

# **Chain Loop System**

**Owner's Manual** 

**PNEG-2177** 

Version 1.0

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All information, illustrations, photos, and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

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# **1** Safety Cautions

#### **Topics Covered in this Chapter**

- Safety Guidelines
- Cautionary Symbol Definitions
- Safety Precautions
- Safety Decals
- Safety Sign-off Sheet

# Safety Guidelines

Safety guidelines are general-to-specific safety rules that must be followed at all times. This manual is written to help you understand safe operating procedures and problems that can be encountered by the operator and other personnel when using this equipment. Save these safety guidelines for future reference.

As owner or operator, you are responsible for understanding the requirements, hazards, and precautions that exist and to inform others as required. Unqualified persons must stay out of the work area at all times.

Alterations must not be made to the equipment. Alterations can produce dangerous situations resulting in SERIOUS INJURY or DEATH.

This equipment must be installed in accordance with the current installation codes and applicable regulations, which must be carefully followed in all cases. Authorities having jurisdiction must be consulted before installations are made.

When necessary, you must consider the installation location relative to electrical, fuel and water utilities.

Personnel operating or working around equipment must read this manual. This manual must be delivered with equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.

ST-0001-3

# **Cautionary Symbol Definitions**

Cautionary symbols appear in this manual and on product decals. The symbols alert the user of potential safety hazards, prohibited activities and mandatory actions. To help you recognize this information, we use the symbols that are defined below.

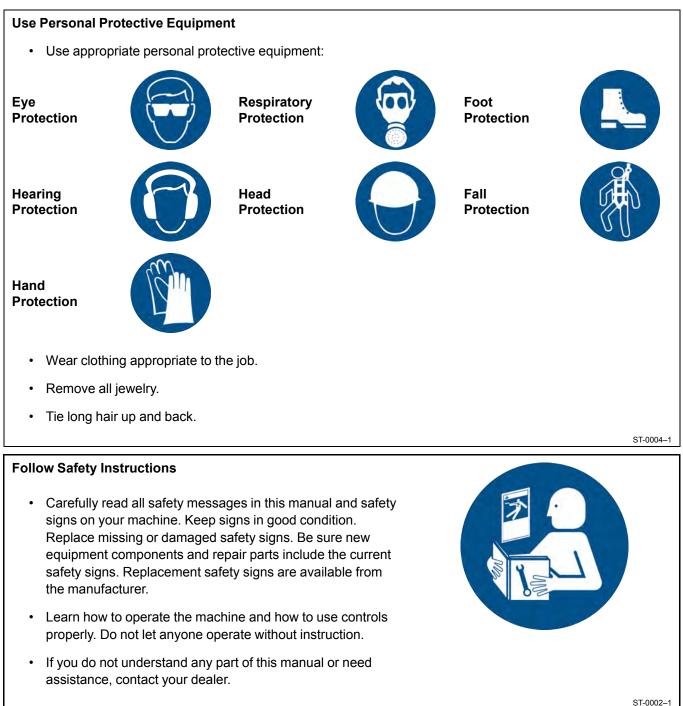
Table 1-1 Description of the different cautionary s	symbols
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Symbol	Description
	This symbol indicates an imminently hazardous situation which, if not avoided, will result in serious injury or death.
<b>WARNING</b>	This symbol indicates a potentially hazardous situation which, if not avoided, <b>can result in serious injury or death.</b>
	This symbol indicates a potentially hazardous situation which, if not avoided, <b>can result in minor or moderate injury.</b>
NOTICE	This symbol is used to address practices not related to personal injury.
$\triangle$	This symbol indicates a general hazard.
$\bigcirc$	This symbol indicates a prohibited activity.
	This symbol indicates a mandatory action.

ST-0005–2

# **Safety Precautions**

This is all the topics contained in the Master Safety Reference File. Mainly used to verify formatting before releasing the topic.



#### Maintain Equipment and Work Area

- Understand service procedures before doing work. Keep area clean and dry.
- Never service equipment while it is operating. Keep hands, feet, and clothing away from moving parts.
- Keep your equipment in proper working condition. Replace worn or broken parts immediately.

#### **Operate Motor Properly**

- · All electrical connections must be made in accordance with applicable local codes (National Electrical Code for the US, Canadian Electric Code, or EN60204 along with applicable European Directives for Europe). Make sure equipment and bins are properly grounded.
- Lock-out power before resetting motor overloads.
- Do not repetitively stop and start the drive in order to free a plugged condition. Jogging the drive in this manner can damage the equipment and drive components.

#### **Stay Clear of Moving Parts**

- Entanglement in rotating sprocket or moving chain will cause serious injury or death.
- Keep all guards and covers in place at all times.
- · Lock-out power source before making adjustments, cleaning, or maintaining equipment.

#### Sharp Edge Hazard

- · This product has sharp edges, which can cause serious injury.
- To avoid injury, handle sharp edges with caution and always use proper protective clothing and equipment.







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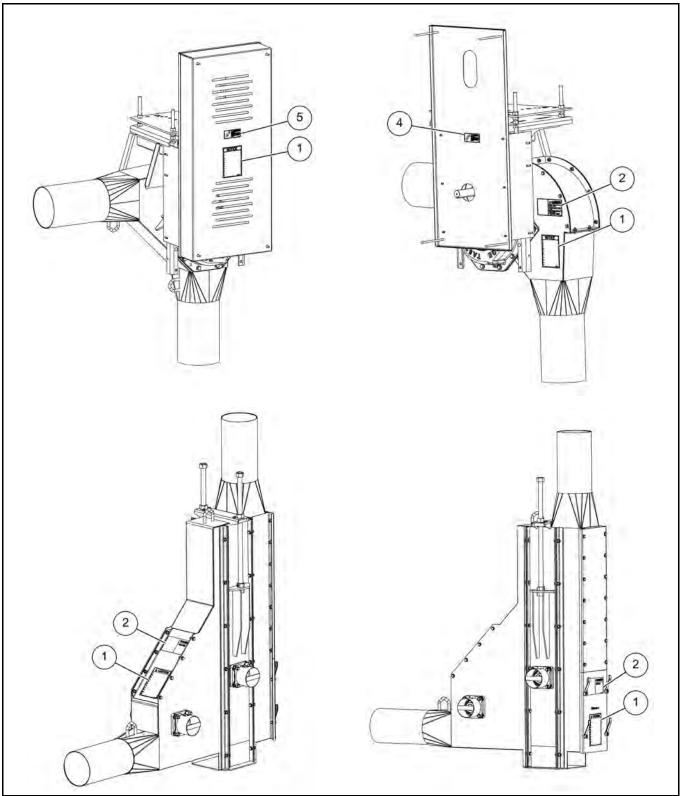
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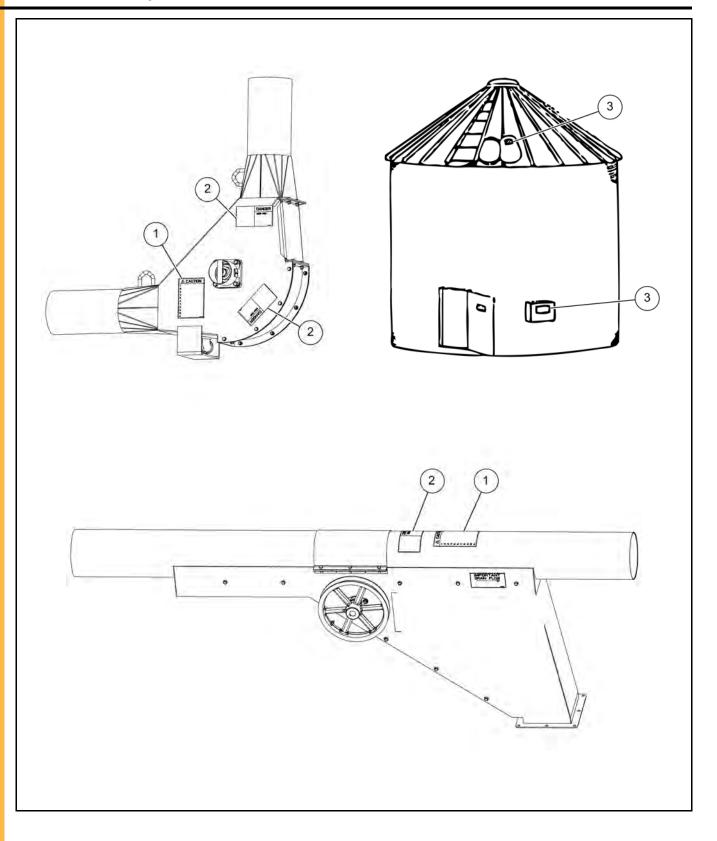
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# Safety Decals

The safety decals on your equipment are safety indicators which must be carefully read and understood by all personnel involved in the installation, operation, service and maintenance of the equipment.

## **Decals Placement**





Ref #	Decal No.	Decal	Description
1	DC-1379	Denot perate while under the influence of drugs or alcohol.         9. Do not operate while under the influence of drugs or alcohol.         9. Do not operate while under the influence of drugs or alcohol.         9. Do not operate unless all safety equipment, switches, guards, and shields are securely in place and operational.         9. Any electrical wiring or service work must be performed by a qualified electrician. It must meet all state and operating area.         9. Do not allow children in the area of operation.         9. Do not allow children in the area of operation.         9. Do not allow children in the area of operation.         9. Disconnect and lockout power before making any adjustments or performing any service work.         9. Disconnect power prior to resetting any motor overload.         10. Make certain all electric motors are grounded.         11. Replace all worn or damaged labels immediately.         OBM Douplin: 217-228-4421	Decal, Notice
2	8107001	ASI Crosp 217.5254421 <b>Big Crosp 217.5254421</b> <b>Big Characteristics</b> <b>Big Characteristics</b>	Decal, Danger
3	8107006	Monoperative       And the second secon	Decal, Danger

Ref #	Decal No.	Decal	Description
4	DC-994	ACCOUNT OF CHARACTER SHEAR POINT Keep hands clear of moving parts. Do not operate with guard removed. Disconnect and lockout power before servicing. DC-894	Decal, Danger Shear Point
5	DC-995	Keep hands clear of moving parts. Do not operate with guard removed. Disconnect and lockout power before servicing.	Decal, Warning Shear Point

To replace a damaged or missing decal, contact us to receive a free replacement.

#### **GSI Decals**

1004 E. Illinois St. Assumption, IL 62510 Tel: 1-217-226-4421

# Safety Sign-off Sheet

Below is a sign-off sheet that can be used to verify that all personnel have read and understood the safety instructions. This sign-off sheet is provided for your convenience and personal record keeping.

Date	Employee Name	Supervisor Name

ST-0007

# NOTES

# **2** Information

### **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 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.

	8 in.	10 in.	12 in.
*Maximum capacity in BPH (Tons/Hr)	4000 (100)	6000 (150)	1000 (250)
Chain travel in FPM (Meters, Min)	325 (99)	325 (99)	400 (122)
Head shaft RPM	94	94	83
Corner housing thickness, galvanized (mm)	7 Ga. (4.8)	5 Ga. (4.8)	3/16 in. (4.8)
Galvanized tubing wall thickness (mm)	12 Ga. (2.7)	12 Ga. (2.7)	10 Ga. (3.47) 7 Ga. (5)
Paddle thickness (UHMW) (mm)	3/8 in. (9.5)	1/2 in. (12.7)	1/2 in. (12.7)
Corner shaft diameter (mm)	2 in. (50.8)	3 in. (76.2)	3-7/16 in. (87.3)
Conveyor chain	81XHH	81XHH	81XHH
Conveyor sprocket	16 Tooth	16 Tooth	22 Tooth
*Power requirements			
Per foot vertical (KW/M)	0.35 (0.86)	0.5 (1.22)	0.75 (1.84)
Per foot horizontal (KW/M)	0.08 (0.19)	0.11 (0.27)	0.18 (0.44)
Weight per foot lbs (KG/M)			
Empty	12 (17.9)	15 (22.3)	24 (35.8) 30 (44.7)
Full of 56 lb. per bu. material	28 (41.7)	40 (59.5)	59 (88) 65 (97)

Table 2-1 Chain loop system specifications

\*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.



Make sure that the main power isolator is locked in the "OFF" position and that the only key is in the possession before removing any shields and inspection covers.

- 1. Check all safety decals and replace any that are worn, missing or illegible. Refer to *Safety Decals, page* 9 for decal part numbers and location.
- 2. Check for proper chain tension and adjust if necessary. See *Chain and Paddles, page 35* for full instructions.
- 3. 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.
- 4. Check the lubricant level in the gear reducer at the drive corner. See *Dodge Gear Reducer, page 21* for lubrication specifications.

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

- 5. Check the condition of the drive belts and make sure that they are aligned and tensioned properly.
- 6. Check that the corner sprockets are centered in the housings. Re-align the sprockets and tighten the set screws if necessary.
- 7. Check overall structural integrity of the Chain Loop System and make sure that all supports and components are secure.
- 8. 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.



# **3** Operation

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 breaking 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 as 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.



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

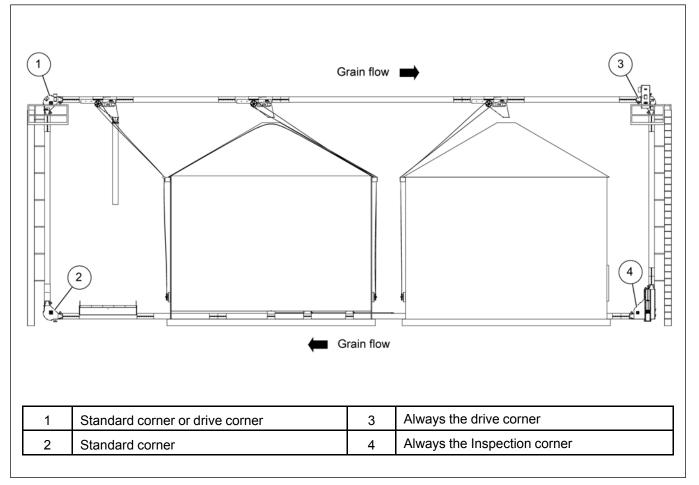
#### **Chapter 3: Operation**

# 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. Run the Chain Loop System until all remaining grain in the tube has been returned to the withdrawal bin.

Shut down the drive motor. 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 all power to 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. Shut down and lock out the Chain Loop System before installing the sweep auger.

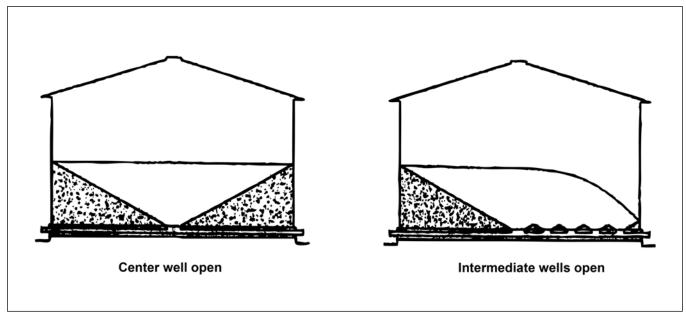


Figure 3-2 Grain unload using sweep auger

# NOTES





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 the system. When referring to the dodge manual, note that the reducer is mounted in the "D" position on the Chain Loop.

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

Use a high-grade petroleum base rust and oxidation inhibited SAE 90 weight gear oil for ambient temperatures from 15°F to 125°F (-10°C to 52°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:

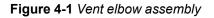
Model	Quarts (qt)	Liters (L)	Motors HP
TA3203H	4.0	3.80	15-20
TA4207H	7.3	6.90	25-30
TA5215H	12.9	12.2	40
TA6307H	15.8	15.0	60

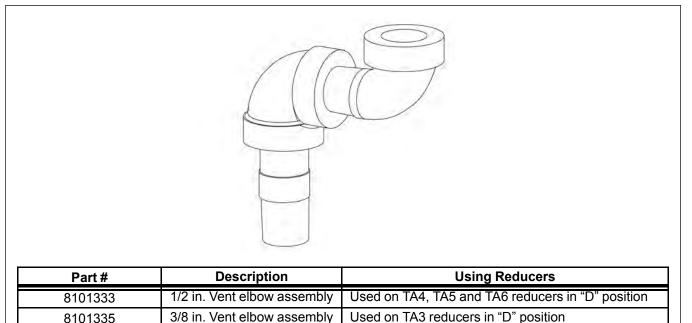
The oil should be changed at the beginning of every harvesting season if the Chain Loop is used for seasonal grain handling. It should be changed after 2500 hours of operation or every 6 months if used under average industrial conditions. The oil should be changed more frequently if used under extreme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

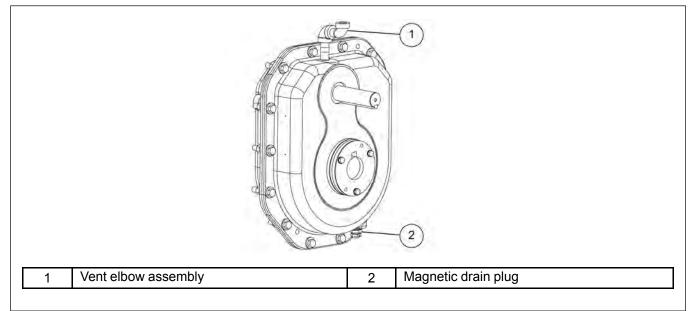




#### To install vent elbow assembly:

NOTE: Reducer is shown in "D" position with input shaft at the top

Figure 4-2 Installing the vent elbow assembly



- Remove magnetic drain plug from the top of the reducer and replace with the proper vent elbow assembly.
- Remove vent plug from the bottom of the reducer and replace with the magnetic drain plug from the top.
- Install the vent plug in the top of the vent elbow assembly.

## **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 in. when the chain is properly tensioned. See *Chain and Paddles, page 35* for details.

The Chain Loop chain has connecting links spaced every 10 ft. Check these links to make sure that they are securely fastened and that the cotter pins are bent back correctly. See *Figure 5-13, page 36*.

Check the lock nuts 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 counterclockwise 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 *Figure 5-14, page 37*.

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 amount of multi-purpose grease every 50 hours. Check bearings for wear and that the locking collars are secure.

## **Corner Sprockets**

Inspect the condition of corner sprockets for teeth wear and that they are centrally aligned in each of the corner housings.

# NOTES

# **5** Installation

#### **Topics Covered in this Chapter**

- General Information
- Tube and Corner Assembly
- Drive Assembly
- Chain Loop Torque Arm Repair Kit
- Drive Box Assembly Instructions
- Discharge with Gate Assembly
- Unload Well Installation
- Chain and Paddles
- Inspection Corner
- Ground Control Kit for Discharge Gates
- Inlet Dump Hopper Assembly

# **General Information**

# 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 in.	29 lbs./ft. (43.1 Kg/m)	411 lbs. (187 Kg)	342 lbs. (155 Kg)	1103 lbs. (502 Kg)
10 in.	40 lbs./ft. (59.5 Kg/m)	533 lbs. (242 Kg)	489 lbs. (222 Kg)	1394 lbs. (634 Kg)
12 in. 7 Gauge	65 lbs./ft. (97 Kg/m)	1084 lbs. (493 Kg)	933 lbs. (424 Kg)	2420 lbs. (1101 Kg)

NOTE: Each calculation includes the respective chain.

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. **The inspection corner is always located on the ground furthest from the loading hopper. This allows proper chain tension-ing throughout the system.** See *Figure 3-1, page 18*.

#### **Chapter 5: Installation**

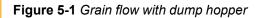
It is important to slide components together tightly and to have the clamping band centered on the joint before tightening the bands. All cuts should be made square and the inside diameter chamfered to ensure that the ends butt together tightly during assembly. Even small gaps left in the tubing system during assembly will gradually close during operation of the Chain Loop causing the chain to require frequent inspection and tightening. See *Tube and Corner Assembly, page 27*.

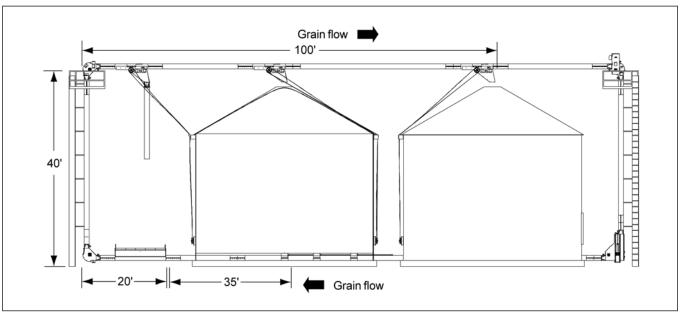
General guidelines to consider are:

- 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.
- 6. There can be no twist in the chain/paddles. The opening should be oriented so that the open side of the paddle will pass across the sprockets.

System Size	Vertical Factor	Horizontal Factor
8 in. 0.35 HP/loaded foot (0.86 Kw/M)		0.08 HP/loaded foot (0.19 Kw/M)
10 in. 0.50 HP/loaded foot (1.22 Kw/M)		0.11 HP/loaded foot (0.27 Kw/M)
12 in.	0.75 HP/loaded foot (1.84 Kw/M)	0.18 HP/loaded foot (0.44 Kw/M)

The system should be designed to minimize the distance grain must be 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, then the motor size for this 8 in. system would be: 0.35 HP/ft x 40 vertical ft. = 14 HP plus 0.08 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, then the motor size would be:
   0.35 HP/ft x 40 vertical ft. = 14 HP plus
   0.08 HP/ft x (35 + 20 + 100 horizontal ft.) = 12.4 HP / 26.4 (Use a 30 HP motor)

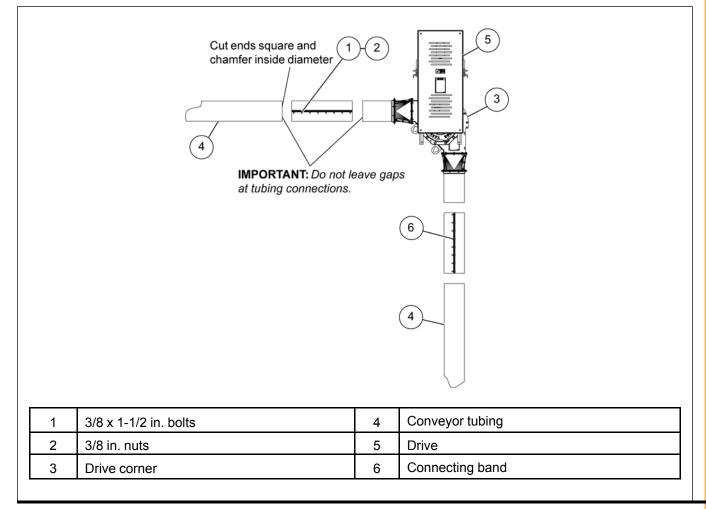
# **Tube and Corner Assembly**

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 must be 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.

Figure 5-2 Tube and corner assembly



# **Drive Assembly**

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

#### IMPORTANT:

- 1. Use the proper size motor to ensure satisfactory operation. Too small of a motor will not supply the horsepower required to achieve capacity and damage to the motor may occur. Too large of a motor may cause high stress on components resulting in shorter life. See Table 2-1, page 15 for motor size specifications.
- 2. 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 in. 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.

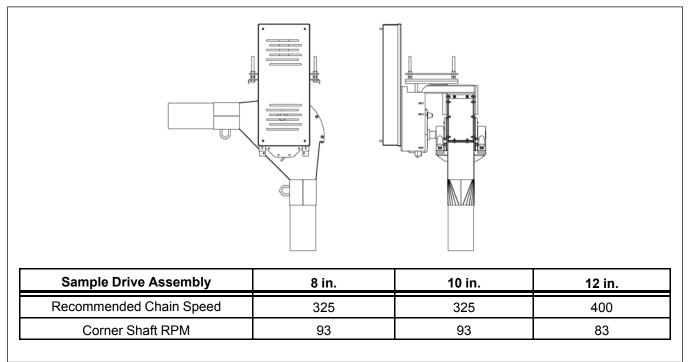
Check that all fasteners are tightly secured. Close and fasten belt guard.



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 and O gear oil. Follow the instructions on the reducer name plate, warning tags and in the installation manual attached to the reducer.

#### Figure 5-3 Sample drive assembly



# Chain Loop Torque Arm Repair Kit

#### **Before You Begin**



Secure the motor mount from both sides to prevent the drive unit from pivoting either direction on the shaft.

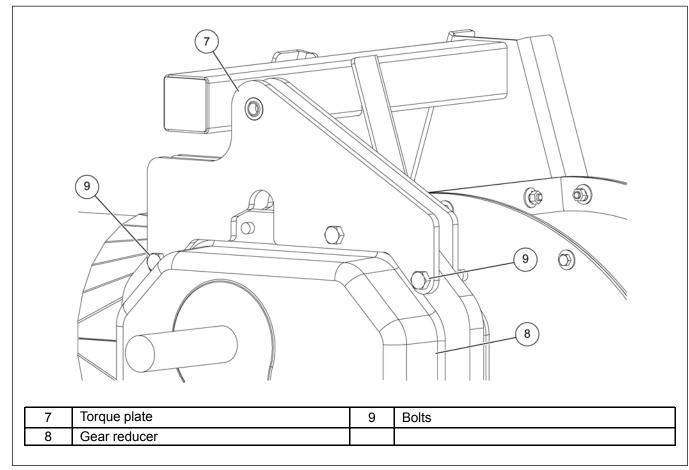
NOTE: Motor mount and belt guard removed for clarity.

1. Attach both torque plate (7) assemblies to each side of the gear reducer (8) using the bolts provided. Re-use the lock washer and hex nut provided with the gear reducer.

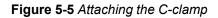
#### NOTE:

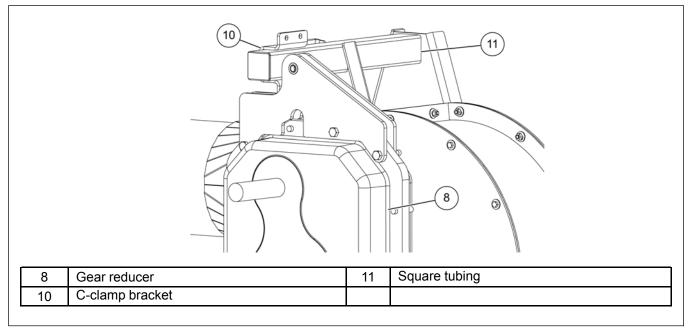
- a. Leave the hardware loose to allow for ease of assembly.
- b. 3/8 in. bolts (9) are used for TA3 reducer.
- c. 1/2 in. bolts (9) are used for TA4 and TA5 reducers.

Figure 5-4 Attaching the torque plate



2. Place the C-clamp bracket (8) to the back side of the square tubing (11).

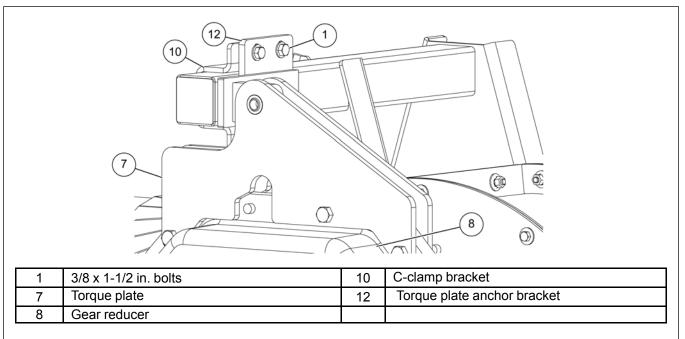




3. Place the torque plate anchor bracket (12) between the torque plate assemblies (7) and attach it to the C-clamp (10) using the 3/8 in. hardware (1).

