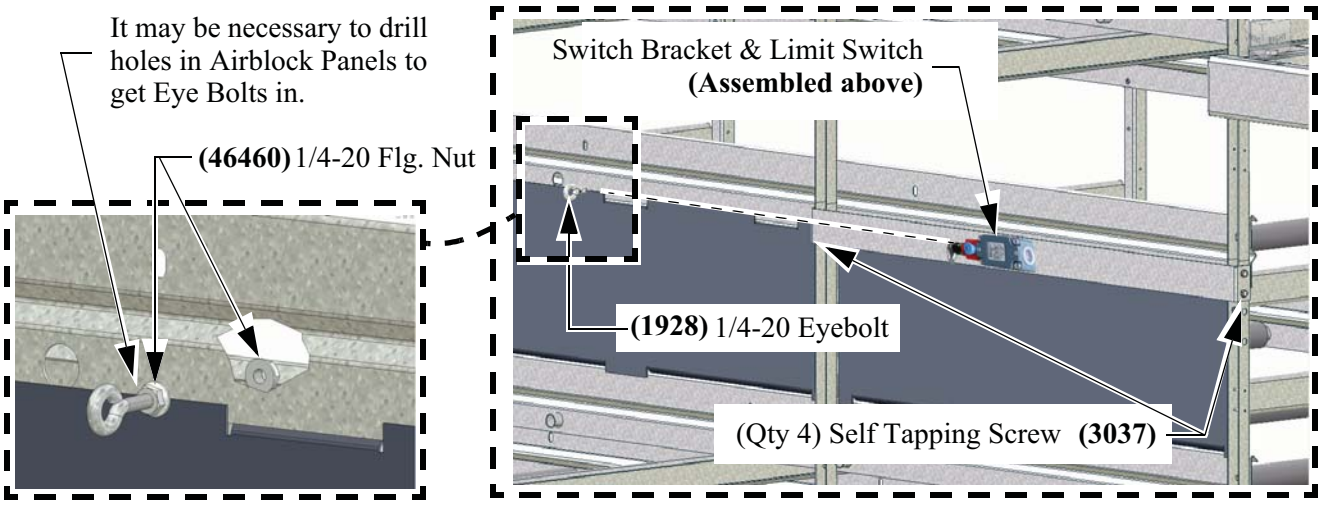
Step 2. Install Cable Eye Bolts

Install Screw Hooks in the Rails to route the Emergency Stop Cable through at a level that is convenient to reach. Use the holes in the bottom of the Rails. Install a Screw Hook in the hole closest to the Cable Stop Switch Bracket **(See Step 3 below).** Install Screw Hooks 10’ apart along the entire system.



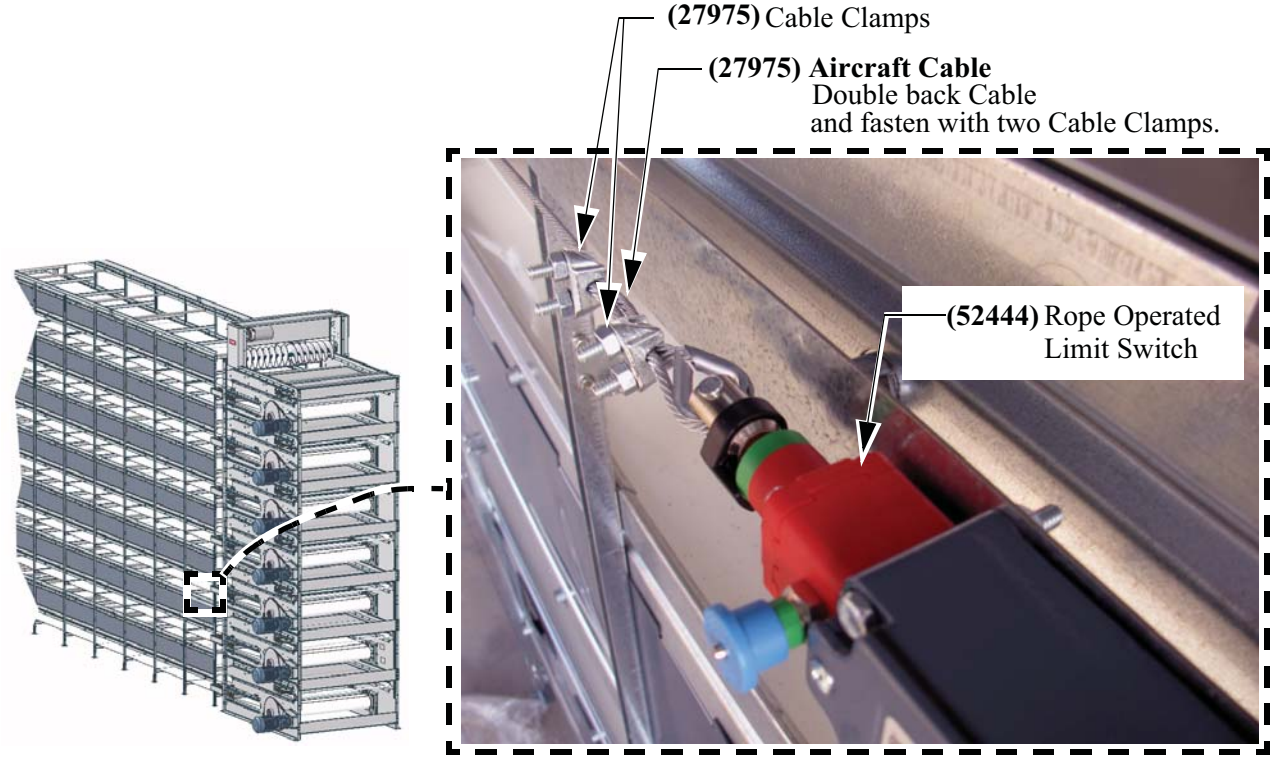
Step 3. Install Switch Bracket and Limit Switch

Line up the Center of the Switch with the Center of the Eye Bolts and use Self Tapping Screws (3037) to attach it to the Legs **as shown**.



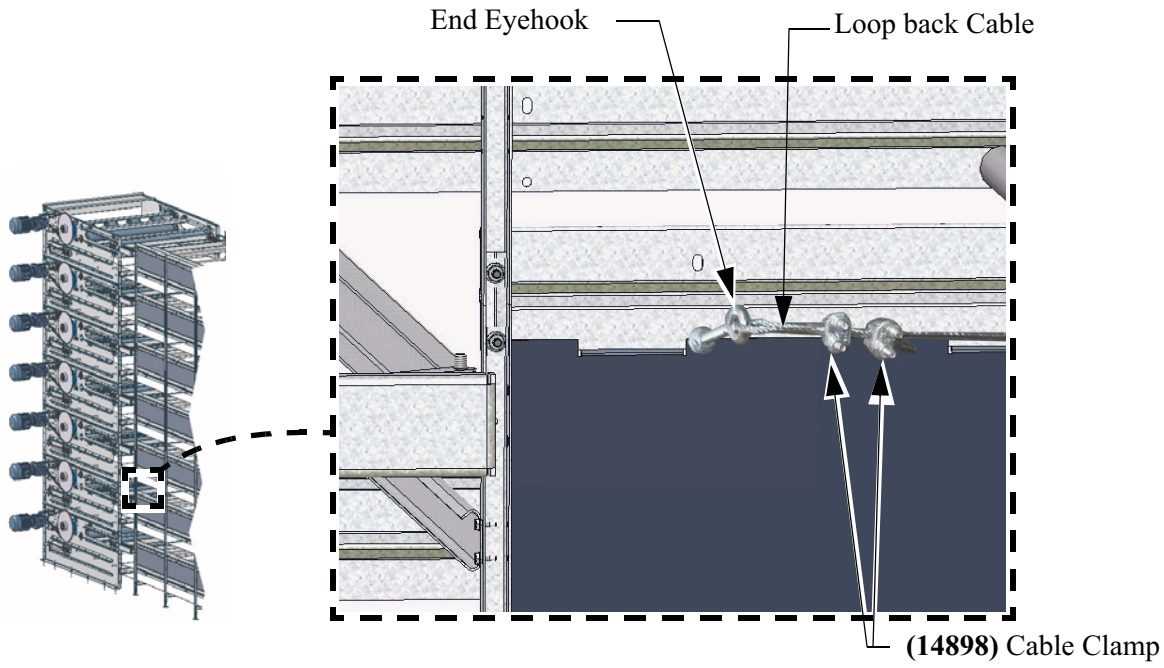
Step 4a. Emergency Stop Cable Installation (Switch End)

Attach the Cable to the Limit Switch and anchor it at the other end as shown.



Step 4b. Emergency Stop Cable Installation (Non Switch End)

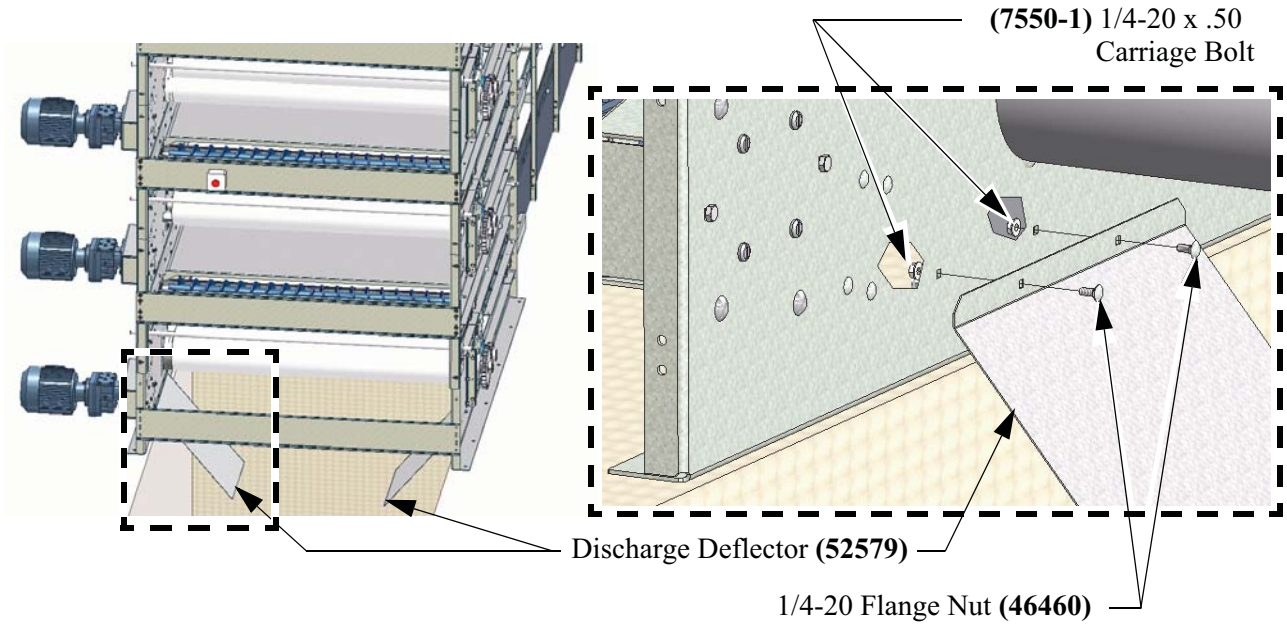
Attach the Cable to the End Eyehook as shown.



Discharge Kit

Step 1. Discharge Deflectors

Attach Discharge Deflectors (52579) to the Bottom Drive at the Loading/Unloading end of the system.

