OWNER'S MANUAL

Chain Loop System

Without Controls

Manual

PNEG-1128

PNEG-1128

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SAFETY GUIDELINES

This manual contains information that is important for you, the owner/operator, to know and understand. This information relates to protecting ***personal safety*** and ***preventing equipment problems***. It is the responsibility of the owner/operator to inform anyone operating or working in the area of this equipment of these safety guidelines.To help you recognize this information, we use the symbols that are defined below.
Please read the manual and pay attention to these sections. Failure to read this manual and it's safety instructions is a misuse of the equipment and may lead to serious injury or death.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER **DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING **WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION **CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

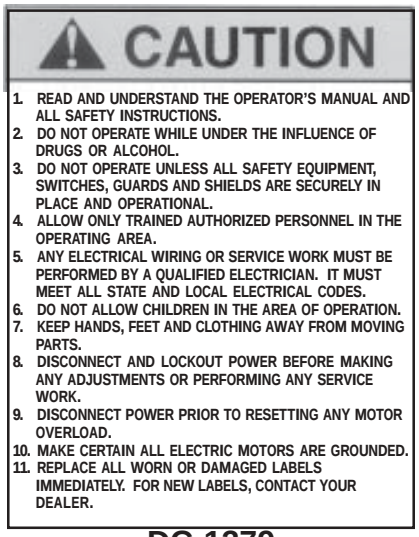
CAUTION **CAUTION** used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

NOTE **NOTE** indicates information about the equipment that you should pay special attention to.

THE DECALS SHOWN ON THIS PAGE MUST BE DISPLAYED AS SHOWN

Replacements are available upon request. Write to the following address:
The GSI Group, 1004 E. Illinois Street, Assumption, IL 62510 USA
Phone: 217-287-2653

Please note:
1. The decals on this page are not actual size.
2. Keep all decals wiped clean at all times.
3. All decals must be replaced if they are destroyed, missing, painted over or can no longer be read.



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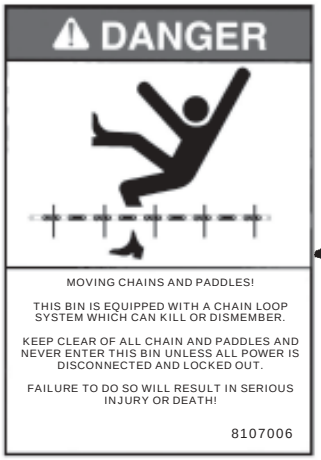
This decal is provided in the Owner's Manual Packet. Place on the bin during Intallation.



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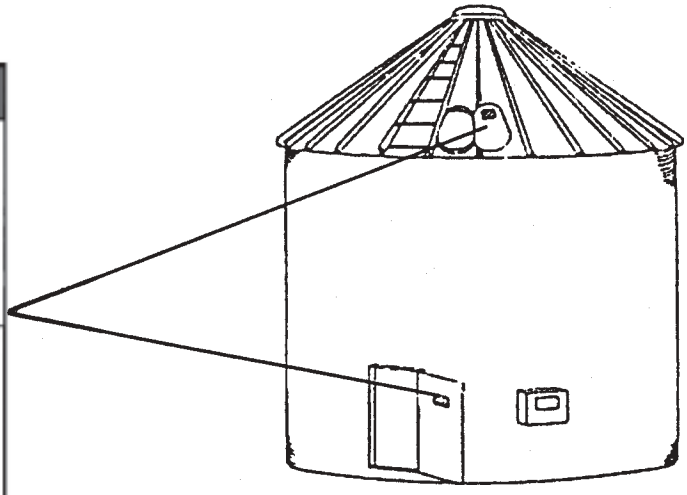

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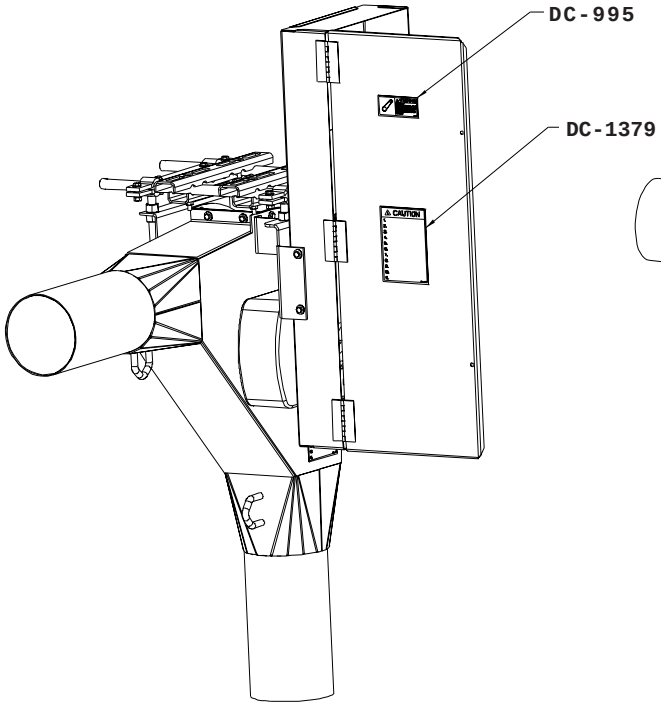
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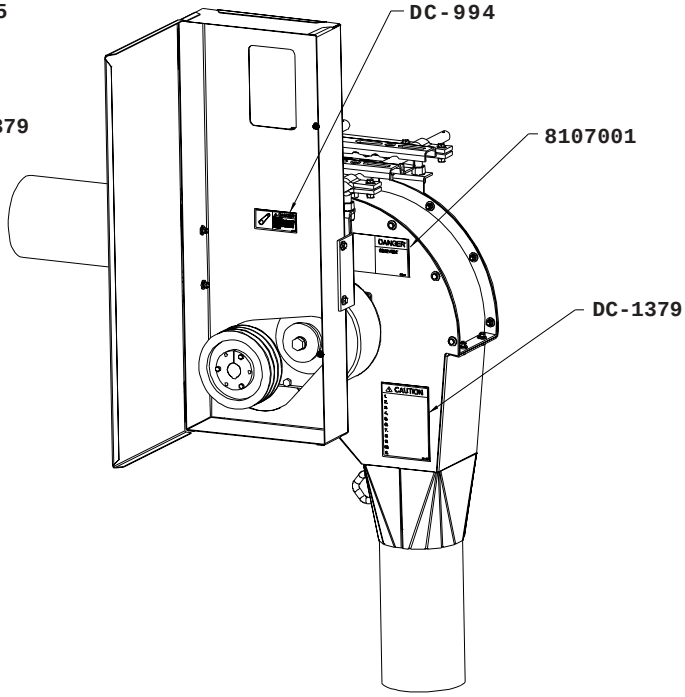
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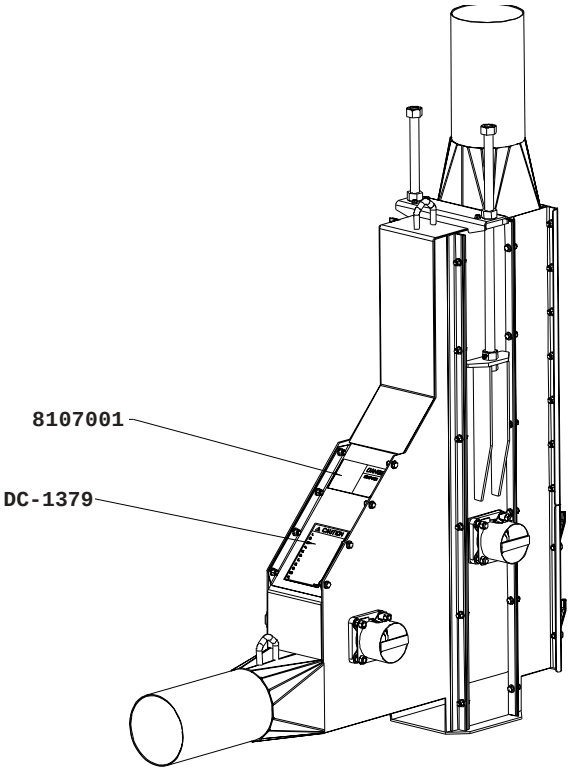
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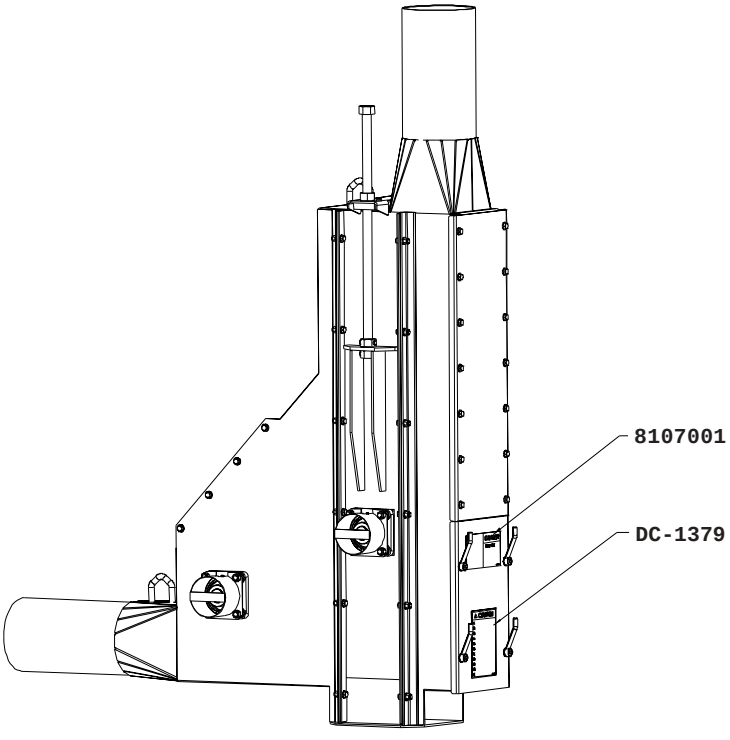
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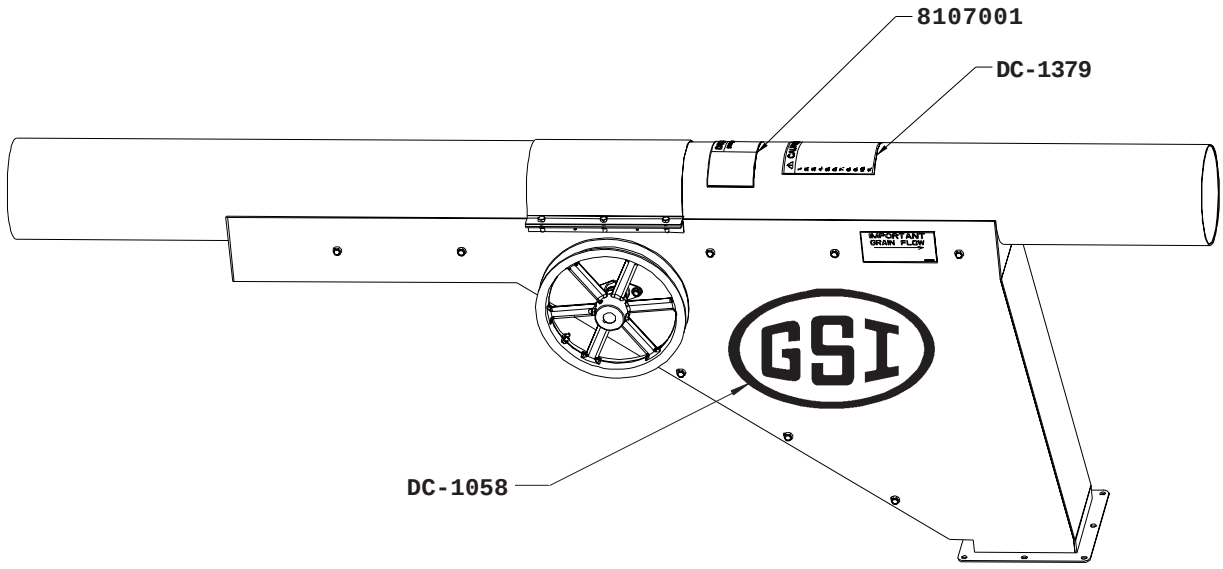
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IMPORTANT GRAIN FLOW
GSI
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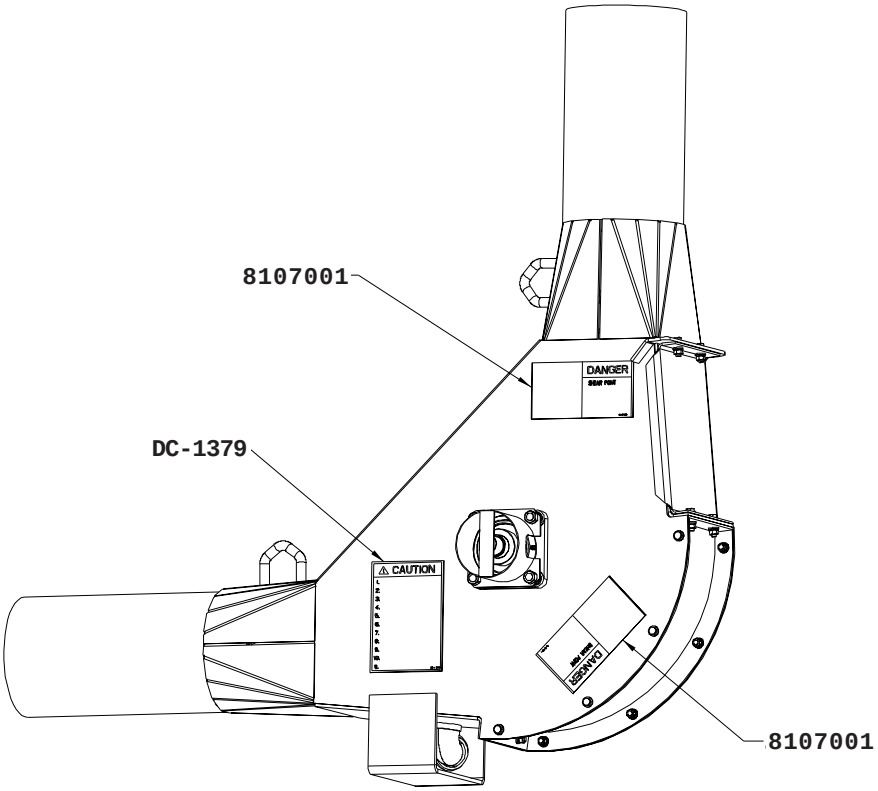

8107001
DANGER
DC-1379
CAUTION
DANGER
8107001

GRAIN BIN SAFETY

The Chain Loop System is generally used to move grain into or from grain bins.
Be aware of the dangers inherit in grain bins.

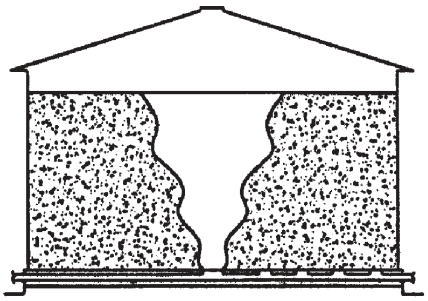
DO NOT ENTER A GRAIN BIN UNLESS POWER IS LOCKED OUT TO ALL BIN EQUIPMENT.

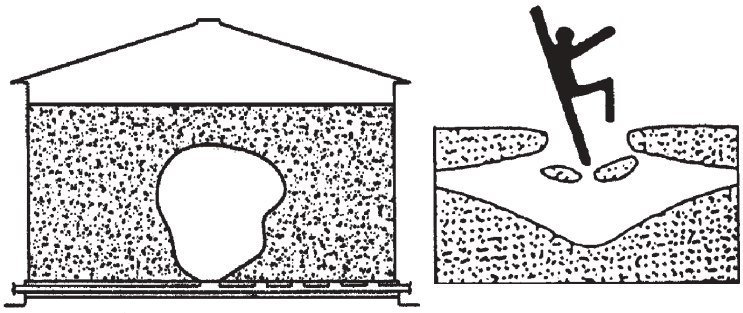
DANGER

DO NOT ENTER A GRAIN BIN WHILE GRAIN IS BEING REMOVED. FLOWING GRAIN CAN TRAP, BURY AND CAUSE SUFFOCATION.

DANGER

DO NOT ENTER A GRAIN BIN IF THE GRAIN HAS BRIDGED OR STOPPED FLOWING NORMALLY. THE GRAIN CAN COLLAPSE WITHOUT WARNING AND CAN TRAP, BURY AND CAUSE SUFFOCATION.