#### NOTE: Leave the hardware loose to allow for ease of assembly.

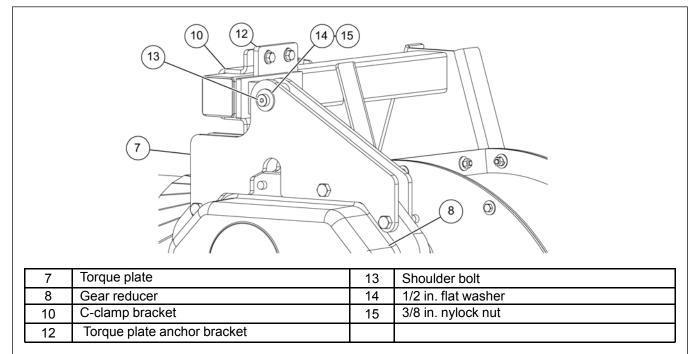
Figure 5-6 Attaching the anchor bracket to the C-clamp



Attach the torque plate anchor bracket (12) to the torque plates (7) using the two 1/2 in. flat washers (14), shoulder bolt (13) and 3/8 in. nylock nut (15). Refer to *Figure 5-7, page 31*.

5. Tighten the hardware attaching the torque plate assemblies (7) to the gear reducer (8) after tightening the shoulder bolt (13) hardware.

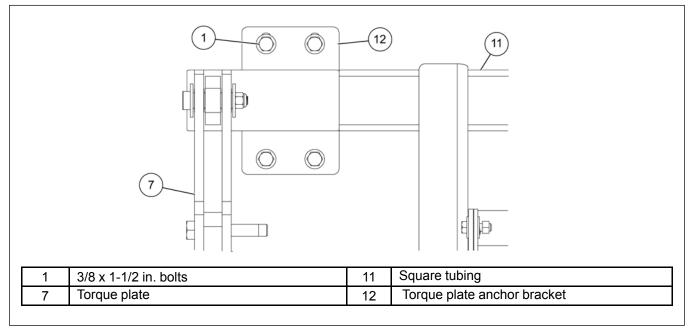
**Figure 5-7** Attaching the anchor bracket to the torque plate



Move the torque plate anchor bracket (12) on the square tube (11) so the torque plate assemblies (7) are aligned vertical. Once aligned, the 3/8 in. hardware (1) attaching the torque plate anchor bracket (12) to the C-clamp can be tightened.

NOTE: Washers must be on the outside of each torque plate (7) assembly.

Figure 5-8 Aligning the torque plate assemblies



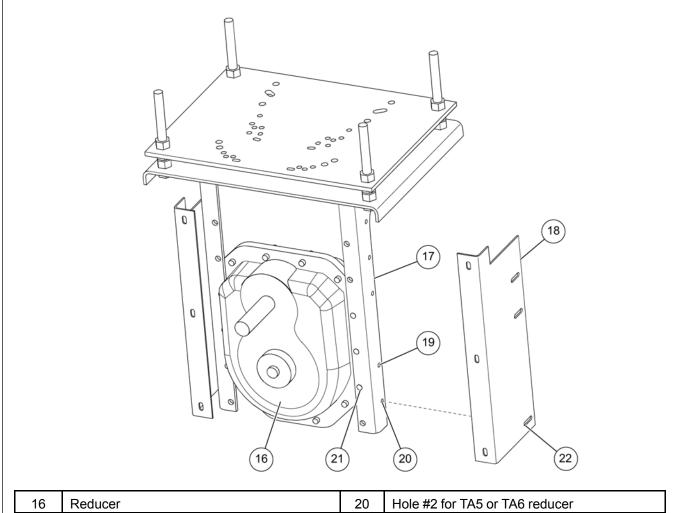
# **Drive Box Assembly Instructions**

The below image shows the details for assembling the drive box.

#### NOTE:

- 1. When attaching the reducer to the motor mount frames, fasten reducer starting with second hole (21) from the bottom. Use the hardware supplied in the reducer.
- 2. When attaching the belt guard bracket to the motor mount frame, align the lower slot (22) with hole #1 (19) when using a TA3 or TA4 reducer. (Use hole #2 (20) when using a TA5 or TA6 reducer.)

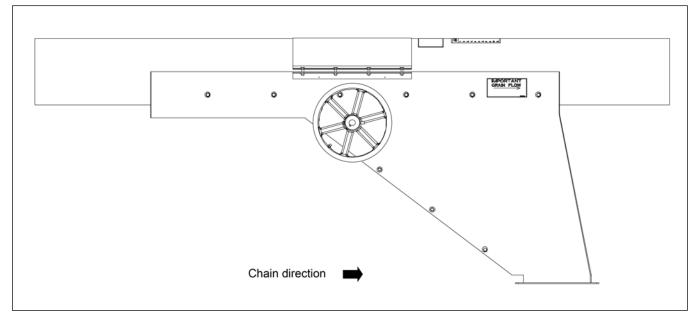
Figure 5-9 Drive box assembly

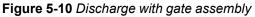


16	Reducer	20	Hole #2 for TA5 or TA6 reducer
17	Motor mount frame	21	Second hole for attaching reducer
18	Belt guard bracket	22	Lower slot in belt guard bracket
19	Hole #1 for TA3 or TA4 reducer		

# **Discharge with Gate Assembly**

The discharge unit includes an 8 ft. long section (12 ft. long in 12 in. system). 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 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 must be removed by chamfering the inside diameter. Join tube and discharge gate together with connecting bands. Slide the tube sections tightly 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. See *Figure 5-11, page 34* for minimum spacing requirements and 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 (1/2 in. pipe) should fit inside the pipe used for the intermediate wells (1 in. 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 slidegate 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**

Observe the minimum spacings shown 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.

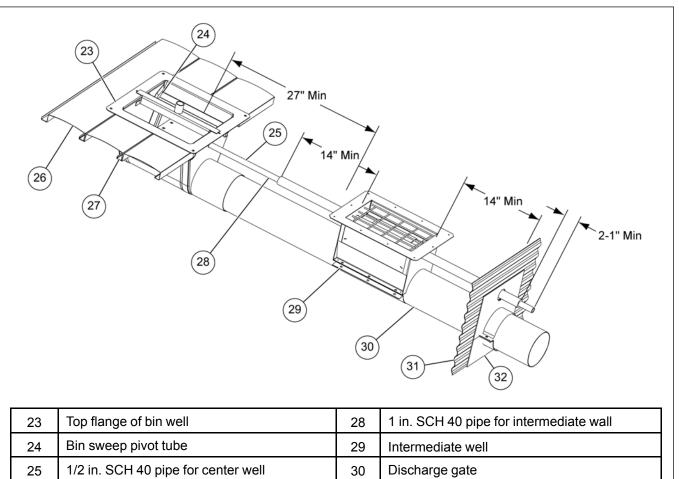
A control pipe kit may be ordered from your dealer. For the center well, use 1/2 in. SCH. 40 pipe (-7/8 in. O.D.). For the intermediate well(s), use 1 in. SCH. 40 pipe (-1 3/8 in. O.D.). It may be necessary to support the unload well(s) and/or discharge tube from below with blocks or other material.

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.

#### NOTE:

- 1. The top flange of the bin well (23) is intended to lay flat on the bin floor.
- 2. Bin sweep pivot tube (24) must be in exact center of the bin.
- 3. 1/2 in. SCH 40 pipe for center well runs inside of pipe for intermediate wells.

Figure 5-11 Unload well installation



31

32

Bin wall

Optional bin flange

26

27

Floor

Center well

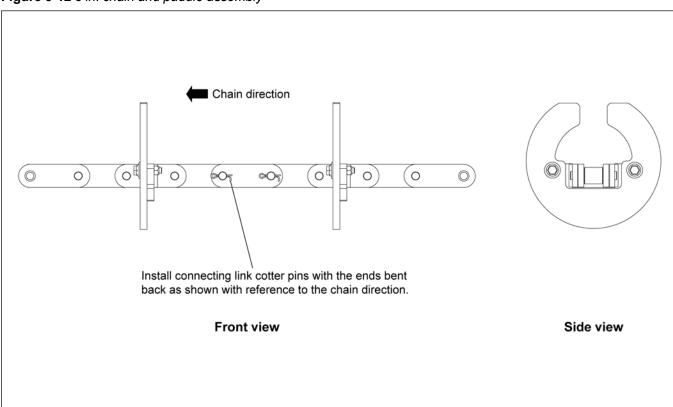
# **Chain and Paddles**

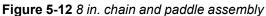
The paddles are attached to the chain with  $5/16 \times 1$  in. serrated flange bolts, flat washers and locking nuts. Make sure that the slots in the chain paddle brackets are oriented as shown in *Figure 5-13, page* 36. The head of the bolt should be against the face of the plastic paddle and the washer and nut should be against the face of the chain paddle bracket. Make sure all hardware is tightened properly to a torque of 20 ft. lbs.

The chain is shipped in 10 ft. lengths and needs to be spliced as shown in *Figure 5-13, page 36*. 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° 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 *Figure 5-14, page 37*.





#### **Chapter 5: Installation**

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



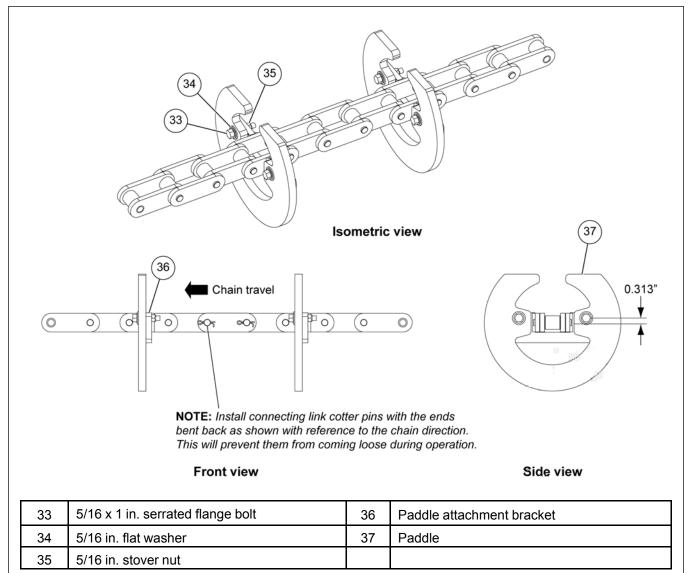
Make sure all shields and safety guards are in place before restoring power.

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



*Turn OFF and lock out the main power source BEFORE removing any inspection covers or shields.* 

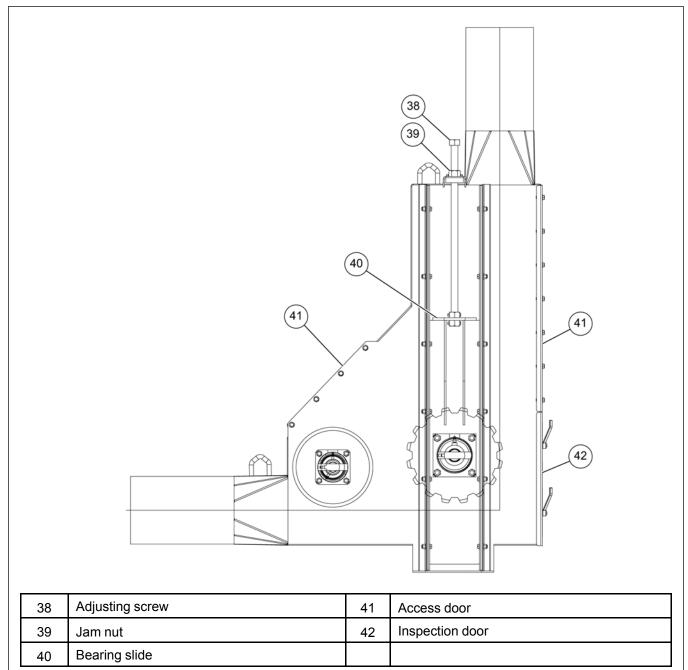
#### Figure 5-13 10 in. chain and paddle assembly



# **Inspection Corner**

The below image shows details about the inspection cover assembly.

Figure 5-14 Inspection cover



# **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 eave, 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 example 1 See example 2 43 46 46 44 45 44 Example 1 Example 2 Controls mounted on bin Controls mounted on adjacent bin. where the discharge is located. Guide pin 43 Control cable 45

46

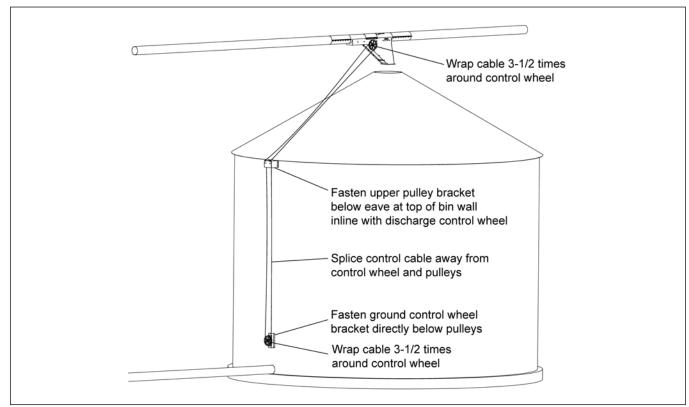
Figure 5-15 Ground control wheel mounting

Cable routed between pulley and guide pin

Pulley

44

- 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.
- Set screws 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 eave 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 *Ground Control Kit, page 127*.



#### Figure 5-16 Ground control wheel mounting

- Make sure that the discharge gate is half open and wrap the cable 3-1/2 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 3-1/2 wraps of cable. This will ensure 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.

#### **Chapter 5: Installation**

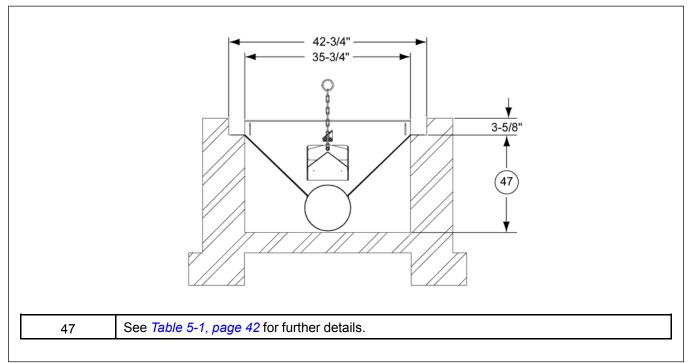
- At the ground control wheel, turn the wheel until the cable clamp is up and wrap the cable 3-1/2 times around it.
- Secure the cable clamp to the middle wrap.
- Splice the ends of the cable with a cable clamp. With the discharge gate half open, the splice should be at least 5 ft. away from the pulleys 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 3-1/2 wraps on the ground control wheel.

# 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.

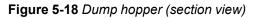
For drive over systems, the grate must be supported by a concrete structure.

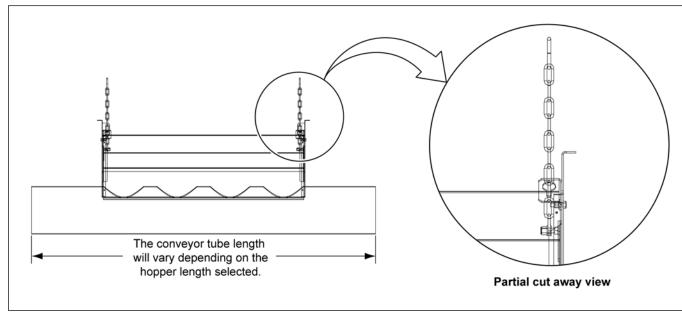
#### Figure 5-17 Dump hopper



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.





**NOTE:** When the system is not in use, it is a good practice to cover the hopper with a rubber mat to help keep water, animals and debris out.

#### **Dump Hopper and Foundation**

#### NOTE:

- 1. The dump hopper is based on a minimum allowable soil bearing capacity of 3000 PSF. Bearing capacity of the soil should be determined by geotechnical investigation and be of uniform bearing capacity.
- 2. The construction site must be free of vegetation and debris and well drained.
- 3. The hopper foundation must be founded below the frost line, or placed on frost free line.
- 4. 1 ft. well graded gravel must be laid directly under foundation bottom.
- 5. All reinforcements must meet the requirements of ASTM A615 Grade 60 deformed bars.
- 6. Concrete must have a minimum compressive strength of 3000 PSI at 28 days, 6-8% air entrainment, 4 in. slump.

#### **Chapter 5: Installation**

#### Figure 5-19 Dump hopper and foundation

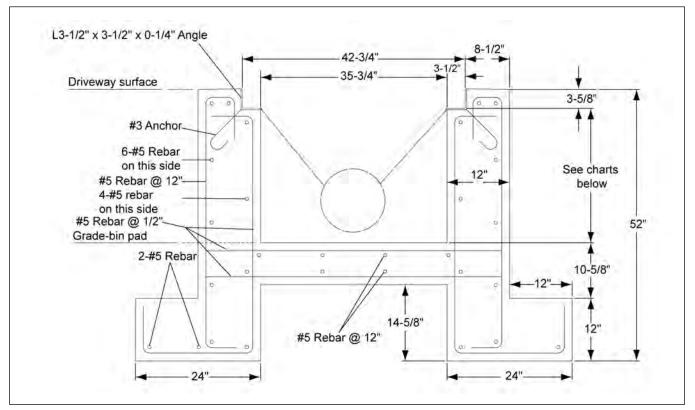


 Table 5-1 Grandstand floor supports

Support #	Top of Floor Height	8" Hopper Ledge Height	8" Power Sweep Ledge Height	10" Hopper and Power Sweep Ledge Height	12" Hopper Ledge Height	12" Power Sweep Ledge Height
FL-379-191	13-3/8"	20-1/2"	19-3/4"	-	-	-
FL-379-193	15-7/8"	23"	22-1/4"	22-1/4"	-	-
FL-379-192	18-11/16"	25-3/4"	25"	25"	24"	23-5/8"

Table 5-2 Air flow supports

Support #	Top of Floor Height	8" Hopper Ledge Height	8" Power Sweep Ledge Height	10" Hopper and Power Sweep Ledge Height	12" Hopper Ledge Height	12" Power Sweep Ledge Height
4031325	13-1/4"	20-3/8"	19-5/8"	-	-	-
4031550	15-1/2"	22-5/8"	21-7/8"	21-7/8"	-	-
4031850	18-1/2"	25-5/8"	24-7/8"	24-7/8"	23-13/16"	23-1/2"

**NOTE:** All instructions shall be construed as recommendations only. Due to variation and discontinuities in local site conditions and foundation installation, grain systems assumes no liability for results arising from the use of such recommendations.

# **6** Troubleshooting

#### 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 back 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 belts 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 *Chain and Paddles, page 35* for details.

#### 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 back 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.
- e. If you hear paddles "clicking" at a joint, check for gaps in the tubing. This will require loosening the bolts in the connecting band to be able to see the tube joint.

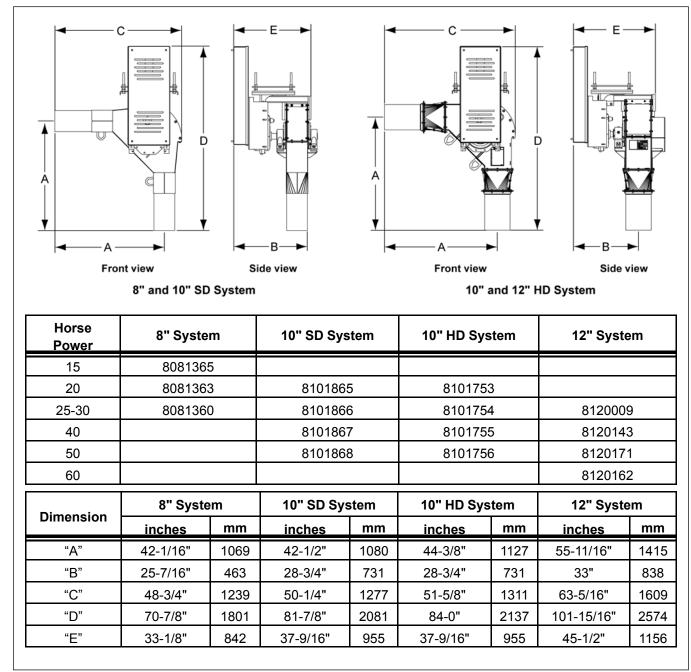
#### 6. Chain failure

- a. Check to make sure that the master connecting links have been installed correctly. See *Figure 5-13, page 36.*
- b. Check for obstructions in the system.
- c. Avoid starting the system under load. Let the system run until empty before shutting down.

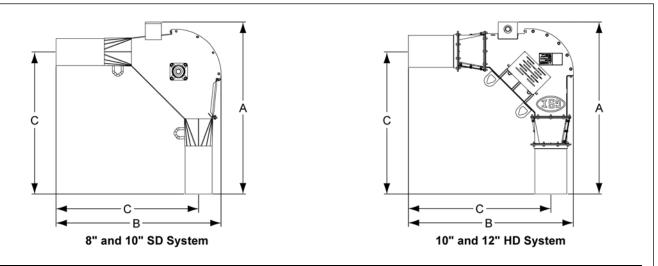
# **7** Component Dimensions

### 8", 10" and 12" Component Dimensions

Figure 7-1 Drive corners

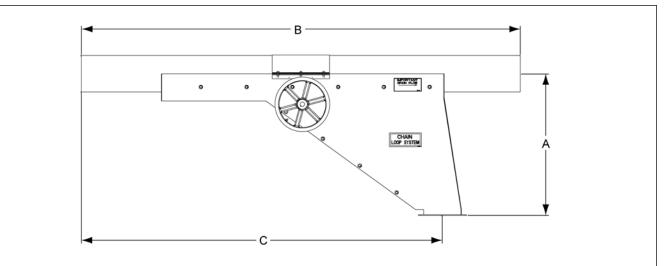


#### Figure 7-2 Standard corners



Dimension	8" System		10" SD System		10" HD System		12" System	
Dimension	inches	mm	inches	mm	inches	mm	inches	mm
"A"	50-7/32"	1275	51-21/32"	1312	53-3/4"	1365	65-25/32"	1670
"B"	48-3/4"	1238	50-1/16"	1271	51-5/8"	1311	63-9/32"	1607
"C"	42-1/16"	1068	42-1/2"	1080	44-3/8"	1127	55-11/16"	1415
Assembly #	808102	1	810186	9	8101599	)	812003	1

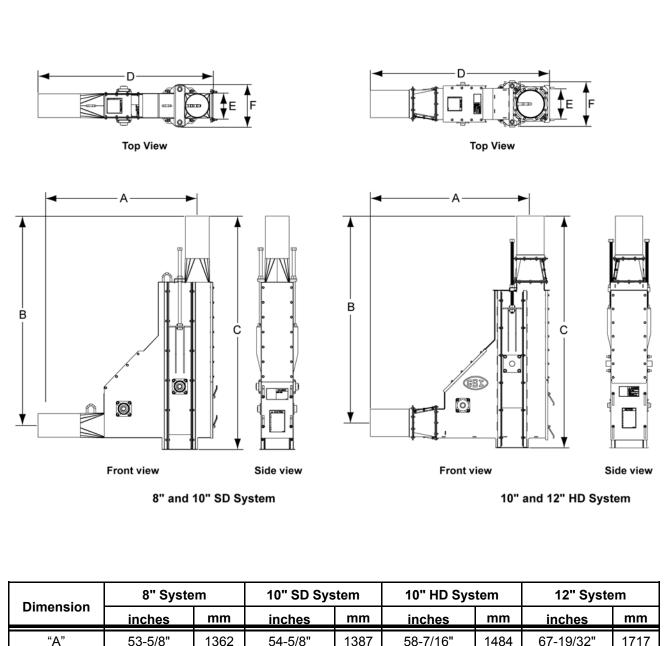
#### Figure 7-3 Discharge gates



Dimension	8" Sy	stem	10" Sy	/stem	12" System		
Dimension	inches	mm	inches	mm	inches	mm	
"A"	30-1/16"	764	32-1/16"	814	54-11/16"	1388	
"B"	96"	2438	96"	2438	144"	3657	
"C"	79"	2007	79"	2007	123-63/64"	3148	
Assembly #	8081	1370	8101	554	81202	293	



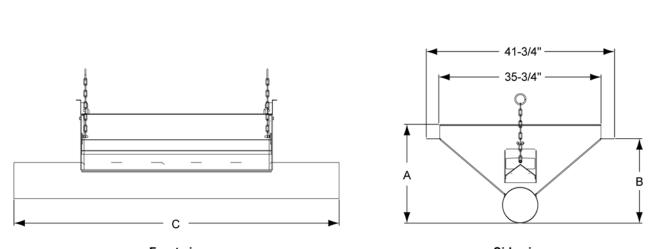
#### Figure 7-4 Inspection corners



Dimension	8" System		10" SD System		10" HD System		12" System	
Dimension	inches	mm	inches	mm	inches	mm	inches	mm
"A"	53-5/8"	1362	54-5/8"	1387	58-7/16"	1484	67-19/32"	1717
"B"	70-7/16"	1789	71-1/2"	1816	75-7/16"	1916	86-3/32"	2187
"C"	78-19/32"	1996	80-21/32"	2049	84-5/8"	2149	96-3/16"	2443
"D"	58-15/16"	1497	61-1/8"	1553	65-7/16"	1662	75-7/32"	1911
"E"	8-3/8"	213	10-3/8"	264	10-3/8"	264	12-3/16"	309
"F"	13-7/8"	1492	15-7/8"	403	15-7/8"	403	25-5/16"	643
Assembly #	808104	8	810187	0	810161	8	812005	1

# 8", 10" and 12" Bin Well and Dump Hopper Dimensions

Figure 7-5 Inlet hopper part numbers and dimensions



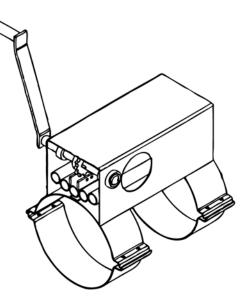
Front view

Side view

					Part #				Dimer	sion	"C"
Hopper Width		8" S	ystem	1(	)" System	12" \$	System	1	inches	;	mm
42-1/2" w/ Drive-over Grates		808	9025H		8109035	812	29024		72"		1829
42-1/2" Hopper Assembly Only		808	31106		8101106	812	20121		72"		1829
62-1/2" w/ Drive-over Grates		808	9027H		8109027		-		92"		2337
62-1/2" Hopper Assembly Or	nly	808	31107		8101107		-		92"		2337
102-1/2" w/ Drive-over Grate	s	808	9029H		8109039	812	29025		132"		3353
102-1/2" Hopper Assembly C	Only	808	31108		8101108	812	20127		132"		3353
122-1/2" w/ Drive-over Grates			-	- 8129026			152"		3861		
122-1/2" Hopper Assembly Only			-		-	812	20134		152"		3861
125" w/ Drive-over Grates	Prive-over Grates 80		9031H	6	3101166L	-			155"		3937
125" Hopper Assembly Only		808	081166 8		8101166	-			155"		3937
144-1/2" w/ Drive-over Grate	s	808	9033H		8109043	-			168"		4267
144-1/2" Hopper Assembly C	Only	808	31109		8101109		-		168"		4267
Dimension		8" Sy	/stem		10" S	System			12" Sy	sten	า
Dimension	inc	hes	mm		inches	m	m	ir	nches	r	nm
"A" (Top of Drive-over Grate)	22-	-1/2"	572		24-3/8"	61	9	24	-13/32"	6	620
"B" (Top of Hopper Flange)	18-	-3/4"	476		20-3/4"	52	27	2	1-3/8"	Ę	543

### Chapter 7: Component Dimensions

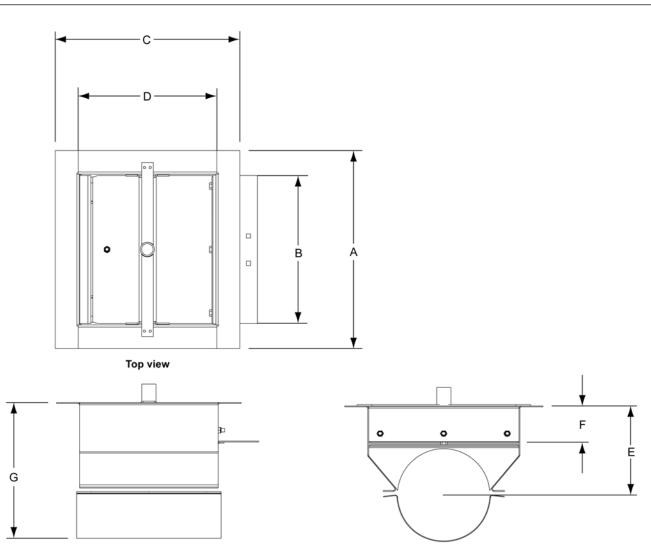
#### Figure 7-6 Rack and pinion controls



