NEW LEADER

MODEL JOHN DEERE 4 SERIES
NL200G4 & NL300G4

UNIT SERIAL NUMBER _____

MANUAL NUMBER: 309738-D

EFFECTIVE 03/23/2016

Hi-Way NEW LEADER
Highway Equipment Company
Building the best since 1939.

1330 76TH AVE SW
CEDAR RAPIDS, IA 52404-7052
PHONE (319) 363-8281 | FAX (319) 286-3350
www.highwayequipment.com

TABLE OF CONTENTS

TABLE OF CONTENTS

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Insert Current New Leader Warranty

PLEASE ! ALWAYS THINK SAFETY FIRST !!

The purpose of this manual is to familiarize the person (or persons) using this unit with the information necessary to properly install, operate, and maintain this system. The safety instructions indicated by the safety alert symbol in the following pages supersede the general safety rules. These instructions cannot replace the following: the fundamental knowledge that must be possessed by the installer or operator, the knowledge of a qualified person, or the clear thinking necessary to install and operate this equipment. Since the life of any machine depends largely upon the care it is given, we suggest that this manual be read thoroughly and referred to frequently. If for any reason you do not understand the instructions, please call your authorized dealer or our Product Sales and Support Department at 1-888-363-8006.

It has been our experience that by following these installation instructions, and by observing the operation of the spreader, you will have sufficient understanding of the machine enabling you to troubleshoot and correct all normal problems that you may encounter. Again, we urge you to call your authorized dealer or our Product Sales and Support Department if you find the unit is not operating properly, or if you are having trouble with repairs, installation, or removal of this unit.

We urge you to protect your investment by using genuine HECO parts and our authorized dealers for all work other than routine care and adjustments.

Highway Equipment Company reserves the right to make alterations or modifications to this equipment at any time. The manufacturer shall not be obligated to make such changes to machines already in the field.

This Safety Section should be read thoroughly and referred to frequently.

ACCIDENTS HURT !!!

ACCIDENTS COST !!!

ACCIDENTS CAN BE AVOIDED !!!

TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND THAT OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.

In this manual and on the safety signs placed on the unit, the words "DANGER," "WARNING," "CAUTION," and "NOTICE" are used to indicate the following:

DANGER	Indicates an imminently hazardous situation that, if not avoided, WILL result in death or serious injury. This signal word is to be limited to the most extreme situations and typically for machine components that, for functional purposes, cannot be guarded.
WARNING	Indicates a potentially hazardous situation that, if not avoided, COULD result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.
CAUTION	Indicates a potentially hazardous situation that, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.
NOTICE!	Is used for informational purposes in areas which may involve damage or deterioration to equipment but generally would not involve the potential for personal injury.
NOTE:	Provides additional information to simplify a procedure or clarify a process.

The need for safety cannot be stressed strongly enough in this manual. At Highway Equipment Company, we urge you to make safety your top priority when operating any equipment. We firmly advise that anyone allowed to operate this machine be thoroughly trained and tested, to prove they understand the fundamentals of safe operation.

The following guidelines are intended to cover general usage and to assist you in avoiding accidents. There will be times when you will run into situations that are not covered in this section. At those times the best standard to use is common sense. If, at any time, you have a question concerning these guidelines, please call your authorized dealer or our Product Sales & Support Department at (888) 363-8006.

SAFETY DECAL MAINTENANCE INSTRUCTIONS

1. Keep safety decals and signs clean and legible at all times.

2. Replace safety decals and signs that are missing or have become illegible.

3. Replaced parts that displayed a safety sign should also display the current sign.

4. Safety decals or signs are available from your dealer's Parts Department or our Cedar Rapids factory.

SAFETY DECAL INSTALLATION INSTRUCTIONS

1. Clean Surface
   Wash the installation surface with a synthetic, free-rinsing detergent. Avoid washing the surface with a soap containing creams or lotion. Allow to dry.

2. Position Safety Decal
   Decide on the exact position before application. Application marks may be made on the top or side edge of the substrate with a lead pencil, marking pen, or small pieces of masking tape. NOTE: Do not use chalk line, china marker, or grease pencil. Safety decals will not adhere to these.

3. Remove the Liner
   A small bend at the corner or edge will cause the liner to separate from the decal. Pull the liner away in a continuous motion at a 180-degree angle. If the liner is scored, bend at score and remove.

4. Apply Safety Decal
   a. Tack decal in place with thumb pressure in upper corners.
   b. Using firm initial squeegee pressure, begin at the center of the decal and work outward in all directions with overlapping strokes. NOTE: Keep squeegee blade even—nicked edges will leave application bubbles.
   c. Pull up tack points before squeegeeing over them to avoid wrinkles.

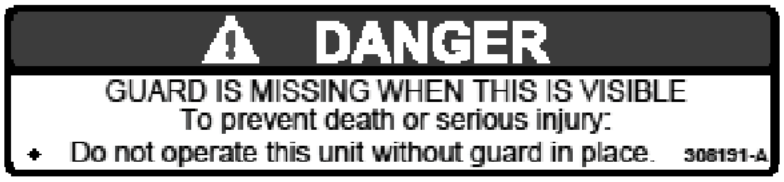
5. Remove Pre-mask
   If safety decal has a pre-mask cover remove it at this time by pulling it away from the decal at a 180 degree angle. NOTE: It is important that the pre-mask covering is removed before the decal is exposed to sunlight to avoid the pre-mask from permanently adhering to the decal.

6. Remove Air Pockets
   Inspect the decal in the flat areas for bubbles. To eliminate the bubbles, puncture the decal at one end of the bubble with a pin (never a razor blade) and press out entrapped air with thumb moving toward the puncture.

7. Re-Squeegee All Edges.


DANGER
MOVING PART HAZARD
To prevent death or serious injury:
• Stay out of box while conveyor is moving.
• Disconnect and lockout power source before adjusting or servicing.
• Do not ride on spreader.
364-C


DANGER
FLYING MATERIAL & ROTATING SPINNER HAZARD
To prevent death or serious injury:
• Wear eye protection.
• Stop machine before servicing or adjusting.
• Keep bystanders at least 60 feet away.
368-C


DANGER
GUARD IS MISSING WHEN THIS IS VISIBLE
To prevent death or serious injury:
• Do not operate this unit without guard in place.
308191-A

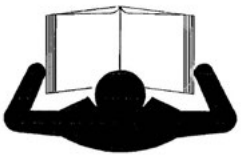

WARNING
FALLING HAZARD
To prevent death, serious injury or machine damage:
• Do not stand or climb on guard.
55630-D


WARNING
HIGH PRESSURE FLUID HAZARD
To prevent death or serious injury:
• Relieve pressure on system before repairing, adjusting, or disconnecting.
• Keep all lines, fittings and couplers tight and free of leaks.
• Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
• Do not use hydraulic lines for hand holds or steps.
• Components may be hot.
39138-C


WARNING
MOVING PART HAZARD
To prevent death or serious injury:
• Close and secure guards before starting.
• Do not stand or climb on machine.
• Disconnect and lockout power source before adjusting or servicing.
• Keep hands, feet and hair away from moving parts.
55631-C


CAUTION
HAZARDOUS MATERIALS
To avoid injury or machine damage:
• Materials to be spread can be dangerous.
• Improper selection, application, use or handling may be a hazard to persons, animals, crops or other property.
• Follow instructions and precautions given by the material manufacturer.
321-C

⚠ CAUTION



TO AVOID INJURY OR MACHINE DAMAGE:

- Do not operate or work on this machine without reading and understanding the operators manual.
- Keep hands, feet, hair and clothing away from moving parts.
- Do not allow riders on machine.
- Avoid unsafe operation or maintenance.
- Disengage power takeoff and shut off engine before removing guards, servicing or unclogging machine.
- Keep unauthorized people away from machine.
- Keep all guards in place when machine is in use.
- If manual is missing, contact dealer for replacement.

150034-C

NOTICE

Spinner assembly and material flow divider have NOT been adjusted at the factory. Before assembling unit, read and follow assembly instructions in the operation and maintenance manual for this unit.

Before spreading material, spread pattern tests must be conducted to properly adjust the spread pattern. Refer to the "How to Check Your Spread Pattern" manual for adjustment instructions. A spread pattern test kit is available from your New Leader dealer.

Wind, humidity, rain and other adverse weather conditions can affect spread pattern, resulting in uneven crop growth and loss of yield.

THE MANUFACTURER OF THIS SPREADER WILL NOT BE LIABLE FOR MISAPPLIED MATERIAL DUE TO AN IMPROPERLY ADJUSTED SPREADER OR ADVERSE WEATHER CONDITIONS.

It is recommended that spread pattern tests be conducted prior to each spreading season, after any spreader maintenance, and periodically during the spreading season. Spread pattern tests must be conducted whenever a new product is to be applied.

71526-F

NOTICE

- Conveyor chain life will be noticeably extended by periodic lubrication.
- Use a 75% diesel fuel and 25% number 10 oil mixture on the links and rollers.
- Failure to keep the chain links loose and free running can result in severe damage to the conveyor chain, drag shaft, gear case, body structure, and is cause for voiding the warranty.

21476-E

NOTICE

- Spreader hopper life will be noticeably extended if the unit is washed daily when spreading fertilizer.
- Wash under side of belt by using water hose in wash port daily.
- Conveyor belt should be turning during wash cycle.
- Failure to maintain the conveyor will drastically shorten belt life and is cause for voiding the warranty.

21477-D

NO STEP

39017-D

GENERAL SAFETY RULES-OPERATIONS

1. Before attempting to operate this unit, read and be sure you understand the operation and maintenance manual. Locate all controls and determine the use of each. Know what you are doing!

2. When leaving the unit unattended for any reason, be sure to:
   a. Take power take-off out of gear.
   b. Shut off conveyor and spinner drives.
   c. Shut off vehicle engine and unit engine (if so equipped).
   d. Place transmission of the vehicle in "neutral" or "park".
   e. Set parking brake firmly.
   f. Lock ignition and take keys with you.
   g. Lock vehicle cab.
   h. If on steep grade, block wheels.

   These actions are recommended to avoid unauthorized use, runaway, vandalism, theft and unexpected operation during start-up.

3. Do not read, eat, talk on a mobile phone or take your attention away while operating the unit. Operating is a full-time job.

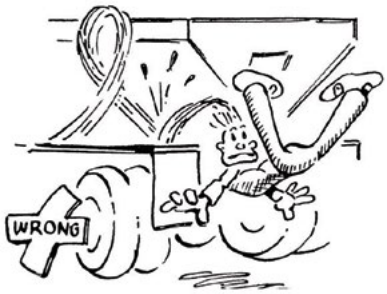
4. Stay out of the spreader. If it's necessary to enter the spreader, return to the shop, empty body, turn off all power, set vehicle brakes, lock engine starting switch and remove keys before entering. Tag all controls to prohibit operation. Tags should be placed, and later removed, only by person working in the body.

5. Guards and covers are provided to help avoid injury. Stop all machinery before removing them. Replace guards and covers before starting spreader operation.

6. Stay clear of any moving members, such as shafts, couplings and universal joints. Make adjustments in small steps, shutting down all motions for each adjustment.

7. Before starting unit, be sure everyone is clear and out of the way.

8. Do not climb on unit. Use the inspection ladder or a portable ladder to view the unit. Be careful in getting on and off the ladder, especially in wet, icy, snowy or muddy conditions. Clean mud, snow or ice from steps and footwear.



9. Do not allow anyone to ride on any part of unit for any reason.

10. Keep away from spinners while they are turning:
    a. Serious injury can occur if spinners touch you.
    b. Rocks, scrap metal or other material can be thrown off the spinner violently. Stay out of discharge area.
    c. Make sure discharge area is clear before spreading.

11. Inspect spinner fins, spinner frame mounting and spinner fin nuts and screws every day. Look for missing fasteners, looseness, wear and cracks. Replace immediately if required. Use only new SAE grade 5 or grade 8 screws and new self-locking nuts.

12. Inspect all bolts, screws, fasteners, keys, chain drives, body mountings and other attachments periodically. Replace any missing or damaged parts with proper specification items. Tighten all bolts, nuts and screws to specified torques according to the torque chart in this manual.

13. Shut off engine before filling fuel and oil tanks. Do not allow overflow. Wipe up all spills. Do not smoke. Stay away from open flame. FIRE HAZARD!

14. Starting fluids and sprays are extremely flammable. Don't smoke. Stay away from flame or heat!

15. All vehicles should be equipped with a serviceable fire extinguisher of 5 BC rating or larger.

16. Hydraulic system and oil can get hot enough to cause burns. DO NOT work on system that is hot. Wait until oil has cooled. If an accident occurs, seek immediate medical assistance.

17. Wear eye protection while working around or on unit.
18. Read, understand and follow instructions and precautions given by the manufacturer or supplier of materials to be spread. Improper selection, application, use or handling may be hazardous to people, animals, plants, crops or other property.

CAUTION If spreader is used to transport chemicals, check with your chemical supplier regarding DOT (Department of Transportation) requirements.

19. Cover all loads that can spill or blow away. Do not spread dusty materials where dust may create pollution or a traffic visibility problem.

20. Turn slowly and be careful when traveling on rough surfaces and side slopes, especially with a loaded spreader. Load may shift causing unit to tip.

21. Read and understand the precautionary decals on the spreader. Replace any that become defaced, damaged, lost or painted over. Replacement decals can be ordered from your dealer's parts department or from Highway Equipment Company by calling (319) 363-8281.

SAFETY

GENERAL SAFETY RULES-MAINTENANCE

1. Maintenance includes all lubrication, inspection, adjustments (other than operational control adjustments such as feedgate openings, conveyor speed, etc.) part replacement, repairs and such upkeep tasks as cleaning and painting.

2. When performing any maintenance work, wear proper protective equipment—always wear eye protection—safety shoes can help save your toes—gloves will help protect your hands against cuts, bruises, abrasions and from minor burns—a hard hat is better than a sore head!

3. Use proper tools for the job required. Use of improper tools (such as a screwdriver instead of a pry bar, a pair of pliers instead of a wrench, a wrench instead of a hammer) not only can damage the equipment being worked on, but can lead to serious injuries. USE THE PROPER TOOLS.

4. Before attempting any maintenance work (including lubrication), shut off power completely. DO NOT WORK ON RUNNING MACHINERY!

5. When guards and covers are removed for any maintenance, be sure that such guards are reinstalled before unit is put back into operation.

6. Check all screws, bolts and nuts for proper torques before placing equipment back in service. Refer to torque chart in this manual.

7. Some parts and assemblies are quite heavy. Before attempting to unfasten any heavy part or assembly, arrange to support it by means of a hoist, by blocking or by use of an adequate arrangement to prevent it from falling, tipping, swinging or moving in any manner which may damage it or injure someone. Always use lifting device that is properly rated to lift the equipment. Do not lift loaded spreader. NEVER LIFT EQUIPMENT OVER PEOPLE.

8. If repairs require use of a torch or electric welder, be sure that all flammable and combustible materials are removed. Fuel or oil reservoirs must be emptied, steam cleaned and filled with water before attempting to cut or weld them. DO NOT weld or flame cut on any tank containing oil, gasoline or their fumes or other flammable material, or any container whose contents or previous contents are unknown.

9. Keep a fully charged fire extinguisher readily available at all times. It should be a Type ABC or a Type BC unit.

10. Cleaning solvents should be used with care. Petroleum based solvents are flammable and present a fire hazard. Don't use gasoline. All solvents must be used with adequate ventilation, as their vapors should not be inhaled.

11. When batteries are being charged or discharged, they generate hydrogen and oxygen gases. This combination of gases is highly explosive. DO NOT SMOKE around batteries—STAY AWAY FROM FLAME—don't check batteries by shorting terminals as the spark could cause an explosion. Connect and disconnect battery charger leads only when charger is "off". Be very careful with "jumper" cables.

12. Batteries contain strong sulfuric acid—handle with care. If acid gets on you, flush it off with large amounts of water. If it gets in your eyes, flush it out with plenty of water immediately and get medical help.

13. Hydraulic fluid under high pressure leaking from a pin hole are dangerous as they can penetrate the skin as though injected with a hypodermic needle. Such liquids have a poisonous effect and can cause serious wounds. To avoid hazard, relieve pressure before disconnecting hydraulic lines or performing work on system. Any fluid injected into the skin must be treated within a few hours as gangrene may result. Get medical assistance immediately if such a wound occurs. To check for such leaks, use a piece of cardboard or wood instead of your hand. Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to system. Wear protective gloves and safety glasses or goggles when working with hydraulic systems.

14. The fine spray from a small hydraulic oil leak can be highly explosive—DO NOT SMOKE—STAY AWAY FROM FLAME OR SPARKS.

SAFETY

GENERAL SAFETY RULES-INSTALLATION

1. The selection of the vehicle on which a spreader body is to be mounted has important safety aspects. To avoid overloading:
   a. Do not mount spreader on a chassis which, when fully loaded with material to be spread, will exceed either the Gross Axle Weight Rating (GAWR) or the Gross Vehicle Weight Rating (GVWR) for the chassis.
   b. Do install the spreader only on a vehicle with cab-to-axle dimension recommended for the spreader body length shown.

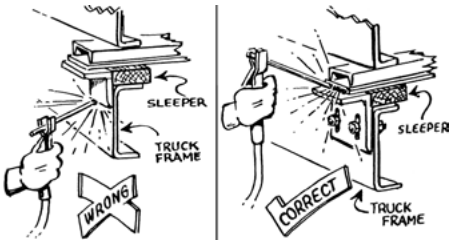
2. Follow mounting instructions in the Installation section of this manual. If mounting conditions require deviation from these instructions refer to factory.

3. When making the installation, be sure that the lighting meets Federal Motor Vehicle Safety Standard (FMVSS) No. 108, ASABE S279 and all applicable local and state regulations.

4. When selecting a PTO to drive hydraulic pump, do not use a higher percent speed drive than indicated in the Installation section of this manual. Too high a percent PTO will drive pump at excessive speed, which can ruin the pump, but more importantly, will overheat the hydraulic oil system and increase the possibility of fire.

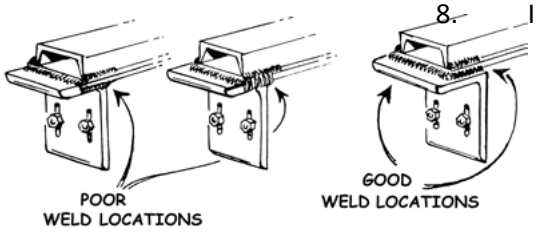
5. When truck frame must be shortened, cut off only the portion that extends behind rear shackle in accordance with the truck manufacturer's recommendations. If a torch is used to make the cut, all necessary precautions should be taken to prevent fire. Cuts should not be made near fuel tanks and hydraulic oil reservoirs, fuel, brake, electric or hydraulic lines and such lines should be protected from flame, sparks or molten metal. Tires should be removed if there is any chance of their being struck by flame, sparks or molten metal. Have a fire extinguisher handy.

6. Do not weld on vehicle frame as such welding can lead to fatigue cracking and must be avoided. When drilling holes in frame member, drill only through the vertical web portions do not put holes in top or bottom flanges. Refer to truck manufacturer's recommendations.



7. Be sure that welds between mounting bars and sill or between mounting angles and spreader cross sills are sound, full fillet welds. Center mounting angles so that good fillet welds can be made on three sides—and edge bead weld is not a satisfactory weld for this service. Use 309 rod/wire for carbon steel and 409 steel. On 304 stainless steel bodies use SAE grade 5 bolts—welding is recommended if type 308 welding rod is available.

8. Install controls so that they are located of convenient use. Position them so that they do not interfere with any vehicle control and that they do not interfere with driver or passenger or with access to or exit from the vehicle.



9. Check for vehicle visibility, especially toward the rear. Reposition or add mirrors so that adequate rearward visibility is maintained.

10. Add Caution, Warning, Danger and Instruction decals as required. Peel off any label masking which has not been removed.

11. Install all guards as required.

12. Check installation completely to be sure all fasteners are secure and that nothing has been left undone.

The Model John Deere 4 Series NL200G4 and NL300G4 are hopper type spreaders intended for spreading free flowing granular agricultural materials, such as chemical fertilizers. When installed on the R4045 chassis, the NL200G4 can be used to apply agricultural limestone. The NL200G4 is NOT intended to spread agricultural limestone when installed on the R4030 or R4038. The MULTAPPLIER allows you to spread two different materials individually or combined. The spreaders are intended for high-clearance post-emergence vehicles—the John Deere 4 Series.

Each unit is powered hydraulically and provides independent variable speed control for the spinner and full automatic ground speed control for the conveyor.

The dual conveyors deliver material to the spinners through an adjustable metering gate at the rear of the hopper body. An orbital type hydraulic motor mounted to a 6 to 1 ratio spur gear case on the NL200G4 and NL300G4, and a direct drive motor on the MULTAPPLIER, drive the conveyors. The NL200G4 has the choice of a #5 straight belt conveyor, or a #4 belt-over-chain conveyor. The NL300G4 has a #5 straight belt conveyor. The MULTAPPLIER has a #4 belt-over-chain conveyor.

The MULTAPPLIER is currently available in two different styles; Style I and Style II. The Style II MULTAPPLIER provides higher output capabilities. Refer to *MULTAPPLIER Style Comparison* in this manual to determine your style of MULTAPPLIER.

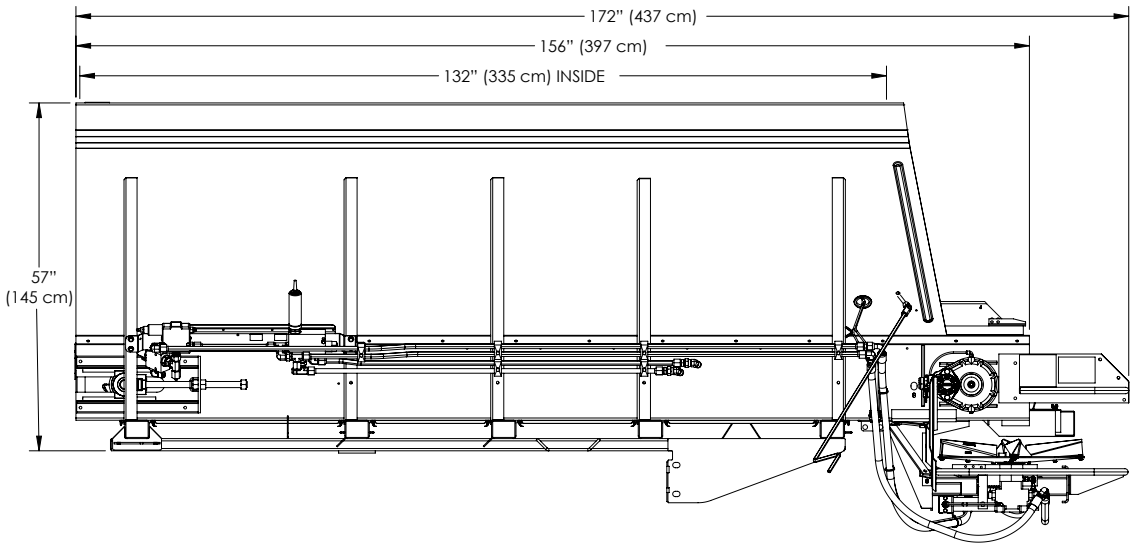
The distributor spinner assembly has two 24 inch (60.96cm) diameter dished discs. Each disc has four formed and heat treated fins that are adjustable to radial angle. The spinner is fully adjustable by means of a rotating handle.

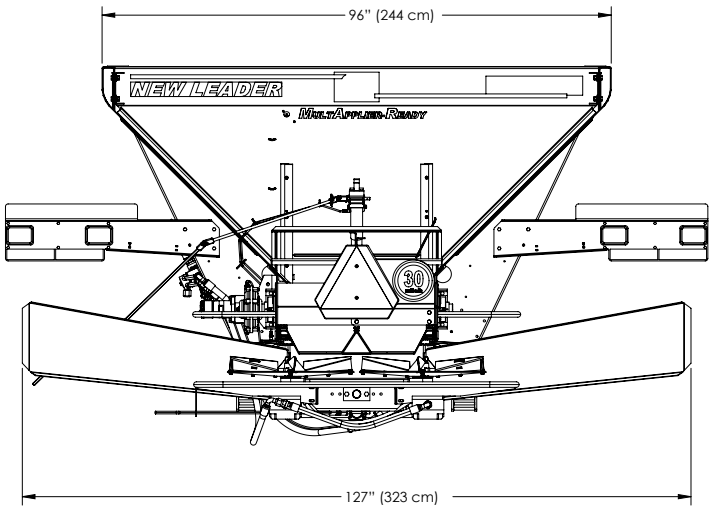
These products are intended for commercial use only.

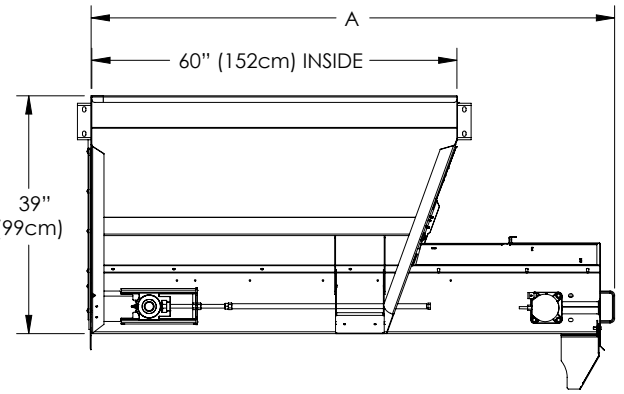
The application of free flowing granular agricultural materials must be done according to the manufacturers' instruction and legal user regulations. Intended use also implies the observance of all user and maintenance instructions prescribed by the manufacturer. Any other use is regarded as noncompliant with its purpose including:

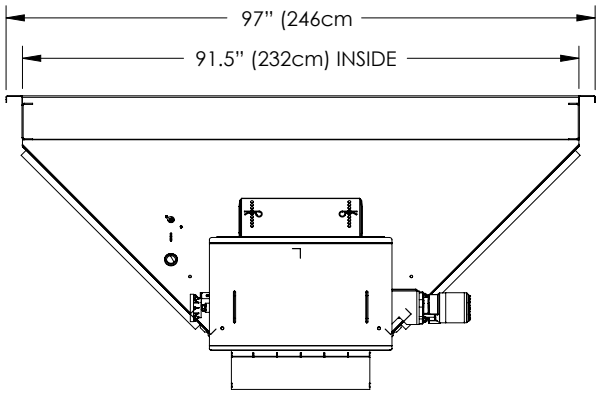
- improper use of agrochemicals (herbicides, fungicides, insecticides, growth regulators) and liquid fertilizers
- noncompliance with instructions issued by the manufacturers of fertilizers and crop protection chemicals
- noncompliance with legal requirements applicable to the use of fertilizers and crop protection chemicals including their combination with other chemicals

NL200G4 WITH MULTAPPLIER









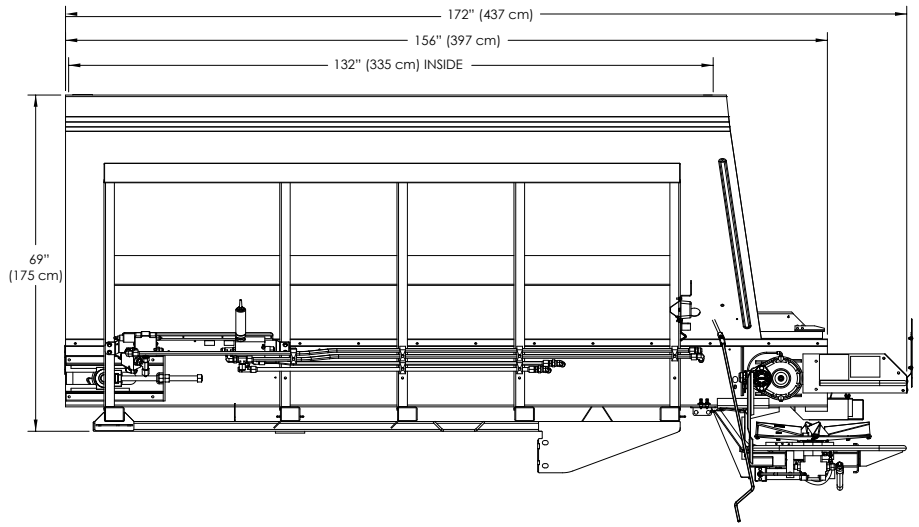
NL200G4 WITH MULTAPPLIER WEIGHTS & CAPACITIES

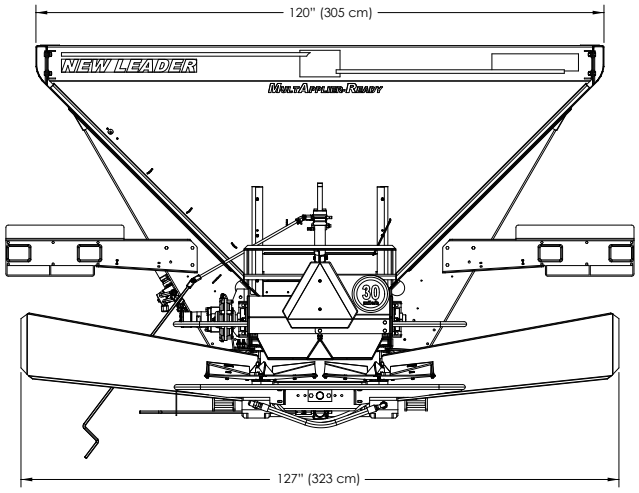
	Single Bin	Single Bin	With MultApplier	With MultApplier
Conveyor Type	Approximate Weight Lbs (kg)	Struck Capacity Cu Yd (Cu M) Cu Ft	Approximate Weight Lbs (kg)	Struck Capacity Cu Yd (Cu M) Cu Ft
NL200 w/ #5 Belt	3240 (1470)	7.41 (5.66) 200	3840 (1742)	3.93 (3.00) 106
NL200 w/ #4 BOC	3640 (1651)		4240 (1923)	

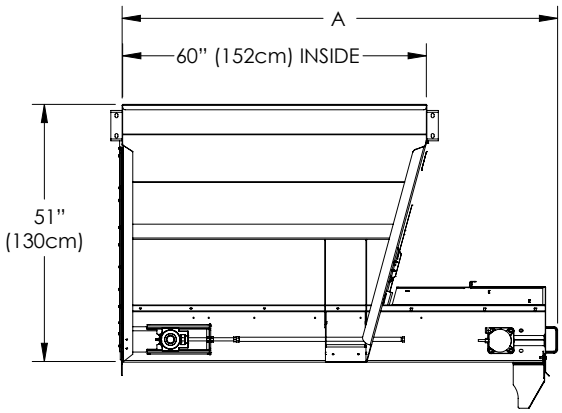
NL200G4 MULTAPPLIER ALONE DIMENSIONS & CAPACITES

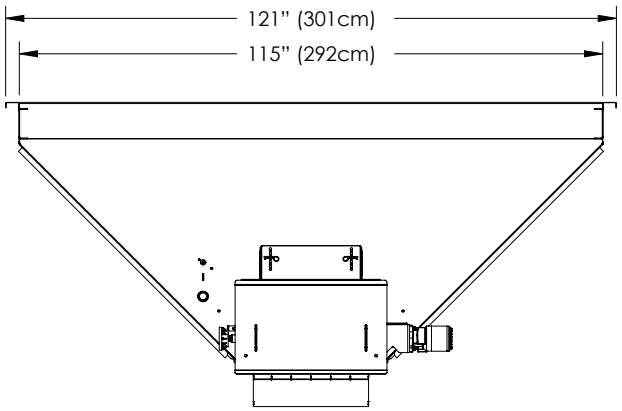
MultApplier Style	Overall Length A	Approximate Weight Lbs (kg)	Struck Capacity Cu Yd (Cu M) Cu Ft
Style I MultApplier	84” (213cm)	950 (431)	2.44 (1.87) 66
Style II MultApplier	86” (218cm)		

NL300G4 WITH MULTAPPLIER









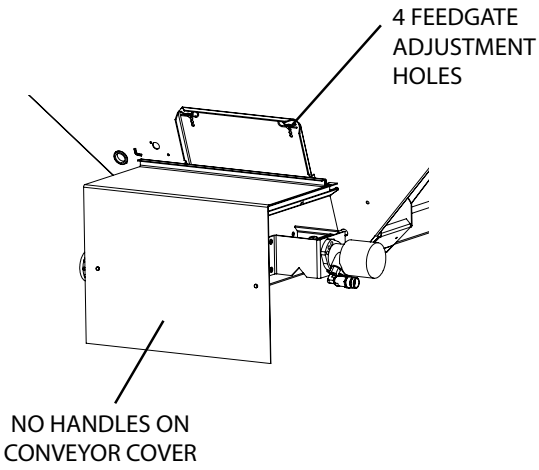
NL300G4 WITH MULTAPPLIER WEIGHTS & CAPACITIES

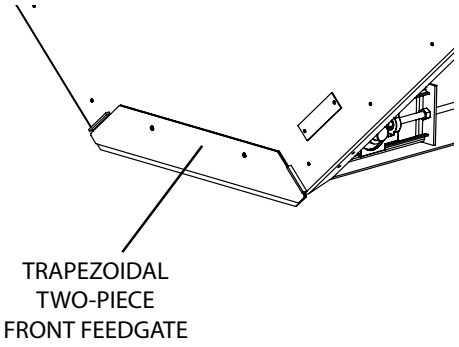
	Single Bin	Single Bin	With MultApplier	With MultApplier
Conveyor Type	Approximate Weight Lbs (Kg)	Struck Capacity Cu Yd (Cu M) Cu Ft	Approximate Weight Lbs (kg)	Struck Capacity Cu Yd (Cu M) Cu Ft
NL200 w/ #5 Belt	3740 (1696)	11.1 (8.50) 300	4445 (2016)	6.00 (4.59) 162

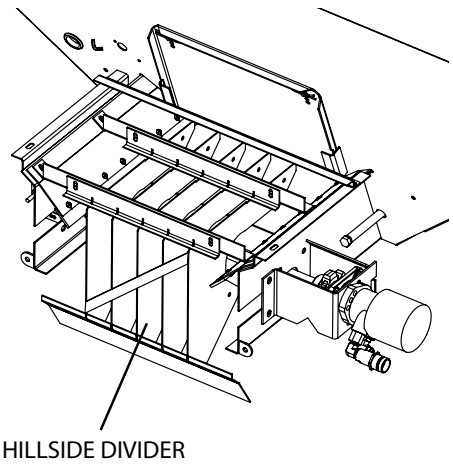
NL300G4 MULTAPPLIER ALONE DIMENSIONS & CAPACITIES

MultApplier Style	Overall Length A	Approximate Weight Lbs (kg)	Struck Capacity Cu Yd (Cu M) Cu Ft
Style I MultApplier	84” (213cm)	1120 (508)	3.93 (3.00) 106
Style II MultApplier	86” (218cm)		

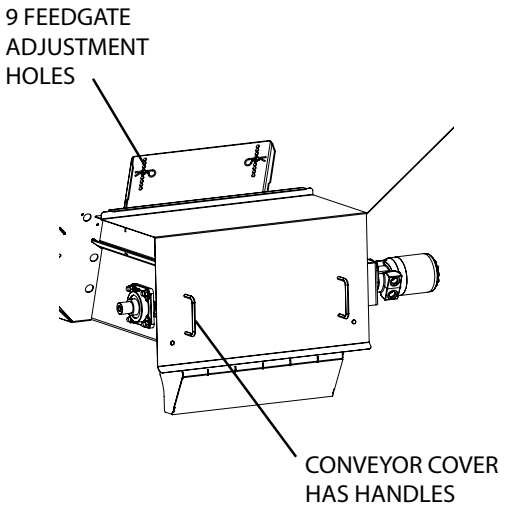
Style I

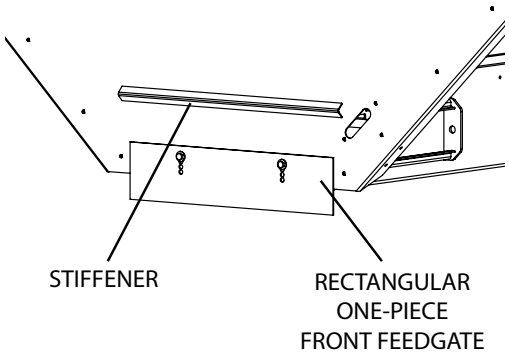


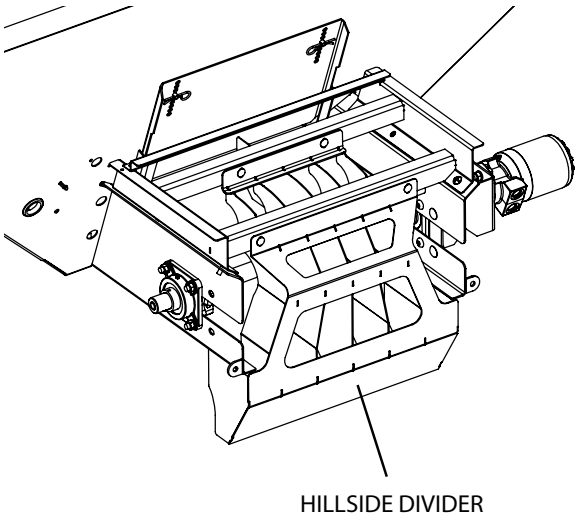




Style II







NOTE: **Refer to www.highwayequipment.com for installation instructions.**

Once on the website:
- Click *Customer Support*.
- Select: *Other New Leader Manuals and Instructions*.
- Select: *John Deere 4-Series Dry Spreader Installation Instructions*.

FEEDGATE ADJUSTMENT

WARNING Stay out of the spreader. If it's necessary to enter the spreader, return to the shop, empty body, turn off all power, set vehicle brakes, lock engine starting switch and remove keys before entering. Tag all controls to prohibit operation. Tags should be placed, and later removed, only by person working in the body.

Adjust the MULTAPPLIER's front feedgate prior to installation.

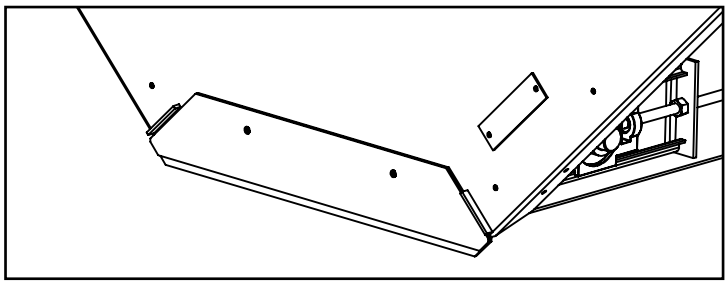


Figure 1A - 1 1/2" (3.81 cm) or 2" (5.08 cm) Opening (Style I)

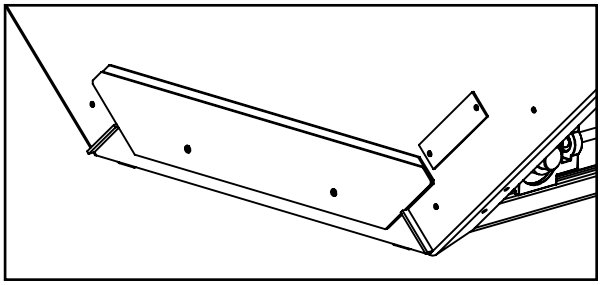


Figure 1B - 3" (7.62 cm) Opening (Style I)

Style I - To adjust main bin's feedgate opening on a Style I MULTAPPLIER-equipped unit: position front feedgates on MULTAPPLIER as necessary to achieve a 1-1/2 inch (3.81 cm), 2 inch (5.08 cm) (Figure 1A) or 3 inch (7.62 cm) (Figure 1B) opening. Position both feedgates with short side down for a 3" (7.62 cm) opening. NOTE: Both feedgates are installed for shipping.

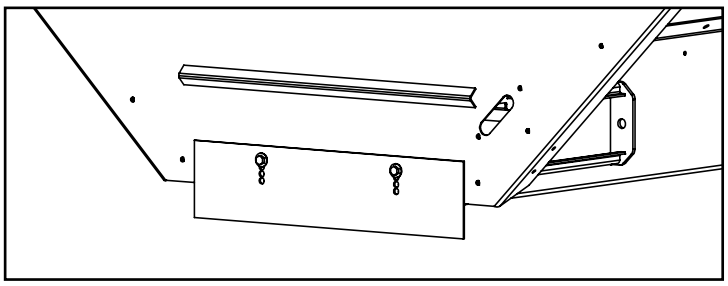


Figure 2A - 2 1/2" (3.81 cm) or 2" (5.08 cm) Opening (Style II)

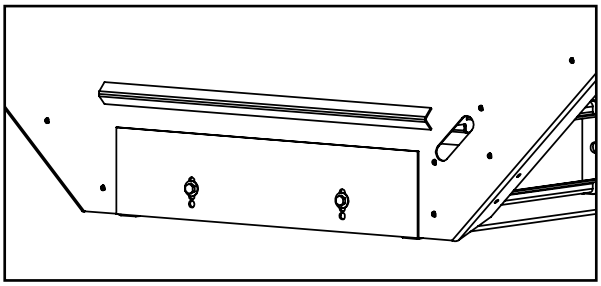


Figure 2B - 4" (10.16 cm) Opening (Style II)

Style II - To adjust main bin's feedgate opening on a Style II MULTAPPLIER-equipped unit: position front feedgate on MULTAPPLIER as necessary to achieve a 1 1/2 inch (3.81 cm) (Figure 2A) to 4 inch (10.16 cm) (Figure 2B) opening in 1/2 inch increments.

