

Hutchinson I Mayrath

ASSEMBLY INSTRUCTIONS

The following instructions are to be used for assistance with the set-up and installation of equipment, accessories, and serviceable parts used on this machinery and are not meant to replace any operating or safety procedures as outlined in the Operator's Manual included with the conveyor.



This safety symbol is used throughout these instructions to alert you to information about unsafe actions or situations, and will be followed by the word **DANGER**, **WARNING**, or **CAUTION**. Be Alert! Your safety and the safety of others is involved.

DANGER - Indicates immediate hazards that may result in severe injury or death. **WARNING** - Indicates unsafe actions or situations that may cause severe injury, death and/or major equipment or property damage. **CAUTION** - Indicates unsafe actions or situations that may cause injury, and/or minor equipment or property damage.

GRAIN PUMP LOOP and DOUBLE RUN SUPPORT KITS (Grain Pump Loop - Horizontal and Vertical Applications) (Double Run - Angled and Horizontal Applications)

These instructions are used for installation on Eclipse towers using the CTWK012 Top Crossmember.

Double Run Angled Applications - Pages 1 to 4

Double Run Horizontal Applications - Pages 5 to 7

Grain Pump Loop Horizontal Applications - Pages 8 to 10

Grain Pump Loop Vertical Applications - Pages 11 to 14



WARNING! To help prevent serious personal injury, always wear the proper protective gear. Gloves, hearing protection, safety glasses and face shield should be worn when working with metal materials.



Use caution when working above the ground. Persons operating, servicing or repairing equipment that requires above ground work shall be properly secured with the use of "Fall Protection" equipment as set forth in the EU-OSHA guidelines and regulations.

Do Not work at heights during winds, heavy rain, snow, ice or storm.



Metal buildings, scaffolding and other types of work surfaces can become slippery, especially when surfaces are wet and/or oily. This can create hazardous working conditions. Use caution when working, climbing or walking on these surfaces.

Double Run Angled Applications

Install Tube Support to Top Crossmember

Before beginning assembly it is suggested to read through these instructions and lay out all items from the kit to ensure all parts are accounted for.

This not only helps you become familiar with the parts and assembly procedures, but also makes you aware of what tools, equipment or materials you may need to complete the installation process.

1. Assemble two of the four Angle Brackets together using 1/2" x 1-1/4" flange bolts and flange nuts (See Figure 1).

Leave the nuts slightly loose until final installation. Assemble the remaining two angle brackets together in the same manner.

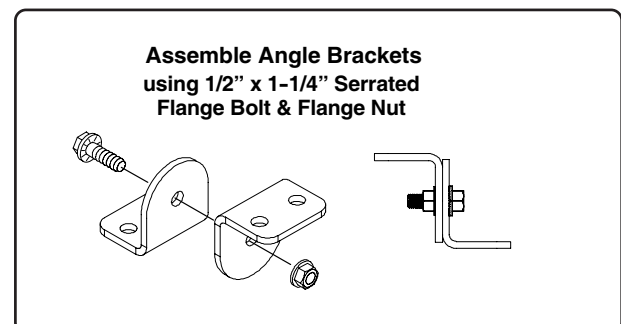


Figure 1

Install Tube Support to Crossmember (con't.)

2. Determine the location of the tube support on the top crossmember. Use the two inside holes of the tube support to attach the angle brackets (any of the other holes can be used if there are obstructions or areas which otherwise would cause these inside holes not to work).
3. Attach the assembled angle brackets to the bottom side of the Tube Support using 1/2" x 1-1/4" flanged bolts and flanged nuts (position the angle brackets so the feet are facing to the outside, see Fig. 2).
4. Position the tube support with angle bracket assembly onto the top crossmember. Using the angle bracket holes as a template, mark the holes to be drilled.
 Drill 9/16" (14 mm) diameter holes at these locations.
5. Secure the tube support to the top crossmember using 1/2" x 1-1/4" flange bolts and flange nuts.
 Tighten hardware (also tighten the two bolts securing the angle brackets together).