Dimension	8" System		10" Sy	ystem	12" System	
Dimension	inches	mm	inches	mm	inches	mm
Length	15-1/2"	394	15-1/2"	619	15-1/2"	619
Top Width	7-1/4"	476	7-1/4"	476	7-1/4"	476
Height* *(center of tube to top)	9-1/2"	241	10-1/2"	267	11-1/2"	292
Assembly #	GK1768		GK1	772	GK1787	

# **Chapter 7: Component Dimensions**

#### Figure 7-7 Center wells



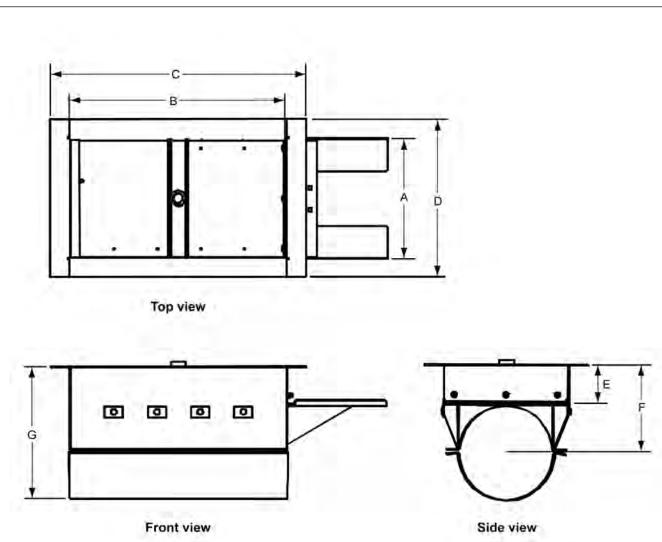
Front view

Side view

		8" Sy	stem		10" System				
Dimension	without Rollers		with Rol	ler	without Ro	ollers	with Roller		
	inches	mm	inches	mm	inches	mm	inches	mm	
"A"	17-1/8"	435	17-1/8"	435	17-1/8"	435	17-9/32"	439	
"B"	13"	330	13"	330	13"	330	13"	330	
"C"	16"	406	16"	406	18"	457	18"	457	
"D"	12"	305	12"	305	13-3/4"	349	13-3/4"	349	
"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 #	GK278	5	808119	2	GK194	3	810119	)2	

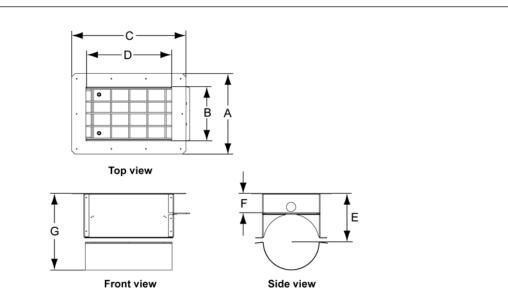
# **Chapter 7: Component Dimensions**

Figure 7-8 Large center wells



Dimension	8" System ii	n. with roller	10" System ir	n. with roller	12" System in. with roller		
	inches	mm	inches	mm	inches	mm	
"A"	13"	330	13"	330	13"	330	
"B"	21-27/32"	555	23-3/4"	603	23-3/4"	603	
"C"	25-31/32"	659	28"	711	28"	711	
"D"	17-5/32"	436	17-9/32"	439	17-9/32"	439	
"E"	3-9/32"	83	4-1/16"	103	3-9/16"	76	
"F"	7-23/32"	196	9-13/32"	239	9-7/8"	229	
"G"	11-25/32"	299	14-1/2"	368	16"	406	
Assembly #	808	1238	8101	254	8120101		

#### Figure 7-9 Intermediate wells

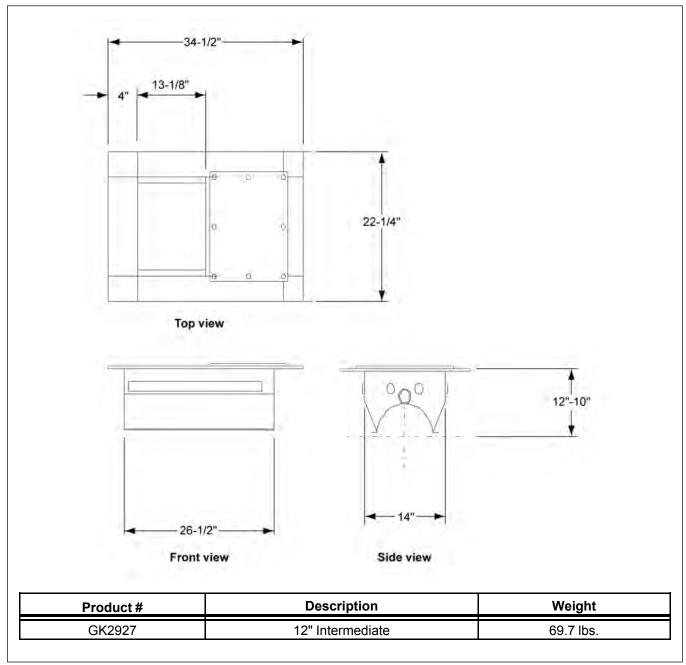


			10" Syst	em			
Dimension	without Ro	ollers	with Roll	ers	with Slide Gate		
	inches	mm	inches	mm	inches	mm	
"A"	17-1/8"	435	17-1/8"	435	17-1/8"	435	
"B"	13"	330	13"	330	13"	330	
"C"	18"	457	18"	457	22"	559	
"D"	13-7/8"	352	13-7/8"	352	17-7/8"	454	
"E"	9-1/2"	241	9-1/2"	241	9-1/2"	241	
"F"	2-1/8"	54	2-1/8"	54	-	-	
"G"	14-1/2"	368	14-1/2"	368	14-1/2"	368	
Assembly #	GK1942		810119	3	8101194		
		8" Sy	stem		*12" System		
Dimension	without Ro	ollers	with Roll	ers	with Rol	ller	
	inches	mm	inches	mm	inches	mm	
"A"	11-5/8"	295	13-1/8"	333	22-1/4"	565	
"B"	7-1/2"	191	7-5/16"	186	14-1/4"	362	
"C"	16-1/2"	419	19-1/4"	489	34-1/2"	876	
"D"	13-1/2"	343	13-1/2"	343	13-1/8"	333	
"E"	7"	178	7-5/8"	194	10"	254	
		70	1-15/16"	49	2-1/8"	54	
"F"	2-3/4"	70	1 10/10	-			
"F" "G"	<u>2-3/4"</u> 11"	279	11-5/8"	295	16"	406	

\* 12" Commercial intermediate well drawing. Refer to Figure 7-10, page 53.



#### Figure 7-10 12" intermediate well



# NOTES

# **8** Parts List

#### **Topics Covered in this Chapter**

- 8 in. Chain and Paddles
- 10 in. Chain and Paddles
- 12 in. Chain and Paddles (8120141)
- 8 in. Discharge Gate Assembly (8081370)
- 10 in. Discharge Gate Assembly (8101554)
- 12 in. (7 Gauge) Discharge Gate (8120293)
- Chain Loop Drive Components
- 8 in. (15 HP) Drive Components (8081365)
- 8 in. (20 HP) Drive Components (8081363)
- 8 in. (15 HP-20 HP) Drive Components (8081362)
- 10 in. (20 HP) Standard Drive Components (8101865)
- 10 in. (20 HP) HD Drive Components (8101753)
- 10 in. (15 HP-20 HP) Drive Components (8101871)
- 10 in. (15 HP-20 HP) HD Drive Components (8101633)
- 8 in. (25 HP-30 HP) Drive Components (8081360)
- 8 in. (25 HP-30 HP) Drive Components (8081359)
- 10 in. (25 HP-30 HP) Standard Drive Components (8101866)
- 10 in. (25 HP-30 HP) HD Drive Components (8101754)
- 10 in. (25 HP-30 HP) Standard Drive Components (8101872)
- 10 in. (25 HP-30 HP) HD Drive Components (8101628)
- 10 in. (40 HP) Standard Drive Components (8101867)
- 10 in. (40 HP) HD Drive Components (8101755)
- 10 in. (50 HP) Standard Drive Components (8101868)
- 10 in. (50 HP) HD Drive Components (8101756)
- 10 in. (40 HP-50 HP) Standard Drive Components (8101873)
- 10 in. (40 HP-50 HP) HD Drive Components (8101604)
- 8 in. (15 HP) Drive Components (8081271)
- 8 in. (20 HP) Drive Components (8081285)
- 8 in. 10 in. (25 HP-30 HP) Drive Components (8081296)
- 10 in. (40 HP) Drive Components (8101303)
- 10 in. (50 HP) Drive Components (8101331)
- Belt Guard Assembly TA3 (8120217)
- Belt Guard Assembly TA4 (8120211)
- Belt Guard Assembly TA5 (8120214)
- 12 in. 7 Gauge (30 HP) Drive Components (8120000)
- 12 in. 7 Gauge (40 HP-50 HP) Drive Components (8120144)
- 12 in. 7 Gauge (60 HP) Drive Components (8120163)
- 8 in. and 10 in. Inlet Dump Hoppers
- 12 in. (7 Gauge) 42-1/2 in. Inlet Dump Hoppers (8120121)
- 12 in. (7 Gauge) 102-1/2 in. Inlet Dump Hoppers (8120127)
- 12 in. (7 Gauge) 122-1/2 in. Inlet Dump Hoppers (8120134)

#### **Chapter 8: Parts List**

- 12 in. (10 Gauge) 102-1/2 in. Inlet Dump Hoppers (8120186)
- 12 in. (10 Gauge) 122-1/2 in. Inlet Dump Hoppers (8120187)
- 8 in. and 10 in. Standard Corner
- 10 in. HD Standard Corner (8101599)
- 12 in. (7 Gauge) Standard Corner (8120031)
- 8 in. and 10 in. Inspection Corner
- 10 in. HD Inspection Corner (8101618)
- 12 in. (7 Gauge) Inspection Corner (8120051)
- Chain Loop Torque Plate Assembly
- Ground Control Kit

# 8 in. Chain and Paddles

Figure 8-1 8 in. Chain and paddles parts

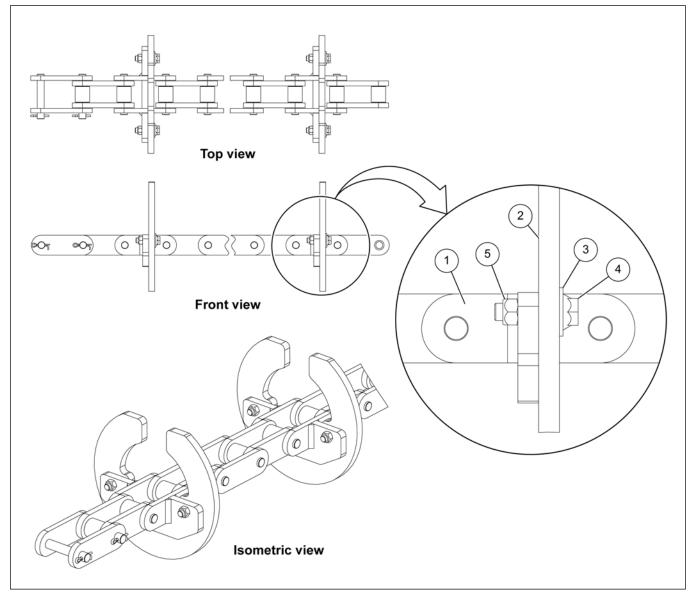


Table 8-1 8 in.	Chain and paddles parts list
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Ref #	Part #	Description	Qty
1	8081387	Chain Weldment 8 in. x 10 ft. 81 x HH with Connection Link	1
2	8081145	Paddle 8 in., 8 in. Chain Loop UHMW	12
3	S-845	Flat Washer 5/16 in. USS SAE YDP Grade 2	24
4	S-8135	Flange Bolt 5/16-18 x 1-1/4 in. ZN Grade 5	24
5	S-8324	Stover Nut 5/16-18 in. ZN Grade C	24

# 10 in. Chain and Paddles

Figure 8-2 10 in. Chain and paddles parts

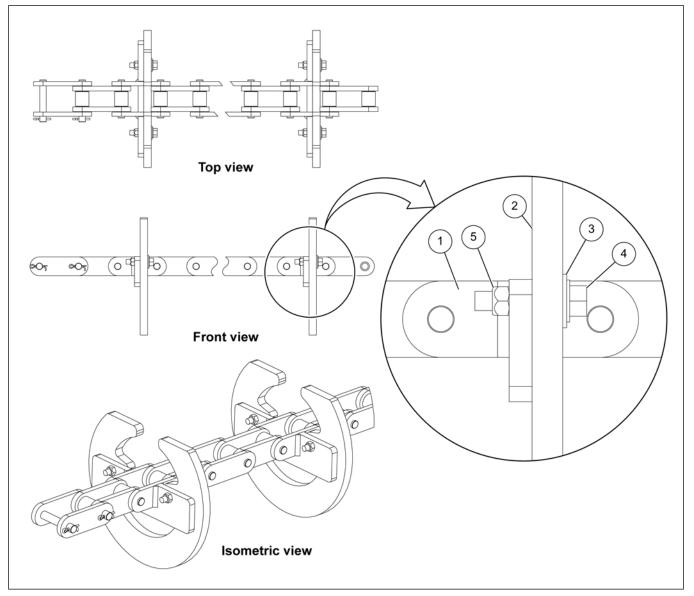


Table 8-2 10 in	. Chain and paddles parts list
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Ref #	Part #	Description	Qty
1	8101573	Chain Weldment 10 in. x 10 ft. 81 x HH with Connection Link	1
2	8101145	Paddle 10 in., Chain Loop UHMW	12
3	S-845	Flat Washer 5/16 in. USS SAE YDP Grade 2	24
4	S-10185	Flange Bolt 5/16-18 x 1-1/2 in. ZN Grade 5	24
5	S-8324	Stover Nut 5/16-18 in. ZN Grade C	24

# 12 in. Chain and Paddles (8120141)

Figure 8-3 12 in. Chain and paddles (8120141) parts

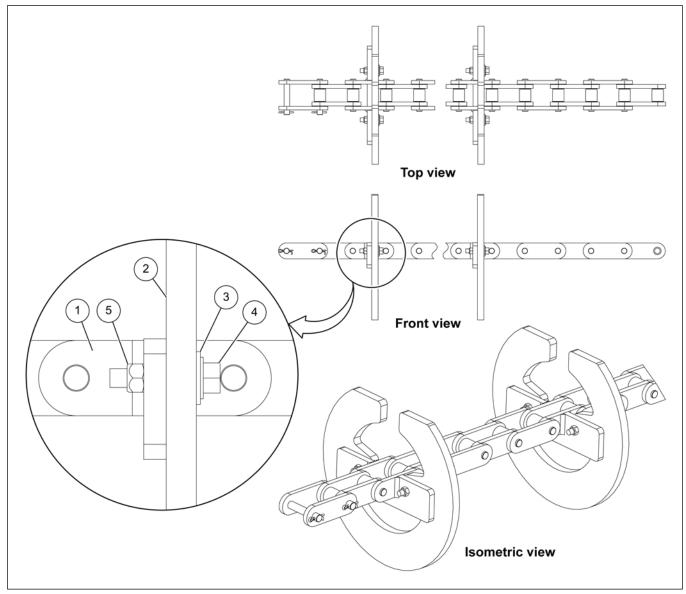
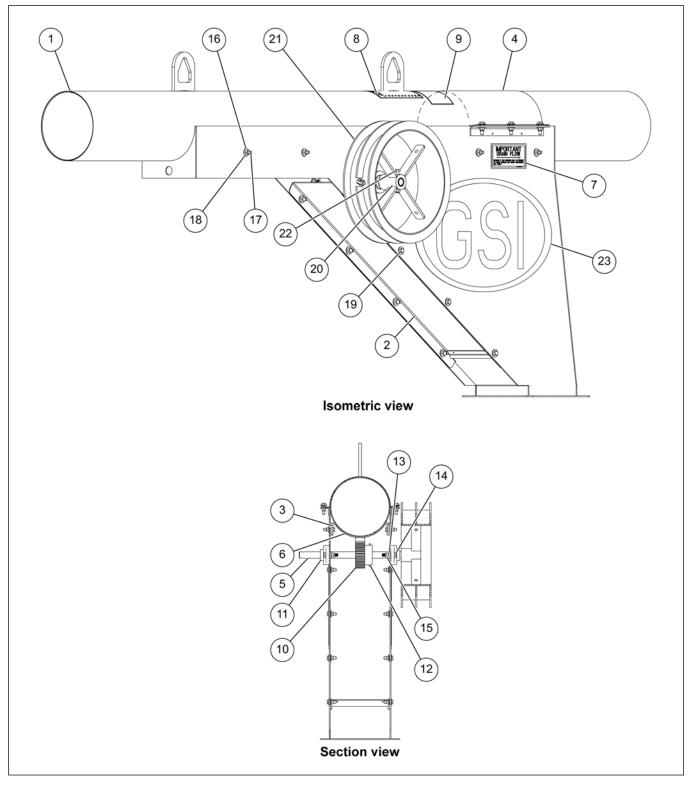


Table 8-3 10 in. Chain and paddles parts list

Ref #	Part #	Description	Qty
1	8120302	Chain Weldment 12 in. x 10 ft. 81 x HH with Connection Link	1
2	8120139	Paddle 12 in., Chain Loop	9
3	S-845	Flat Washer 5/16 in. USS SAE YDP Grade 2	18
4	S-10185	Flange Bolt 5/16-18 x 1-1/2 in. ZN Grade 5	18
5	S-8324	Stover Nut 5/16-18 in. ZN Grade C	18

# 8 in. Discharge Gate Assembly (8081370)

Figure 8-4 8 in. Discharge gate Assembly (8081370) parts

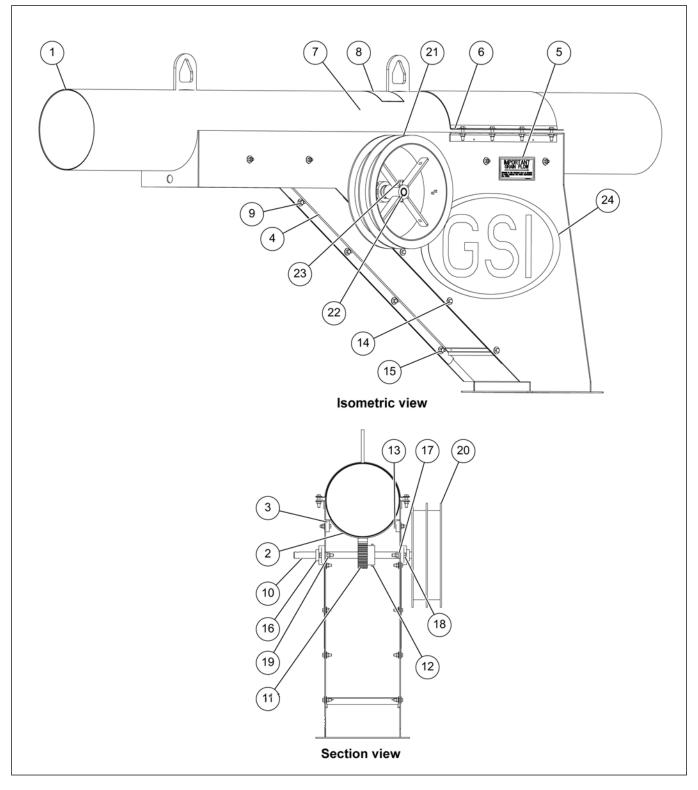


Ref #	Part #	Description	Qty
1	8081369-BS	Chain Loop: Discharge Weldment 8 in.	1
2	8081093-BS	Weldment, 8 in. 90° Discharge Access Panel	1
3	8081351-BS	8 in. Discharge Gate Steel Rail	2
4	8081096	Access Door Assembly 8 in. 90° Discharge with Gate	1
5	8081298	Shaft Control with Discharge Gate	1
6	8081097	Slide Gate Weldment 8 in. 90° Discharge with Gate	1
7	8107004	Decal, Important	1
8	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
9	8107001	Decal, Danger	1
10	S-8129	Spur Gear 8DP 26 Tooth 7/8 in. Bore	1
11	S-8030	Bearing, 7/8 2-Bolt Flange 3 in. C/C	2
12	3FH0887	Spring Pin 1/4 x 3 in. Plated	1
13	S-7409	Flat Washer 3/8 in. SAE ZN Grade 2	4
14	S-10275	Bolt, HHCS 3/8-16 x 1-1/2 in. Grade 8	4
15	S-7383	Nylock Nut 3/8-16 in. ZN Grade 5	4
16	S-845	Flat Washer 5/16 in. USS SAE YDP Grade 2	40
17	S-4276	Bolt, HHTB 5/16-18 x 1-1/4 in. ZN Grade 5	18
18	S-7382	Nylock Nut 5/16-18 in. ZN Grade 5	27
19	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	8
20	8081316	Bushing - Control Wheel Discharge	1
21	8101555	Ground Control: Wheel with Clamp 1 in. Bore	1
22	S-7076	Bolt, HHCS 5/16-18 x 2-1/2 in. ZN Grade 5	1
23	DC-1058	Decal, GSI Logo 13 x 23.5 in.	2
N/S	CRTGATESTCNR	Crate Chain Loop Discharge Gate and Standard Corner	1
N/S	MHC01031	Sealant, Gray MD Max 3500 Tube, Acrylic Caulking	1

Table 8-4 8 in. Discharge gate Assembly (8081370) parts list

# 10 in. Discharge Gate Assembly (8101554)

Figure 8-5 10 in. Discharge gate Assembly (8101554) parts

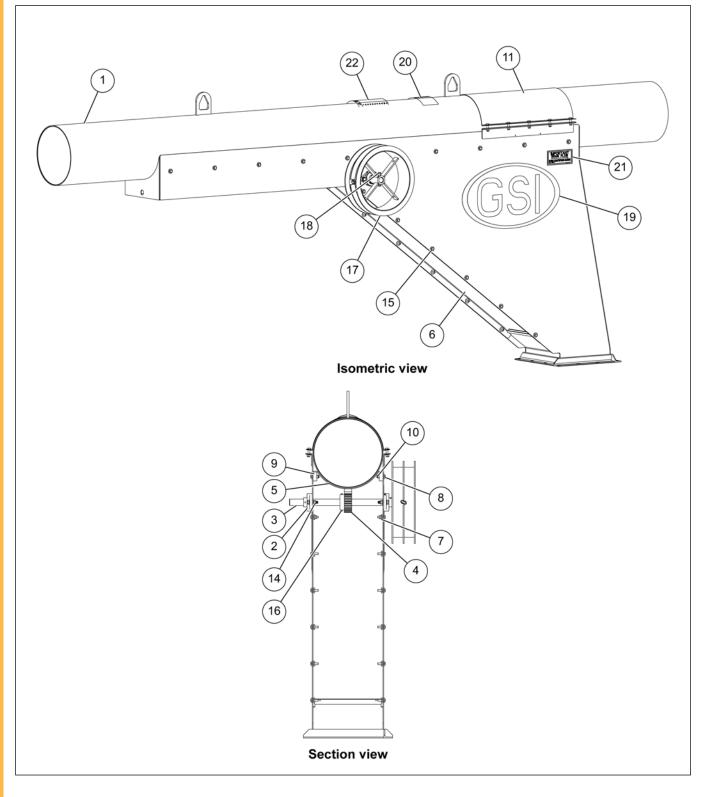


Ref #	Part #	Description	Qty
1	8101553-BS	Chain Loop: Discharge Weldment 10 in.	1
2	8101097	Slide Gate Weldment 10 in. 90° Discharge with Gate	1
3	8101501-BS	Chain Loop 10 in. Discharge Gate Rail	2
4	8101093-BS	Weldment, 10 in. 90° Discharge Access Panel	1
5	8107004	Decal, Important	1
6	8101096	Access Door Assembly 10 in. 90° Discharge with Gate	1
7	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
8	8107001	Decal, Danger	1
9	S-845	Flat Washer 5/16 in. USS SAE YDP Grade 2	44
10	8101304	Shaft Control with Discharge Gate	1
11	S-8129	Spur Gear 8DP 26 Tooth 7/8 in. Bore	1
12	3FH0887	Spring Pin 1/4 x 3 in. Plated	1
13	S-4276	Bolt, HHTB 5/16-18 x 1-1/4 in. ZN Grade 5	12
14	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	8
15	S-7382	Nylock Nut 5/16-18 in. ZN Grade 5	29
16	S-8030	Bearing, 7/8 2-Bolt Flange 3 in. C/C	2
17	S-7409	Flat Washer 3/8 in. SAE ZN Grade 2	4
18	S-10275	Bolt, HHCS 3/8-16 x 1-1/2 in. Grade 8	4
19	S-7383	Nylock Nut 3/8-16 in. ZN Grade 5	4
20	8101555	Ground Control: Wheel with Clamp 1 in. Bore	1
21	S-2741	Bolt, HHCS 5/16-18 x 1-1/2 in. ZN Grade 5	8
22	8081316	Bushing - Control Wheel Discharge	1
23	S-7076	Bolt, HHCS 5/16-18 x 2-1/2 in. ZN Grade 5	1
24	DC-1058	Decal, GSI Logo 13 x 23.5 in.	2

 Table 8-5 10 in. Discharge gate Assembly (8101554) parts list

# 12 in. - (7 Gauge) Discharge Gate (8120293)

Figure 8-6 12 in. - (7 Gauge) Discharge gate (8120293) parts



Ref #	Part #	Description	Qty
1	8120292-BS	Chain Loop: Discharge Weldment 12 in. 7 Gauge	1
2	MHC01377	Bearing, Light Duty 1-1/8 in.	2
3	8120091	Shaft - Discharge Gate	1
4	MHC00999	Gear, Spur 8 DP 26T 1-1/8 in. Bore	1
5	8120088	Slide Gate Weld - Discharge Gate	1
6	8120086-BS	Bottom Cover Weldment	1
7	S-845	Flat Washer 5/16 in. USS SAE YDP Grade 2	64
8	S-4276	Bolt, HHTB 5/16-18 x 1-1/4 in. ZN Grade 5	30
9	8120286-BS	Chain Loop: 10 in. Discharge, Gate Rail	4
10	S-7382	Nylock Nut 5/16-18 in. ZN Grade 5	38
11	8120169-BS	12 x 22 in. Halfband	1
12	S-7409	Flat Washer 3/8 in. SAE ZN Grade 2	8
13	S-10275	Bolt, HHCS 3/8-16 x 1-1/2 in. Grade 8	4
14	S-7383	Nylock Nut 3/8-16 in. ZN Grade 5	4
15	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	12
16	3FH0887	Spring Pin 1/4 x 3 in. Plated	1
17	8101556	Ground Control: Wheel with Clamp 1.125 in. Bore	1
18	S-7076	Bolt, HHCS 5/16-18 x 2-1/2 in. ZN Grade 5	1
19	DC-1058	Decal, GSI Logo 13 x 23.5 in.	2
20	8107001	Decal, Danger	1
21	8107004	Decal, Important	1
22	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
N/S	S-8762	Clamp, 3/16 in. Cable Zinc Plated	1
N/S	S-2052	Foam Strip 1/8 in. Thick x 1/2 in. Wide Weather In Rolls 75 ft. Per Roll	7
N/S	MHC01031	Sealant, Gray MD Max 3500 Tube, Acrylic Caulking	0.25