NOTE: Visit www.newleadervip.com and enter parameters to determine minimum and maximum application rates and feedgate openings for optimal performance of your spreader.

INSERT INSTALLATION

WARNING	Use only lifting devices that meet or exceed OSHA standard 1910.184. Never exceed work load limits or lift equipment over people. Empty spreader before lifting. Loads may shift or fall if improperly supported, causing injury.

Before installing the MULTAPPLIER: Remove the Inverted V and Hillside Flow Divider from the spreader, if so equipped, and set hardware aside. Adjust the MULTAPPLIER's front feedgate to the proper opening. Support endgate by attaching a hoist to the lift hooks. Remove hardware from both sides of the endgate and hoist from the spreader.

Always inspect unit lift points for signs of wear, cracking, corrosion, gouges, alterations, or distortion.

Always use a sling, spreader bar, or lifting bar that attaches to the lifting points with a minimum of 60 degrees from horizontal. It is preferable to use an "H" style lifting bar that keeps the attaching chains in a near vertical orientation.

Parts Needed:

Description	Qty
MULTAPPLIER	1
Capscrew - 1/2 x 1 1/4 Grade 8	8
Flat Washer - 1/2 Grade 8	16
Lock Washer - 1/2 Grade 8	8
Hex Nut - 1/2 Grade 8	8

1. Make sure rubber sealer hardware is loose. If not, loosen.

Figure 3A

Figure 3B

2. To install MULTAPPLIER:
   a. Figure 3A - Hoist and slide MULTAPPLIER into position between main bin's side sheets.
   b. Figure 3B - Align MULTAPPLIER's and main bin's front and rear mount brackets.
   c. Make sure MULTAPPLIER is resting on inside of main bin, and not resting on tops of side sheets.
   d. Release tension on hoist but do not remove.

Figure 4A (uninstalled)

Figure 4B (shown installed)
View from rear of unit.

3. Figures 4A-4B - Visually make sure MULTAPPLIER is centered from side to side in main bin and rear pads are resting on main bin.

Figure 5

Figure 6

4. Figure 5 - There must be contact between rear pads and main unit. Check for contact by trying to slide paper between pads and main bin. If no contact, adjust MULTAPPLIER.

5. Figure 6 - Inside main unit, locate front pads by lifting rubber sealers on front endgate.

Figure 7A

Figure 7B

6. Figures 7A-7B - There must be contact between front pads and main unit. Check for contact by trying to slide paper between pads and main bin. If no contact, adjust MULTAPPLIER.
NOTE: Pry MULTAPPLIER at mount brackets if necessary.

Figure 8

Figure 9

7. Figure 8 - Once both front pads are in contact, insert hardware in front mount brackets' lower holes. Shim between main bin and MULTAPPLIER brackets if distance is larger than 1/8" (.32cm). Tighten hardware per torque recommendations.

8. Make sure feedgate is level.

NOTICE!	Leakage of material may occur if the sealer belts are not set properly on the front of the MULTAPPLIER. Highway Equipment Company is not liable for lost material due to improperly installed sealer belts.

9. Figure 9 - Make sure there is a complete seal covering the gap between the MULTAPPLIER and the main bin's side sheets. Tighten all hardware on rubber sealers at front of MULTAPPLIER.

10. Make sure rear pads are still in place against main bin. Install hardware in lower holes of rear mount brackets. Shim between main bin and MULTAPPLIER brackets if distance is larger than 1/8" (.32cm). Tighten hardware per torque recommendations in this manual.

11. Make sure MULTAPPLIER's side sheets are not resting on top of main bin's side sheets.

12. Install hardware in all four mount brackets' upper holes. Tighten hardware per torque recommendations.

13. Remove hoist.

14. Inspect unit for foreign debris around conveyor area.

HYDRAULICS

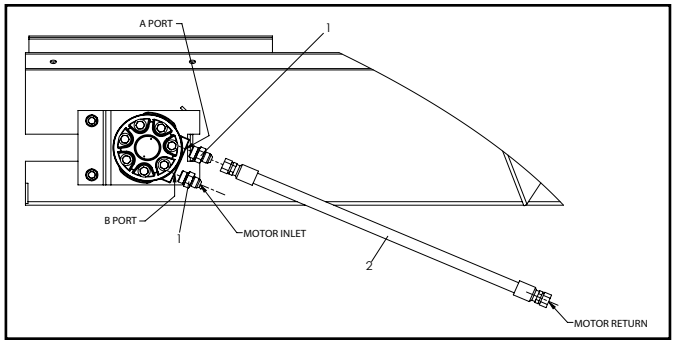


Figure 10A – Detach Hoses

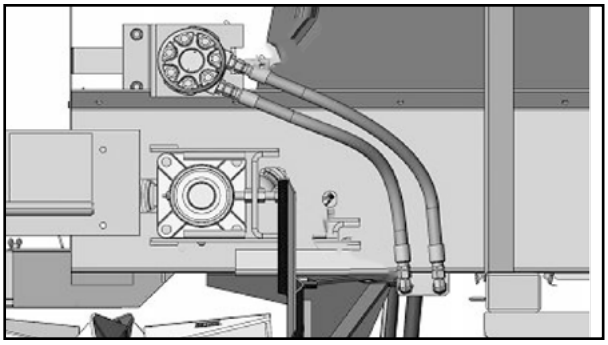


Figure 10B – MULTAPPLIER Hydraulic Hose Connection

Detach hoses on the spreader and the MULTAPPLIER as shown in Figure 10A. Connect MULTAPPLIER hoses to spreader connection points as shown in Figure 10B.

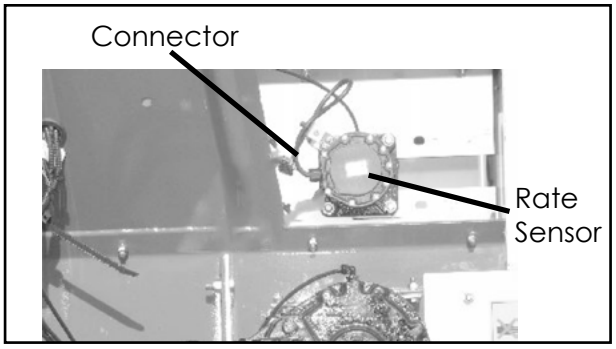


Figure 11A – Rate Sensor

Figure 11B – Grease Bank

Plug in rate sensor as shown in Figure 11A.

Attach MULTAPPLIER grease lines to grease bank as shown in Figure 11B.

HILLSIDE DIVIDER

NOTICE!	Highway Equipment Company will not be liable for misapplied material due to an improperly adjusted divider, spreader or both.

Figure 12 - Hillside Divider (Style I)

Style I - Remove hardware from rear two chain shield holes on each side of MULTAPPLIER and set aside. Install MULTAPPLIER Hillside Divider (A) over conveyors and attach using chain shield hardware. Adjust Hillside Divider so that the middle divider is centered over both conveyors and the Material Divider (B) as shown in Figure 12. Tighten hardware to recommended torque.

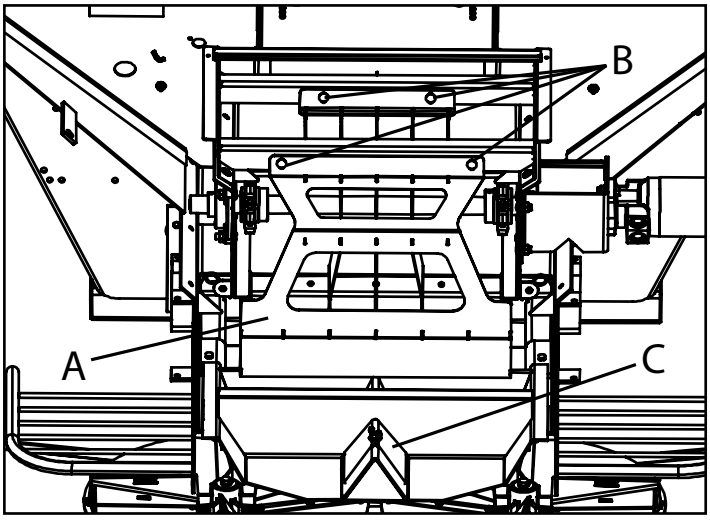


Figure 13 - Hillside Divider (Style II)

Style II - Loosen hardware from rear two chain shield holes on each side of MULTAPPLIER. Install MULTAPPLIER Hillside Divider (A) and fasten to Support using single bin Hillside Divider hardware removed before MULTAPPLIER installation (B). Adjust Hillside Divider so that the middle divider is centered over both conveyors and the Material Divider (C) as shown in Figure 13. Tighten all hardware to recommended torque.

DUAL CONVEYOR COVER

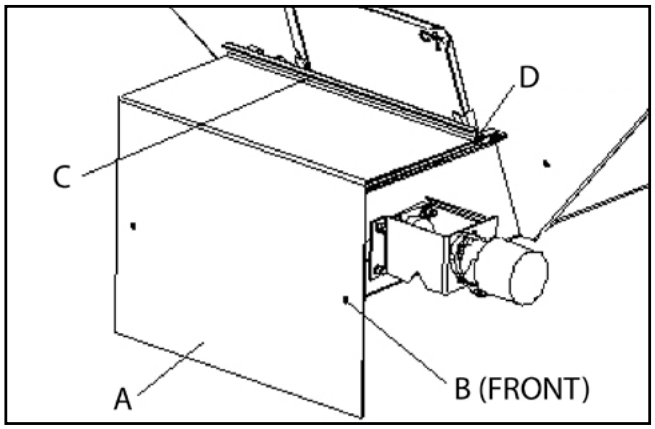


Figure 14 - Dual Conveyor Cover (Style I)

Parts Needed:

Description	Qty
Cover	1
Hold-down	1
Hair Pin	2
Capscrew - 3/8 x 1	6
Flat Washer - 3/8	6
Lock Washer - 3/8	6
Hex Nut - 3/8	8

Style I - Remove rear plate of Material Divider. Place Cover (A) on MULTAPPLIER sills as shown in Figure 14 and insert hair pins (B) through cover pins. Position Hold-down (C) over cover and attach with supplied hardware (D). Reinstall rear plate of material divider.

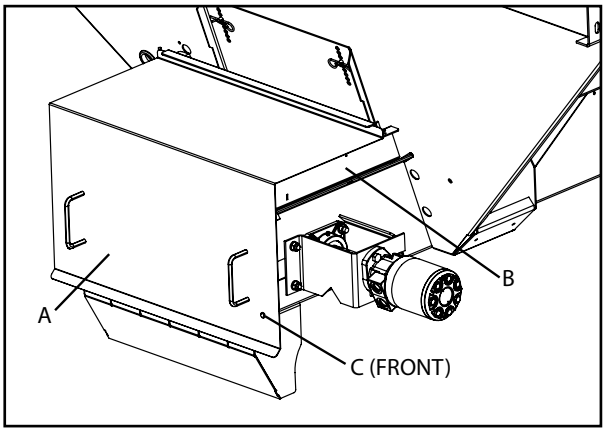


Figure 15 - Dual Conveyor Cover (Style II)

Parts Needed:

Description	Qty
Cover	**1**
Hair Pin	**2**

Style II - Remove rear plate of Material Divider. Place Cover (A) on Hillside Divider Support (B) as shown in Figure 15 and insert hair pins (C) through cover pins. Reinstall rear plate of material divider.

BIN SENSORS

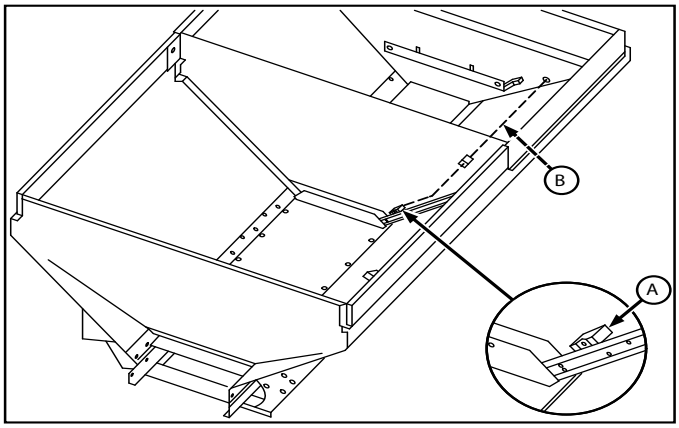


Figure 16 - Bin Sensor Mounting in MULTAPPLIER

Figure 16 - Bin Sensor for main bin (A) connects to extension harness (B) connector “Bin 2” routed along MULTAPPLIER bin.

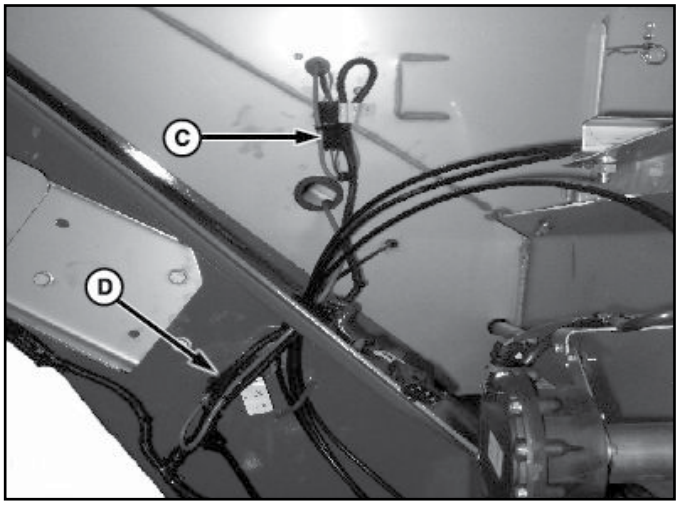


Figure 17 - MULTAPPLIER Bin Sensor Connections

Figure 17 - Plug MULTAPPLIER Bin Sensor into “Bin 1” connector (C). Plug extension harness for main Bin Sensor into “Bin 2” connector at rear of machine.

MULTAPPLIER REMOVAL/ENDGATE INSTALLATION

Remove MULTAPPLIER and reinstall endgate, Inverted V, single conveyor Hillside Divider, etc. by following installation instructions in reverse order. Make sure the MULTAPPLIER hydraulics and electrical are disconnected from the main bin before removal. See “Inverted V” in the *New Leader Installation Instructions* manual.

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WARNING Stand clear of moving machinery.

NOTE: Do not load spreader with material.

1. Check over entire unit to be sure all fasteners are in place and properly tightened per *Fastener Torque Chart* in this manual.
2. Make sure no other persons are in vicinity of vehicle or spreader.
3. Make sure no loose parts are in unit or on conveyor or spinner.
4. Open feedgate until it is completely clear of conveyor.
5. Check oil level in hydraulic reservoir; fill as necessary. Refer to the John Deere 4 Series Operator's manual for proper oil.
6. Sit in driver's seat. The operator presence switch deactivates the hydraulics when the operator leaves the driver's seat.
7. Set engine speed to about 1000 RPM. Allow engine to run and circulate oil for several minutes. Increase warm-up time in cold weather.
8. Set spinner speed to 400 RPM.
9. Enable spinner using solution pump switch. Verify that spinners start and stop with operation of pump switch.
10. Turn rate selection switch to manual postion and input conveyor speed.
11. Set spinner speed to 700 RPM and allow both the conveyor and spinner to run.
12. Shut down system.

DANGER Do not check leaks with hands while system is operating as high pressure leaks can be dangerous! If skin is pierced with hydraulic fluid at high pressure seek immediate medical attention as fluid injected into the skin could cause gangrene if left untreated. Relieve pressure before disconnecting hydraulic lines or working with system. Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system. Wear protective gloves and safety glasses or goggles when working with hydraulic systems.

WARNING DO NOT check for hydraulic leaks adjacent to moving parts while system is operating as there may be danger of entanglement!

13. Check all connections in hydraulic system to make sure there are no leaks.
14. Check hydraulic oil reservior and refill to maintain level around mid-point of sight gauge.
15. Check Bin Sensor.

Unit is now ready for field testing.

The following procedure is a guide:

1. Field test over any suitable course which allows vehicle to be driven at speeds to be used while spreading.
2. Make sure unit has been properly serviced and hydraulic reservoir is full.

NOTE:	Do not load spreader.

3. Input 700 RPM spinner speed into controller product parameters.

	**DANGER**	Take proper safety precautions when observing conveyor and spinner speed while vehicle is in motion! These may include use of suitable mirrors clamped to permit observation by a safely seated observer, following the spreader in another vehicle at a safe distance, or other suitable means. Do not stand on fenders, in body or on any part of spreader as there is danger of falling off the vehicle or into moving parts! Use great care in performing this test!

4. Start engine. Engage pump and allow to run long enough to bring hydraulic oil up to operating temperature. Verify spinners revolving at 700RPM.

NOTE:	Conveyor should not move.

5. Set program in control console to operational mode and begin forward travel. Move conveyor switch on console to ''on'' position.

NOTE:	Conveyor should start immediately when vehicle moves and should continue to run at speeds which vary directly with the vehicles speed; the conveyor should speed up as vehicle speed increases and slow down as vehicle speed reduces. Spinner speed should remain constant when engine speed is above minimum operating range.

1. Make sure unit has been properly serviced and is in good operating condition. Field test unit prior to first use, prior to each spreading season's use, and following overhaul or repair work, to verify that all components and systems are functioning properly. See *Field Testing* section.
2. Fill Main Bin and MultApplier (if equipped) with material to be spread (see Figure 1).

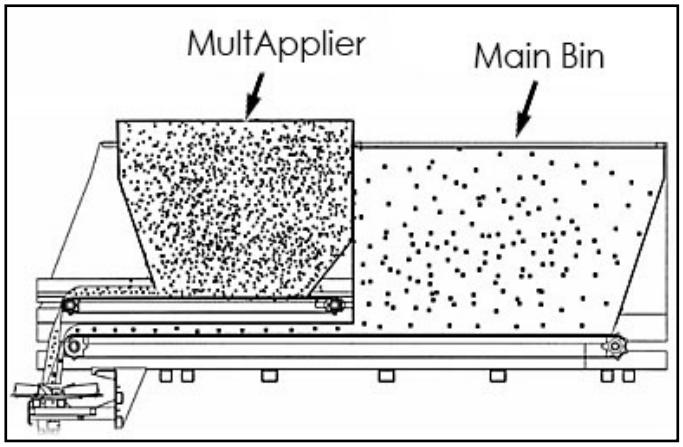


Figure 1- Main bin & MultApplier filled

3. Drive to location where spreading is to be done.
4. Turn on power to controller and set program to desired values.
5. Engage pump and set throttle to full.
6. Adjust spinner to give spread pattern desired. See *G4 Spread Pattern* section.
7. Adjust feedgate opening to obtain yield desired. Measure actual material depth.

WARNING	Stay out of the spreader while conveyor is operating. Turn off all power, set vehicle brakes, lock engine starting switch and remove keys before getting in the spreader. Tag all controls to prohibit operation. Tags should be placed, and later removed, only by the person working in the spreader.

WARNING	Drive only at speeds which permit good control of vehicle!

For additional information, check John Deere *Controller* manual.

PREVENTATIVE MAINTENANCE PAYS!

The handling and spreading of commercial fertilizers is a most severe operation with respect to metal corrosion. Establish a frequent, periodic preventative maintenance program to prevent rapid damage to spreading equipment. Proper cleaning, lubrication and maintenance will give you longer life, more satisfactory service and more economical use of your equipment.

WARNING	Shut off all power and allow all moving parts to come to rest before performing any maintenance operation.

HYDRAULIC SYSTEM

The use of proper oil in the hydraulic system is one of the most important factors for satisfactory operation. Utmost cleanliness in handling the oil cannot be stressed enough. Keep hydraulic oil in original closed containers, clean top of container before opening and pouring, and handle in extremely clean measures and funnels.

Refer to John Deere Operator's Manual for proper hydraulic system service.

CONVEYOR GEARCASE

Drain oil in a new unit after first two weeks (or not more than 100 hours) of operation, and flush gearcase thoroughly with light oil. Refer to Lubricant and Hydraulic Oil Specifications section for proper grade oil. Refill gearcase with one (1) pint (.47 liters) of recommended lubricant. After initial change, oil should be changed every 2,000 hours of operation or annually, whichever occurs first.

Check gearcase oil level monthly.

BIN LEVEL SENSOR

WARNING	Stay out of the spreader. Do not climb on spreader. Use a portable ladder to inspect, clean and maintain the bin sensor from outside the spreader. Failure to do so could result in injury from falling.

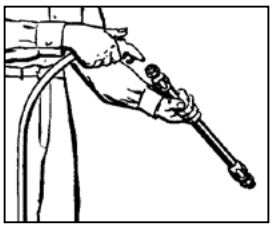
NOTICE!	Wipe sensor clean periodically to prevent accumulation of product. Avoid wet material as it may stick to sensor. If material sticks to sensor it won't warn user when bin is low.

Clean sensor with long handled brush or hose from outside of spreader. Do not aim high pressure sprayer directly at sensor—it could damage the components.

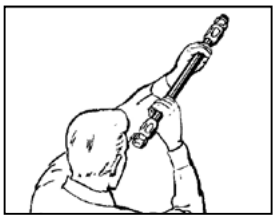
HYDRAULIC HOSE

Hose assemblies in operation should be inspected frequently for leakage, kinking, abrasion, corrosion or any other signs of wear or damage. Worn or damaged hose assemblies should be replaced immediately.

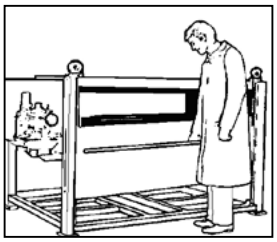
WARNING Testing should be conducted in approved test stands with adequate guards to protect the operator.



Clean
Clean assembly by blowing out with clean compressed air. Assemblies may be rinsed out with mineral spirits if the tube stock is compatible with oil, otherwise hot water at 150°F (65.55° C) maximum may be used.



Inspect
Examine hose assembly internally for cut or bulged tube, obstructions, and cleanliness. For segment style fittings, be sure that the hose butts up against the nipple shoulder; band and retaining ring are properly set and tight, and segments are properly spaced. Check for proper gap between nut and socket or hex and socket. Nuts should swivel freely. Check the layline of the hose to be sure the assembly is not twisted. Cap the ends of the hose with plastic covers to keep clean.



Test
The hose assembly should be hydrostatically tested at twice the recommended working pressure of the hose.
Test pressure should be held for not more than one minute and not less than 30 seconds. When test pressure is reached, visually inspect hose assembly for: 1. Any leaks or signs of weakness. 2. Any movement of the hose fitting in relation to the hose. Any of these defects are cause for rejection.

Storage and Handling

Hose should be stored in a dark, dry atmosphere away from electrical equipment, and the temperature should not exceed 90° F (32° C).

#5 STRAIGHT BELT CONVEYOR

MAINTENANCE

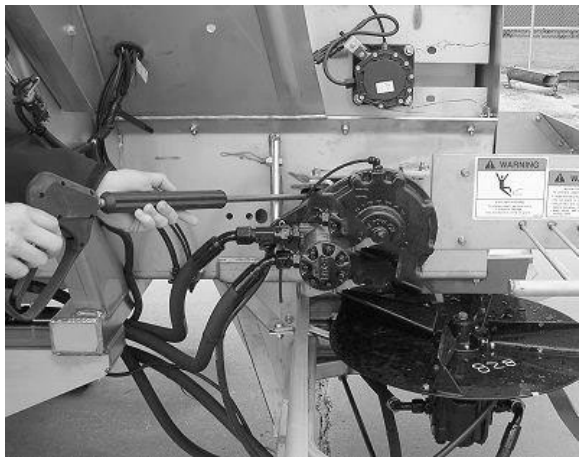
The conveyor belt should be checked daily for material build-up, proper tension and tracking. See "Adjustment" section.

CLEANING

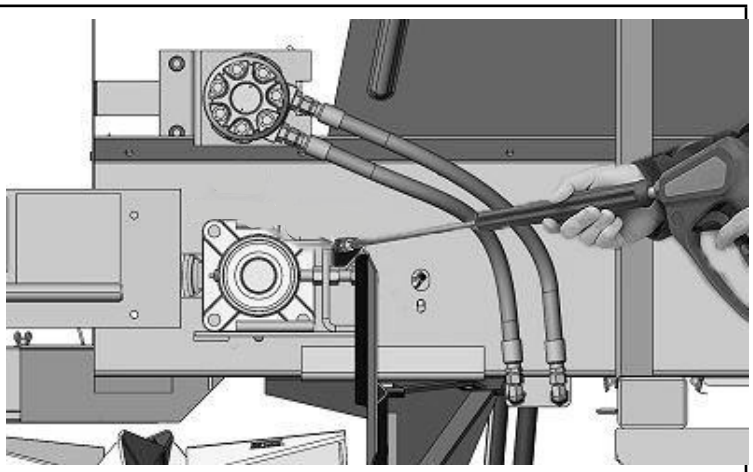
Cleaning ports on both the left and right side (see Figure 2) are provided to aid conveyor belt cleanout. Cleaning should be done regularly to ensure there is no build-up of material on the belt or in the conveyor which could shorten the life of the components or the unit. Before beginning, disable spinner by unplugging spinner control valve. To clean, have an operator in the drivers seat set the conveyor to a slow speed and allow to run while a second person inserts a pressure washer nozzle into ports and spraying debris from between belts (see below).

WARNING	Use extreme caution when working near moving machinery. Do not insert pressure washer nozzle beyond the tip to prevent it catching in moving parts, which could cause injury. Do not wear gloves or loose clothing when working near moving machinery.

WARNING	When spraying, hazardous material may return on back spray. Wear safety glasses and observe all local hazardous material handling procedures or laws when cleaning equipment whenever applicable.



Left Hand Conveyor Cleaning Port



Right Hand Conveyor Cleaning Port

Figure 2-Cleaning Ports for Conveyor

INSPECTION

Do not be alarmed as sides of belt wear unless belt is out of track. The belt will continue to operate satisfactorily with up to 1" (2.54cm) total worn from the sides. Inspect belt lacing frequently for wear or "raveling" of belt grip area and loosening hardware. Retighten loose nuts and peen end of lacing screw into slot of nut as required.

ADJUSTMENT

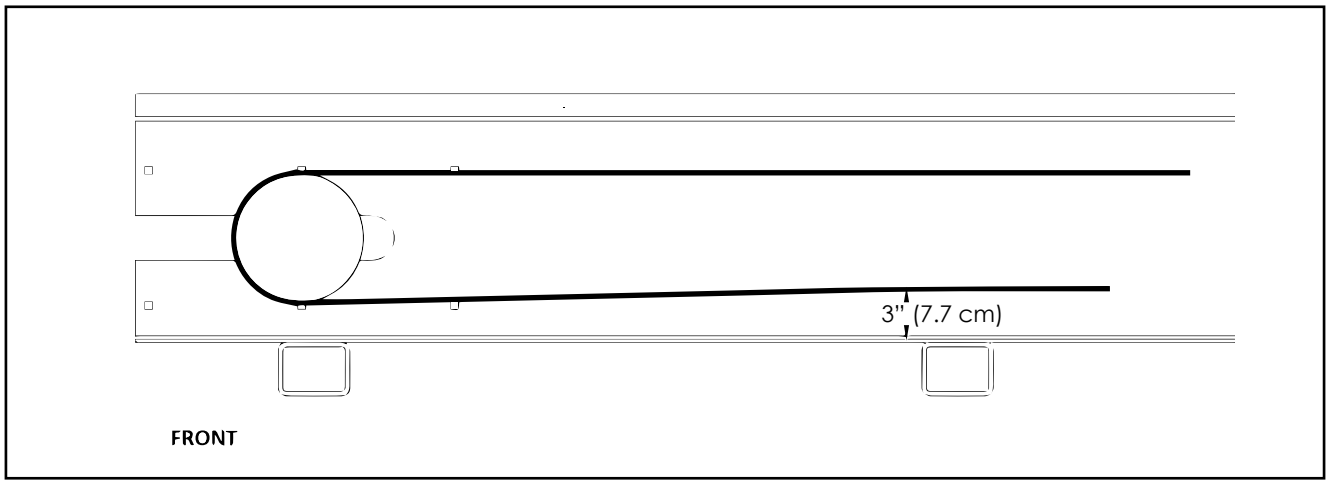


Figure 3

Initial Break-in time: 3 weeks. Check for tension and tracking after first load emptied, and every day after during break-in period. After break-in period, check tension and tracking weekly.

NOTE	When any adjustments are made to tension or tracking, recheck after a load has been run through machine to ensure proper operation continues.

1. TENSION
   Belt tension should be just tight enough to prevent slippage—no tighter. If the "flats" on the conveyor drive pulley are visible through the belt, tension is high enough. Make sure the conveyor is shut off. Measure vertical distance from bottom of sill to conveyor in front of 2nd stake from front. Measurement should be 3" (7.62cm) on both sides of conveyor. Use front adjusting bolts to tension both sides of conveyor as necessary.

2. TRACKING
   Empty spreader to check tracking by doing the following:
   A. Make sure engine is shut off. Set spinner speed to 0 and disable spinner by unplugging Spinner control valve.

WARNING Do not work near rotating spinners. Severe injury can result from contact with moving parts.

   B. Verify snubber pulley is secure and square. Measure from bearing block to rear of sill on both sides. Move bearing blocks in the slotted holes as necessary to make measurements equal.
   C. Place controller in manual mode (see control manufacturer's manual) and run conveyor at slow speed. Gradually increase speed (40-50 rpm) until tracking is visual. If problems do occur, refer to next page.

CAUTION Use great care to avoid entanglement with any moving parts.

A properly adjusted belt will either remain in a steady position centered on the pulley or more often will "wander" back and forth 1/4 (.64cm) to 1/2 (1.27cm) inch across the pulley, but remain generally centered. The conveyor belt sides should not curl or scuff.

Improper tracking is usually due to three basic causes. These problems and their respective solutions follow:

PROBLEM 1: (Figure 4)
Belt tracks to one side, contacts side of conveyor. Contact is more severe at the front and may not quite touch at the rear.

SOLUTION:
Tighten idler bearing at side in contact with belt. Make this adjustment one turn at a time. Operate conveyor 10 to 15 minutes at a high speed to allow belt to react to the adjustment. Repeat if necessary.

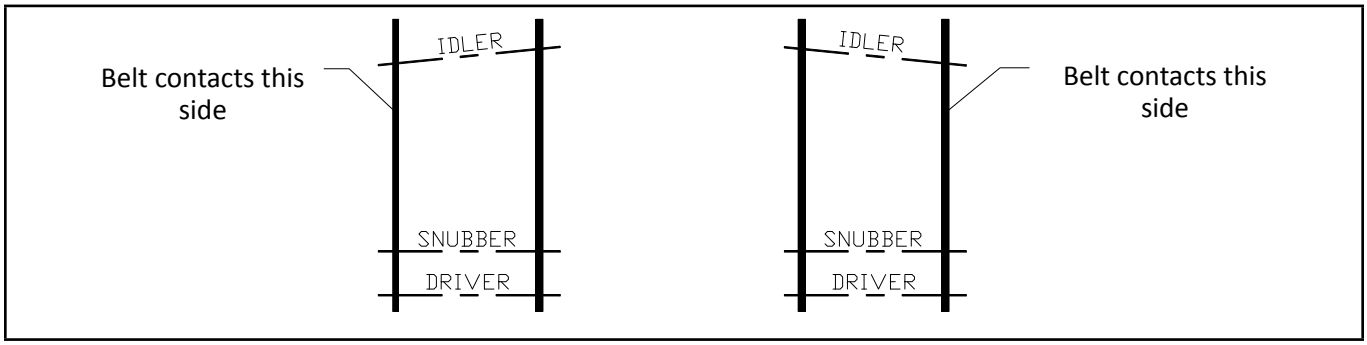


Figure 4

PROBLEM 2: (Figure 5)
Belt contacts one side at front and contacts other side at rear.

SOLUTION:
If adjusting as in Problem 1 does not remedy the situation, adjustment of the drive pulley is necessary. Mark the position of the adjustment screw (RH side) on the side of the unit. Determine which illustration shows the problem to figure out which direction the drive shaft should be moved. Loosen the adjustment screw to move the shaft forward; tighten the screw to move the shaft rearward.
NOTE: The illustration is exaggerated. Only move the adjustment screw 1/4 (.64cm) turn at a time after loosening the bolts holding the bearing. Usually, 1/64 (.04cm) to 1/32 (.04cm) inch adjustment is all that is necessary. Retighten bearing. Operate conveyor for 10 to 15 minutes at a high speed to allow belt to react to adjustment. The problem should change to Problem 1. Adjust as in Problem 1 to track belt properly.

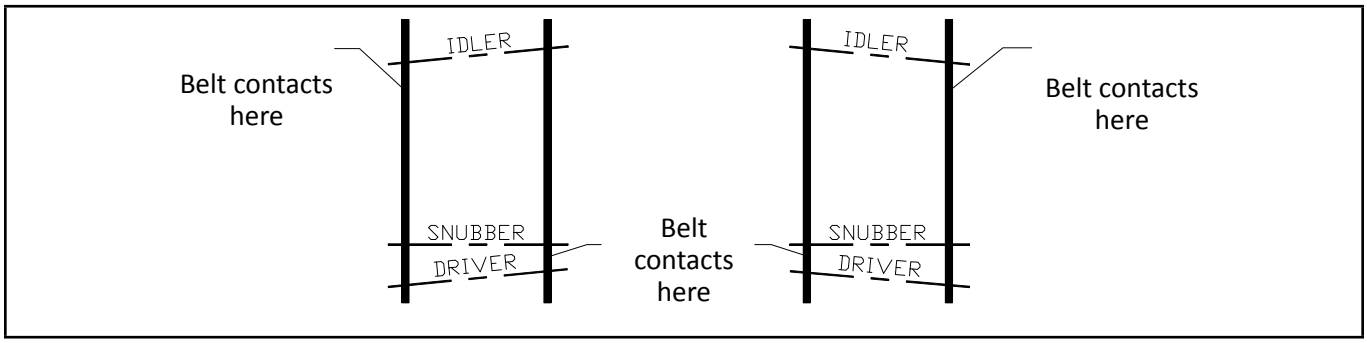


Figure 5

PROBLEM 3: (Figure 6)
Belt contacts side as in Problem 1, but contacts more heavily at a point approximately three feet from rear.

SOLUTION:
Realign snubber pulley. Note the point or side of contact from the illustration. This side of the snubber is too low.
NOTE: This pulley moves up and down ONLY.
Loosen belt and raise or lower as necessary. Loosen the two bolts holding the snubber bearing on the side to be adjusted after marking the old position. Move approximately 1/16 (.16cm) inch at a time and retighten. Retighten belt the exact number of turns previously loosened. Operate conveyor 10 to 15 minutes to allow belt to react to adjustment. Refer to Problem 1 and readjust. If readjustment does not compensate, repeat.

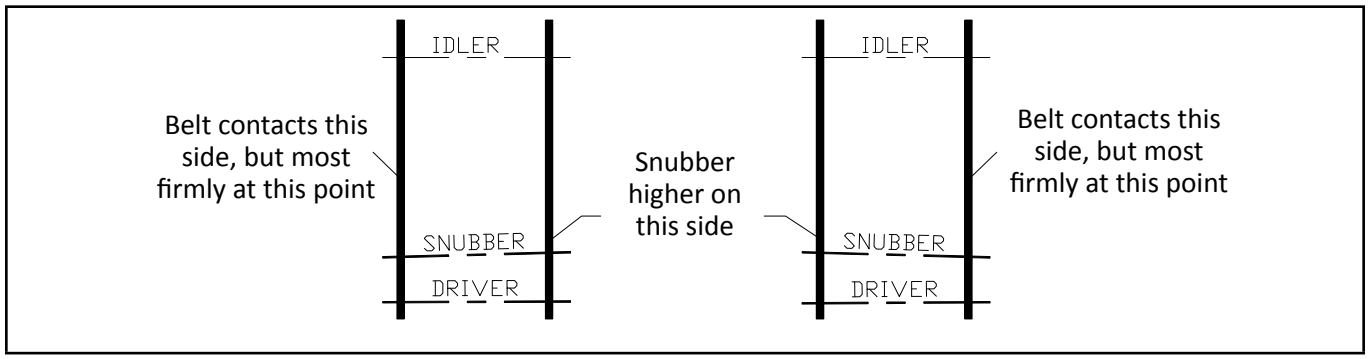


Figure 6

If, after continued adjustment, the belt does not track properly, check the following:
1. Check for twisted spreader body. Shims must be placed between spreader cross tubes and the mounting surface to eliminate any twist in the body structure.
2. Check for crowned Idler Pulley by placing a straight edge on the pulley. If properly crowned, the straight edge will contact the center pulley leaving 1/16 (.016cm) inch gap between the straight edge and both pulley ends. Replace the pulley if crown is not present.
3. Check for lacing squareness by removing the belt. This should be done as a last resort. If the lacing is not square to the belt ends, contact your dealer for service.
4. Sight down the body under the belt shields. The only point which should come close to or slightly contact the belt, is the lowest point on the shield. If the belt contacts the shield firmly at any other point, tracking will be impossible and you should see your dealer immediately. Only your dealer can correct the situation.

SHIELDS

The belt shields along each side of the belt inside the unit should be just contacting the belt when the belt is properly adjusted and the unit is empty (Figure 7). If a shield has clearance along its length, it can be moved down until it just contacts the belt by loosening the fastener bolts, allowing the shield to slide downward and tightening the bolts. If the shield is tending to cut into the belt along its full length, loosening the bolts and raising the shield until it just contacts the belt will correct the problem.

If the shield cuts the belt at one or more points or if it gaps at one or more points, it should be replaced.

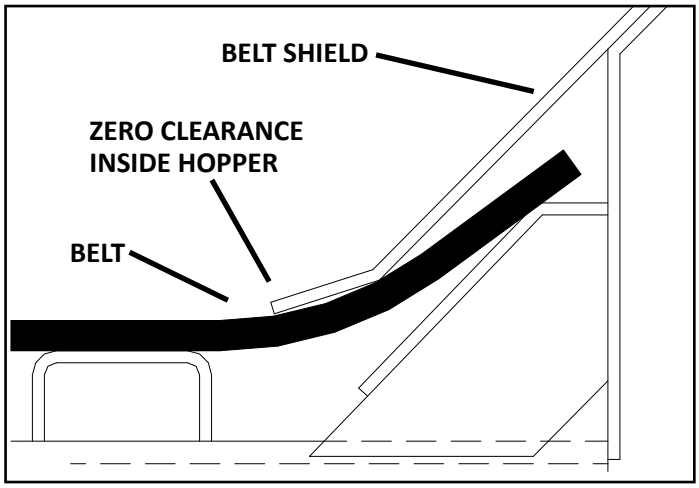


Figure 7 - #5 Bottom

NOTICE! Don't lubricate the #5 belt. Use of lubricants will cause the belt to deteriorate and fail prematurely.

#5 Straight Belt Removal & Replacement

Tools and Equipment Required (NOTE: Two people MUST be used for this procedure.):

1. 1 1/2" Hex Wrench
2. 25 to 30 Feet (762cm – 914.4cm) of 1/4" (.64cm) to 3/8" (.95cm) Rope.
3. 3 or 4 Pieces of 2 x 4 (5.08cm x 10.16cm) Lumber about 3 Feet (91.44cm) Long.
4. 10 (304.5cm) Feet of 14 or 16 Gauge Soft Iron Wire.

Parts Required: See *Parts Pages.*

Procedure:

1. Set spinner speed to stop spinners and disable spinner by unplugging Spinner control valve.
2. Remove both belt shields, clean thoroughly and repaint.
3. Adjust processor to Manual operation. Select a slow Manual Speed until splice is centered between bearing pockets at read of spreader.
4. Move the front idler adjustment bolts to extreme rear position.
5. Shut down spreader. Pull out splice pin to separate belt splice.
6. Insert pin into one end of belt splice. Attach a winch to the belt splice and remove belt.
   NOTE: If the splice pin cannot be removed, cut belt and remove belt by hand.
7. Using any suitable tool, remove any caked material from the drive pulley, snubber pulley, idler pulley and from inside the frame channels. Clean and repaint as required.
8. Thread OLD splice pin through one end of new belt splice. Connect wire to pin about 1/4" (.64cm) in from each side of the belt, forming a loop.
9. Ensure belt is threaded properly with bottom of rivet facing outward as shown in Figure 8. Thread the rope along the top of the belt channel, around the front idler pulley, over the snubber pulley, and under the drive pulley.