CHAIN LOOP SYSTEM INFORMATION

A Chain Loop System is a chain and paddle conveyor moving through a round housing. A loop system allows you to do total loading and unloading with a single drive. Chain Loop systems will handle a wide range of free flowing materials. They are primarily intended for grain and grain products. They will move material into and out of a grain storage structures, vehicles, dryers and other facilities with ease and gentleness. The Chain Loop System is well suited for blending materials while being transferred from one storage unit to another.

The height and length of the system is limited by the combined horsepower required to move the grain. The vertical Chain Loop System requires greater horsepower per foot, so the taller units will be more limited in the overall horizontal length. System lengths of several hundred feet are common. However, relatively small systems to accomplish more specific tasks are also available.

Chain Loop System Specifications		
	8"	10"
*****Maximum capacity in BPH (Tons/HR)	4000 (100)	6000 (150)
Chain travel in FPM (Meters, Min.)	325 (99)	325 (99)
Head shaft RPM	94	94
Corner housing thickness, galvanized (mm)	3/16 " (4.8)	3/16 " (4.8)
Galvanized tubing wall thickness (mm)	12 GA (2.7)	12 GA (2.7)
Paddle thickness (UHMW) (mm)	3/8" (9.5)	1/2" (12.7)
Corner shaft diameter (mm)	2" (50.8)	3" (76.2)
Conveyor chain	81X	81XHH
Conveyor sprocket	16 tooth	16 tooth
*Power requirements		
Per foot vertical (KW/M)	0.35 (.86)	0.5 (1.22)
Per foot horizontal (KW/M)	0.08 (.19)	0.11 (.27)
Weight per foot lbs. (KG/M)		
Empty	12 (17.9)	15 (22.3)
Full of 56 lb. per bu. material	28 (41.7)	40 (59.5)

* clean dry grain

FINAL INSPECTION CHECK LIST

The Chain Loop System requires an inspection before start-up after the assembly is complete and before each use. The following are critical areas to be inspected.

1. Make sure that the main power isolator is locked in the **"OFF"** position and that the only key is in your possession before removing any shields and inspection covers.
2. Check all safety decals and replace any that are worn, missing or illegible. See pages iii, iv and v for decal part numbers and location.
3. Check for proper chain tension and adjust if necessary. See page 13 for full instructions.
4. Check that the discharge gates open and close completely. Remove the inspection cover from the top of the discharge gate and make sure that the gate is clean inside.
5. Check the lubricant level in the gear reducer at the drive corner. See page 5 for lubrication specifications.

NOTE: The gear reducer is shipped dry and needs to be filled to the proper level before use.

6. Check the condition of the drive belts and make sure that they are aligned and tensioned properly.
7. Check that the corner sprockets are centered in the housings. Realign the sprockets and tighten the setscrews if necessary.
6. Check overall structural integrity of the Chain Loop system and make sure that all supports and components are secure.
9. Check to make sure that the chain moves freely (this is particularly important if the temperature is below freezing). Use a pipe wrench on the end of each of the corner shafts to manually move the chain.

10. Make sure all shields and safety guards are in place before restoring power.

OPERATING THE CHAIN LOOP SYSTEM

The Chain Loop is generally used to transfer grain to or from storage bins. Grain can be fed into the system through an inlet dump hopper or through center or intermediate grain wells in the storage bins. Wells from more than one bin can be opened at the same time to blend the contents of different bins. The system is usually oriented vertically (with the tube running under the storage bins), or at an angle with the bottom tube running along the sides and the top tube running over the fill holes of the storage bins. Horizontal installations are also possible - check with your dealer for special gear reducer lubrication requirements for horizontal installations.

The Chain Loop System should always be run under partial load for a period of time to polish the tube walls before attempting to run at full load. This is especially true when braking in a new system but equally important after being idle for a length of time. Observe the amp meter on the drive motor while running with a partial load until the amperage starts to decline. This is an indication that the tube walls have been polished enough to handle a larger load.

It is very important to avoid stopping the chain under a loaded condition. Never attempt to restart until the Loop System has been emptied of as much grain a possible.

Lock out the main power source before removing any inspection covers or shields necessary to empty the system.

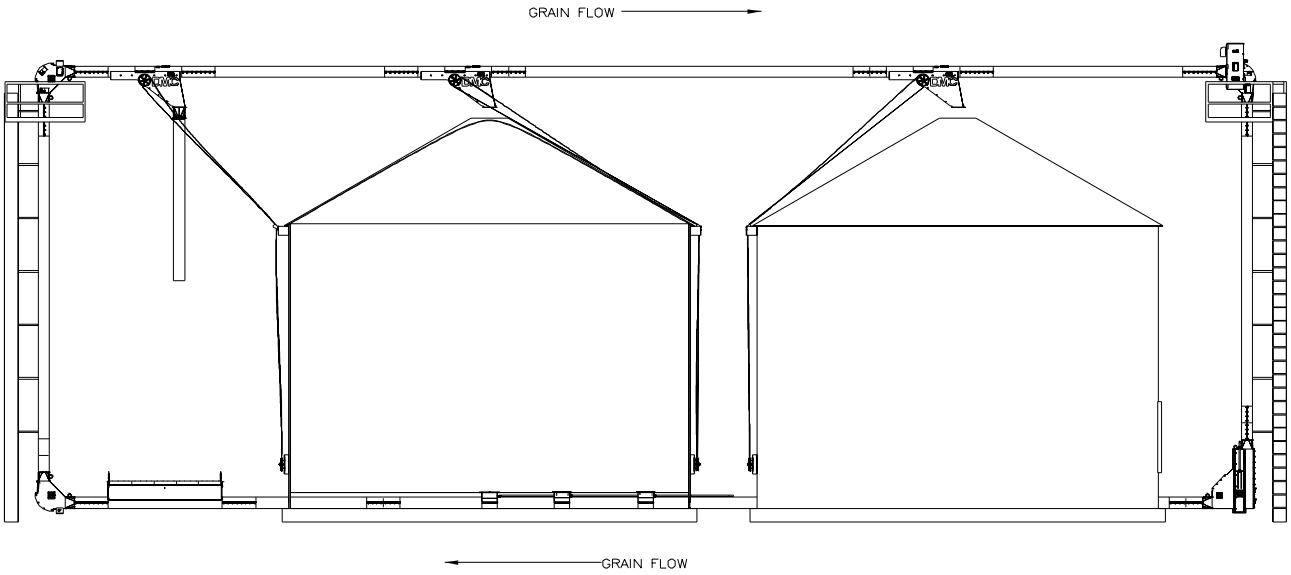
Observe the following basic sequence for using the Chain Loop System to fill storage bins.

1. Open the discharge gate above the destination bin.
2. If available, open the discharge gate above a bin downstream from the destination bin to be used as an overflow.
3. Start the Chain Loop drive motor. Station an individual at the control box to observe the amp gauge of the drive motor.
4. Let grain flow into the Inlet Dump Hopper. Open the flow control by adjusting the chains on the hopper a small amount at a time to make sure that the amperage does not exceed the capability of the drive motor. Note: Some materials and grains such as soybeans flow very easily, so it is important to make sure that the center shield in the inlet hopper is adjusted low enough to prevent overloading the system.
5. Let the Chain Loop run until the system is empty.
6. Close the discharge gates and the dump hopper flow control when through filling.

7. Shut down the drive motor.
8. Make sure to lock out the power source before leaving the work area.

Observe the following basic sequence for using the Chain Loop System to transfer grain from storage bins.

1. Open the discharge gate above the withdrawal bin.
2. Open the discharge gate above the destination bin or truck-loading spout.
3. Start the Chain Loop drive motor. Station an individual at the control box to observe the amp gauge of the drive motor.
4. Open the slide gate under the withdrawal bin a little at a time to make sure that the amperage does not exceed the capability of the drive motor.
5. Close the discharge gate above the destination bin or truck when full. **DO NOT SHUT DOWN THE CHAIN LOOP DRIVE MOTOR AT THIS TIME.**
6. Close the slide gate under the withdrawal bin.
7. Let the Loop system run until all the remaining grain in the tube has been returned to the withdrawal bin
8. Shut down the drive motor.
9. Make sure to lock out the power source before leaving the work area.



A sweep auger may be placed in the bin after all the grain has been removed that will gravity-flow through the center well. Shut down and lock out the Chain Loop System before installing the sweep auger.

If intermediate bin wells are being used, they should be opened after grain has stopped flowing into the center well and before the sweep auger is placed in the bin. See Figure 4-1. Shut down and lock out the Chain Loop System before installing the sweep auger.

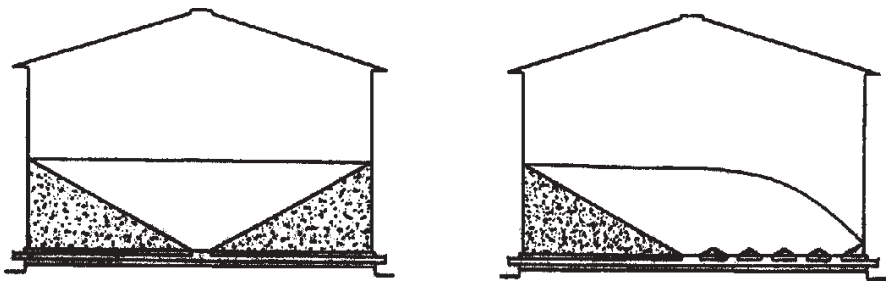


Figure 1

Maintenance

Lock out the main power source before performing any maintenance or service inspections

Dodge Gear Reducer

Use the information that is on the gear reducer nameplate, the warning tags and the Dodge instruction manual that is included with the Chain Loop manual to determine specific maintenance instructions for the gear reducer used on your system. When referring to the Dodge manual, note that the reducer is mounted in the “A” position on the Chain Loop.

The gear reducer is shipped dry and must be filled to the proper level before use.

Use a high-grade petroleum base rust & oxidation inhibited SAE 90 weight gear oil for ambient temperatures from 15 to 125 degrees F (-10 to 52 degrees C). Oils with an “EP” additive are not recommended for average conditions (see the lubrication section of the Dodge manual). Use the check oil plug for determining the correct amount of oil; too much oil will cause overheating and too little will cause bearing and gear failure. The approximate quantity of oil for each reducer size is:

Model	SCXT 415	1.88 qt	(1.78L) - for 15 - 20 HP motors
	SCXT 515	3.25 qt	(3.08L) - for 25 - 30 HP motors
	SCXT 615	4.25 qt	(4.02L) - for 40 HP motors

The oil should be changed at the beginning of every harvesting season if the Chain Loop is used for seasonal grain handling. It should be changed after 2500 hours of operations or every 6 months if used under average industrial conditions. The oil should be changed more frequently if used under extreme operating conditions such as large changes in ambient temperatures, dust, dirt, chemical particles chemical fumes or oil sump temperatures above 200 degrees F.

Drain the reducer, clean the magnetic plug and flush with kerosene before refilling with new oil.

Drive Belts

Check to make sure that drive belts are tensioned and aligned properly. Use a straight edge to check the alignment with the motor and reducer sheaves. Adjust all the motor tensioning rods equally to keep the motor shaft parallel to the reducer shaft.

CHAIN AND PADDLES

Check for proper chain tension. Open the inspection door at the inspection corner and check chain tension by pulling the bottom edge of a paddle by hand. The paddle tip should not move more than 3/4" when the chain is properly tensioned. See page 13.

The Chain Loop chain has connecting links spaced every 10 feet. Check these links to make sure that they are securely fastened and that the cotter pins are bent back correctly. See page 14.

Check the locknuts used to fasten the paddles to the chain brackets. They should be tightened to a torque specification of 20 ft-lbs (2.8 KG-M or 26 N-M).

Adjust the chain tension by loosening the locking jam nuts on the adjusting screw and turning the screw to move the inspection corner sprocket. Turning the adjusting screw clockwise will tighten the chain and turning it counter-clockwise will loosen the chain. Remove chain links if there is not enough travel in the adjusting screw to tighten the chain. Adjust each side equally to keep the sprocket shaft square with the corner housing. See pages 13 and 15.

Spray a light coating of oil on the chain after a season of use.

Corner Shaft Bearings

The bearings for the corner sprockets are sealed bearings and require only a small of amount of multi-purpose grease every 50 hours. Check bearings for wear and that the locking collars are secure.

Corner Sprockets

Inspect the corner sprockets for teeth wear and condition and that they have remained centered in each of the corner housings.

INSTALLATION

It is expected that an experienced millwright or contractor will provide the supporting structure and do the installation of a Chain Loop system including the electrical wiring and the control box.

All electrical wiring and controls should be in accordance with local regulations (BS767: 1992 or the National Electric Code).

Note: It is recommended that an amp meter for the drive motor be installed close to the inlet hopper so an operator can easily monitor and avoid overloading the system.

The supporting structure needs to comply with local wind loads and soil supporting requirements as well as support the weight of the Chain Loop system. Component weights full of grain are:

System Size	Tube (full)	Discharge Gate	Standard Corner	Drive Corner
8”	29 lbs/ft (43.1 KG/M)	334 lbs (152 KG)	248 lbs (112 KG)	623 lbs (283 KG)
10”	40 lbs/ft (59.5 KG/M)	456 lbs (207 KG)	456 lbs (207 KG)	736 lbs (334 KG)

A layout should be drawn to show the exact location of grain bins, inlets, outlets, the control box, outlet control kits, the power source and the supporting structure. The layout should consider future expansion, the ability to mix grains from several locations, the grain direction, the operation of slide gates, the use of other conveyors to fill or unload bins and whether the Chain Loop tube is under the center of or beside the grain bins. Chain Loop systems are provided with one or two drive corners depending on the power requirements of each system. Drive corners are always located at the upper corners, and the drive corner for single drive systems must be located at the far end of the top chain run. This will allow the drive corner to pull grain up from the loading hopper and across the top to the storage bins. See the drawing on page 4.

It is important to slide components together tightly and to have the clamping band centered on the joint before tightening the bands. All cuts should be made square and the inside diameter chamfered to ensure that the ends butt together tightly during assembly. Even small gaps left in the tubing system during assembly will gradually close during operation of the Chain Loop causing the chain to require frequent inspection and tightening. See page 9.

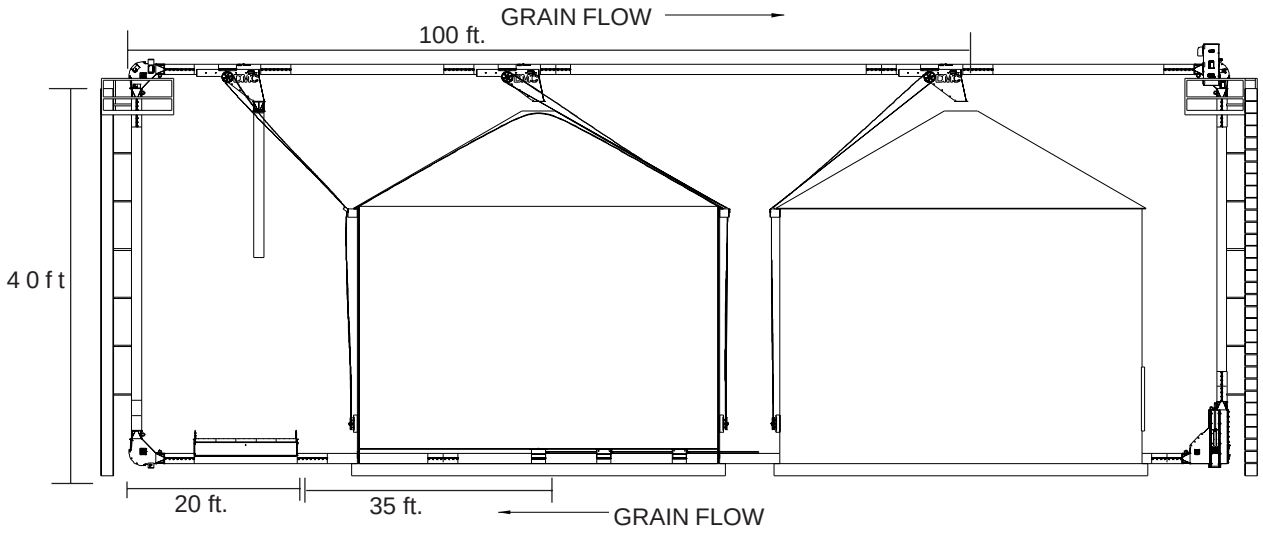
General guidelines to consider are:

1. The Chain Loop will move grain in one direction only; it is not reversible.
2. Provide room for service and maintenance at each of the corners and discharge gates.
3. Avoid having any part of the system under grade to eliminate water accumulation problems.
4. Provide adequate footings for solid supporting structures.
5. Minimize the loaded distance by placing the inlet hopper as close to the vertical tube as possible.