Table 8-6 12 in. - (7 Gauge) Discharge gate (8120293) parts list

# **Chain Loop Drive Components**

Hz	Part #	Size	Voltage	Shaft Diameter	Lbs.	Kgs.
50	1500-3-50	15 HP	220/380/440 3 PH	1-5/8 in.	264.0	119.7
50	2000-3-50	20 HP	220/380/440 3 PH	1-5/8 in.	277.0	125.6
50	2500-3-50	25 HP	220/380/440 3 PH	1-7/8 in.	480.0	217.7
50	3000-3-50	30 HP	220/380/440 3 PH	1-7/8 in.	380.0	172.4
50	4000-3-50	40 HP	220/380/440 3 PH	2-1/8 in.	571.0	259.0

Table 8-7 International chain loop motors - 50 Hz

Table 8-8 8 in. Motor pulleys, bushings and drive belts - 50 Hz

HP	Part	Part #	Description	Qty	Lbs.	Kgs.
15 HP 20 HP	Motor Pulley	PT0703	4 Grade B6.0 SD	1	11.73	5.3
	Motor Pulley Bushing	GC06516	SD x 1-5/8 in. Bore	1	1.6	0.7
15 HP	Reducer Pulley	GC09690	4 Grade B6.2 SD	1	25	11.3
	Reducer Bushing	CE-00614	SD x 1-3/8 in. Bore	1	3.8	1.7
	Drive Belts	020-1035-3	BX59	3	0.9	0.4
20 HP	Motor Pulley	KD-PDS0028	2 Grade 5V 9.0 SK	1	23	10.4
	Motor Pulley Bushing	GC03810	SK x 1-5/8 in. Bore	1	5	2.3
	Reducer Pulley	KD-PDS0018	2 Grade 5V 9.25 SK	1	38	17.2
	Reducer Bushing	PT0778	SK x 1-3/8 in. Bore	1	9	4.1
	Drive Belts	KD-PDV0017	5VX710	4	1.1	0.5
	Motor Pulley	MHC01668	3 Grade 5V 9.0 SF	1	36	16.3
	Motor Pulley Bushing	MHC01162	SF x 1-7/8 in. Bore	1	9	4.1
25-30 HP	Reducer Pulley	MHC01160	3 Grade 5V 9.25 SF	1	44	19.9
	Reducer Bushing	GC07551	SF x 1-7/16 in. Bore	1	9	4.1
	Drive Belts	MHC00604	5VX800	3	1.1	0.5

Table 8-9 10 in. Motor pulleys, bushings and drive belts - 50 Hz

HP	Part	Part #	Description	Qty	Lbs.	Kgs.
	Motor Pulley	KD-PDS0028	2 Grade 5V 9.0 SK	1	23	10.4
20 HP	Motor Pulley Bushing	GC03810	SK x 1-5/8 in. Bore	1	5	2.3
20 HP	Reducer Pulley	KD-PDS0018	2 Grade 5V 9.25 SK	1	38	17.2
	Reducer Bushing	PT0778	SK x 1-3/8 in.	1	9	4.1
	Drive Belts	KD-PDV0017	5VX710	4	1.1	0.5
	Motor Pulley	MHC01668	3 Grade 5V 9.0 SF	1	36	16.3
25-30 HP	Motor Pulley Bushing	MHC01162	SF x 1-7/8 in. Bore	1	9	4.1
	Reducer Pulley	MHC01160	3 Grade 5V 9.25 SF	1	44	19.9
	Reducer Bushing	GC07551	SF x 1-7/16 in. Bore	1	9	4.1
	Drive Belts	MHC00604	5VX800	3	1.1	0.5
40 HP	Motor Pulley	MHC01717	4 Grade 5V 8.5 E	1	36	16.3
	Motor Pulley Bushing	MHC01540	E x 2-1/8 in. Bore	1	9	4.1
40 HP	Reducer Pulley	KD-PDS0016	4 Grade 5V 9.0 E	1	44	19.9
	Reducer Bushing	MHC01537	E x 1-5/8 in. Bore	1	9	4.1
	Drive Belts	MHC00604	5VX800	3	1.2	0.5
	Motor Pulley	KD-PDS0021	4 Grade 5V 10.3 E	1	36	16.3
50 HP	Motor Pulley Bushing	MHC01540	E x 2-1/8 in. Bore	1	9	4.1
	Reducer Pulley	KD-PDS0029	4 Grade 5V 10.9 E	1	44	19.9
	Reducer Bushing	MHC01537	E x 1-5/8 in. Bore	1	9	4.1
	Drive Belts	CE-00562	5VX900	4	1.2	0.5

able 8-10 Chain loop motors - 60 Hz (for USA and countries with 60 Hz power)
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Hz	Part #	Size	Voltage	Shaft Diameter	Lbs.	Kgs.
60	3EL5069	15 HP	230, 1 PH	1-5/8 in.	314	142.4
60	MTR-0022	15 HP	230/460 3 PH	1-5/8 in.	234	106.1
60	MTR-0025	20 HP	230/460 3 PH	1-5/8 in.	264	119.7
60	MTR-0054	25 HP	230/460 3 PH	1-7/8 in.	396	179.6
60	MTR-0056	30 HP	230/460 3 PH	1-7/8 in.	433	196.4
60	MTR-0063	40 HP	230/460 3 PH	2-1/8 in.	514	233.1
60	MTR-0067	50 HP	230/460 3 PH	2-1/8 in.	579	263
60	MTR-0069	60 HP	230/460 3 PH	2-3/8 in.	747	339

 Table 8-11
 8 in. Motor pulleys, bushings and drive belts - 60 Hz

HP	Part	Part #	Description	Qty	Lbs.	Kgs.
15 HP 20 HP	Motor Pulley	CE-00582	3 Grade B6.4 SD	1	11.73	5.3
	Motor Pulley Bushing	GC06516	SD x 1-5/8 in. Bore	1	1.6	0.7
15 HP	Reducer Pulley	GC07874	3 Grade B8.0 SK	1	25	11.3
	Reducer Bushing	PT0778	SK x 1-3/8 in.Bore	1	3.8	1.7
	Drive Belts	MHC00823	BX61	3	0.9	0.4
20 HP	Motor Pulley	3311A1	4 Grade B6.4 SD	1	23	10.4
	Motor Pulley Bushing	GC06516	SD x 1-5/8 in. Bore	1	5	2.3
	Reducer Pulley	GC06676	4 Grade B8.0 SK	1	38	17.2
	Reducer Bushing	PT0778	SK x 1-3/8 in.	1	9	4.1
	Drive Belts	MHC00823	BX61	4	1.1	0.5
	Motor Pulley	MHC01566	3 Grade B11.0 SK	1	36	16.3
	Motor Pulley Bushing	CE-00617	SK x 1-7/8 in. Bore	1	9	4.1
25-30 HP	Reducer Pulley	MHC01567	3 Grade B13.6 SK	1	44	19.9
	Reducer Bushing	GC06687	SK x 1-7/16 in. Bore	1	9	4.1
	Drive Belts	D02-0067	BX85	3	1.1	0.5

HP	Part	Part #	Description	Qty	Lbs.	Kgs.
	Motor Pulley	3311A1	4 Grade B6.4 SD	1	23	10.4
20 HP	Motor Pulley Bushing	GC06516	SD x 1-5/8 in. Bore	1	5	2.3
	Reducer Pulley	GC06676	4 Grade B8.0 SK	1	38	17.2
	Reducer Bushing	PT0778	SK x 1-3/8 in.	1	9	4.1
	Drive Belts	MHC00823	BX61	4	1.1	0.5
	Motor Pulley	MHC01566	3 Grade B11.0 SK	1	36	16.3
	Motor Pulley Bushing	CE-00617	SK x 1-7/8 in. Bore	1	9	4.1
25-30 HP	Reducer Pulley	MHC01567	3 Grade B13.6 SK	1	44	19.9
	Reducer Bushing	GC06687	SK x 1-7/16 in. Bore	1	9	4.1
	Drive Belts	D02-0067	BX85	3	1.1	0.5
	Motor Pulley	MHC01668	3 Grade 5V 9.0 SF	1	36	16.3
	Motor Pulley Bushing	GT3-0068	SF x 2-1/8 in. Bore	1	9	4.1
40 HP	Reducer Pulley	MHC01531	3 Grade 5V 11.3 SF	1	44	19.9
	Reducer Bushing	MHC01669	SF x 1-5/8 in. Bore	1	9	4.1
	Drive Belts	MHC00039	5VX850	3	1.2	0.5
	Motor Pulley	KD-PDS0016	4 Grade 5V 9.0 E	1	36	16.3
50 HP	Motor Pulley Bushing	MHC01540	E x 2-1/8 in. Bore	1	9	4.1
	Reducer Pulley	MHC01699	4 Grade 5V 11.3 E	1	44	19.9
	Reducer Bushing	MHC01537	E x 1-5/8 in. Bore	1	9	4.1
	Drive Belts	MHC00039	5VX850	4	1.2	0.5

Table 8-12 10 in. Motor pulleys, bushings and drive belts - 60 Hz  $\,$ 

 Table 8-13 12 in. Motor pulleys, bushings and drive belts - 60 Hz

HP	Part	Part #	Description	Qty	Lbs.	Kgs.
	Motor Pulley	MHC01530	3 Grade 5V 8.0 SF	1	19	8.6
	Motor Pulley Bushing	MHC01162	SF x 1-7/8 in. Bore	1	3.8	1.7
30 HP	Reducer Pulley	MHC01531	3 Grade 5V 11.3 SF	1	25	11.3
	Reducer Bushing	GC07551	SF x 1-7/16 in. Bore	1	3.8	1.7
	Drive Belts	MHC00604	SVX800	3	0.9	0.4
	Motor Pulley	MHC01160	3 Grade 5V 9.25 SF	1	23	10.4
	Motor Pulley Bushing	GT3-0068	SF x 2-1/8 in. Bore	1	5	2.3
40 HP	Reducer Pulley	MHC01536	3 Grade 5V 13.2 E	1	38	17.2
	Reducer Bushing	MHC01537	E x 1-5/8V	1	9	4.1
	Drive Belts	MHC00475	5VX1000	3	1.1	0.5
	Motor Pulley	MHC01538	4 Grade 5V 9.25 E	1	36	16.3
	Motor Pulley Bushing	MHC01540	E x 2-1/8 in. Bore	1	9	4.1
50 HP	Reducer Pulley	MHC01539	4 Grade 5V 13.2 E	1	44	19.9
	Reducer Bushing	MHC01537	E x 1-5/8 in. Bore	1	9	4.1
	Drive Belts	MHC00475	5VX1000	4	1.1	0.5
	Motor Pulley	KD-PDS0014	4 Grade 5V 9.75 E	1	36	16.3
60 HP	Motor Pulley Bushing	017-1371-8	E x 2-3/8 in. Bore	1	9	4.1
	Reducer Pulley	MHC01539	4 Grade 5V 13.2 E	1	44	19.9
	Reducer Bushing	MHC01541	E x 2-3/16 in. Bore	1	9	4.1
	Drive Belts	MHC00477	5VX1060	4	1.2	0.5

# 8 in. (15 HP) Drive Components (8081365)

Figure 8-7 8 in. (15 HP) Drive components (8081365) parts

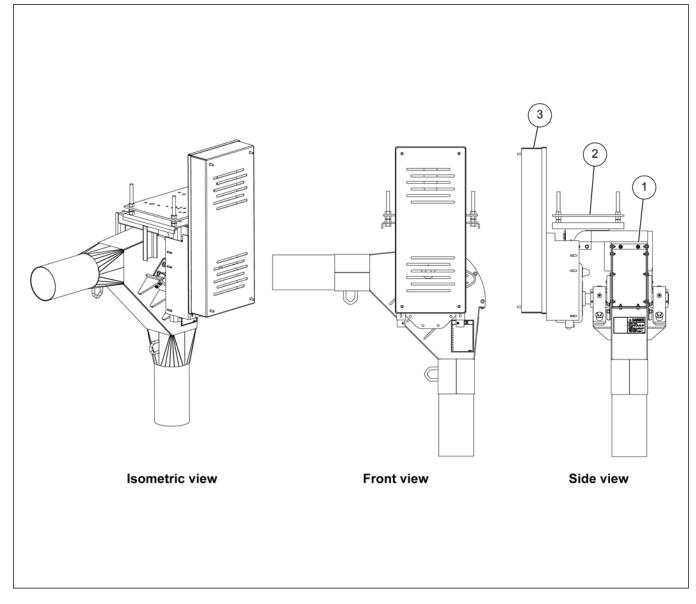


Table 8-14 8 in. (15 HP) Drive components (8081365) parts list

Ref #	Part #	Description	Qty
1	8081362	Chain Loop: 15-20 HP TA3 Drive Corner Assembly - 8 in. 207 "E" Bearing	1
2	8081271	Drive Box TA3, 15 HP, 8 in. and 10 in. Chain Loop	1
3	8120217	Belt Guard Assembly Chain Loop, TA3	1

# 8 in. (20 HP) Drive Components (8081363)

Figure 8-8 8 in. (20 HP) Drive components (8081363) parts

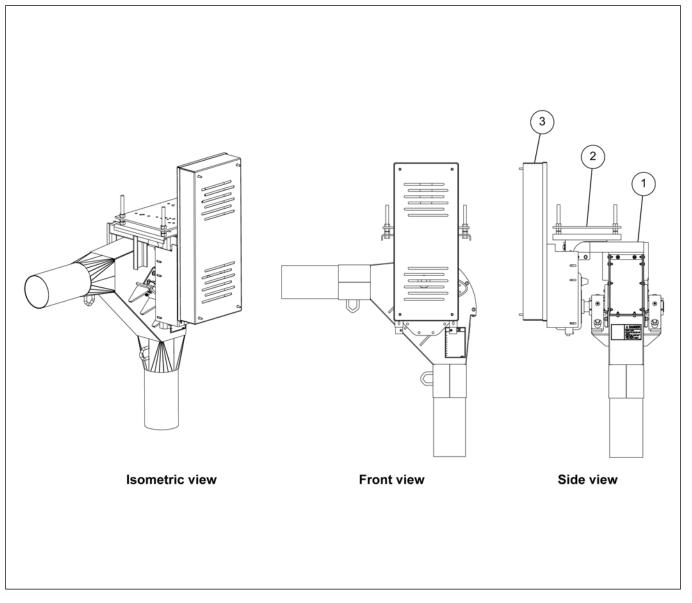


Table 8-15 8 in. (20 HP) Drive components (8081363) parts list

Ref #	Part #	Description	Qty
1	8081362	Chain Loop: 15-20 HP TA3 Drive Corner Assembly - 8 in. 207 "E" Bearing	1
2	8081285	Drive Box TA3, 20 HP, 8 in. and 10 in. Chain Loop	1
3	8120217	Belt Guard Assembly Chain Loop, TA3	1

# 8 in. (15 HP-20 HP) Drive Components (8081362)

Figure 8-9 8 in. (15 HP-20 HP) Drive components (8081362) parts

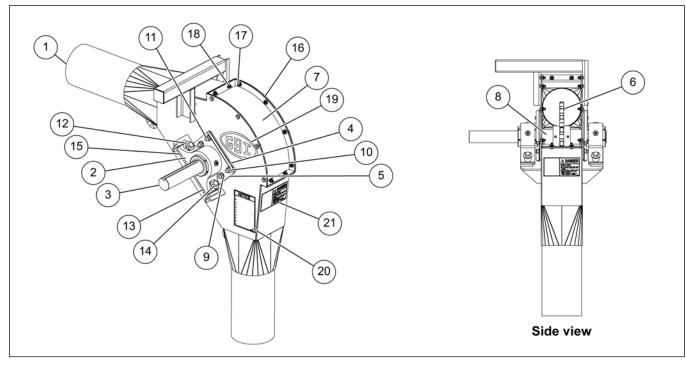


Table 8-16 8 in	. (15 HP-20 HP)	Drive components	(8081362) parts list
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Ref #	Part #	Description	Qty
1	8081361	Chain Loop: TA3 Drive Corner Weldment - 8 in. 207 "E" Bearing	1
2	8101510	Bearing, Taper Dodge #P2BE207R	2
3	8081364	Chain Loop: TA3 Drive Shaft - 8 in. 207 "E" Bearing	1
4	8081269	Corner Seal UHMW, 8 in. and 10 in. Chain Loop	2
5	8081270	Cover Plate for UHMW Bearing Seal	2
6	PT1086	Sprocket, (Hub Type) 3 in. I.D.	1
7	8081009	Weld, 8 in. Drive/Stand Corner Inspection Door	1
8	S-9177	Square Key 3/4 x 3-7/16 in.	1
9	S-8562	Flat Washer 1/2 in. GV	16
10	S-8760	Bolt, HHCS 1/2-13 x 1-1/2 in. ZN Grade 5	8
11	S-8260	Nylock Nut 1/2-13 in. ZN Grade 5	8
12	S-858	Flat Washer 5/8 in. USS ZN Grade 2	8
13	S-3208	Split Lock Washer 5/8 in. Med ZN	4
14	S-7011	Bolt, HHCS 5/8-11 x 3-1/2 in. ZN Grade 8	4
15	S-4110	Hex Nut 5/8-11 in. YDP Grade 5	4
16	S-845	Flat Washer 5/16 in. USS SAE YDP Grade 2	24
17	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	12
18	S-3611	Flange Nut 5/16-18 in. YDP Grade 2	12
19	DC-1474	Decal, Logo GSI 5 x 9 in.	2
20	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
21	8107001	Decal, Danger Shear Point	1

# 10 in. (20 HP) Standard Drive Components (8101865)

Figure 8-10 10 in. (20 HP) Standard drive components (8101865) parts

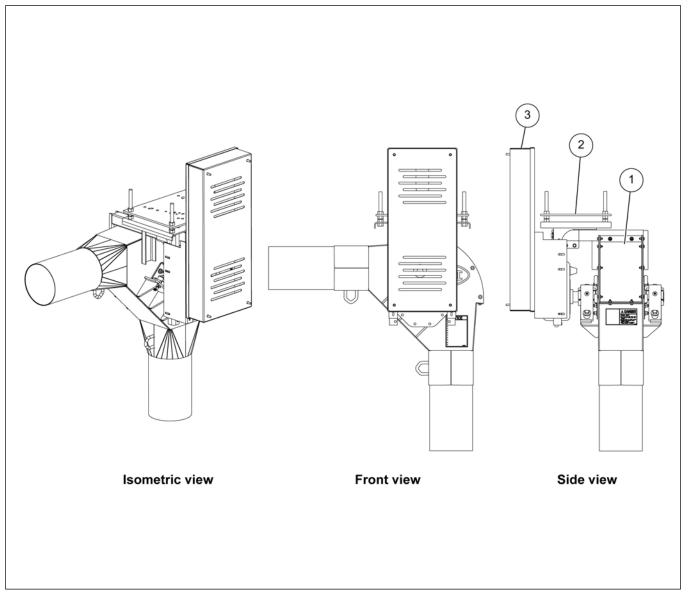


Table 8-17 10 in. (20 HP) Standard drive components (8101865) parts list

Ref #	Part #	Description	Qty
1	8101871	Chain Loop: 20 HP TA3 Drive Corner Assembly - 10 in. Standard Split Sprocket	1
2	8081285	Drive Box TA3, 20 HP, 8 in. and 10 in. Chain Loop	1
3	8120217	Belt Guard Assembly Chain Loop, TA3	1

# 10 in. (20 HP) HD Drive Components (8101753)

Figure 8-11 10 in. (20 HP) HD drive components (8101753) parts

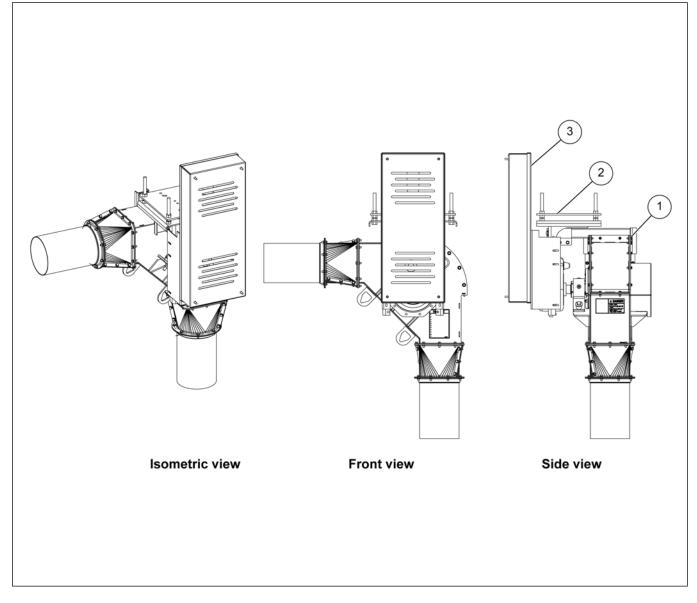
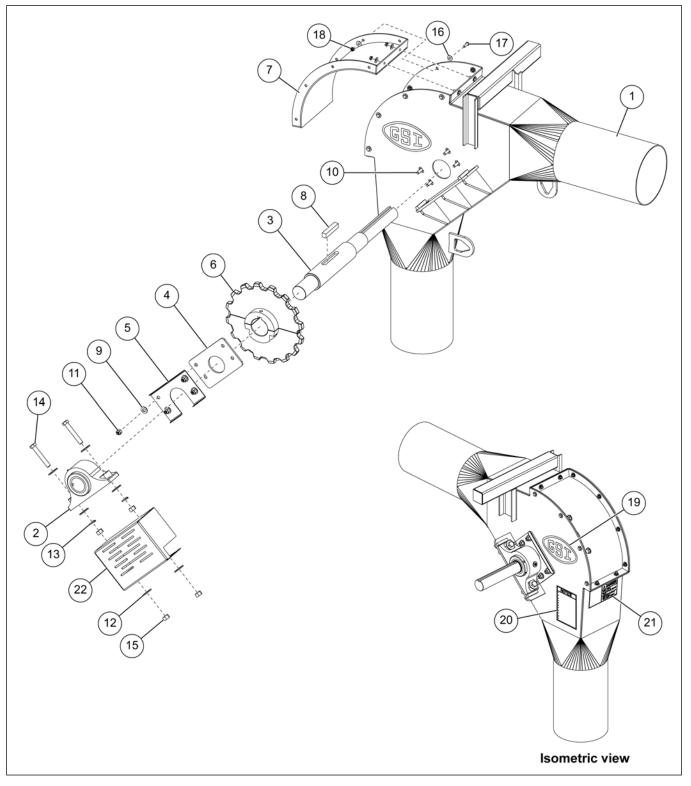


Table 8-18 10 in. (20 HP) HD drive components (8101753) parts list

Ref #	Part #	Description	Qty
1	8101633	Chain Loop: 20 HP TA3 Drive Corner Assembly - 10 in. HD	1
2	8081285	Drive Box TA3, 20 HP, 8 in. and 10 in. Chain Loop	1
3	8120217	Belt Guard Assembly Chain Loop, TA3	1

# 10 in. (15 HP-20 HP) Drive Components (8101871)

Figure 8-12 10 in. (15 HP-20 HP) Drive components (8101871) parts

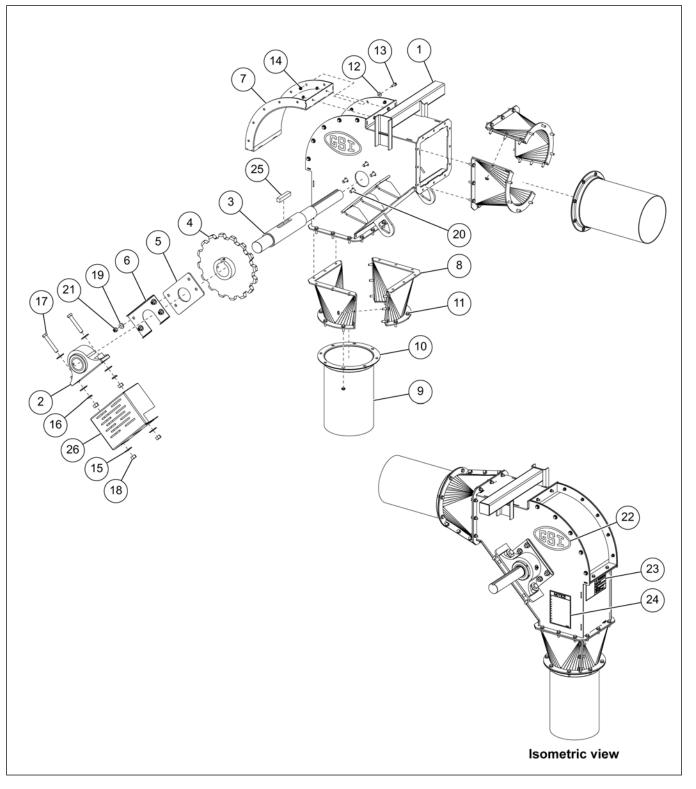


Ref #	Part #	Description	Qty
1	8101524-BS	Chain Loop: TA3 Drive Corner Weldment - 10 in. 207 "E" Bearing	1
2	8101510	Bearing, Taper Dodge #P2BE207R	2
3	8101527	Chain Loop: TA3 Drive Shaft - 10 in. 207 "E" Bearing	1
4	8081269	Corner Seal UHMW, 8 in. and 10 in. Chain Loop	2
5	8081270-BS	Cover Plate for UHMW Bearing Seal	2
6	8101764	Sprocket, 81X Split 16T 3 in. Bore Type C Hub 45-55 RC Teeth Only	1
7	8101009-BS	Door Inspection Weldment - Bin Silver	1
8	S-9177	Square Key 3/4 x 3-7/16 in.	1
9	S-8562	Flat Washer 1/2 in. GV	16
10	S-8760	Bolt, HHCS 1/2-13 x 1-1/2 in. ZN Grade 5	8
11	S-8260	Nylock Nut 1/2-13 in. ZN Grade 5	8
12	S-858	Flat Washer 5/8 in. USS ZN Grade 2	10
13	S-3208	Split Lock Washer 5/8 in. Med ZN	4
14	S-7893	Bolt, HHCS 5/8-11 x 4 in. ZN Grade 8	4
15	S-4110	Hex Nut 5/8-11 in. YDP Grade 5	6
16	S-845	Flat Washer 5/16 in. USS SAE YDP Grade 2	24
17	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	12
18	S-3611	Flange Nut 5/16-18 in. YDP Grade 2	12
19	DC-1474	Decal, Logo GSI 5 x 9 in.	2
20	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
21	8107001	Decal, Danger Shear Point	1
22	8101768-Y	Chain Loop: Shaft Cover - 207 Bearing	1
N/S	CRTDRVCNR	Crate Chain Loop Drive Corner	1