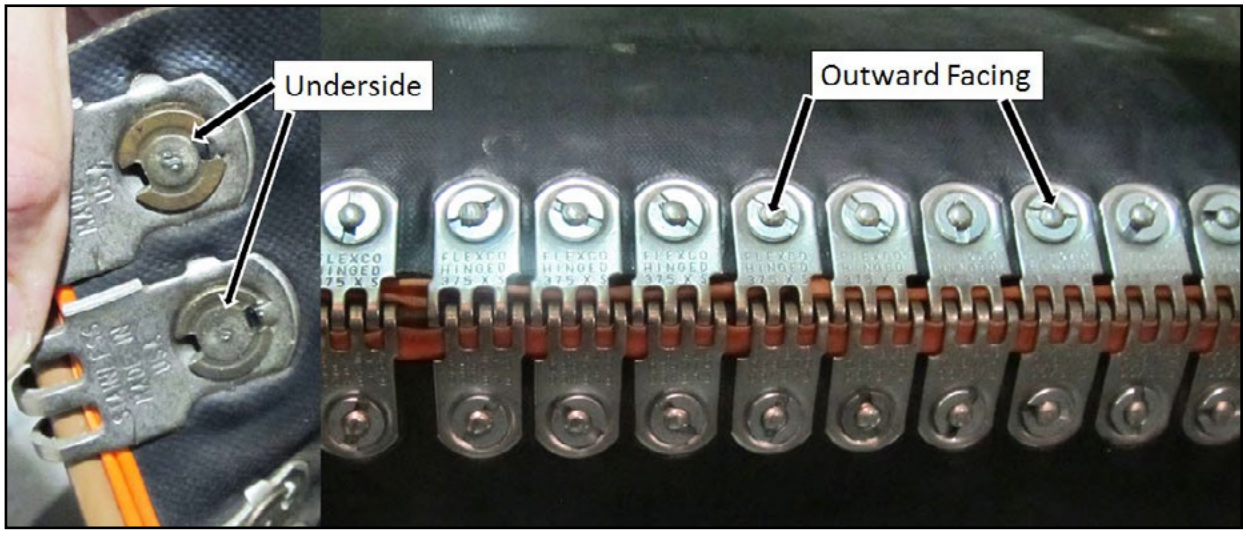


Figure 8 - Belt splice facing

CAUTION Make sure power is shut off before performing threading operation.

10. Tie end of rope under drive pulley to wire loop. Wrap other end of rope once around drive pulley and out to rear.
11. Start conveyor drive so drive pulley turns slowly. One person should pull on rope while other feeds belt into unit from rear. Pull new belt under drive pulley, over snubber pulley, along frame channels, around front idler pulley and back to drive pulley.

CAUTION Use extreme care to avoid entanglement! Someone must stay at controls to stop conveyor instantly if required.

CAUTION Use extreme care to avoid entanglement! Stand well back from drive pulley.

12. Shut off all power and insert lumber under belt to support its weight as shown in Figure 9.
13. Insert a plastic tube in each splice and across the full width of the belt and pull the two ends together at the center of the rear face of the drive pulley.
14. Insert the splice pin (flexible, plastic covered).
15. Snug the belt up by tightening the idler pulley.
16. Tighten the belt until the edge of the belt is approximately 2" (5.08cm) above the lower edge of the sill lower flange on each side. Remove lumber.
17. Adjust for proper tracking as outlined in the *Belt Conveyor Adjustment* section of this manual.

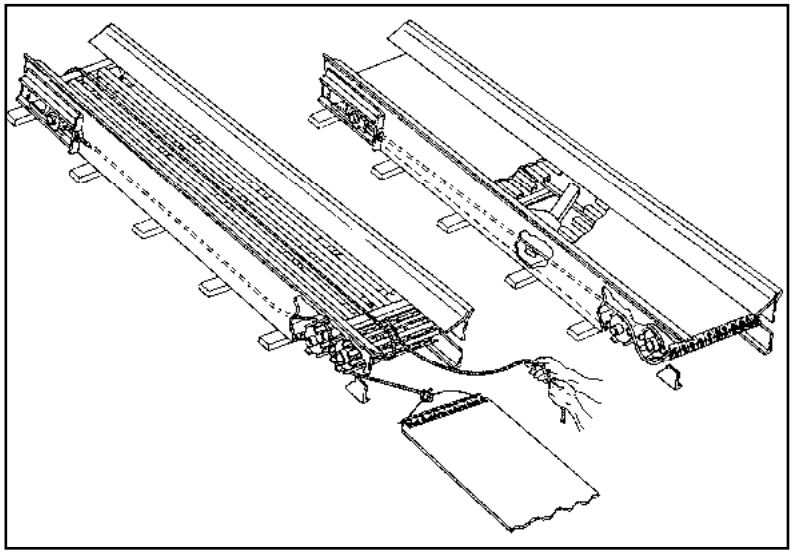


Figure 9 – #5 Belt Installation

#4 BELT-OVER-CHAIN (BOC) CONVEYOR

Hose down unit and remove any material build-up on sprockets and under chain.

NOTICE! The conveyor will move away from the bottom panel if material accumulates under the conveyor or on the sprockets. The more material that accumulates, the closer the chain will come to the chain shields. If the conveyor should catch a chain shield, it could permanently damage the conveyor, the chain shields or the unit. Do not remove material while conveyor or spinner is running!

Lubricate conveyor chain daily. Disable spinner by unplugging Spinner control valve before running conveyor. Run conveyor slowly to lubricate chain. Use a mixture of 75% fuel oil and 25% SAE 10 oil in a pressurized hand spray gun. Spray oil mixture between links of chain through openings provided at rear end of sill or from front outside body when clearance is adequate. After washing unit, allow to dry, then lubricate.

⚠	**DANGER**	Stay out of body when conveyor is running. Stay clear of all moving parts. Entanglement of clothes, any part of your body or anything you have in your hands can cause serious injury. Do not use a bar, rod or hammer on conveyor while it is moving—if it gets caught it could cause injury!

If a chain oiler is used, fill oiler reservoir daily with a mixture of 75% diesel fuel and 25% sae 10 oil. Before each filling of unit with material to be spread, open petcock and run conveyor until full length of chain has been oiled, then shut petcock.

ADJUSTMENT

Proper chain tension is also a factor in chain and sprocket life (Figure 10). Measure from rear of unit forward to achieve proper chain tension. Make sure chain is tensioned equally on both sides. This adjustment is made on each side of the unit at rear.

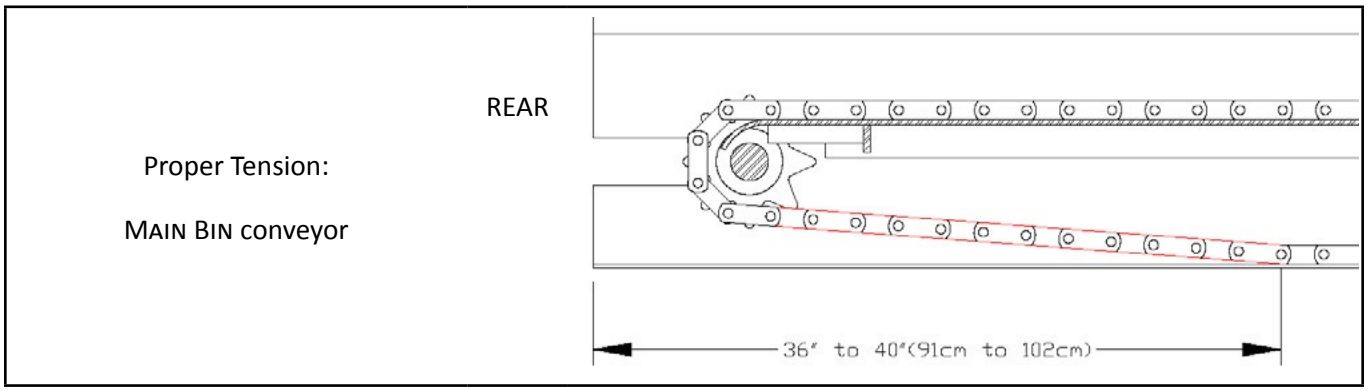


Figure 10 A- Adjusting Chain Tension

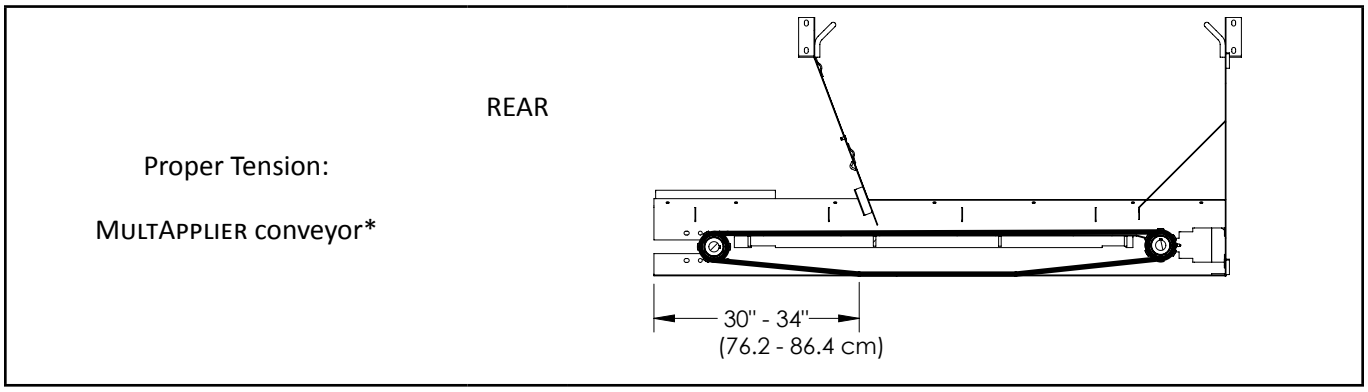


Figure 10 B- Adjusting Chain Tension

* NOTE: MULTAPPLIER conveyor touches bottom of sill across 1' to 1-1/2' measure at center when properly tensioned.

Conveyor chains that are too tight will tend to stretch, causing excess sprocket wear and eventually breakage. Excess slack presents the possibility of chain catching on sub-frame parts. Bent or distorted chain bars will cause damage as well. Straighten or replace bent or distorted chain bars immediately.

#4 BELT-OVER-CHAIN (BOC) CONVEYOR MAINTENANCE

The standard belt for the #4 conveyor is moderate oil resistant that is impervious to moisture, weathering or normal action which can be used with chemical impregnated fertilizer or oil based additives.

- Inspect belt fastener occasionally for wear or "raveling" of belt grip area.
- Make sure belt connecting pin is positioned correctly as shown in Figure 11.

NOTICE! Pin must not rotate. If pin ends are not bent down and tight against lacing, the ends may cut into the chain shield sealers or belt wipers.

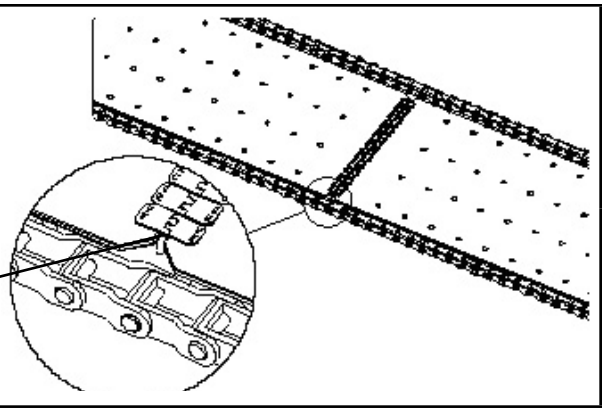


Figure 11 - Conveyor Belt Pin Installation

Spinners

Visually inspect spinner fins daily for build-up of material and wear. Spinner discs and fins must be kept clean and polished. Even a small build-up of material on a spinner can significantly affect the spread pattern. Rusty, rough, bent or worn fins, as shown in Figure 12, will produce bad spread patterns. Replace worn fins or discs as needed. See *Fin Kit Installation Instructions* for replacement part numbers and instructions.

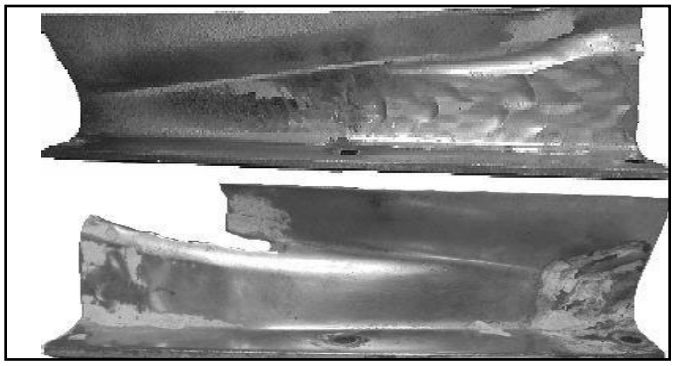


Figure 12 - Worn Fins

Spinner Deflectors

Visually inspect spinner deflectors (Figure 13) daily for build-up of material and damage. Clean as needed. Even a small build-up of material on a spinner deflector can affect the spread pattern. If damaged, bent or otherwise, replace. See *Parts List* in this manual for replacement part numbers.

Figure 13 - Spinner Deflector

Material & Hillside Dividers

Visually inspect material divider (Figure 14) and hillside dividers (as equipped) daily for build-up of material and wear. Any build-up of material on divider components can affect performance. Clean as needed. Replace worn or damaged parts as necessary. See *Parts List* in this manual for replacement part numbers.

Figure 14 - Material Divider

Lubrication of Idler Shaft Bearings and Adjustment Screws

Lubricate the front idler bearing (A) and adjusting screws (B) weekly using a grease gun at fittings. Hand grease threads of adjusting screws as shown in Figure 15.

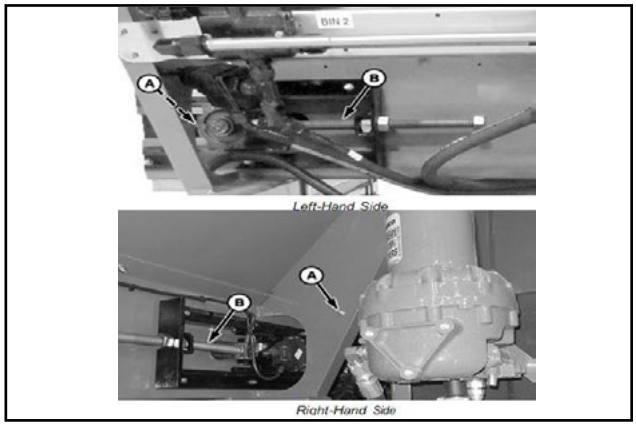


Figure 15 - Idler Shaft Bearings & Adjusting Screws

LUBRICATION OF BEARINGS

Grease in a bearing acts to prevent excessive wear of parts, protects ball races, and balls from corrosion and aids in preventing excessive heat within the bearing. It is very important the grease maintain its proper consistency during operation. It must not be fluid and it must not channel.

Make sure all fittings are thoroughly cleaned before grease is injected. Points to be lubricated by means of a grease gun have standard grease fittings.

Lubricate bearings by pumping grease slowly until it forms a slight bead around the seals. This bead indicates adequate lubrication and also provides additional protection against the entrance of dirt.

For additional information, see *Lubrication and Maintenance Chart* in this manual.

CLEAN UP

CAUTION	When applying hazardous chemicals, including pesticides, residue can build up on the inside or outside of the unit. Clean entire vehicle thoroughly, following applicable ordinances for hazardous material cleanup.

NOTICE!	High pressure wash can inject water and/or fertilizer into electronic/electrical components or connectors, bearings, hydraulic seals, fuel injection pumps or other sensitive parts and components. This may cause damage or product malfunction. Use caution when cleaning these areas including reducing pressure, and spraying at a 45 to 90 degree angle to reduce risk.

Thoroughly wash unit every two to three days during the operating season to maintain minimal maintenance operation. Hose unit down under pressure to free all sticky and frozen material.

It is important the unit be thoroughly cleaned at the end of each operating season. All lubrication and maintenance instructions should be closely followed. Repaint worn spots to prevent formation of rust.

FASTENERS

Tighten all screw fasteners to recommended torques after first week of operation and annually thereafter. If loose fasteners are found at anytime, tighten to recommended torque. Replace any lost or damaged fasteners or other parts immediately. Check body mounting hardware every week.

NOTICE!	The lubricant distributor and/or supplier is to be held responsible for results obtained from their products. Procure lubricants from distributors and/or suppliers of unquestioned integrity, supplying known and tested products. Do not jeopardize your equipment with inferior lubricants. No specific brands of oil are recommended. Use only products qualified under the following oil viscosity specifications and classification recommended by reputable oil companies.

HYDRAULIC SYSTEM

Refer to the John Deere Operator's Manual. Consult your New Leader dealer or the Product Support Department at Highway Equipment Company for additional information.

GEARCASE LUBRICANT

Lubricate these assemblies with non-corrosive type SAE 90 E.P. (extreme pressure) gear oil conforming to MIL-L2105 B multi-purpose gear lubricating oil requirements (API Service GL 4) with ambient temperatures from 40 to 100° F (4.4 to 37.8° C). Ambient temperatures below 40° F (4.4°C) require an SAE 80 E.P. lubricant; above 100° F (37.8° C) use an SAE 140 E.P. grade oil.

GREASE GUN LUBRICANT

Use a waterproof ball and roller bearing lithium base lubricant with a minimum melting point of 300° F (148.9° C). This lubricant should have a viscosity which assures easy handling in the pressure gun at prevailing atmospheric temperatures. The grease should conform to NLGI No. 2 consistency.

CHAIN OILER MIXTURE

Use a mixture of 75% No. 1 or No. 2 diesel fuel or kerosene mixed with 25% SAE 10 engine oil.

NOTICE!	Don't lubricate the #5 straight belt. Use of lubricants will cause the belt to deteriorate and fail prematurely.

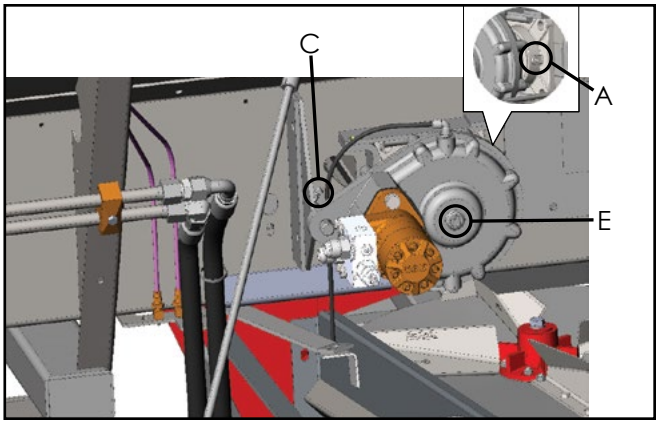
WARNING Shut off all power and allow all moving parts to come to rest before performing any maintenance operation.

The spreader should be regularly lubricated with the lubricants recommended in this manual in accordance with the following chart (see Figure 16 for locations). The grease should conform to NLGI No. 2 consistency:

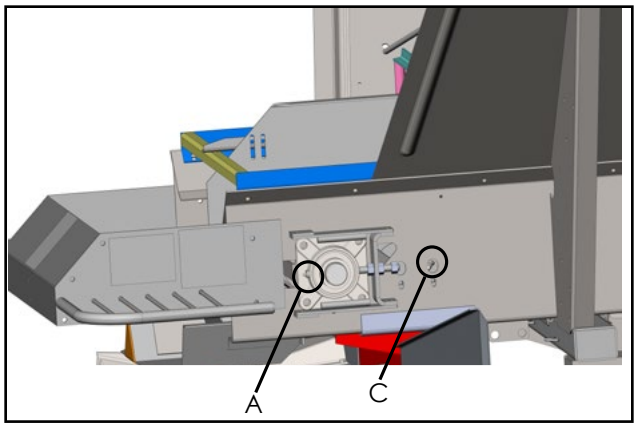
Location	Place	Method	Frequency
Hydraulic System			
See John Deere manual			
#5 Straight Belt Conveyor			
Driveshaft Bearings (A)	2	Grease Gun	Weekly
Idler Shaft Bearings (B)	2	Grease Gun	Weekly
Snubber Pulley Bearings (C) (#5 Straight Belt ONLY)	2	Grease Gun	Weekly
Idler Adjusting Screws (D)	2	Hand Grease	Weekly
Gear Case (E)	1	Gear Oil	Check Monthly; Change Annually
#4 Belt-Over-Chain Conveyor - Main Bin			
Driveshaft Bearings (A)	2	Grease Gun	Weekly
Idler Shaft Bearings (B)	2	Grease Gun	Weekly
Idler Adjusting Screws (D)	2	Hand Grease	Weekly
Chain	2 Strands	Spray Oil	Daily
#4 Belt-Over-Chain Conveyor - MultApplier			
Driveshaft Bearings (F)	2	Grease Gun	Weekly
Idler Shaft Bearings (F)	2	Grease Gun	Weekly
Idler Adjusting Screws (D)	2	Hand Grease	Weekly
Chain	2 Strands	Spray Oil	Daily
Feedgate Jack Assembly			
Gears (G)	1	Grease Gun	Annually
Tube (G)	1	Grease Gun	Weekly
Spinner			
Grease Zerks – Jack & Shaft (H)	4	Grease Gun	Weekly

NOTE: Unusual conditions, such as excessive dust, temperature extremes or excessive moisture may require more frequent lubrication of specific parts.

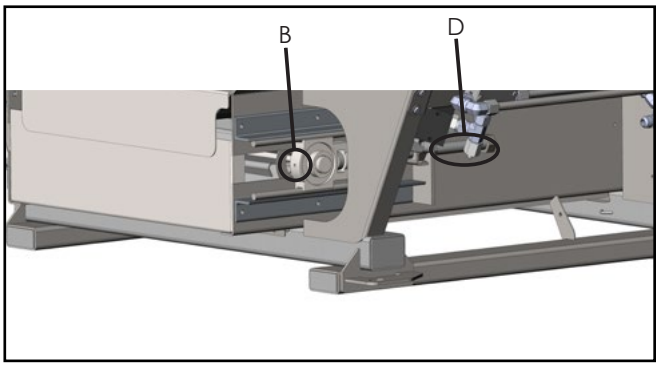
*See *Lubricant and Hydraulic Oil Specifications* for types of lubricants and oil to be used.



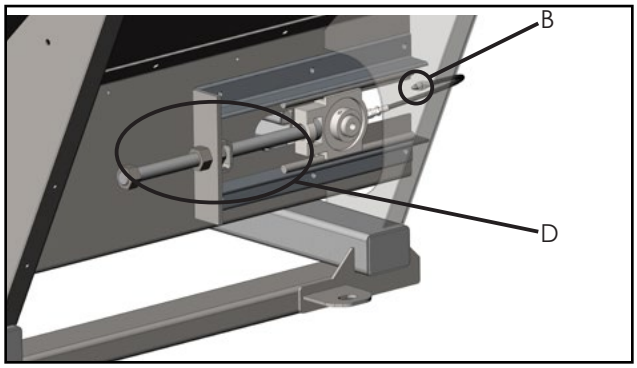
Drive - Left Hand Side



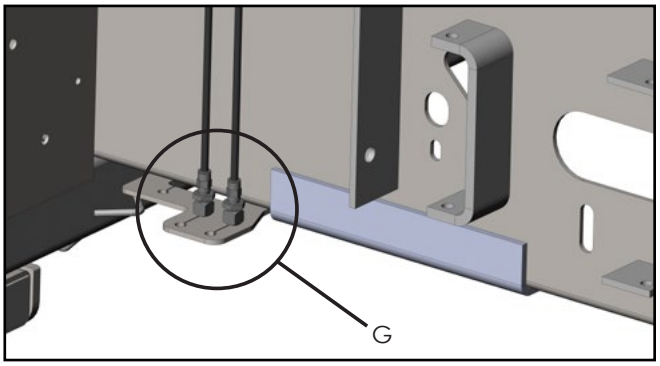
Drive - Right Hand Side



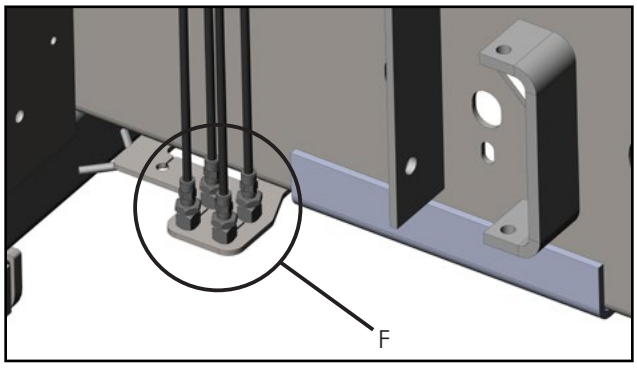
Idler - Left Hand Side



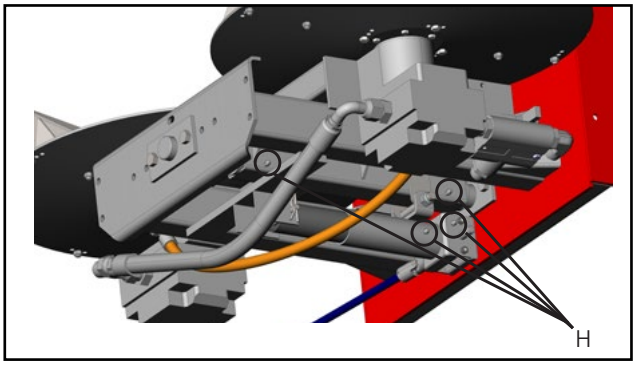
Idler - Right Hand Side



Feedgate Jack Assembly



MultApplier Bearings



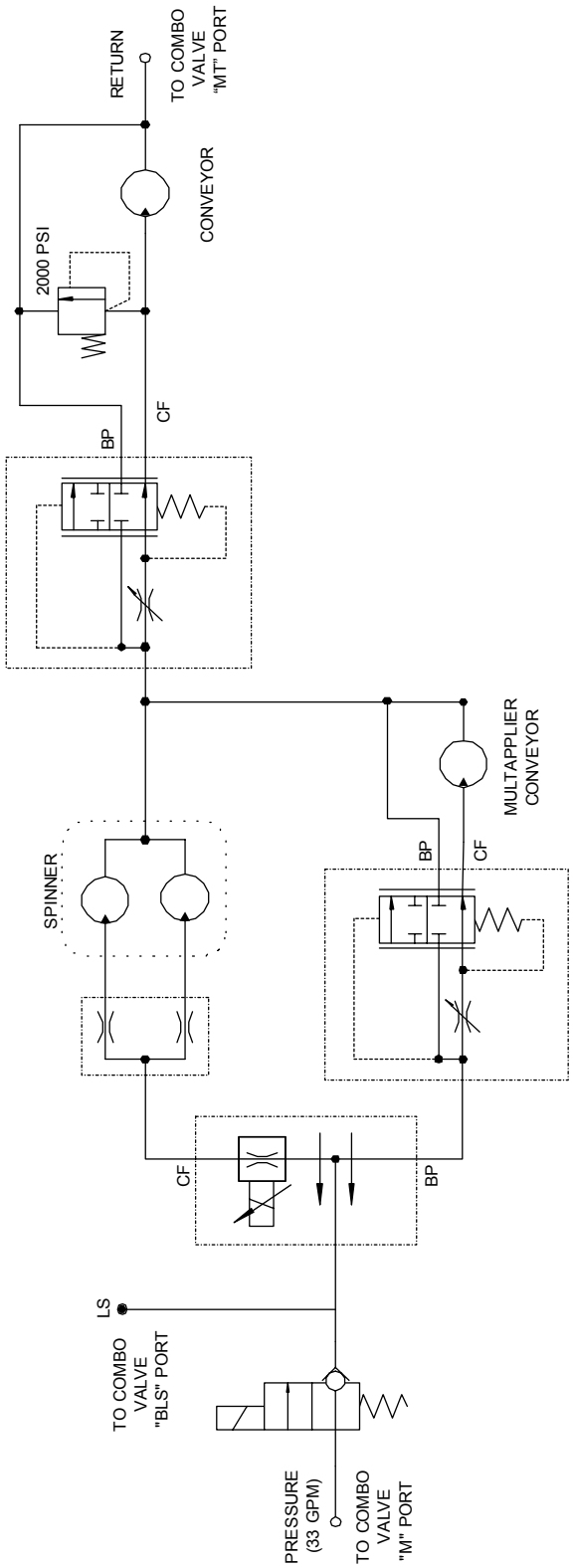
Spinner Grease Zerks

Figure 16 - Grease/Lubrication Points(Illustrated)

Symptom:	Reason:	Correction:
Controller is in manual mode, and either spinners do not run, or conveyor does not run.	Hydraulic oil level low.	Add hydraulic oil as necessary to maintain level around mid-point of sight gauge.
	Hydraulic system not engaged.	Refer to John Deere 4 Series manual.
	Relief valve set too low.	Refer to John Deere 4 Series manual.
	Worn pump.	Refer to John Deere 4 Series manual.
	Jammed or frozen spinner motors.	Free up. If not possible, replace as required.
	Jammed or frozen conveyor.	Free up conveyor.
	Jammed or frozen conveyor hydraulic motor.	Replace motor.
	Controller application or programming.	Refer to controller manual.
	Malfunctioning conveyor valve, spinner valve, or enable valve.	Test voltage at valves. If voltage present, repair or replace valve as necessary. If voltage not present, refer to John Deere 4 Series manual.
Spinners turn but conveyor does not run in manual mode.	Jammed or frozen conveyor.	Free up conveyor.
	Jammed or frozen conveyor hydraulic motor.	Replace motor.
	Conveyor hydraulic motor shaft key sheared.	Replace key.
	Controller application or programming.	Refer to controller manual.
	Malfunctioning conveyor valve.	Test voltage at valve. If voltage present, repair or replace valve as necessary. If voltage not present, refer to John Deere 4 Series manual.
	#5 straight belt not tensioned properly.	Tension #5 Straight belt per instructions in this section.
Console in operation mode, but the conveyor does not move when the machine moves.	Relief valve open to return line.	Using relief valve testing adapter and flow meter, test conveyor relief valve for opening pressure. If now 2050 PSI (138 bar), adjust or replace valve.
	Jammed or frozen conveyor.	Free up conveyor.
	Jammed or frozen conveyor hydraulic motor.	Replace motor.
	Conveyor hydraulic motor shaft key sheared.	Replace key.
	Controller application or programming.	Refer to controller manual.
	Malfunctioning conveyor valve.	Test voltage at valve. If voltage present, repair or replace valve as necessary. If voltage not present, refer to John Deere 4 Series manual.

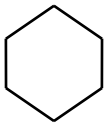
Symptom:	Reason:	Correction:
Spinner speed does not stay constant	Relief valve set too low.	Refer to John Deere 4 Series manual.
	Worn pump.	Refer to John Deere 4 Series manual.
	Controller application or programming.	Refer to controller manual.
	Defective spinner control valve.	Replace spinner control valve cartridge and coil. If no improvement, replace spinner control valve.
	Contamination in John Deere load sense bleed-down orifice.	Clear orifice.
Spinners run with cab control in "Off" position	Conveyor switch controls conveyor only. Spinners run any time hydraulic system is engaged, controller is on and target spinner speed is present.	None required. This is a normal condition. To stop spinners, unplug spinner valve harness, enter in controller target spinner speed of zero, disengage hydraulic system, or turn off engine.
Hydraulic oil overheats (200° F. or hotter).	Hydraulic oil level low.	Add hydraulic oil as necessary to maintain level around mid-point of sight gauge.
	Relief valve set too low.	Refer to John Deere 4 Series manual.
	Relief valve open to return line.	Using relief valve testing adapter and flow meter, test valve for opening pressure. If not 2050 PSI (138 bar), adjust or replace relief valve.
	Worn motor (spinner or conveyor).	Motor heats up at an excessive rate (check for this when system is cold). Replace motor.
	Improper or deteriorated hydraulic oil.	Replace hydraulic oil with proper specification oil and replace filter.
	Pinched or obstructed hose, hydraulic line or fitting.	Clear obstruction or replace part. Straighten kinked hoses.
Conveyor runs sporadically.	Hydraulic oil level low.	Add hydraulic oil as necessary to maintain level around mid-point of sight gauge.
	Driving too fast for application rate.	Will not normally occur if within maximum application rates. Slow down, check conveyor.
	Controller application or programming.	Refer to control manual.
Conveyor runs when hydraulics are engaged and controller conveyor switch is in off position.	Conveyor valve is out of adjustment.	Adjust conveyor valve to off position
	No voltage to conveyor valve.	Test voltage at conveyor valve.
Hydraulic system pulsates.	Hydraulic pump requires adjustment.	Refer to John Deere 4 Series manual.
Hopper empties with no low bin warning.	Bin sensor covered with material.	Clean bin sensor per Maintenance instructions above. Once clean, test bin level sensor.
	Faulty bin sensor.	Replace bin sensor.
	Controller alarm not enabled.	Program controller to count down product with low bin warning.
Application rate error.	Controller application or programming.	Refer to controller manual.

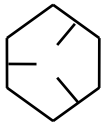
HYDRAULIC SCHEMATIC

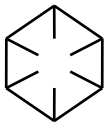


STANDARD TORQUES
NATIONAL COARSE (NC) CAP SCREW GRADES

CAP SCREW GRADE IDENTIFICATION - MARKINGS ON HEAD

SAE GRADE 2  NO MARKINGS

SAE GRADE 5  THREE MARKS - 120 DEGREES APART

SAE GRADE 8  SIX MARKS - 60 DEGREES APART

USE GRADE 2 TORQUES FOR STAINLESS STEEL FASTENERS AND CARRIAGE BOLTS.

	TORQUE - FOOT-POUNDS					
CAP SCREW SIZE	GRADE 2		GRADE 5		GRADE 8	
	DRY	LUBE	DRY	LUBE	DRY	LUBE
1/4”	5	4	8	6	12	9
5/16”	11	8	17	13	25	18
3/8”	20	15	30	23	45	35
7/16”	30	24	50	35	70	55
1/2”	50	35	75	55	110	80
9/16”	65	50	110	80	150	110
5/8”	90	70	150	110	220	170
3/4”	100	120	260	200	380	280
7/8”	140	110	400	300	600	460
1”	220	160	580	440	900	650

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NOTES

Hi-Way NEW LEADER
Highway Equipment Company
Building the best since 1939.

Order from the **AUTHORIZED DEALER** in your area.

1. Always give the pertinent model and serial number.

2. Give part name, part number and the quantity required.

3. Give the correct address to where the parts are to be shipped, and the carrier if there is a preference.

Unless claims for shortages or errors are made immediately upon receipt of goods they will not be considered. Any part returns should be directed through the dealer from which they were purchased.

When broken goods are received, a full description of the damage should be made by the carrier agent on the freight bill. If this description is insisted upon, full damage can always be collected from the transportation company.

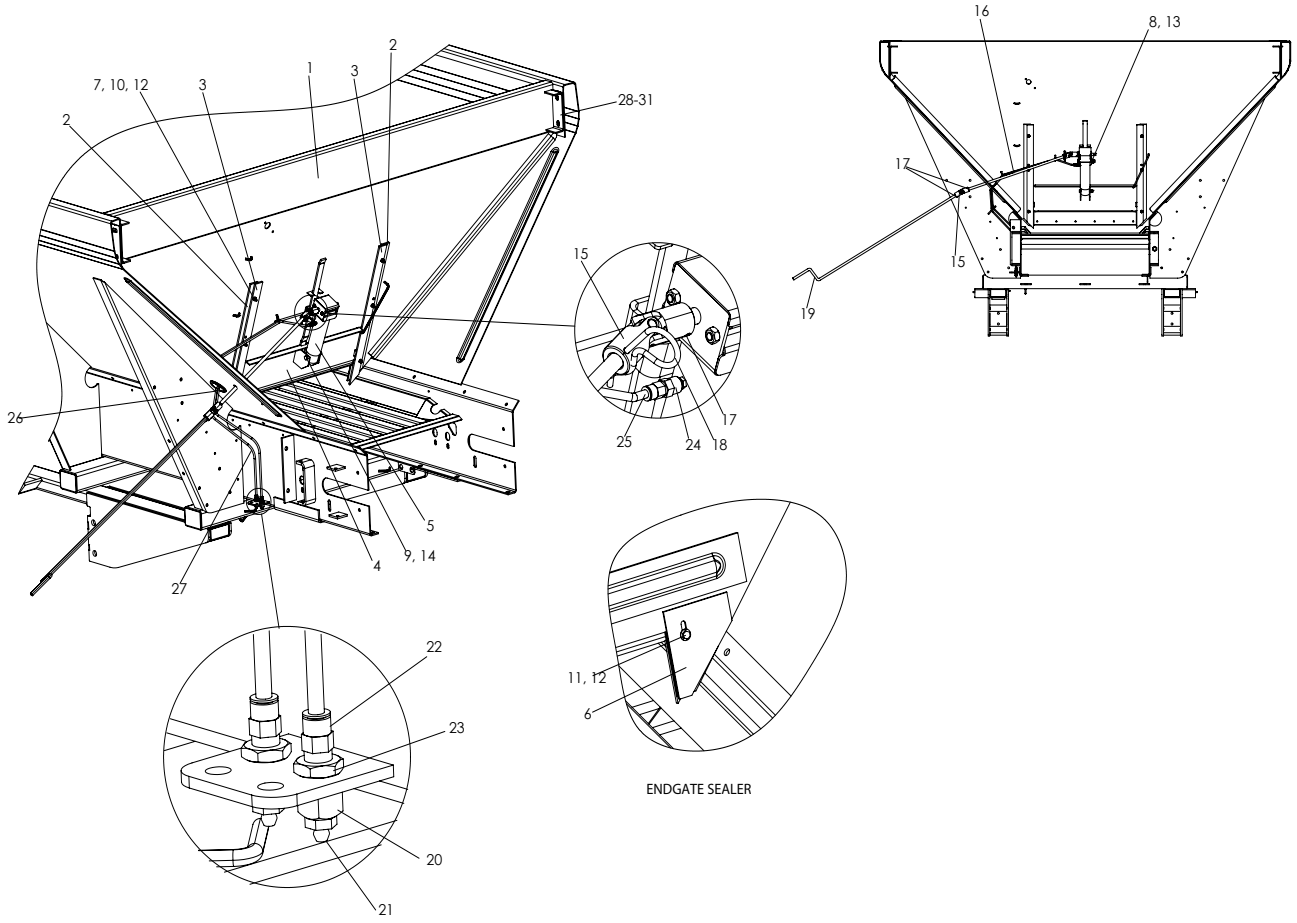
No responsibility is assumed for delay or damage to merchandise while in transit. Our responsibility ceases upon delivery of shipment to the transportation company from whom a receipt is received showing that shipment was in good condition when delivered to them, therefore, claims (if any) should be filed with the transportation company and not with Highway Equipment Company.

If your claims are not being handled (by the transportation company) to your satisfaction, please call the Parts Manager at Highway Equipment Company (319-363-8281) for assistance.