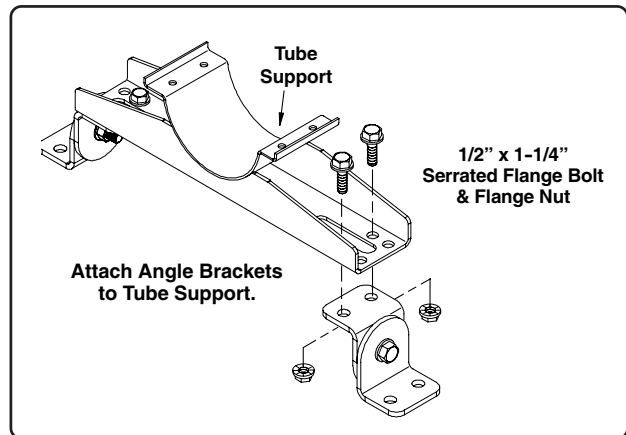
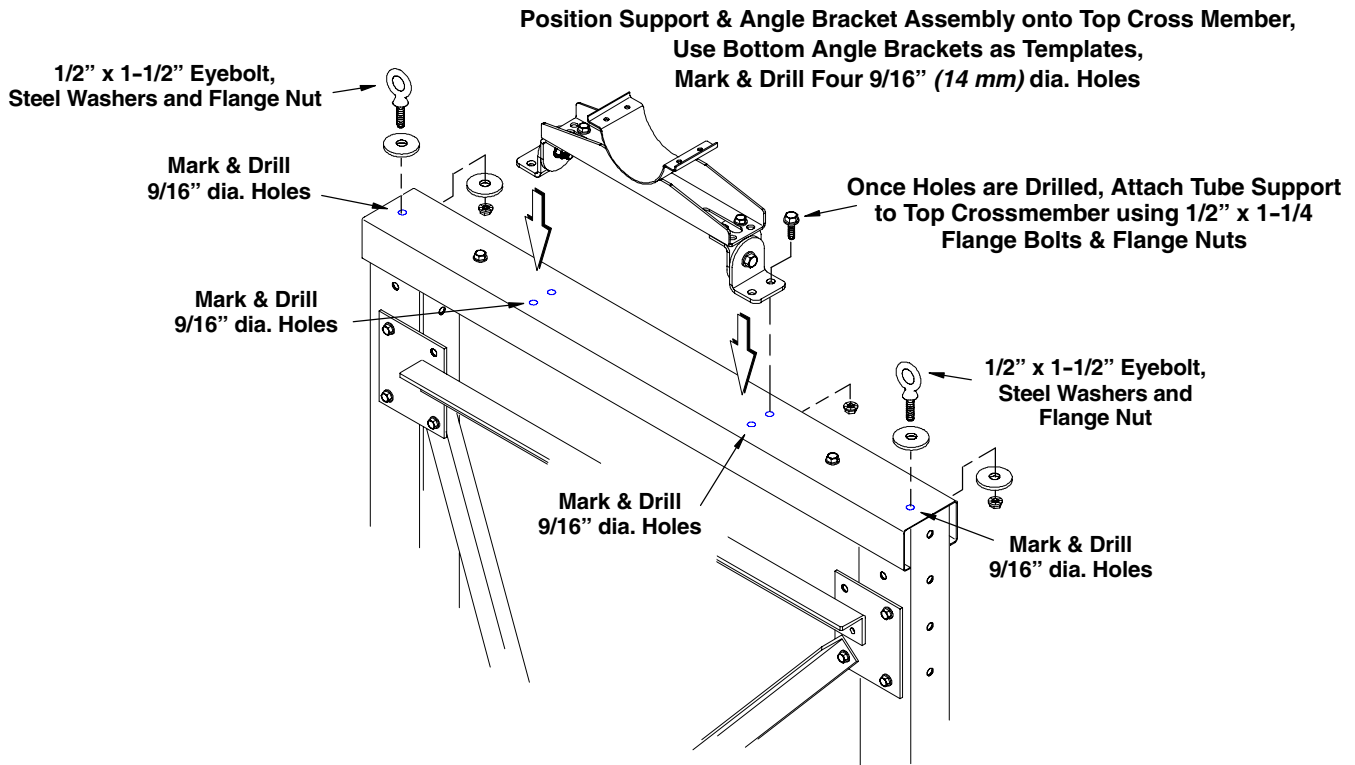
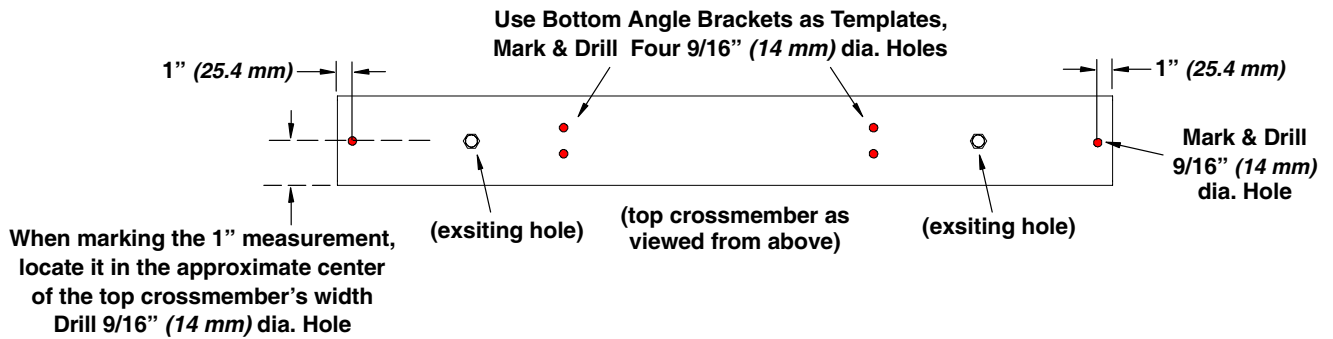


Figure 2

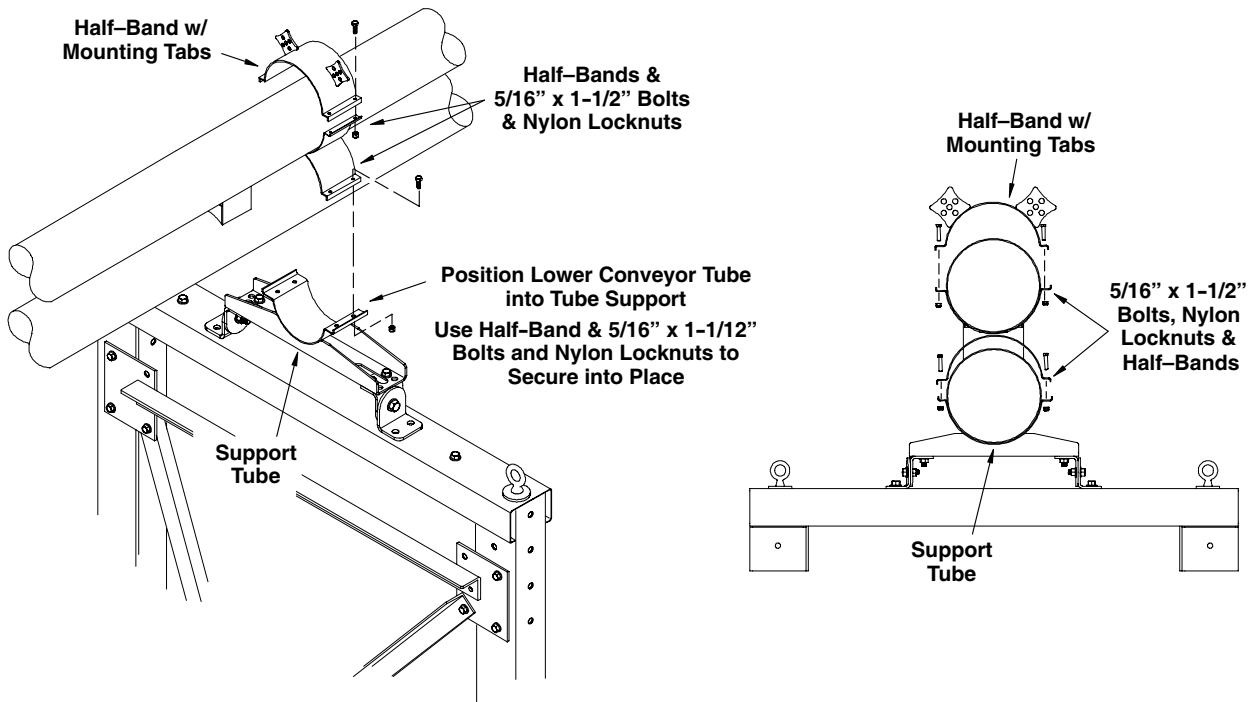


Install Tube Support to Crossmember (con't.)