Table 8-19 10 in. (15 HP-20 HP) Drive components (8101871) parts list

# 10 in. (15 HP-20 HP) HD Drive Components (8101633)

Figure 8-13 10 in. (15 HP-20 HP) HD drive components (8101633) parts



Ref #	Part #	Description	Qty
1	8101632-BS	Chain Loop: TA3 Drive Corner Weldment - 10 in. HD	1
2	8101510	Bearing, Taper Dodge #P2BE207R	2
3	8101527	Chain Loop: TA3 Drive Shaft - 10 in. 207 "E" Bearing	1
4	8101764	Sprocket, 81X Split 16T 3 in. Bore Type C Hub 45-55 RC Teeth Only	1
5	8081269	Corner Seal UHMW, 8 in. and 10 in. Chain Loop	2
6	8081270-BS	Cover Plate for UHMW Bearing Seal	2
7	8101590-BS	Chain Loop: 10 in. Standard Corner Cover Weld	1
8	8101625-BS	Chain Loop: 10 in. Square-Round Weld Assembly	4
9	8101600-BS	Chain Loop: 10 in. HD Corner Tube Weld - Bin Silver	2
10	S-10028	Flange Nut 3/8-16 in. ZN Grade 5	52
11	S-9065	Flange Bolt 3/8-16 x 1 in. ZN Grade 5	52
12	S-845	Flat Washer 5/16 in. USS SAE YDP Grade 2	10
13	S-7470	Flange Bolt 5/16-18 x 1 in. ZN Grade 5	15
14	S-3611	Flange Nut 5/16-18 in. YDP Grade 2	14
15	S-858	Flat Washer 5/8 in. USS ZN Grade 2	10
16	S-3208	Split Lock Washer 5/8 in. Med ZN	4
17	S-7893	Bolt, HHCS 5/8-11 x 4 in. YDP Grade 8	4
18	S-4110	Hex Nut 5/8-11 in. YDP Grade 5	6
19	S-8562	Flat Washer 1/2 in. GV	16
20	S-8760	Bolt, HHCS 1/2-13 x 1-1/2 in. ZN Grade 5	8
21	S-8260	Nylock Nut 1/2-13 in. ZN Grade 5	8
22	DC-1474	Decal, Logo GSI 5 x 9 in.	2
23	8107001	Decal, Danger Shear Point	1
24	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
25	S-9177	Square Key 3/4 x 3-7/16 in.	1
26	8101768-Y	Chain Loop: Shaft Cover - 207 Bearing - Ochre	1

Table 8-20 10 in. (15 HP-20 HP) HD drive components (8101633) parts list

# 8 in. (25 HP-30 HP) Drive Components (8081360)

Figure 8-14 8 in. (25 HP-30 HP) Drive components (8081360) parts

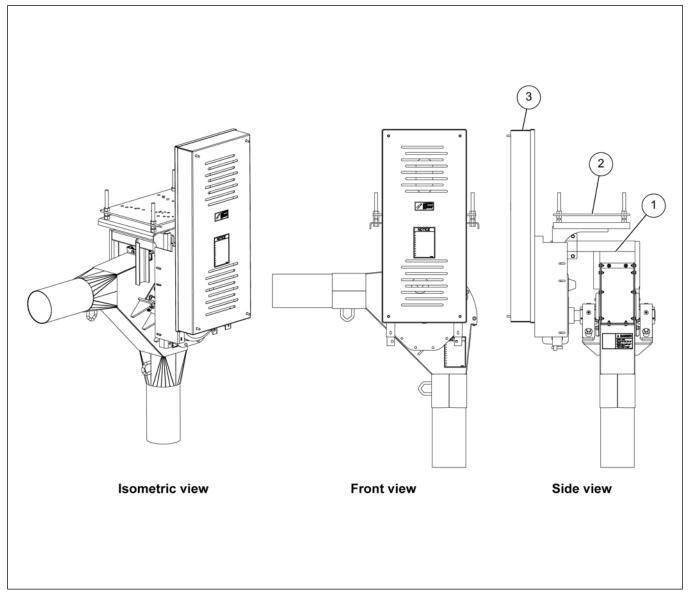
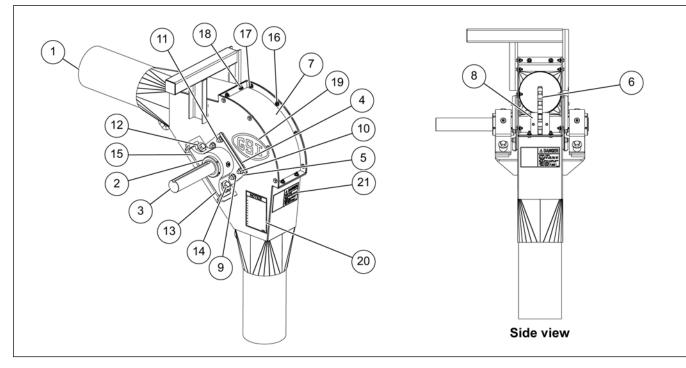


Table 8-21 8 in. (25 HP-30 HP) Drive components (8081360) parts list

Ref #	Part #	Description	Qty
1	8081359	Chain Loop: 25, 30 HP TA4 Drive Corner Assembly - 8 in. 207 "E" Bearing	1
2	8081296	Drive Box TA4, 25 and 30 HP, 8 in. and 10 in. Chain Loop	1
3	8120211	Belt Guard Assembly Chain Loop, TA4	1

#### 8 in. (25 HP-30 HP) Drive Components (8081359)

Figure 8-15 8 in. (25 HP-30 HP) Drive components (8081359) parts



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<b>Table 8-22</b> 8 in.	(25 HP-30 HP	) Drive components	s (8081359) parts list

Ref #	Part #	Description	Qty
1	8081358	Chain Loop: TA4 Drive Corner Weldment - 8 in. 207 "E" Bearing	1
2	8101510	Bearing, Taper Dodge #P2BE207R	2
3	8081355	Chain Loop: TA4 Drive Shaft - 8 in. 207 "E" Bearing	1
4	8081269	Corner Seal UHMW, 8 in. and 10 in. Chain Loop	2
5	8081270	Cover Plate for UHMW Bearing Seal	2
6	PT1086	Sprocket, (Hub Type) 3 in. I.D.	1
7	8081009	Weld, 8 in. Drive/Stand Corner Inspection Door	1
8	S-9177	Square Key 3/4 x 3-7/16 in.	1
9	S-8562	Flat Washer 1/2 in. GV	16
10	S-8760	Bolt, HHCS 1/2-13 x 1-1/2 in. ZN Grade 5	8
11	S-8260	Nylock Nut 1/2-13 in. ZN Grade 5	8
12	S-858	Flat Washer 5/8 in. USS ZN Grade 2	8
13	S-3208	Split Lock Washer 5/8 in. Med ZN	4
14	S-7011	Bolt, HHCS 5/8-11 x 3-1/2 in. ZN Grade 8	4
15	S-4110	Hex Nut 5/8-11 in. YDP Grade 5	4
16	S-845	Flat Washer 5/16 in. USS SAE YDP Grade 2	24
17	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	12
18	S-3611	Flange Nut 5/16-18 in. YDP Grade 2	12
19	DC-1474	Decal, Logo GSI 5 x 9 in.	2
20	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
21	8107001	Decal, Danger Shear Point	1

# 10 in. (25 HP-30 HP) Standard Drive Components (8101866)

Figure 8-16 10 in. (25 HP-30 HP) Standard drive components (8101866) parts

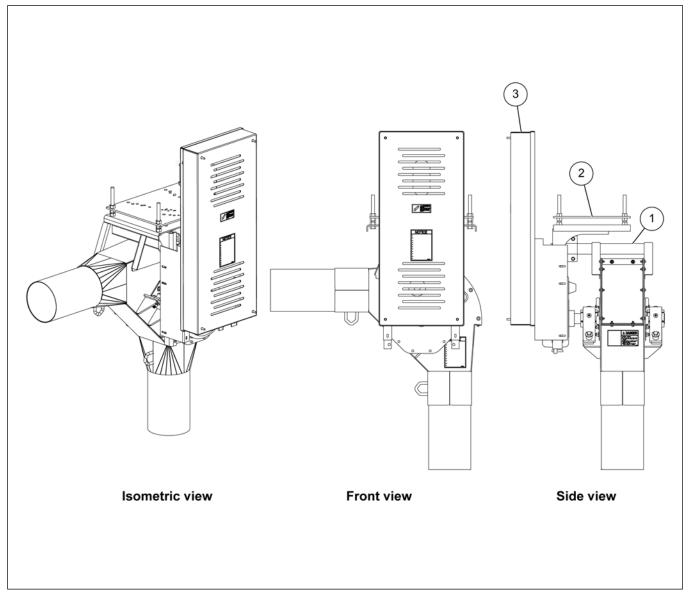


Table 8-23 10 in. (25 HP-30 HP) Standard drive components (8101866) parts list

Ref #	Part #	Description	Qty
1	8101872	Chain Loop: 25-30 HP TA4 Drive Corner Assembly - 10 in. Standard Split Sprocket	1
2	8081296	Drive Box TA4, 25 and 30 HP, 8 in. and 10 in. Chain Loop	1
3	8120211	Belt Guard Assembly Chain Loop, TA4	1

# 10 in. (25 HP-30 HP) HD Drive Components (8101754)

Figure 8-17 10 in. (25 HP-30 HP) HD drive components (8101754) parts

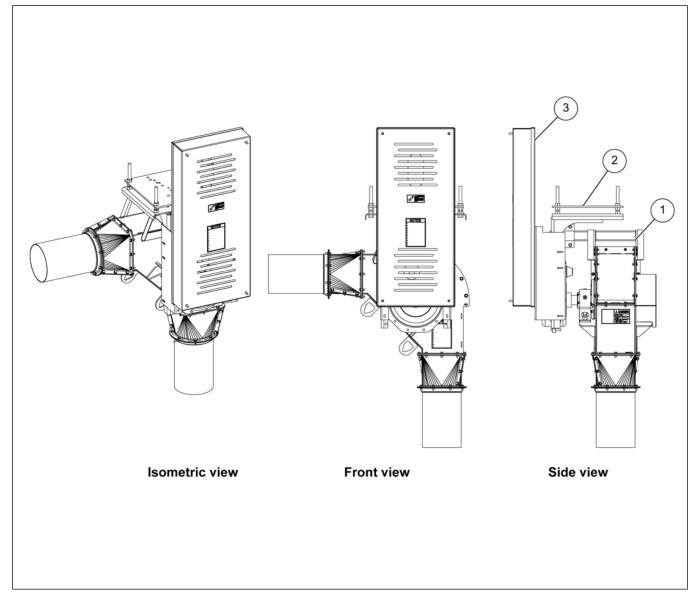
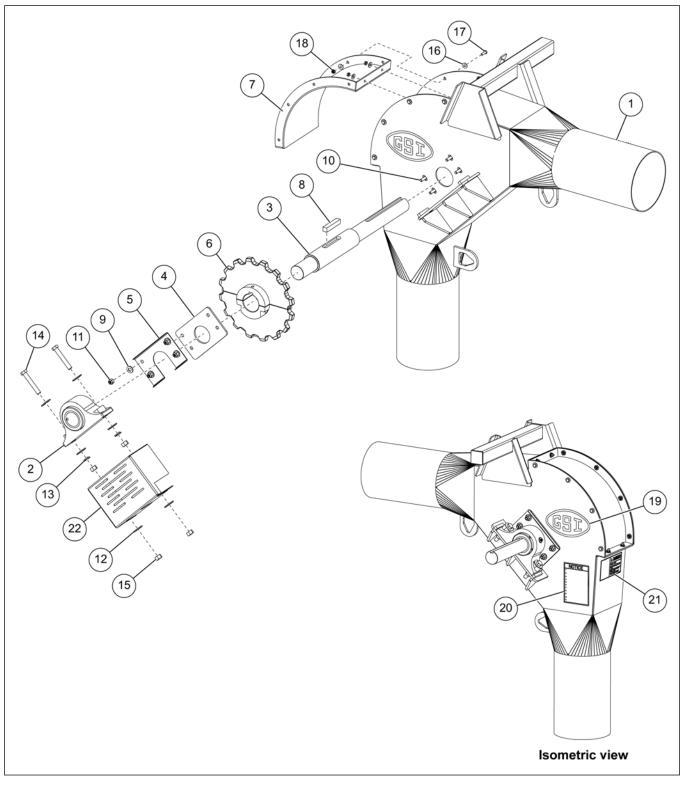


Table 8-24 10 in	. (25 HP-30 HP) H	ID drive components	(8101754) parts list
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Ref #	Part #	Description	Qty
1	8101628	Chain Loop: 25-30 HP TA4 Drive Corner Assembly - 10 in. HD	1
2	8081296	Drive Box TA4, 25-30 HP, 8 in. and 10 in. Chain Loop	1
3	8120211	Belt Guard Assembly Chain Loop, TA4	1

# 10 in. (25 HP-30 HP) Standard Drive Components (8101872)

Figure 8-18 10 in. (25 HP-30 HP) Standard drive components (8101872) parts

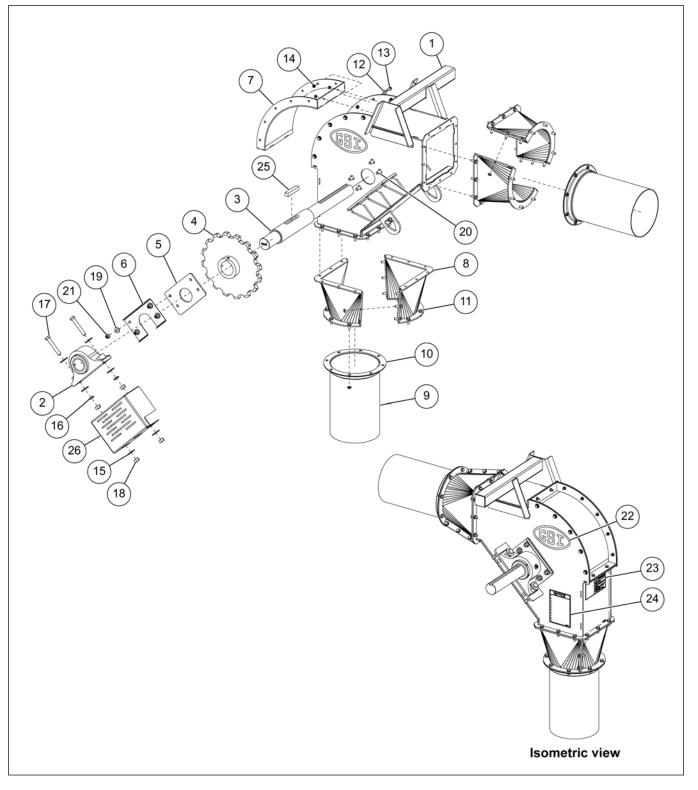


Ref #	Part #	Description	Qty
1	8101515-BS	Chain Loop: TA4 Drive Corner Weldment - 10 in. 207 "E" Bearing	1
2	8101510	Bearing, Taper Dodge #P2BE207R	2
3	8101518	Chain Loop: TA4 Drive Shaft - 10 in. 207 "E" Bearing	1
4	8081269	Corner Seal UHMW, 8 in. and 10 in. Chain Loop	2
5	8081270-BS	Cover Plate for UHMW Bearing Seal	2
6	8101764	Sprocket, 81X Split 16T 3 in. Bore Type C Hub 45-55 RC Teeth Only	1
7	8101009-BS	Door Inspection Weldment - Bin Silver	1
8	S-9177	Square Key 3/4 x 3-7/16 in.	1
9	S-8562	Flat Washer 1/2 in. GV	16
10	S-8760	Bolt, HHCS 1/2-13 x 1-1/2 in. ZN Grade 5	8
11	S-8260	Nylock Nut 1/2-13 in. ZN Grade 5	8
12	S-858	Flat Washer 5/8 in. USS ZN Grade 2	10
13	S-3208	Split Lock Washer 5/8 in. Med ZN	4
14	S-7893	Bolt, HHCS 5/8-11 x 4 in. ZN Grade 8	4
15	S-4110	Hex Nut 5/8-11 in. YDP Grade 5	6
16	S-845	Flat Washer 5/16 in. USS SAE YDP Grade 2	24
17	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	12
18	S-3611	Flange Nut 5/16-18 in. YDP Grade 2	12
19	DC-1474	Decal, Logo GSI 5 x 9 in.	2
20	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
21	8107001	Decal, Danger Shear Point	1
22	8101768-Y	Chain Loop: Shaft Cover - 207 Bearing	1
N/S	CRTDRVCNR	Crate Chain Loop Drive Corner	1

Table 8-25 10 in. (25 HP-30 HP) Standard drive components (8101872) parts list

# 10 in. (25 HP-30 HP) HD Drive Components (8101628)

Figure 8-19 10 in. (25 HP-30 HP) HD drive components (8101628) parts



Ref #	Part #	Description	Qty
	8101629-BS	Chain Loop: TA4 Drive Corner Weldment - 10 in. HD	
1			1
2	8101510	Bearing, Taper Dodge #P2BE207R	2
3	8101518	Chain Loop: TA4 Drive Shaft - 10 in. 207 "E" Bearing	1
4	8101764	Sprocket, 81X Split 16T 3 in. Bore Type C Hub 45-55 RC Teeth Only	1
5	8081269	Corner Seal UHMW, 8 in. and 10 in. Chain Loop	2
6	8081270-BS	Cover Plate for UHMW Bearing Seal	2
7	8101590-BS	Chain Loop: 10 in. Standard Corner Cover Weld	1
8	8101625-BS	Chain Loop: 10 in. Square-Round Weld Assembly	4
9	8101600-BS	Chain Loop: 10 in. HD Corner Tube Weld - Bin Silver	2
10	S-10028	Flange Nut 3/8-16 in. ZN Grade 5	52
11	S-9065	Flange Bolt 3/8-16 x 1 in. ZN Grade 5	52
12	S-845	Flat Washer 5/16 in. USS SAE YDP Grade 2	10
13	S-7470	Flange Bolt 5/16-18 x 1 in. ZN Grade 5	15
14	S-3611	Flange Nut 5/16-18 in. YDP Grade 2	14
15	S-858	Flat Washer 5/8 in. USS ZN Grade 2	10
16	S-3208	Split Lock Washer 5/8 in. Med ZN	4
17	S-7893	Bolt, HHCS 5/8-11 x 4 in. YDP Grade 8	4
18	S-4110	Hex Nut 5/8-11 in. YDP Grade 5	6
19	S-8562	Flat Washer 1/2 in. GV	16
20	S-8760	Bolt, HHCS 1/2-13 x 1-1/2 in. ZN Grade 5	8
21	S-8260	Nylock Nut 1/2-13 in. ZN Grade 5	8
22	DC-1474	Decal, Logo GSI 5 x 9 in.	2
23	8107001	Decal, Danger, Shear Point	1
24	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
25	S-9177	Square Key 3/4 x 3-7/16 in.	1
26	8101768-Y	Chain Loop: Shaft Cover - 207 Bearing - Ochre	1

Table 8-26 10 in. (25 HP-30 HP) HD drive components (8101628) parts list

# 10 in. (40 HP) Standard Drive Components (8101867)

Figure 8-20 10 in. (40 HP) Standard drive components (8101867) parts

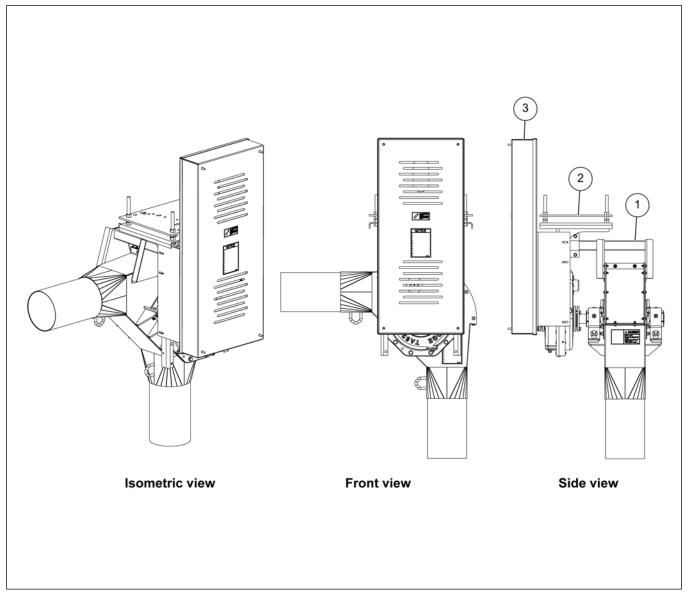


Table 8-27 10 in. (40 HP) Standard drive components (8101867) parts list

Ref #	Part #	Description	Qty
1	8101873	Chain Loop: 40-50 HP TA5 Drive Corner Assembly - 10 in. Standard Split Sprocket	1
2	8101303	Drive Box TA5, 40 HP, 10 in. Chain Loop	1
3	8120214	Belt Guard Assembly Chain Loop, TA5	1

# 10 in. (40 HP) HD Drive Components (8101755)

Figure 8-21 10 in. (40 HP) HD drive components (8101755) parts

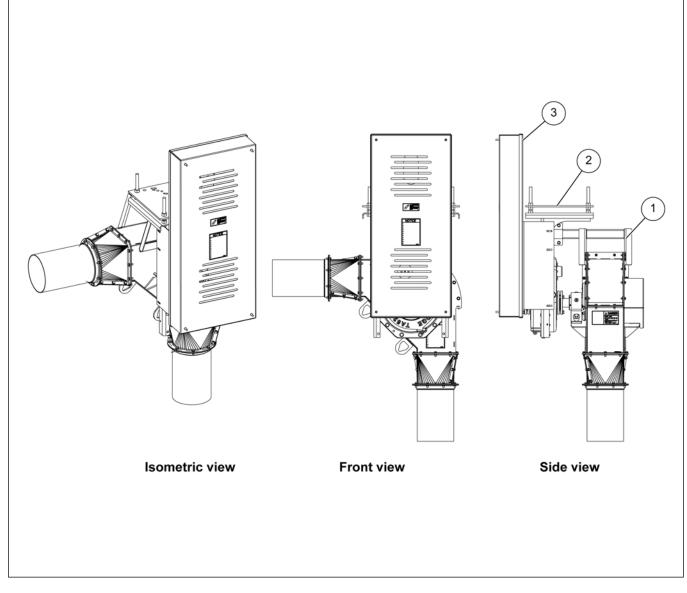


Table 8-28 10 in. (40 HP) HD drive components (8101755) parts list

Ref #	Part #	Description	Qty
1	8101604	Chain Loop: 40-50 HP TA5 Drive Corner Assembly - 10 in. HD	1
2	8101303	Drive Box TA5, 40 HP, 10 in. Chain Loop	1
3	8120214	Belt Guard Assembly Chain Loop, TA5	1

# 10 in. (50 HP) Standard Drive Components (8101868)

Figure 8-22 10 in. (50 HP) Standard drive components (8101868) parts

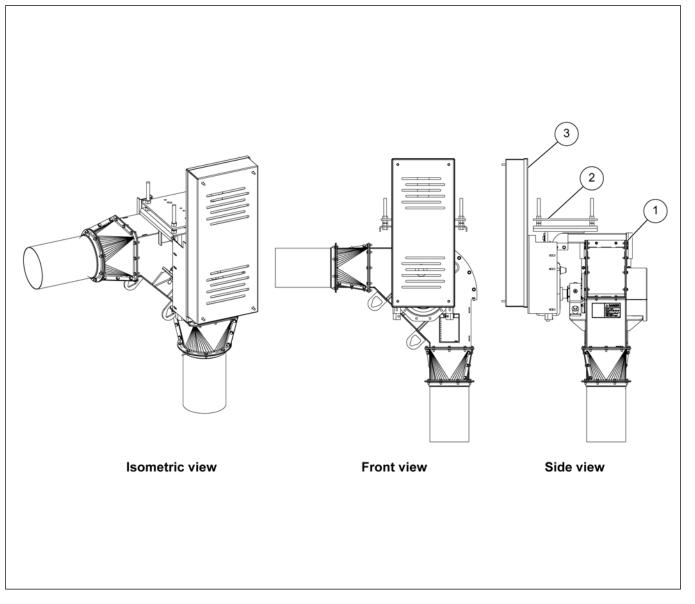


Table 8-29 10 in. (50 HP) Standard drive components (8101868) parts list

Ref #	Part #	Description	Qty
1	8101873	Chain Loop: 40-50 HP TA5 Drive Corner Assembly - 10 in. Standard Split Sprocket	1
2	8101331	Drive Box TA5, 50 HP, 10 in. Chain Loop	1
3	8120214	Belt Guard Assembly Chain Loop, TA5	1

# 10 in. (50 HP) HD Drive Components (8101756)

Figure 8-23 10 in. (50 HP) HD drive components (8101756) parts

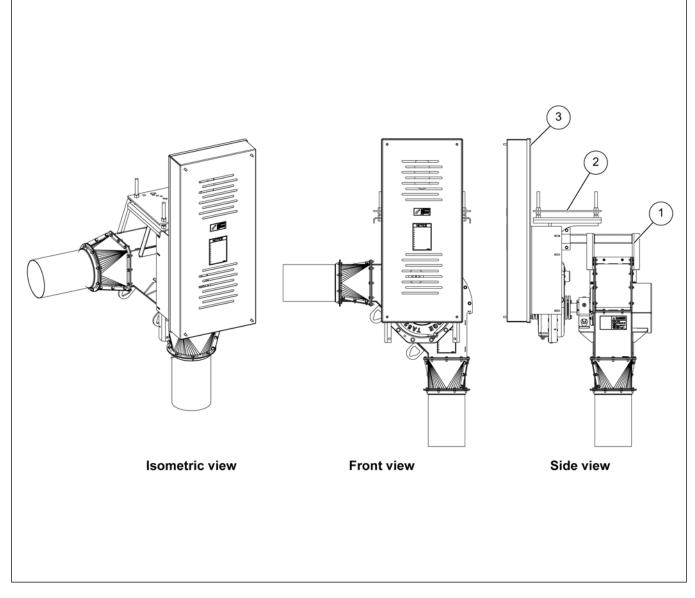
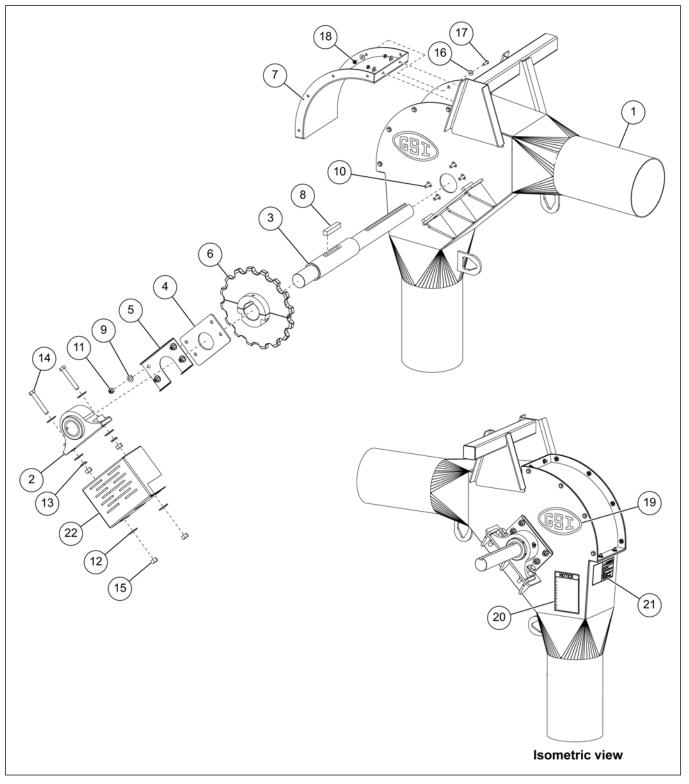


Table 8-30 10 in. (50 HP) HD drive components (8101756) parts list

Ref #	Part #	Description	Qty
1	8101604	Chain Loop: 40-50 HP TA5 Drive Corner Assembly - 10 in. HD	1
2	8101331	Drive Box TA5, 50 HP, 10 in. Chain Loop	1
3	8120214	Belt Guard Assembly Chain Loop, TA5	1