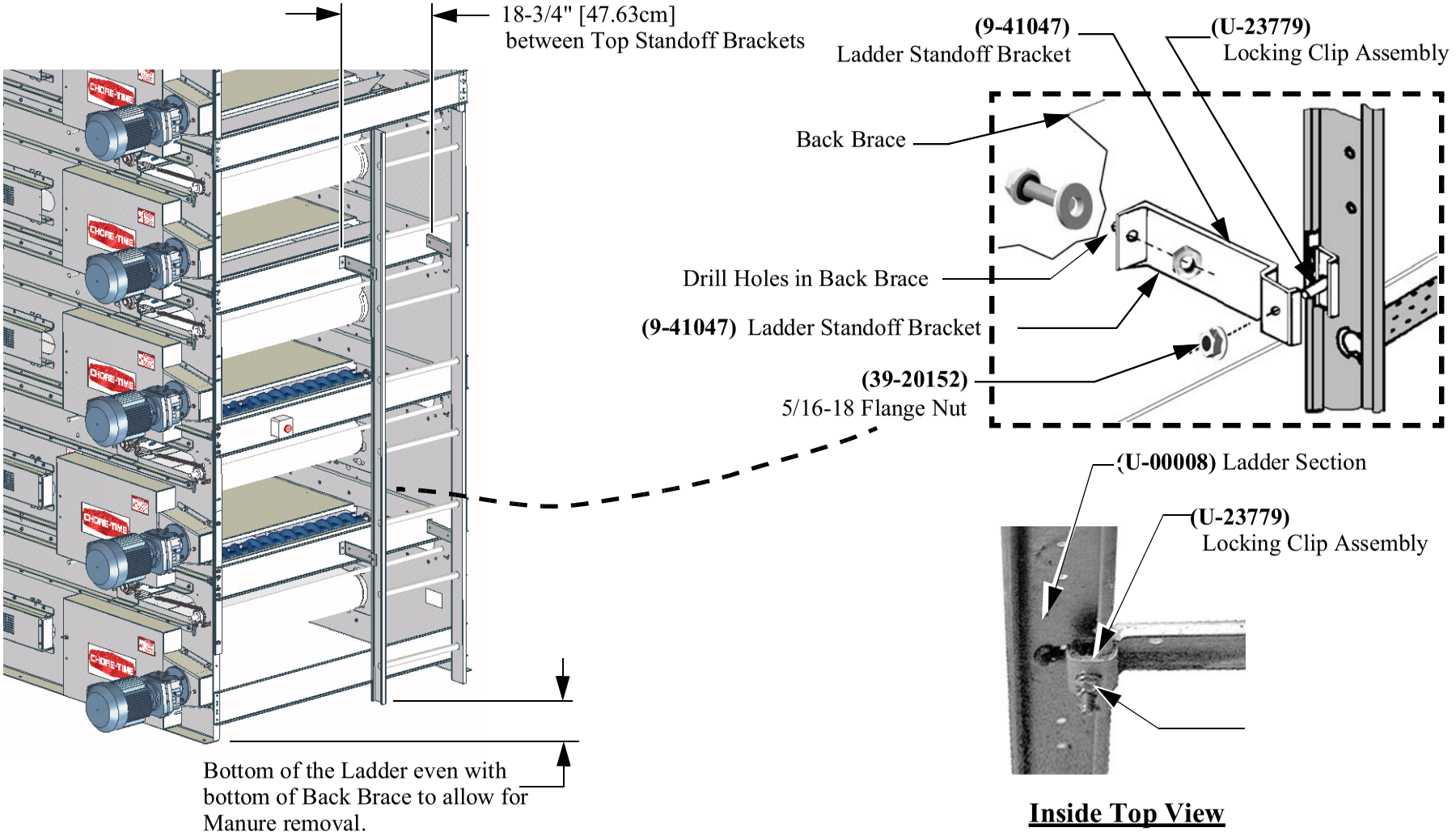


Ladder and Cage Assembly (9-26906)

Important! Ladder installations must use all specified connecting Brackets to maintain Safety. Failure to follow specific Hardware instructions during assembly could result in serious operator injury and/or structural damage.

Step 1. Attach Standard Ladder Standoff Brackets

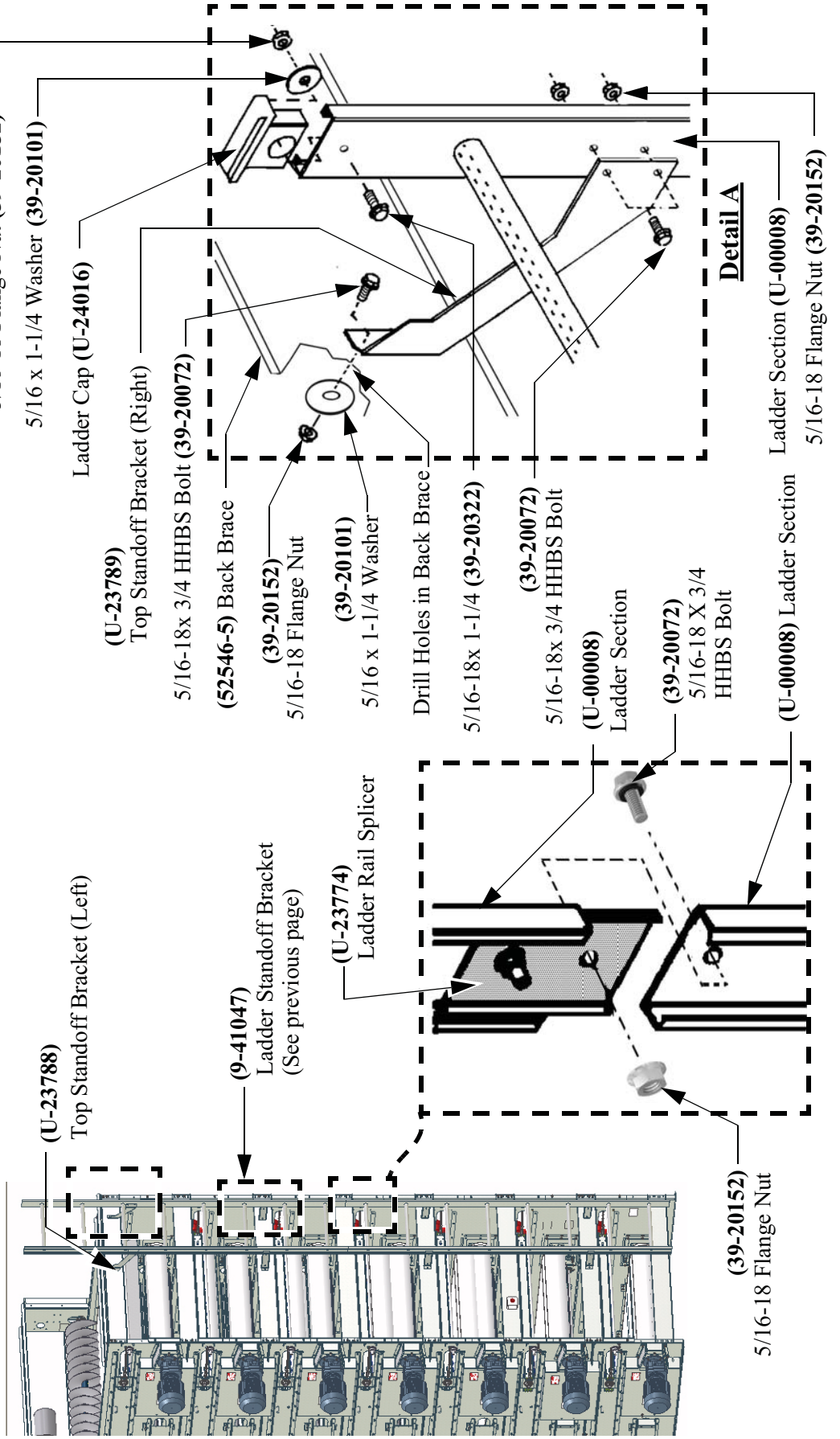
Drill Holes in the **2nd and 4th** Back Braces off the Floor and attach Standard Ladder Standoff Brackets (9-41047) **as shown. Attach a Ladder Section (U-00008) to the Standoff Brackets. (Note: Bottom of Ladder even with bottom of the bottom Back Brace).**



Warning! Use special care in assembling Ladders. **Failure to follow specific hardware instructions during assembly could result in serious injury or structural damage.** Assemble and attach Ladders as shown. One ladder at each end of system.

Step 2. Attach Top Ladder Section

Attach 3rd set of Standoff Brackets as shown. Fasten Top Standoff Brackets (Left U-23788, and Right U-23789) to the Top Back Brace. Attach the Top Ladder Section (U-00008) to the Bottom Ladder section with Ladder Rail Splicers (U-23774) and to the Standoff Brackets **as shown.**



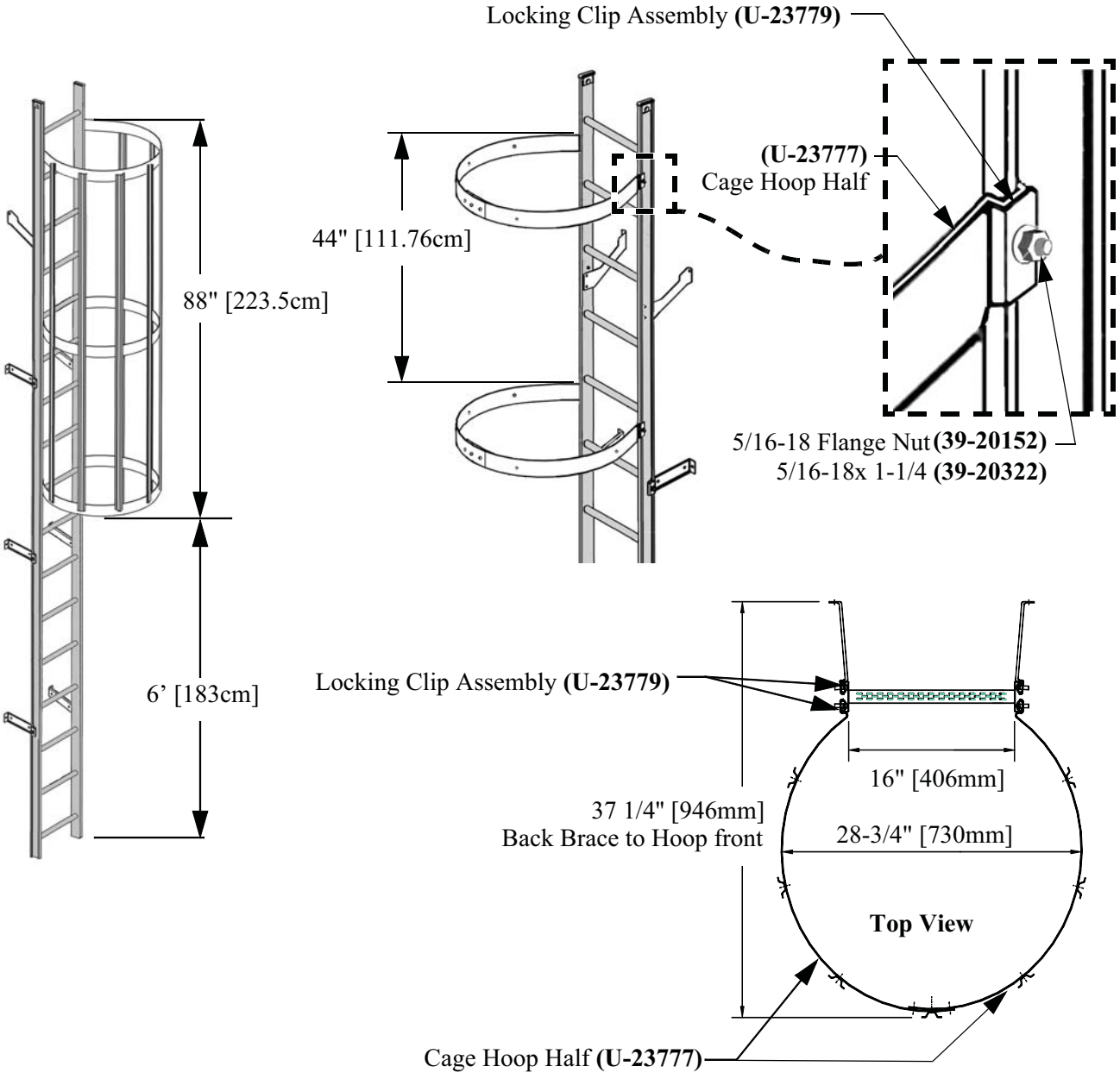
Step 3. Ladder Cage Assembly

Hoop Halves

The Cage is begun by joining two (2) **Hoop Halves**, and attaching them to the Ladder Rails

Align the three front holes and overlap the two (2) Hoop Halves. Connect with 5/16 x 3/4" Hex Head Bin Seal Bolts, Bolt heads **inside**, and 5/16" Hex Nuts, leaving a Bolt out of the center hole. Tighten Bolts from the **head** side.

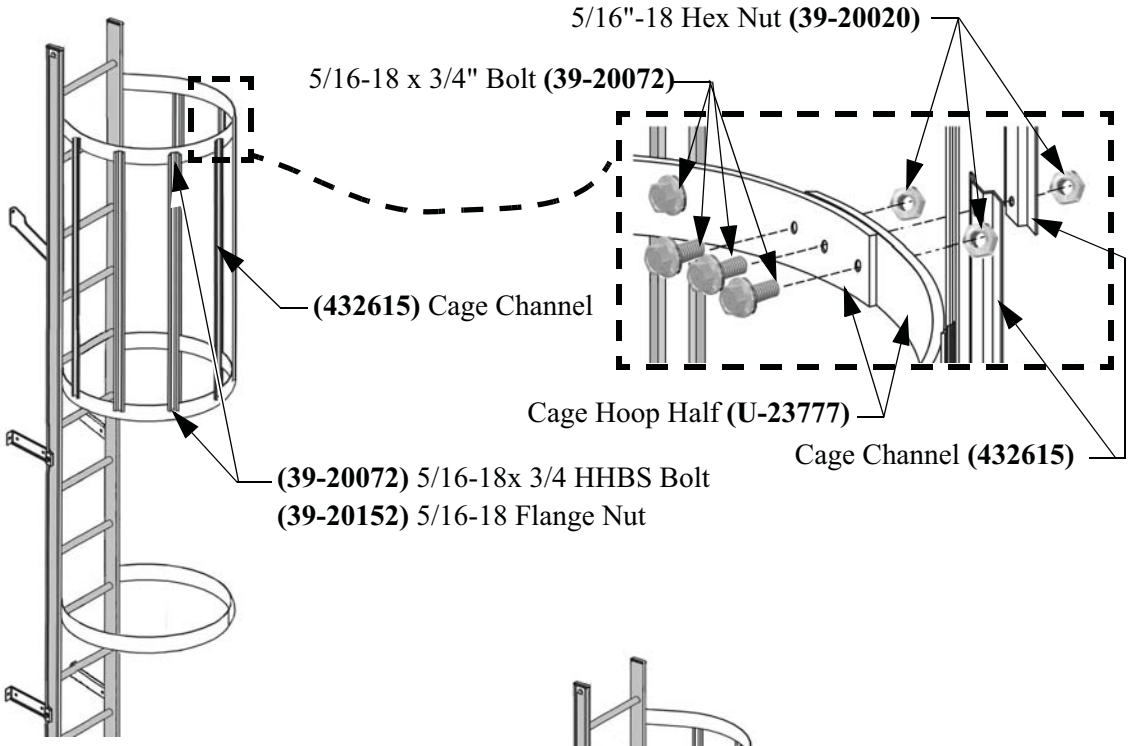
Connect the Hoop ends to the **front** side* of the Ladder Extension Rail with Locking Clip assemblies (Item 1), secured on the outside with Flange Nuts. Hoops are placed every 44" [111.76cm] as shown.