6. On each end of the top crossmember, measure 1" (25 mm) in from the end and mark as shown below (when marking the 1" measurement, locate the mark in the approximate center of the crossmember's width). Drill a 9/16" (14 mm) diameter hole at each location.
7. Install the 1/2" x 1-1/2" eyebolts, 2-1/2" O.D. x 17/32" I.D. x 1/4" steel washers and 1/2" nuts into each of these holes (see illustration on Page 2). Tighten the nuts so that the eyebolts can still be easily rotated to match the angle the chain will be in.



8. Place the lower Double Run Grain Pump tube into the tube support making sure the double run tubes are vertical. Secure the lower tube using a half-band and 5/16" x 1-1/2" bolts and nylon locknuts. Install the half-band, and the half-band with mounting tabs to the top tube of the double run as shown below. Secure with 5/16" x 1-1/2" bolts and nylon locknuts. Tighten the hardware just snug to allow for any movement when tightening the tension with the chain and turnbuckles.

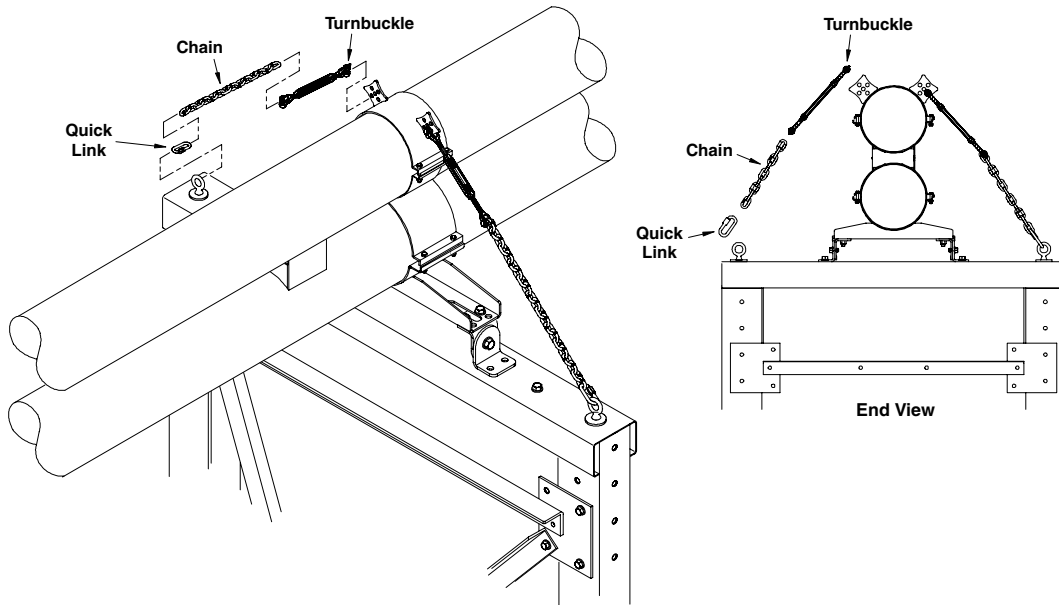


Install Tube Support to Crossmember (con't.)

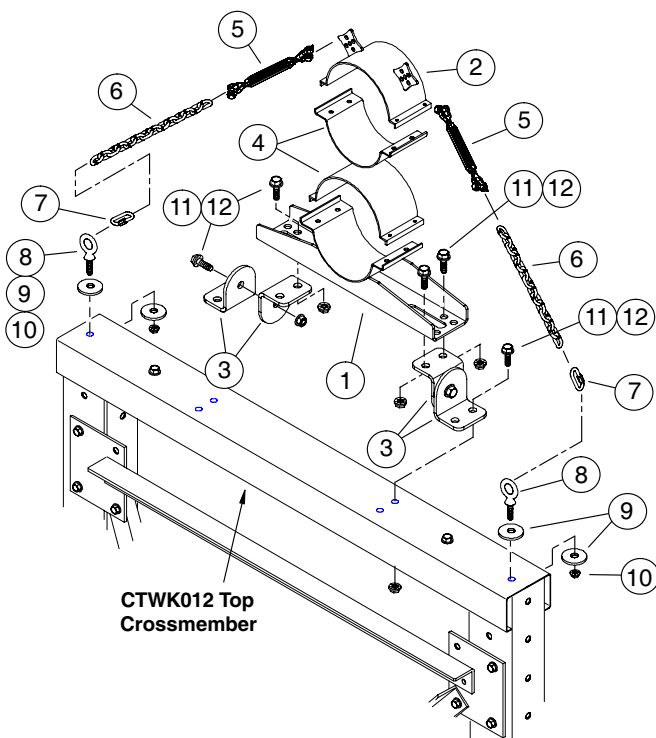
- After the half-band with mounting tabs has been installed, take the chain supplied in the kit and cut it in half. Install the chain, quick links, and the turnbuckles onto each of the eyebolts as shown below (prior to installing the turnbuckles, adjust them so they are in the approximate center of adjustment).

Once installed tighten the turnbuckles and adjust to desired tension. Tighten all hardware previously installed.

**Install, Quick Link, Chain & Turnbuckle
Tighten Turnbuckle to Desired Tension**



Double Run Support Part No's.