In the parts list the following symbols and abbreviations stand for:

* - Not Shown
AR – As Required
CS – Carbon Steel
SS – Stainless Steel

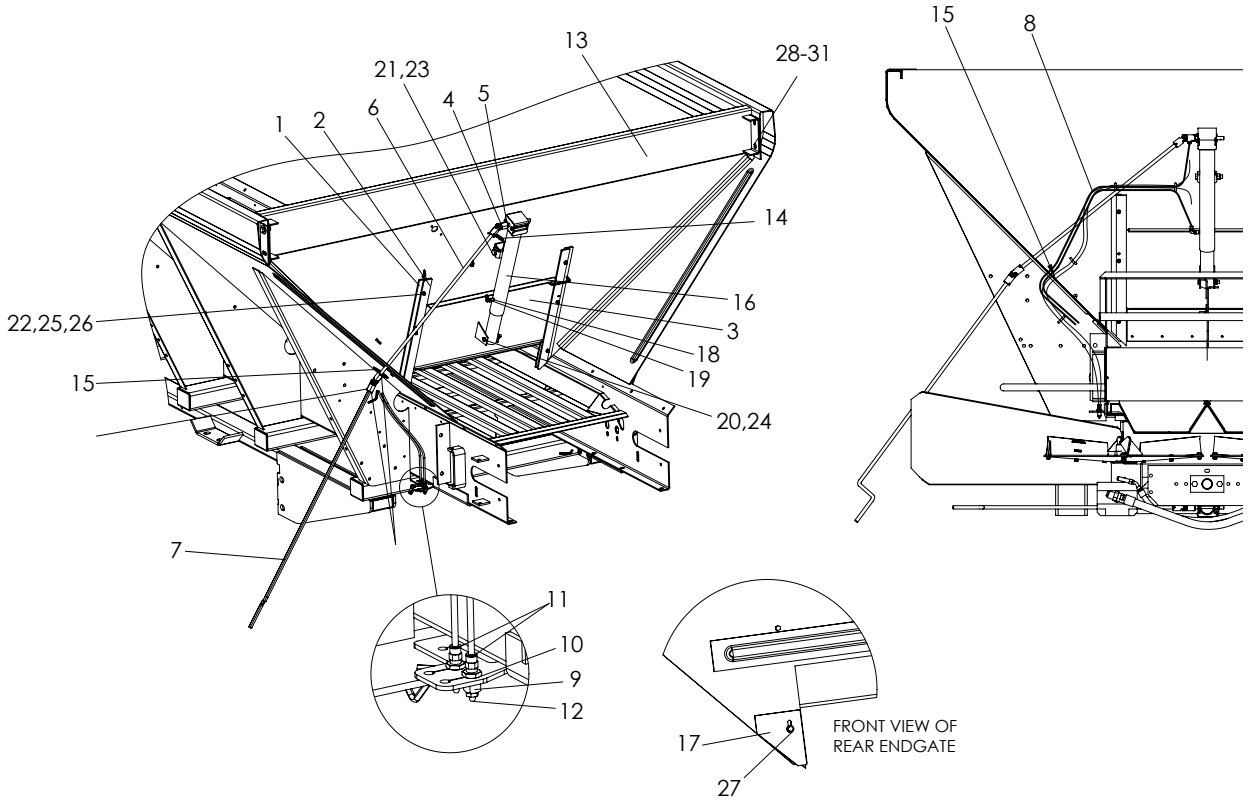
The parts listed under the different steel types (CS, 409 SS and 304 SS) are for that type of unit and do not necessarily mean the part is made of that type of steel.



ENDGATE SEALER

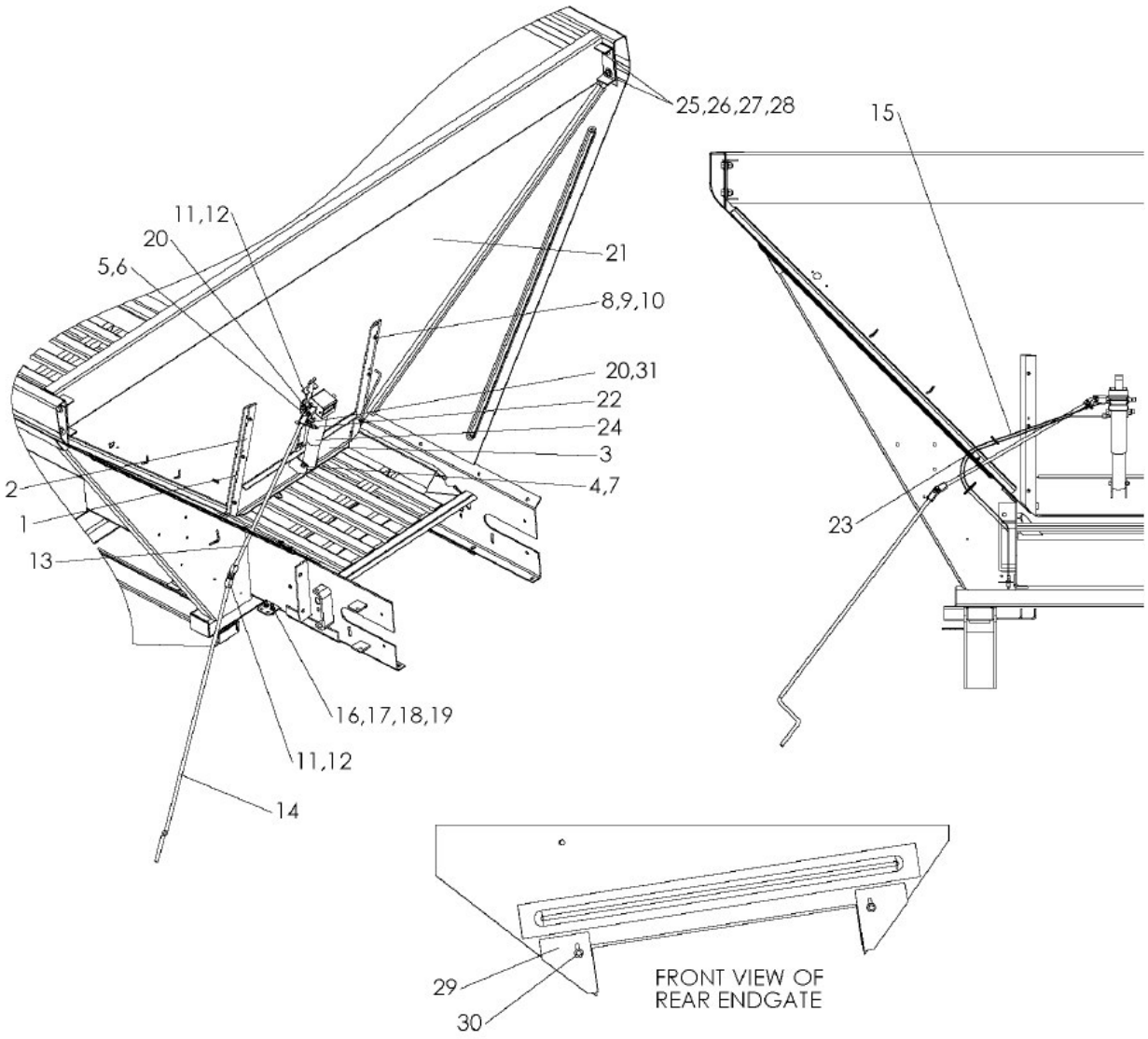
ITEM	PART NO.	DESCRIPTION	QTY
1	309675	Endgate - Wldmnt 96+6 304	1
	309704	Endgate - Wldmnt 96+6 409	1
2	36385	Bar - Feedgate Guide	2
3	36384	Bar - Feedgate slide 304	2
4	304778	Feedgate - Wldmnt 30” 304	1
	306018	Feedgate - Wldmnt 30” 409	1
5	87170	Jack - coated assy	1
6	305078	Sealer - Endgate Bolt-in 304	2
7	36412	Nut - Hex 1/4 - 20NC SS	6
8	39016	Nut - Lock 1/2 - 13NC SS	1
9	72054	Nut - Lock 3/8 - 16NC SS	1

ITEM	PART NO.	DESCRIPTION	QTY
10	36418	Washer - Lock 1/4 SS	6
11	36423	Washer - Flat 1/4 SS	2
12	40750	Cap Screw - 1/4 - 20NC x 1-1/4 SS	6
13	80798	Cap Screw - 1/2 - 13NC x 3-3/4 SS	1
14	71827	Cap Screw - 3/8 - 16NC x 3 SS	1
15	85002	U-Joint	2
16	98634	Handle - Feedgate EXT	1
17	20918	Pin - Roll 3/16 x 1	3
18	86878	Pin - Hair .178 x 3-3/4	1
19	14382	Handle - Jack Feedgate	1
20	301332	Connector - Bulkhead	2
21	6069	Zerk - Grease	2
22	301334	Fitting – Straight Male 1/4 - 28	2
23	301333	Nut - Lock, connector	2
24	306349	Connector - Zerk - Lock	2
25	301339	Fitting - Straight Male 1/8 NPT	2
26	21653	Grommet - Robber 2-1/2	1
27	310490	Tube – 1/4 OD	2
28	20128-X1	Cap Screw – 1/2-13NC x 1-1/4	4
29	20695	Washer – Flat 1/2	8
30	20714	Washer – Lock 1/2	4
31	20646	Nut – Hex 1/2-13NC	4



ITEM	PART NO.	DESCRIPTION	QTY
1	36385	Guide – Feedgate	2
2	36384	Slide – Feedgate	2
3	98513	Feedgate Wldmt 304	1
	98512	Feedgate Wldmt 409	1
4	85002	U-Joint	2
5	20918	Pin - Roll	3
6	85357	Handle - Extension	1
7	14382	Handle	1
8	310490	Tube - 1/4 OD	2
9	301332	Connector - Bulkhead	2
10	301333	Nut - Lock, Connector	2
11	301334	Fitting - Straight Male	2
12	6069	Zerk - Grease	2
13	302815	Endgate - Wldmt 304	1
	306019	Endgate - Wldmt 409	1

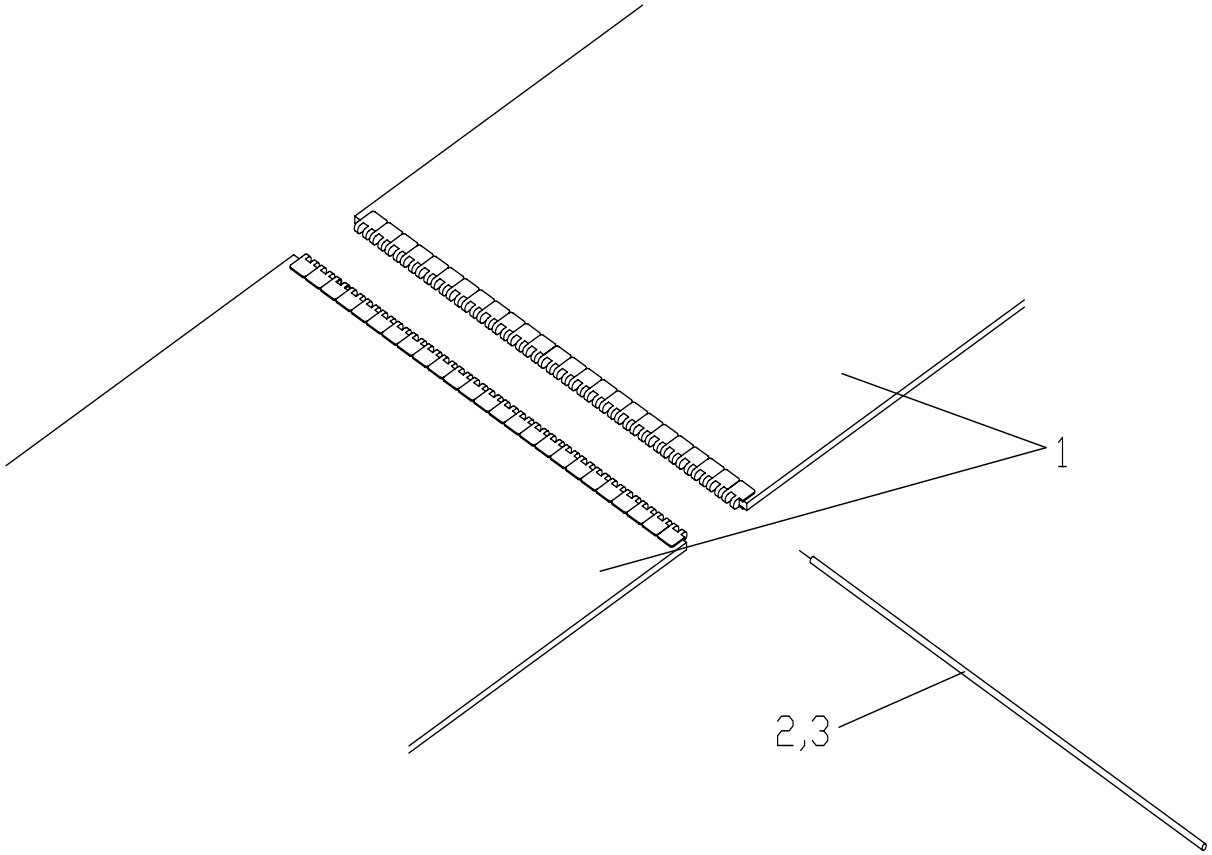
ITEM	PART NO.	DESCRIPTION	QTY
14	86878	Pin - Hair .178 x 3-3/4	1
15	21653	Grommet - Rubber	1
16	40704	Jack - Coated	1
17	305078	Sealer - Endgate Bold-in (inside)	2
18	306349	Connector - Zerk Lock	2
19	301336	Fitting - 90 Male Swivel	2
20	71827	Capscrew - 3/8-16NC x 3 SS	1
21	80798	Capscrew - 1/2-13NC x 3-3/4 SS	1
22	40750	Capscrew - 1/4-20NC x 1-1/4 SS	6
23	39016	Nut - Lock 1/2-13NC SS	1
24	72054	Nut - Lock 3/8-16NC SS	1
25	36412	Nut - Hex 1/4-20NC SS	6
26	36418	Washer - Lock 1/4 SS	6
27	36423	Washer - Flat 1/4 SS	2
28	20128-X1	Capscrew - 1/2-13NC x 1-1/4	4
29	20695	Washer - Flat 1/2	8
30	20714	Washer - Lock 1/2	4
31	20646	Nut - Hex 1/2-13NC	4



ITEM	PART NO.	DESCRIPTION	QTY
1	36385	Guide – Feedgate	2
2	36384	Slide – Feedgate	2
3	304778	Feedgate Wldmt 304	1
	306018	Feedgate Wldmt 409	1
4	71827	Cap Screw – 3/8 x 3 SS	1
5	80798	Cap Screw – 1/2 x 3-3/4 SS	1
6	39016	Nut – Lock 1/2 SS	1
7	72054	Nut – Lock 3/8 SS	1
8	40750	Cap Screw – 1/4 x 1 1/4 SS	6
9	36418	Washer – Lock 1/4 SS	6

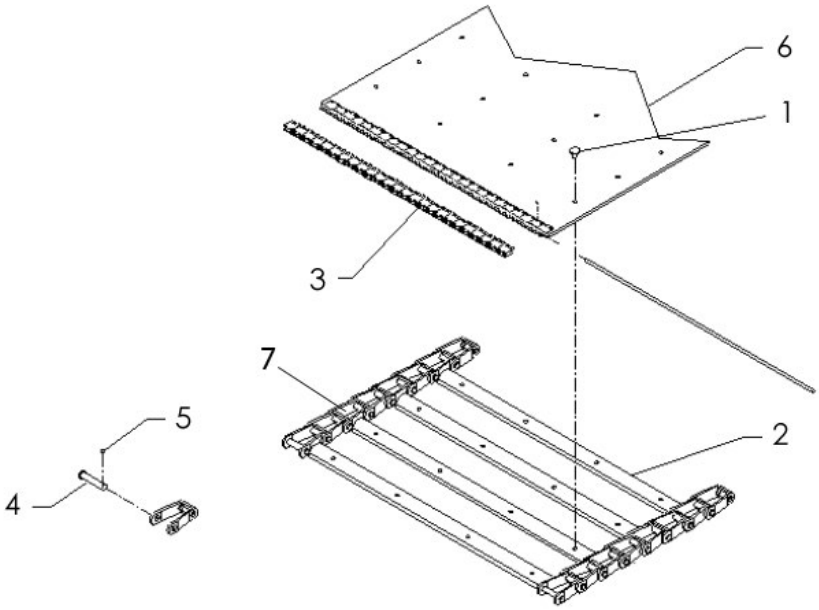
ITEM	PART NO.	DESCRIPTION	QTY
10	36412	Nut – Hex 1/4 SS	6
11	85002	U-Joint	2
12	20918	Pin – Roll	3
13	98634	Handle – Extension	1
14	14382	Handle	1
15	301338	Tube – 1/4 OD	AR
16	301332	Connector – Bulkhead	2
17	301333	Nut – Lock, Connector	2
18	301334	Fitting – Straight Male	2
19	6069	Zerk – Grease	2
20	306349	Connector – Zerk-Lock	2
21	304765	Endgate – Wldmt 304	1
	306020	Endgate – Wldmt 409	1
22	86878	Pin – Hair .178 x 3-3/4	1
23	21653	Grommet – Rubber	1
24	87170	Jack - Assy	1
25	20128-X1	Cap Screw – 1/4-13 x 1-1/4	4
26	20695	Washer – Flat 1/2	8
27	20714	Washer – Lock 1/2	4
28	20646	Nut – Hex 1/2-13	4
29	305078	Sealer – Endgate Bolt-in (inside)	2
30	36423	Washer – Flat 1/4	2
31	301339	Fitting - Straight Male 1/8	2

#5 STRAIGHT BELT CONVEYOR



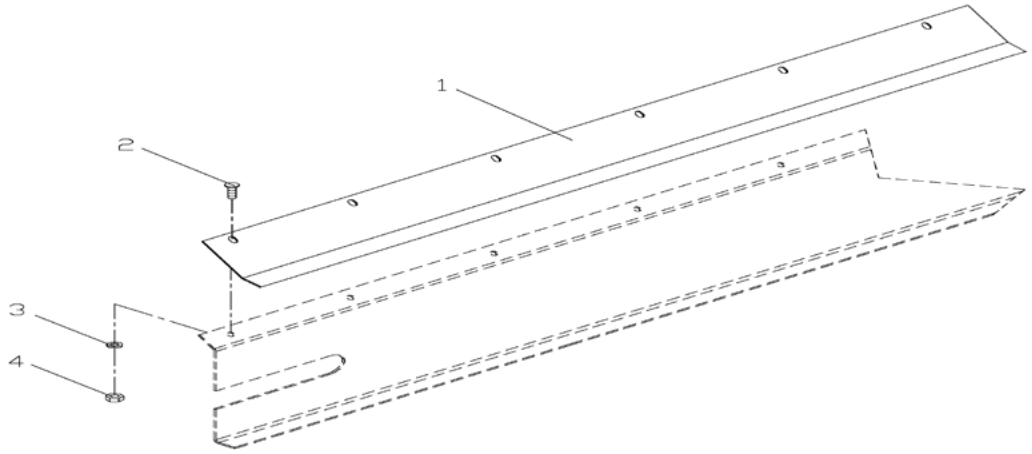
ITEM	PART NO.	DESCRIPTION	QTY
1	305308 AE	Belt - Conveyor	1
2	310495	Tube - Plastic	2
3	70950	Pin - Hinge	1

#4 BOC CONVEYOR

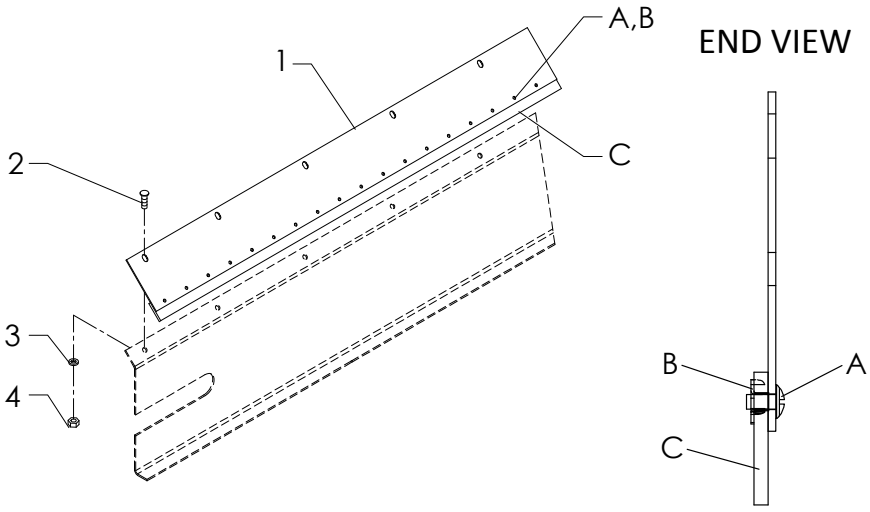


ITEM	PART NO.	DESCRIPTION	QTY
	305614-AE	Belt-Over-Chain - #4 12’ MOR	1
1	305646	Screw - #4 BOC 1/4 x 9/16 torx Flat Head	AR
2	305643	Crossbar – Wldmt	AR
3	73317	Kit – Splicer	1
4	36697	Pin – Pintle Chain	6
5	20817	Pin – Cotter	6
6	56377-AB	Belt – Conveyor	26 ft.
7	36699	Link - Pintle Chain	AR

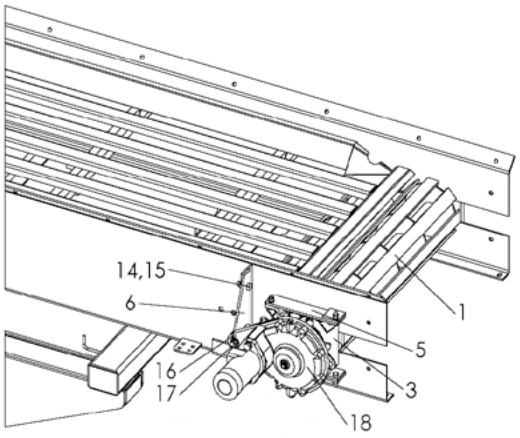
#5 STRAIGHT BELT CHAIN SHIELDS



ITEM	PART NO.	DESCRIPTION	QTY
1	97749-AA	Shield - Chain 12’ 304	2
	97732-AA	Shield - Chain 12’ 409	2
2	71829	Screw - Truss Head 3/8 - 16 x 1 SS	28
3	36420	Washer - Lock 3/8 SS	28
4	36414	Nut - Hex 3/8 - 16 SS	28



ITEM	PART NO.	DESCRIPTION	QTY
1	308866	Chain Shield - #4 BOC 12’ 304 LH	1
	308865	Chain Shield - #4 BOC 12’ 304 RH	1
	308868	Chain Shield - #4 BOC 12’ 409 LH	1
	308867	Chain Shield - #4 BOC 12’ 409 RH	1
A	88931	Nut – Tee 1/4 x 1/4	AR
B	56258	Screw – Truss Head 1/4 x 1/2	AR
C	305975	Sealer – Belt #4 BOC Shield 12’	13 ft.
2	71829	Screw – Truss Head 3/8 x 1 SS	AR
3	36420	Washer – Lock 3/8 SS	AR
4	36414	Nut – Hex 3/8 SS	AR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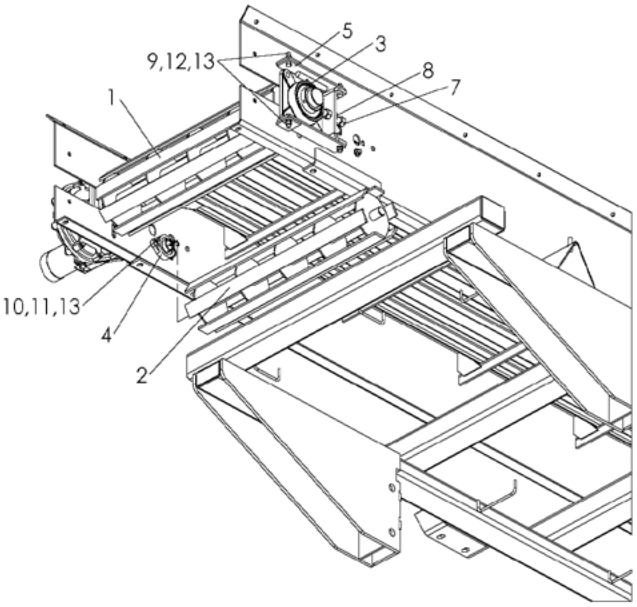
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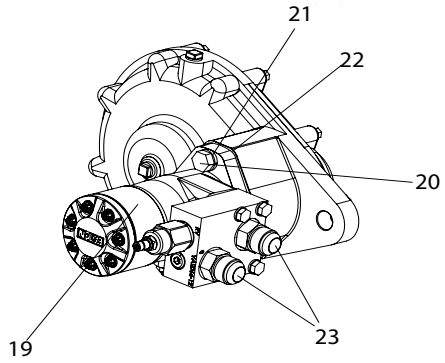
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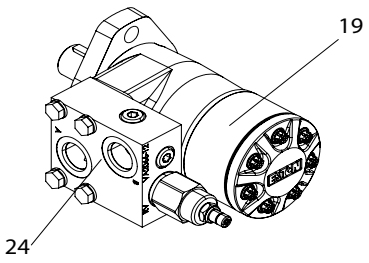
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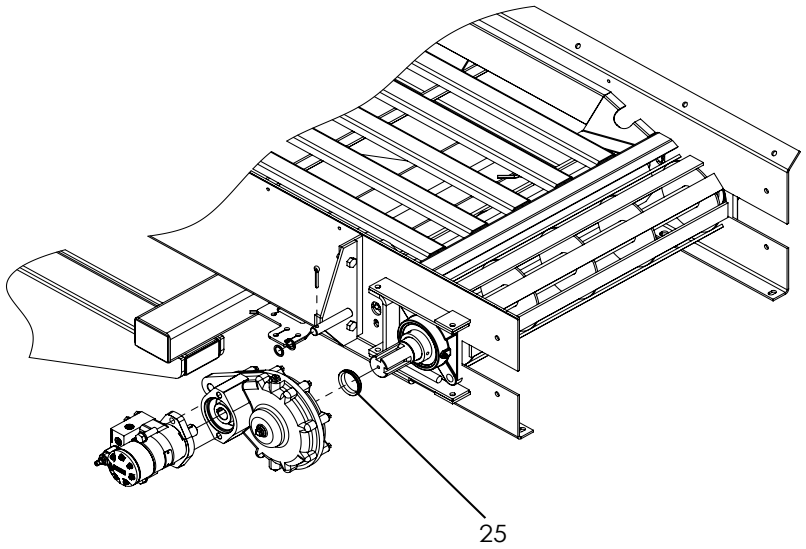
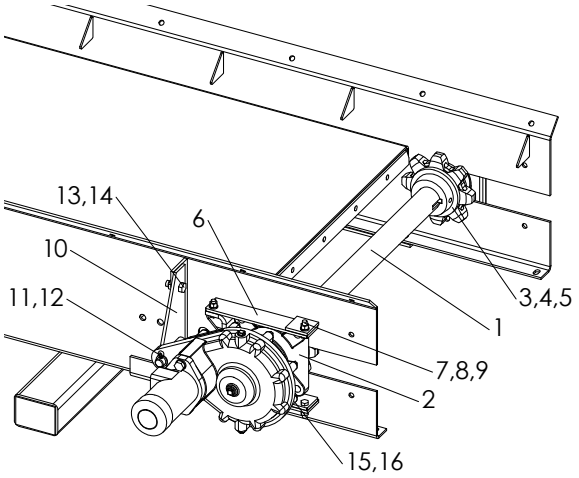

25

#5 STRAIGHT BELT CONVEYOR DRIVE CONTINUED

ITEM	PART NO.	DESCRIPTION	QTY
	309613	Gear Case - Assy, Includes 18-24	1
1	71674	Drive - Wldmt Pulley	1
2	71676	Snubber - Wldmt Pulley	1
3	6465	Bearing	2
4	32468	Bearing - Assy	2
5	82885	Guide - Wldmt Bearing	4
6	82552	Torque Arm - LH Wldmt	1
7	81354	Screw - Wldmt Set 5/8	1
8	36417	Nut - Hex 5/8	1
9	36399	Cap Screw - 3/8-16NC x 1-1/4	8
10	71772	Screw - Button Head 3/8-16NC x 1-1/4	4
11	36425	Washer - Flat 3/8	4
12	36420	Washer - Lock 3/8	8
13	36414	Nut - Hex 3/8	12
14	20128	Cap Screw - 1/2-13NC x 1-1/4	2
15	20680	Nut - Lock 1/2-13NC	2
16	20833	Pin - Cotter 1/4 x 1-1/2	1
17	2716	Washer - Macine 1 OD x 3/4 ID	2
18	36671	Gear Case – Single * parts list under *Gear Case - Single Pinion*	1
	309600	Motor – Hydraulic, Assy: Includes 19-24.	1
19	309601	Motor - Hydraulic	1
	39137	Seal Kit	1
20	20129	Cap Screw 1/2 x 1-1/2	2
21	20714	Washer - Lock 1/2	2
22	74524	Gasket - Motor Flange	2
23	29753	Fitting - 12-10 070120	2
24	309602	Valve - Relief	1
25	311172	V-Ring Seal	1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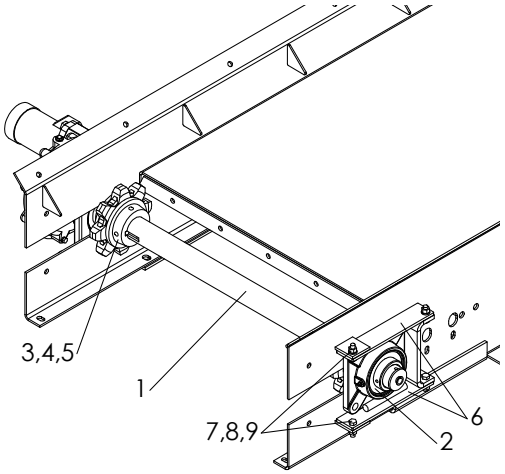
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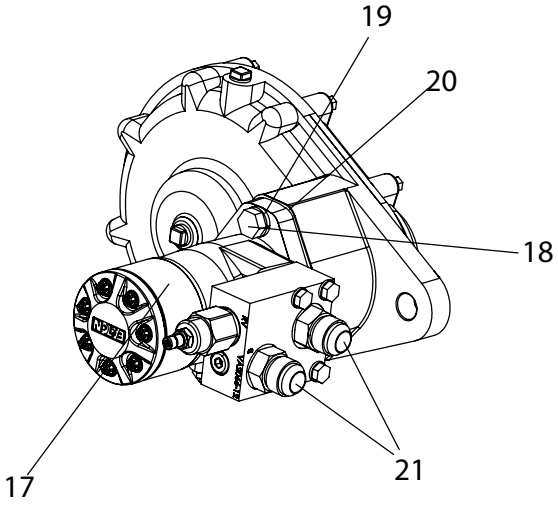
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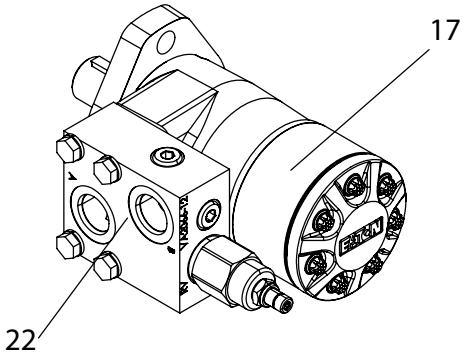
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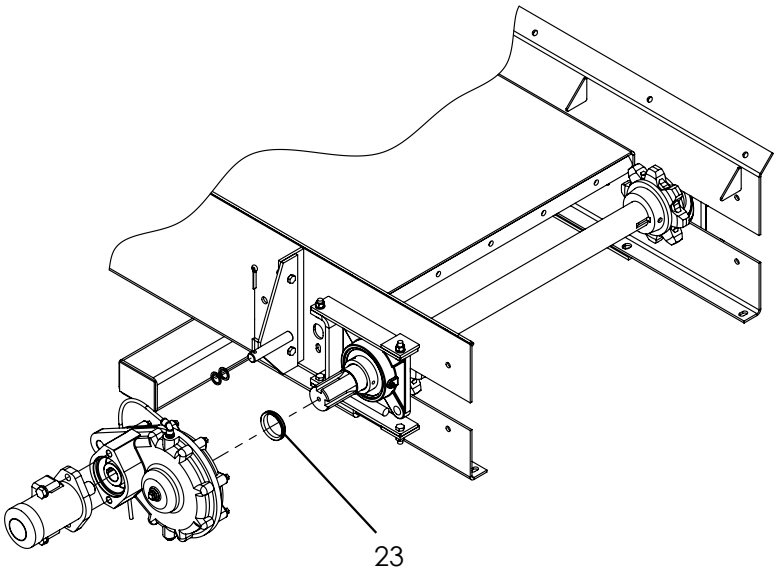
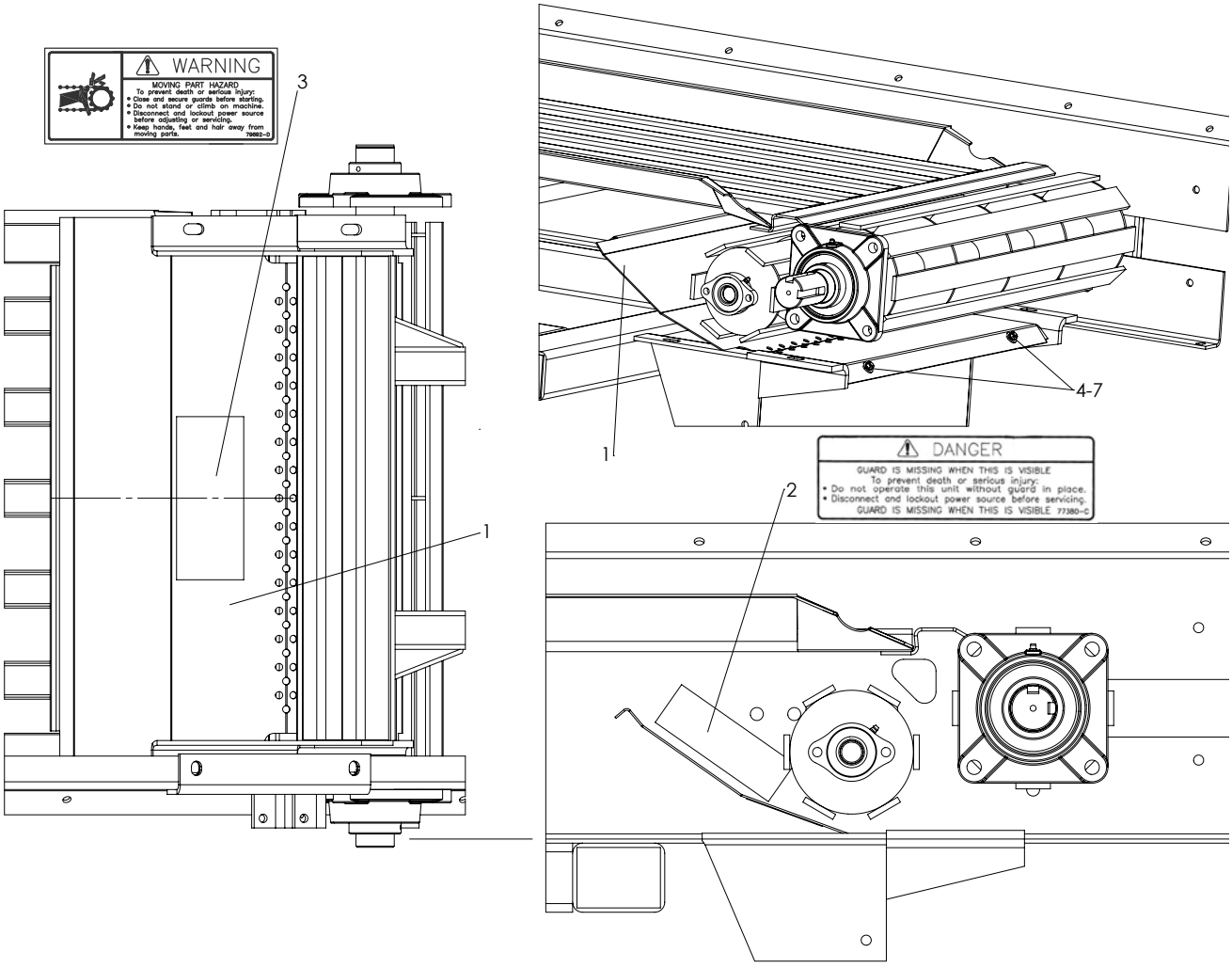

23

ITEM	PART NO.	DESCRIPTION	QTY
1	310606	Shaft – Drive	1
2	6465	Bearing	2
3	88276	Sprocket	2
4	20743	Screw – Set 5/16 x 3/8	4
5	6131	Key – Square 3/8 x 1 1/2	2
6	82885	Guide – Bearing	4
7	36399	Cap Screw - 3/8 x 1 1/4 SS	8
8	36420	Washer – Lock 3/8 SS	8
9	36414	Nut – Hex 3/8 SS	8
10	82552	Bracket – Torque Arm LH	1
11	20833	Pin – Cotter 1/4 x 1 1/2	1
12	2716	Washer – Flat 3/4	2
13	20128	Cap Screw - 1/2 x 1 1/2	2
14	20680	Nut – Lock 1/2	2
15	37010	Key – Square 1/2 x 1 1/2	2
16	36671	Gear Case - Single (See *Gear Case - Single Pinion* Parts List)	1
17	309601	Motor - Hydraulic (See *Conveyor Motor* Parts List)	1
	39137	Seal Kit	1
18	20129	Cap Screw – 1/2 x 1-1/2	2
19	20714	Washer – Lock 1/2	2
20	74524	Gasket – Motor Flange	2
21	29753	Fitting - 12-10 070120	1
22	309602	Valve - Relief	1
23	311172	V-Ring Seal	1

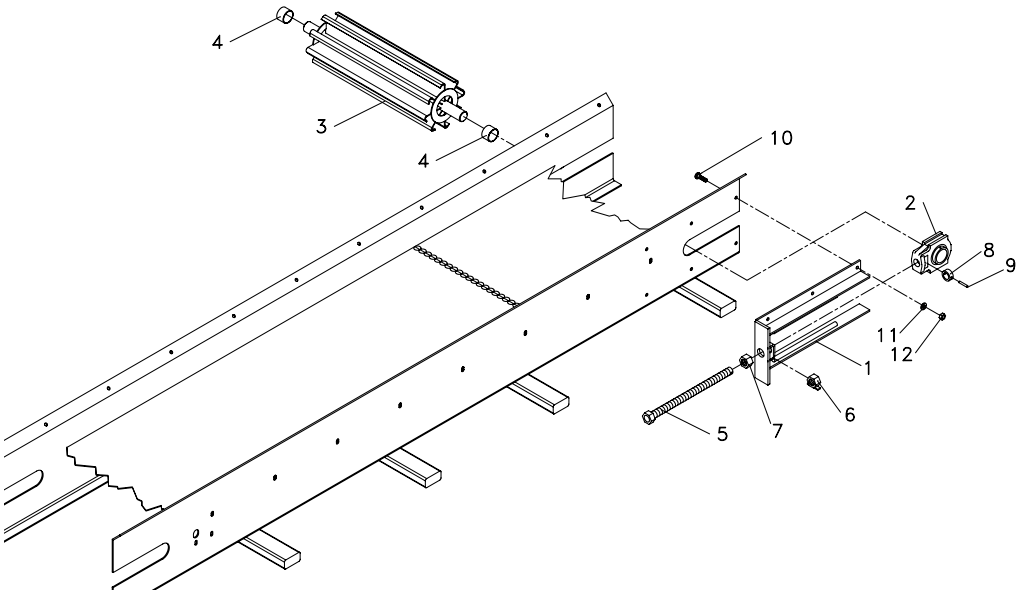
#5 STRAIGHT BELT DRIVE & SNUBBER GUARD

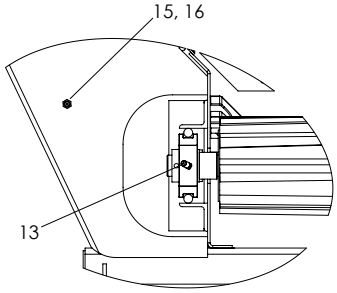


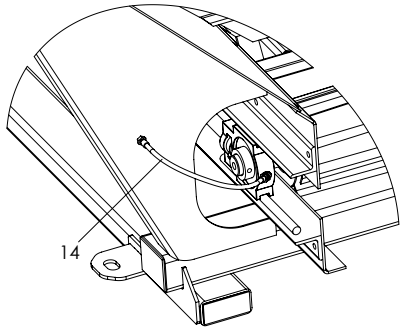
ITEM	PART NO.	DESCRIPTION	QTY
1	305249	Guard - Pulley Drive & Snubber	1
2	77380	Decal - Danger, Guard is Missing	2
3	79692	Decal - Warning, Moving Parts Hazard	1
4	36393	Cap Screw - 1/4-20NC X 3/4 SS	2
5	36412	Nut - Hex 1/4-20NC SS	2
6	36423	Washer - Flat 1/4 SS	2
7	36418	Washer - Lock 1/4 SS	2