# 10 in. (40 HP-50 HP) Standard Drive Components (8101873)

Figure 8-24 10 in. (40 HP-50 HP) Standard drive components (8101873) parts

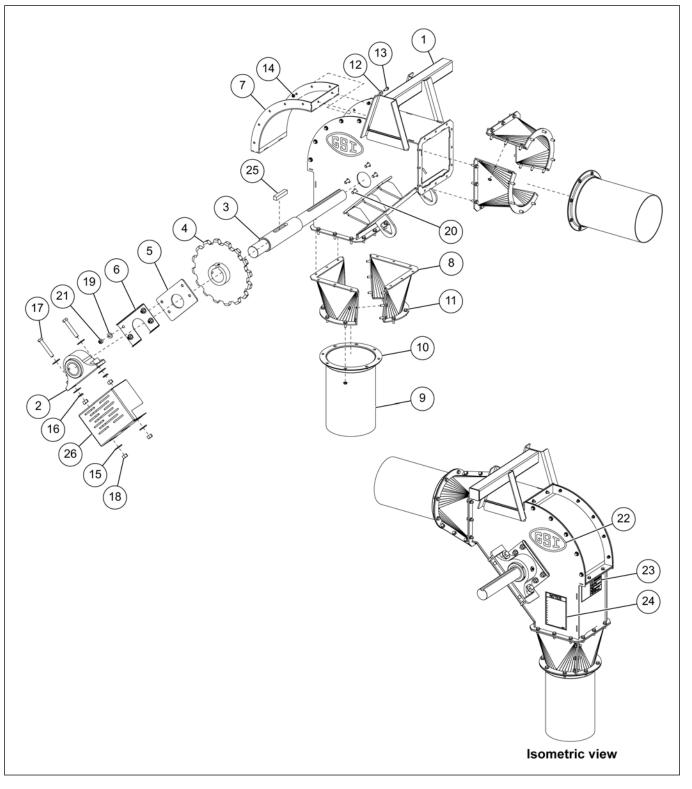


Ref #	Part #	Description	Qty
1	8101509-BS	Chain Loop: TA5 Drive Corner Weldment - 10 in. 207 "E" Bearing	1
2	8101510	Bearing, Taper Dodge #P2BE207R	2
3	8101512	Chain Loop: TA5 Drive Shaft-10 in. 207 "E" Bearing	1
4	8081269	Corner Seal UHMW, 8 in. and 10 in. Chain Loop	2
5	8081270-BS	Cover Plate for UHMW Bearing Seal	2
6	8101764	Sprocket, 81X Split 16T 3 in. Bore Type C Hub 45-55 RC Teeth Only	1
7	8101009-BS	Door Inspection Weldment - Bin Silver	1
8	S-9177	Square Key 3/4 x 3-7/16 in.	1
9	S-8562	Flat Washer 1/2 in. GV	16
10	S-8760	Bolt, HHCS 1/2-13 x 1-1/2 in. ZN Grade 5	8
11	S-8260	Nylock Nut 1/2-13 in. ZN Grade 5	8
12	S-858	Flat Washer 5/8 in. USS ZN Grade 2	10
13	S-3208	Split Lock Washer 5/8 in. Med ZN	4
14	S-7893	Bolt, HHCS 5/8-11 x 4 in. ZN Grade 8	4
15	S-4110	Hex Nut 5/8-11 in. YDP Grade 5	6
16	S-845	Flat Washer 5/16 in. USS SAE YDP Grade 2	24
17	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	12
18	S-3611	Flange Nut 5/16-18 in. YDP Grade 2	12
19	DC-1474	Decal, Logo GSI 5 x 9 in.	2
20	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
21	8107001	Decal, Danger Shear Point	1
22	8101768-Y	Chain Loop: Shaft Cover - 207 Bearing	1
N/S	CRTDRVCNR	Crate Chain Loop Drive Corner	1

 Table 8-31 10 in. (40 HP-50 HP) Standard drive components (8101873) parts list

# 10 in. (40 HP-50 HP) HD Drive Components (8101604)

Figure 8-25 10 in. (40 HP-50 HP) HD drive components (8101604) parts



Ref #	Part #	Description	Qty
1	8101603-BS	Chain Loop: TA5 Drive Corner Weldment - 10 in. HD	1
2	8101510	Bearing, Taper Dodge #P2BE207R	2
3	8101512	Chain Loop: TA5 Drive Shaft - 10 in. 207 "E" Bearing	1
4	8101764	Sprocket, 81X Split 16T 3 in. Bore Type C Hub 45-55 RC Teeth Only	1
5	8081269	Corner Seal UHMW, 8 in. and 10 in. Chain Loop	2
6	8081270-BS	Cover Plate for UHMW Bearing Seal	2
7	8101590-BS	Chain Loop: 10 in. Standard Corner Cover Weld	1
8	8101625-BS	Chain Loop: 10 in. Square-Round Weld Assembly	4
9	8101600-BS	Chain Loop: 10 in. HD Corner Tube Weld - Bin Silver	2
10	S-10028	Flange Nut 3/8-16 in. ZN Grade 5	52
11	S-9065	Flange Bolt 3/8-16 x 1 in. ZN Grade 5	52
12	S-845	Flat Washer 5/16 in. USS SAE YDP Grade 2	10
13	S-7470	Flange Bolt 5/16-18 x 1 in. ZN Grade 5	15
14	S-3611	Flange Nut 5/16-18 in. YDP Grade 2	14
15	S-858	Flat Washer 5/8 in. USS ZN Grade 2	10
16	S-3208	Split Lock Washer 5/8 in. Med ZN	4
17	S-7893	Bolt, HHCS 5/8-11 x 4 in. YDP Grade 8	4
18	S-4110	Hex Nut 5/8-11 in. YDP Grade 5	6
19	S-8562	Flat Washer 1/2 in. GV	16
20	S-8760	Bolt, HHCS 1/2-13 x 1-1/2 in. ZN Grade 5	8
21	S-8260	Nylock Nut 1/2-13 in. ZN Grade 5	8
22	DC-1474	Decal, Logo GSI 5 x 9 in.	2
23	8107001	Decal, Danger Shear Point	1
24	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
25	S-9177	Square Key 3/4 x 3-7/16 in.	1
26	8101768-Y	Chain Loop: Shaft Cover - 207 Bearing - Ochre	1

Table 8-32 10 in. (40 HP-50 HP) HD drive components (8101604) parts list

# 8 in. (15 HP) Drive Components (8081271)

Figure 8-26 8 in. (15 HP) Drive components (8081271) parts

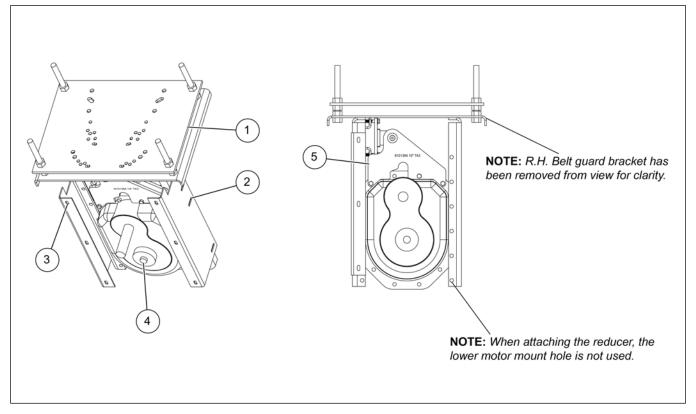


Table 8-33 8 in. (15 HP) Drive components (8081271) parts list

Ref #	Part #	Description	Qty
1	TA3CLMM	Motor Mount, Chain Loop TA3	1
2	BG-0167	Belt Guard Bracket, R.H., TA3	1
3	BG-0168	Belt Guard Bracket, L.H., TA3	1
4	MHC01074	Shaft, Reducer Dodge #TA3203H15	1
5	8081324	TA3 Torque Plate Kit 8 in., 10 in. Loop	1
N/S	CE-00582	Sheave, 3 Grade, A6.0-B6.4 - SD, 6-3/4 in. O.D.	1
N/S	GC06516	Bushing, SD x 1-5/8 in. Bore	1
N/S	GC07874	Sheave, 3 Grade, A7.6-B8.0 - SK, 8.35 in. O.D.	1
N/S	MHC00823	Belt, V BX61	3
N/S	MHC01094	Bushing, Taper, TA3203TB x 2-3/16 Dodge # 903022	1
N/S	PT0778	Bushing, SK 1-3/8 in. Bore QD Style	1
N/S	TA3HDW	Hardware, Belt Guard TA3	1
N/S	8101336	Vent Elbow Kit 3/8 in. with Instructions	1

## 8 in. (20 HP) Drive Components (8081285)

Figure 8-27 8 in. (20 HP) Drive components (8081285) parts

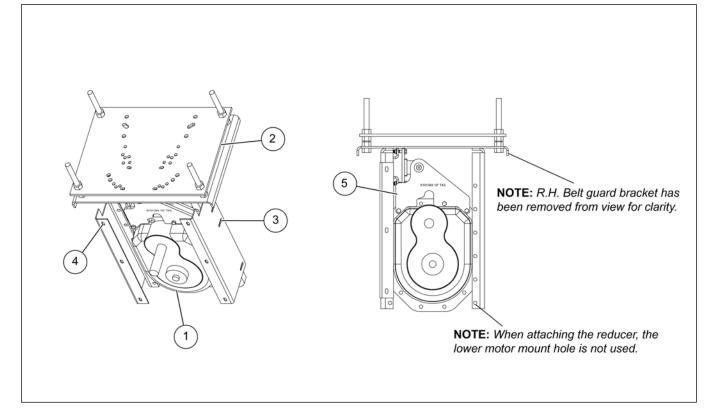
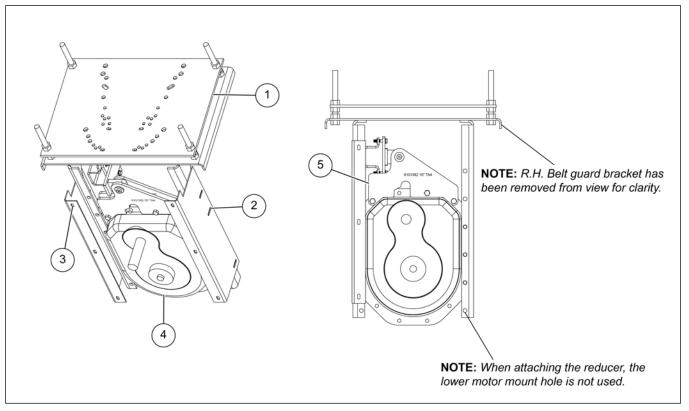


Table 8-34 8 in. (20 HP) Drive components (8081285) parts list

Ref #	Part #	Description	Qty
1	MHC01074	Shaft, Reducer Dodge #TA3203H15	1
2	<b>TA3CLMM</b>	Motor Mount, Chain Loop TA3	1
3	BG-0167	Belt Guard Bracket, R.H., TA3	1
4	BG-0168	Belt Guard Bracket, L.H., TA3	1
5	8081324	TA3 Torque Plate Kit 8 in., 10 in. Loop	1
N/S	3311A1	Sheave, 4 Grade, A6.0-B6.4 -SD, 6-3/4 in. O.D.	1
N/S	GC06516	Bushing, SD x 1-5/8 in. Bore	1
N/S	GC06676	Sheave, 4 Grade, A7.6-B8.0 - SK, 8.35 in. O.D.	1
N/S	MHC00823	Belt, V BX61	4
N/S	MHC01094	Bushing, Taper, TA3203TB x 2-3/16 Dodge # 903022	1
N/S	PT0778	Bushing, SK 1-3/8 in. Bore QD Style	1
N/S	TA3HDW	Hardware, Belt Guard TA3	1
N/S	8101336	Vent Elbow Kit 3/8 in. with Instructions	1

# 8 in. - 10 in. (25 HP-30 HP) Drive Components (8081296)

Figure 8-28 8 in. - 10 in. (25 HP-30 HP) Drive components (8081296) parts



Ref #	Part #	Description	Qty
1	TA4CLMM	Motor Mount, Chain Loop TA4	1
2	BG-0181	Belt Guard Bracket, R.H., TA4	1
3	BG-0182	Belt Guard Bracket, L.H., TA4	1
4	MHC01075	Shaft, Reducer Dodge #TA4207H15	1
5	8101424	TA4 Torque Plate Kit 8 in., 10 in. Loop	1
N/S	CE-00617	Bushing, SK 1-7/8 in. Bore	1
N/S	D02-0067	Belt, V BX85 Replaces 717-1346-5	3
N/S	GC06687	Bushing, SK x 1-7/16 in. Bore	1
N/S	MHC01096	Bushing, Taper, TA4207TB x 2-7/16	1
N/S	MHC01566	Sheave, 3 Grade, A10.6-B11.0 - SK, 11.35 in. O.D.	1
N/S	MHC01567	Sheave, 3 Grade, A13.2-B13.6 - SK, 13.95 in. O.D.	1
N/S	TA4HDW	Hardware, Belt Guard TA4	1
N/S	8101334	Vent Elbow Kit 1/2 in.	1

# 10 in. (40 HP) Drive Components (8101303)

Figure 8-29 10 in. (40 HP) Drive components (8101303) parts

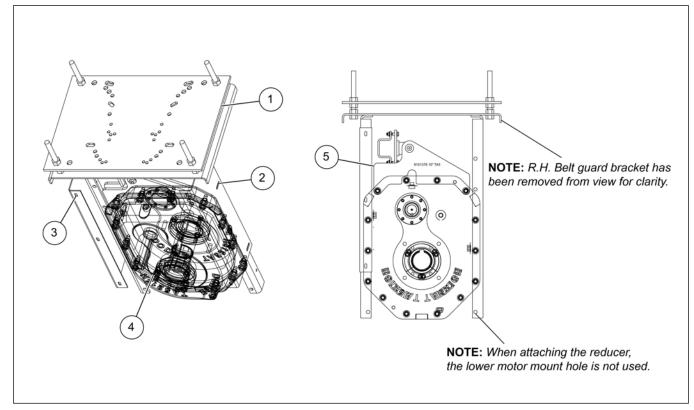


Table 8-36 10 in. (40 HP) Drive components (8101303) parts list

Ref #	Part #	Description	Qty
1	TA5CLMM	Motor Mount, Chain Loop TA5	1
2	BG-0196	Belt Guard Bracket, R.H., TA5	1
3	BG-0197	Belt Guard Bracket, L.H., TA5	1
4	MHC01076	Shaft, Reducer Dodge #TA4207H15	1
5	8101425	TA5 Torque Plate Kit 8 in., 10 in. Loop	1
N/S	GT3-0068	Bushing, SF 2-1/8 in. Bore	1
N/S	MHC00039	Belt, V 5VX-850	3
N/S	MHC01097	Bushing, Taper, TA5215TB x 2-7/16	1
N/S	MHC01531	Sheave, 3 Grade 5V 11.3-SF QD	1
N/S	MHC01668	Sheave, 3 Grade 5V 9.0SF QD	1
N/S	MHC01669	Bushing, SF x 1-5/8 in. Bore QD	1
N/S	TA5HDW	Hardware, Belt Guard TA5	1
N/S	8101334	Vent Elbow Kit 1/2 in.	1

# 10 in. (50 HP) Drive Components (8101331)

Figure 8-30 10 in. (50 HP) Drive components (8101331) parts

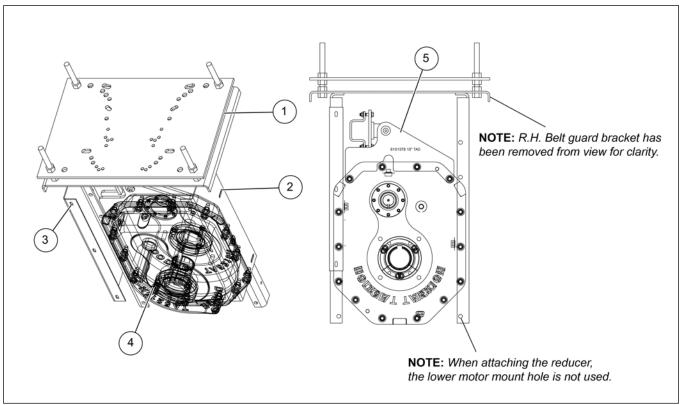


Table 8-37 10 in. (50 HP) Drive components (8101331) parts list

Ref #	Part #	Description	Qty
1	TA5CLMM	Motor Mount, Chain Loop TA5	1
2	BG-0196	Belt Guard Bracket, R.H., TA5	1
3	BG-0197	Belt Guard Bracket, L.H., TA5	1
4	MHC01076	Shaft, Reducer Dodge #TA4207H15	1
5	8101425	TA5 Torque Plate Kit 8 in., 10 in. Loop	1
N/S	MHC01540	Bushing, E x 2-1/8 in. Bore QD	1
N/S	MHC00039	Belt, V 5VX-850	4
N/S	MHC01097	Bushing, Taper, TA5215TB x 2-7/16	1
N/S	MHC01699	Sheave, 4 Grade 5V 11.3 in. QD "E"	1
N/S	KD-PDS0016	Sheave, 4 Grade 5V 9.0 in. QD "E"	1
N/S	MHC01537	Bushing, E x 1-5/8 in. Bore QD	1
N/S	TA5HDW	Hardware, Belt Guard TA5	1
N/S	8101334	Vent Elbow Kit 1/2 in.	1

# Belt Guard Assembly TA3 (8120217)

Figure 8-31 Belt guard assembly TA3 (8120217) parts

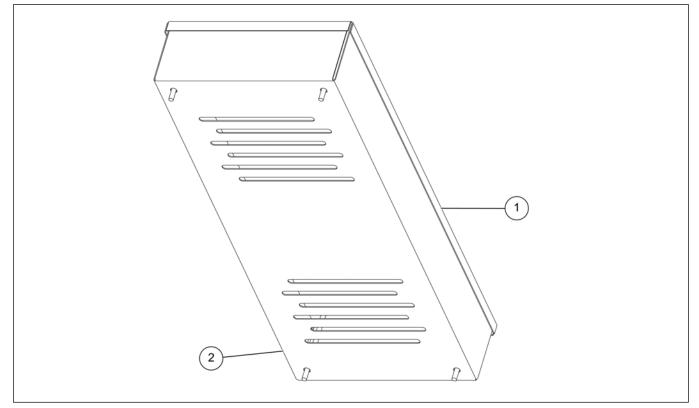
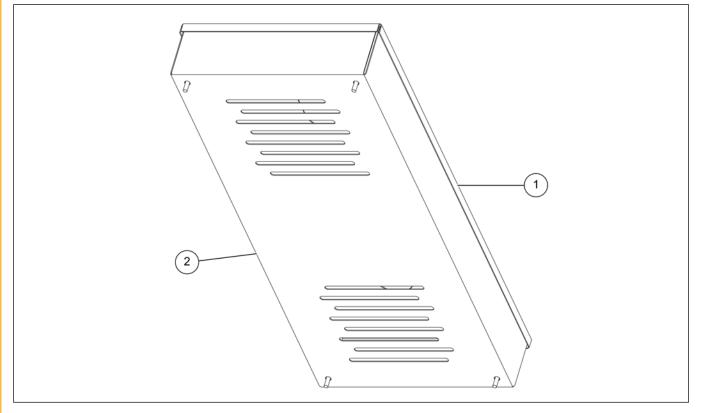


Table 8-38 Belt guard assembly TA3 (8120217) parts list

Ref #	Part #	Description	Qty
1	8120216	Belt Guard Back Weld Chain Loop, TA3	1
2	8120222	Belt Guard Cover Weld Chain Loop, TA3	1
N/S	S-1054	Split Lock Washer 3/8 in. ZN	4
N/S	S-248	Flat Washer 3/8 in. 7/16 in. I.D. 1 in. O.D. YDP	4
N/S	S-456	Hex Nut 3/8-16 in. YDP Grade 5	4
N/S	DC-994	Decal, Danger Shear Point	1
N/S	DC-995	Decal, Warning Shear Point	1
N/S	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1

## Belt Guard Assembly TA4 (8120211)

Figure 8-32 Belt guard assembly TA4 (8120211) parts



#### Table 8-39 Belt guard assembly TA4 (8120211) parts list

Ref #	Part #	Description	Qty
1	8120210	Belt Guard Back Weld Chain Loop, TA4	1
2	8120220	Belt Guard Cover Weld Chain Loop, TA4	1
N/S	S-1054	Split Lock Washer 3/8 in. ZN	4
N/S	S-248	Flat Washer 3/8 in. 7/16 in. I.D. 1 in. O.D. YDP	4
N/S	S-456	Hex Nut 3/8-16 in. YDP Grade 5	4
N/S	DC-994	Decal, Danger Shear Point	1
N/S	DC-995	Decal, Warning Shear Point	1
N/S	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1

## Belt Guard Assembly TA5 (8120214)

Figure 8-33 Belt guard assembly TA5 (8120214) parts

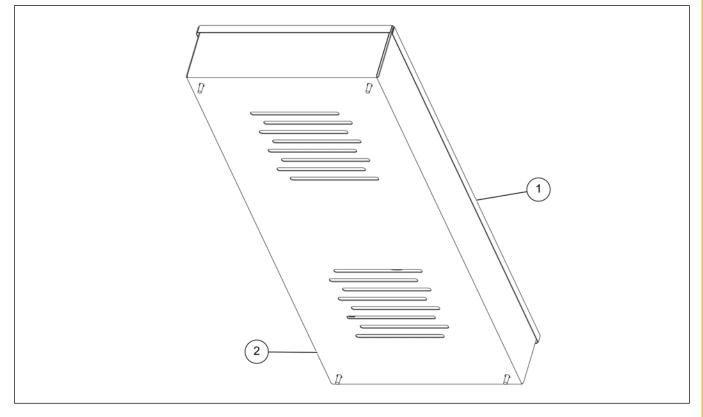
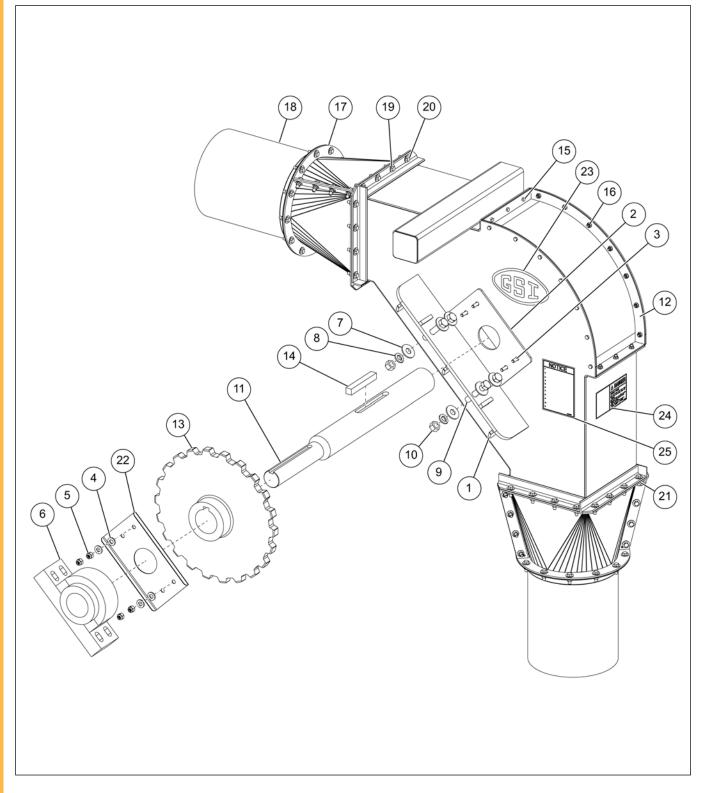


Table 8-40 Belt guard assembly TA5 (8120214) parts list

Ref #	Part #	Description	Qty
1	8120213	Belt Guard Back Weld Chain Loop, TA5	1
2	8120218	Belt Guard Cover Weld Chain Loop, TA5	1
N/S	S-1054	Split Lock Washer 3/8 in. ZN	4
N/S	S-248	Flat Washer 3/8 in. 7/16 in. I.D. 1 in. O.D. YDP	4
N/S	S-456	Hex Nut 3/8-16 in. YDP Grade 5	4
N/S	DC-994	Decal, Danger Shear Point	1
N/S	DC-995	Decal, Warning Shear Point	1
N/S	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1

#### 12 in. 7 Gauge (30 HP) Drive Components (8120000)

Figure 8-34 12 in. 7 Gauge (30 HP) drive components (8120000) parts

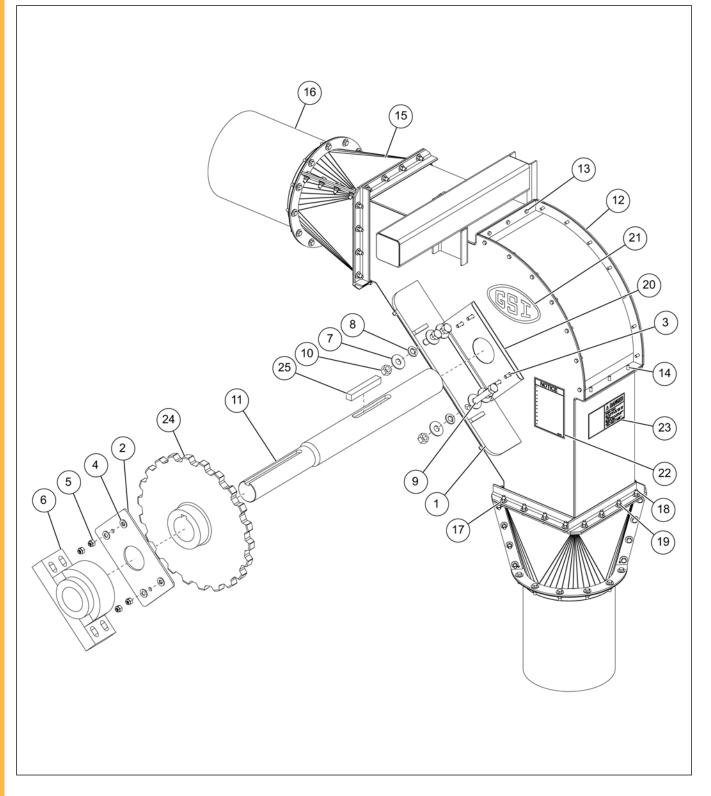


Ref #	Part #	Description	Qty
1	8120027-BS	TA4 Drive Corner Weld - 12 in. Chain Loop	1
2	8120010	UHMW Corner Dust Seal	2
3	S-8760	Bolt, HHTB 1/2-13 x 1-1/2 in. ZN Grade 5	8
4	S-8562	Flat Washer 1/2 in. GV	8
5	S-8260	Nylock Nut 1/2-13 in. ZN Grade 5	8
6	MHC01277	Bearing, Dodge 4-Bolt S-2000 P.B. 3-7/16 in.	2
7	S-866	Flat Washer 3/4 in. USS ZN Flat Grade 2	16
8	S-233	3/4 in. Lock Washer	8
9	S-7884	Bolt, HHCS 3/4-10 x 4 in. ZN Grade 8	8
10	S-234	Nut 3/4-10 in.	8
11	8120011	TA4 Drive Shaft	1
12	8120022-BS	Corner Cover Weldment	1
13	8120311	Sprocket, 81X Split 22T 3 7/16 in. Bore Type C Hub 45-55 RC Teeth Only	1
14	K0875S06	Keystock, 7/8 in. Square x 6 in. Long	1
15	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	20
16	S-3611	Flange Nut 5/16-18 in. YDP Grade 2	20
17	8120308-BS	Chain Loop: 12 in. Square Round Weld Assembly - Bin Silver	4
18	8120304-BS	Chain Loop: 12 in. HD Corner Tube Weld - Bin Silver	2
19	S-248	Flat Washer 3/8 in. 7/16 in. I.D. 1 in. O.D. YDP	72
20	S-2071	Bolt, HHCS 3/8-16 x 1-1/4 in. ZN Grade 5	72
21	S-968	Flange Nut 3/8-16 in. ZN Grade 5	72
22	8120170-BS	Cover, Plate For UHMW Bearing Seal	2
23	DC-1474	Decal, Logo GSI 5 x 9 in.	2
24	8107001	Decal, Danger Shear Point	1
25	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
N/S	S-2052	Foam Strip 1/8 in. Thick x 1/2 in. Wide Weather In Rolls 75 ft. Per Roll	4.083'