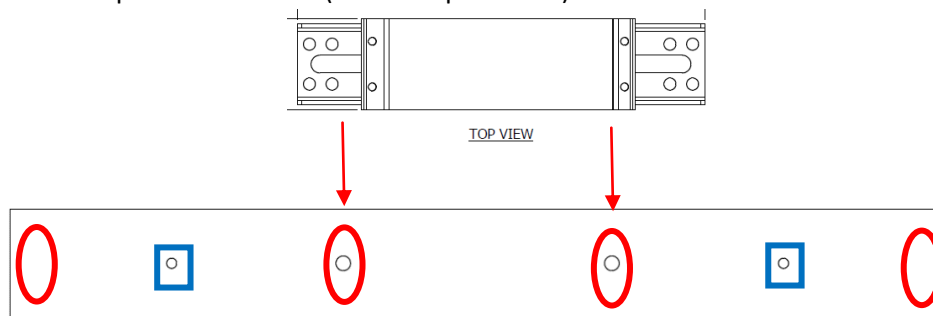


Ref. No.	Part No.	Description
1	1052829	Tube Support (6" Models)
(1)	1052830	Tube Support (8" Models)
(1)	1052831	Tube Support (10" Models)
(1)	1052832	Tube Support (12" Models)
2	1052835	Half-Band w/ Mounting Tabs (6")
(2)	1052836	Half-Band w/ Mounting Tabs (8")
(2)	1052837	Half-Band w/ Mounting Tabs (10")
(2)	1052838	Half-Band w/ Mounting Tabs (12")
3	1052833	Angle Bracket
4	5046A1	Half-Band (6")
(4)	5042A1	Half-Band (8")
(4)	5044A1	Half-Band (10")
(4)	5271A1	Half-Band (12")
5	1052839	Turnbuckle, 1/2" x 6" adjustment
6	1052861	Chain
7	1052851	Quick Link
8	1046115	Eyebolt, 1/2" x 1-1/2"
9	1051207	Washer, 2-1/2" O.D. x 17/32" I.D. x 1/4"
10	33138	Nut, 1/2-13 f/ Eyebolt
11	1051967	Bolt, 1/2-13 x 1-1/4" Serrated Flange
12	1051968	Nut, 1/2-13 Serrated Flange

If Installing the Horizontal Support:

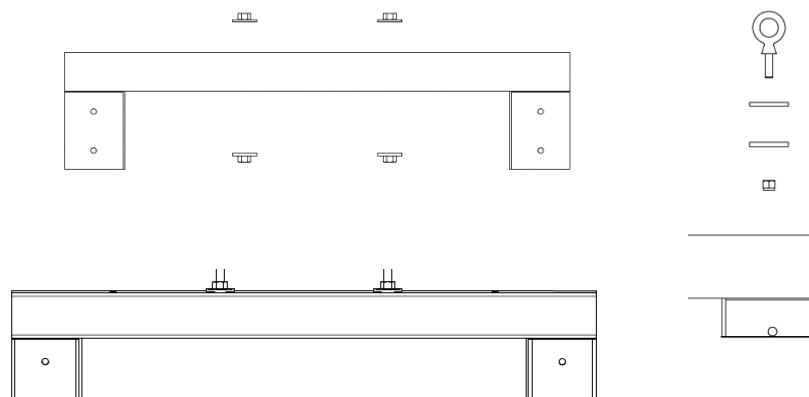
IMPORTANT: Grain Handling Equipment must be secured to prevent any lateral movement.

1. Start by laying out all of your parts and hardware and making sure all is accounted for. Once this is confirmed move on to the next step.
2. Determine the location of the Tube Support Weldment on the Top Crossmember. Using the qty (2) $\frac{3}{4}$ " all thread and hardware locate the center of the slots in the Top Support Weldment. This measurement should be close to 13" center to center on the holes but may differ depending on the location of your system on the top of the tower. Drill qty (2) $\frac{13}{16}$ " holes at these locations. Also drill qty (2) $\frac{9}{16}$ " holes 1" to the center of the hole from the outer end of the Top Crossmember. (see example below).

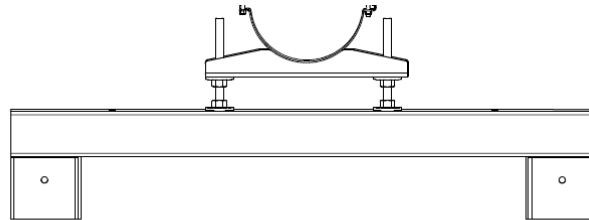
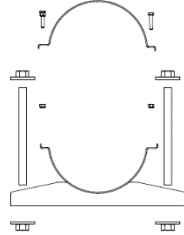


NOTE: The holes in the Squares are factory mounting holes for the top Crossmember to the tower legs

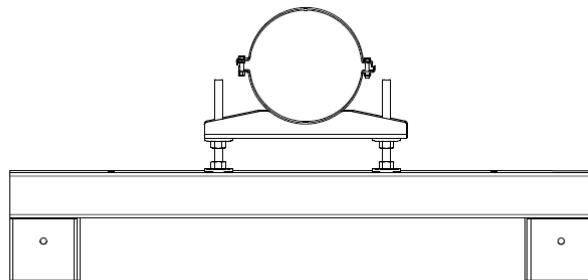
3. Install one $\frac{3}{4}$ " all thread qty (2) $\frac{3}{4}$ " flat washers and qty (2) $\frac{3}{4}$ " nuts into each of the $\frac{13}{16}$ " holes drilled in the Top Crossmember. Suggest to install the bottom nut flush with the end of the $\frac{3}{4}$ " all thread. Mount the eyebolts 1046115, steel washer(s) 1051207, lock nut 33138 for the top double run support to the outer most drilled holes. Tighten Nuts so that eye bolt can still be easily rotated to match the angle that chain will be. (see example below) (Snug up all hardware but do not tighten completely at this time). OR (Hand tighten). (see example below)



- Using qty (4) $\frac{3}{4}$ " flat washers and qty (4) $\frac{3}{4}$ " nuts install the Tube Support weldment at a height selected on the $\frac{3}{4}$ " all thread. Place the remaining hardware for the $\frac{3}{4}$ " hardware.