For additional Safety Decals, see *Guard - Front Cover* and *Decals - Safety*

#5 STRAIGHT BELT CONVEYOR IDLER

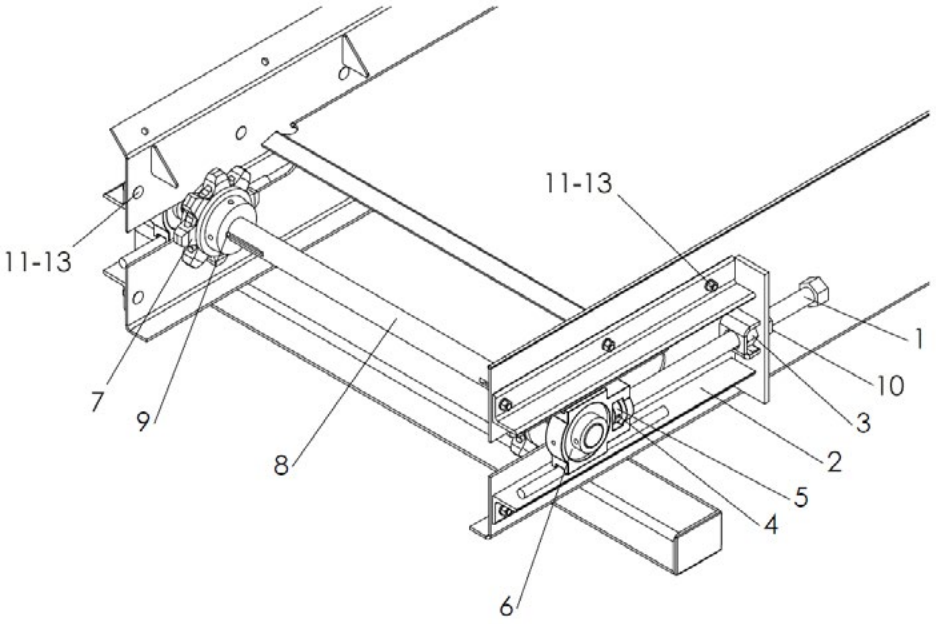






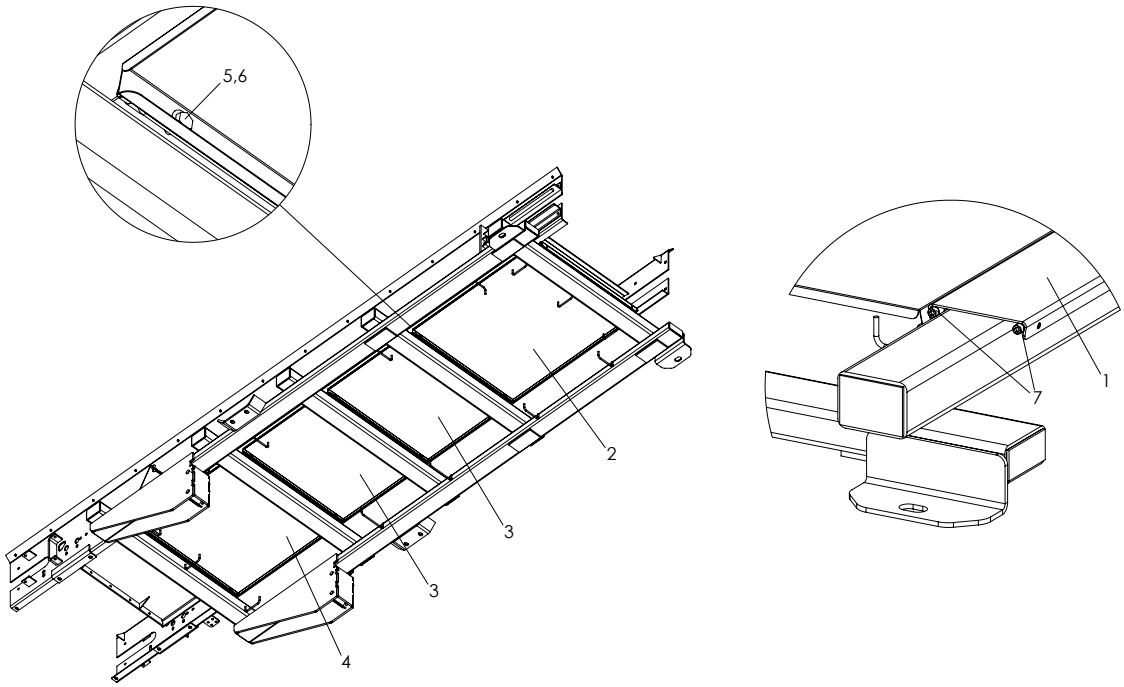
ITEM	PART NO.	DESCRIPTION	QTY
1	7895	Take-up Wldmt	2
2	22511	Bearing - Take-up	2
3	81344-X1	Idler - Wldmt Turnkleen 30” 304	1
4	81345	Spacer - Pipe Idler Pulley	2
5	36508	Screw - Adjustable Wldmt SS	2
6	39110	Nut - Wldmt SS	2
7	36509	Nut - Hex 1-8NC SS	2
8	30725	Collar - Set 1”	2
9	20925	Pin - Roll 1/4 x 1-1/2 SS	2
10	36409	Bolt - Carriage 3/8-16NC x 1-1/4 SS	12
11	36420	Washer - Lock 3/8 SS	12
12	36414	Nut - Hex 3/8-16NC SS	12
13	34735	Adapter - Elbow 45	1
14	310550	Hose - Assy 1/8 x 16	1
15	310471	Nut - Bulkhead 1/8-27	1
16	6072	Zerk - Grease	1

#4 BOC CONVEYOR IDLER

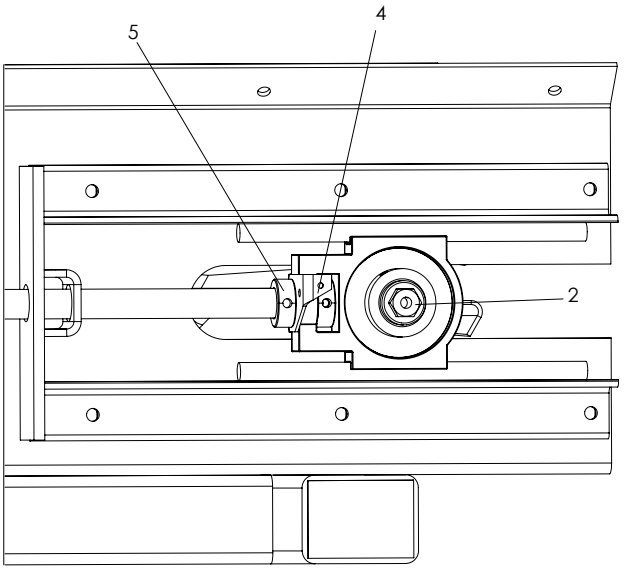


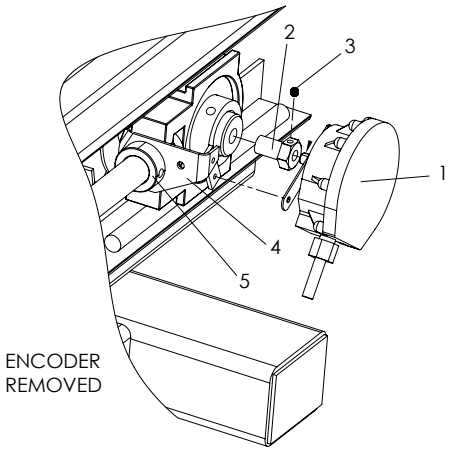
ITEM	PART NO.	DESCRIPTION	QTY
1	36508	Screw - Wldmt Adjusting	2
2	79321	Take Up - Wldmt 304	2
	7895	Take Up - Wldmt 409	2
3	39110	Nut Wldmt	2
4	20925	Pin – Roll 1/4 x 1 1/2	2
5	30725	Collar – Set 1”	2
6	22511	Bearing – Take-up	2
7	97051	Sprocket – Idler	2
8	82799	Shaft – Idler	1
9	2135	Key – Square 5/16 x 2 1/2	2
10	36509	Nut – Hex 1-8NC SS	2
11	36408	Bolt – Carriage 3/8 x 1 SS	12
12	36420	Washer – Lock 3/8 SS	12
13	36414	Nut – Hex 3/8 SS	12

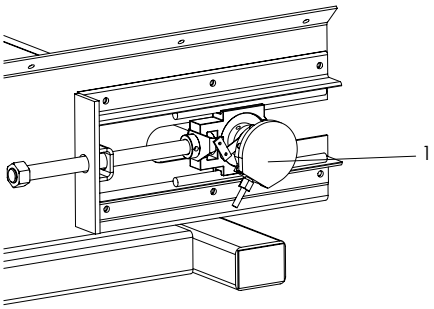
CONVEYOR PAN 304



ITEM	PART NO.	DESCRIPTION	QTY
1	307645	Support Panel - Wldmt Chassis 304	5
2	307646	Panel - Front Chassis 304	1
3	307647	Panel - Center Chassis 304	2
4	307648	Panel - Rear Chassis 304	1
5	58799	Cap Screw - 1/4-20NC x 1/2 SS	16
6	36423	Washer - Flat 1/4 SS	16
7	307642	Screw - Sockhead 5/16-18NC x 1/2 SS	20

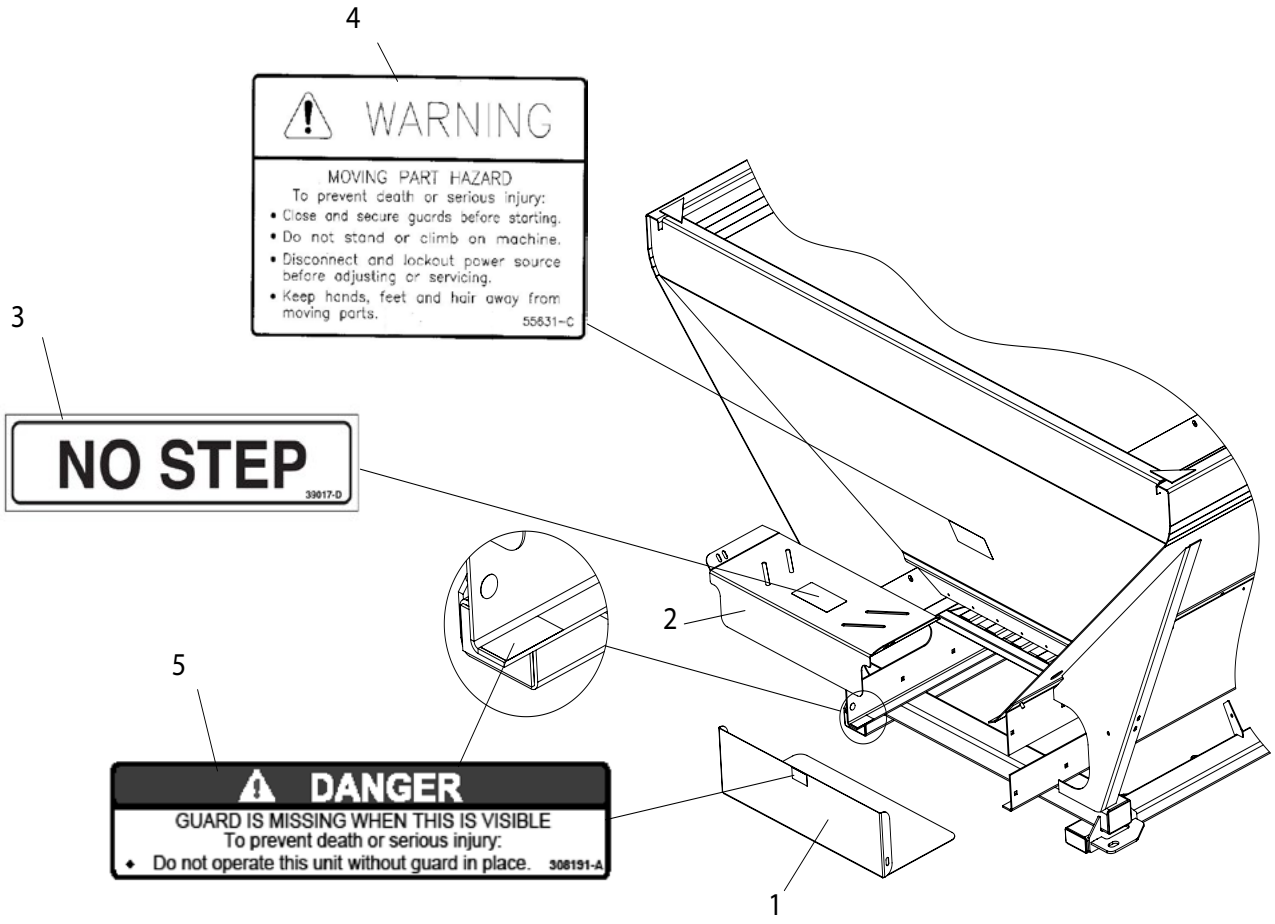






ITEM	PART NO.	DESCRIPTION	QTY
1	303994	Encoder – 180 with Hardware	1
2	310601	Coupler - Rate Sensor SS	1
3	310603	Screw - Set 1/4-20NC x 1/4 SS	1
4	81949	Bracket - Sensor, Idler Mount	1
5	2696	Collar - Set 1”	1

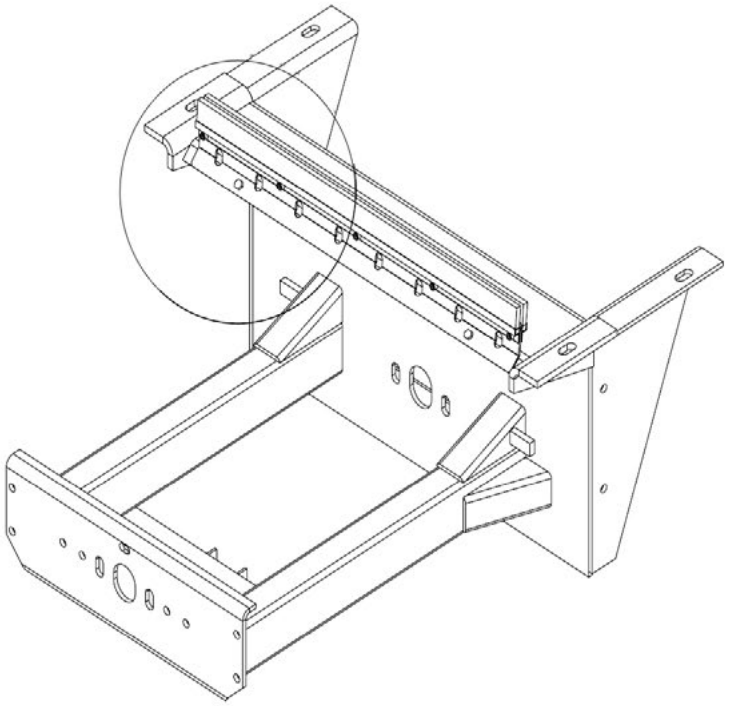
GUARD - FRONT COVER

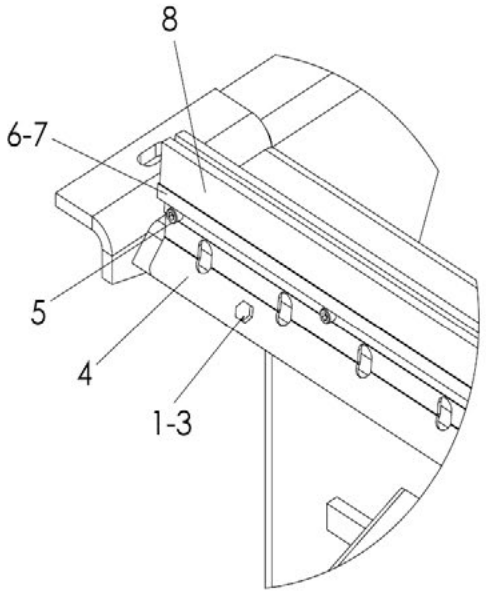


ITEM	PART NO.	DESCRIPTION	QTY
1	308860	Guard – Front Cover - Bottom	1
2	308859	Guard -- Front Cover - Top	1
3	39017	Decal – No Step	1
4	55631	Decal - Warning, Moving Part Hazard	1
5	308191	Decal - Danger, Guard is Missing	2

For additional Safety Decals, see also *Drive and Snubber Guard* and *Decals - Safety*

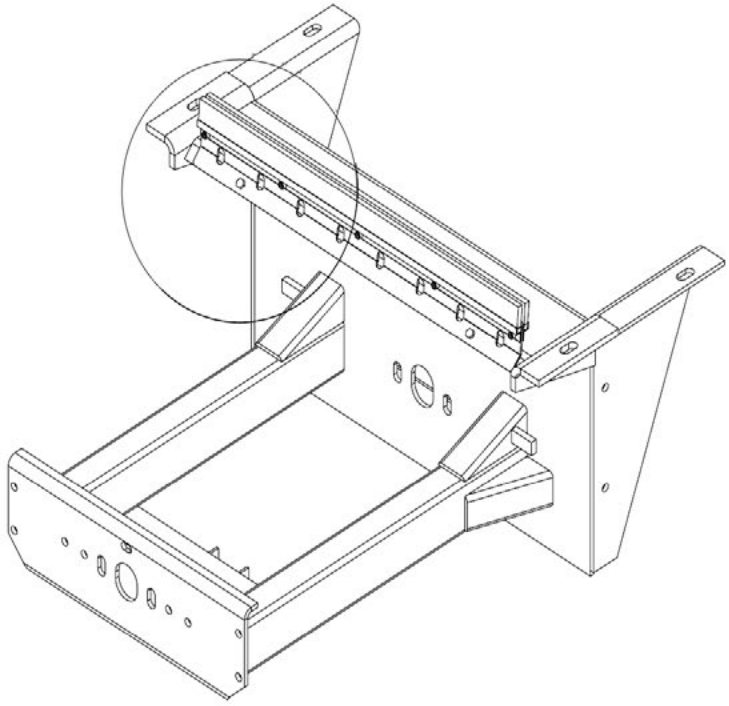
BRUSH KIT - #5 STRAIGHT BELT

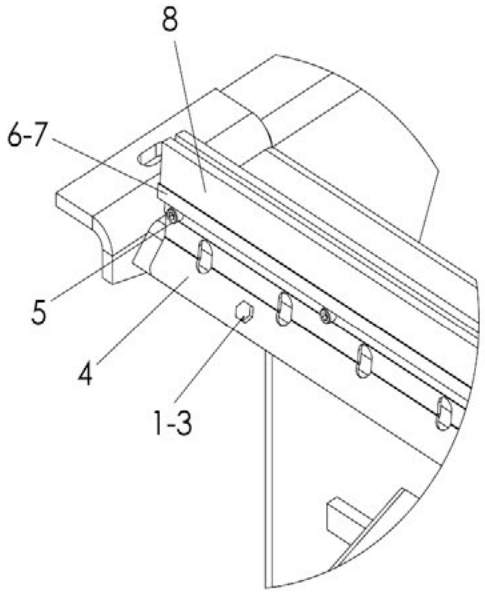




ITEM	PART NO.	DESCRIPTION	QTY
	308810	Brush - Strip Assy, Includes items 4-8	
1	36395	Cap Screw - 1/4-20NC x 1 SS	2
2	36418	Washer - Lock 1/4 SS	2
3	36412	Nut - Hex 1/4-20NC SS	2
4	308800	Mount - Brush	1
5	308802	Screw - Sockethead 1/4-20NC x 1/2 SS	5
6	308796	Holder - Brush 24” SS	1
7	308804	Holder - Wldmt Brush	1
8	308795	Brush - Strip 24”	2

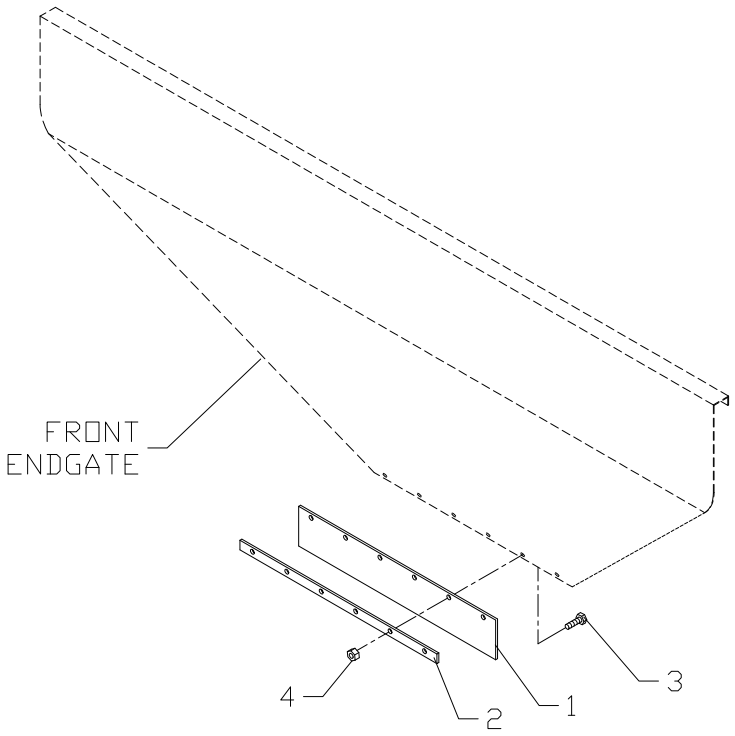
BRUSH KIT - #4 BOC



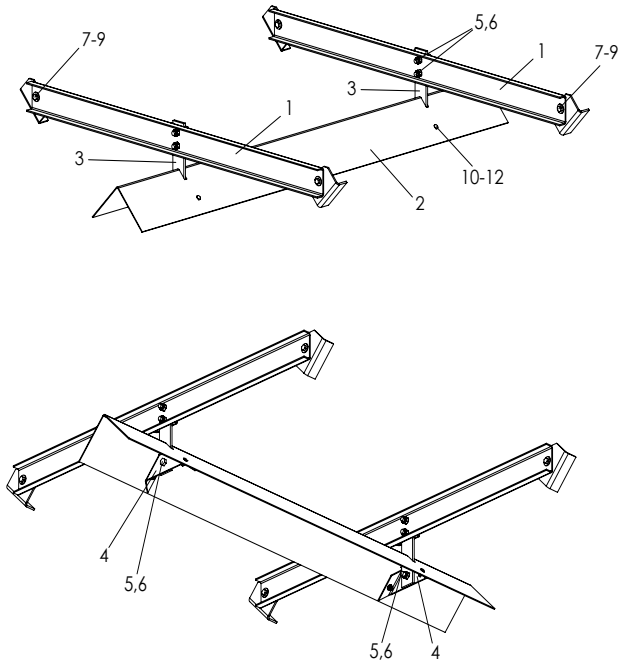


ITEM	PART NO.	DESCRIPTION	QTY
	308809	Brush - Strip Assy, Includes items 4-8	
1	36393	Cap Screw - 1/4-20NC x 3/4 SS	2
2	36418	Washer - Lock 1/4 SS	2
3	36412	Nut - Hex 1/4-20NC SS	2
4	308799	Mount - Brush	1
5	308802	Screw - Sockethead 1/4-20NC x 1/2 SS	5
6	308796	Holder - Brush 24” SS	1
7	308804	Holder - Wldmt Brush	1
8	308803	Brush - Strip 24”	2

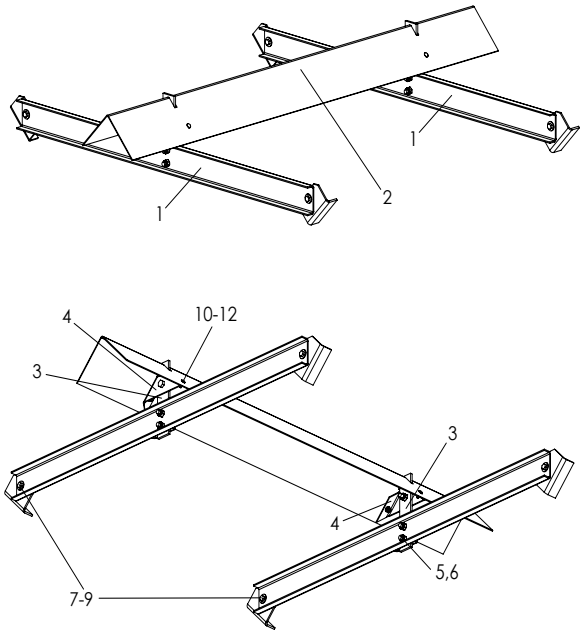
WIPER FRONT



ITEM	PART NO.	DESCRIPTION	QTY
1	14743	Wiper – Belt	1
2	71656	Retainer – Belt	1
3	32446	Screw – Truss Head 1/4-20NC x 3/4 SS	6
4	36412	Nut – Hex 1/4 SS	6

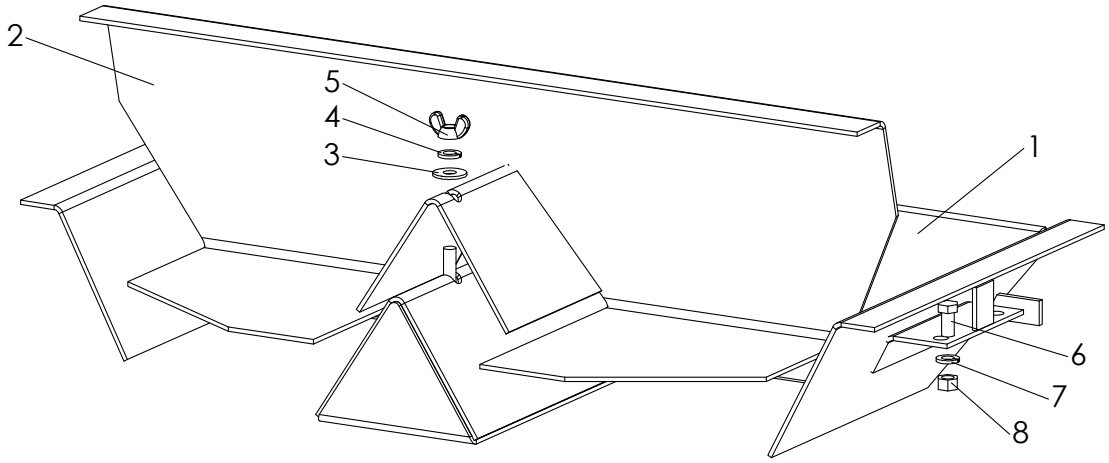


STANDARD (LOWER) ASSY



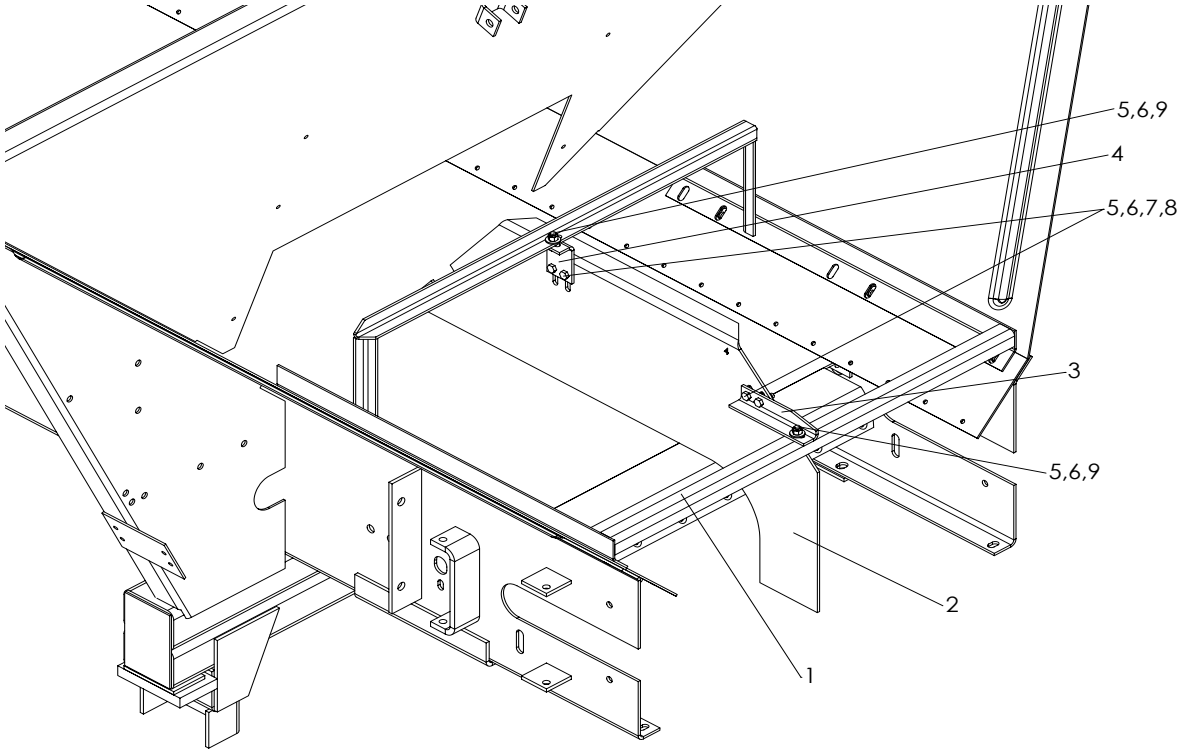
HIGH YIELD ASSY

ITEM	PART NO.	DESCRIPTION	QTY
1	81262	Hanger - V Wldmt 409	2
	81263	Hanger - V Wldmt 304	2
2	82618	Inverted V - 7' (11' Units) 409	1
	82622	Inverted V - 7' (11' Units) 304	1
3	308646	Bar – Adjusting	2
4	302371	Bracket – V Bolt-on	2
5	58800	Cap Screw – 5/8-11NC x 1-3/4 SS	6
6	41762	Nut - Lock 5/8-11NC SS	6
7	36402	Cap Screw - 1/2-13NC x 1-1/4 SS	4
8	36426	Washer - Flat 1/2 SS	4
9	39016	Nut - Lock 1/2-13NC SS	4
10	42639	Bolt - Carriage 5/16-18NC x 1 SS	4
11	36424	Washer - Flat 5/16 SS	4
12	42221	Nut - Lock 5/16-18NC SS	4



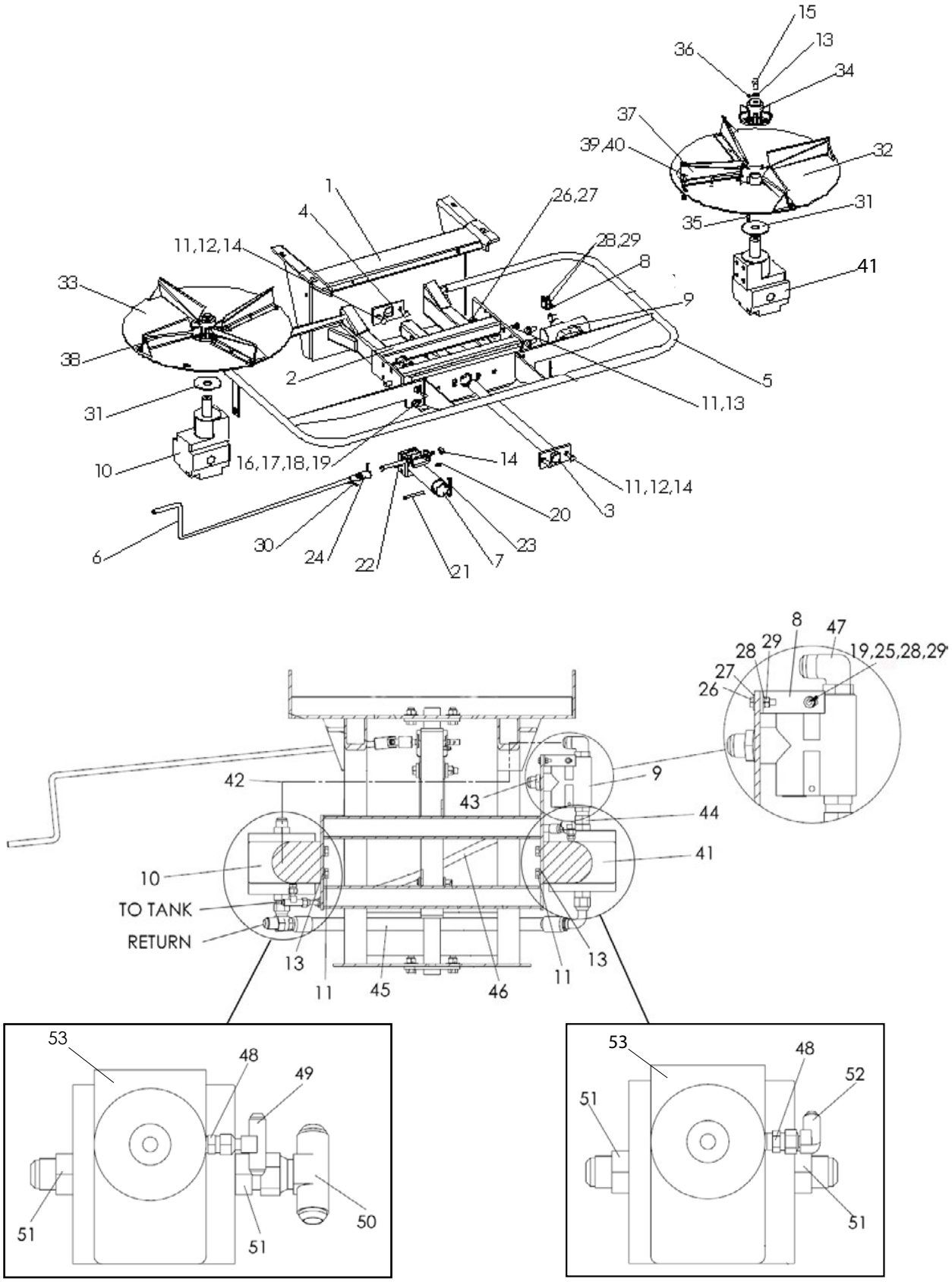
ITEM	PART NO.	DESCRIPTION	QTY
	87108	Divider – Material Assy, Includes 1-5	
1	87054	Divider – Wldmt	1
2	87064	Deflector – Rear Wldmt	1
3	36425	Washer – Flat 3/8 SS	1
4	36420	Washer – Lock 3/8 SS	1
5	20673	Nut – Wing 3/8 SS	1
6	36293	Cap Screw – 3/8-16NC x 3/4 SS	2
7	36420	Washer – Lock 3/8 SS	2
8	36414	Nut – Hex 3/8-16NC SS	2

HILLSIDE DIVIDER



ITEM	PART NO.	DESCRIPTION	QTY
1	86507	Bracket – Wldmt Support	1
2	304796	Panel – Hillside Divider #5 Belt	1
	86506	Panel - Hillside Divider #4 BOC	1
3	56879	Bracket – Clamp	1
4	56880	Angle – Clamp	1
5	34580	Cap Screw – 5/16 x 1 SS	6
6	36424	Washer – Flat 5/16 SS	8
7	36419	Washer – Lock 5/16 SS	4
8	36413	Nut – Hex 5/16 SS	4
9	42221	Nut – Lock 5/16 SS	2

Note: Use chain shield hardware to attach Item 1 to sills.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TO TANK
RETURN
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ITEM	PART NO.	DESCRIPTION	QTY
	86503	24" Hydraulic Fan Assy	
	87106	Fan – LH Assy,	
		Includes 32, 34, 36, 38-40	1
	87105	Fan – RH Assy,	
		Includes 33-37, 39, 40	1
1	87090	Plate – Back	1
2	87082	Mount – Motor Wldmt	1
3	87021	Shaft – Support Wldmt	1
4	87023	Plate – Shaft Mount	1
5	87032-X1	Guard – Spinner Wldmt	1
6	87024	Handle	1
7	87170	Jack – Coated Assy	1
8	87053	Angle – Valve Mount	1
9	43510	Valve – Flow Divider	1
10	87098	Motor – LH Style II Assy, includes 48-51, 53	1
11	36402	Cap Screw – 1/2-13NC x 1-1/4 SS	12
12	36426	Washer – Flat 1/2 SS	4
13	36422	Washer – Lock 1/2 SS	10
14	39016	Nut – Lock 1/2-13NC SS	5
15	36401	Cap Screw – 1/2-13NC x 1 SS	2
16	36398	Cap Screw – 3/8-16NC x 1 SS	4
17	36425	Washer – Flat 3/8 SS	4
18	36420	Washer – Lock 3/8 SS	4
19	36414	Nut – Hex 3/8-16NC SS	5
20	6072	Zerk – Grease	2
21	6547	Pin – Clevis	1
22	80798	Cap Screw – 1/2-13NC x 3-3/4 SS	1
23	36429	Pin – Hair SS	1
24	85002	U-Joint	1
25	34865	Cap Screw – 1/4-20NC x 2-1/4 SS	1
26	36395	Cap Screw – 1/4-20NC x 1 SS	1
27	36423	Washer – Flat 1/4 SS	1
28	36418	Washer – Lock 1/4 SS	2
29	36412	Nut – Hex 1/4-20NC SS	2
30	20918	Pin – Roll	2
31	305571	Washer – Rubber	2
32	27056-X4	Disc – Distributor RH	1
33	27056-X5	Disc – Distributor LH	1

ITEM	PART NO.	DESCRIPTION	QTY
34	10877	Hub	2
35	20004	Cap Screw – 1/4-20NC x 7/8	12
36	20676	Nut – Lock 1/4-20NC	12
37	309091	Fin - RH Wldmt	4
38	309092	Fin – LH Wldmt	4
39	20034	Cap Screw – 5/16-18NC x 3/4	24
40	20677	Nut – Lock 5/16-18NC	24
41	87099	Motor - RH Style II Assy, includes 48, 51-53	1
42	98108	Hose - 3/4 x 27 1/2”	1
43	29789	Adapter - Cnctr	1
44	29788	Adapter	1
45	87049	Hose - 3/4 x 25 1/2”	1
46	87112	Hose - 3/8 x 28”	1
47	29847	Adapter - Elbow 90°	1
48	34763	Adapter - Pipe	2
49	29825	Tee - Swivel Nut Branch	1
50	29809	Adapter - Tee Branch	1
51	34717	Adapter - O Ring	4
52	34816	Elbow - Hydraulic	1
53	305944	Motor-Spinner Style II (See *Spinner Motor* Parts List)	2
	72548	Seal Kit	1
	305824	Retainer Seal Kit	1
54	* 36940	Bolt – Carriage 1/2 x 2 SS	4
55	* 36426	Washer – Flat 1/2 SS	4
56	* 36422	Washer – Lock 1/2 SS	4
57	* 36416	Nut – Hex 1/2-13NC SS	4

* - Not Shown – Used to attach spinner to sills.