Table 8-41 12 in. 7 Gauge (30 HP) drive components (8120000) parts list

# 12 in. 7 Gauge (40 HP-50 HP) Drive Components (8120144)

Figure 8-35 12 in. 7 Gauge (40 HP-50 HP) drive components (8120144) parts

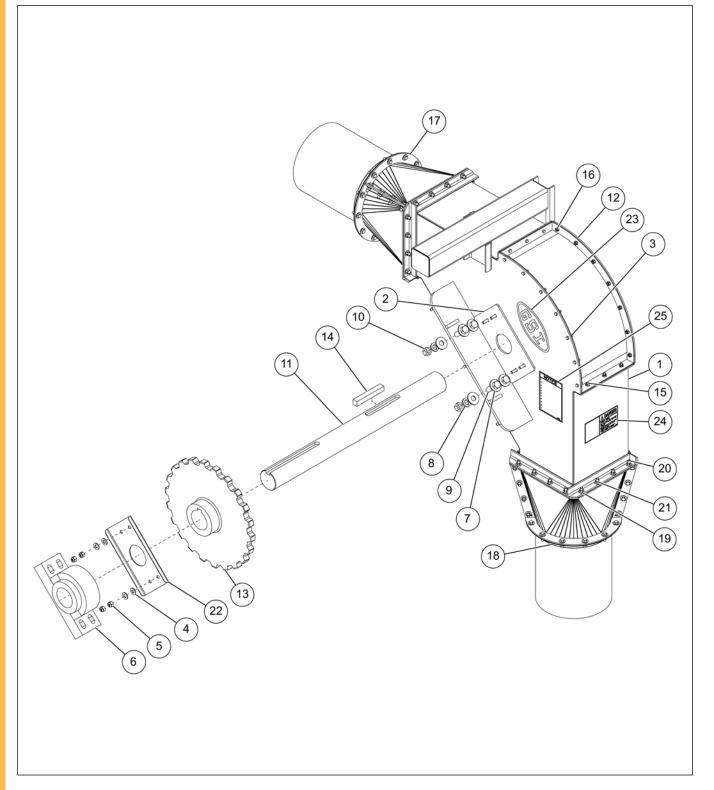


Ref #	Part #	Description	Qty
1	8120154-BS	TA5 Drive Corner Weld - 12 in. Chain Loop	1
2	8120010	UHMW Corner Dust Seal	2
3	S-8760	Bolt, HHTB 1/2-13 x 1-1/2 in. ZN Grade 5	8
4	S-8562	Flat Washer 1/2 in. GV	8
5	S-8260	Nylock Nut 1/2-13 in. ZN Grade 5	8
6	MHC01277	Bearing, Dodge 4-Bolt S-2000 P.B. 3-7/16 in.	2
7	S-866	Flat Washer 3/4 in. USS ZN Flat Grade 2	16
8	S-233	3/4 in. Lock Washer	8
9	S-7884	Bolt, HHCS 3/4-10 x 4 in. ZN Grade 8	8
10	S-234	Nut 3/4-10 in.	8
11	8120148	TA5 Drive Shaft	1
12	8120022-BS	Corner Cover Weldment	1
13	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	20
14	S-3611	Flange Nut 5/16-18 in. YDP Grade 2	20
15	8120308-BS	Chain Loop: 12 in. Square Round Weld Assembly - Bin Silver	4
16	8120304-BS	Chain Loop: 12 in. HD Corner Tube Weld - Bin Silver	2
17	S-248	Flat Washer 3/8 in. 7/16 in. I.D. 1 in. O.D. YDP	72
18	S-2071	Bolt, HHCS 3/8-16 x 1-1/4 in. ZN Grade 5	72
19	S-968	Flange Nut 3/8-16 in. ZN Grade 5	72
20	8120170-BS	Cover, Plate for UHMW Bearing Seal	2
21	DC-1474	Decal, Logo GSI 5 x 9 in.	2
22	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
23	8107001	Decal, Danger Shear Point	1
24	8120311	Sprocket, 81X Split 22T 3 7/16 in. Bore Type C Hub 45-55 RC Teeth Only	1
25	K0875S06	Keystock, 7/8 in. Square x 6 in. Long	1
N/S	S-2052	Foam Strip 1/8 in. Thick x 1/2 in. Wide Weather In Rolls 75 ft. Per Roll	4.083'

Table 8-42 12 in. 7 Gauge (40 HP-50 HP) drive components (8120144) parts list

### 12 in. 7 Gauge (60 HP) Drive Components (8120163)

Figure 8-36 12 in. 7 Gauge (60 HP) drive components (8120163) parts

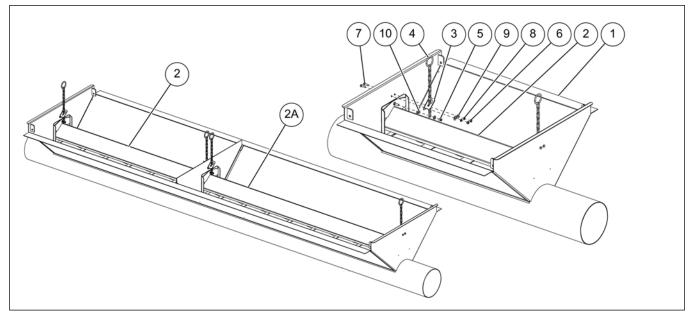


Ref #	Part #	Description	Qty
1	8120164-BS	TA6 Drive Corner Weld - 12 in. Chain Loop	1
2	8120010	UHMW Corner Dust Seal	2
3	S-8760	Bolt, HHTB 1/2-13 x 1-1/2 in. ZN Grade 5	8
4	S-8562	Flat Washer 1/2 in. GV	8
5	S-8260	Nylock Nut 1/2-13 in. ZN Grade 5	8
6	MHC01277	Bearing, Dodge 4-Bolt S-2000 P.B. 3-7/16 in.	2
7	S-866	Flat Washer 3/4 in. USS ZN Flat Grade 2	16
8	S-233	3/4 in. Lock Washer	8
9	S-7884	Bolt, HHCS 3/4-10 x 4 in. ZN Grade 8	8
10	S-234	Nut 3/4-10 in.	8
11	8120165	TA6 Drive Shaft	1
12	8120022-BS	Corner Cover Weldment	1
13	8120311	Sprocket, 81X Split 22T 3 7/16 in. Bore Type C Hub 45-55 RC Teeth Only	1
14	K0875S06	Keystock, 7/8 in. Sq x 6 in. Long	1
15	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	20
16	S-3611	Flange Nut 5/16-18 in. YDP Grade 2	20
17	8120308-BS	Chain Loop: 12 in. Square Round Weld Assembly - Bin Silver	4
18	8120304-BS	Chain Loop: 12 in. HD Corner Tube Weld - Bin Silver	2
19	S-248	Flat Washer 3/8 in. 7/16 in. I.D. 1 in. O.D. YDP	72
20	S-2071	Bolt, HHCS 3/8-16 x 1-1/4 in. ZN Grade 5	72
21	S-968	Flange Nut 3/8-16 in. ZN Grade 5	72
22	8120170-BS	Cover, Plate for UHMW Bearing Seal	2
23	DC-1474	Decal, Logo GSI 5 x 9 in.	2
24	8107001	Decal, Danger Shear Point	1
25	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
N/S	S-2052	Foam Strip 1/8 in. Thick x 1/2 in. Wide Weather In Rolls 75 ft. Per Roll	4.083'

Table 8-43 12 in. 7 Gauge (60 HP) drive components (8120163) parts list

## 8 in. and 10 in. Inlet Dump Hoppers

Figure 8-37 8 in. and 10 in. Inlet dump hoppers parts



Ref #	Part #	Description	Qty
	8081110	8 in. Inlet Dump Hopper Weldment (42-1/2 in. Long)	1
	8081111	8 in. Inlet Dump Hopper Weldment (62-1/2 in. Long)	1
	8081112	8 in. Inlet Dump Hopper Weldment (102-1/2 in. Long)	1
	8081113	8 in. Inlet Dump Hopper Weldment (144-1/2 in. Long)	1
1	8081167	8 in. Inlet Dump Hopper Weldment (125 in. Long)	1
	8101110	10 in. Inlet Dump Hopper Weldment (42-1/2 in. Long)	1
	8101111	10 in. Inlet Dump Hopper Weldment (62-1/2 in. Long)	1
	8101112	10 in. Inlet Dump Hopper Weldment (102-1/2 in. Long)	1
	8101113	10 in. Inlet Dump Hopper Weldment (144-1/2 in. Long)	1
2	8081127	Shield-Center, 42 in. Long 8 in. Inlet Dump Hopper Weldment	1
2 2A	8081128	Shield-Center, 62 in. Long 8 in. Inlet Dump Hopper Weldment	1
2A	8081129	Shield-Center, 81-1/2 in. Long 8 in. Inlet Dump Hopper Weldment	1
	8081130	Shield-Center, 102 in. Long 8 in. Inlet Dump Hopper Weldment	1
2	8101127	Shield-Center, 42 in. Long 10 in. Inlet Dump Hopper Weldment	1
	8101128	Shield-Center, 62 in. Long 10 in. Inlet Dump Hopper Weldment	1
2A	8101129	Shield-Center, 81-1/2 in. Long 10 in. Inlet Dump Hopper Weldment	1
2	8101130	Shield-Center, 102 in. Long 10 in. Inlet Dump Hopper Weldment	1
3	8101137	Bracket, Chain Support Inlet Dump Hopper	2
4	8101138	Weldment, Center Shield Chain	2
5	S-7383	Nylock Nut 3/8-16 in. ZN Grade 5	2
6	S-396	Hex Nut 5/16-18 in. YDP Grade 2	4
7	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	4
8	S-1147	Split Lock Washer 5/16 in. ZN	4
9	S-1937	Flat Washer 5/16 in. ZN SAE Grade 2	4
10	S-7409	Flat Washer 3/8 in. SAE ZN Grade 2	4

### 12 in. (7 Gauge) 42-1/2 in. Inlet Dump Hoppers (8120121)

Figure 8-38 12 in. (7 Gauge) 42-1/2 in. Inlet dump hoppers (8120121) parts

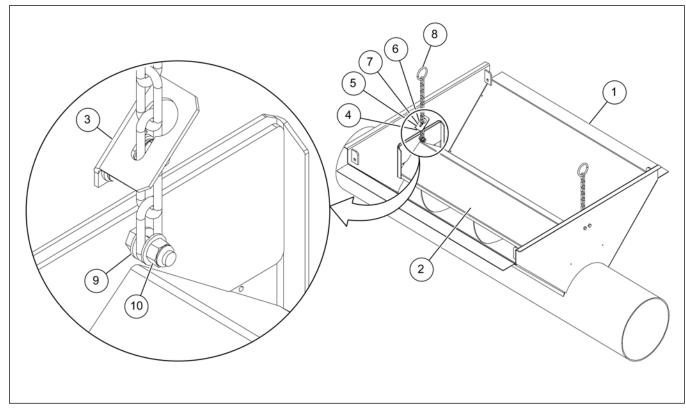


 Table 8-45 12 in. (7 Gauge) 42-1/2 in. Inlet dump hoppers (8120121) parts list

Ref #	Part #	Description	Qty
1	8120112	Dump Hopper Weldment 7 Gauge 42-1/2 in.	1
2	8120119	Center Shield Weldment 42-1/2 in.	1
3	8101137	Bracket, Chain Support Inlet Dump Hopper	2
4	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	4
5	S-1937	Flat Washer 5/16 in. ZN SAE Grade 2	4
6	S-1147	Split Lock Washer 5/16 in. ZN	4
7	S-396	Hex Nut 5/16-18 in. YDP Grade 2	4
8	8101138	Weldment, Center Shield Chain	2
9	S-7409	Flat Washer 3/8 in. SAE ZN Grade 2	4
10	S-7383	Nylock Nut 3/8-16 in. ZN Grade 5	2

### 12 in. (7 Gauge) 102-1/2 in. Inlet Dump Hoppers (8120127)

Figure 8-39 12 in. (7 Gauge) 102-1/2 in. inlet dump hoppers (8120127) parts

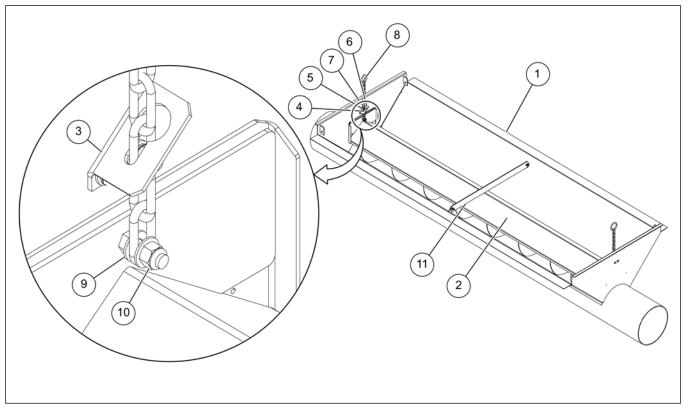
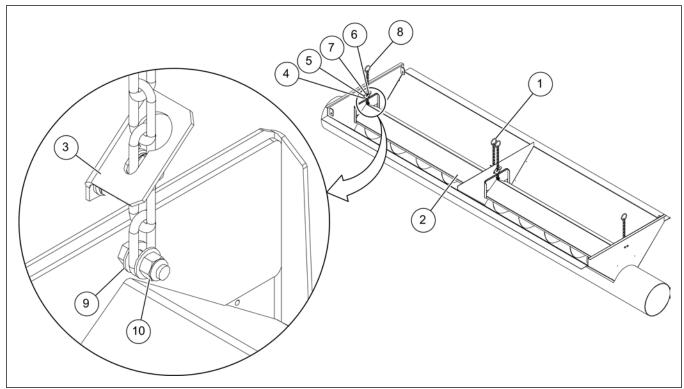


Table 8-46 12 in. (7 Gauge) 102-1/2 in. inlet dump hoppers (8120127) parts list

Ref #	Part #	Description	Qty
1	8120125	Dump Hopper Weldment 7 Gauge 102-1/2 in.	1
2	8120122	Center Shield Weldment 102-1/2 in.	1
3	8101137	Bracket, Chain Support Inlet Dump Hopper	2
4	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	6
5	S-1937	Flat Washer 5/16 in. ZN SAE Grade 2	6
6	S-1147	Split Lock Washer 5/16 in. ZN	6
7	S-396	Hex Nut 5/16-18 in. YDP Grade 2	6
8	8101138	Weldment, Center Shield Chain	2
9	S-7409	Flat Washer 3/8 in. SAE ZN Grade 2	4
10	S-7383	Nylock Nut 3/8-16 in. ZN Grade 5	2
11	8120128	Brace, 12 in. Dump Hopper Center	1

#### 12 in. (7 Gauge) 122-1/2 in. Inlet Dump Hoppers (8120134)

Figure 8-40 12 in. (7 Gauge) 122-1/2 in. inlet dump hoppers (8120134) parts



Ref #	Part #	Description	Qty
1	8120132	Dump Hopper Weldment 7 Gauge 122-1/2 in.	1
2	8120129	Center Shield Weldment 122-1/2 in.	2
3	8101137	Bracket, Chain Support Inlet Dump Hopper	4
4	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	6
5	S-1937	Flat Washer 5/16 in. ZN SAE Grade 2	6
6	S-1147	Split Lock Washer 5/16 in. ZN	6
7	S-396	Hex Nut 5/16-18 in. YDP Grade 2	6
8	8101138	Weldment, Center Shield Chain	4
9	S-7409	Flat Washer 3/8 in. SAE ZN Grade 2	8
10	S-7383	Nylock Nut 3/8-16 in. ZN Grade 5	4

## 12 in. (10 Gauge) 102-1/2 in. Inlet Dump Hoppers (8120186)

Figure 8-41 12 in. (10 Gauge) 102-1/2 in. inlet dump hoppers (8120186) parts

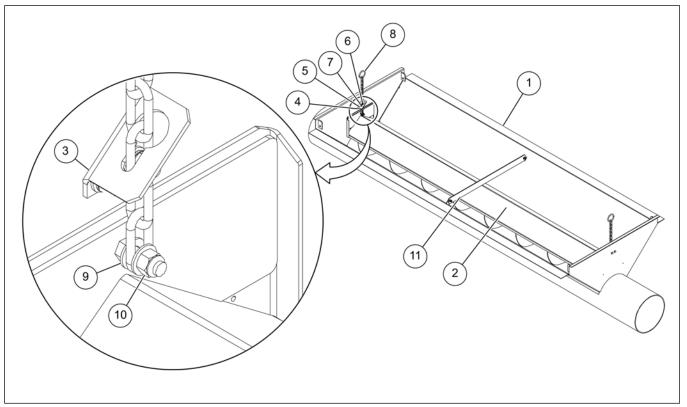


Table 8-48 12 in. (10 Gauge) 102-1/2 in. inlet dump hoppers (8120186) parts list

Ref #	Part #	Description	Qty
1	8120189	Dump Hopper Weldment 10 Gauge 102-1/2 in.	1
2	8120122	Center Shield Weldment 102-1/2 in.	1
3	8101137	Bracket, Chain Support Inlet Dump Hopper	2
4	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	6
5	S-1937	Flat Washer 5/16 in. ZN SAE Grade 2	6
6	S-1147	Split Lock Washer 5/16 in. ZN	6
7	S-396	Hex Nut 5/16-18 in. YDP Grade 2	6
8	8101138	Weldment, Center Shield Chain	2
9	S-7409	Flat Washer 3/8 in. SAE ZN Grade 2	4
10	S-7383	Nylock Nut 3/8-16 in. ZN Grade 5	2
11	8120128	Brace, 12 in. Dump Hopper Center	1

#### 12 in. (10 Gauge) 122-1/2 in. Inlet Dump Hoppers (8120187)

Figure 8-42 12 in. (10 Gauge) 122-1/2 in. inlet dump hoppers (8120187) parts

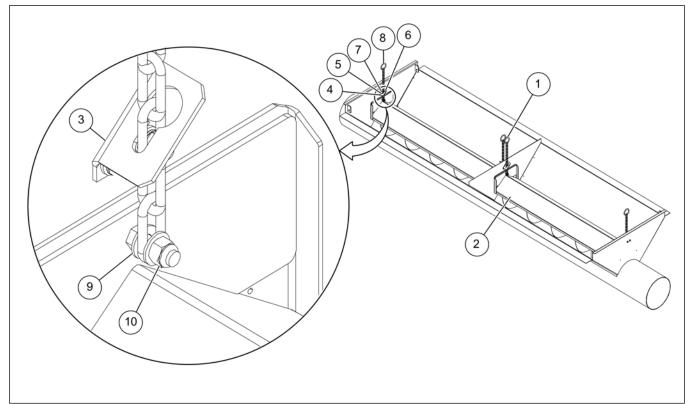
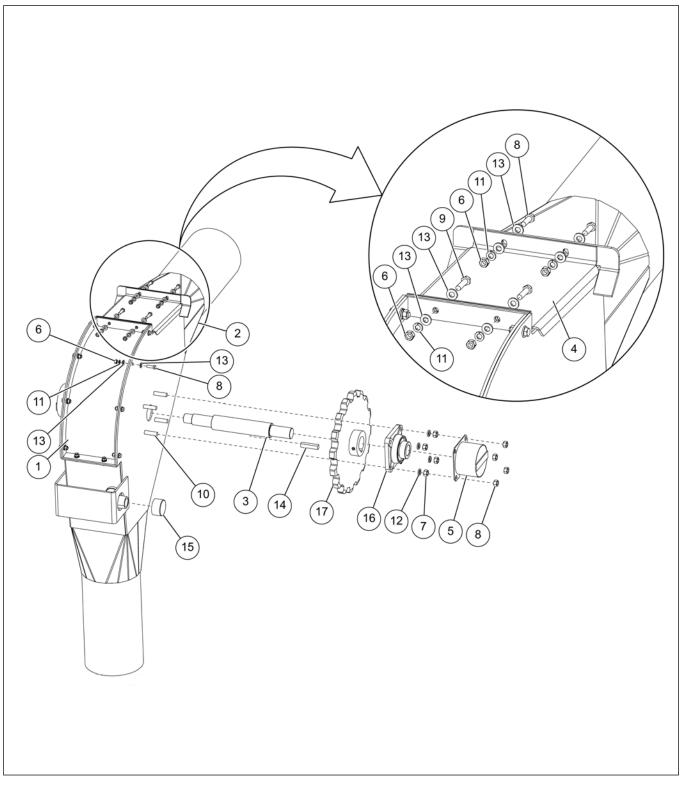


Table 8-49 12 in. (10 Gauge) 122-1/2 in. inlet dump hoppers (8120187) parts list

Ref #	Part #	Description	Qty
1	8120190	Dump Hopper Weldment 10 Gauge 122-1/2 in.	1
2	8120129	Center Shield Weldment 122-1/2 in.	2
3	8101137	Bracket, Chain Support Inlet Dump Hopper	4
4	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	6
5	S-1937	Flat Washer 5/16 in. ZN SAE Grade 2	6
6	S-1147	Split Lock Washer 5/16 in. ZN	6
7	S-396	Hex Nut 5/16-18 in. YDP Grade 2	6
8	8101138	Weldment, Center Shield Chain	4
9	S-7409	Flat Washer 3/8 in. SAE ZN Grade 2	8
10	S-7383	Nylock Nut 3/8-16 in. ZN Grade 5	4

#### 8 in. and 10 in. Standard Corner

Figure 8-43 8 in. and 10 in. Standard corner parts

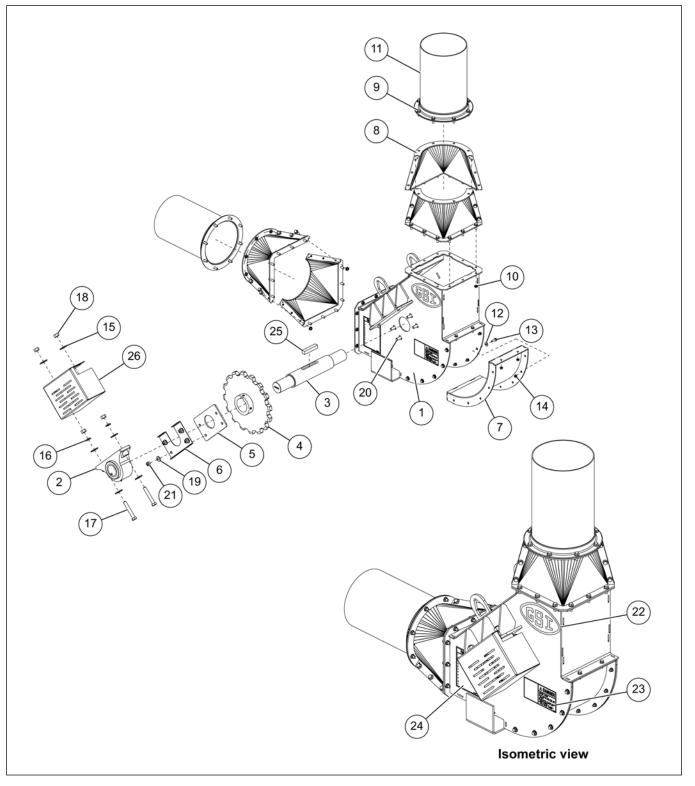


Ref #	Part #	Description	Qty
4	8081009	Weld, 8 in. Drive/Stand Corner Inspection Door	1
1	8101009	Door Inspection, Weldment	1
	8081022	8 in. Corner Standard, 8 in. Weldment Hot Dipped 8081023	1
2	8101022	10 in. Corner Standard, 10 in. Weldment Hot Dipped 8101023	1
	8081029	8 in. Shaft Corner, 8 in. Standard/Inspection Corner	1
3	8101029	10 in. Shaft Corner, 10 in. Standard/Inspection Corner	1
	8081032	Access Door, 8 in. Standard Corner	1
4	8101032	Access Door, 10 in. Standard Corner	1
_	8081196	8 in. Cover Bearing Shield Zinc Plated 8081197	2
5	8101196	10 in. Cover Bearing Shield Zinc Plated 8101197	2
6		Hex Nut, 5/16-18 in. UNC Finished, Plated, Grade 2	14
7		Hex Nut, 1/2-13 in. UNC Finished, Plated, Grade 2	16
8		Hex Bolt, Standard Third-Grade 5 5/16-18 in. UNC x 1 in., Plated	12
9		Hex Bolt, Standard Third-Grade 5 5/16-18 in. UNC x 1-1/4 in., Plated	2
10		Hex Bolt, Standard Third-Grade 5 1/2-13 in. UNC x 2 in., Plated	8
11		Lock Washer, Regular 5/16 in., Plated	14
12		Lock Washer, Regular 1/2 in., Plated	8
13		Flat Washer, SAE 5/16 in., Plated	28
14		Key Square, 1/2 x 2-1/2 in.	1
15		Fit-Cap, Pipe 1-1/2 in., (SCH 40)	1
40	PT0145	Bearing, Normal Duty 1-1/2 in. Bore With Locking Collar 4 Hole Flange	2
16	PT0144	10 in. Bearing with Housing, 2 in. ECC LK, Wide, RL, CYL, 4H	2
	PT1093	8 in. Sprocket (Hub Type) 16 Tooth, 2 in. I.D., 81XH	1
17	PT1086	Sprocket, (Hub Type) 3 in. I.D.	1

Table 8-50 8 in. and 10 in. Standard corner parts list

#### 10 in. HD Standard Corner (8101599)

Figure 8-44 10 in. HD standard corner (8101599) parts

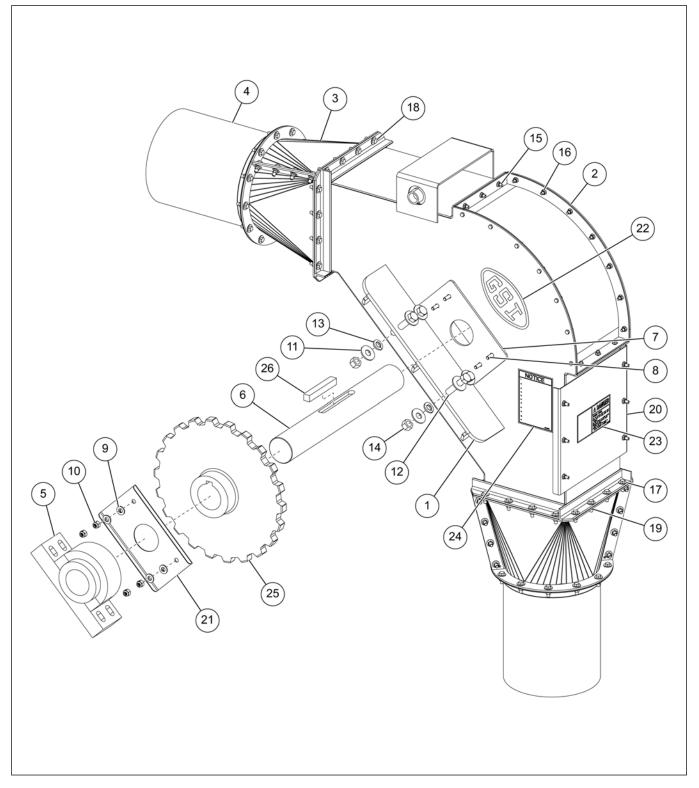


Ref #	Part #	Description	Qty
1	8101582-BS	Chain Loop: 10 in. Standard Corner Weld Assembly	1
2	8101510	Bearing, Taper Dodge #P2BE207R	2
3	8101601	Chain Loop: 10 in. HD Standard Corner Shaft	1
4	8101764	Sprocket, 81X Split 16T 3 in. Bore Type C Hub 45-55 RC Teeth Only	1
5	8081269	Corner Seal UHMW, 8 in. and 10 in. Chain Loop	2
6	8081270-BS	Cover Plate for UHMW Bearing Seal	2
7	8101590-BS	Chain Loop: 10 in. Standard Corner Cover Weld	1
8	8101625-BS	Chain Loop: 10 in. Square-Round Weld Assembly	4
9	S-9065	Flange Bolt 3/8-16 x 1 in. ZN Grade 5	52
10	S-10028	Flange Nut 3/8-16 in. ZN Grade 5	52
11	8101600	Chain Loop: 10 in. HD Corner Tube Weld	2
12	S-845	Flat Washer 5/16 in. USS SAE YDP Grade 2	10
13	S-7470	Flange Bolt 5/16-18 x 1 in. ZN Grade 5	15
14	S-3611	Flange Nut 5/16-18 in. YDP Grade 2	14
15	S-858	Flat Washer 5/8 in. USS ZN Grade 2	12
16	S-3208	Split Lock Washer 5/8 in. Med ZN	4
17	S-7893	Bolt, HHCS 5/8-11 x 4 in. YDP Grade 8	4
18	S-4110	Hex Nut 5/8-11 in. YDP Grade 5	8
19	S-8562	Flat Washer 1/2 in. GV	16
20	S-8760	Bolt, HHCS 1/2-13 x 1-1/2 in. ZN Grade 5	8
21	S-8260	Nylock Nut 1/2-13 in. ZN Grade 5	8
22	DC-1474	Decal, Logo GSI 5 x 9 in.	2
23	8107001	Decal, Danger Shear Point	2
24	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
25	S-9177	Square Key 3/4 x 3-7/16 in.	1
26	8101768-Y	Chain Loop: Shaft Corner - 207 Bearing - Ochre	2