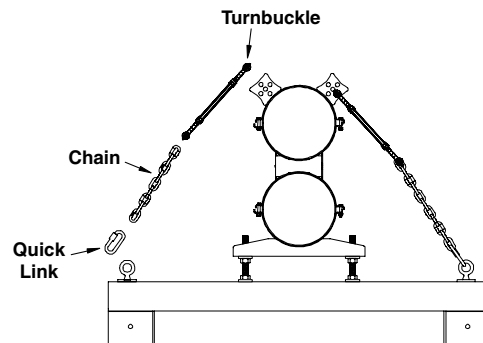
- Place the Double Run Grain Pump bottom tube into the Tube Support Weldment. Use the Top Half band to secure Double Run Grain Pump bottom tube to the Top Support Weldment using Qty (4) $\frac{5}{16}$ " bolts and nuts. Ensure that the double run tubes are vertical of each other and tighten the bolts at this time.



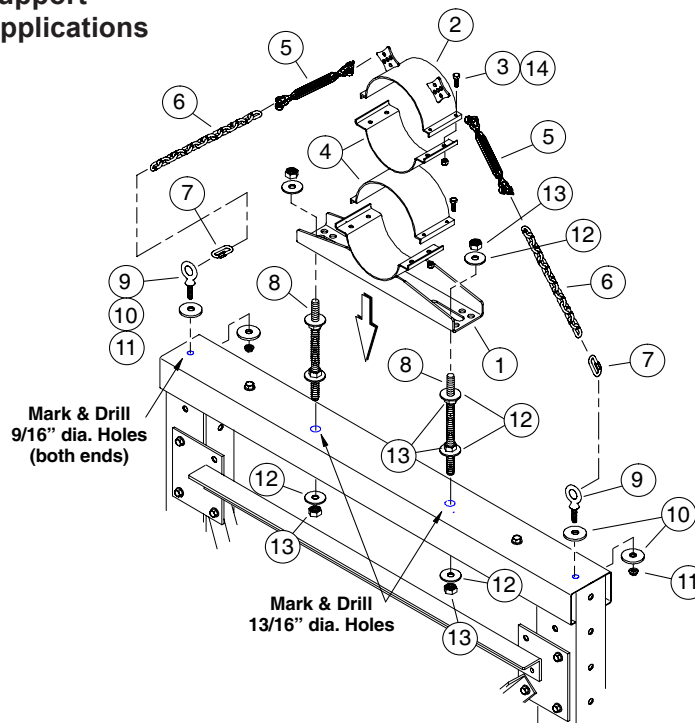
- Using the $\frac{3}{4}$ " nuts adjust the height of the Double Run Grain Pump as needed. Tighten all of the $\frac{3}{4}$ ".
- Install the top double run support bracket now. You will install the half band and top band with chain mounts at the same time. Tighten the $\frac{5}{16}$ " bolts and nuts till snug you will want some potential for rotating when tightening the chain tensioners.

8. Once the top support band is installed you will take the chain supplied in the kit and cut it in half. Then install the chain, quick link, and the turnbuckle onto each side (suggest adjusting the turnbuckle so it is in the center of adjustment).

Once installed tighten the turnbuckles and adjust to desired tension. Tighten all hardware previously installed.



Part No's.
Double Run Support
f/ Horizontal Applications

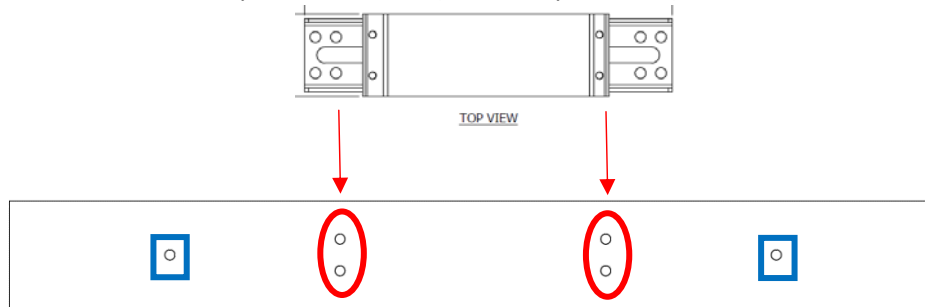


Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	1052829	Tube Support (6" Models)	5	1052839	Turnbuckle, 1/2" x 6" adjustment
(1)	1052830	Tube Support (8" Models)	6	1052861	Chain
(1)	1052831	Tube Support (10" Models)	7	1052851	Quick Link
(1)	1052832	Tube Support (12" Models)	8	7308C	Rod, 3/4" x 10" Threaded
2	1052835	Half-Band w/ Mounting Tabs (6")	9	1046115	Eyebolt, 1/2" x 1-1/2"
(2)	1052836	Half-Band w/ Mounting Tabs (8")	10	1051207	Washer, 2-1/2" O.D. x 17/32" I.D. x 1/4"
(2)	1052837	Half-Band w/ Mounting Tabs (10")	11	33138	Nut, 1/2-13 f/ Eyebolt
(2)	1052838	Half-Band w/ Mounting Tabs (12")	12	1052879	Washer, 3/4" x 2.50"
3	33135	Nut, 5/16-18 Nylon Lock	13	33138	Nut, 3/4"
4	5046A1	Half-Band (6")	14	4736	Bolt, 5/16-18 x 1-1/2" G5 PLT
(4)	5042A1	Half-Band (8")			
(4)	5044A1	Half-Band (10")			
(4)	5271A1	Half-Band (12")			

HORIZONTAL SUPPORT OPTION INSTALL: These examples of installation are with the Eclipse product CTWK012 Top Crossmember.

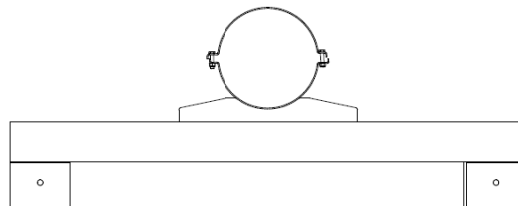
IMPORTANT: Grain Handling Equipment must be secured to prevent any lateral movement.

1. Start by laying out all of your parts and hardware and making sure all is accounted for. Once this is confirmed move on to the next step.
2. Determine the location of the Tube Support Weldment on the Top Crossmember.
If bolting directly to the Top Crossmember use qty (2) $\frac{1}{2}$ " bolts and nuts on each end of the Top Support Weldment. Select which set of holes that will be used on each side and drill qty (4) $\frac{9}{16}$ " holes into the Top Crossmember (see example below).