INSTALLATION (continued)

System Size	Vertical Factor	Horizontal Factor
8”	.35 hp/loaded foot (.86Kw/M)	.08 hp/loaded foot (.19Kw/M)
10”	.50 hp/loaded foot (1.22 Kw/M)	.11 hp/loaded foot (.27Kw/M)

The system should be designed to minimize the distance grain must moved. The example shows the dump hopper located next to the vertical tube. If it were located on the other side of the grain bins then the system would have to move grain that much farther before taking it up and over to the discharge gates.



This example illustrates a system and the power requirements for different functions of a Chain Loop system.
If the main requirement is maximum filling rate, than the motor size for this 8” system would be:

.35 hp/ft X 40 vertical ft = 14 hp plus
.08 hp/ft X (20 + 100 horizontal ft) = 9.6 hp
= 23.6 (Use a 25 hp motor)

If the requirement is maximum flow rate while moving grain from bin to bin as well as a maximum filling rate, than the motor size would be:

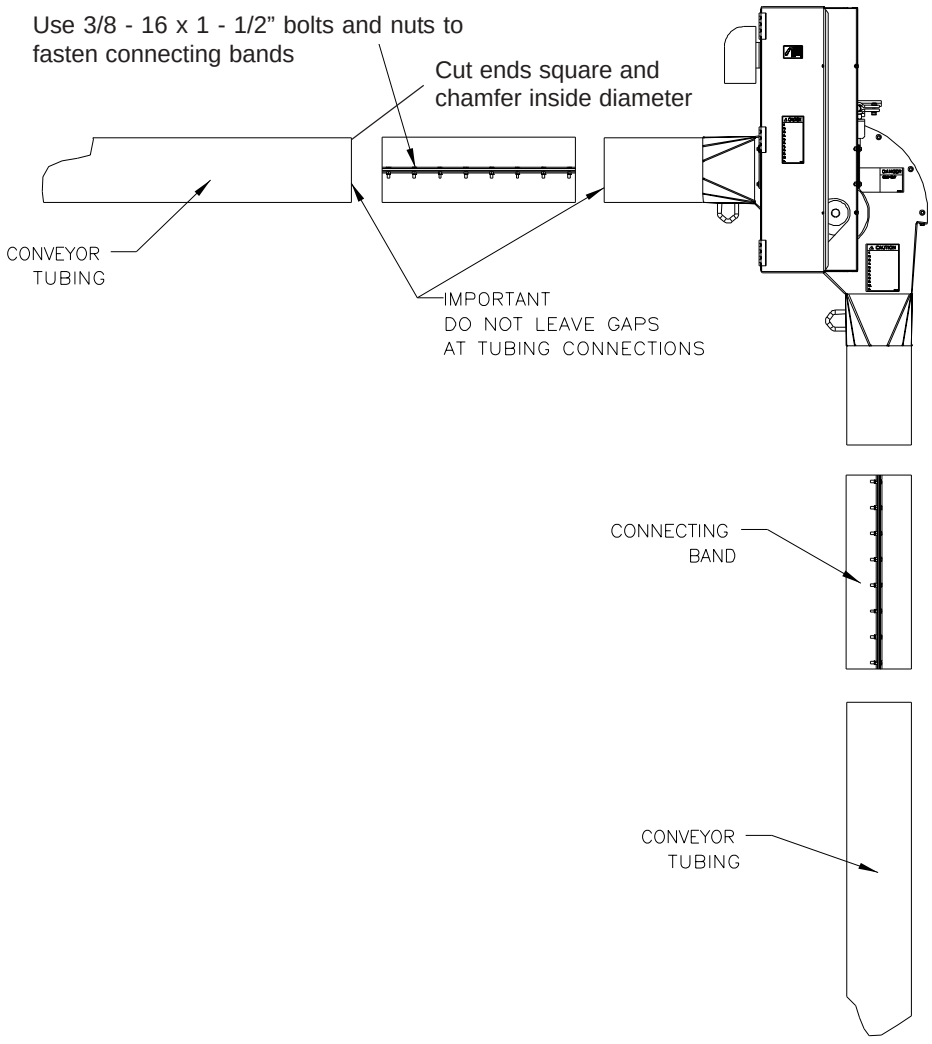
.35 hp/ft X 40 vertical ft = 14 hp plus
.08 hp/ft X (35 + 20 + 100 horizontal ft) = 12.4 hp
= 26.4 (Use a 30 hp motor)

TUBE AND CORNER ASSEMBLY

Lay the sections out in order so as to determine what portions to assemble prior to actual placement in the system.

When cutting tubes to exact length, the ends must be cut square and any burrs on the ends removed by chamfering the inside diameter. Join tube and corner components together with connecting bands. Slide the tube sections tight together and space the connecting band in equal amounts on both parts of the connection. Tighten the bolts in the band.

Fasten the discharge in place within the tube with connecting bands.



DRIVE ASSEMBLY

The Chain Loop System is powered by an electric 1750 RPM motor.

IMPORTANT: Use the proper size motor to ensure satisfactory operation. Too small of a motor will not supply the horsepower required to achieve capacity and possible damage to the motor will occur. Too large of a motor may cause high stress on components resulting in shorter life. See page 5 for motor size specifications.

IMPORTANT: Use the motor sheave furnished. If other size sheaves are used or substituted, improper chain speed and unsatisfactory operation will result.

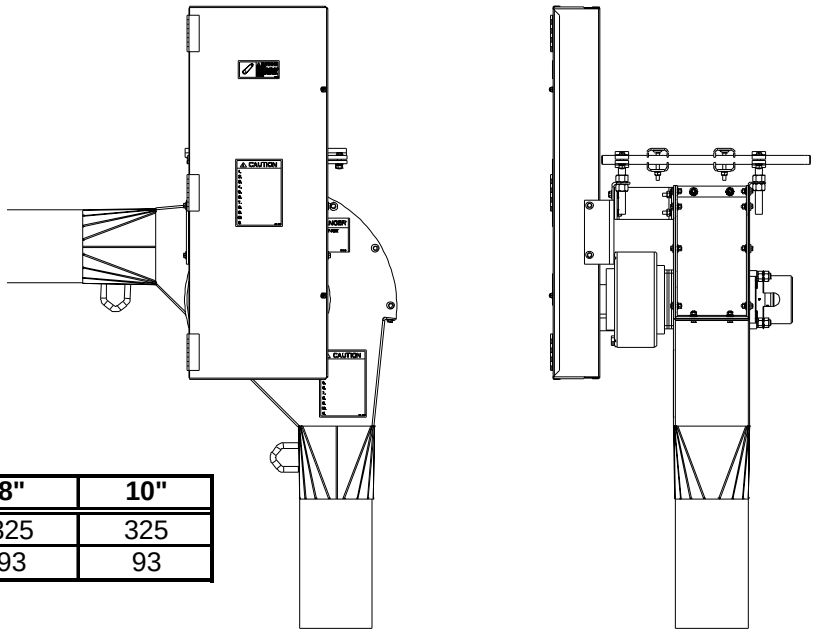
Mount the sheaves as close to the belt guard back as possible. Align sheaves by using a straight edge, placed across the outer faces of both sheaves. Secure in place using taper lock bushing. Be sure drive keys are properly installed. Check sheave alignment again after sheaves are secured to shafts.

Install the belts onto the sheaves and set belt tension. To tighten belts, turn the 3/4” nuts on the motor mount rods to raise the motor mount assembly. Raise all the rods the same distance so the motor mount assembly is parallel with the top.

Check all fasteners to see that they are tight. Close and fasten belt guard.

Keep all safety shields and devices in place.

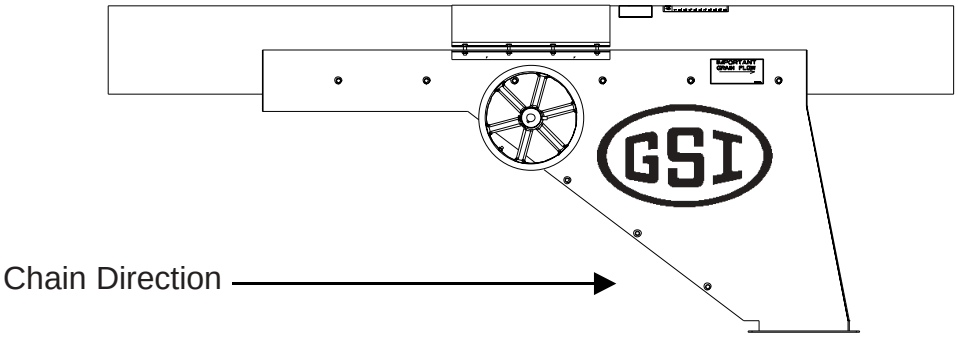
The gear reducer is shipped without oil. It is necessary to add the proper amount of oil before running. Use a high grade petroleum base, rust and oxidation inhibited R & O gear oil. Follow the instructions on the reducer name plate, warning tags and in the installation manual attached to the reducer.



Unit Size	8"	10"
Recommended chain speed	325	325
Corner shaft RPM	93	93

DISCHARGE WITH GATE ASSEMBLY

The discharge unit includes an 8 ft. long section. Locate the outlet of the discharge in the desired location. It may be necessary to cut exact lengths of other tube conveyor sections to locate the discharge unit in its proper place. The discharge with gate is designed for chain travel through in only one direction. Make sure it is oriented properly by comparing the appearance to the diagram or referring to the decal on the discharge unit. Operation in the wrong direction can cause paddle damage.



When cutting tubes to exact length, the ends must be cut square and any burrs on the ends removed by chamfering the inside diameter. Join tube and discharge gate together with connecting bands. Slide the tube sections tight together and space the connecting band in equal amounts on both parts of the connection.

Bin well installation for Chain Loop Systems installed under a row of grain bins.

Position the center bin well so that the bin sweep pivot is at the center of the bin and on top of the Chain Loop tube. Intermediate wells may be placed on the tube between the center and bin wall if desired (use drawing PNEG-723 for minimum spacing requirements). Use figure 1 as a guide to mark and cut the openings for the wells in the tube.

NOTE: Do not cut the opening with the chain and paddles inside the tube or they may be damaged.

The control pipe for the center well (½" pipe) should fit inside the pipe used for the intermediate wells (1" pipe). With the center and intermediate wells closed, drill a hole through both control pipes so that a bolt can be used to lock both pipes together. This will allow both slide gates to be operated together.

Open the slide gate in the center well and withdraw grain until no more flows. Close the center well slide-gate and place the bolt in the hole drilled through both control rods. The intermediate well slide gates can now be operated with the center well.

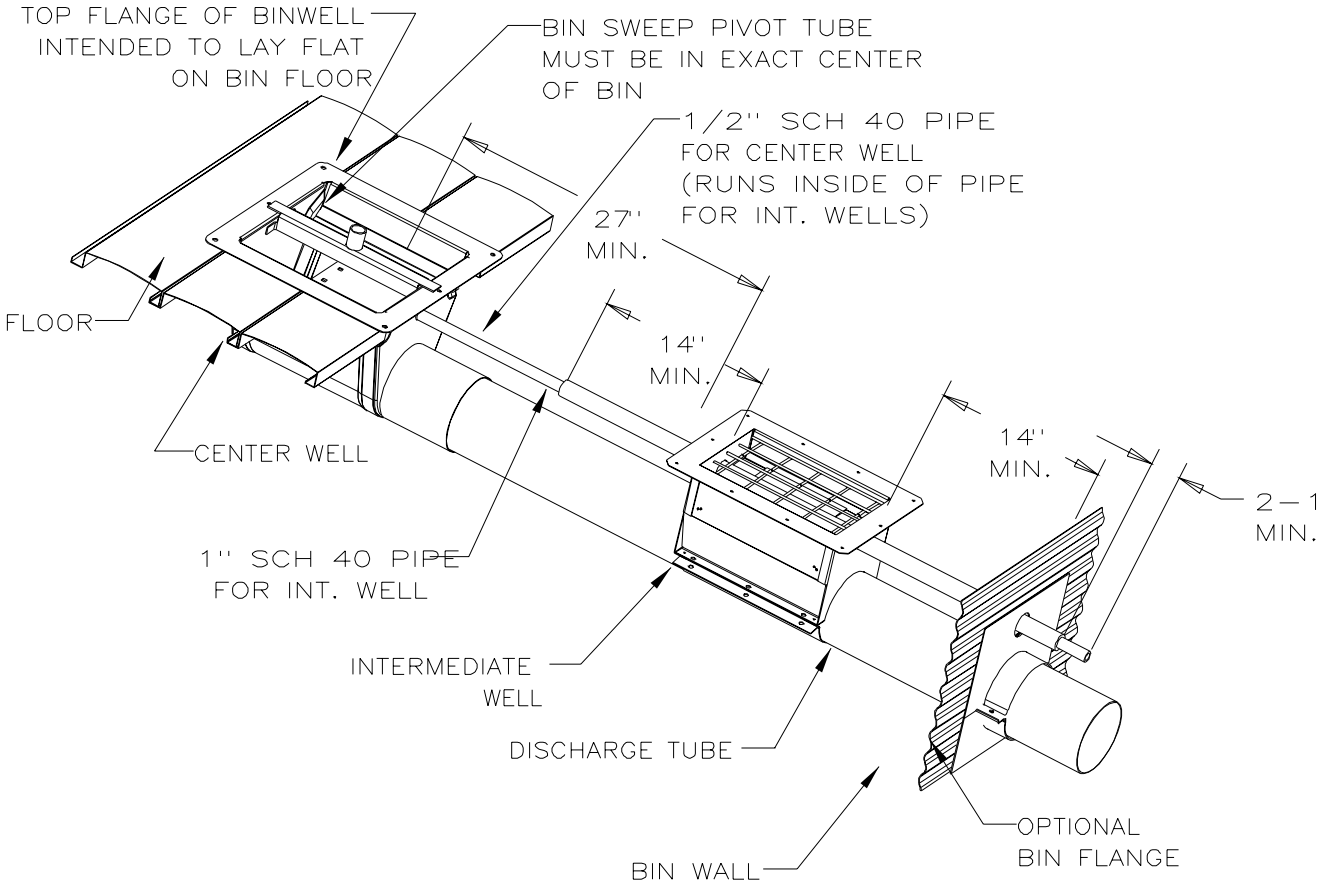
UNLOAD WELL INSTALLATION

General Information

Observe the minimum spacings show in the illustration below. Wells should be positioned on the tube so that the gates will open when control pipes are pulled out and away from the center of the bin.

A control pipe kit may be ordered from your dealer. For the center well use 1/2" Sch. 40 pipe (-7/8" OD). For the intermediate well(s) use 1" Sch. 40 pipe (-1 3/8" OD). It may be necessary to support the unload well(s) and/or discharge tube from below with blocks or other material.

Consult the manufacturer of the bin floor for information on cutting openings in the floor for unload wells, for sealing around unload wells, and for proper support of the floor around the unload wells and discharge tube.



CHAIN AND PADDLES

The paddles are attached to the chain with 5/16 x 1" long Whiz-lock bolts, and 5/16 flange lock nuts. Make sure that the slots in the paddles are oriented as shown on page 14. The head of the bolt should be inside the "V" shaped attachment bracket and the nut should be against the face of the plastic paddle. Make sure all hardware is tightened properly to a torque of 20 ft-lbs.

The chain is shipped in 10 foot lengths and needs to be spliced as shown on page 14. Make sure to bend the ends of the cotter pins as shown to prevent them from working loose and causing the chain to break.

Use an electrical fish tape or wire to pull the chain through the tube assembly. It is possible for the chain to twist a full 360 degrees during this process. Visually check the chain through open inspection covers at the discharge gates and openings for wells to make sure that this has not happened.