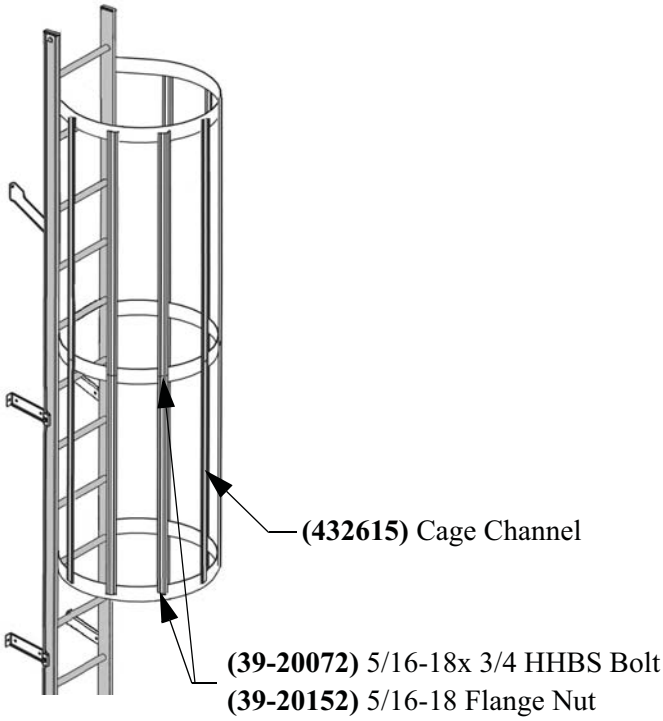


Cage Channels

The Cage has seven (7) Channels around.

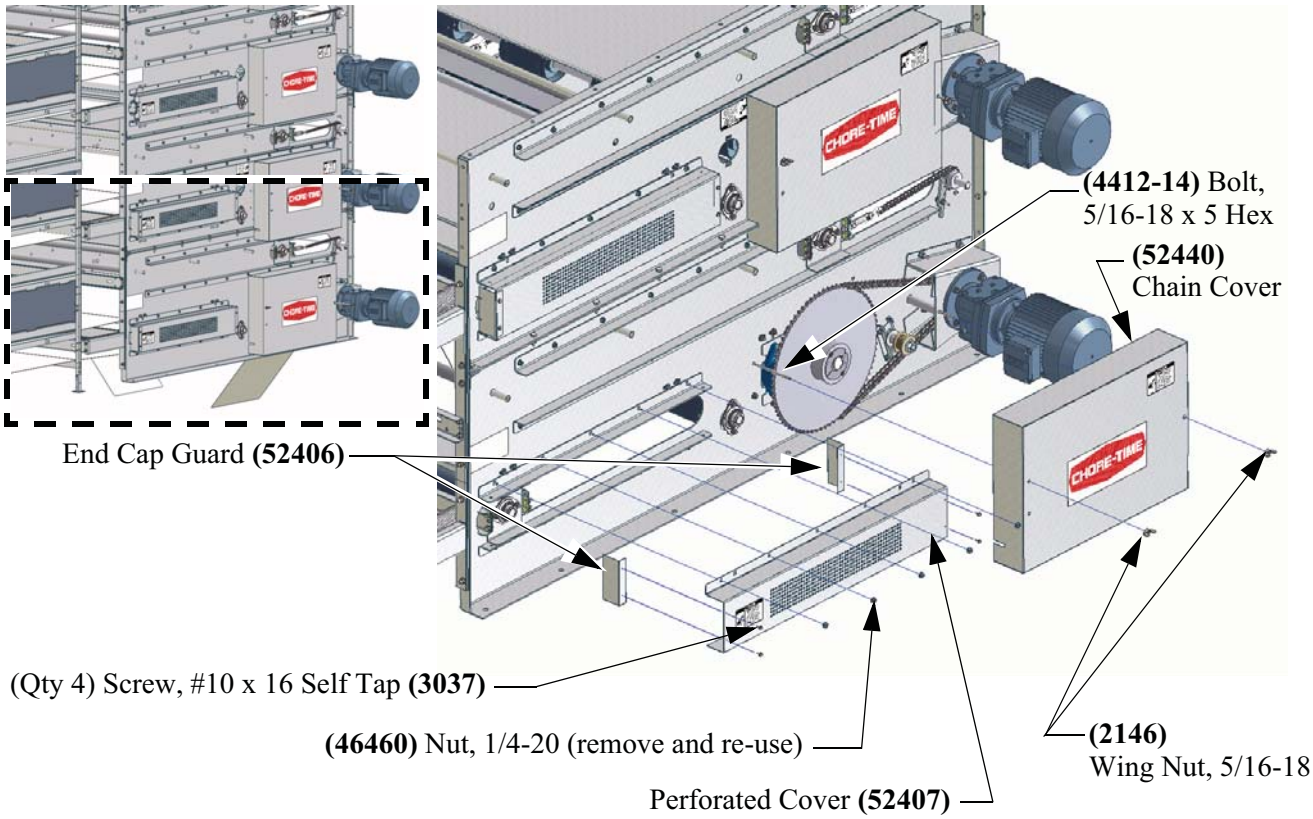
Channels connect **outside** the Hoop Halves with 5/16-18 Hardware as shown below. Bolt heads **inside**. Tighten Bolts from the **head** side.



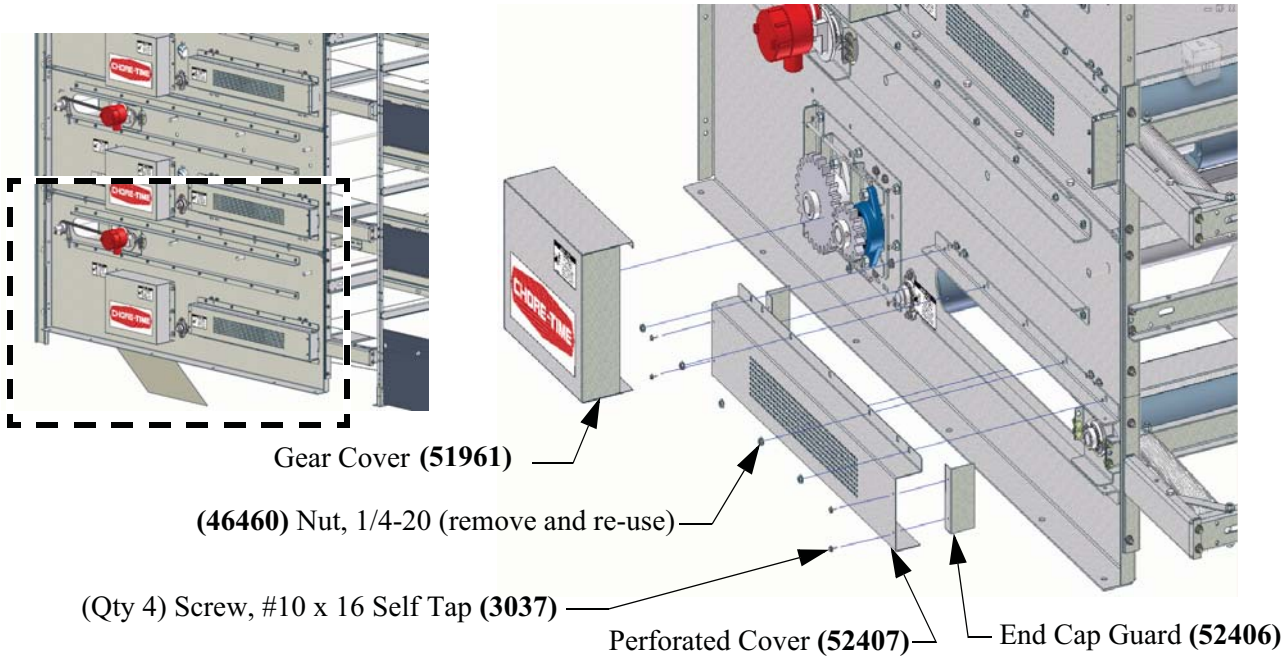


Covers

Attach Drive Side Covers **as shown.**



Attach Non-Drive Side Covers **as shown.**



Kit Part Numbers

(52400) MDS Manure Drive Assembly Kit

PART NO.	QTY.	DESCRIPTION
51966	4	MOUNT, MDS IDLER BEARING
51712	1	PKG, CHAIN IDLER HARDWARE
49960-3	1	SHAFT, IDLER TENSIONER
20359	1	ASSY, CHAIN IDLER
52014	2	DEFLECTOR, MANURE
28546-5	1	BRACE, MODULAR MB CROSS 49.99 WIDE LAYER
52375	1	PAD, MDS MANURE LANDING
50781	2	MDS, IDLER SCRAPER
51965	4	BRACE, MDS IDLER
50758	3	BELT, SUPORT ROLLER TUBE
50313-4	3	BELT, SUPPORT TUBE
39487-5	2	SCRAPER, SNUB ROLLER
42088	2	COLLAR, SET 1.250
52365	1	SPACER, MDS DRIVE
52013	1	SPUR, GEAR 26T 4 PITCH HARDENED
52012	1	SPUR, GEAR 15T 4 PITCH HARDENED
48128-2	3	PLATE, BELT SUPPORT 51.00
50756	1	SHAFT, MDS DRIVE ROLLER
52405	1	WELDMENT, SNUB ROLLER MDS
50757	1	ROLLER, MDS DRIVE
51062-3	1	WELDMENT, AUGER IDLER
51924	1	SHAFT, MDS IDLER
49048-2	2	ROLLER,48.50" SOLID IDLER
50222-5	2	SHAFT, IDLER 53.6"
20191-2	6	BEARING AND COLLAR
39487-5	1	SCRAPER, SNUB ROLLER 49.99 WIDE
52556	1	PKG, HARDWARE MDS DRIVE

(52400) MDS Manure Drive Hardware Packages

(51712) Chain Idler Hardware

QTY	PART NO.	DESCRIPTION
2	23727	SPACER
2	27970-8	SPROCKET, #40 14T .75 BORE
2	51681	CATCH, SPROCKET
2	39-45692	NUT, 3/8 HEX FLANGE
2	2112-1	KEY, 3/16 SQ. X 1.00
2	1543	SPRING, EXTENSION
8	1258	WSHR, 1/4
2	4413-7	BOLT, 3/8-16 X 3.00
6	46460	NUT, 1/4-20 HX FLANGE
4	1269	NUT, 1/4-20 NY INSERT
2	1049	COLLAR, .75 SET
4	4404-19	BOLT, 1/4-20 X 1.75

(52556) MDS Drive Hardware

PART NO.	QTY.	DESCRIPTION
52554	1	PKG, HDWR. MDS CHAIN IDLER
52555	1	PKG, HDWR. MDS DRIVE ASSY
RML041	1	BAG, PLASTIC 10X14 .004MIL
20191-1	12	FLANGETTE

(52556) MDS Drive Hardware Packages

(52554) MDS Chain Idler Hardware

PART NO.	QTY.	DESCRIPTION
RML018	1	BAG, PLASTIC 7X12 .004MIL
51745	2	ASSY CHAIN

(52555) MDS Drive Assembly Hardware

PART NO.	QTY.	DESCRIPTION
25353	2	EXT .850 X 4 SPRING
4412-12	4	BOLT, HH5 5/16-18X2 C/Z
2145	8	NUT, HX 5/16-18 C/Z
46460	12	NUT, SERR 1/4-20 FLANGE
4412-7	8	5/16-18 X 1" BOLT
8490	45	NUT, HX FLANGE 5/16-18
25128-1	2	KEY, SQUARE 3/8
2419-5	2	KEY, SQUARE 1/4 X 3/4
22692	8	BOLT, CARR5 1/4-20X.625 C/Z
2046	18	5/16-18 X .75 BOLT
RML016	1	BAG, PLASTIC 6X7 .004MIL
20125	24	5/16 CARRIAGE BOLT

(51999) MDS Drive Mount Kit

2955-23	12	WSHR, .406X1.5X.052
2555	12	BOLT, HH5 3/8-16X1 C/Z
2183	12	NUT, HZ LOCKA 3/8-16 C/Z
2180	4	SCREW, HH LAG 1/4-10X1.25 C/Z
2955-52	4	WSHR, SS 1 X .275
PART NO.	QTY	DESCRIPTION

(51950) MDS Drive Set Kit

21176	24	ANCR, WEDGE .50 X 4.25
51998	12	SHIM, MDS DRIVE 20 GAGE
51953	12	SHIM, MDS DRIVE 16 GAGE
51951	12	SHIM, MDS DRIVE 10 GAGE
PART NO.	QTY	DESCRIPTION