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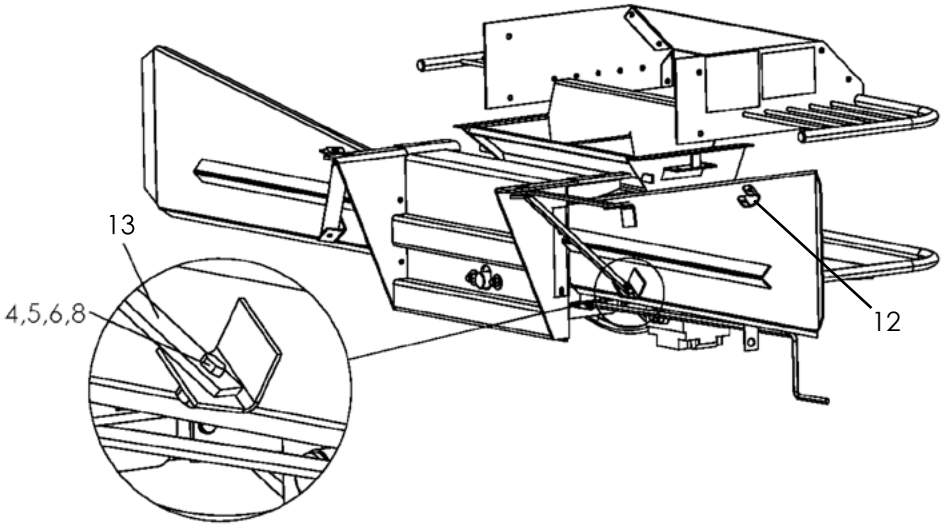
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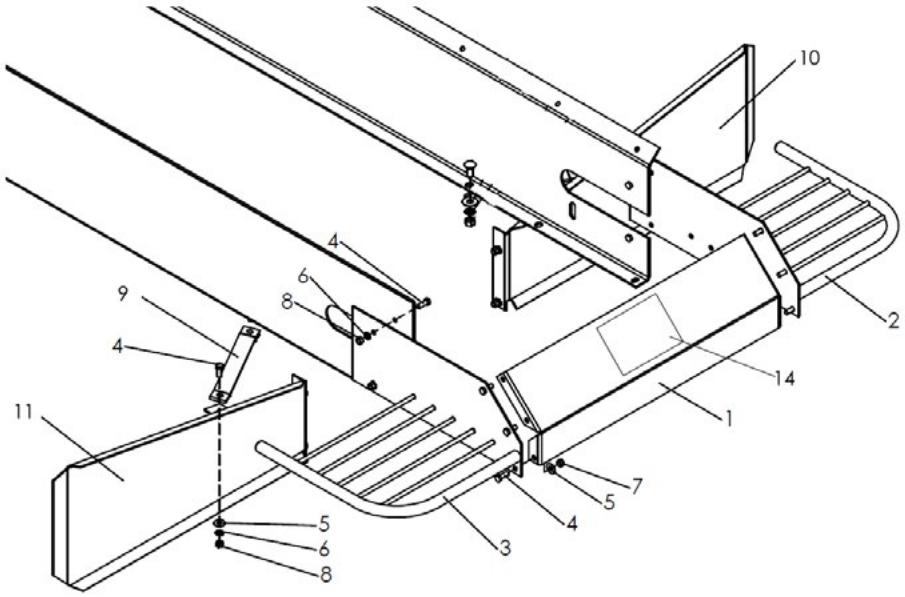
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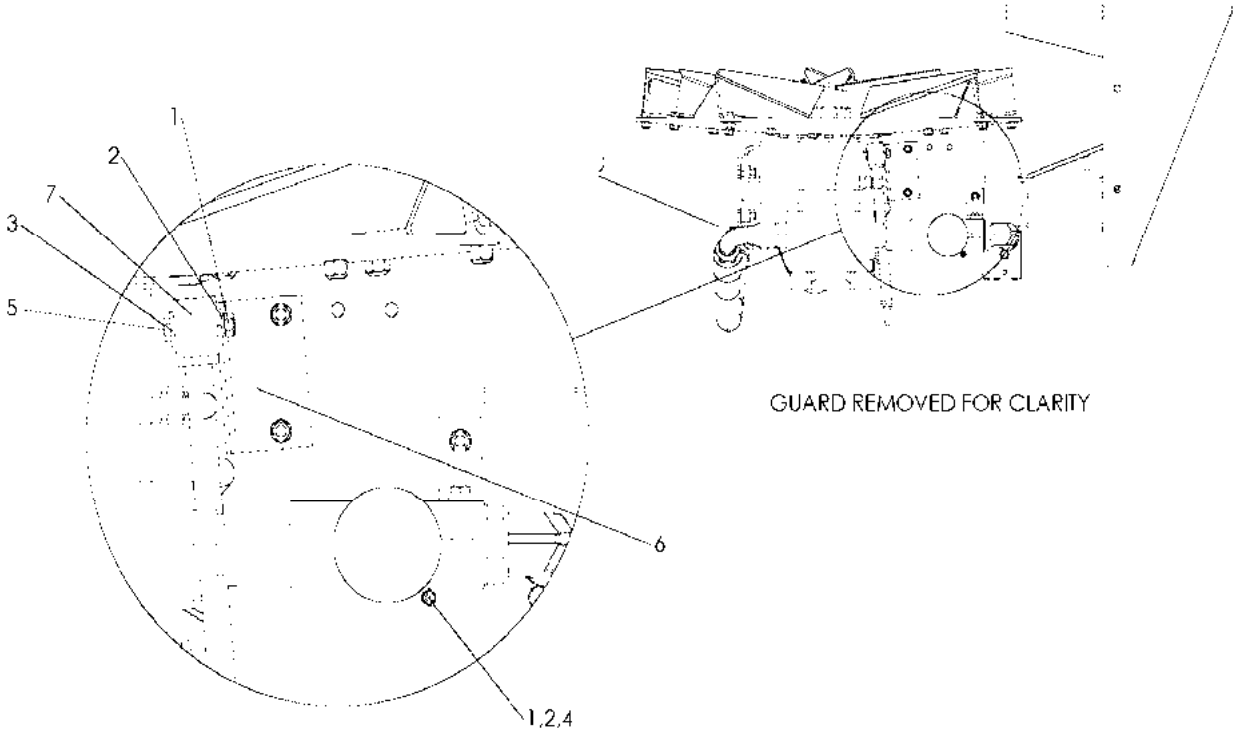
ITEM	PART NO.	DESCRIPTION	QTY
1	305712	Guard – Center 304	1
2	87027-X1	Guard – RH Wldmt	1
3	87031-X1	Guard – LH Wldmt	1
4	36398	Cap Screw – 3/8 x 1 SS	18
5	36425	Washer – Flat 3/8 SS	14
6	36420	Washer – Lock 3/8 SS	12
7	72054	Nut – Lock 3/8 SS	6
8	36414	Nut – Hex 3/8 SS	14
9	87068	Bar - Stiffener 304	2
10	305075	Shield – RH Wldmt	1
11	306686	Shield – LH Wldmt 304 w/ Bracket	1
12	* 97519	Pin – Snap	1
13	305040	Bar – Stiffener Lower 304	2
14	*87109	Decal - Décor G4	1

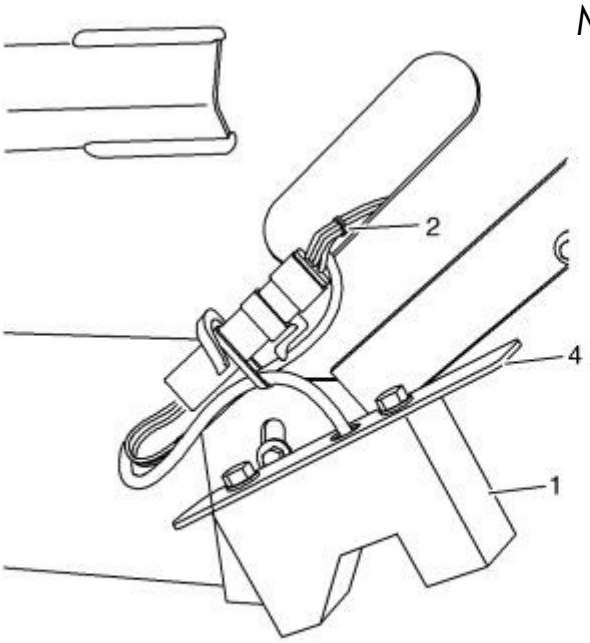
* - Not Shown

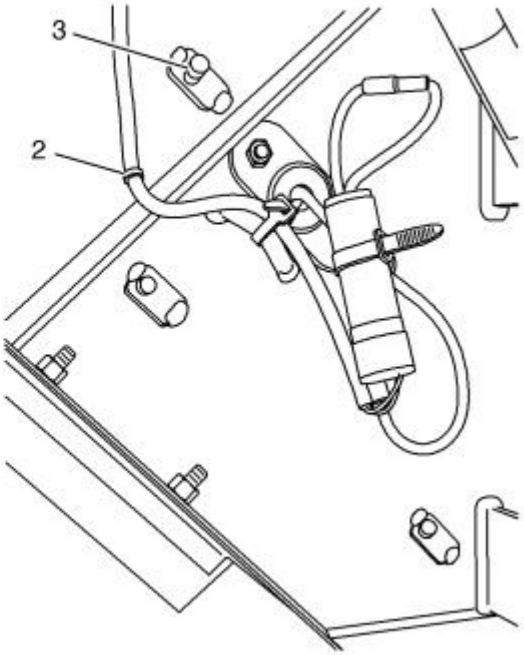
NOTE: Guards are intended to reduce hazard of entanglement with machinery and injury. All guards must be installed per this drawing before spreader is put into operation.



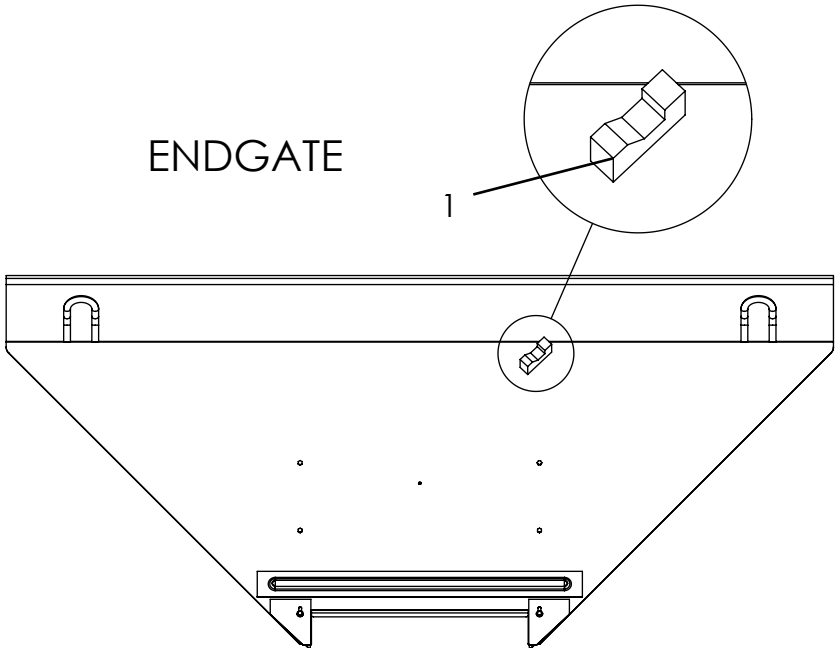
ITEM	PART NO.	DESCRIPTION	QTY
1	36412	Nut – Hex 1/4-20NC SS	6
2	36418	Washer – Lock 1/4 SS	6
3	36423	Washer – Flat 1/4 SS	3
4	36393	Cap Screw – 1/4-20NC x 3/4 SS	2
5	42448	Cap Screw – 1/4 x 1-1/2 SS	2
6	86672	Bracket	1
7	89011	Sensor – Assy	1

MULTAPPLIER

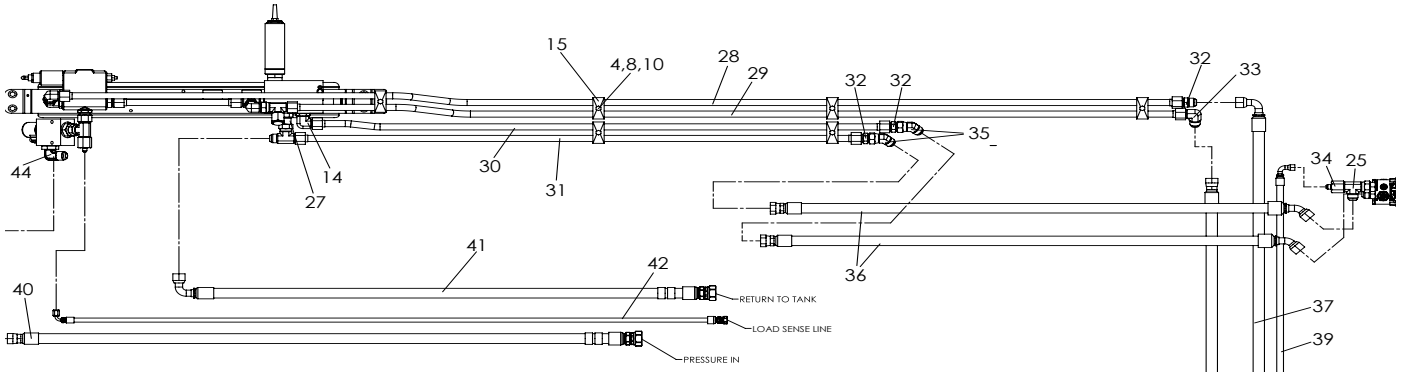




ENDGATE



ITEM	PART NO.	DESCRIPTION	QTY
1	98787-AB	Lead - 18” Bin Level Sensor	1
2	307130	Cable - Jumper 102”	1
3	36393	Cap Screw - 1/4-20NC x 3/4 SS	2
4	307124	Mount - Sensor 304	1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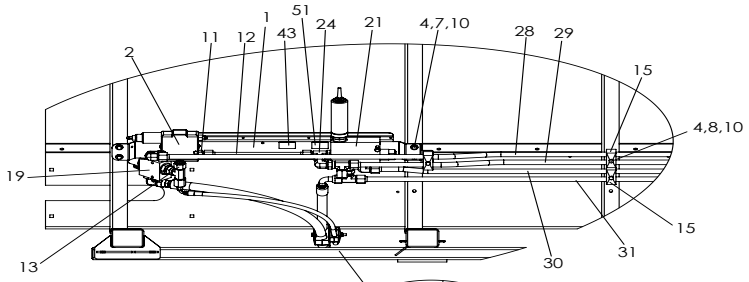
RETURN TO TANK
LOAD SENSE LINE
PRESSURE IN
37
39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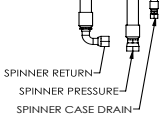
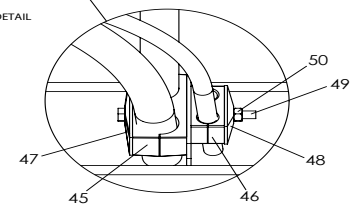
VALVE MOUNTING BRACKET DETAIL


38
SPINNER RETURN
SPINNER PRESSURE
SPINNER CASE DRAIN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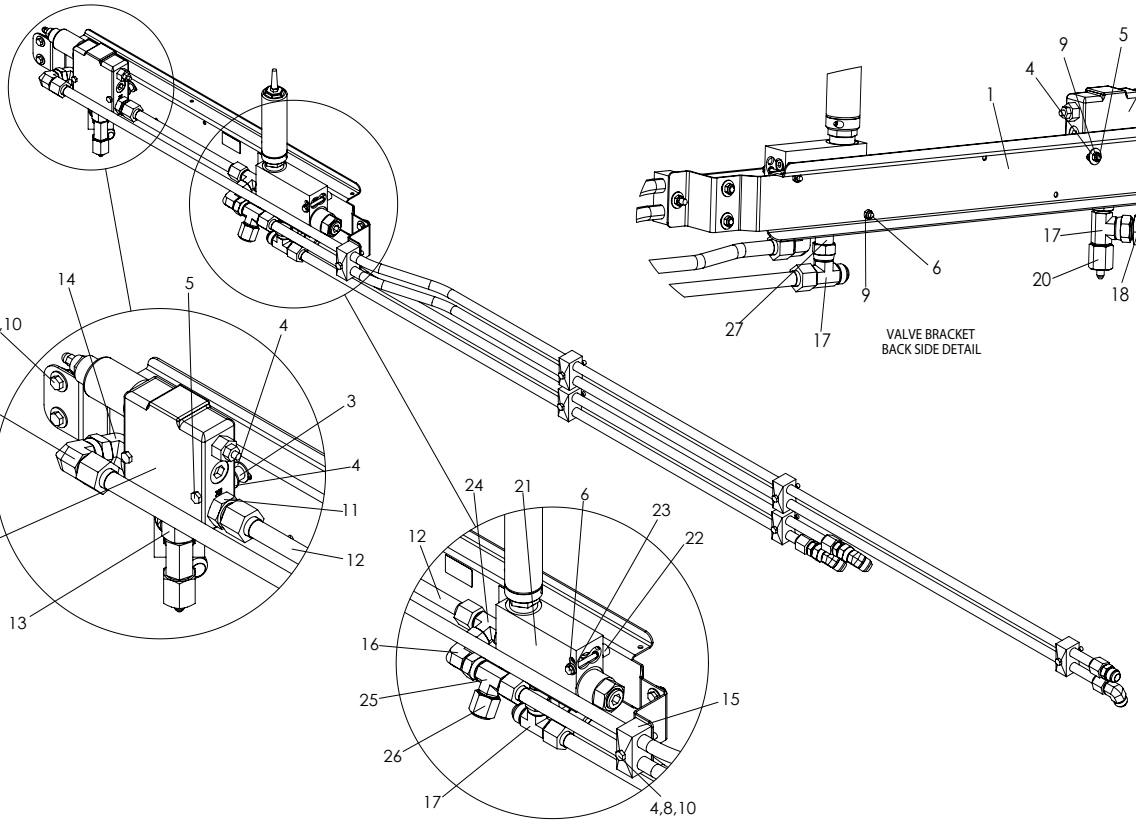
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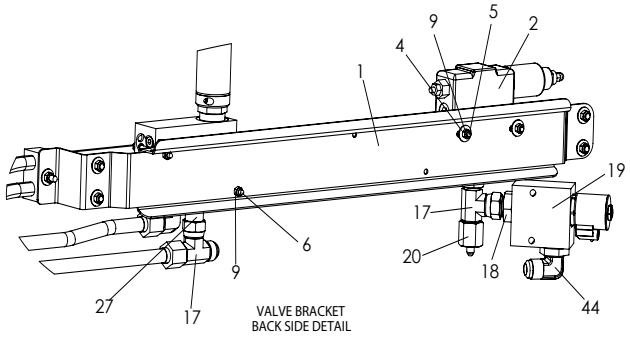
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VALVE BRACKET
BACK SIDE DETAIL

ITEM	PART NO.	DESCRIPTION	QTY
1	309604	Bracket - Valve 304	1
2	32485-X1	Valve - Control PWM	1
3	70341-X1	Pipe - Spacer 1/2	2
4	36424	Washer - Flat 5/16 SS	20
5	36396	Cap Screw - 1/4-20NC x 3 SS	2
6	56396	Cap Screw - 1/4-20NC x 3-1/4 SS	2
7	56858	Cap Screw - 5/16-18NC x 3/4 SS	4
8	71830	Cap Screw - 5/16-18NC x 2-1/2 SS	6
9	42034	Nut - Lock 1/4-20NC SS	4
10	42221	Nut - Lock 5/16-18NC SS	10
11	29789	Fitting - 12-12 070120	1
12	307449	Tube - .75 OD x 12” ASSY 304	1
13	29788	Fitting - 12-12 S 1040-30 Non Standard	1
14	29847	Fitting - 12-12 070220	2
15	75036	Clamp - Tubing Twin .75	6
16	34709	Fitting - 12-12 070221	2
17	29809	Fitting - 12-12-12 070433	2
18	29835	Fitting - 12-16 070120	1
19	310599	Valve - Solenoid	1
20	56353	Fitting - 12-4 070123	1
21	306278	Valve - Assy Control 25 GPM SFP	1
22	302098	Washer - Step 1/4	2
23	302097	Washer - Step 1/4	2
24	29791	Fitting - 12-12-12 070428	1
25	29781	Fitting - 12-12-12 070432	2
26	29801	Fitting - 12 070112	1
27	303226	Fitting - 12-12 Special	1
28	309605	Tube - .75 OD x 114” Assy 304	1
29	309606	Tube - .75 OD x 91” Assy 304	1
30	305027-AA	Tube - .75 OD x 60” Assy 304	1
31	309607	Tube - .75 OD x 57” Assy 304	1
32	29817	Fitting - 12-12 070101	3
33	29785	Fitting - 12-12 070201	1
34	56407	Fitting - 12-6 070123	1
35	29782	Fitting - 12-12 070321	2
36	309612	Hose - Assy 3/4 100R2 x 55”	2
37	56135	Hose - Assy 3/4 100R2 x 65”	1

ITEM	PART NO.	DESCRIPTION	QTY
38	77849	Hose - Assy 3/4 100R2 x 54-1/2”	1
39	310647	Hose - Assy 3/8 100R1 x 53”	1
40	309621	Hose - Assy 3/4 100R12 x 65”	1
41	309624	Hose - Assy 3/4 100R1 x 55”	1
42	309633	Hose - Assy 1/4 100R2 x 68-3/4”	1
43	309775	Decal - Bin 2	1
44	29829	Adapter - Elbow 90°	1
45	305266	Clamp - Hose 1.18 Double	1
46	310581	Clamp - Tubing Twin .59	1
47	305267	Plate - Cover Hose Clamp 304	1
48	310582	Plate - Cover Hose Clamp 304	1
49	310583	Cap Screw - 5/16-18NC x 4 SS	1
50	36413	Nut - Hex 5/16-18NC SS	1
51	309774	Decal - Bin 1	1
52	*310648	Tie - Dual Clamp	5

*not shown

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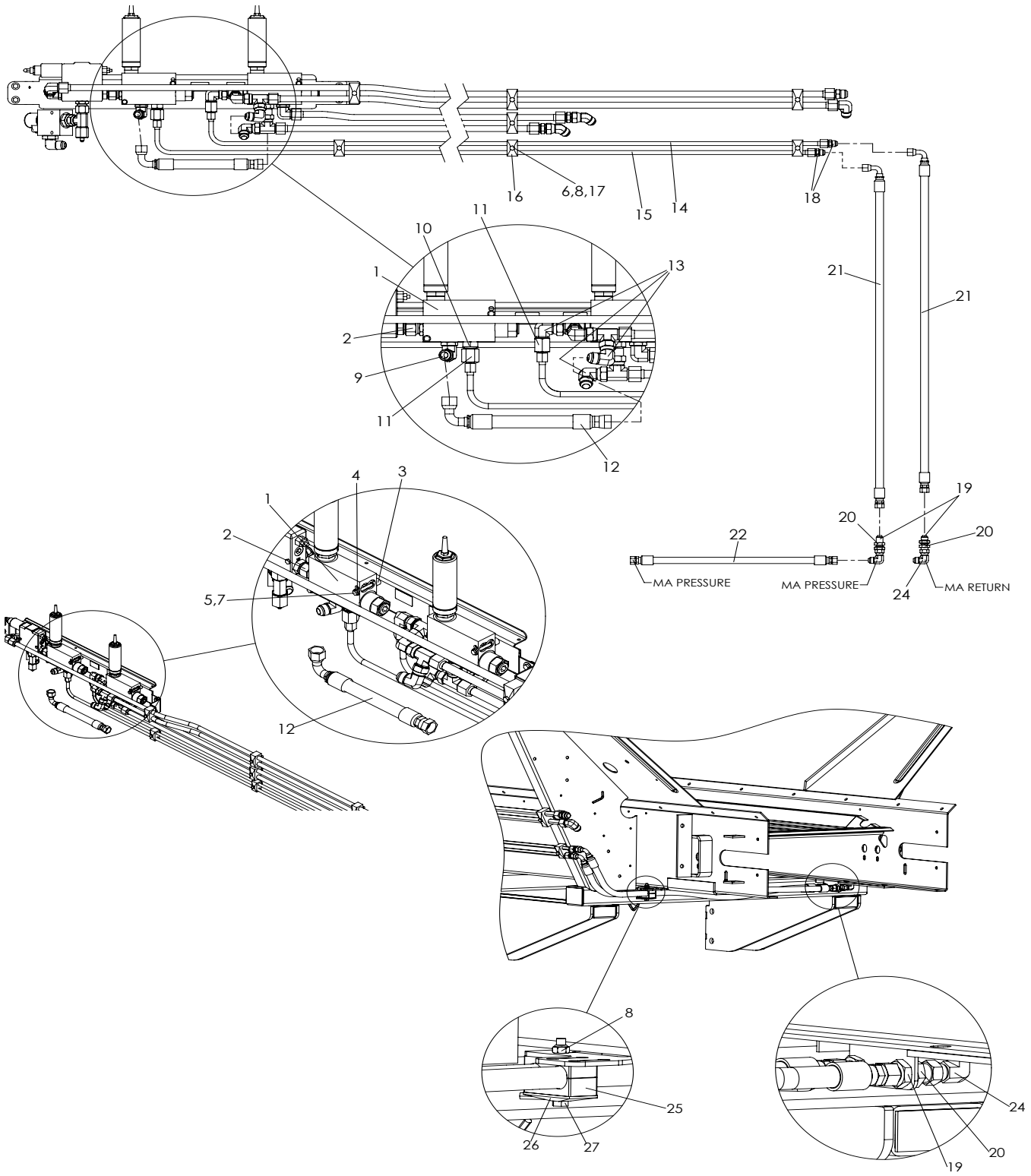
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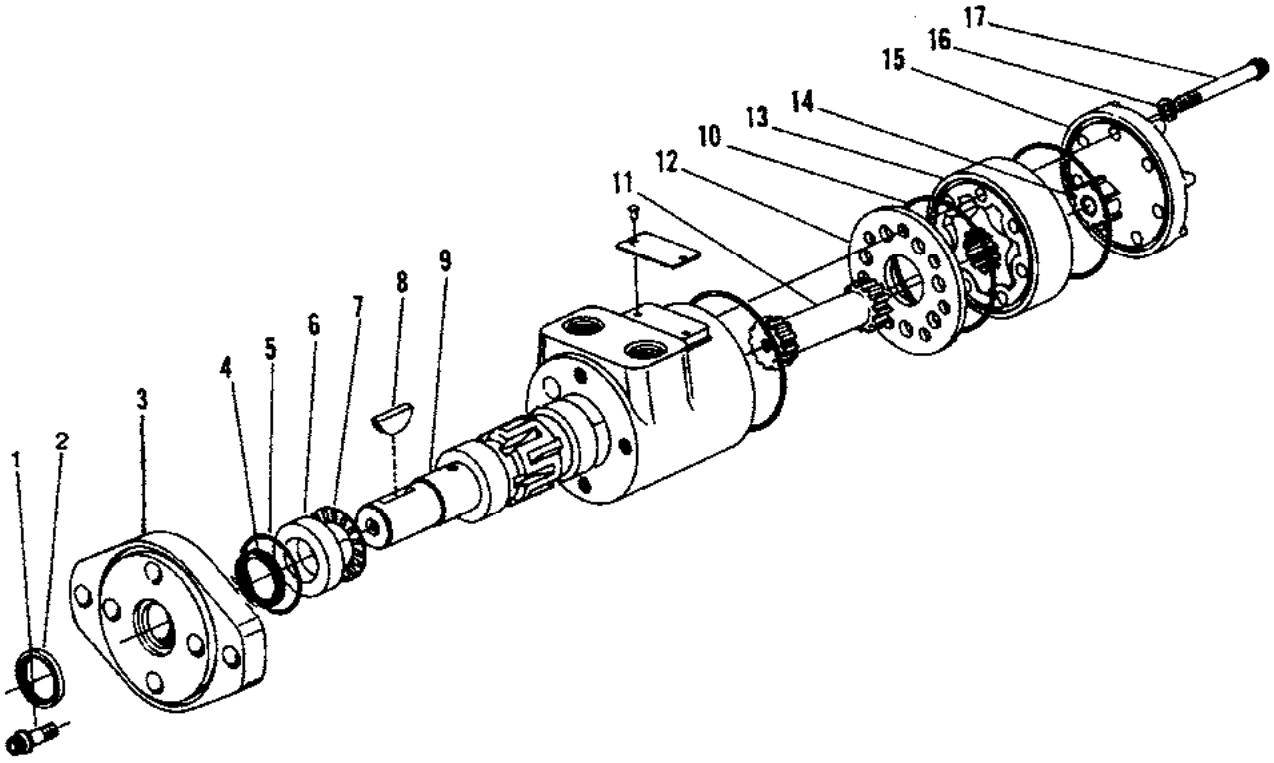
ITEM	PART NO.	DESCRIPTION	QTY
1	306273	Valve- Assy Control 5 GPM SFP	1
	306274	Manifold - 5-25 GPM SFP	1
	306275	Valve - Flow Control 5 GPM	1
2	29788	Fitting - 12-12 1040-30 Non-Stanard	1
3	302098	Washer - Step 1/4	2
4	302097	Washer - Step 1/4	2
5	56396	Cap Screw - 1/4-20NC x 3-1/4 SS	2
6	309619	Cap Screw - 5/16-18NC x 2 SS	4
7	42034	Nut - Lock 1/4-20NC SS	2
8	42221	Nut - Lock 5/16-18NC SS	5
9	29847	Fitting - 12-12 070220	1
10	29789	Fitting - 12-12 070120	1
11	56406	Fitting - 12-8 070123	2
12	56104	Hose - Assy 3/4 100R2 x 13-1/2”	1
13	34709	Fitting - 12-12 070221	3
14	309608	Tube - .5 OD x 96.88” Assy 304	1
15	309609	Tube - .5 OD x 101.50” Assy 304	1
16	300031	Clamp - Tubing Twin 1/2	4
17	36424	Washer - Flat 5/16 SS	4
18	56351	Fitting - 8-8 070101	2
19	56332	Fitting - 8-8 070601S 304	2
20	56333	Fitting - 8 070118	2
21	309618	Hose - Assy 1/2 100R2 x 43.5”	2
22	310636	Hose - Assy 1/2 100R1 x 23” SS	1
23	*310648	Tie - Dual Clamp	1
24	306742	Fitting - 8-8 070221S 304	2
25	310649	Clamp - Tubing Twin .84	1
26	310688	Plate - Cover Hose Clamp 304	1
27	71830	Cap Screw - 5/16-18NC x 2-1/2 SS	1

*Not Shown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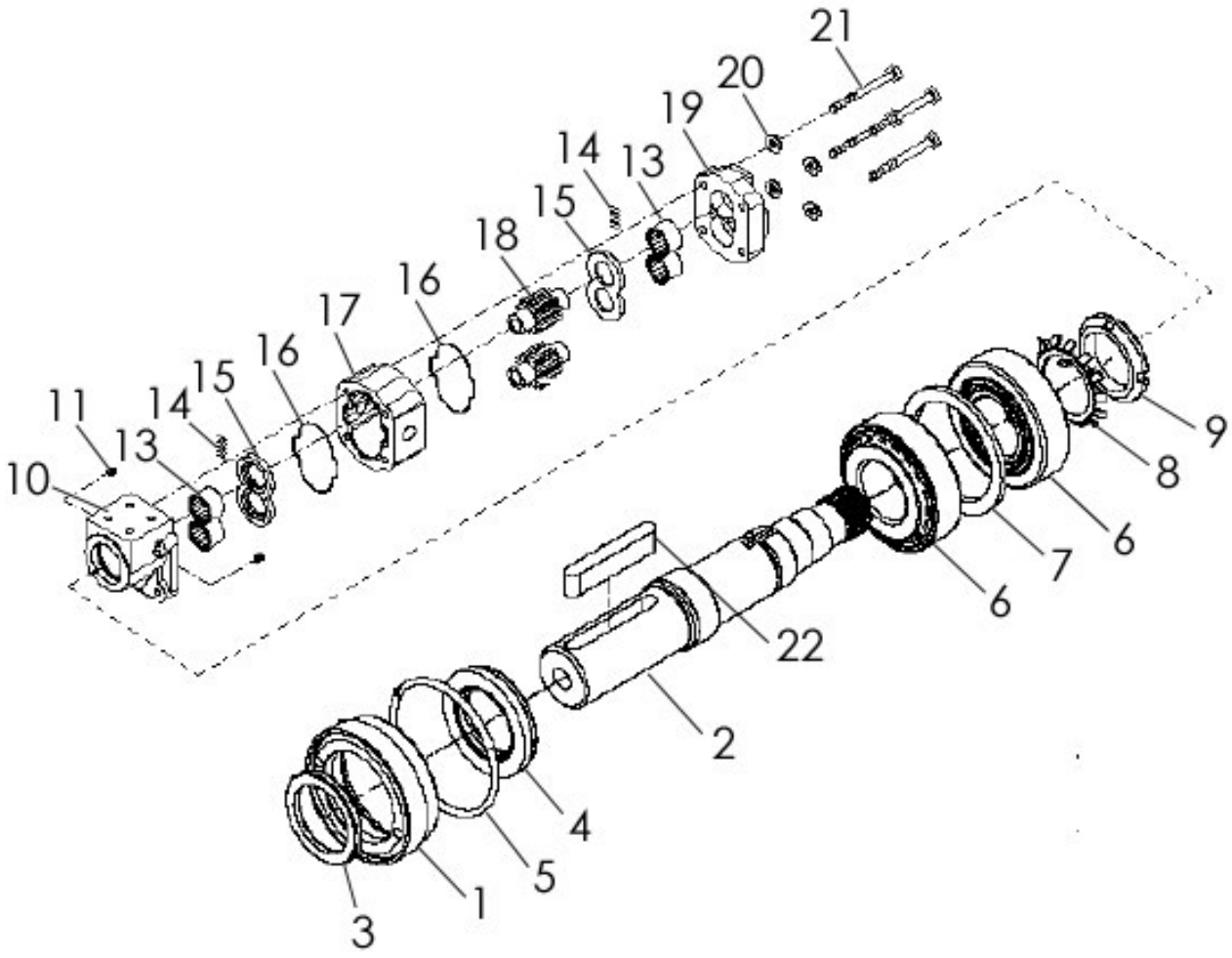
ITEM	PART NO.	DESCRIPTION	QTY
	38897	Motor – Hydraulic 1-1/2”	
	39137	Seal Kit - Includes 2, 4, 5, 10, 16, 18 & 19	
1	NSS	Cap Screw – 5/16 x 7/8	4
2	NSS	Seal	1
3	NSS	Flange – Mounting	1
4	NSS	Seal	1
5	NSS	Seal – O-Ring	1
6	NSS	Race – Bearing	1
7	NSS	Bearing – Thrust Needle	1
8	3065	Key	1
9	NSS	Shaft – Output Keyed	1
10	NSS	Seal – O-Ring	3
11	NSS	Drive	1
12	NSS	Plate – Spacer	1
13	NSS	Gerotor – 1-1/2”	1
14	NSS	Spacer – 1-1/2”	1
15	NSS	Cap – End	1
16	NSS	Washer – Seal	7
17	NSS	Cap Screw	7
18	* NSS	Seal – O-Ring	1
19	* NSS	Washer – Back-up	1

* - Not Shown NSS - Not Sold Separately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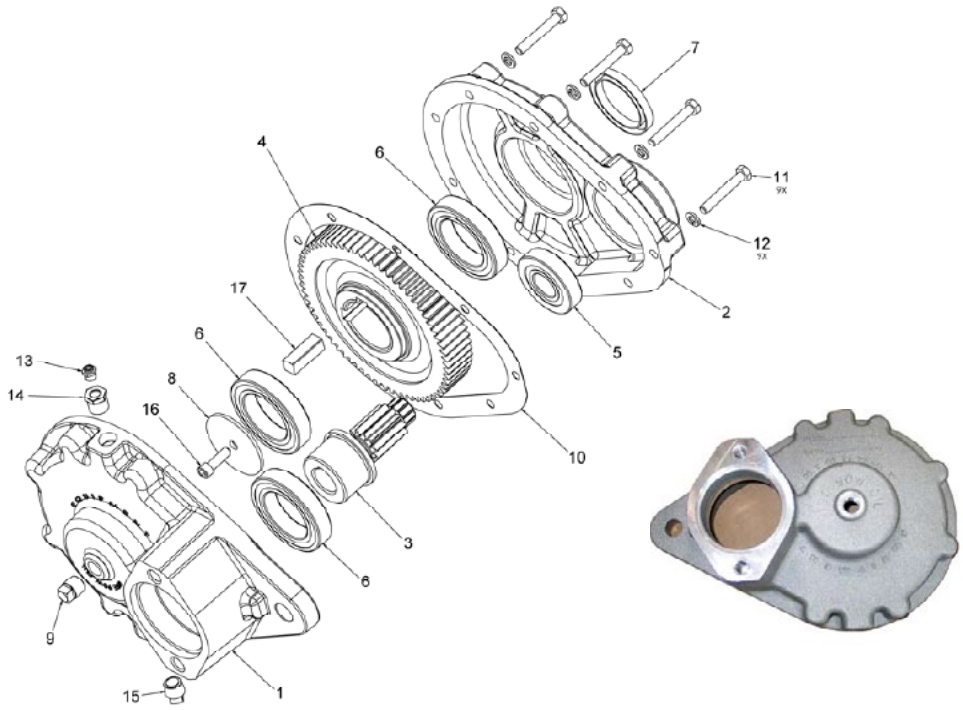
ITEM	PART NO.	DESCRIPTION	QTY
	305944	Motor Assy	
	72548	Kit – Seal, Includes Items 3-5, 26	
	305824	Retainer – Seal Kit Soft Seal, Includes 1,3-5	
	306093	Shaft – Assy Output, Includes: 1-9, 2	
1	NSS	Ring - Retainer	1
2	NSS	Shaft	1
3	33809	Seal - Excluder	1
4	71980	Seal	1
	23940	Tool Seal Installation (Required to Install Item 4)	
5	28494	"O" Ring	1
6	NSS	Bearing – Tapered Roller Assy	2
7	NSS	Spacer	1
8	NSS	Washer - Lock	1
9	NSS	Nut – lock	1
10	NSS	Cover – Shaft End	1
11	NSS	Plug	2
12	NSS	Bushing	1
13	NSS	Bearing	4
14	NSS	Seals - Pocket (Makes 12 Seals)	1
15	NSS	Plate	2
16	NSS	Gasket	2
17	NSS	Housing	1
18	NSS	Set - Gear	1
19	NSS	Cover - Port End	1
20	NSS	Washer	4
21	NSS	Cap Screw	4
22	24458	Key	1
23	*30723	Tool – Wrench Spanner	1
24	*24536	Tool – Seal Driver	1
25	*23940	Tool – Seal Sleeve	1
26	*306090	Sleeve – Speedi	1

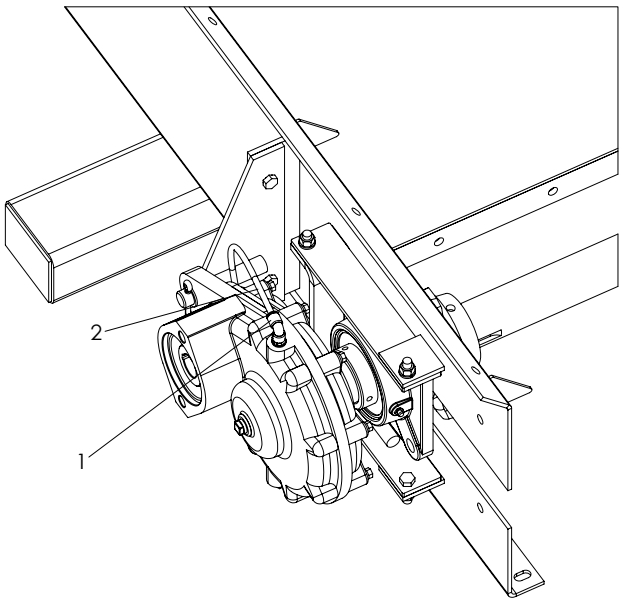
* - Not Shown NSS - Not Sold Separately

GEARCASE - SINGLE PINION

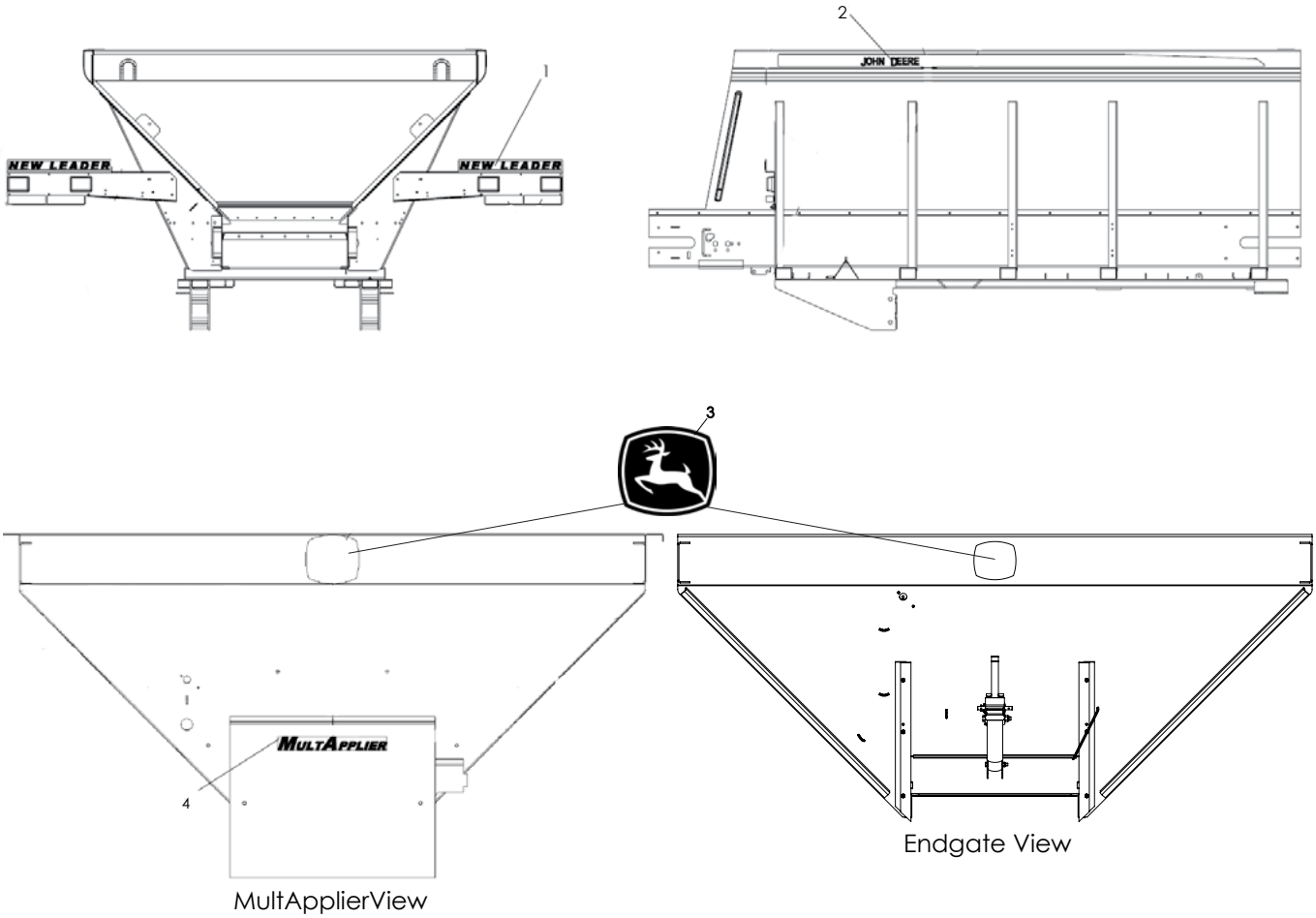


ITEM	PART NO.	DESCRIPTION	QTY
	36671	Gear Case – Assy Single Pinion	
	304269-AB	Parts – Service, Includes 1–17	
1	304559	Housing – Outboard	1
2	304560	Housing – Inboard	1
3	304561	Gear – Pinion 11 Tooth	2
4	304562	Gear – Driven 67 Tooth	1
5	37007	Bearing	2
6	37008	Bearing	4
7	37006	Seal – Oil	1
8	38979	Washer – Flat 2-1/2 x 11/32	2
9	6031	Plug – Pipe	1
10	304563	Gasket – Housing	1
11	20040	Cap Screw – 5/16NC x 2	10
12	20711	Washer – Lock 5/16	10
13	2564	Cap – Breather	1
14	27465	Bushing – Pipe 1/8 x 3/8	1
15	21490	Plug – Pipe Magnetic	1
16	38980	Screw – Allen Head 5/16-18 x 1	1
17	37010	Key – 1/2 x 1/2 x1-1/2	2