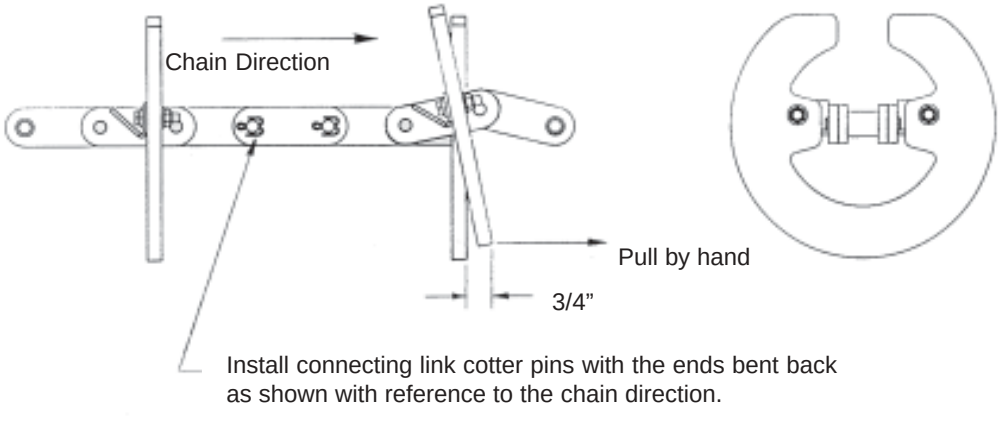
Adjust the tightening screws in the inspection corner all the way up and connect the final chain link through the access door in the inspection corner after removing as much chain slack as possible. Tighten the chain by turning the adjusting screws clockwise; adjust each side equally to keep the sprocket shaft square with the housing. Remove chain links if there is not enough travel in the adjusting screw to tighten the chain. Make sure that the sprocket shaft is square to the housing by measuring the shaft position on both sides of the housing. See page 15.

The chain should be tightened until the paddles are nearly rigid on the chain. The tips of the paddles should only move 3/4" when grabbed and pulled by hand.

Make sure all shields and safety guards are in place before restoring power

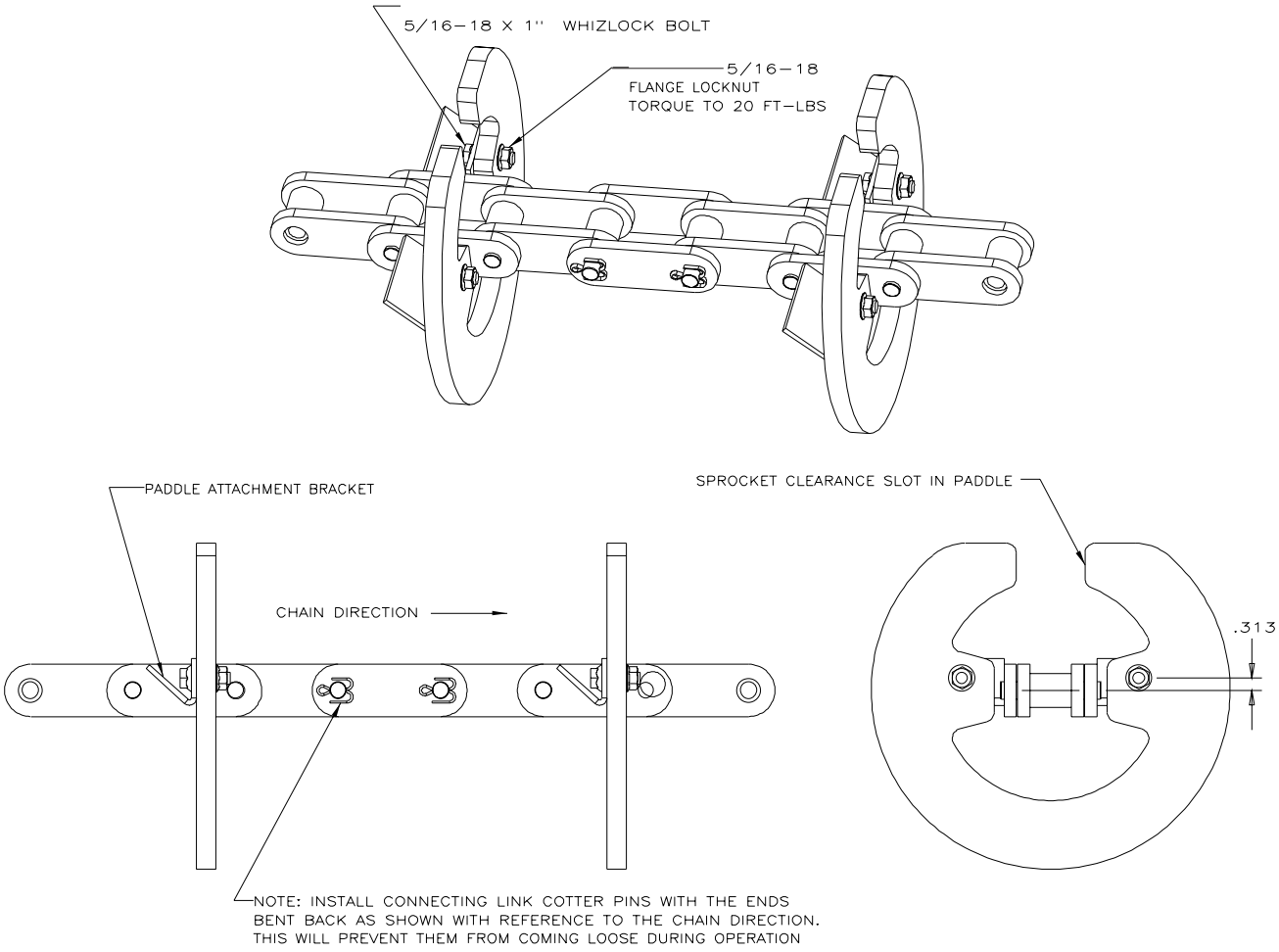
Check and re-tension the chain after the system has been trial run while empty.

Lock out the main power source
BEFORE removing any inspection covers or shields.

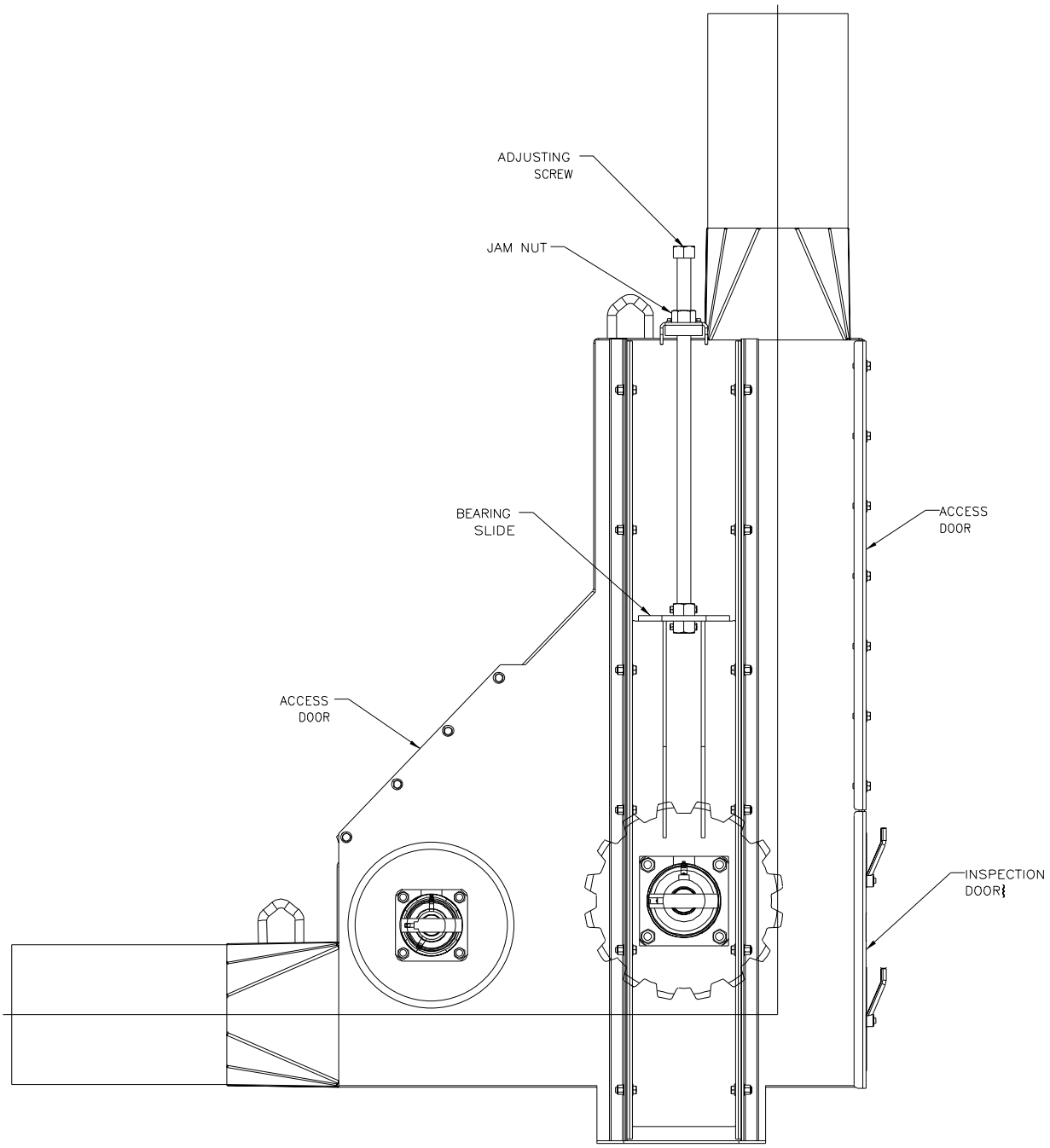


Install connecting link cotter pins with the ends bent back as shown with reference to the chain direction.

CHAIN AND PADDLES



INSPECTION CORNER

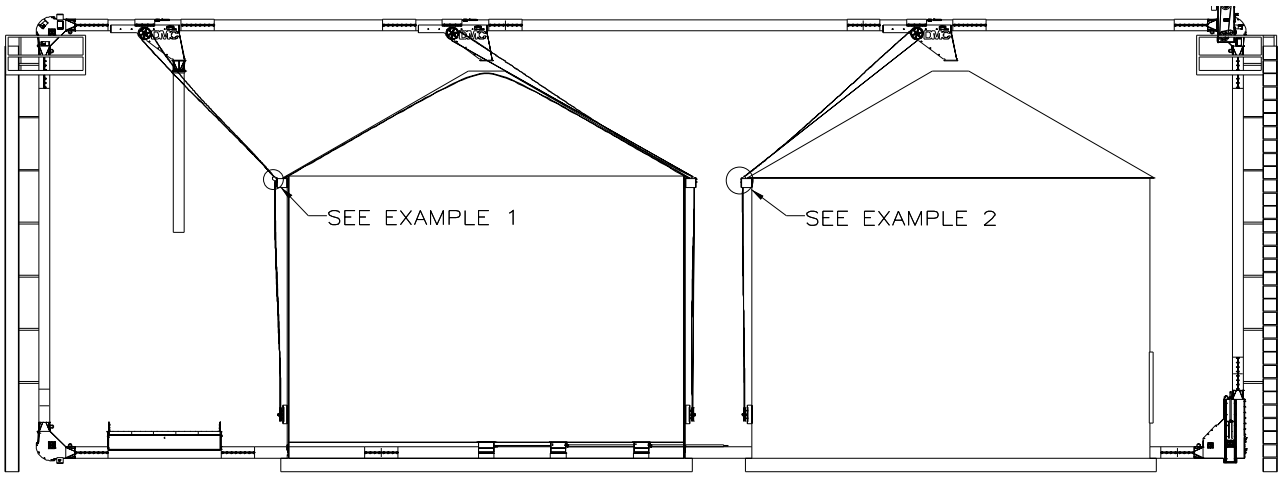


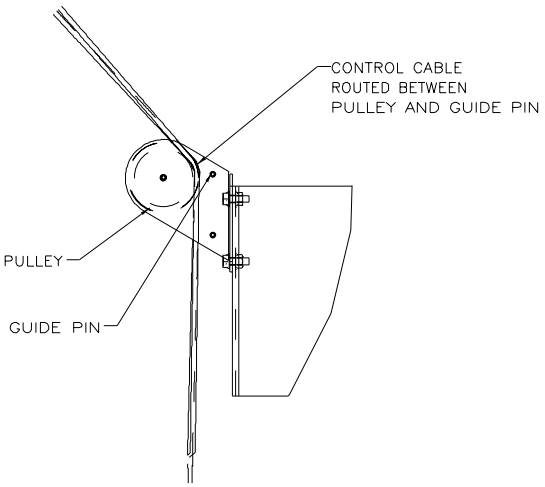
Ground Control Kit for Discharge Gates

Determine the best location for each ground control kit. Note that each kit comes with 100 ft of cable, which should be adequate for individual bin installations.

The cable idler pulley bracket is usually mounted at the top of the bin wall, just under the roof eve, in line with the control wheel on the discharge gate. The ground control wheel-mounting bracket should be mounted to the bin wall directly under the idler pulley bracket at a convenient operating height. It is important to keep the cable in line with the control wheels on both the discharge gate and at the ground to avoid having the cable “walk off” either wheel.

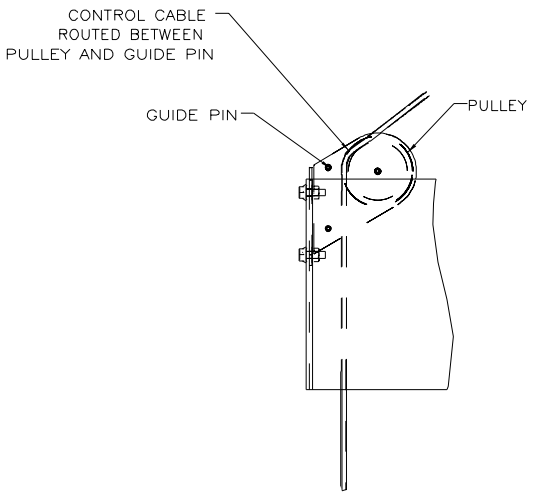
The ground control wheel can be mounted to the same bin as the discharge gate, or to an adjacent bin. See examples 1 & 2.





EXAMPLE 2

CONTROLS MOUNTED
ON ADJACENT BIN



EXAMPLE 1

CONTROLS MOUNTED ON BIN
WHERE THE DISCHARGE IS LOCATED

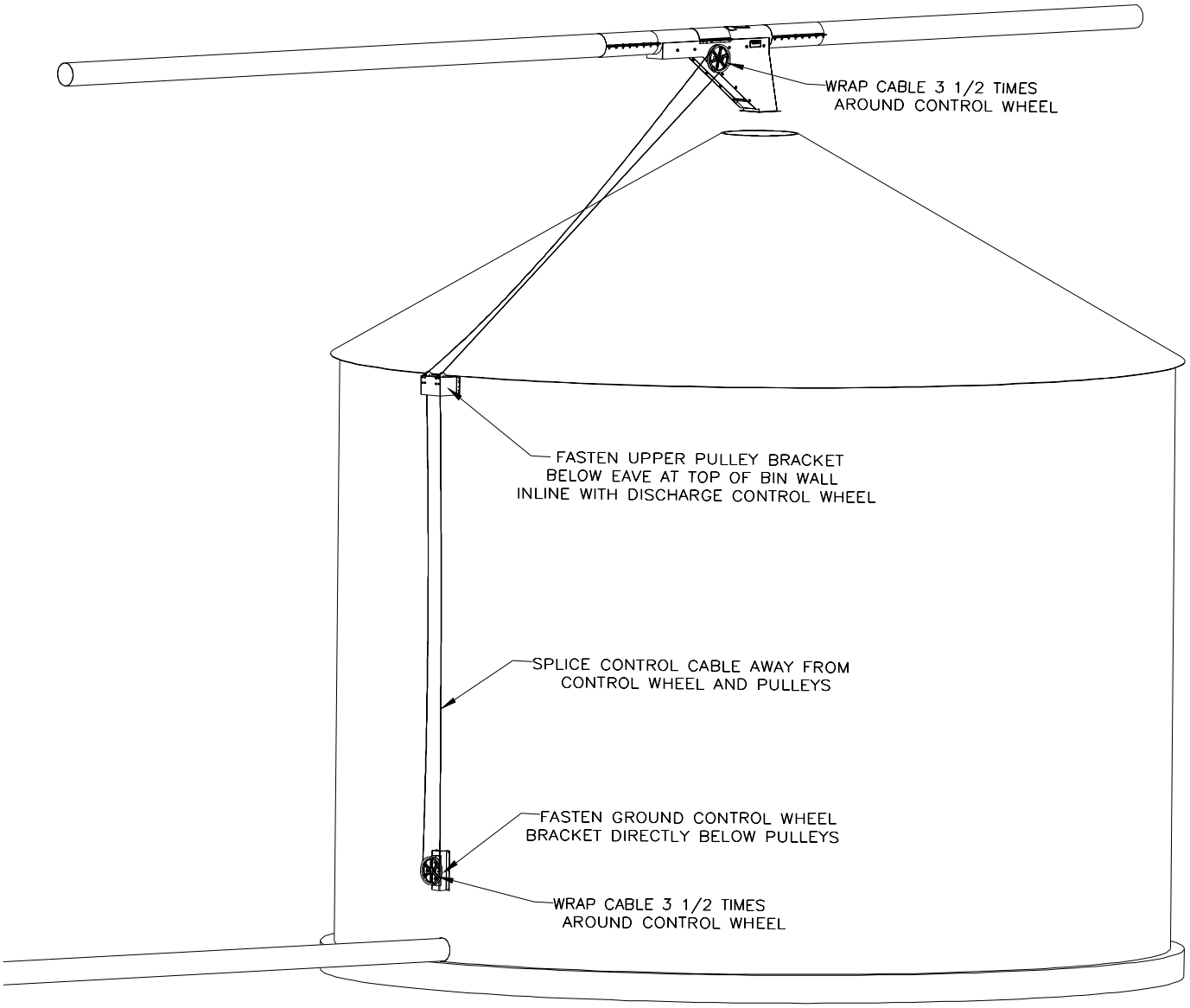
Each control system should be marked to identify which discharge gate is being controlled.