Table 8-51 10 in. HD standard corner (8101599) parts list

#### 12 in. (7 Gauge) Standard Corner (8120031)

Figure 8-45 12 in. (7 Gauge) standard corner (8120031) parts



Ref #	Part #	Description	Qty
1	8120030-BS	Standard Cover Weldment	1
2	8120022-BS	Corner Cover Weldment	1
3	8120308-BS	Chain Loop: 12 in. Square Round Weld Assembly - Bin Silver	4
4	8120304-BS	Chain Loop: 12 in. HD Corner Tube Weld - Bin Silver	2
5	MHC01277	Bearing, Dodge 4-Bolt S-2000 P.B. 3-7/16 in.	2
6	8120032	TA4 Drive Shaft	1
7	8120010	UHMW Corner Dust Seal	2
8	S-8760	Bolt, HHTB 1/2-13 x 1-1/2 in. ZN Grade 5	8
9	S-8562	Flat Washer 1/2 in. GV	8
10	S-8260	Nylock Nut 1/2-13 in. ZN Grade 5	8
11	S-866	Flat Washer 3/4 in. USS ZN Flat Grade 2	16
12	S-7884	Bolt, HHCS 3/4-10 x 4 in. ZN Grade 8	8
13	S-233	3/4 in. Lock Washer	8
14	S-234	Nut 3/4-10 in.	8
15	S-1196	Bolt, HHCS 5/16-18 x 1 in. ZN Grade 5	26
16	S-3611	Flange Nut 5/16-18 in. YDP Grade 2	26
17	S-248	Flat Washer 3/8 in. 7/16 in. I.D. 1 in. O.D. YDP	72
18	S-2071	Bolt, HHCS 3/8-16 x 1-1/4 in. ZN Grade 5	72
19	S-968	Flange Nut 3/8-16 in. ZN Grade 5	72
20	8120099-BS	Door, Standard Corner Inspection	1
21	8120170-BS	Cover, Plate For UHMW Bearing Seal	2
22	DC-1474	Decal, Logo GSI 5 x 9 in.	2
23	8107001	Decal, Danger Shear Point	1
24	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	1
25	8120311	Sprocket, 81X Split 22T 3 7/16 in. Bore Type C Hub 45-55 RC Teeth Only	1
26	K0875S06	Keystock, 7/8 in. Square x 6 in. Long	1
N/S	S-2052	Foam Strip 1/8 in. Thick x 1/2 in. Wide Weather In Rolls 75 ft. per Roll	4.083'

Table 8-52 12 in. (7 Gauge) standard corner (8120031) parts list

#### 8 in. and 10 in. Inspection Corner

Figure 8-46 8 in. and 10 in. Inspection corner parts

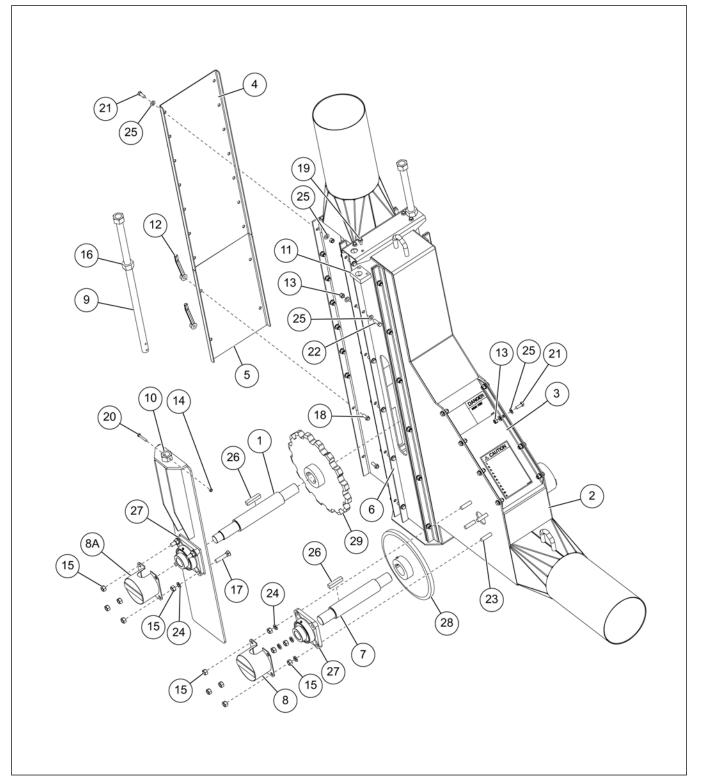
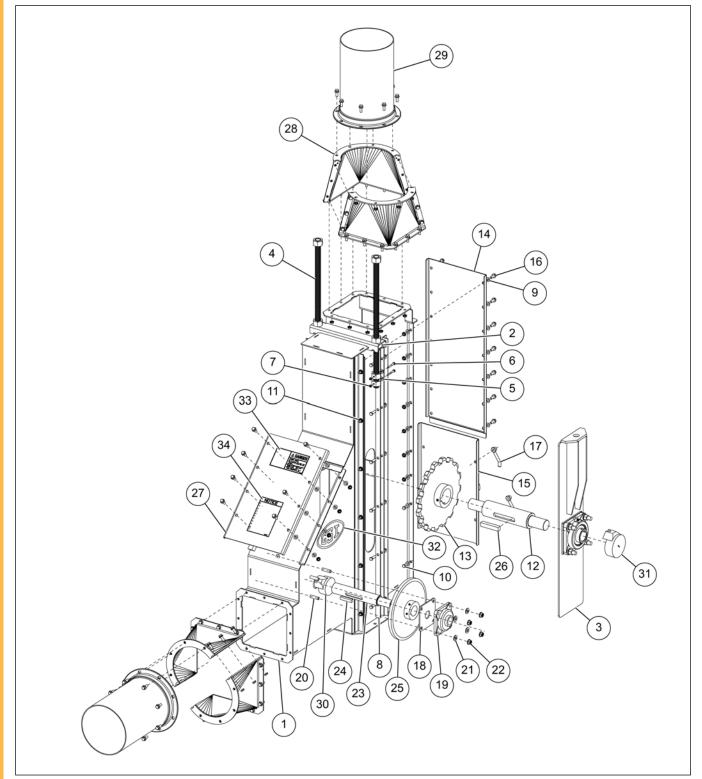


Table 8-53 8 in. and 10 in. Inspection corner parts list

Ref #	Part #	Description	Qty
4	8081029	8 in. Shaft-Corner, 8 in. Standard/Inspection Corner	1
1	8101029	10 in. Shaft-Corner, 10 in. Standard/Inspection Corner	1
•	8081049	Corner Inspection, 8 in. Weldment Hot Dipped 8081050	1
2	8101049	Corner Inspection, 10 in. Weldment Hot Dipped 8081050	1
•	8081063	Door Inspection, 45° 8 in. Inspection Corner	1
3	8101063	Door Inspection, 45° 10 in. Inspection Corner	1
	8081065	Door Inspection, Long 8 in. Inspection Corner	1
4	8101065	Door Inspection, Long 10 in. Inspection Corner	1
-	8081067	Door Inspection, Short 8 in. Inspection Corner	1
5	8101067	Door Inspection, Short 10 in. Inspection Corner	1
•	8081078	Slide Plate, 8 in. Inspection Corner 56 in. Length	8
6	8101078	Slide Plate, 10 in. Inspection Corner 57 in. Length	8
-	8081080	Shaft, 8 in. Inspection Corner	1
7	8101080	Shaft, 10 in. Inspection Corner Idler	1
8	8081196 (for PT0145)	8 in. Cover Bearing Shield Zinc Plated 8081197	4
8a	8101196 (for PT0144)	10 in. Cover Bearing Shield Zinc Plated 8101197	2
9	8101075	Take-Up Screw Weldment 6 in., 8 in. and 10 in. Inspection Corner	2
10	8101077	Take-Up Screw Nut 6 in., 8 in., 10 in. Inspection Corner	4
11	8101202	Block, 1-5/16 in. Thread Take-Up	2
12	1FH0582	Nut Handle, Iron 3/8 in., Zinc Plated	4
13		Lock Nut, 3/8-16 in. UNC Nylon Lock, Plated, Grade 2	46
14		Lock Nut, 1/4-20 in. UNC Two-Way, Plated, Grade 2	4
15		Hex Nut, 1/2-13 in. UNC Finished, Plated, Grade 2	32
16		Hex Nut, 1-8 UNC Finished, Plated, Grade 2	2
47	8 in. System	Bolt-Plow, #3 Head, RD, CSK 1/2 in. UNC x 2-1/2 in., SQ Neck	8
17	10 in. System	Bolt-Plow, #3 Head, RD, CSK 5/8 in. UNC x 3 in., SQ Neck	8
18		Screw Flange Whiz Lock 3/8-16 in. UNC x 1 in., Plated	4
19		Screw Flange Whiz Lock 5/16-18 in. UNC x 3/4 in., Plated	4
20		Hex Bolt, Standard Third-Grade 5 1/4-20 in. UNC x 1-3/4 in., Plated	4
21		Hex Bolt, Standard Third-Grade 5 3/8-16 in. UNC x 1 in., Plated	22
22		Hex Bolt, Standard Third-Grade 5 3/8-16 in. UNC x 1-1/4 in., Plated	24
23		Hex Bolt, Standard Third-Grade 5 1/2-13 in. UNC x 2 in., Plated	8
24		Lock Washer, Regular 1/2 in., Plated	16
25		Flat Washer, Standard 3/8 in., Plated	92
26		Key Square, 1/2 x 2-1/2 in.	2
07	PT0145	Bearing, Normal Duty 1-1/2 in. Bore With Locking Collar 4 Hole Flange	4
27	PT0144	10 in. Bearing with Housing, 2 in. ECC LK, Wide, RL, CYL, 4H	2
28	PT1087	Idler Wheel - 8 in. and 10 in. Inspection Corner	1
20	PT1093	8 in. Sprocket (Hub Type) 16 Tooth, 2 in. I.D.	1
29	8101764	Sprocket, 81X Split 16T 3 in. Bore Type C Hub 45-55 RC Teeth Only	1

#### 10 in. HD Inspection Corner (8101618)

Figure 8-47 10 in. HD Inspection Corner (8101618) parts

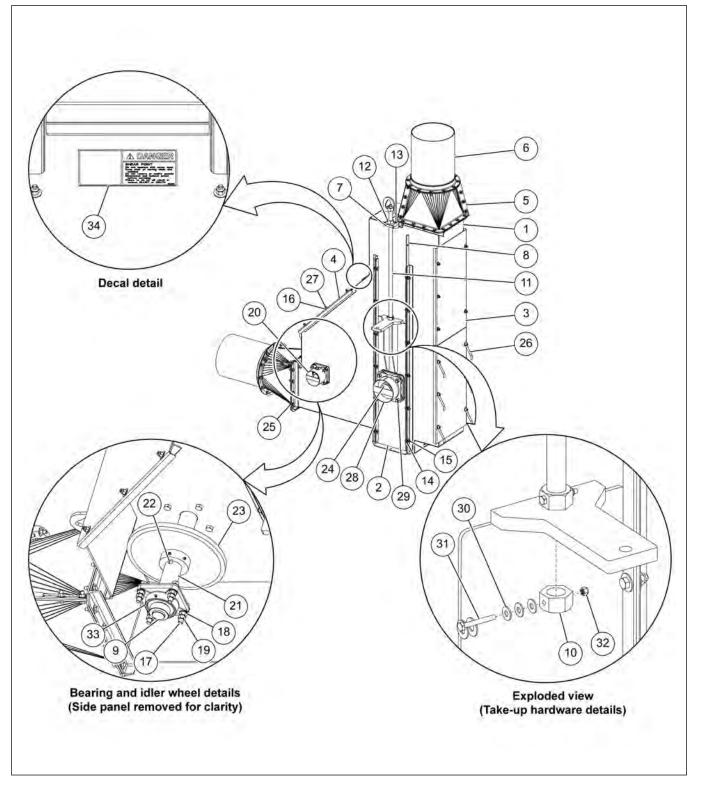


Ref #	Part #	Description	Qty
1	8101610-BS	Chain Loop: 10 in. Inspection Corner Weld Assembly	1
2	S-8906	Nut, 1-5 ACME Thread SQ Zinc	2
3	8101621	Chain Loop: 10 in. Inspection Corner Take-Up Slide	2
4	8101637	Chain Loop: 10 in. Inspection Corner Adjustment Assembly	2
5	S-1430	Flat Washer 1/4-20 in. ZN Grade 2	4
6	S-9377	Bolt, 1/4-20 x 2 in. ZN Grade 8	4
7	S-7025	Nut, Nylock 1/4-20 in. ZN Grade 5	4
8	8081078-BS	Slide Plate, 8 in. Inspection Corner 56 in. Length	8
9	S-7409	Flat Washer 3/8 in. SAE ZN Grade 2	96
10	S-2071	Bolt, HHCS 3/8-16 x 1-1/4 in. ZN Grade 5	28
11	S-10028	Flange Nut 3/8-16 in. ZN Grade 5	98
12	8101029	10 in. Shaft-Corner, 10 in. Standard/Inspection Corner	1
13	8101764	Sprocket, 81X Split 16T 3 in. Bore Type C Hub 45-55 RC Teeth Only	1
14	8101617-BS	Chain Loop: 10 in. Inspection Corner Top Cover - Bin Silver	1
15	8101619-BS	Chain Loop: 10 in. Inspection Corner Bottom Cover - Bin Silver	1
16	S-9065	Flange Bolt 3/8-16 x 1 in. ZN Grade 5	74
17	BC-00003	Handle, Easy Grip 3/8 in.	4
18	8101305	UHMW Bearing Seal	2
19	KD-PBA0003	Bearing 1-1/2 in. Dodge 4B SC Flange	2
20	S-7811	Bolt, HHCS 1/2-13 x 2 in. ZN	8
21	S-2120	Flat Washer 1/2 in. SAE ZN	8
22	S-8506	Flange Nut 1/2-13 in. ZN	8
23	8101080	Shaft, 10 in. Inspection Corner Idler	1
24	S-9167	Square Key, 1/2 x 1/2 x 2-1/2 in.	1
25	PT1087	Idler Wheel - 8 in. and 10 in. Inspection Corner	1
26	S-9177	Square Key 3/4 x 3-7/16 in.	1
27	8101620-BS	Chain Loop: 10 in. Inspection Corner Front Cover - Bin Silver	1
28	8101625-BS	Chain Loop: 10 in. Square-Round Weld Assembly	4
29	8101600-BS	Chain Loop: 10 in. HD Corner Tube Weld - Bin Silver	2
30	DBR-080079	Cover, Dodge 208 Series Bearing	2
31	DBR-100068	Cover, Dodge 211 Series Bearing	2
32	DC-1474	Decal, Logo GSI 5 x 9 in.	2
33	8107001	Decal, Danger Shear Point	2
34	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	2

Table 8-54 10 in. HD Inspection Corner (8101618) parts list

#### 12 in. (7 Gauge) Inspection Corner (8120051)

Figure 8-48 12 in. (7 Gauge) inspection corner (8120051) parts



Ref #	Part #	Description	Qty
1	8120034-BS	12 in. Inspection Corner Weldment	1
2	8120062	GTU Slide Assembly	2
3	8120050-BS	Sprocket Cover - Inspection Corner	2
4	8120048-BS	Idler Cover	1
5	8120308-BS	Chain Loop: 12 in. Square Round Weld Assembly - Bin Silver	4
6	8120304-BS	Chain Loop: 12 in. HD Corner Tube Weld - Bin Silver	2
7	8101202	Block, 1-5/16 in. Thread Take-Up	2
8	8081078-BS	Plate, 8 in. Inspection Corner 56 in. L Slide	8
9	PT0145	Bearing, Normal Duty 1-1/2 in. Bore with Locking Collar 4 Hole Flange	2
10	8101077	Take-Up Screw Nut 6 in., 8 in., 10 in. Inspection Corner	4
11	8120052	Standard Take-Up Screw Weldment	2
12	S-240	Hex Nut 1-8 in. ZN Grade 5	2
13	S-6606	Flange Bolt 5/16-18 x 3/4 in. ZN Grade 5	4
14	S-248	Flat Washer 3/8 in. 7/16 in. I.D. 1 in. O.D. YDP	236
15	S-2071	Bolt, HHCS 3/8-16 x 1-1/4 in. ZN Grade 5	98
16	S-7383	Nylock Nut 3/8-16 in. ZN Grade 5	40
17	S-6500	Bolt, HHCS 1/2-13 x 2-1/2 in. ZN Grade 5	8
18	S-236	1/2 in. Lock Washer	8
19	S-3729	Hex Nut 1/2-13 in. YDP Grade 5	16
20	8081196-BS	8 in. Cover Bearing Shield Zinc Plated	2
21	8120054	Idler Shaft Inspection Corner	1
22	S-9167	Key Square, 1/2 x 1/2 x 2-1/2 in.	1
23	PT1087	Idler Wheel - 8 in. and 10 in. Inspection Corner	1
24	8120055	Shaft - Inspection Corner	1
25	S-456	Hex Nut 3/8-16 in. YDP Grade 5	74
26	BC-00003	Handle, Easy Grip 3/8 in.	6
27	S-7469	Bolt, HHCS 3/8-16 x 1 in. ZN Grade 5	22
28	8120056-BS	Bearing Cover Assembly	2
29	S-4110	Hex Nut 5/8-11 in. YDP Grade 5	8
30	S-1430	Flat Washer 1/4 in. ZN Grade 2	6
31	S-9377	Bolt, 1/4-20 x 2 in. ZN Grade 8	4
32	S-7025	Nut, Nylock 1/4-20 in. ZN Grade 5	4
33	8101305	UHMW Bearing Seal	2
34	8107001	Decal, Danger Shear Point	1
N/S	8120311	Sprocket, 81X Split 22T 3 7/16 in. Bore Type C Hub 45-55 RC Teeth Only	1
N/S	CE-00972	Key, 7/8 x 7/8 x 6 in.	1
N/S	S-2052	Foam Strip 1/8 in. Thick x 1/2 in. Wide Weather In Rolls 75 ft. Per Roll	2
N/S	CRTINSP-12	Crate Chain Loop Inspection Corner - 12 in.	1
N/S	DC-1379	Decal, Notice 5-1/8 x 7-3/8 in.	2
N/S	K0875S06	Keystock, 7/8 in. Sq x 6 in. Long	1

Table 8-55 12 in. (7 Gauge) inspection corner (8120051) parts list

#### **Chain Loop Torque Plate Assembly**

Figure 8-49 Chain loop torque plate assembly parts

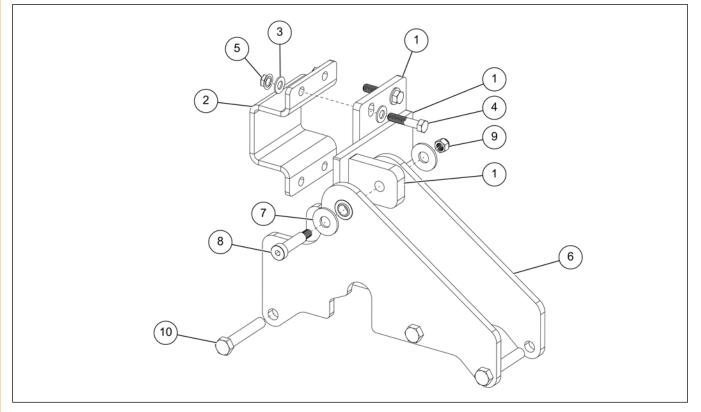


 Table 8-56 Chain loop torque plate assembly parts list

Ref #	Part #	Description	Qty
1	8101380	Torque Plate Anchor Bracket	1
0	8101346	8 in. and 10 in. C-Clamp Bracket	1
2		12 in. C-Clamp Bracket	1
3	S-7409	Flat Washer 3/8 in. SAE ZN Grade 2	8
4	S-8322	Bolt, HHCS 3/8-16 x 1-3/4 in. ZN Grade 5	4
5	S-968	Flange Nut 3/8-16 in. ZN Grade 5	4
	8101385	TA3 - 8 in. and 10 in. Torque Plate with Bearing	2
	8101383	TA4 - 8 in. and 10 in. Torque Plate with Bearing	2
6	8101381	TA5 - 10 in. Torque Plate with Bearing	2
		TA5 - 12 in. Torque Plate with Bearing	2
		TA6 - 12 in. Torque Plate with Bearing	2
7	S-2121	Flat Washer 1/2 x 1-3/8 x 0.109 in. Type A ZN	2
8	S-9466	Shoulder Bolt 3/8-16 x 1/2 x 1-3/4 in. SKT HD	1
9	S-7383	Nylock Nut 3/8-16 in. ZN Grade 5	1
40	S-7687	TA3 - Bolt, HHCS 3/8-16 x 2 in. ZN	3
10	S-8252	TA4 and TA5 - Bolt, HHCS 1/2-13 x 3 in. ZN	3

## **Ground Control Kit**

Figure 8-50 Ground control kit parts

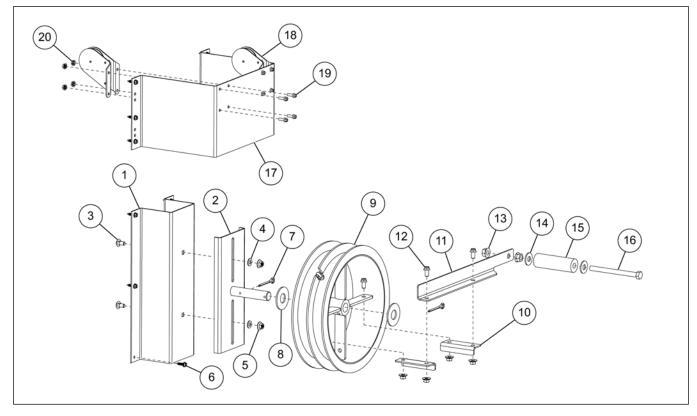


Table 8-57 Ground control kit parts list

Ref #	Part #	Description	Qty
1	8101157	Bracket, Ground Control Kit, Bin Wall Mount	1
2	8101158	Weldment, Ground Control Kit Wheel	1
3	S-7391	Carriage Bolt, 3/8-16 x 3/4 in. Long ZN Grade 5	2
4	S-7409	Flat Washer 3/8 in. SAE ZN Grade 2	2
5	S-968	Flange Nut, 3/8-16 in. ZN Grade 5	6
6	S-8166	Screw, SMSAB 1/4 x 1 in. HWH ZN	12
7	S-6994	Cotter Pin 3/16 x 2 in. ZN Grade 2	2
8	S-7835	Flat Washer 1 in. ID USS Washer	2
9	8101555	Ground Control: Wheel with Clamp 1 in. Bore	1
10	8101540-BS	Ground Control: Handle Bracket	2
11	8101541-BS	Ground Control: Handle	1
12	S-9067	Flange Bolt 3/8-16 x 3/4 in. ZN Grade 5	4
13	S-8506	Flange Nut 1/2-13 in. ZN	2
14	S-2121	Flat Washer 1/2 in.	2
15	GSB-0050	Roller, Hand 1.5 in. O.D.	1
16	S-8377	Bolt HHCS 1/2-13 x 6 in. ZN Grade 5	1
17	8101156	Bracket, Ground Control Kit Pulley Mount	1
18	PT0550	Pulley, Hot House	2
19	S-8680	Flange Bolt 1/4-20 x 3/4 in. ZN Grade 5	8
20	S-7215	Flange Nut 1/4-20 in. ZN	8

# NOTES

## **GSI Group, LLC Limited Warranty**

The GSI Group, LLC ("GSI") warrants products which it manufactures to be free of defects in materials and workmanship under normal usage and conditions for a period of 12 months after sale to the original end-user or if a foreign sale, 14 months from arrival at port of discharge, whichever is earlier. The end-user's sole remedy (and GSI's only obligation) is to repair or replace, at GSI's option and expense, products that in GSI's judgment, contain a material defect in materials or workmanship. Expenses incurred by or on behalf of the end-user without prior written authorization from the GSI Warranty Group shall be the sole responsibility of the end-user.

	Product	Warranty Period
	Performer Series Direct Drive Fan Motor	3 Years
AP Fans and Flooring	All Fiberglass Housings	Lifetime
	All Fiberglass Propellers	Lifetime
AP/Cumberland	Flex-Flo/Pan Feeding System Motors	2 Years
	Feeder System Pan Assemblies	5 Years **
Cumberland	Feed Tubes (1-3/4" and 2.00")	10 Years *
Feeding/Watering Systems	Centerless Augers	10 Years *
	Watering Nipples	10 Years *
Grain Systems	Grain Bin Structural Design	5 Years
Grain Systems	Portable and Tower Dryers	2 Years
Farm Fans Zimmerman	Portable and Tower Dryer Frames and Internal Infrastructure †	5 Years

Warranty Extensions: The Limited Warranty period is extended for the following products:

- Warranty prorated from list price:
  0 to 3 years no cost to end-user
  3 to 5 years end-user pays 25%
  5 to 7 years end-user pays 50%
  7 to 10 years end-user pays 75%
- \*\* Warranty prorated from list price:
  0 to 3 years no cost to end-user
  3 to 5 years end-user pays 50%
- Motors, burner components and moving parts not included.
   Portable dryer screens included.
   Tower dryer screens not included.

GSI further warrants that the portable and tower dryer frame and basket, excluding all auger and auger drive components, shall be free from defects in materials for a period of time beginning on the twelfth (12<sup>th</sup>) month from the date of purchase and continuing until the sixtieth (60<sup>th</sup>) month from the date of purchase (extended warranty period). During the extended warranty period, GSI will replace the frame or basket components that prove to be defective under normal conditions of use without charge, excluding the labor, transportation, and/or shipping costs incurred in the performance of this extended warranty.

#### **Conditions and Limitations:**

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION SET FORTH ABOVE. SPECIFICALLY, GSI MAKES NO FURTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH: (I) PRODUCT MANUFACTURED OR SOLD BY GSI OR (II) ANY ADVICE, INSTRUCTION, RECOMMENDATION OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF GSI REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCTS.

GSI shall not be liable for any direct, indirect, incidental or consequential damages, including, without limitation, loss of anticipated profits or benefits. The sole and exclusive remedy is set forth in the Limited Warranty, which shall not exceed the amount paid for the product purchased. This warranty is not transferable and applies only to the original end-user. GSI shall have no obligation or responsibility for any representations or warranties made by or on behalf of any dealer, agent or distributor.

GSI assumes no responsibility for claims resulting from construction defects or unauthorized modifications to products which it manufactured. Modifications to products not specifically delineated in the manual accompanying the equipment at initial sale will void the Limited Warranty.

This Limited Warranty shall not extend to products or parts which have been damaged by negligent use, misuse, alteration, accident or which have been improperly/inadequately maintained. This Limited Warranty extends solely to products manufactured by GSI.

Prior to installation, the end-user has the responsibility to comply with federal, state and local codes which apply to the location and installation of products manufactured or sold by GSI.

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This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.



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