The holes in the blue squares are the factory mounting holes in the Top Crossmember.

3. Place the Top Support Weldment on top of the Top Cross member, install and tighten the qty (4) $\frac{1}{2}$ " bolts and nuts.
4. Place the Grain Pump Loop tube into the Top Support Weldment. Use the Top Half band to secure the Grain Pump Loop tube to the Top Support Weldment using Qty (4) $\frac{5}{16}$ " bolts and nuts (see example below). Then finish tightening the $\frac{5}{16}$ " hardware.



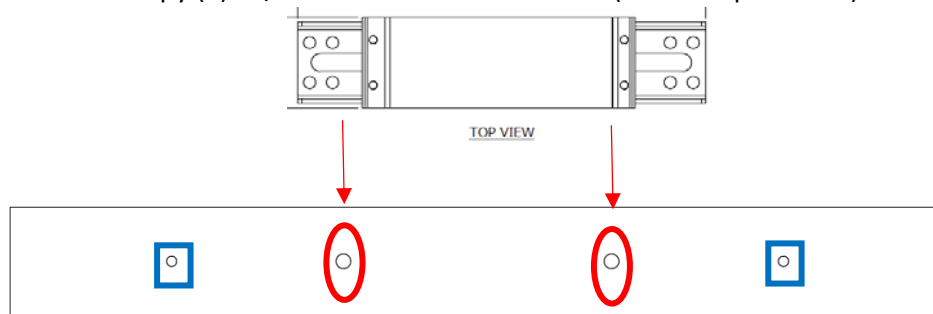
Horizontal Support with Vertical Adjustment:

If mounting the horizontal tube support on the bottom run of your grain pump loop it is suggested that you use the all-thread mounting. Concrete anchors or epoxy are recommended for mounting into the concrete. Place the washer and nut tight to the concrete. Be sure to follow any local building codes and standards of your region.

1. Start by laying out all of your parts and hardware and making sure all is accounted for. Once this is confirmed move on to the next step.

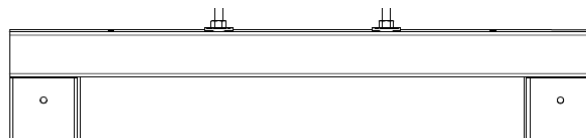
2. Determine the location of the Tube Support Weldment on the Top Crossmember.

If using the qty (2) $\frac{3}{4}$ " all thread and hardware locate the center of the slots in the Top Support Weldment. Drill qty (2) $\frac{13}{16}$ " holes at these locations (see example below).

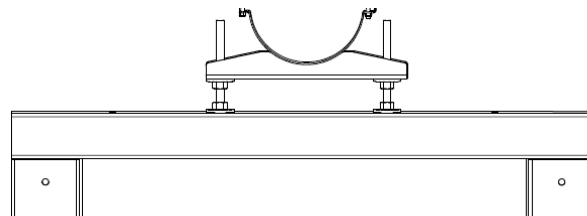


The holes in the blue squares are the factory mounting holes in the Top Crossmember.

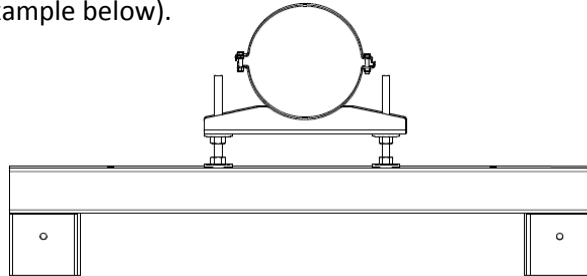
3. Install one $\frac{3}{4}$ " all thread qty (2) $\frac{3}{4}$ " flat washers and qty (2) $\frac{3}{4}$ " nuts into each of the $\frac{13}{16}$ " holes drilled in the Top Crossmember. Suggest to install the bottom nut flush with the end of the $\frac{3}{4}$ " all thread. (see example below) (Snug up hardware but do not tighten completely at this time). OR (Hand tighten).



4. Using qty (2) $\frac{3}{4}$ " flat washers and qty (2) $\frac{3}{4}$ " nuts install the Top Support weldment at a height selected on the $\frac{3}{4}$ " all thread. (see example below) (Snug up hardware but do not tighten completely at this time). OR (Hand tighten).



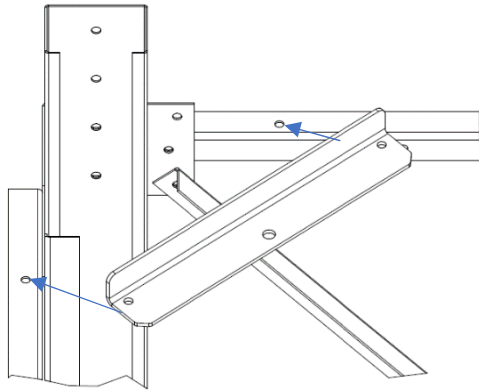
5. Place the Grain Pump Loop tube into the Top Support Weldment. Use the Top Half band to secure the Grain Pump Loop tube to the Top Support Weldment using Qty (4) 5/16" bolts and nuts (see example below).



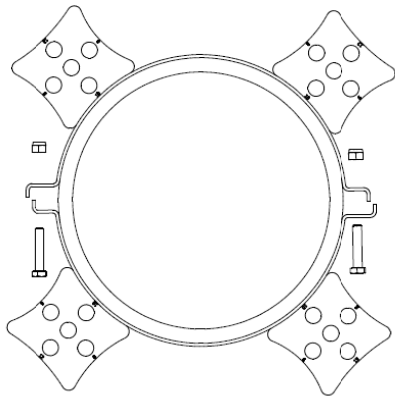
6. Using the $\frac{3}{4}$ " nuts adjust the height of the Grain Pump Loop tube as needed. The Slots in the Top Support Weldment allow for some horizontal adjustment if needed. Tighten all of the $\frac{3}{4}$ " and $\frac{5}{16}$ " hardware.

VERTICAL SUPPORT OPTION INSTALL:

1. Start by laying out all of your parts for the kit. Depending on how the loop is positioned in the tower you will use either 4 turnbuckles or 3 turnbuckles and the 2 straps provided. If loop is within 14" of a corner the straps are suggested.
2. Locate the 4 1052880 angled pieces that are supplied with your kit. You may need to field drill holes into your tower, if your tower doesn't have the holes in it already. Secure with 1/2" bolts and nuts (tighten at this time).The image below shows how the corner brackets are to mount.