Each control system should be marked after installation to clearly identify whether the discharge gate is open or closed.

Setscrews in the ground control wheel can be used to lock the wheel in position to prevent accidental opening or closing of the discharge gate.

Assemble the idler pulleys to the mounting bracket on the inside surface if the cable is going to a discharge gate on the same bin. Assemble them on the outside if the cable is going to an adjacent bin. Attach the idler pulley bracket to the bin wall just under the eve to ensure that the cable will clear the bin roof.

Attach the ground control wheel bracket to the bin wall directly below the idler bracket. Assemble the wheel-mounting bracket loosely to the wall bracket and slide it up as far as possible. Assemble the control wheel to the shaft and secure with cotter pins. See page 18.



Make sure that the discharge gate is half open **and wrap the cable 3 ½ times around the discharge gate control wheel. Note that turning the wheel clockwise will close the gate.**

Secure the cable to the wheel with the cable clamp by attaching it to the approximate middle of the 3-½ wraps of cable. This will insure that the gate will fully open and close without restriction from the cable clamped to the wheel.

Make sure that the discharge gate is still half open.

Route the cable back through the right idler pulley and down to the ground control wheel.

At the ground control wheel, turn the wheel until the cable clamp is up and wrap the cable 3 ½ times around it.

Secure the cable clamp to the middle wrap.

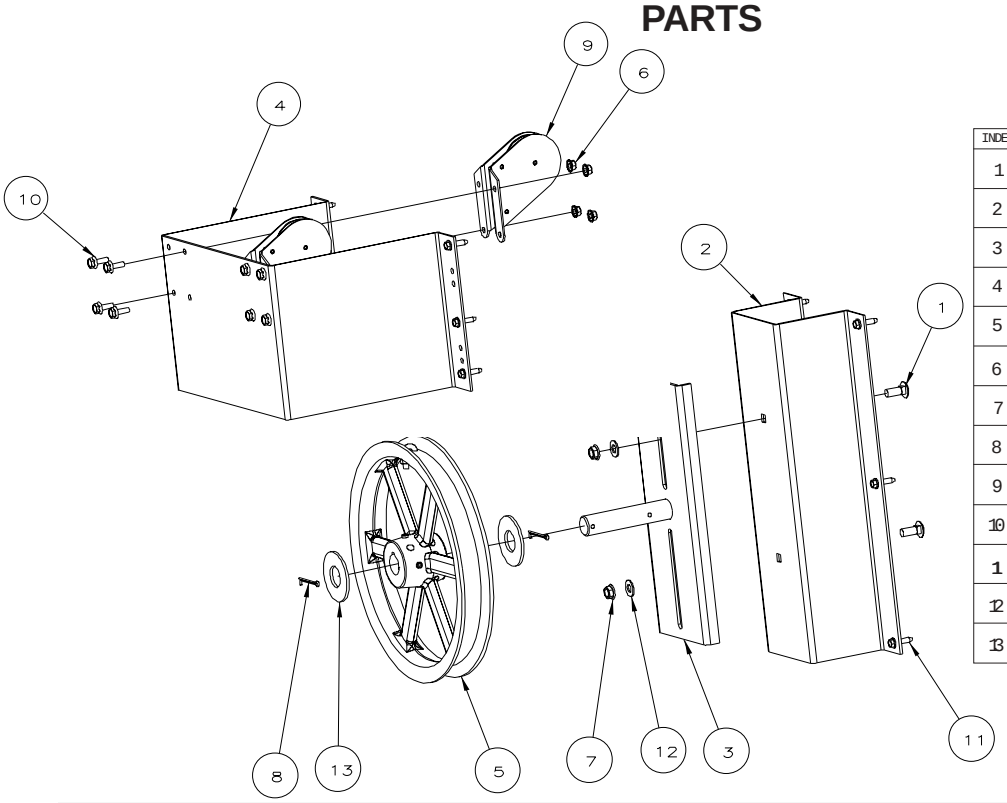
Splice the ends of the cable with a cable clamp. With discharge gate half open, the splice should be at least 5 ft away from the pulleys and control wheels.

Slide the ground wheel bracket down to take up any slack in the cable and tighten in place.

Check the installation by turning the ground wheel clockwise to fully close the discharge gate and counterclockwise to fully open the gate without any restrictions from the cable splice or the clamps on the control wheels.

If the rotation is wrong, then reverse the direction of the 3-½ wraps on the ground control wheel.

PARTS

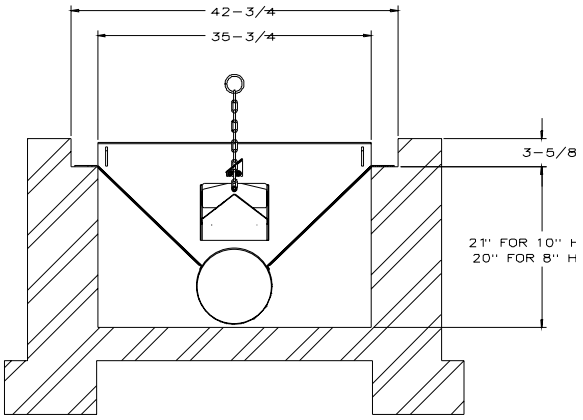


INDEX	PART	DESCRIPTION	QTY
1		BOLT– CAR,STD THRD–GRD 2 3/8–16 UNC X .75, PLTD	2
2	8101157	BRACKET– BIN WALL MOUNT GROUND CONTROL KIT	1
3	8101158	BRACKET– CONTROL WHEEL, WLDMT ZINC PLATED 8101159	1
4	8101156	BRACKET– PULLEY MOUNT, GROUND CONTROL KIT	1
5	8101153	CONTROL WHEEL– W/CLAMP 90° DISCHARGE W/GATE	1
6		NUT– LOCK,FLG, 1/4–20UNC (WHIZ LOCK) PLTD.	8
7		NUT– LOCK,FLG, 3/8–16UNC (WHIZ LOCK) PLTD.	2
8		PIN– COTTER, STANDARD 3/16" X 1–3/4" LONG	2
9		PULLEY– HOT HOUSE, (NOLIN MILLING NO #)	2
10		SCREW– MF FLG WHIZ LOCK 1/4–20 UNC X 3/4", PLTD	8
11		SCREW– S/DRILL, WH HX HD 1/4–14 X 1, (TEK3) PLTD	12
12		WASHER– FLAT, STANDARD 3/8", PLTD	2
13		WASHER– FLAT, STANDARD 1", PLTD.	2

INLET DUMP HOPPER ASSEMBLY

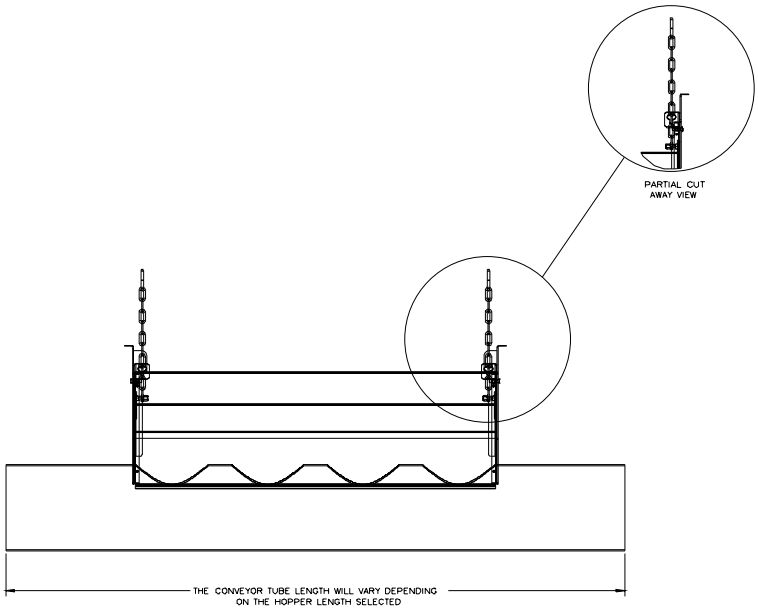
The dump hopper will include a length of tubular conveyor from 6 ft to 11 ft. depending on the length of dump hopper selected. It will also include a top safety screen or drive over grating. There is a grain flow control inside the hopper that is adjustable using chains mounted at each end. A dump hopper is to receive grain into the Chain Loop System and should be located at a point along the bottom conveyor portion. Usually dump hoppers are located near the standard corner where the chain and paddles turn to carry grain up.

For drive over systems, the grate must be supported by a concrete structure, such as show below.

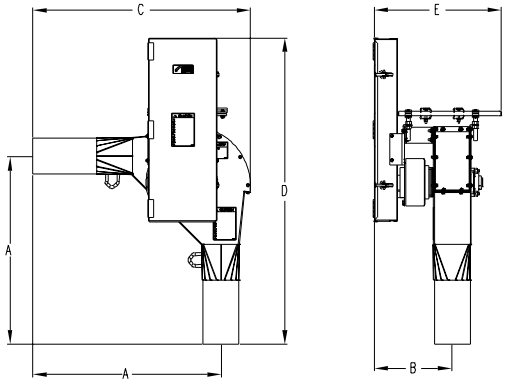


A hopper with top safety screen may be used in non-drive over situations. The top safety screen will not support vehicles. Make sure either the top safety screen or drive-over grating is in place on the hopper.

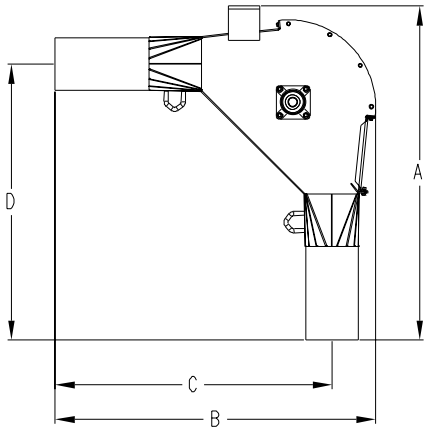
Fasten the Inlet Dump Hopper Assembly in place within the tubular conveyor with connecting bands.



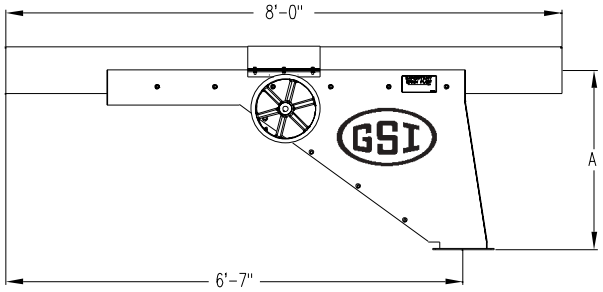
8” & 10” COMPONENT DIMENSIONS



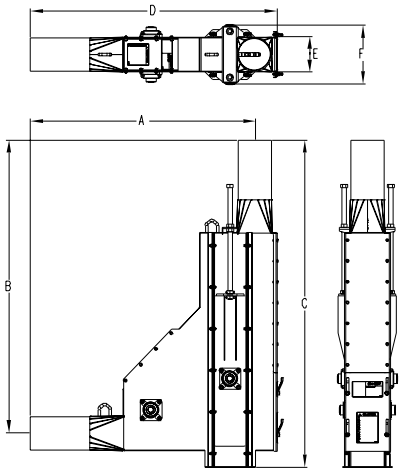
DRIVE CORNERS		
Horsepower (per corner)	Assembly Part Numbers 8" System	10" System
15-20 hp	8081002	8101002
25-30 hp	8081004	8101004
40 hp		8101176
Dimension	8" System inches (mm)	10" System inches (mm)
"A"	42 1/16 (1068)	42 1/2 (1080)
"B"	17 1/4 (438)	18 1/4 (464)
"C"	48 3/4 (1238)	50 1/4 (1276)
"D"	67 1/2 (1715)	67 3/4 (1721)
"E"	29 (737)	29 (737)



STANDARD CORNERS		
	8" System	10" System
Dimension	inches (mm)	inches (mm)
"A"	50 7/8 (1292)	52 3/8 (1330)
"B"	48 7/8 (1241)	50 1/8 (1273)
"C"	42 1/2 (1080)	42 1/2 (1080)
"D"	42 1/2 (1080)	42 1/2 (1080)
Assembly	P.N. 8081021	P.N. 8101021

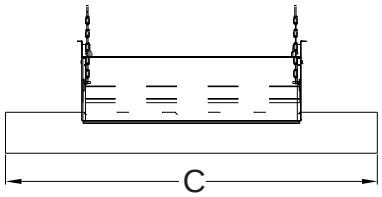


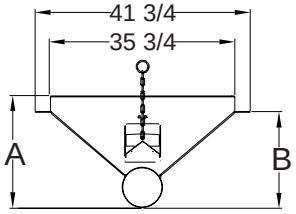
DISCHARGE GATES		
	8" System	10" System
Dimension	inches (mm)	inches (mm)
"A"	30 1/16 (764)	32 1/16 (814)
"B"	96 (2438)	96 (2438)
"C"	79 (2007)	79 (2007)
Assembly	P.N. 8081081	P.N. 8101081

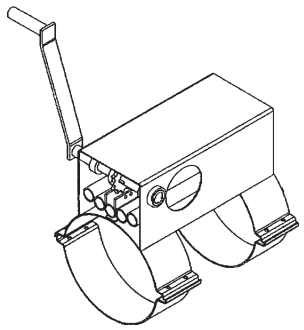


INSPECTION CORNERS		
	8" System	10" System
Dimension	inches (mm)	inches (mm)
"A"	53 5/8 (1362)	54 7/8 (1394)
"B"	69 13/16 (1773)	71 1/8 (1807)
"C"	78 11/16 (1999)	81 (2057)
"D"	58 3/4 (1492)	61 1/8 (1553)
"E"	8 3/8 (213)	10 3/8 (264)
"F"	13 7/8 (352)	15 7/8 (403)
Assembly	P.N. 8081048	P.N. 8101048

8” & 10” BIN WELL AND DUMP HOPPER DIMENSIONS







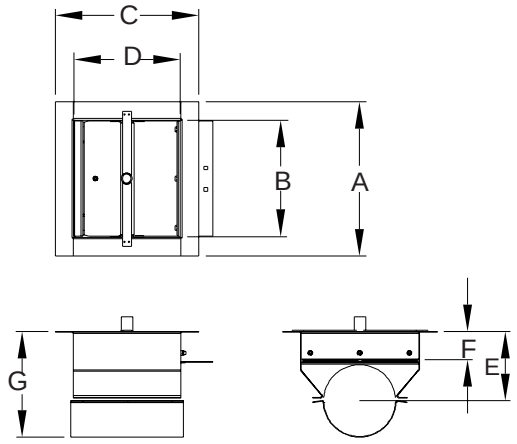
INLET HOPPER PART NUMBERS

Assembly Description (Hopper Width)	Part Number 8" System	Part Number 10" System	Dimension "C" inches (mm)
42 1/2" w/Drive-Over Grates	8089025	8109025	72 (1829)
42 1/2" Hopper Assm. Only	8081106	8101106	72 (1829)
62 1/2" w/Drive-Over Grates	8089027	8109027	92 (2337)
62 1/2" Hopper Assm. Only	8081107	8101107	92 (2337)
102 1/2" w Drive-Over Grates	8089029	8109029	132 (3353)
102 1/2" Hopper Assm. Only	8081108	8101108	132 (3353)
125" w/Drive-Over Grates	8089031		155 (3937)
125" Hopper Assm. Only	8081166		155 (3937)
144 1/2" w/Drive-Over Grates	8089033	8109033	168 (4267)
144 1/2" Hopper Assm. Only	8081109	8101109	168 (4267)