(52052) MDS Spreading Auger Kit

52553	1	PKG, HARDWARE MDS SPREADING AUGER
52047	2	COVER, MDS SPREADING AUGER
51931	1	AUGER, SPREADING MDS
2527-10	4	DECAL, DANGER ROTATING PARTS
20828	8	SCREW, HXWH MACH 10-24 X .750 C/Z
2525-4	2	DECAL, CHORE-TIME
27970-4	1	SPROCKET, #40 ROLLER CHAIN 14T
20201	1	SPROCKET, 28 TOOTH X 1.00 BORE
52045	1	SHAFT, MDS SPREADING AUGER
51987	2	PNL, MDS DRIVE TOP
52289	2	PNL, SIDE MDS SPREADING AUGER
PART NO.	QTY.	DESCRIPTION

(52553) MDS Spreading Auger Parts Package

20191-2	2	BEARING AND COLLAR
20191-1	4	FLANGETTE
8490	4	NUT, HX FLANGE A 5/16-18
20125	4	BOLT, CARR5 5/16-18X.75 C/Z
546	4	WSHR, .376X.875X.079 C/Z
547	4	WSHR, LOCK .323X.586X.078 C/Z
2046	4	BOLT, HH5 5/16-18X.75 C/Z
39-45692	12	NUT, FLANGE SERRATED 3/8-16
313	8	NUT, HX 10-24 C/Z
2555	12	3/8-16 HEX HEAD
2419-3	1	1/4 X SQ KEY STOCK
2112-1	1	3/16 X 1 SQ KEY STOCK
ST11051	1	HINGE, IN WALL VENT 1.5 X 2.5
21045-14	1	CHAIN, DRIVE
PART NO.	QTY.	DESCRIPTION

(52402) MDS Drive Stack Kit

52551	1	PKG, HARDWARE MDS DRIVE STACK
52383	4	SPLICE, MDS DRIVE FRONT
52382	4	SPLICE, MDS DRIVE REAR
PART NO.	QTY.	DESCRIPTION

(52551) MDS Drive Stack Parts Package

52376	8	BRKT, MDS DRIVE REINFORCEMENT
RML016	1	BAG, PLASTIC 6X7 .003MIL
39-45692	12	NUT, FLANGE SERRATED 3/8-16
2555	18	3/8-16 HEX HEAD
4412-7	34	5/16-18X1" BOLT
8490	34	NUT, HX FLANGE A 5/16-18
PART NO.	QTY.	DESCRIPTION

(52403) MDS Driveling Kit

PART NO.	QTY.	DESCRIPTION
52552	1	PKG, HARDWARE MDS DRIVETRAIN
52364	1	SPROCKET, MDS DRIVE
52368	1	DRIVE SPROCKET HUB, 2517 1-1/2 W/KW TL
52001-1	1	CHAIN, DRIVE #50 65 INCHES

(52552) MDS Drivetrain Parts Package

PART NO.	QTY.	DESCRIPTION
25128-1	1	KEY, SQUARE 3/8
RML014	1	BAG, PLASTIC 4X5 .003MIL
52016	1	CONNECTING LINK, SPRING CLIP
4412-7	4	5/16-18X1" BOLT
8490	4	NUT, HX FLANGE A 5/16-18

(52404) S-Idler Spring Kit

PART NO.	QTY.	DESCRIPTION
52550	1	PKG, HARDWARE MDS S-IDLER
51965	1	BRACE, MDS IDLER
52036	2	SPRING, MDS S-IDLER
51964	2	MDS, S-IDLER SPRING BRKT

(52550) MDS S-Idler Hardware Package

PART NO.	QTY.	DESCRIPTION
25062-1	4	BOLT, CARR2 3/8-16X1 C/Z
52527	4	SUPPORT, S-IDLER SPRING
RML015	1	BAG, PLASTIC 5X6 .003MIL
39-45692	6	NUT, FLANGE SERRATED 3/8-16
4413-7	4	3/8-16 HEX HEAD F
2046	8	5/16-18X.75 BOLT
8490	8	NUT, HX FLANGE A 5/16-18

(52580) MDS Discharge Kit

46460	4	NUT, HX FLANGE SERRATED 1/4-20
7550-1	4	BOLT, RHSQNK5 1/4-20X.50 C/Z
52579	2	DEFLECTOR, MDS DISCHARGE
PART NO.	QTY.	DESCRIPTION

(52750) MDS Drive Covers Hardware Package

RML016	1	BAG, PLASTIC 6X7 .003MIL
8928	1	NUT, WING SS 3/8-16
2146	1	NUT, WING 5/16-18 C/Z
4412-14	1	BOLT, HHFTHD2 5/16-18X5 C/Z
8490	1	NUT, HX FLANGE A 5/16-18
PART NO.	QTY.	DESCRIPTION

(52838) MDS Belt Lacer Kit

52839	1	FACE PLATE, LACER
52840	1	LACER
PART NO.	QTY.	DESCRIPTION

(52843) MDS Belt Lace Kit

9247	40	ROPE, POLYESTER .125 DIA
52844	2	BOX OF LACE
52845	3	TAPE, TWO SIDED
52846-20	1	PIN 20', LACE
52847	1	40' BELT
PART NO.	QTY.	DESCRIPTION

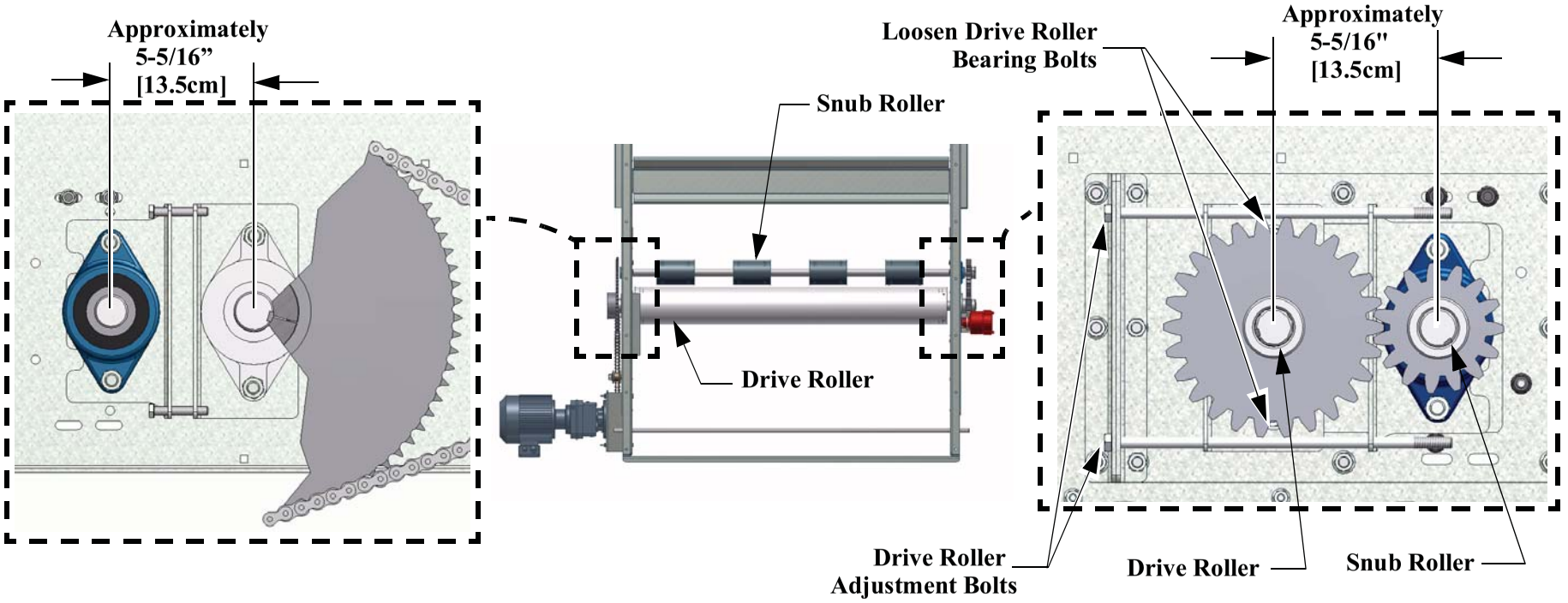
Start Up / Operation

Step 1. Run Each Tier to check for Belt direction and Tracking.

Initial position of Drive and Snub Roller

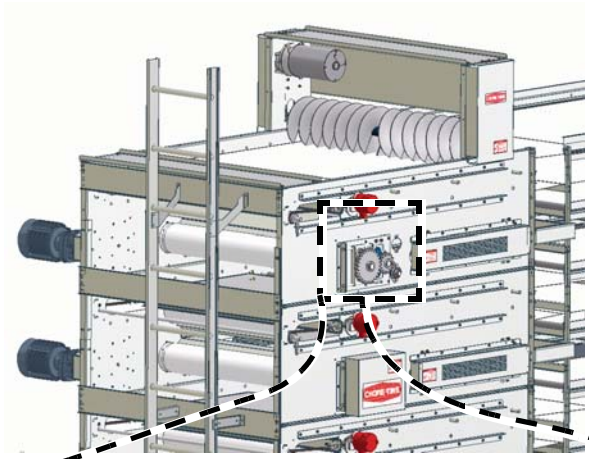
Belt Tracking (Initial Position of Rollers)

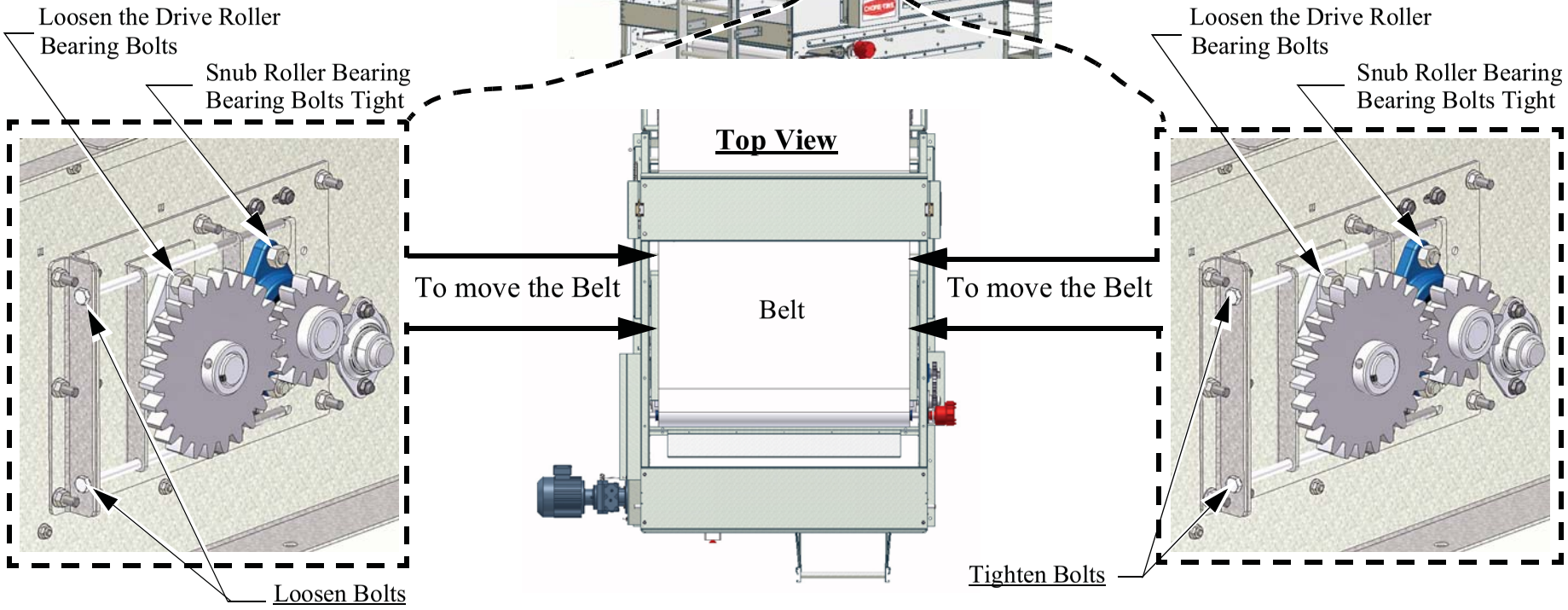
The distance from the center of the Snub Roller to the Center of the Drive Roller should be approximately 5-5/16" [13.5cm]. Before making minor adjustments to Belt Tracking, check the distance and adjust the Drive Roller accordingly. If this distance is correct and the Belt Tracking still needs adjusted proceed to **Step 2**.



Belt Tracking (Drive Roller Adjustment)

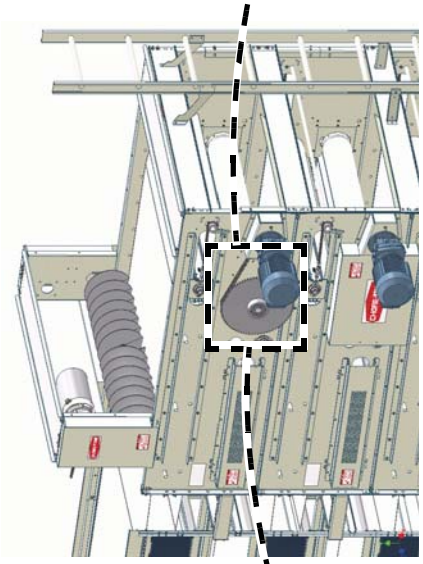
Adjusting the Drive Roller is the recommended way to change Belt Tracking. Only use Snub Roller adjustment if necessary.