GEARCASE BREATHER TUBE

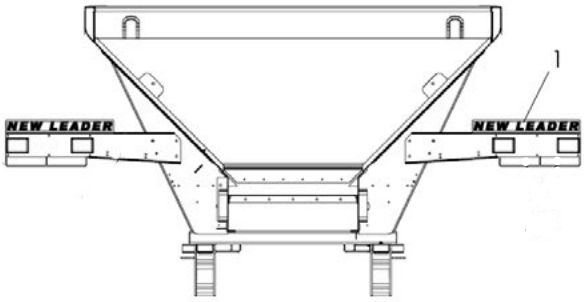


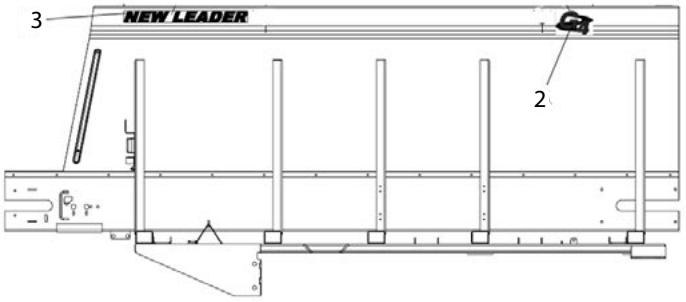
ITEM	PART NO.	DESCRIPTION	QTY
1	306891	Fitting - 4-2 630202K	1
2	310494	Tubing - 1/4 OD Air Brake Black	1

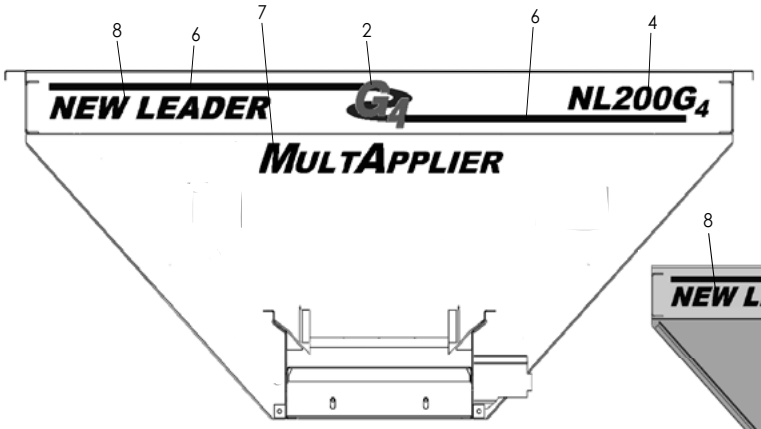


ITEM	PART NO.	DESCRIPTION	QTY
1	84762	Decal – New Leader Black	2
2	305825-AA	Decal – Kit LH & RH JD Stripes	1
3	305826	Decal - JD Leaping Deer	1
4	306348	Decal - MULTAPPLIER Black	1

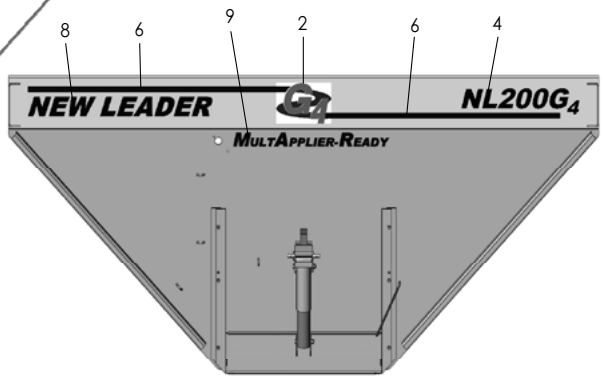
DECALS - DECOR NON-PAINTED BODY







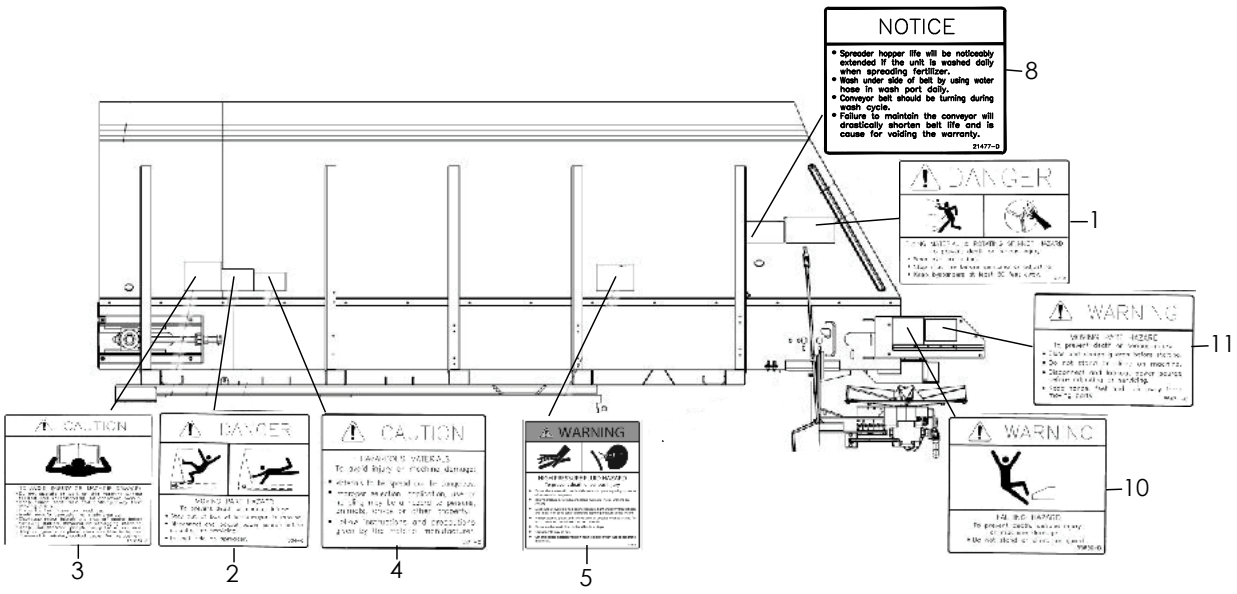
MultApplier View

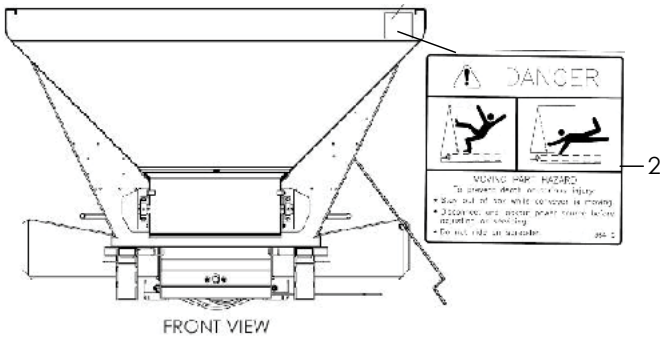


Endgate View

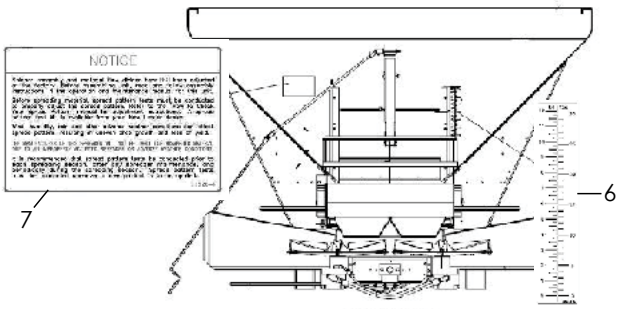
ITEM	PART NO.	DESCRIPTION	QTY
1	84762	Decal – New Leader Black	2
2	87122	Decal – G4 Black/Red	2
3	87164	Decal – New Leader Black	2
4	309638	Decal – NL200G4 Black	1
6	87162	Decal – 3/4 Striping Black	7 ft
7	88245	Decal – MULTAPPLIER Black	1
8	87164	Decal – New Leader Black	1
9	300403	Decal – MULTAPPLIER Ready	1

DECALS - SAFETY

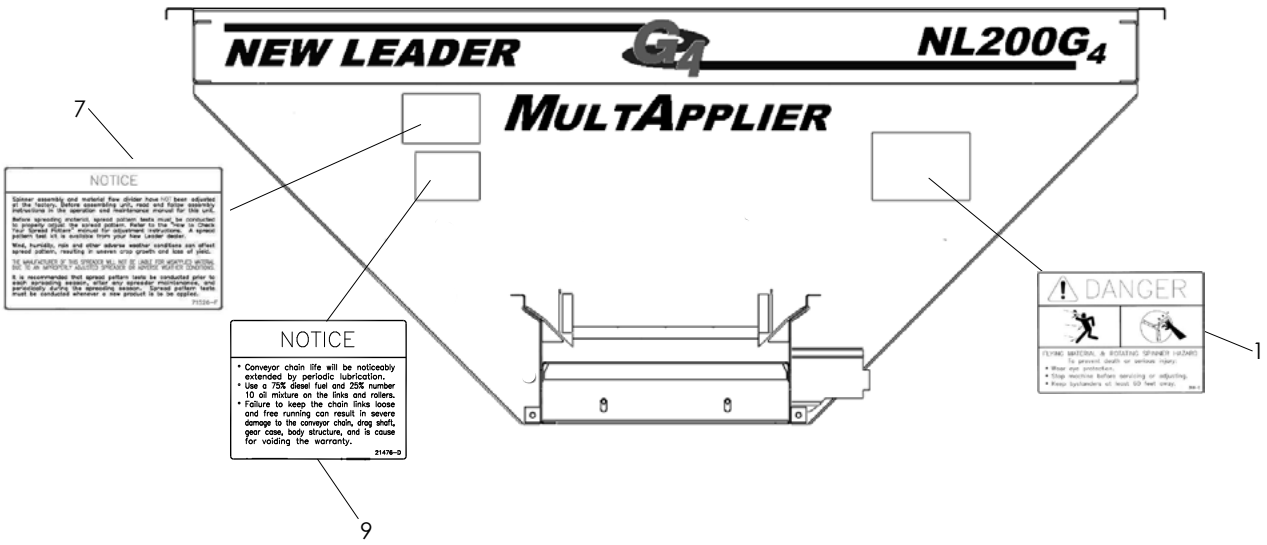


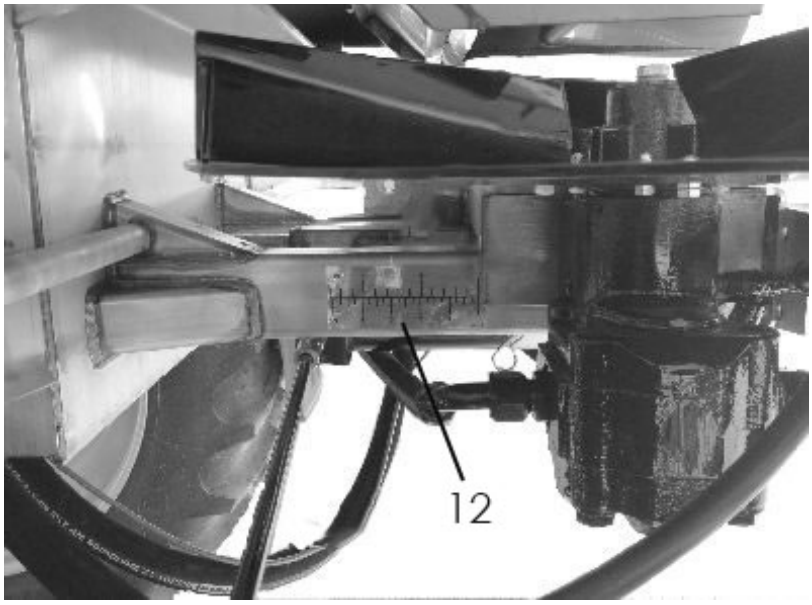


FRONT VIEW



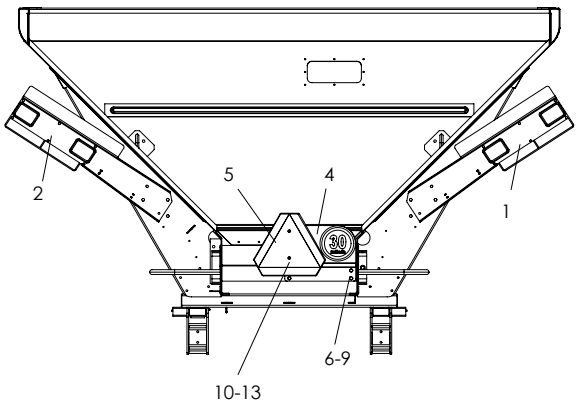
REAR VIEW

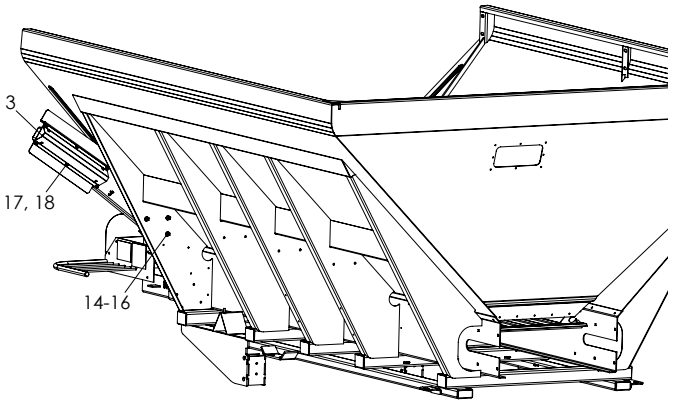




ITEM	PART NO.	DESCRIPTION	QTY
1	368	Decal – Danger, Flying Material	2
2	364	Decal – Danger, Moving Part	3
3	150034	Decal – Caution Operation & Maintenance	1
4	321	Decal – Caution Hazardous Material	1
5	39138	Decal – Warning High Pressure Fluid	1
6	23769	Decal – Feedgate Ruler Scale 12”	1
	310521	Decal - Feedgate Ruler Scale 5”	1
7	71526	Decal – Notice Adjust Spinner	1
8	21477	Decal - Notice Conveyor Belt Life	1
9	21476	Decal – Notice Conveyor Chain Life	1
10	55630	Decal – Warning Falling Hazard	2
11	55631	Decal – Warning Guard for Protection	3
12	87110	Decal – Scale Spinner	1

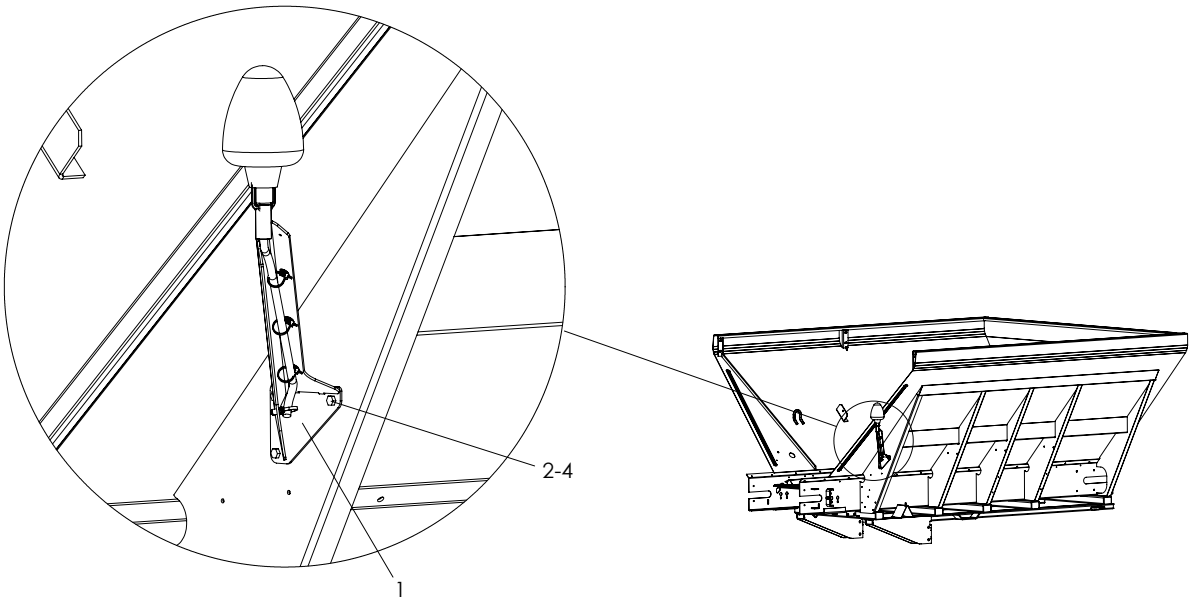
For additional Safety Decals, see also *Drive and Snubber Guard* and *Guard - Front Cover*





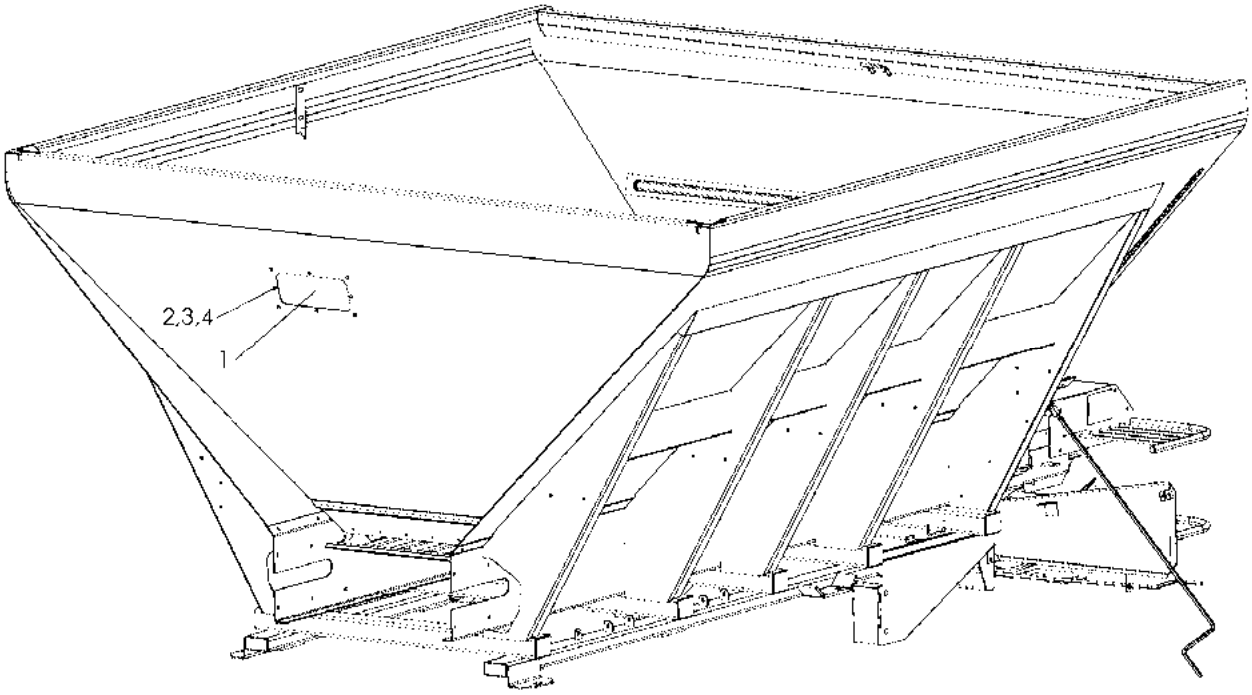
ITEM	PART NO.	DESCRIPTION	QTY
1	306802-AB	Bracket – Tail Light RH 304	1
2	306802-AA	Bracket – Tail Light LH 304	1
3	308882	Shield - Light 304	2
4	305711	Plate - SMV Mounting	1
5	305229	Sign - SMV	1
6	42639	Bolt - Carriage 5/16-18NC x 1 SS	4
7	36424	Washer - Flat 5/16 SS	4
8	36419	Washer - Lock 5/16 SS	4
9	36413	Nut - Hex 5/16-18NC SS	4
10	32446	Screw - Truss Head 1/4-20NC x 3/4 SS	2
11	36423	Washer - Flat 1/4 SS	2
12	36418	Washer - Lock 1/4 SS	2
13	36412	Nut - Hex 1/4-20NC SS	2
14	36398	Cap Screw - 3/8-16NC x 1 SS	6
15	36425	Washer - Flat 3/8 SS	6
16	72054	Nut - Lock 3/8-16NC SS	6
17	36394	Cap Screw - 1/4-20NC x 7/8 SS	12
18	42034	Nut - Lock 1/4-20NC SS	12
19	*309724	Bundle - Lighting NA	1

* - Not Shown



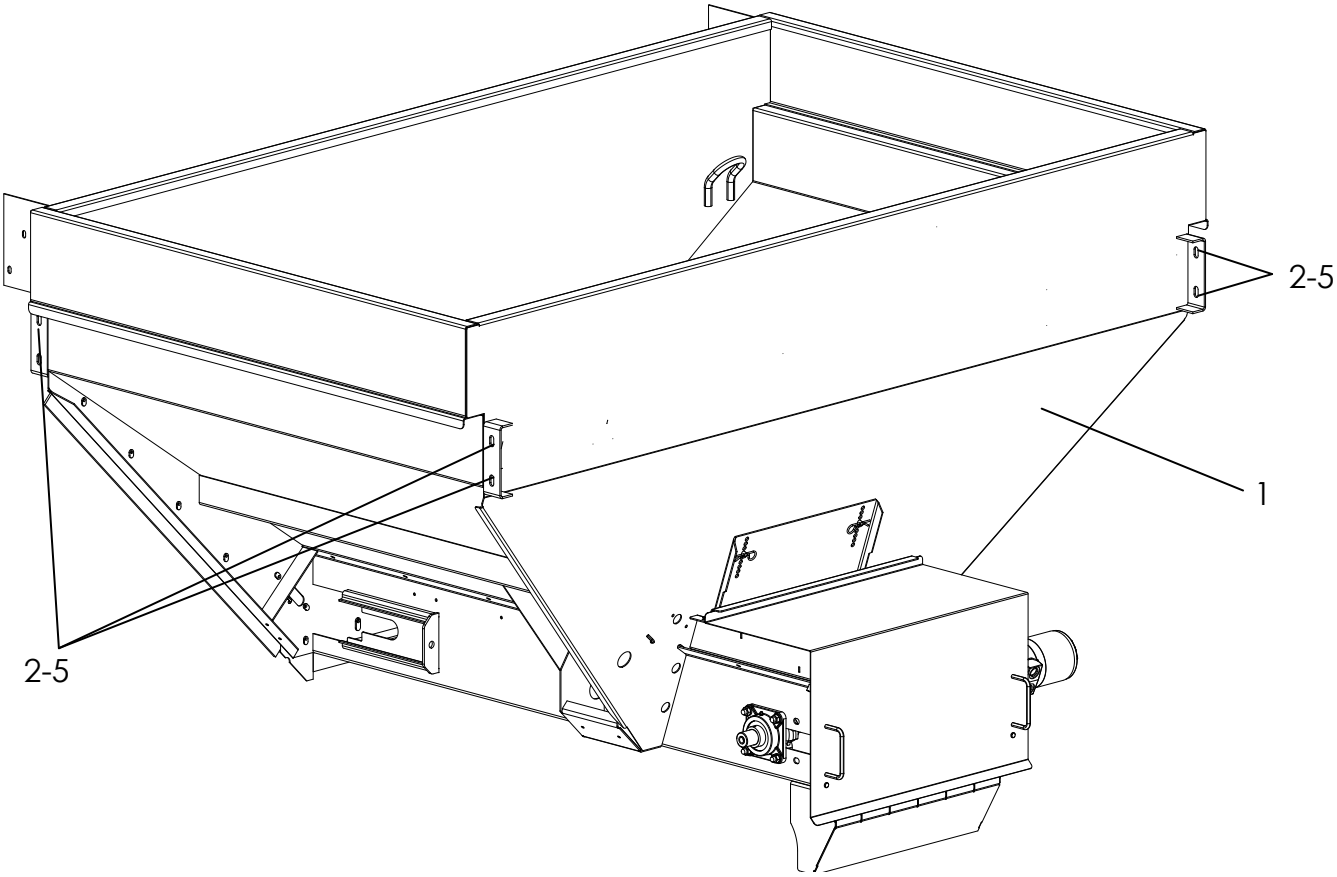
ITEM	PART NO.	DESCRIPTION	QTY
1	308891	Support - Wldmt Beacon 304	1
2	36398	Cap Screw - 3/8-16NC x 1SS	3
3	36425	Washer - Flat 3/8 SS	3
4	72054	Nut - Lock 3/8-16NC SS	3
5	*309908	Beacon Bundle - includes wiring harness & beacon light	1

*not shown



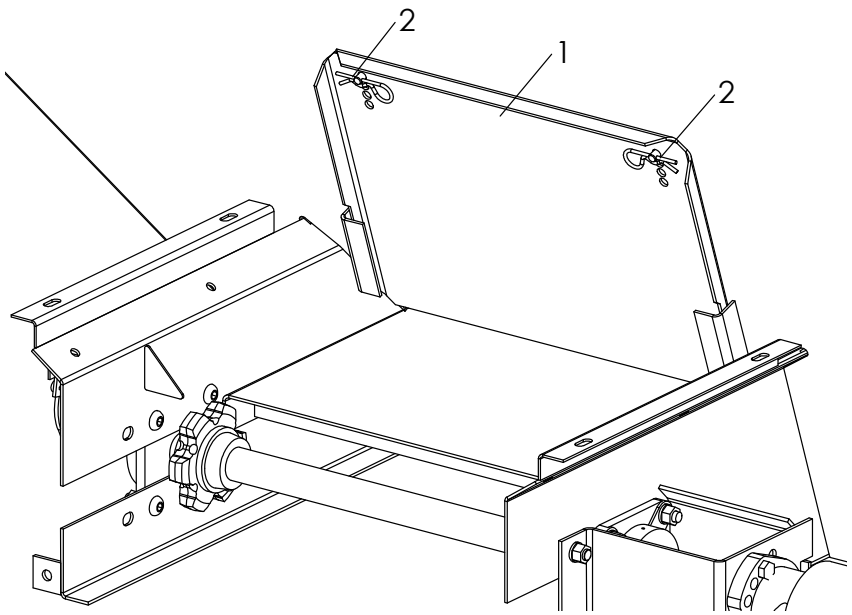
ITEM	PART NO.	DESCRIPTION	QTY
1	302686	Window – Sight	1
2	36395	Cap Screw – 1/4-20 x 1 SS	8
3	36423	Washer – Flat 1/4 SS	8
4	42034	Nut – Lock 1/4-20 SS	8

MULTAPPLIER SHELL & MOUNTING HARDWARE

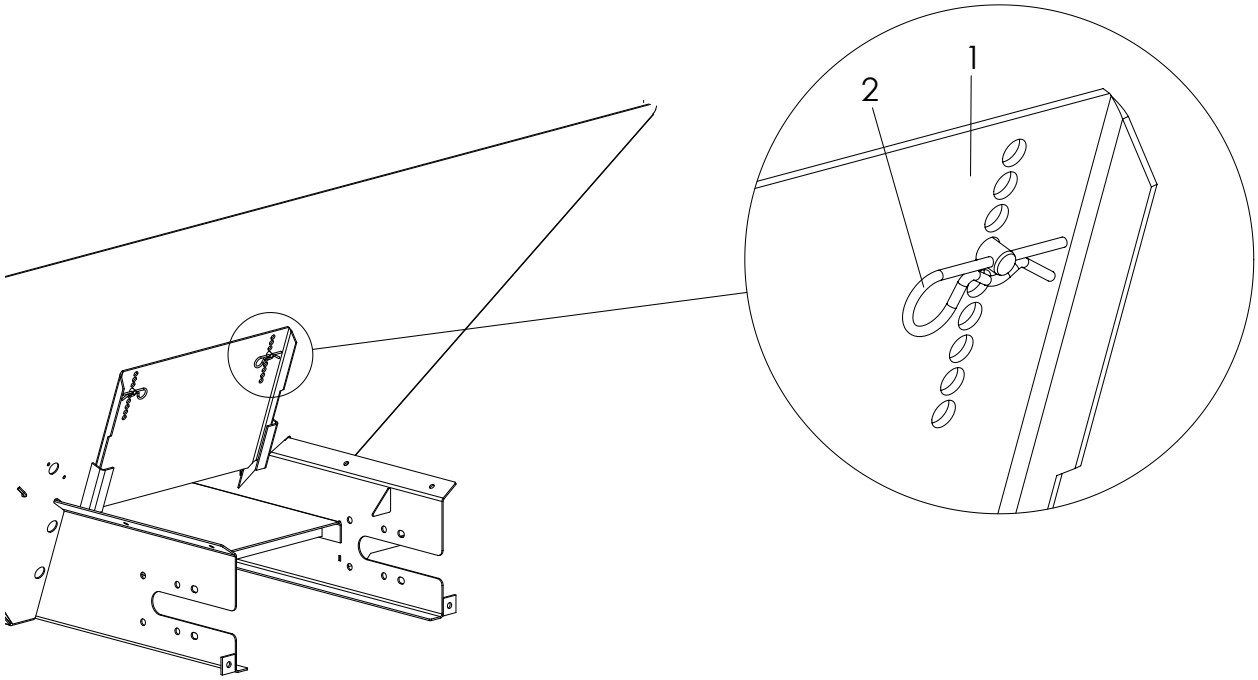


ITEM	PART NO.		DESCRIPTION	QTY
	Style I	Style II		
	86951	86951	Hardware - Kit Mount (Includes Items 2-5)	
1	310665	312343	MULTAPPLIER - 5' Shell Insert NL200G4	1
	304800	312342	MULTAPPLIER - 5' Shell Insert NL300G4	1
2	20128-X1	20128-X1	Cap Screw - 1/2 x 1 1/4 Grade 8	8
3	20695	20695	Washer - Flat 1/2	16
4	20714	20714	Washer - Lock 1/2	8
5	20646	20646	Nut - Hex 1/2	8

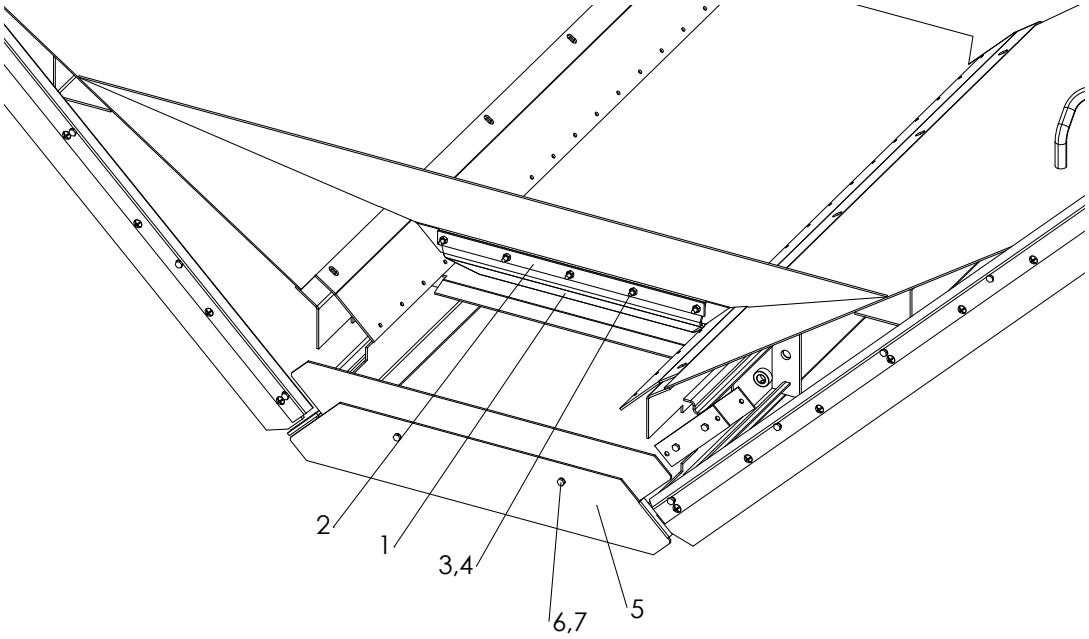
AR - As Required



ITEM	PART NO.	DESCRIPTION	QTY
1	98557	Panel – Feedgate 304	1
2	36429	Pin – Hair 2.562 x .148 SS	2

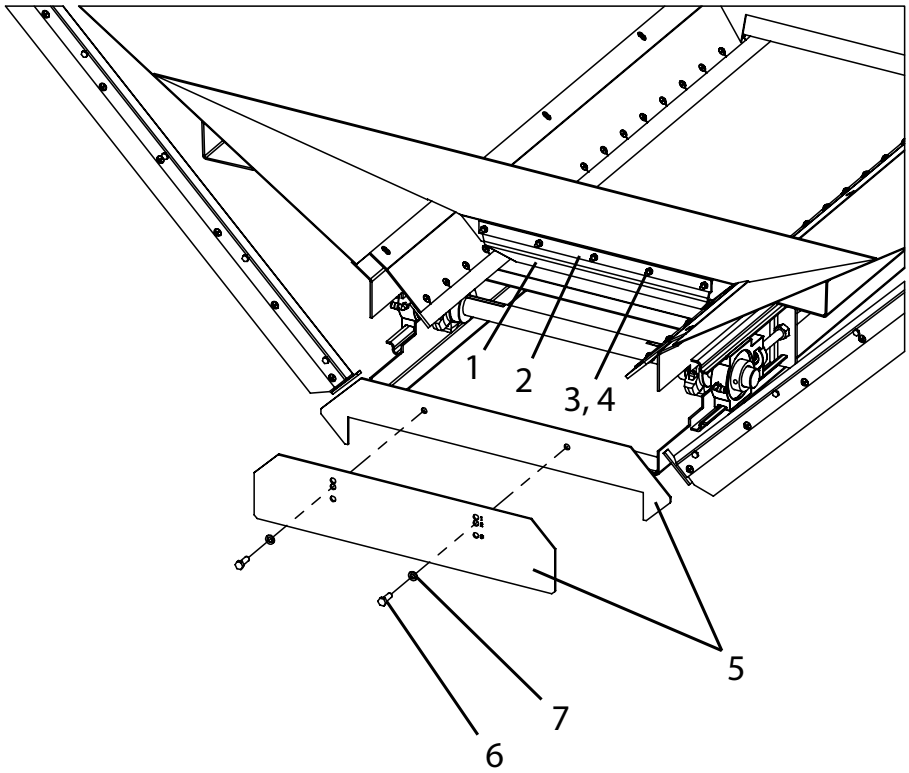


ITEM	PART NO.	DESCRIPTION	QTY
1	306579	Panel - Feedgate	1
2	36429	Pin - Hair	2



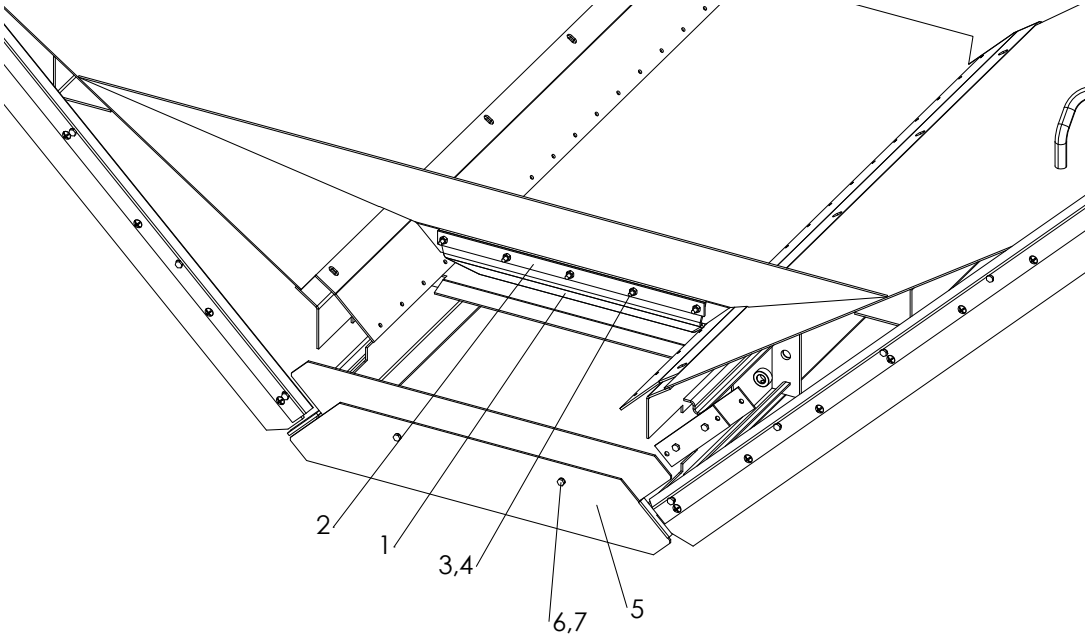
Note: Front endgate removed for clarity.

ITEM	PART NO.	DESCRIPTION	QTY
1	39426	Wiper – Belt Front	1
2	54230	Retainer – Wiper	1
3	42033	Screw - Truss Head 1/4 x 1	5
4	36412	Nut – Hex 1/4	5
5	304811	Feedgate - Panel 1.5”	1
	304812	Feedgate - Panel 2”	1
6	36398	Cap Screw - 3/8 x 1	2
7	36420	Washer - Lock 3/8	2



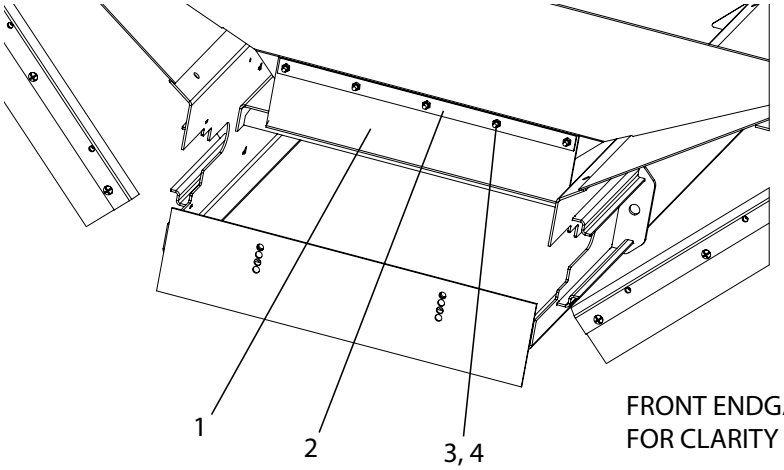
Note: Front endgate removed for clarity.

ITEM	PART NO.	DESCRIPTION	QTY
1	39426	Wiper – Belt Front	1
2	54230	Retainer – Wiper	1
3	42033	Screw - Truss Head 1/4 x 1	5
4	36412	Nut – Hex 1/4	5
5	311102	Panel - Feedgate	1
	311101	Frame - Feedgate	1
6	36398	Cap Screw - 3/8 x 1	2
7	36420	Washer - Lock 3/8	2

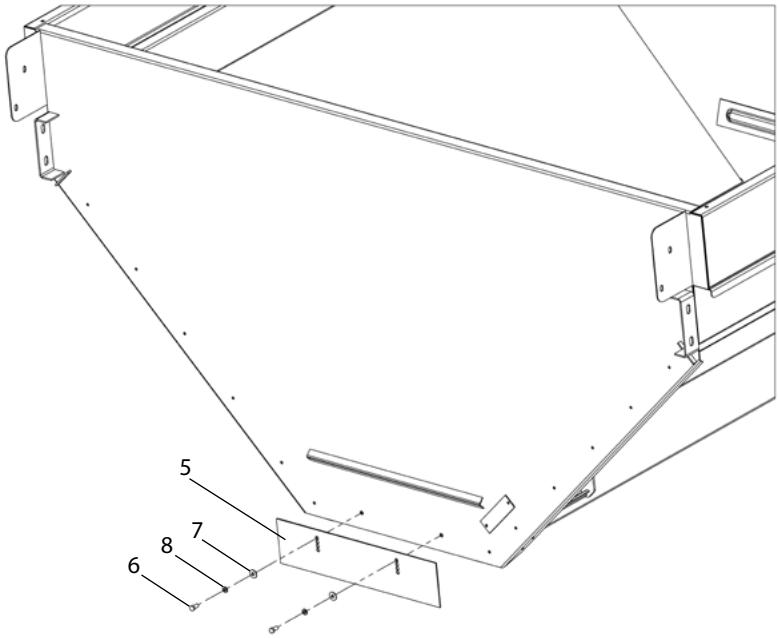


Note: Front endgate removed for clarity.