Dimension	8" System inches (mm)	10" System inches (mm)
"A" (Top of Drive-Over Grate)	22 1/2 (572)	24 3/8 (619)
"B" (To Hopper Flange)	18 3/4 (476)	20 3/4 (527)

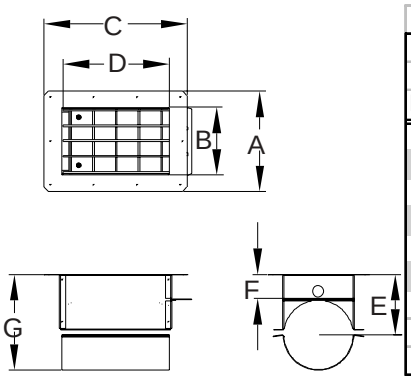
RACK & PINION CONTROLS

Dimension	8" System inches (mm)	10" System inches (mm)
Length	15 1/2 (394)	15 1/2 (394)
Top Width	7 1/4 (184)	7 1/4 (184)
Height	9 1/2 (241)	10 1/2 (267)
Assembly	P.N. GK1768	P.N. GK1772



CENTER WELLS

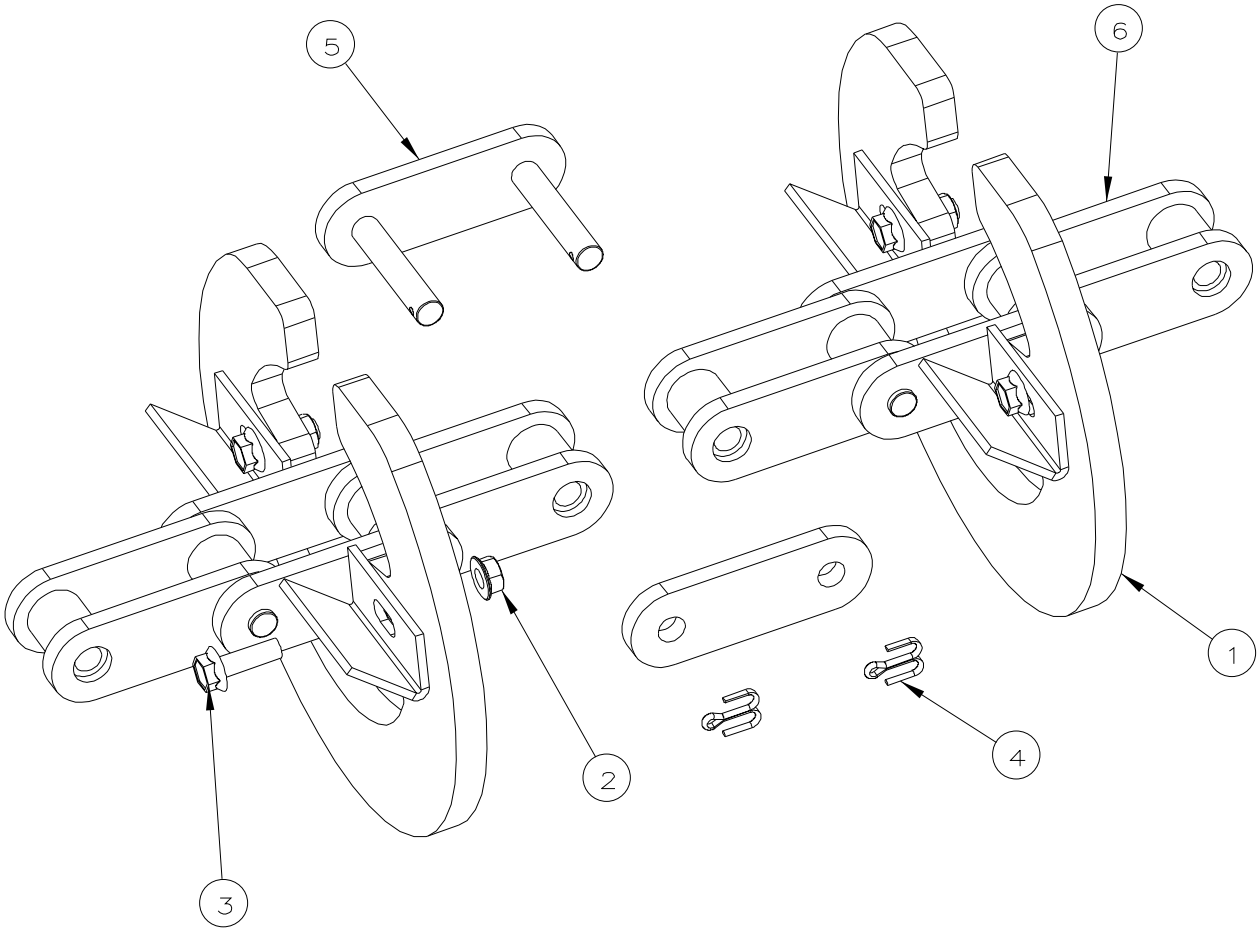
Dimension	8" System w/o Rollers inches (mm)	8" System with Rollers inches (mm)	10" System w/o Rollers inches (mm)	10" System with Rollers inches (mm)
"A"	17 1/8 (435)	17 1/8 (435)	17 1/8 (435)	22 (559)
"B"	13 (330)	13 (330)	13 (330)	18 (457)
"C"	16 (406)	16 (406)	18 (457)	18 (457)
"D"	12 (305)	12 (305)	13 7/8 (352)	13 7/8 (352)
"E"	7 3/4 (197)	7 3/4 (197)	9 1/2 (241)	9 1/2 (241)
"F"	3 1/8 (79)	3 1/8 (79)	3 3/8 (86)	3 3/8 (86)
"G"	11 3/4 (298)	11 3/4 (298)	14 1/2 (368)	14 1/2 (368)
Assembly	P.N. GK2785	P.N. 8081192	P.N.GK1943	P.N. 8101192



INTERMEDIATE WELLS

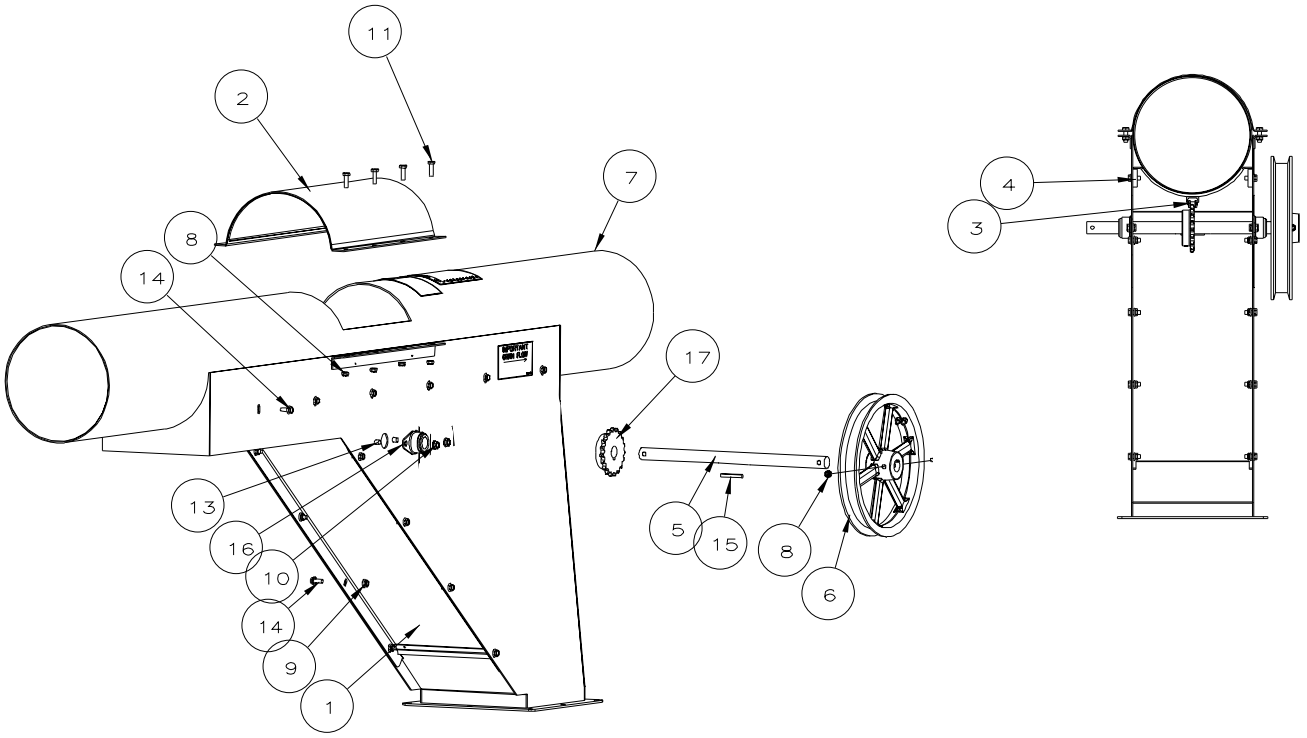
Dimension	8" System w/o Rollers inches (mm)	8" System w/o Slide Gate inches (mm)	10" System w/o Rollers inches (mm)	10" System with Rollers inches (mm)	w/o slide gate inches (mm)
"A"	12 1/8 (308)		17 1/8 (435)	17 1/8 (435)	17 1/8 (435)
"B"	8 (203)	12 (305)	13 (330)	13 (330)	13 (330)
"C"	16 (406)		18 (457)	18 (457)	22 (559)
"D"	12 (305)	14 (356)	13 7/8 (352)	13 7/8 (352)	17 7/8 (454)
"E"	7 3/4 (197)	14 (356)	9 1/2 (241)	9 1/2 (241)	9 1/2 (241)
"F"	1 1/2 (38)		2 1/8 (54)	2 1/8 (54)	
"G"	11 3/4 (298)		14 1/2 (368)	14 1/2 (368)	14 1/2 (368)
Assembly	P.N. GK2779	GK2718	P.N.GK1942	P.N. 8101193	P.N. 8101194

CHAIN AND PADDLES



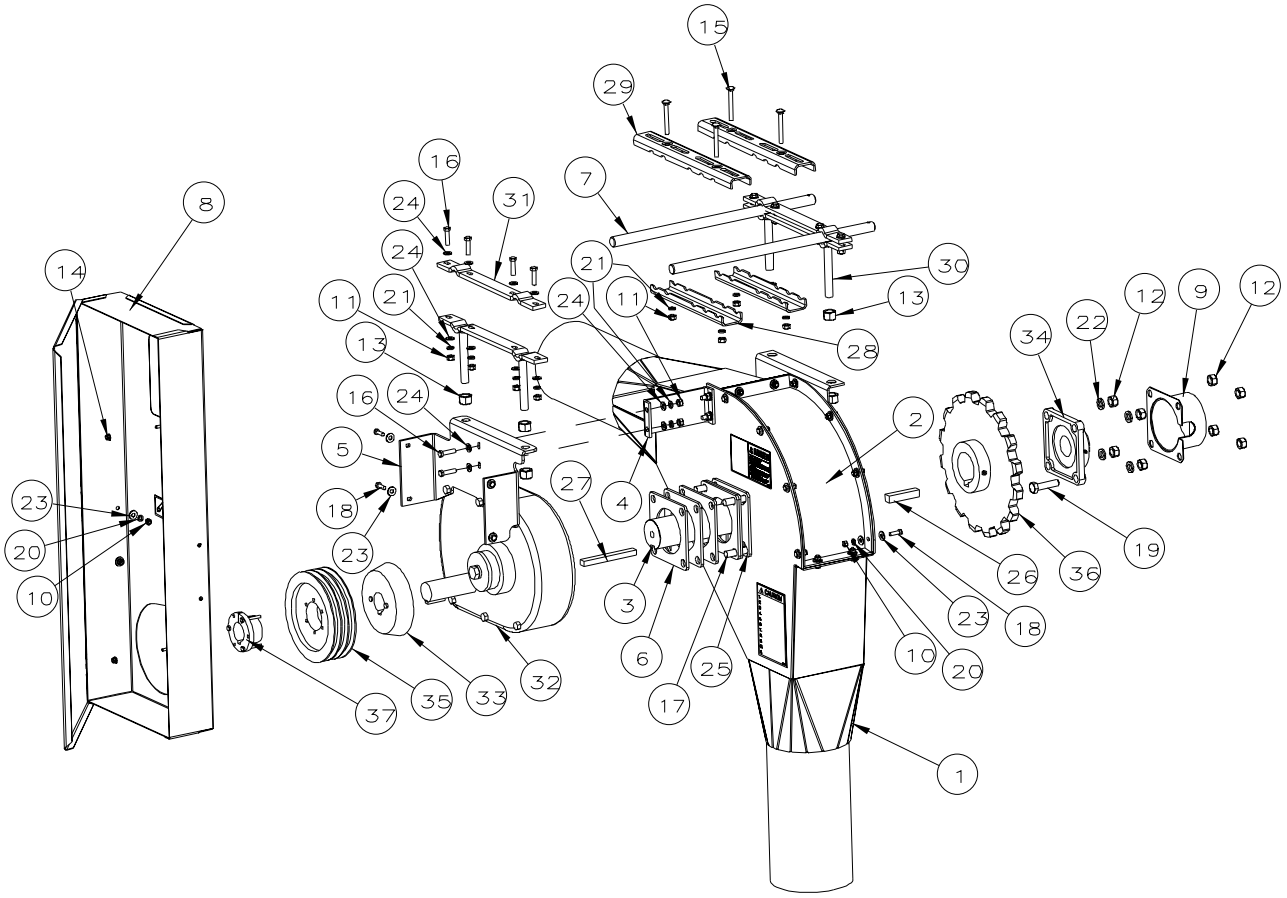
INDEX	PART	DESCRIPTION
1	8101145	PADDLE– 10", UHMW 10" CHAIN LOOP SYSTEM
	8081145	PADDLE– 8", UHMW 8" CHAIN LOOP SYSTEM
2		HEX FLANGE– LOCK NUT 5/16–18 UNC
3		SCREW– FLANGE WHIZ LOCK 5/16–18 UNC X 3/4,PLTD
4		PIN– COTTER, STANDARD 1/8" X 3/4" LONG,
5	CE-00764	LINK– CONNECTING, #81X WITH SIDE PLATE & COTTER PIN
	CE-00766	LINK– CONNECTING, #81XHH WITH SIDE PLATE & COTTER PIN
6	8101162 (8")	CHAIN– STANDARD, 81X WITH BRACKETS AND CONNECTING LINK
	8101163 (10")	CHAIN– HEAVY DUTY, 81XHH WITH BRACKETS AND CONNECTING LINK

DISCHARGE GATE



INDEX	PART	DESCRIPTION	QTY
1	8081093	ACCESS PANEL– WELDMENT 8" 90° DISCHARGE WITH GATE	1
	8101093	ACCESS PANEL– WELDMENT 10" 90° DISCHARGE WITH GATE	
2	8081096	ACCESS DOOR– ASSEMBLY 8" 90° DISCHARGE WITH GATE	1
	8101096	ACCESS DOOR– ASSEMBLY 10" 90° DISCHARGE WITH GATE	
3	8081097	SLIDE GATE– WELDMENT 8" 90° DISCHARGE WITH GATE	1
	8101097	SLIDE GATE– WELDMENT 10" 90° DISCHARGE WITH GATE	
4	8101101	RAIL– SLIDE GATE, 90 DISCH. ZINC PLATED 8101102	2
5	8081103	SHAFT– 1" OD X 16–1/4" ZINC PLATED 8081104	1
	8101103	SHAFT– 1" OD X 17–3/4" ZINC PLATED 8101104	
6	8101153	CONTROL WHEEL– W/CLAMP 90° DISCHARGE W/GATE	1
7	8081203	DISCHARGE W/GATE– 90, 8" ZINC PLATED 8081182	1
	8101203	DISCHARGE W/GATE– 90, 10" ZINC PLATED 8101182	
8		NUT– LOCK, 5/16–18 UNC NYLON LOCK, PLTD. GRD 2	9
9		NUT– LOCK,FLG,5/16–18UNC (WHIZ LOCK) PLTD.	8
10		NUT– LOCK,FLG, 3/8–16UNC (WHIZ LOCK) PLTD.	4
11		BOLT– HEX,STD THRD–GRD 2 5/16–18 UNC X 1, PLTD	8
12		BOLT– HEX,STD THRD–GRD 2 5/16–18 UNC X 3, PLTD	1
13		SCREW– FLANGE WHIZ LOCK 3/8–16 UNC X 1/2, PLTD	4
14		SCREW– FLANGE WHIZ LOCK 5/16–18 UNC X 3/4, PLTD	20
15		KEY– SQUARE 1/4" X 2"	1
16	PT0134	BEARING–W/HOUSING, 1" BRONZE INSERT, 2 HOLE	2
17	PT1088	SPROCKET– (HUB TYPE) 19 TOOTH, 1" ID, #50	1