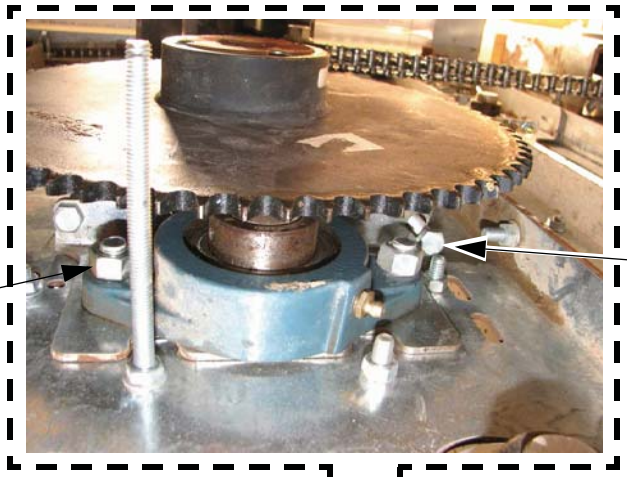


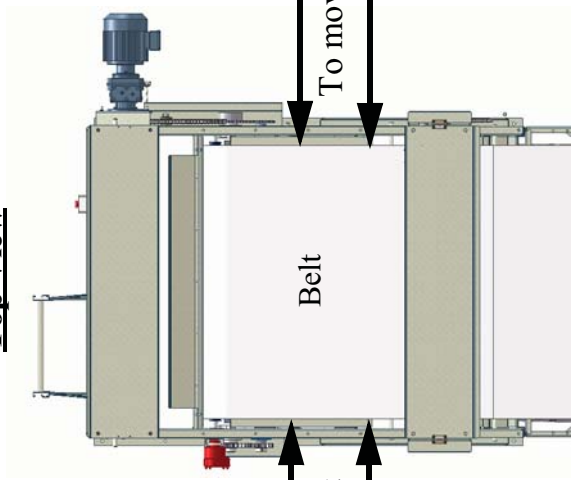


Belt Tracking (Snub Roller Adjustment)

Adjusting the Drive Roller is the easiest way to change Belt Tracking. Only use Snub Roller adjustment if necessary.







Loosen Snub Roller Bearing Bolts

Tighten Bolt to Make Adjustment

To move the Belt

To move the Belt

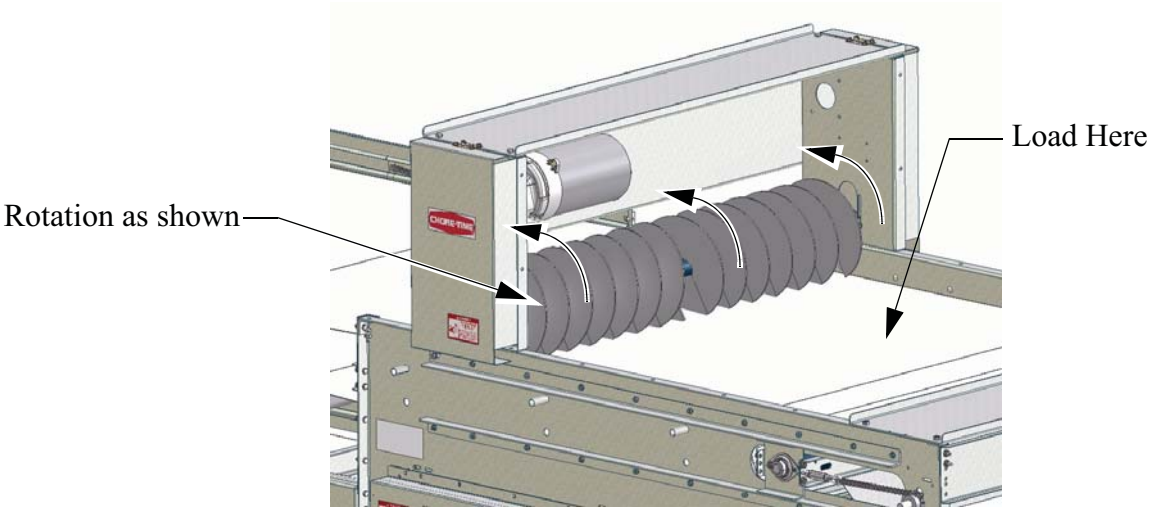
Loosen Snub Roller Bearing Bolts

Loosen Bolt to Make Adjustment

Step 2. Run Spreading Auger

Spreading Auger Rotation

Run the Spreading Auger to check for proper rotation as shown.



Step 3. Run All Tiers and Spreading Auger simultaneously

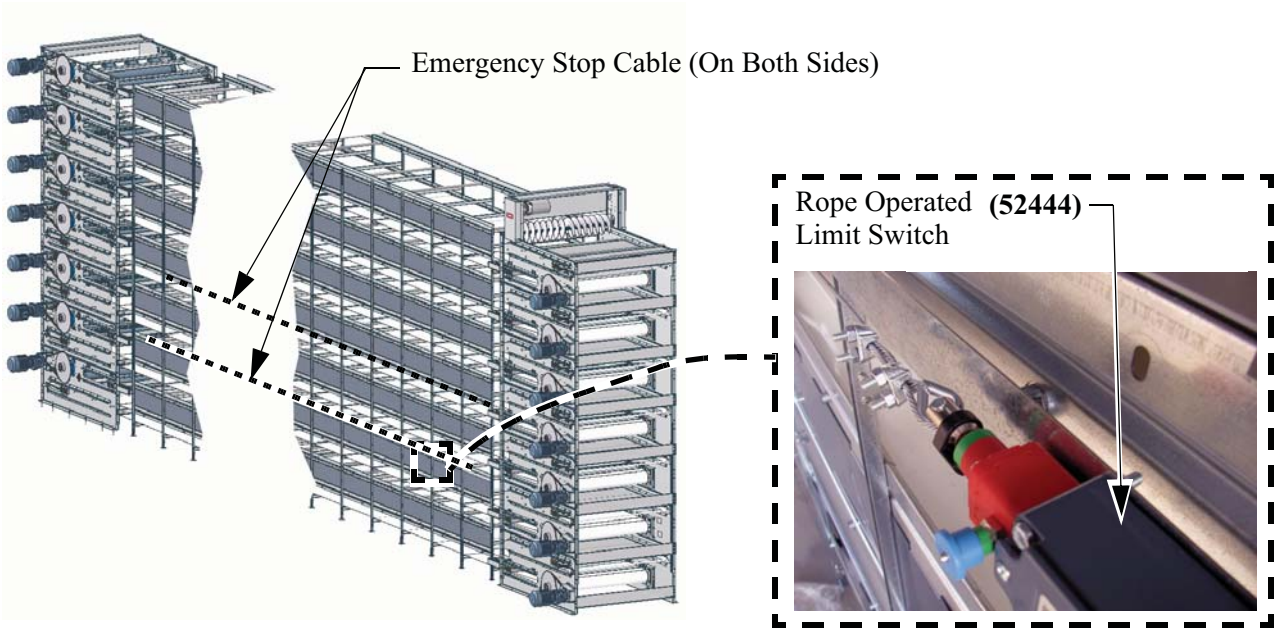
Run entire System Simultaneously

Use the Master Switch to operate all Tier Belts, Spreading Auger, and the chopper.

Step 4. Test Emergency Stop Switches

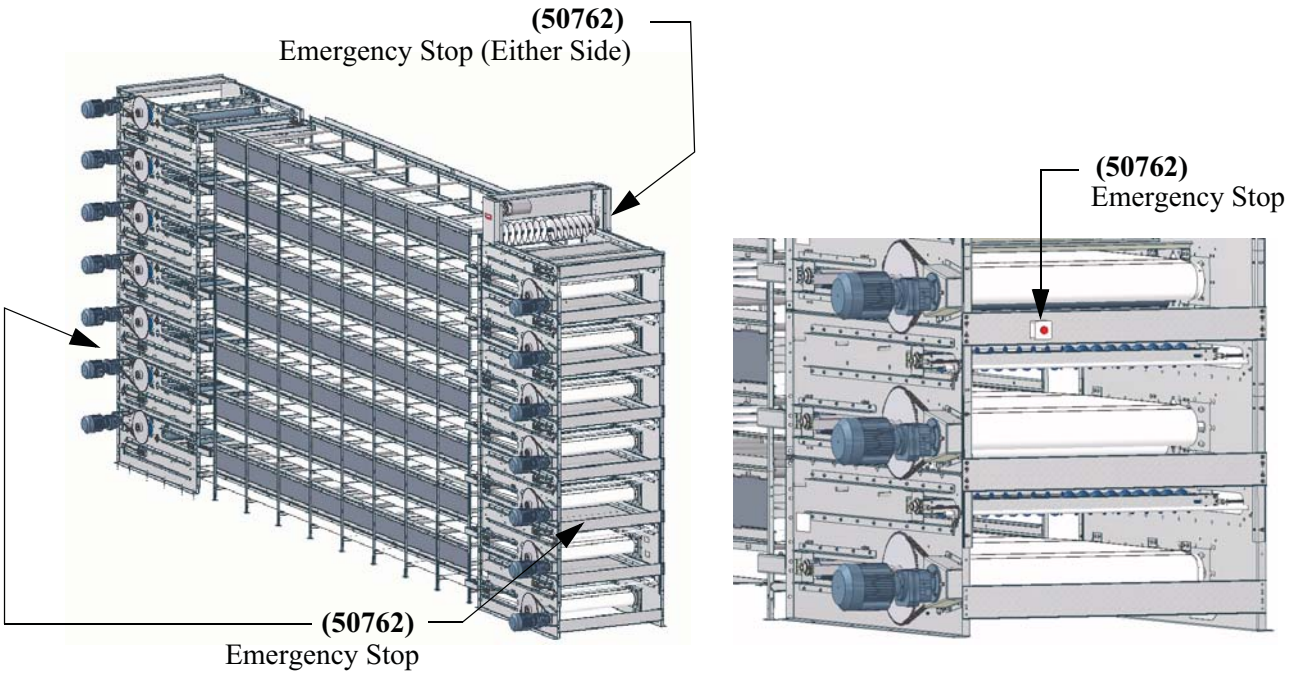
Cable Stop

Pull each of the Emergency Stop Cables to make sure that they operate correctly.



Emergency Stop Buttons

Push each Emergency Stop Button to make sure that they are operating correctly.