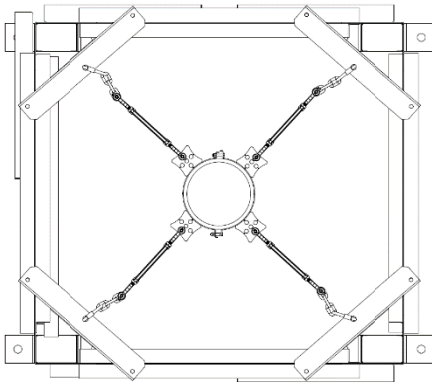


3. Next take the two half bands and (4) 5/16" hardware and mount them to your grain pump system, try to position so that the bottom of the half band tabs and the corner brackets are flush (same horizontal plane). Tighten the hardware down so that the bands do not move easily but not tightened completely down. You may need to adjust the placement as the rest of the kit is put together.

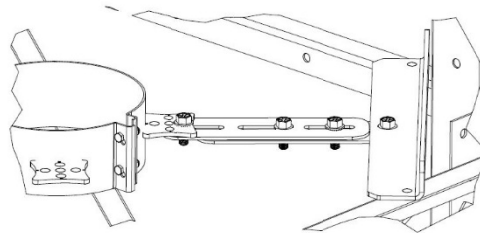


4. Depending on your system and tower configuration Step 4 will differ. If your loop is closer to centered inside your tower (>14 in from all legs), Then you will be using 4 chains and turnbuckles for securing you half bands to the tower. Take the two chains supplied in the kit and cut them into half. This should give you 4 identical length chains. Next you will take a quick link and position it in the center hole of the corner bracket. Connect one end of the chain to the quick link. Suggest adjusting the turn buckle so it is in the center of adjustment. Mount one end of the turn buckle to one ear of the half band weldment. Use the hole furthest to the outside of the tube.

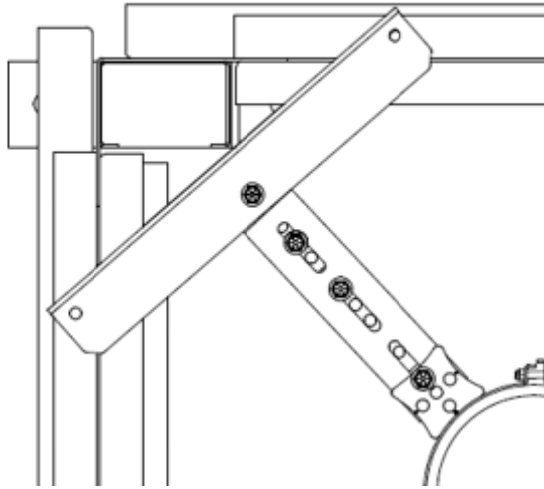
You will then take the loose end of the chain and pull it tight to the turnbuckle and secure (there may be extra chain below this connection. Do not remove until the Grain Pump Loop is adjusted.) Repeat this process for the remaining three (chain / turn buckle assemblies). Tighten the 5/16" half band hardware. Once all four turnbuckles are installed you will begin to tighten so that there is sufficient tension in all directions or (so the Grain Pump Loop tube is in a straight line between the two corners). Be careful not to over tighten one side, this could cause premature wear in the tube. Below are some images on how to complete the assembly. Once tightened you can then remove any excess chain that you may have.



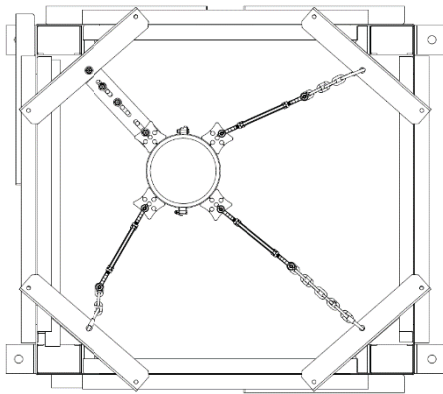
4b If loop is under 14in from one of the 4 tower legs then you will use the two flat straps supplied with your kit to tie into the tower. These two flat straps will replace one of the Chain / Turn Buckle assemblies. Place the strap with the holes underneath the half band ear and secure it to the hole furthest to the outside of the tube with qty 1/2" bolt and nut. Next put the strap with the three slots on top the corner angle center hole and secure with qty 1/2" bolt and nut. The two straps should be parallel with each other (see example below). Field cutting may be required of the straps if loop is closer than shortest length allowed by factory.