DRIVE CORNER



8" CHAIN LOOP MOTORS, PULLEYS & BELTS (NOT SHOWN)										
Motors				Motor Pulleys		Motor Pulley Bushings		Drive Belts		
Hz	P.N.	Size	Voltage	P.N.	Description	P.N.	Decsription	P.N.	Size	Qty
60	3EL5069	15 hp	230,1 ph	PT0667	6.35" OD X SDS-2AB	PT0768	1 5/8" X SDS	PT1172	B73	2
60	1500-3	15 hp	230/460 3 ph	PT0667	6.35" OD X SDS-2AB	PT0768	1 5/8" X SDS	PT1172	B73	2
60	2000-3	20 hp	230/460 3 ph	PT0704	6.35" OD X SD-3AB	PT0798	1 5/8" X SD	PT1172	B73	3
60	2500-3	25 hp	230/460 3 ph	PT1298	7.35" OD X SK-3AB	PT0782	1 7/8" X SK	PT1167	B78	3
60	3000-3	30 hp	230/460 3 ph	PT1298	7.35" OD X SK-3AB	PT0782	1 7/8" X SK	PT1167	B78	3
50	1500-3-50	15 hp	220/380/440 3 ph	PT0732	7.75" OD X SK-2AB	PT0780	1 5/8" X SK	PT0494	B75	2
50	2000-3-50	20 hp	220/380/440 3 ph	PT0664	7.75" OD X SK-3AB	PT0780	1 5/8" X SK	PT0494	B75	3
50	2500-3-50	25 hp	220/380/440 3 ph	PT0666	8.95" OD X SK-3AB	PT0782	1 7/8" X SK	PT1165	B81	3
50	3000-3-50	30 hp	220/380/440 3 ph	PT0666	8.95" OD X SK-3AB	PT0782	1 7/8" X SK	PT1165	B81	3

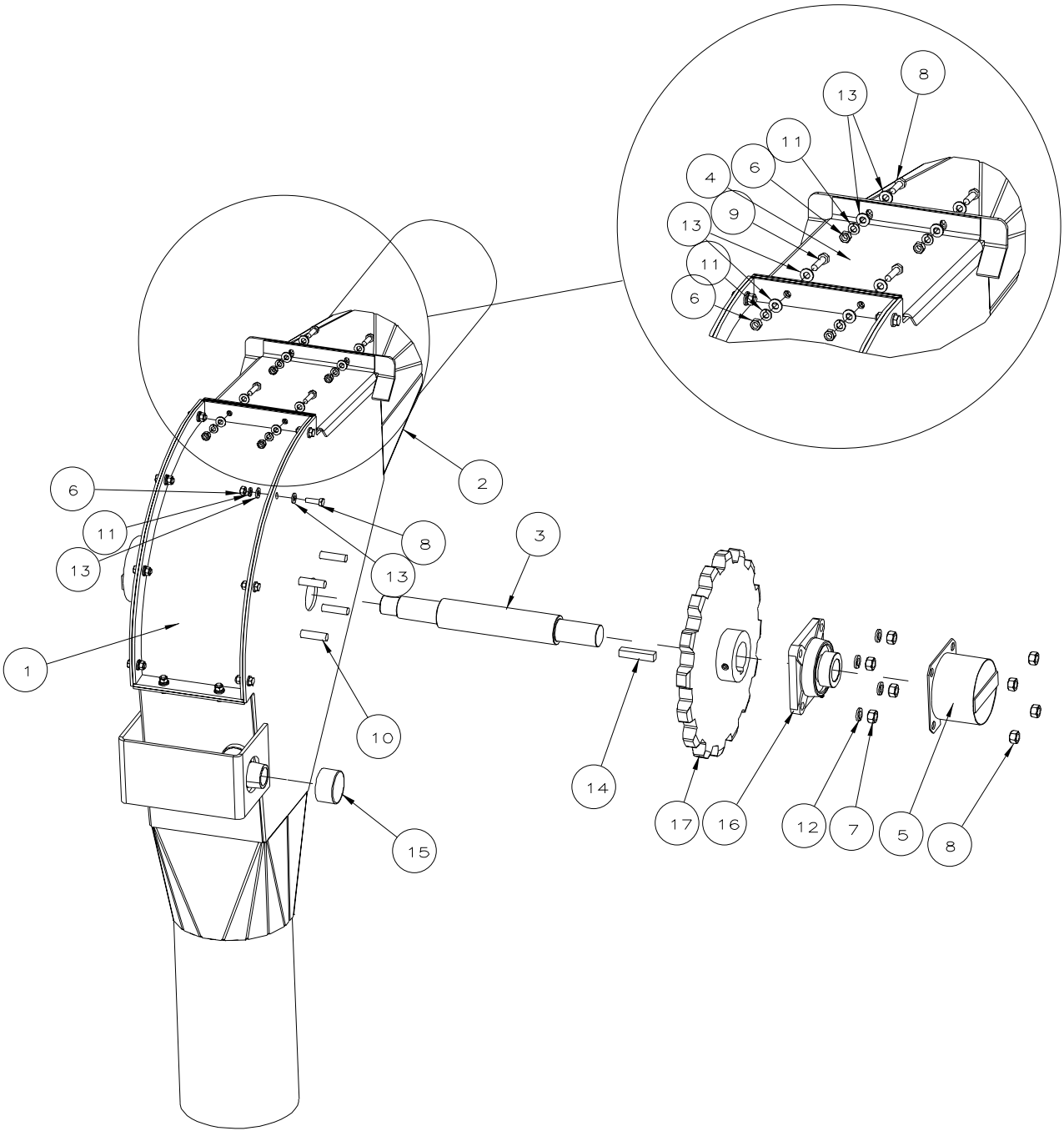
10" CHAIN LOOP MOTORS, PULLEYS & BELTS (NOT SHOWN)										
Motors				Motor Pulleys		Motor Pulley Bushings		Drive Belts		
Hz	P.N.	Size	Voltage	P.N.	Description	P.N.	Decsription	P.N.	Size	Qty
60	2000-3	20 hp	230/460 3 ph	PT0704	6.35" OD X SD-3AB	PT0798	1 5/8" X SD	PT0494	B75	3
60	2500-3	25 hp	230/460 3 ph	PT1298	7.35" OD X SK-3AB	PT0782	1 7/8" X SK	PT1165	B81	3
60	3000-3	30 hp	230/460 3 ph	PT1298	7.35" OD X SK-3AB	PT0782	1 7/8" X SK	PT1165	B81	3
60	4000-3	40 hp	230/460 3 ph	PT1299	7.35" OD X SK-4AB	PT0784	2 1/8" X SK	PT1185	B85	4
50	2000-3-50	20 hp	220/380/440 3 ph	PT0664	7.75" OD X SK-3AB	PT0780	1 5/8" X SK	PT1167	B78	3
50	2500-3-50	25 hp	220/380/440 3 ph	PT0666	8.95" OD X SK-3AB	PT0782	1 7/8" X SK	CP1033	B84	3
50	3000-3-50	30 hp	220/380/440 3 ph	PT0666	8.95" OD X SK-3AB	PT0782	1 7/8" X SK	CP1033	B84	3
50	4000-3-50	40 hp	220/380/440 3 ph	PT0737	8.95" OD X SK-4AB	PT0784	2 1/8" X SK	CP1034	B88	4

DRIVE CORNER

INDEX	PART	DESCRIPTION	QTY
1	8081005	CORNER– DRIVE, 8" WLDMT HOT DIPPED 8081006	1
	8101005	CORNER– DRIVE, 10" WLDMT HOT DIPPED 8101006	
2	8081009 8"	DOOR– INSPECTION, WELDMENT HOT DIPPED 8081010	1
	8101009 10"	DOOR– INSPECTION, WELDMENT HOT DIPPED 8101010	
3	8081027	SHAFT– CORNER, 8" (FOR 15& 20HP)	1
	8081030	SHAFT– CORNER, 8" (FOR 25& 30 HP MOTORS)	
	8101027	SHAFT– CORNER, 10" (FOR 15& 20 HP)	
	8101030	SHAFT– CORNER, 10" (FOR 25& 30 HP)	
	8101181	SHAFT– CORNER, 10" (FOR 40 HP MOTORS)	
4	8081037 (15–20HP)	BRACKET– MOTOR, (LOWER) HOT DIPPED 8081038	1
	8101037 (25–40HP)	BRACKET– MOTOR, (LOWER) HOT DIPPED 8101038	
	8101204 (40 HP)	BRACKET– MOTOR, (LOWER) HOT DIPPED 8101205	
5	8081149 8"	BRACKET– MOTOR (TOP)(15–20HP) HOT DIPPED 8081150	1
	8081039 8"	BRACKET– MOTOR (TOP)(25–30HP) HOT DIPPED 8081040	
	8101149 10"	BRACKET– MOTOR (TOP)(15–20HP) HOT DIPPED 8101150	
	8101039 10"	BRACKET– MOTOR (TOP)(25–30HP) HOT DIPPED 8101040	
	8101174 10"	BRACKET– MOTOR (TOP)(40HP) HOT DIPPED 8101175	
6	8101151	SPACER PLATE– FOR 415 REDUCER ZINC PLATED 8101152	3
	8101033	SPACER PLATE– FOR 515 REDUCER ZINC PLATED 8101034	5
	8101182 (40HP ONLY)	PLATE– REDUCER MOUNT, ZINC PLATED 8101183	1
7	8101035	ROD– MOTOR MOUNT ZINC PLATED 8101036	2
8	8101043 (15–30HP)	SHIELD– WELDMENT 8" & 10" DRIVE CORNER	1
	8101177 (40HP ONLY)	SHIELD– WELDMENT (40HP DRIVE CORNER)	
9	8101196	COVER– BEARING SHIELD ZINC PLATED 8101197	1
10		NUT– HEX, 5/16–18 UNC FINISHED, PLTD, GRADE 2	16
11		NUT– HEX, 3/8–16 UNC FINISHED, PLTD, GRADE 2	16
12		NUT– HEX, 5/8–11 UNC FINISHED, PLTD, GRADE 2	8
13		NUT– HEX, 3/4–10 UNC FINISHED, PLTD. GRADE 2	8
14		NUT– LOCK,FLG, 1/4–20UNC (WHIZ LOCK) PLTD.	2
15		BOLT– CAR,FUL THRD–GRD 2 3/8–16 UNC X 3, PLTD	4
16		BOLT– HEX,STD THRD–GRD 2 3/8–16 UNC X 1–1/2,PLTD	12
17	(15–20HP)	BOLT– HEX,STD THRD–GRD 5 5/8–11 UNC X 2–1/2", PLTD	4
	(25–30HP)	BOLT– HEX,STD THRD–GRD 5 5/8–11 UNC X 3", PLTD	

INDEX	PART	DESCRIPTION	QTY
17	(40HP)	BOLT– HEX,STD THRD–GRD 5 3/8–16 UNC X 1–1/2,PLTD	6
	(40HP)	BOLT– HEX,STD THRD–GRD 5 5/8–11 UNC X 1–1/2", PLTD	4
18		BOLT– HEX,STD THRD–GRD 5 5/16–18 UNC X 1, PLTD	16
19		BOLT– HEX,STD THRD–GRD 5 5/8–11 UNC X 2–1/2", PLTD	4
20		WASHER– LOCK, REGULAR 5/16, PLTD	16
21		WASHER– LOCK, REGULAR 3/8", PLTD	16
22		WASHER– LOCK, REGULAR 5/8", PLTD	8
23		WASHER– FLAT, STANDARD 5/16, PLTD	32
24		WASHER– FLAT, STANDARD 3/8", PLTD	24
25		WASHER– FLAT, STANDARD 5/8", PLTD.	4
26		KEY– SQUARE, 3/4" X 3–7/16"	1
27	(15–20HP)	KEY– RECTANGULAR 5/8" X 7/16" X 6"	1
	(25–30HP)	KEY– RECTANGULAR 3/4" X 1/2" X 6"	
	(40HP)	KEY– RECTANGULAR 7/8" X 11/16" X 8"	
28	GK1341	CLAMP– BOTTOM MOTOR MT.	2
29	GK1342	CLAMP– TOP, MOTOR MOUNT	2
30	GK1900	STRAP AND ROD– WELDMENT	2
31	GK1901	TOP STRAP–	2
32	MS5459	REDUCER– 415 FOR 15& 20 HP MOTORS	1
	MS5460	REDUCER– 515, FOR 25& 30 HP MOTORS	
	MS5461	REDUCER– 615 FOR 40 HP MOTOR	
33	MS5472	FAN– COOLING, FOR 415 REDUCER (15,20HP)	1
	MS5473	FAN– COOLING, FOR 515 REDUCER (25,30HP)	
	MS5474	FAN– COOLING, FOR 615 REDUCER (40HP)	
34	PT0144	BEARING– W/HOUSING, 2" ECC LK, EXT, RL, SPH, 2H	1
35	PT0732 (15HP)	PULLEY– (ARM) QD STYLE 7.75" OD X SK BUSH–2AB	1
	PT0664 (20HP)	PULLEY– (ARM) QD STYLE 7.75" OD X SK BUSH–3AB	
	PT0666 (25–30HP)	PULLEY– (ARM) QD STYLE 8.95" OD X SK BUSH–3AB	
	PT0737 (40HP)	PULLEY– (ARM) QD STYLE 8.95" OD X SK BUSH–4AB	
36	PT1086	SPROCKET– (HUB TYPE) 16 TOOTH, 3" ID, 81XH	1
37	PT0793 (15–20HP)	BUSHING– (QD STYLE) SK, 1–7/16 BORE,	1
	PT1289 (25–30HP)	BUSHING– (QD STYLE) SK, 1–15/16" BORE	
	PT1290 (40HP)	BUSHING– (QD STYLE) SK, 2–3/16" BORE	