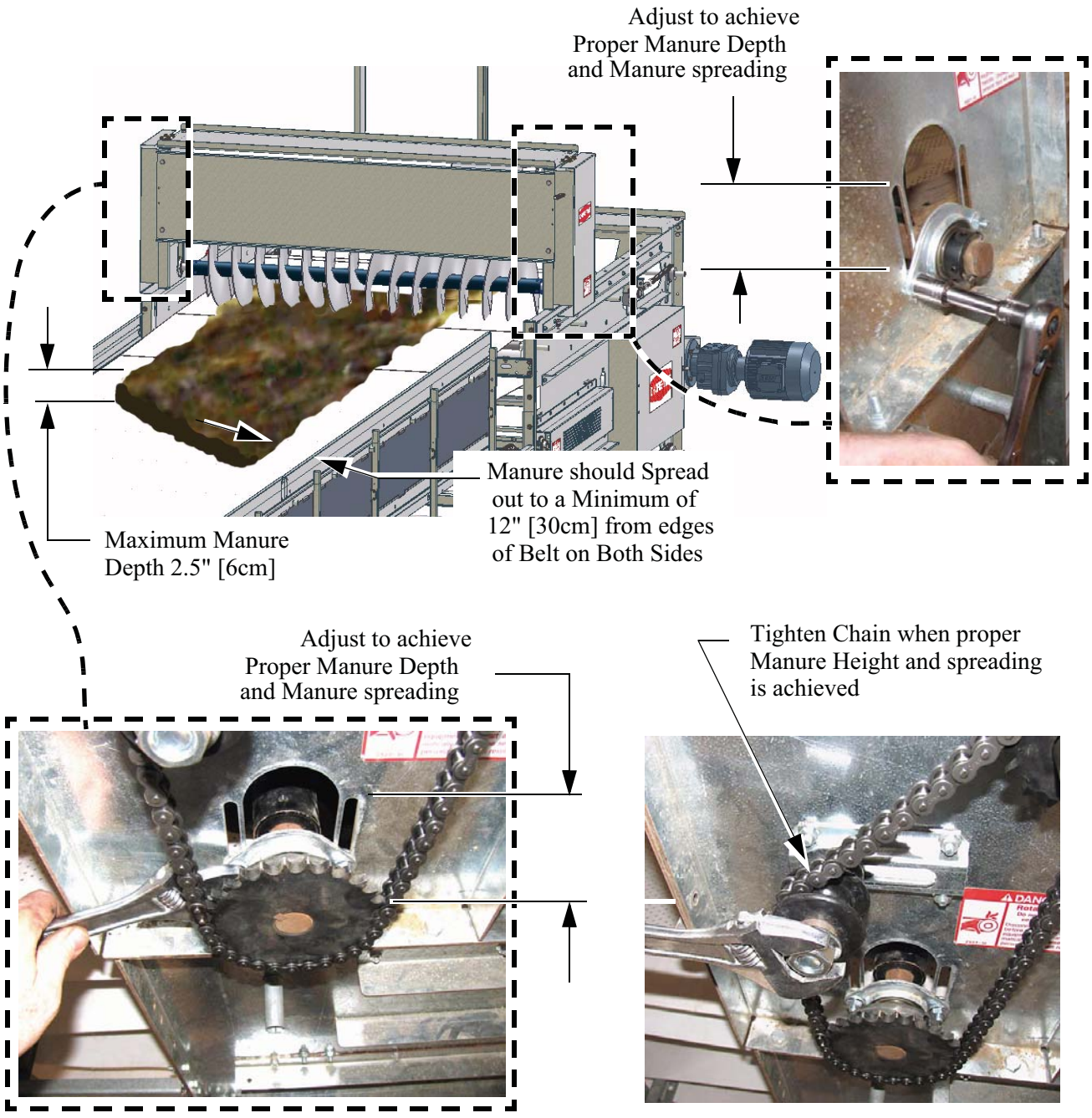


Step 5. Loading the MDS

Loading the Top Belt

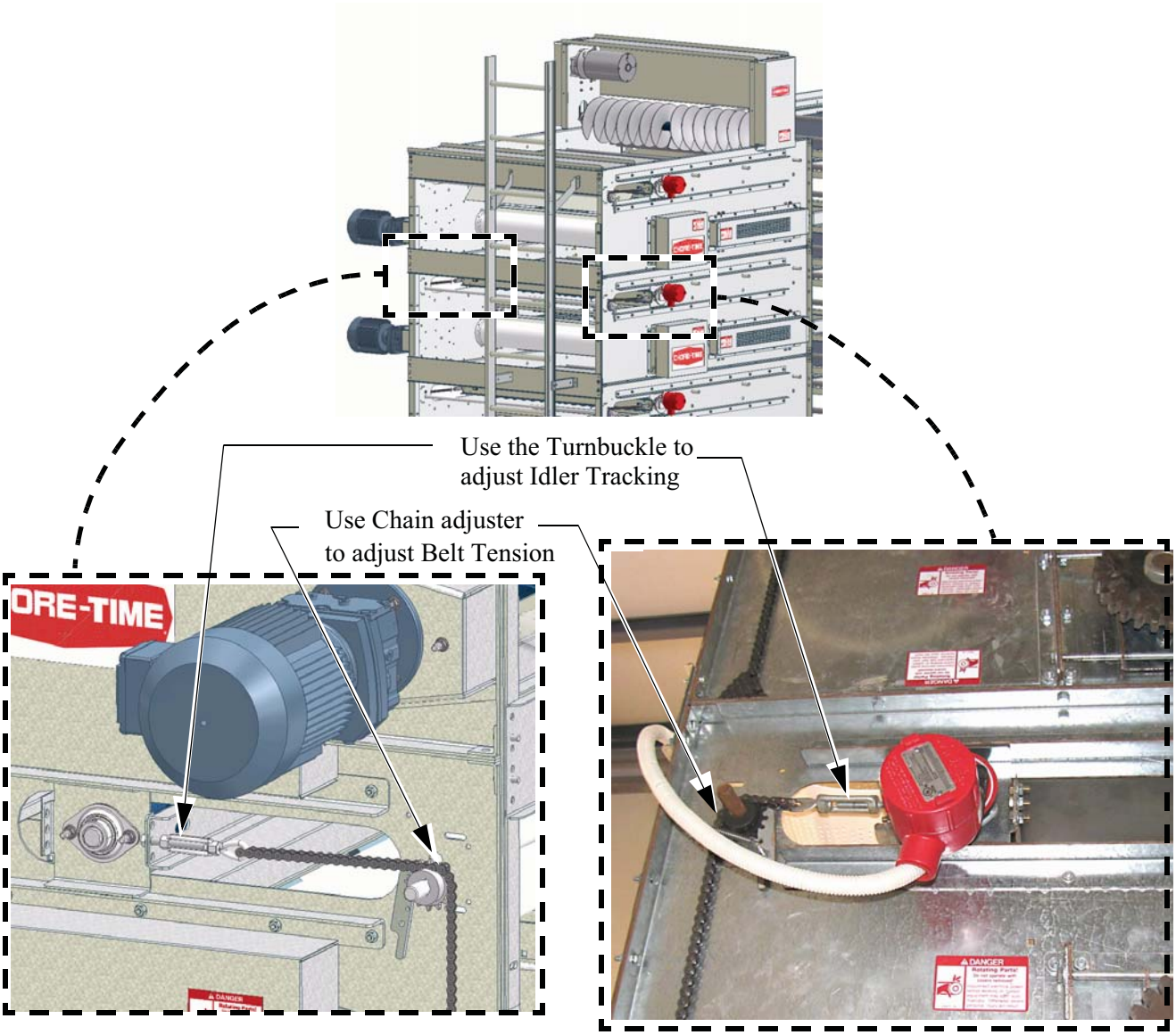
- Begin loading the Top Tier Belt. Maintain Manure Thickness less than 2.5" [6cm] on MDS Belt. Adjust the Spreading Auger to achieve the proper thickness, and to keep the Manure Centered, within 12" [30cm] from Belt edge. Tighten Spreading Auger Chain once Proper height and spreading achieved.
- Adjust Tracking at both ends of the system as the Belt is being loaded (See Belt Tracking Section of this manual). **Stop immediately** if anything is wrong.
- Adjust Tension on the Belt **(See next Page)**.

Important!! Never overload the Belts. Maintain a Manure depth of no greater than 2.5" [6cm]



Adjusting Belt Tension

To adjust the tension in the Belt, adjust using the Idler as **shown below**.



Loading 2nd Tier

Turn on the Second Tier and Turn on the second House Belt respectively.

- Adjust Belt Tracking at both ends of the Second Tier and adjust tension on the Second Tier Belt. Follow the same instructions as the 1st Tier loading.

Important!! Never overload the Belts. Maintain a Manure depth of no greater than 2.5" [6cm]

Loading Remaining Tiers

- Repeat loading instructions for all remaining Tiers.

Important!! Never overload the Belts. Maintain a Manure depth of no greater than 2.5" [6cm]

Maintenance

Before each time of Operation (All Tiers)

- Check Belt Tracking
- Check for any Obstructions/Foreign Objects
- Clean Spilled Manure from around MDS
- Clean the Idlers **(Figure 1)**
- Clean Snub Scraper

Figure 1.

Every 6 Months (All Tiers)

- Lubricate Bearings. Use only high quality lithium soap base grease and clean all dirt from zerk before applying grease. Chore-Time recommends using Shell Alvania # 2. **(Figure 2)**
- Lubricate all Chains
- Check/Change Oil (SAE40 or ISO150) in Gearboxes if needed

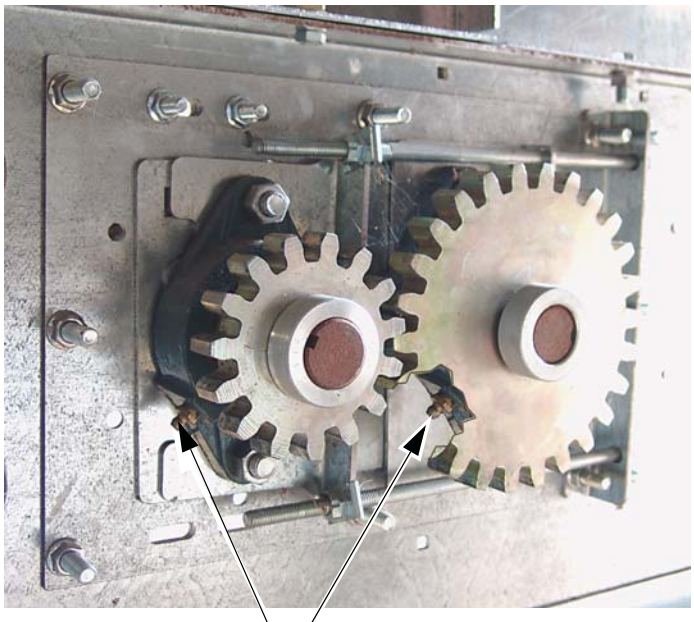


Figure 2.

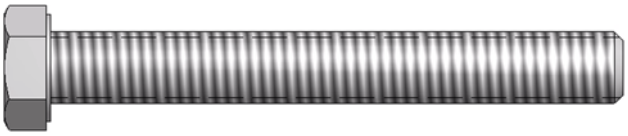
MDS Helpful Hints

Do Not:

- Operate the MDS Belts Backwards
- Allow Belt to touch Sides of Drive
- Let a MDS Belt Slip (Tighten the Snub Roller evenly on Both Sides or Load Lighter
- Allow Idlers to build up with manure (Clean prior to or after each Run)
- Have anything sharp near the Belt

Hardware (Actual Scale)

(4412-14) Bolt, 5/16-18 x 5 Hex



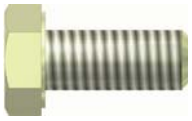
(4413-7) Bolt, 3/8-16 x 3.00

(4404-19) Bolt, 1/4-20 x 1.75

(4412-12) Bolt, 5/16-18 x 2.00

(4412-7) Bolt, 5/16-18 x 1.00

(2555) Bolt, 3/8 -16 x 1.00



(2046) Bolt, 5/16-18 x .75

(3037) Screw, #10 x 16 Self Tap

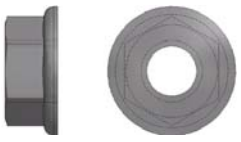
(39-45692) Nut, 3/8 Hex Flange

(46460) Nut, 1/4-20 Hex Flange

(1269) Nut, 1/4-20 Nylon Insert

(2145) Nut, 5/16-18 Hex

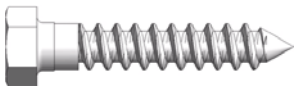
(313) Nut, 10-24 Hex



(8490) Nut, 5/16-18 Hex Flange

(2183) Nut, 3/8-16 Hex

(25062-1) Car. Bolt, 3/8-16 x 1.00



(2180) Bolt, 1/4-10 x 1.25 Lag

(20125) Car. Bolt, 5/16

(20828) Screw, 10-24 x .750 Mach.

(7550-1) Car. Bolt, 1/4-20 x .50

(8928) Wing Nut, 3/8-16

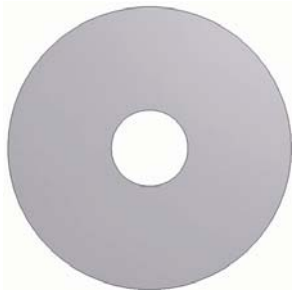
(2146) Wing Nut, 5/16-18

(2419-5) Key, 1/4 x 3/4

(2419-3) Key, 1/4 x 1.00

(2112-1) Key, 3/16 x 1.00

(25128-1) Key, 3/8 x 1.5



(2955-23) Washer, .406 x 1.5 x .052

(2955-52) Washer, .275 x 1.00 SS

(546) Washer, .375 x .875 x .079

(1258) Washer, .81 x .625

(547) Lock Washer,.323 x.586

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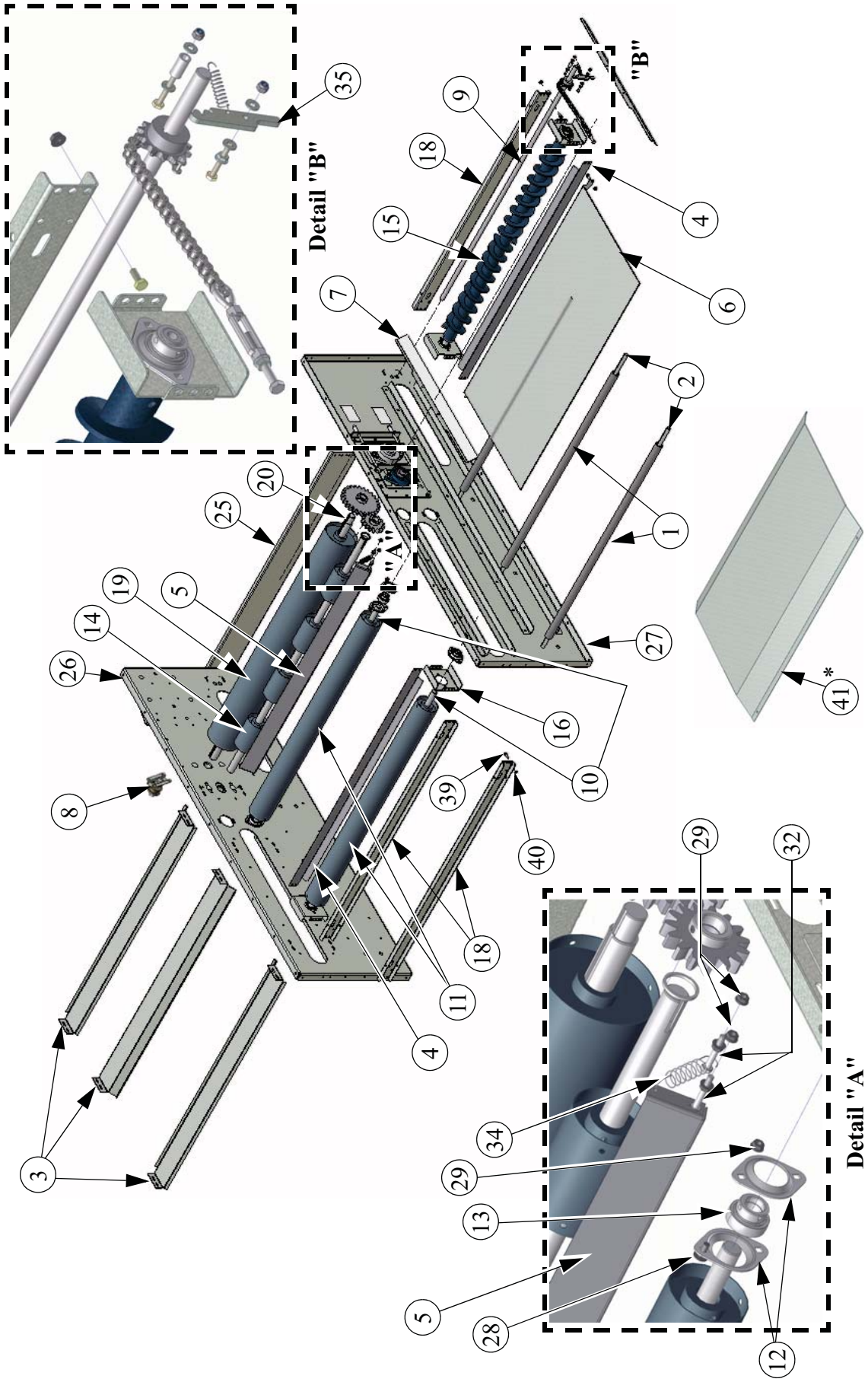
Parts Lists