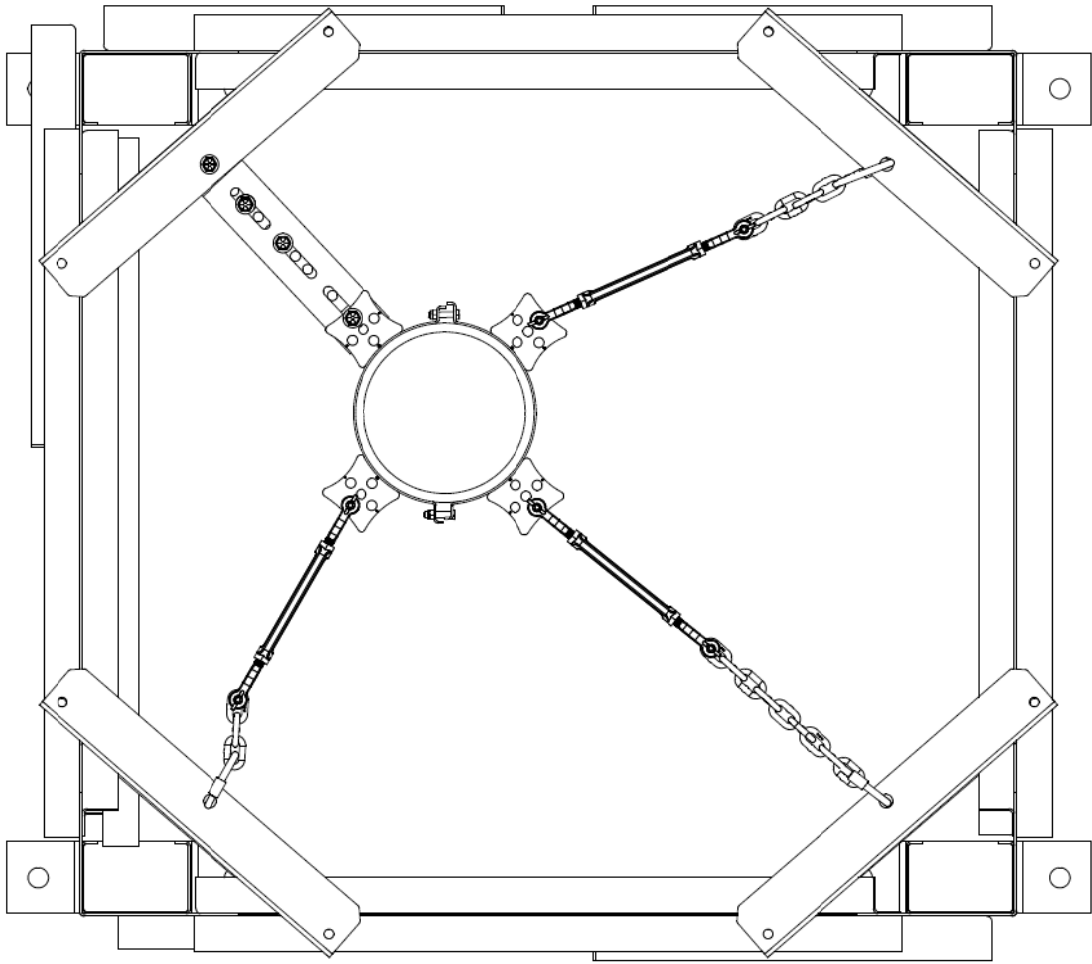
Install a minimum qty (2) ½" bolts and nuts into two slots connecting the straps together (do not tighten at this time) (see example below).



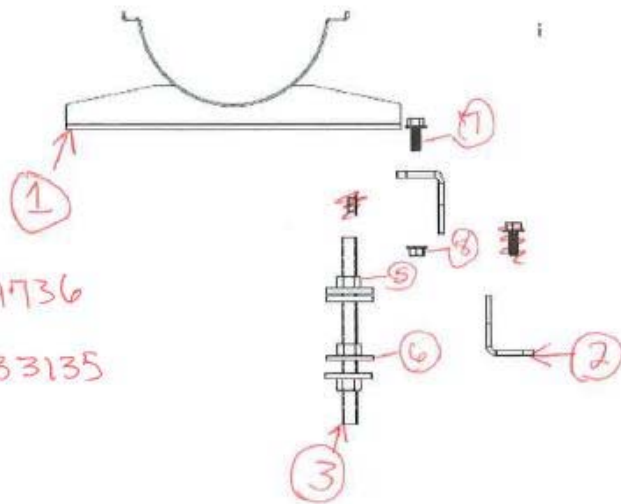
Once the flat straps and three turnbuckles are installed you will begin to adjust each so that there is sufficient tension in all four directions or (so the Grain Pump Loop tube is in a straight line between the two corners). Be careful not to over tighten one side, this could cause premature wear in the tube. Below are some images on how to complete the assembly. Once tightened you can then remove any excess chain that you may have.



Once secured and tightened follow the assembly instructions in of step 4 above. Remove any excess chain once tight.



horizontal Parts Page (Kough)



- 1) 1052829
- 1052830
- 1052831
- 1052832

2) 1052833

3) 7308L

- 4) 5040A1
- 5042A1
- 5044A1
- 5046A1

5) 33138

6) 1052879

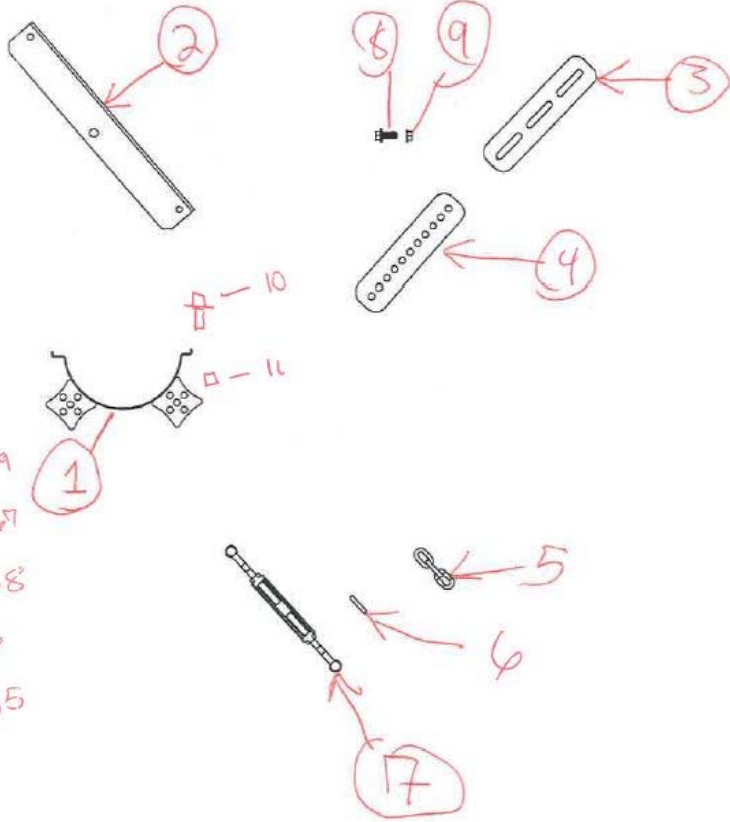
7) 1051967

8) 1051968

9) 4736

10) 33135

Vertical Parts Page (Rough)



- 1) 1052835
- 1052836
- 1052837
- 1052838
- 2) 1052880
- 3) 1053283
- 4) 1053284
- 5) 1052861
- 6) 1052851

- 7) 1052839
- 8) 1051967
- 9) 1051968
- 10) 4736
- 11) 33135

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