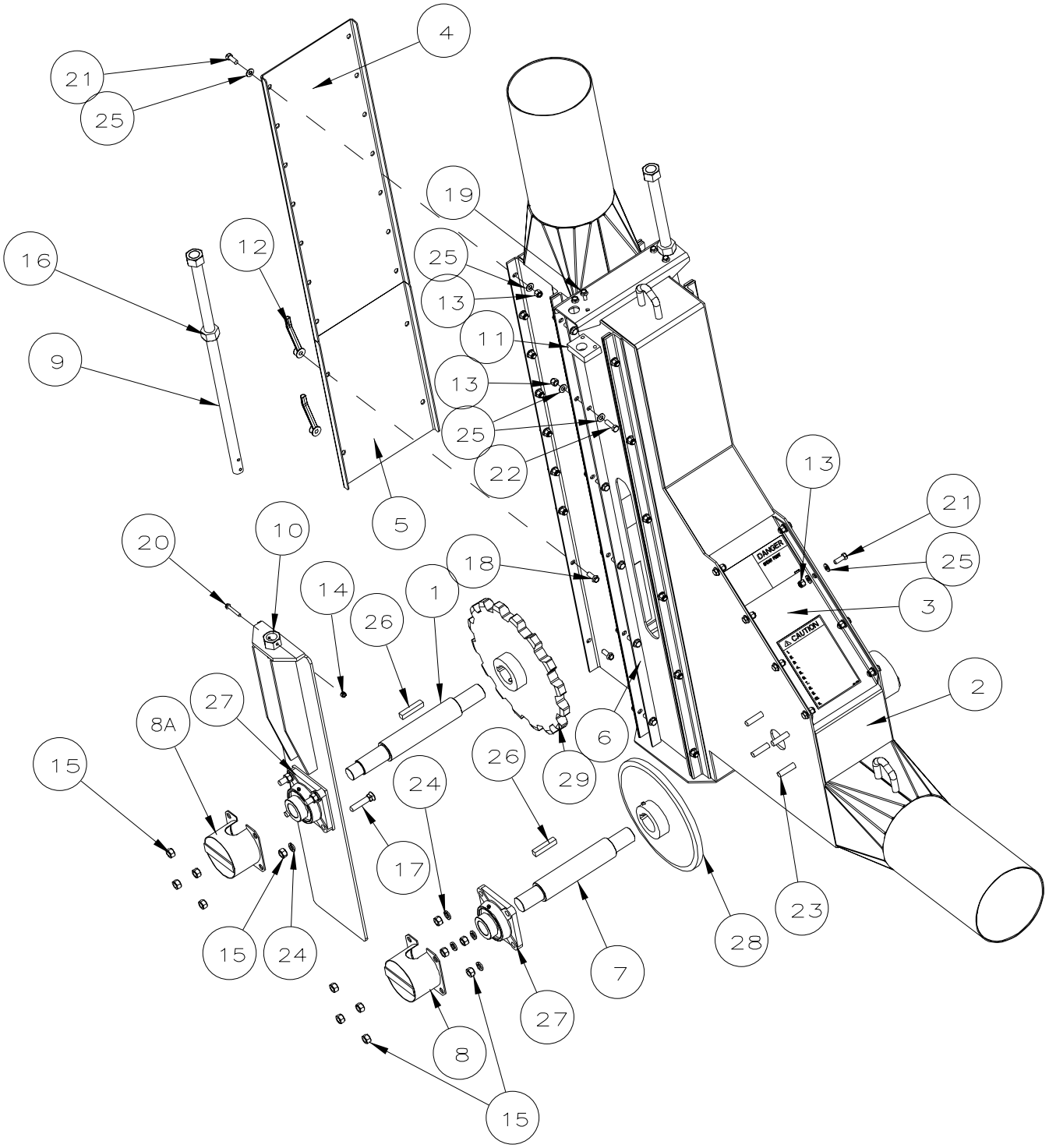
STANDARD CORNER



STANDARD CORNER

INDEX	PART	DESCRIPTION	QTY
1	8081009 8''	DOOR– INSPECTION, WELDMENT HOT DIPPED 8081010	1
	8101009 10''	DOOR– INSPECTION, WELDMENT HOT DIPPED 8101010	
2	8081022 8''	CORNER– STANDARD, 8'' WLDMT HOT DIPPED 8081023	1
	8101022 10''	CORNER– STANDARD, 10'' WLDMT HOT DIPPED 8101023	
3	8081029 8''	SHAFT– CORNER, 8'' STD/INSPECTION CORNER	1
	8101029 10''	SHAFT– CORNER, 10'' STD/INSPECTION CORNER	
4	8081032	ACCESS DOOR– 8'' STANDARD CORNER	1
	8101032	ACCESS DOOR– 10'' STANDARD CORNER	
5	8081196 8''	COVER– BEARING SHIELD ZINC PLATED 8081197	2
	8101196 10''	COVER– BEARING SHIELD ZINC PLATED 8101197	
6		NUT– HEX, 5/16–18 UNC FINISHED, PLTD, GRADE 2	14
7		NUT– HEX, 1/2–13 UNC FINISHED, PLTD. GRADE 2	16
8		BOLT– HEX,STD THRD–GRD 5 5/16–18 UNC X 1, PLTD	12
9		BOLT– HEX,STD THRD–GRD 5 5/16–18 UNC X 1–1/4,PLTD	2
10		BOLT– HEX,STD THRD–GRD 5 1/2–13 UNC X 2, PLTD	8
11		WASHER– LOCK, REGULAR 5/16, PLTD	14
12		WASHER– LOCK, REGULAR 1/2'', PLTD	8
13		WASHER– FLAT, SAE 5/16, PLTD	28
14		KEY– SQUARE, 1/2'' X 2–1/2''	1
15		FIT– CAP, PIPE 1–1/2, (SCH 40)	1
16	PT0145 8''	BEARING– W/HOUSING, 1–1/2'' ECC LK, WIDE, RL, CYL, 4H	2
	PT0144 10''	BEARING– W/HOUSING, 2'' ECC LK, WIDE, RL, CYL, 4H	
17	PT1093 8''	SPROCKET– (HUB TYPE) 16 TOOTH, 2'' ID, 81XH	1
	PT1086 10''	SPROCKET– (HUB TYPE) 16 TOOTH, 3'' ID, 81XH	

INSPECTION CORNER

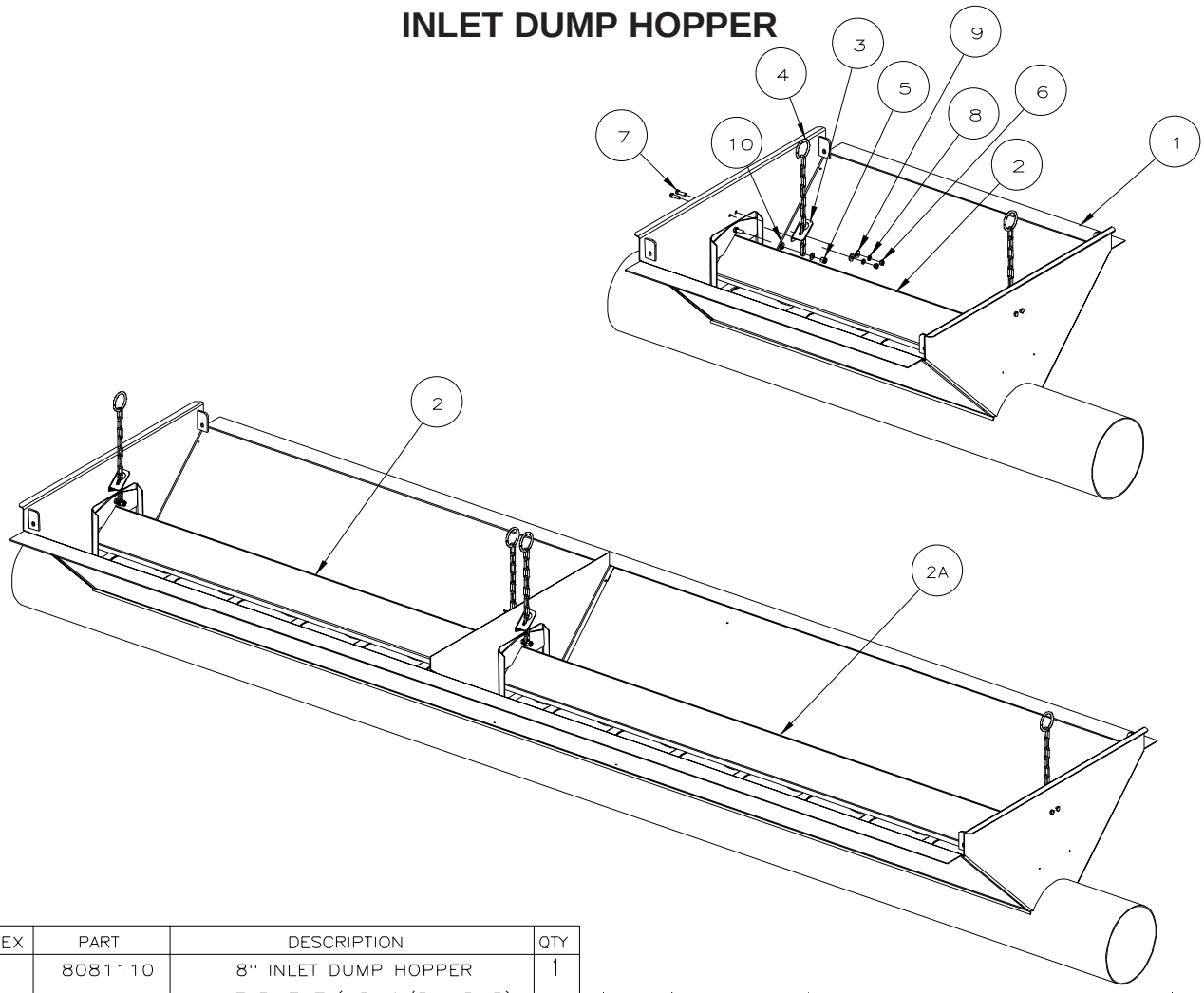


INSPECTION CORNER

INDEX	PART	DESCRIPTION	QTY
1	8081029	SHAFT– CORNER, 8" STD/INSPECTION CORNER	1
	8101029	SHAFT– CORNER, 10" STD/INSPECTION CORNER	
2	8081049	CORNER– INSPECTION, 8" WLDMT HOT DIPPED 8081050	1
	8101049	CORNER– INSPECTION, 10" WLDMT HOT DIPPED 8101050	
3	8081063	DOOR– INSPECTION, 45 DEG 8" INSPECTION CORNER	1
	8101063	DOOR– INSPECTION, 45 DEG 10" INSPECTION CORNER	
4	8081065	DOOR– INSPECTION, LONG 8" INSPECTION CORNER	1
	8101065	DOOR– INSPECTION, LONG 10" INSPECTION CORNER	
5	8081067	DOOR– INSPECTION, SHORT 8" INSPECTION CORNER	1
	8101067	DOOR– INSPECTION, SHORT 10" INSPECTION CORNER	
6	8081078	SLIDE PLATE– 56" LONG (8") HOT DIPPED 8081079	8
	8101078	SLIDE PLATE– 57" LONG (10") HOT DIPPED 8101079	
7	8081080	SHAFT– INSPECTION CORNER, 8" INSPECTION CORNER	1
	8101080	SHAFT– INSPECTION CORNER, 10" INSPECTION CORNER	
8	8081196 (FOR PT0145)	COVER– BEARING SHIELD ZINC PLATED 8081197	4
8A	8101196 (FOR PT0144)	COVER– BEARING SHIELD ZINC PLATED 8101197	2
9	8101075	TAKE UP SCREW– WELDMENT 6",8",10" INSPECTION CORNER	2
10	8101077	TAKE UP SCREW– NUT 6",8",10" INSPECTION CORNER	4
11	8101202	TAKE UP SCREW– BLOCK ZINC PLATED 8101201	2
12	1FH0582	NUT– HANDLE, IRON 3/8–16, ZINC PLTD	4

INDEX	PART	DESCRIPTION	QTY
13		NUT– LOCK, 3/8–16 UNC NYLON LOCK, PLTD. GRD 2	46
14		NUT– LOCK, 1/4–20UNC TWO–WAY, PLTD, GRADE 2	4
15		NUT– HEX, 1/2–13 UNC FINISHED, PLTD. GRADE 2	32
16		NUT– HEX, 1–8 UNC FINISHED, PLTD, GRADE 2	2
17	8" SYSTEM	BOLT–PLOW,#3 HEAD,RD,CSK 1/2–13UNCX2–1/2",SQ NECK	8
	10" SYSTEM	BOLT–PLOW,#3 HEAD,RD,CSK 5/8–11 UNC X 3",SQ NECK	8
18		SCREW– FLANGE WHIZ LOCK 3/8–16 UNC X 1, PLTD	4
19		SCREW– FLANGE WHIZ LOCK 5/16–18 UNC X 3/4, PLTD	4
20		BOLT– HEX,STD THRD–GRD 5 1/4–20 UNC X 1–3/4", PLTD	4
21		BOLT– HEX,STD THRD–GRD 5 3/8–16 UNC X 1, PLTD	22
22		BOLT– HEX,STD THRD–GRD 5 3/8–16 UNC X 1–1/4,PLTD	24
23		BOLT– HEX,STD THRD–GRD 5 1/2–13 UNC X 2, PLTD	8
24		WASHER– LOCK, REGULAR 1/2", PLTD	16
25		WASHER– FLAT, STANDARD 3/8", PLTD	92
26		KEY– SQUARE, 1/2" X 2–1/2"	2
27	PT0145	BEARING– W/HOUSING, 1–1/2" ECC LK, WIDE, RL, CYL, 4H	4
	PT0144	BEARING– W/HOUSING, 1–1/2" ECC LK, WIDE, RL, CYL, 4H	2
28	PT1087	IDLER WHEEL– 8" & 10" INSPECTION CORNER	1
29	PT1093	SPROCKET– (HUB TYPE) 16 TOOTH, 2" ID, 81XH	1
	PT1086	SPROCKET– (HUB TYPE) 16 TOOTH, 3" ID, 81XH	

INLET DUMP HOPPER



INDEX	PART	DESCRIPTION	QTY
1	8081110	8" INLET DUMP HOPPER WELDMENT (42-1/2" LONG)	1
	8081111	8" INLET DUMP HOPPER WELDMENT (62-1/2" LONG)	
	8081112	8" INLET DUMP HOPPER WELDMENT (102-1/2" LONG)	
	8081113	8" INLET DUMP HOPPER WELDMENT (144-1/2" LONG)	
	8081167	8" INLET DUMP HOPPER WELDMENT (125" LONG)	
1	8101110	10" INLET DUMP HOPPER WELDMENT (42-1/2" LONG)	1
	8101111	10" INLET DUMP HOPPER WELDMENT (62-1/2" LONG)	
	8101112	10" INLET DUMP HOPPER WELDMENT (102-1/2" LONG)	
	8101113	10" INLET DUMP HOPPER WELDMENT (144-1/2" LONG)	
2	8081127	SHIELD- CENTER, 42" LONG 8" INLET DUMP HOPPER WLDMT	1
2 2A	8081128	SHIELD- CENTER, 62" LONG 8" INLET DUMP HOPPER WLDMT	
2A	8081129	SHIELD- CENTER, 81-1/2" LONG 8" INLET DUMP HOPPER WLDMT	
2	8081130	SHIELD- CENTER, 102" LONG 8" INLET DUMP HOPPER WLDMT	
2	8101127	SHIELD- CENTER, 42" LONG 10" INLET DUMP HOPPER WLDMT	1
2	8101128	SHIELD- CENTER, 62" LONG 10" INLET DUMP HOPPER WLDMT	
2A	8101129	SHIELD- CENTER, 81-1/2" LONG 10" INLET DUMP HOPPER WLDMT	
2	8101130	SHIELD- CENTER, 102" LONG 10" INLET DUMP HOPPER WLDMT	
3	8101137	BRACKET- CHAIN SUPPORT INLET DUMP HOPPER	2
4	8101138	CHAIN- CTR SHIELD SPRT, WLDMT INLET DUMP HOPPER	2
5		NUT- LOCK, 3/8-16 UNC NYLON LOCK, PLTD. GRD 2	2
6		NUT- HEX, 5/16-18 UNC FINISHED, PLTD, GRADE 2	4
7		BOLT- HEX,STD THRD-GRD 2 5/16-18 UNC X 1, PLTD	4
8		WASHER- LOCK, REGULAR 5/16, PLTD	4
9		WASHER- FLAT, STANDARD 5/16, PLTD	4
10		WASHER- FLAT, STANDARD 3/8", PLTD	4

Trouble Shooting

1. **Chain is slipping on the drive sprocket**
   a. Check the chain tension and tighten at the inspection corner if necessary.
   b. Check for obstructions in the system. The paddles may be catching at joints in the tubing.
   c. Check to make sure that the sprockets are centered in the corner housings.
   d. Avoid starting the system under load. Let the system run until empty before shutting down. If shut down does occur while the system is loaded, remove as much grain as possible and turn the corner sprockets by hand with a pipe wrench to loosen the chain before turning the power on.

2. **Grain recycling back to the fill point**
   a. Check to make sure that the discharge gate is open.
   b. Check and clean out the slide gate in the discharge gate.
   c. Chain speed may be too fast. The drive corner shaft speed should be 94 rpm.

3. **Drive belt are slipping**
   a. Check the drive motor amperage and make sure that the motor is not overloaded.
   b. Tighten belts if slippage occurs when the drive motor is not fully loaded.

4. **System is not delivering full capacity**
   a. Make sure that grain is not over running the discharge gate and returning to the fill-point.
   b. Chain speed may be too slow. The drive corner shaft speed should be 94 rpm.
   c. High moisture grain will move at a lower capacity than dry grain.
   d. Check for obstructions in the inlet hopper.
   e. Check to make sure that the chain has not been installed with a twist. See page 13.

5. **Paddles breaking**
   a. Check to make sure that the sprockets are centered in the corner housings.
   b. Avoid starting the system under load. Let the system run until empty before shutting down. If shut down does occur while the system is loaded, remove as much grain as possible and turn the corner sprockets by hand with a pipe wrench to loosen the chain before turning the power on.
   c. Check to make sure that the paddles are fastened securely to the chain brackets.
   d. Let the system “break-in” and the tubing become polished before loading to full capacity.

6. **Chain Failure**
   a. Check to make sure that the master connecting links have been installed correctly. See page 14.
   b. Check for obstructions in the system
   c. Avoid starting the system under load. Let the system run until empty before shutting down.

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Rev: January, 2002

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