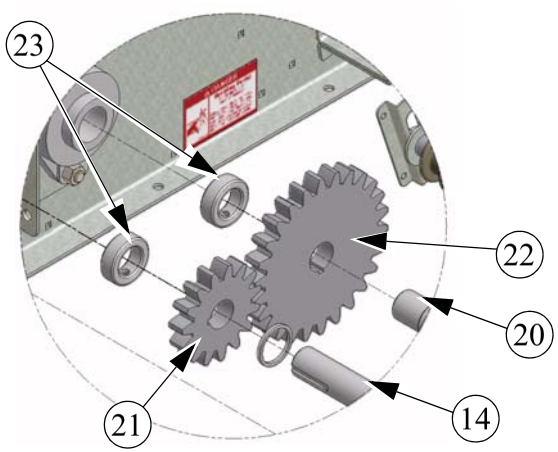
Drive Unit (Itemized Parts)

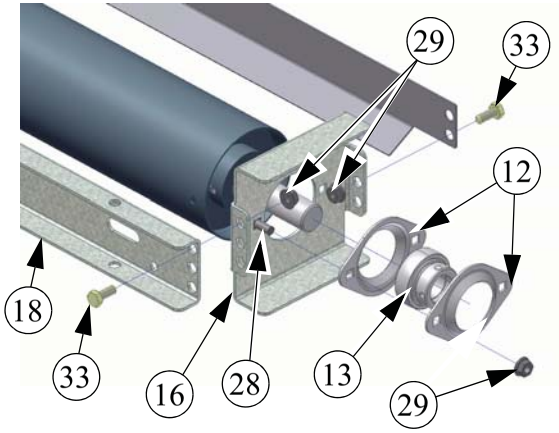


Drive Unit (Part Numbers)

Item	Description	Part No.
1	Belt, Support Roller Tube	50758
2	Belt, Support Tube	50313-4
3	Belt Support	48128
4	Blade, MDS Idler Scraper	50781
5	Scraper, Snub Roller	39487-5
6	Pad, MDS Manure Landing	52375
7	Deflector, Manure	52014
8	Assy, Chain Idler	20359
9	Shaft, Idler Tension	49960-3
10	Shaft, Idler 53.6"	50222-5
11	Roller, 48.5" Solid Idler	49048-2
12	Flangette	20191-1
13	Bearing and Collar	20191-2
14	Weldment, Snub Roller MDS	52405
15	Weldment, Auger Idler	51062-3
16	Mount, MDS S-Idler Bearing	51966
17	Shaft, MDS Idler	51924
18	Brace, MDS Idler	51965
19	Roller, MDS Drive	50757
20	Shaft, MDS Drive Roller	50756
21	Spur Gear 15T 4 Pitch Hardened	52012
22	Spur Gear, 26T 4 Pitch Hardened	52013
23	Collar, Set 1.250	42088
24	Spacer, MDS Drive	52365
25	Cross Brace, Modular Manure Belt	28546-5
26	Panel Assy, MDS Drive Side	52355-X*
27	Panel Assy, MDS	52356-X*
28	Bolt, Carr 5/16-18 x .75	20125
29	Nut, 5/16-18 Hex Serrated Flange	8490
30	Nut, 1/4-20 Hex Serrated Flange	46460
31	Bolt, 1/4-20 x .625 Carr. 5	22692
32	Bolt 5/16-18 x 2	4412-12
* See Drive Panel Itemized Parts on following pages		

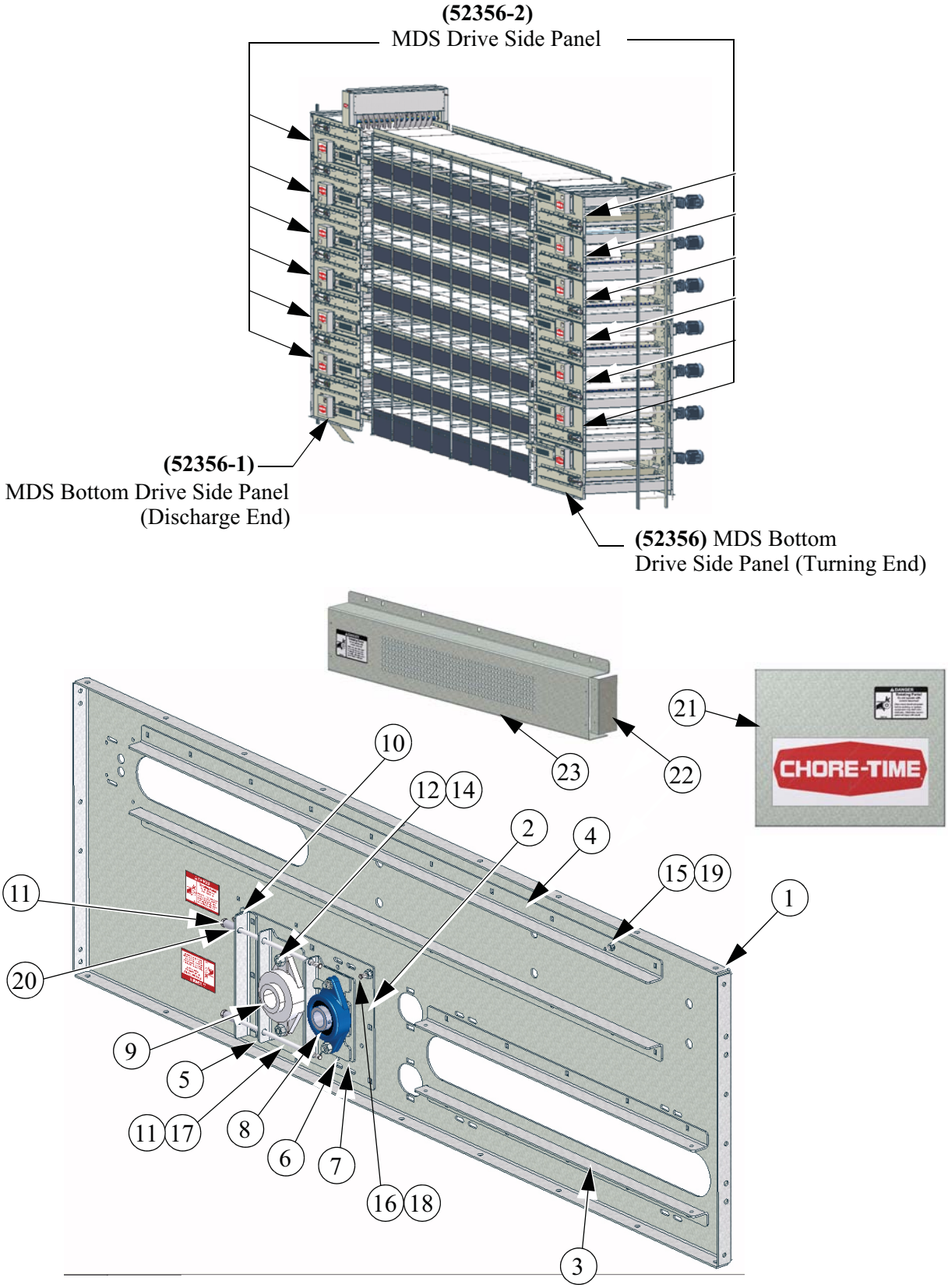
Item	Description	Part No.
33	Bolt, 5/16-18 x .75	2046
34	Ext .850 x 4 Spring	25353
35	Chain hardware Pkg.	51712
36	Key, 1/4 x 3/4	2419-5
37	Key, Square 3/8	25128-1
38	Chain Assembly	51745
39	Bolt, HH5 5/16-18 x 1	4412-7
40	Nut, Hx 5/16-18	2145
41	Pad, manure Spreading	52876





*See following pages for breakdown of different Side Panel Part Numbers
**Top Drive-Loading End only

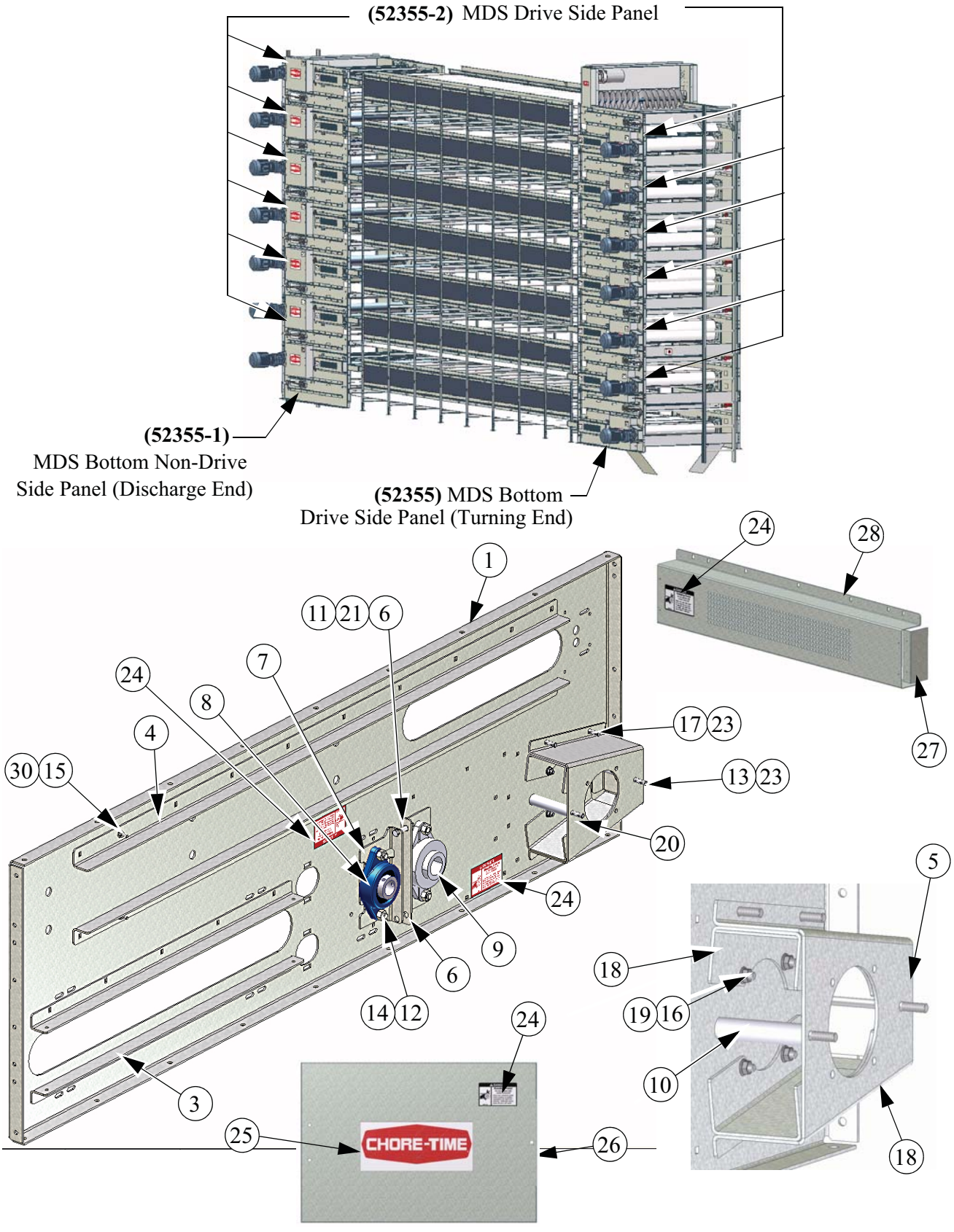
MDS Drive Side Panel (52356-X) Itemized Parts



MDS Drive Side Panel (52356-X) Part Numbers

		52356 2 High Bottom (Turning End) Drive Side Panel	52356-1 2 High Bottom (Discharge End) Drive Side Panel	52356-2 2 High Drive Side Panel
Item	**Description**	**Part Number**		
1	PNL, MDS 2 HIGH DRIVE BOTTOM TURN W/ACCESS	52311	--	--
	PNL, MDS 2 HI DRIVE BOT DISCHARGE W/ACCESS	--	52374	
	PNL. MDS 2HI DRIVER WITH ACCESS	--	--	52381
2	PNL, DRIVE ACCESS	50759	50759	50759
3	BRKT, MDS S-IDLER ANGLE	50769	50769	50769
4	BRKT, MDS DRIVE IDLER ANGLES	50770	50770	50770
5	BRKT, DRIVE ROLLER TRACKING	52358	52358	52358
6	BRKT, SNUB ROLLER TRACKING	52359	52359	52359
7	PLATE, MDS BEARING SLIDE	52360	52360	52360
8	BEARING, 1.25 FLANGE	50425	50425	50425
9	BEARING, 1.50 FLANGE	52361	52361	52361
10	BRKT, DRIVE TRACKING	52362	52362	52362
11	BOLT, HH5 3/8-16X11 C/Z	4413-11	4413-11	4413-11
12	BOLT CARRIAGE-ROUND HEAD,1/2x1.5	25440-3	25440-3	25440-3
13	DECAL, DANGER ROTATING PARTS	2527-10	2527-10	2527-10
14	NUT, HX LOCK 1/2-13 C/Z	8917	8917	8917
15	NUT, 1/4-20 SERRATED FLANGE	46460	46460	46460
16	3/8-16 CARRIAGE BOLT	25062-1	25062-1	25062-1
17	NUT, RETAINER 3/8-16 Z TINNERMN	42091	42091	42091
18	NUT, FLANGE SERRATED 3/8-16	39-45692	39-45692	39-45692
19	BOLT, CARR. 1/4-20X1 C/Z	E2799	E2799	E2799
20	SPACER, ADJUSTMENT	53153	53153	53153
21	COVER, MDS GEAR	51961	51961	51961
22	END CAP, GUARD FULL MDS	52406	52406	52406
23	COVER, MDS SLOT PERFORATED	52407	52407	52407
24	END CAP, GUARD SLOT MDS	52448	52448	52448
25	WSHR, .376X.875X.079 C/Z	546	546	546

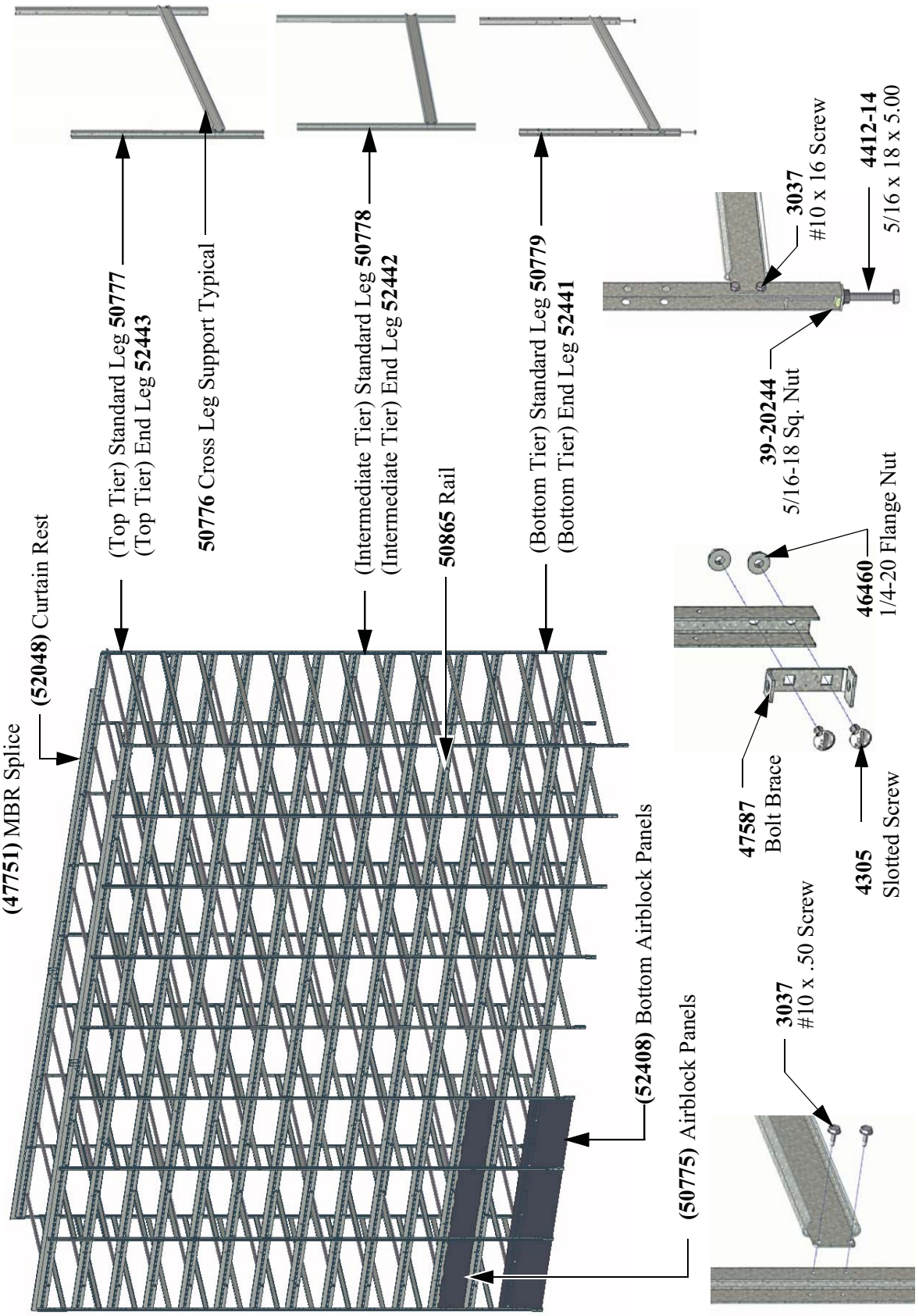
MDS Drive Side Panel (52355-X) Item Numbers



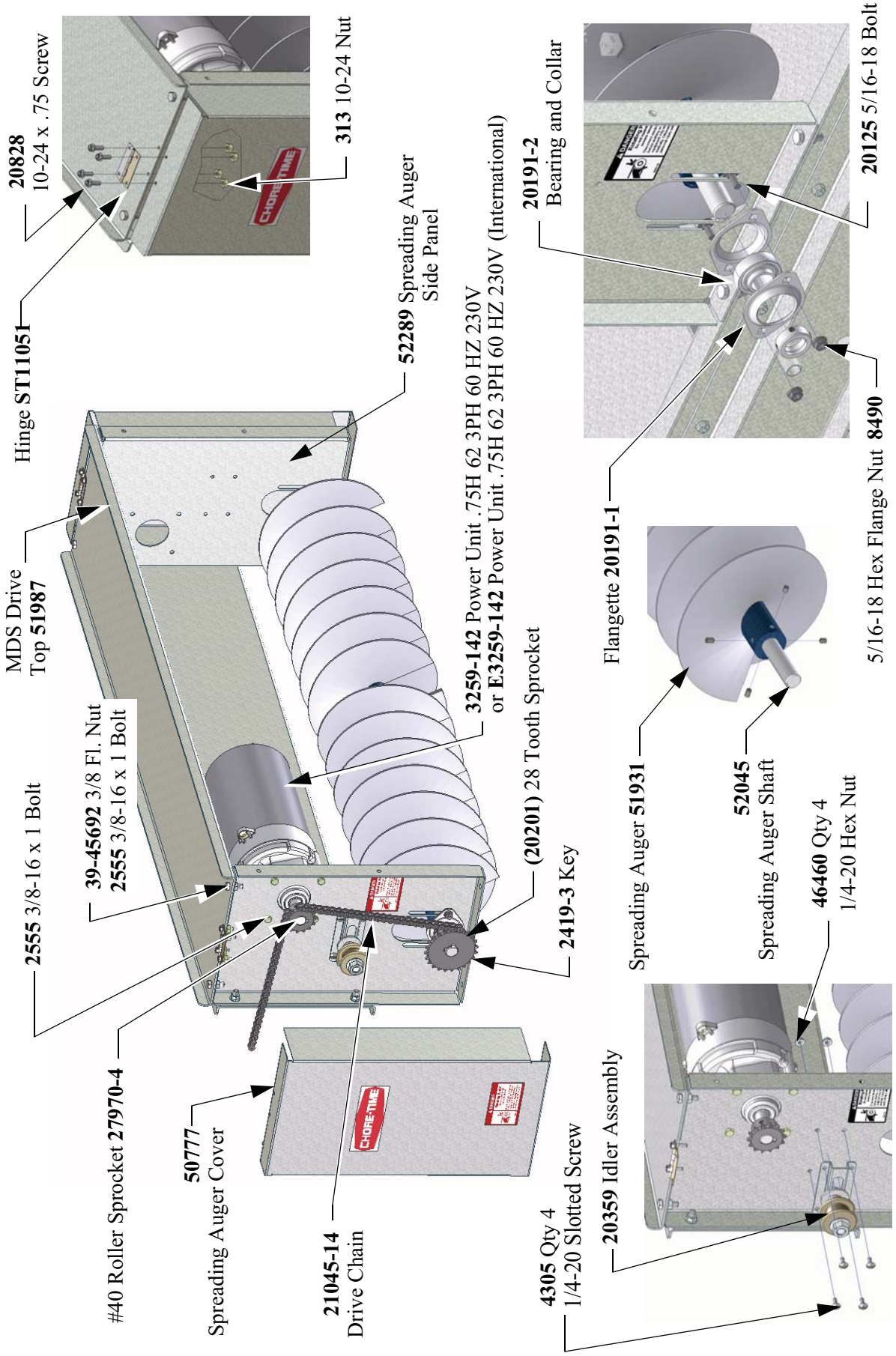
MDS Drive Side Panel (52355-X) Item Numbers

		52355 2 High Bottom (Turning End) Non-Drive Side Panel	52355-1 2 High Bottom (Discharge End) Non-Drive Side Panel	52355-2 2 High Non-Drive Side Panel
Item	**Description**	**Part Number**		
1	PNL, MDS 2 HIGH DRIVE BOTTOM TURN W/ACCESS	--	52377	--
	PNL, MDS 2 HI DRIVE BOT DISCHARGE W/ACCESS	--	--	52380
	PNL. MDS 2HI DRIVER WITH ACCESS	52310	52310	--
2	BRKT, MOTOR MOUNT	50807	50807	50807
3	BRKT, MDS S-IDLER ANGLE	50769	50769	50769
4	BRKT, MDS DRIVE IDLER ANGLES	50770	50770	50770
5	SPACER, MDS MOTOR MOUNT	52357	52357	52357
6	BRKT, DRIVE ROLLER TRACKING	52358	52358	52358
7	BRKT, SNUB ROLLER TRACKING	52359	52359	52359
8	BEARING, 1.25 FLANGE	50425	50425	50425
9	BEARING, 1.50 FLANGE	52361	52361	52361
10	SPACER, MDS MOTOR MOUNT	52369	52369	52369
11	BOLT, HH5 3/8-16X2.25 C/Z	4413-1	4413-1	4413-1
12	BOLT CARRIAGE-ROUND HEAD,1/2X1.5	25440-3	25440-3	25440-3
13	BOLTS, 3/8-16-5 CARRIAGE	25062-4	25062-4	25062-4
14	NUT, HX LOCK 1/2-13 C/Z	8917	8917	8917
15	NUT, 1/4-20 SERRATED FLANGE	46460	46460	46460
16	NUT, HX SERRATED FLANGE 5/16-18	8490	8490	8490
17	BOLT, CARR. 3/8-16x1 C/Z	25062-1	25062-1	25062-1
18	BRACE, MOTOR REINFORCE	52042	52042	52042
19	SCREW,TH MACH5 5/16-18X.75C/Z	7943-1	7943-1	7943-1
20	WING NUT	8928	8928	8928
21	NUT, RETAINER 3/8-16 Z TINNERMAN	42091	42091	42091
22	BOLT, HH5 5/16-18X5 C/Z	4412-14	4412-14	4412-14
23	NUT, FLANGE SERRATED 3/8-16	39-45692	39-45692	39-45692
24	DECAL, DANGER ROTATING PARTS	2527-10	2527-10	2527-10
25	DECAL, LARGE CT	2525-12	2525-12	2525-12
26	COVER, MDS CHAIN	52440	52440	52440
27	END CAP, GUARD FULL MDS	52406	52406	52406
28	COVER, MDS SLOT PERFORATED	52407	52407	52407
29	COVER, MDS SLOT PERFORATED	52448	52448	52448
30	BOLT, CARR5 1/4-20X1 C/Z	E2799	E2799	E2799

Frame Part Numbers



Spreading Auger Part Numbers



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Revisions to this Manual

Page No.	Description of Change
	New Manual

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