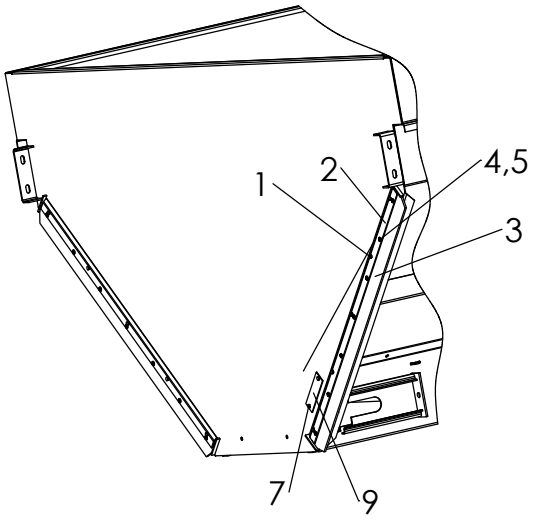
ITEM	PART NO.	DESCRIPTION	QTY
1	39426	Wiper – Belt Front	1
2	54230	Retainer – Wiper	1
3	42033	Screw - Truss Head 1/4 x 1	5
4	36412	Nut – Hex 1/4	5
5	304811	Feedgate - Panel 1.5”	1
	304812	Feedgate - Panel 2”	1
6	36398	Cap Screw - 3/8 x 1	2
7	36420	Washer - Lock 3/8	2



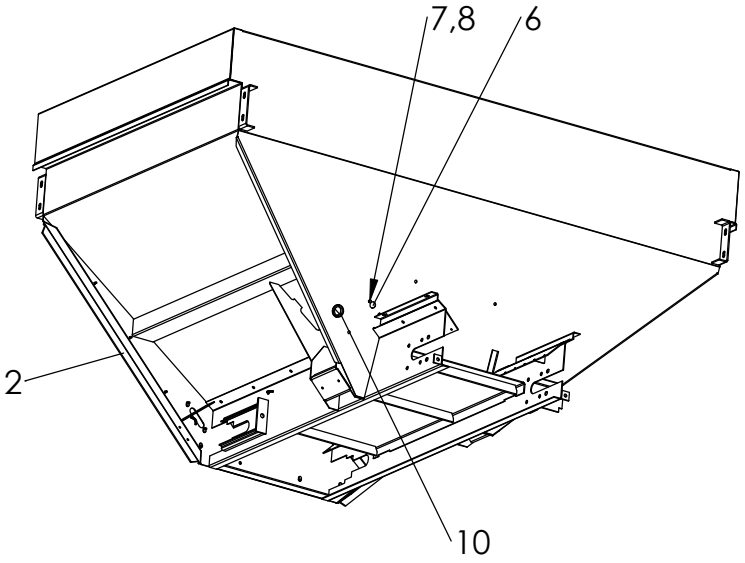
FRONT ENDGATE HIDDEN
FOR CLARITY



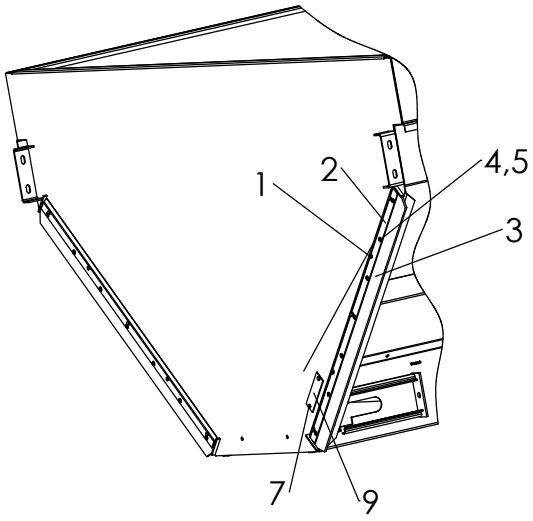
ITEM	PART NO.	DESCRIPTION	QTY
1	39426	Wiper – Belt Front	1
2	54230	Retainer – Wiper	1
3	42033	Screw – Machine 1/4-20NC x 1	5
4	36412	Nut – Hex 1/4-20NC	5
5	306583	Feedgate - 304	1
6	36293	Cap Screw - 3/8-16NC x 3/4 SS	2
7	36425	Washer - Flat 3/8 SS	2
8	36420	Washer - Lock 3/8 SS	2



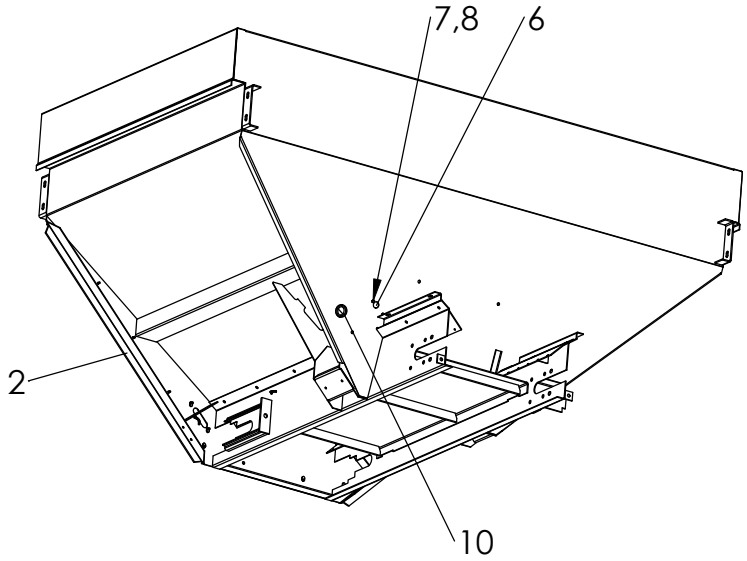
VIEW A-A



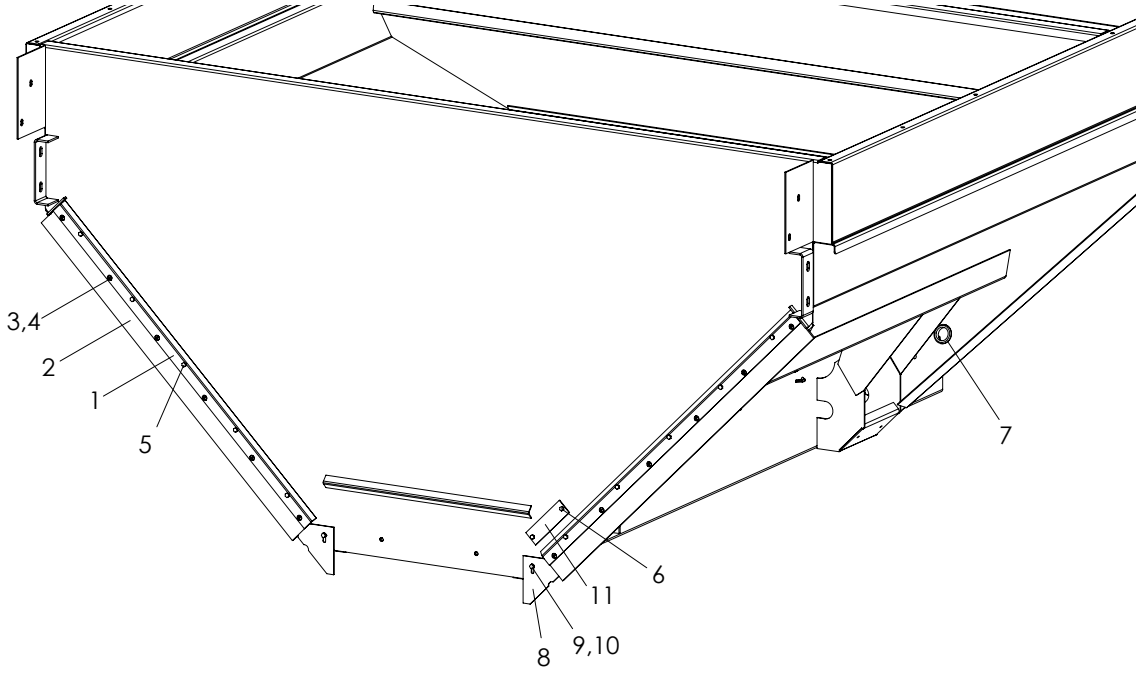
ITEM	PART NO.	DESCRIPTION	QTY
	310669	Seal - Assy, Includes 2-5	2
1	36395	Cap Screw - 1/4-20NC x 1 SS	10
2	310664	Retainer - Seal 304	1
3	310668	Seal - 3 x 1/4 x 42-1/4	1
4	88931	Nut - Tee 1/4 x 1/4	7
5	56258	Screw - Truss Head 1/4-20 x 1/2 SS	7
6	305832	Plate - Bin Sensor	1
7	36393	Cap Screw - 1/4-20NC x 3/4 SS	4
8	42034	Nut - Lock 1/4-20 SS	2
9	307125	Plate - Bin Sensor 304	1
10	34129	Grommet - Rubber	1



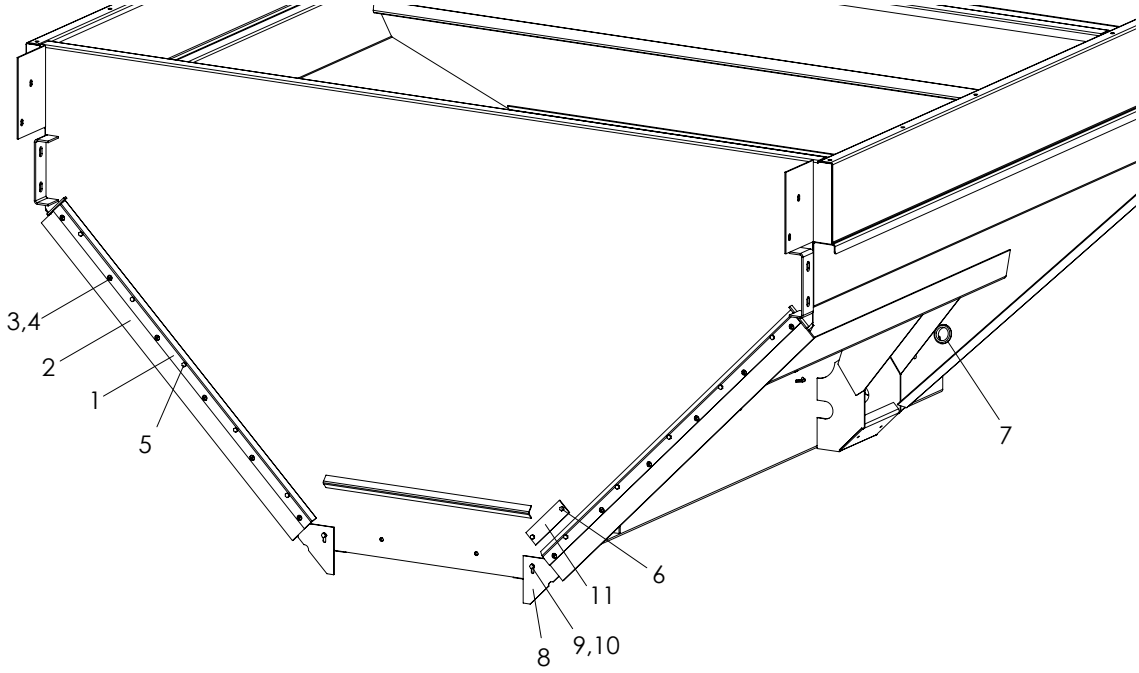
VIEW A-A



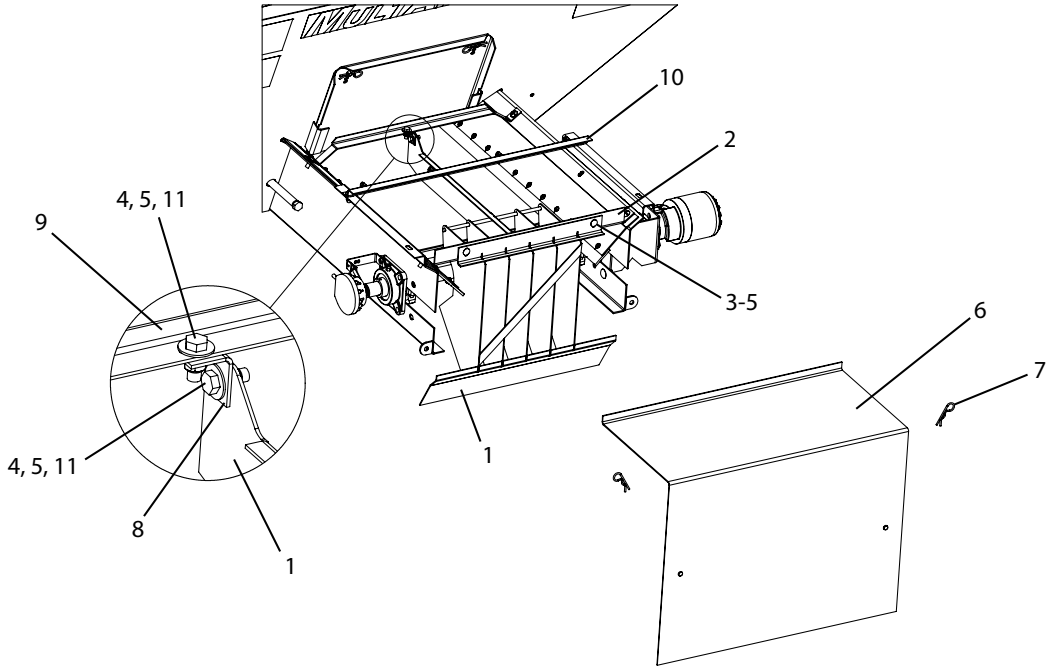
ITEM	PART NO.	DESCRIPTION	QTY
		Seal - Assy, Includes 2-5	2
1	36395	Cap Screw - 1/4-20NC x 1 SS	10
2		Retainer - Seal 304	1
3		Seal - 3 x 1/4 x 42-1/4	1
4	88931	Nut - Tee 1/4 x 1/4	7
5	56258	Screw - Truss Head 1/4-20 x 1/2 SS	7
6	305832	Plate - Bin Sensor	1
7	36393	Cap Screw - 1/4-20NC x 3/4 SS	4
8	42034	Nut - Lock 1/4-20 SS	2
9	307125	Plate - Bin Sensor 304	1
10	34129	Grommet - Rubber	1



ITEM	PART NO.	DESCRIPTION	QTY
	312361	Seal - Assy, Includes 1-4	2
1	312362	Retainer - Seal 304	2
2	312363	Seal - 3 x 1/4 x 40-1/2	2
3	56258	Screw - Truss Head 1/4-20NC x 1/2 SS	12
4	88931	Nut - Tee 1/4 x 1/4	12
5	36395	Cap Screw - 1/4-20NC x 1 SS	10
6	36393	Cap Screw - 1/4-20NC x 3/4 SS	2
7	34129	Grommet - Rubber	1
8	306707	Sealer - Endgate Bolt-In 304	2
9	36418	Washer - Lock 1/4 SS	2
10	40750	Cap Screw - 1/4-20NC x 1-1/4 SS	2
11	307125	Plate - Bin Sensor 304	1

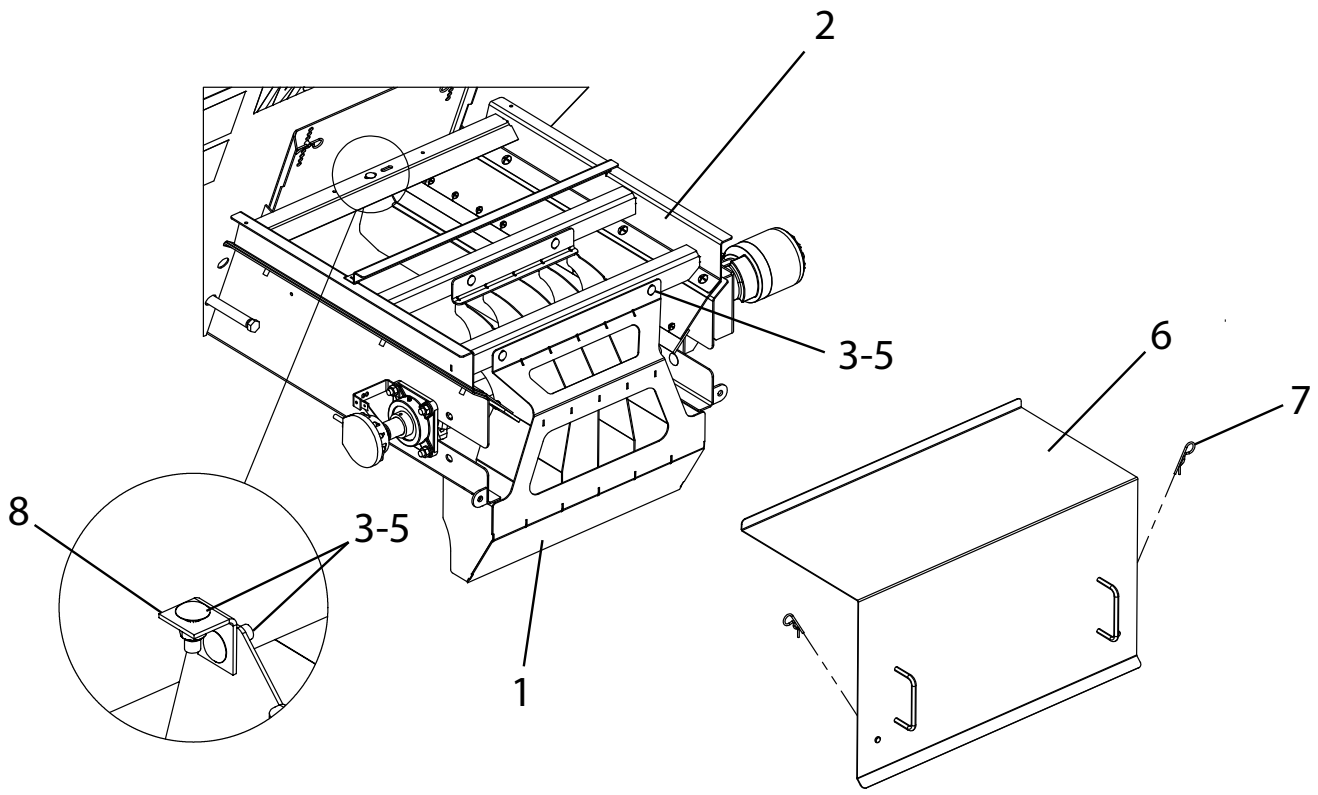


ITEM	PART NO.	DESCRIPTION	QTY
	312729	Seal - Assy, Includes 1-4	2
1	312730	Retainer - Seal 304	1
2	312731	Seal - 3 x 1/4 x 57-11/16	1
3	56258	Screw - Truss Head 1/4-20NC x 1/2 SS	6
4	88931	Nut - Tee 1/4 x 1/4	6
5	36395	Cap Screw - 1/4-20NC x 1 SS	10
6	36393	Cap Screw - 1/4-20NC x 3/4 SS	2
7	34129	Grommet - Rubber	1
8	306707	Sealer - Endgate Bolt-In 304	2
9	36418	Washer - Lock 1/4 SS	2
10	40750	Cap Screw - 1/4-20NC x 1-1/4 SS	2
11	307125	Plate - Bin Sensor 304	1

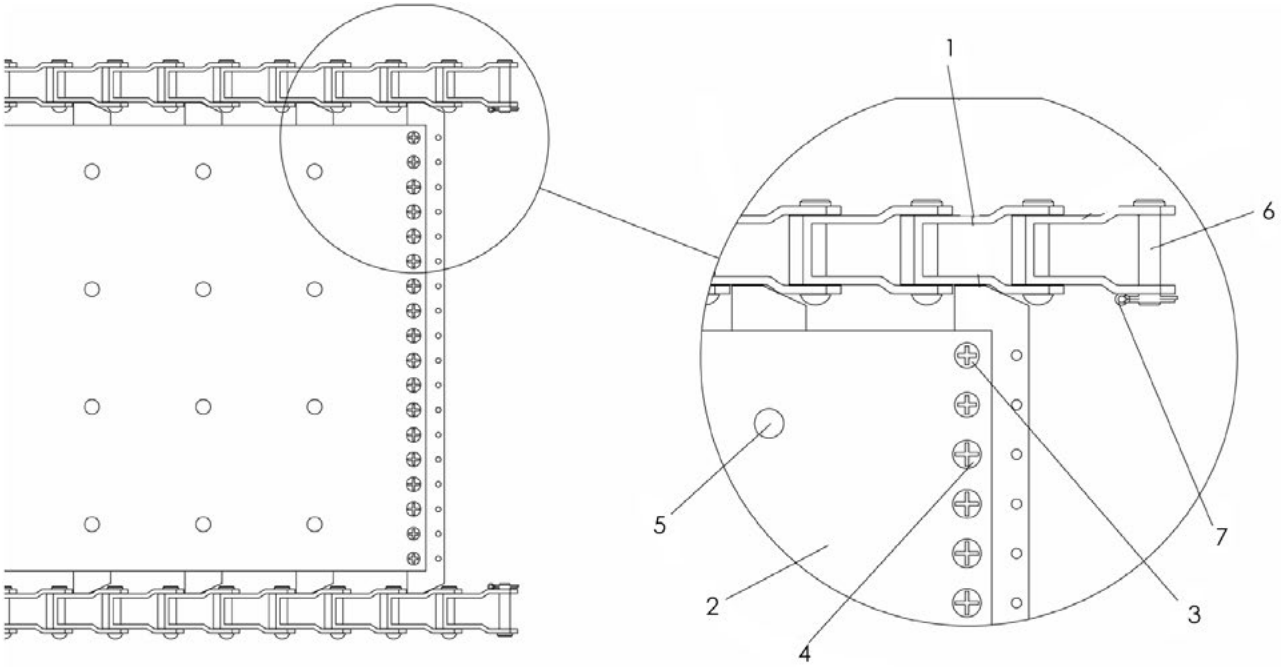


ITEM	PART NO.	DESCRIPTION	QTY
1	310503	Hillside Divider Wldmt 304	1
2	86825	Support - Divider 304	1
3	36408	Bolt - Carriage 3/8-16NC x 1 SS	4
4	36425	Washer - Flat 3/8 SS	4
5	72054	Nut - Lock 3/8-16NC SS	4
6	98562	Cover - Wldmt Rear 304	1
7	36429	Pin - Hair	2
8	306575	Clamp - Angle 304	1
9	306576	Support - Divider 304	1
10	98555	Hold Down - Cover Rear 304	1
11	36398	Cap Screw - 3/8-16 NC x 1 SS	2

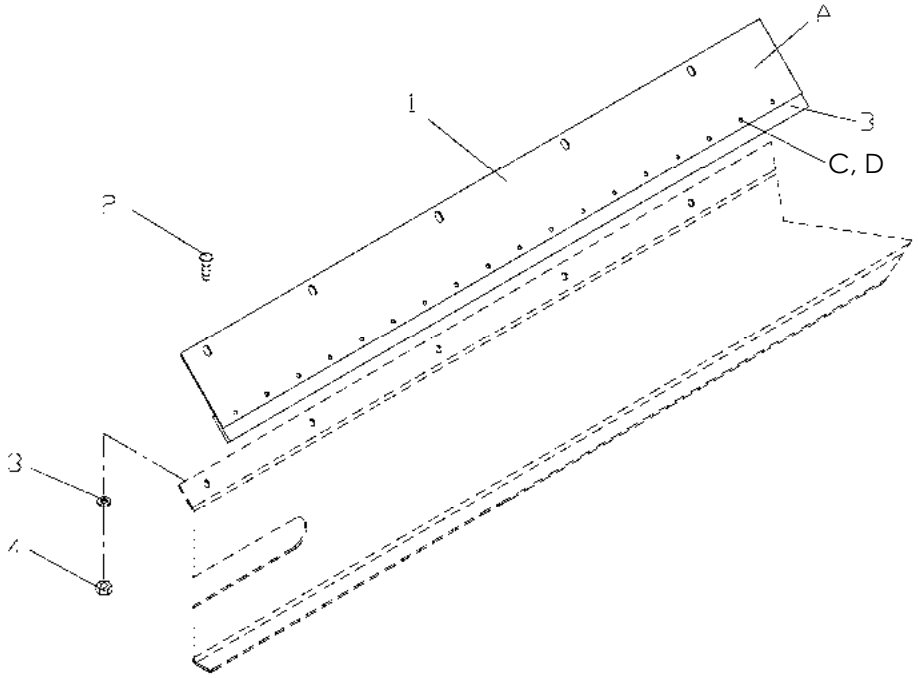
Note: Use chain shield hardware to attach Items 2 & 9 to sills.



ITEM	PART NO.	DESCRIPTION	QTY
1	312348	Hillside Divider Wldmt 304	1
2	312350	Support - Hillside Divider Wldmt 304	1
3	36408	Bolt - Carriage 3/8-16NC x 1 SS	4
4	36425	Washer - Flat 3/8 SS	4
5	72054	Nut - Lock 3/8-16NC SS	4
6	311444	Cover - Wldmt Rear 304	1
7	36429	Pin - Hair	2
8	306575	Clamp - Angle 304	1

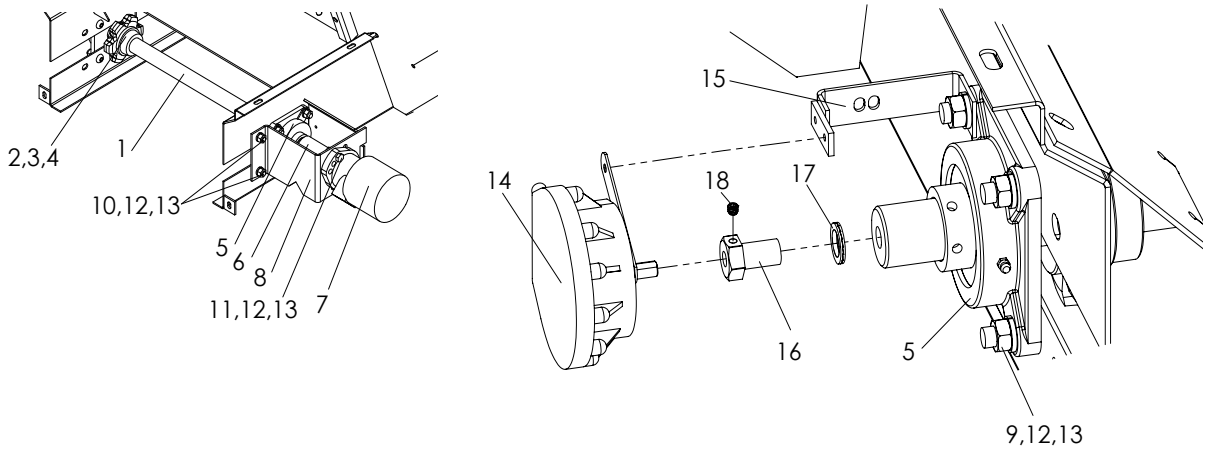


ITEM	PART NO.	DESCRIPTION	QTY
	308712-AB	Belt-Over-Chain - #4 5’ MOR	1
1	308660	Chain Wldmt	1
2	305304-AC	Belt - MOR 18” x 156”	1
3	20617	Screw - Flat 1/4-20NC x 1/2	8
4	20624	Screw - Truss 1/4-20NC x 1/2	28
5	308534	Screw - 1/4 x 1/2-20NC	124
6	21118	Pin - Chain Pintle	2
7	20817	Pin - Cotter	2



ITEM	PART NO.	DESCRIPTION	QTY
1	302828	Shield – Chain Assy	2
A	302827	Shield – Chain	2
B	305975	Belting – Sealer, specify length	AR
C	56258	Screw – Truss Hd 1/4-20 x 1/2	54
D	88931	Nut – Tee 1/4 x 1/4	54
2	71829	Screw – Machine 3/8-16 x 1 SS	14
3	36420	Washer – Lock 3/8 SS	14
4	36414	Nut – Hex 3/8-16 SS	14

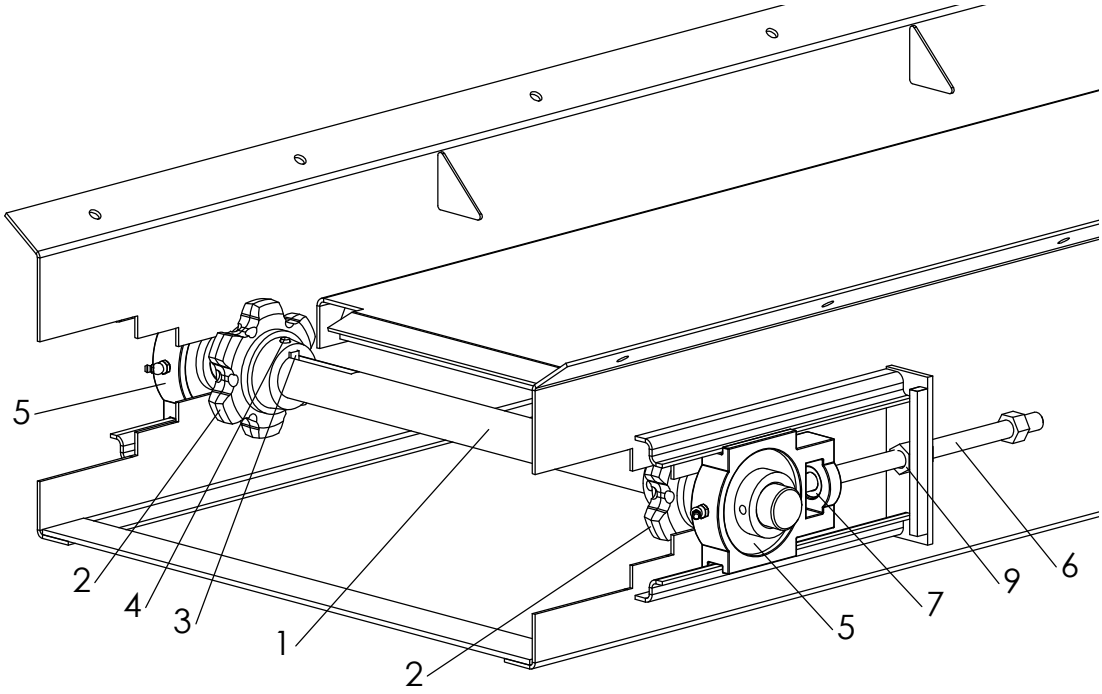
AR – As Required

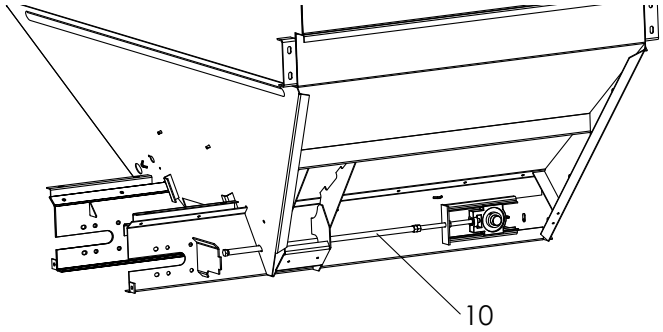


ITEM	PART NO.	DESCRIPTION	QTY
	86759-X1	Shaft - Drive Assy, Includes Items 1-5	
1	310644	Shaft - Drive	1
2	86757	Sprocket	2
3	6131	Key - Square	2
4	20743	Screw - Set	4
5	6697	Bearing	2
6	86762	Coupling - Shaft	1
	* 4059	Key - Square 5/16 x 1-1/2	1
7	311056	Motor - Hydraulic 17.1 CID	1
	*56327	Seal Kit	
8	86766	Mount - Motor	1
9	304484	Screw - Button Head 1/2-13NC x 1-1/2 SS	8
10	72056	Bolt - Carriage 1/2-13NC x 1 SS	2
11	36539	Cap Screw - 1/2-13NC x 1-1/2 SS	2
12	36422	Washer - Lock 1/2 SS	12
13	36416	Nut - Hex 1/2 SS	12
14	303994	Encoder - Conveyor 180	1
15	304953-X1	Bracket - Encoder	1
16	310601	Coupler - Rate Sensor	1
17	310602	Washer - Special Lock	1
18	310603	Screw - Set 1/4-20NC x 1/4 SS	1

* - Not Shown

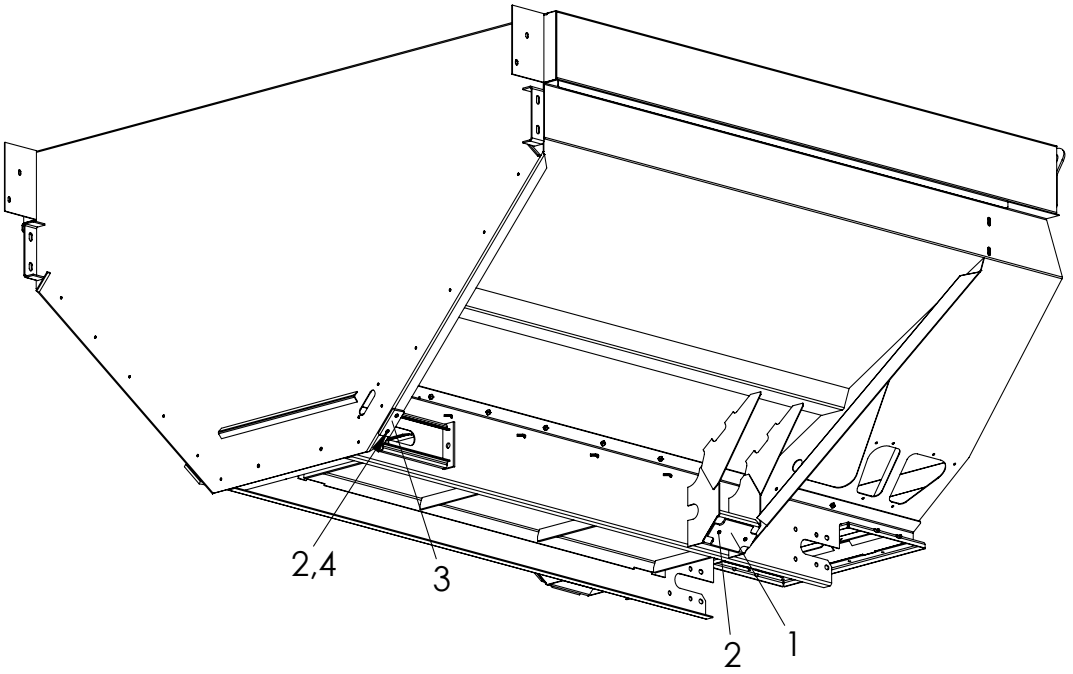
PARTS LIST





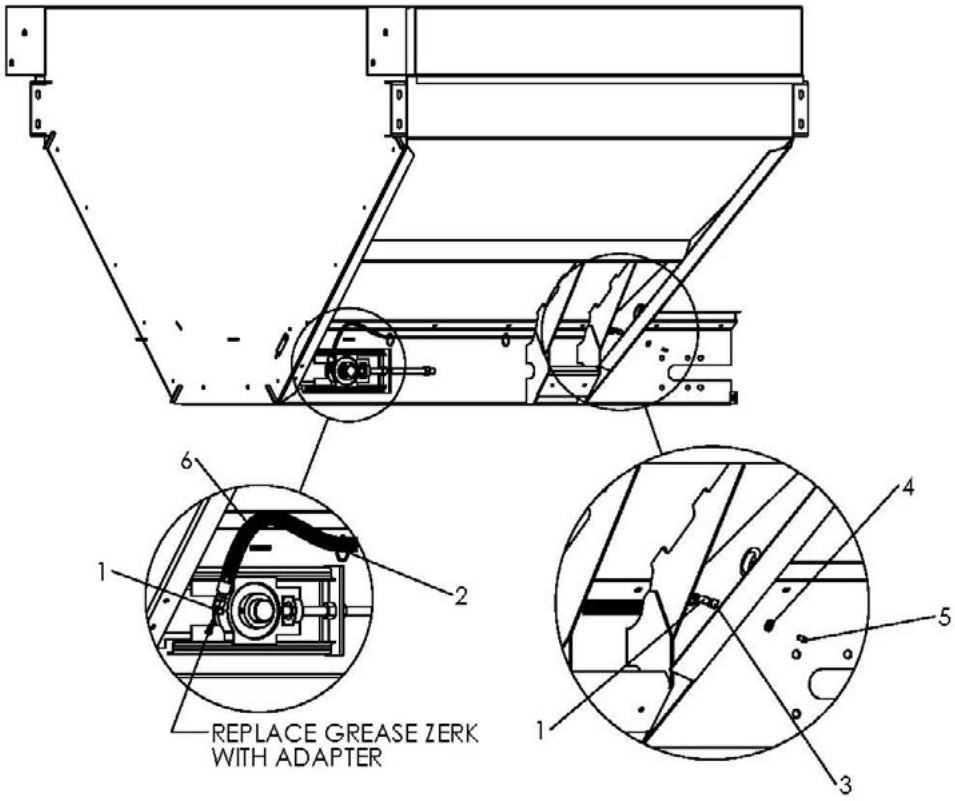
ITEM	PART NO.	DESCRIPTION	QTY
1	89779	Shaft – Idler	1
2	86757	Sprocket	2
3	6131	Key – Square	2
4	20743	Screw – Set 5/16-18NC x 3/8	4
5	22511	Bearing	2
6	87857	Bolt Wldmt	2
7	17078	Collar – Set	2
8	* 36417	Nut – Hex 5/8 SS	2
9	87856	Nut Wldmt 304	2
10	306974	Extended Idler - Pipe Wldmt Adj 5’ 304	2

* - Not Shown



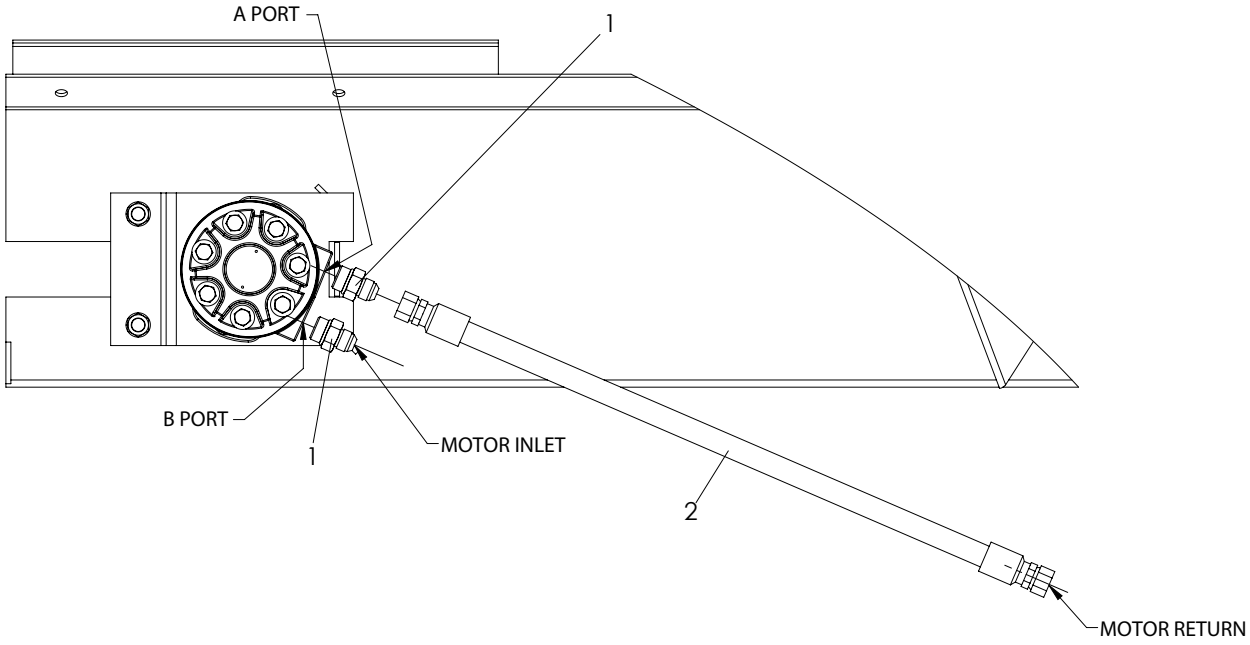
ITEM	PART NO.	DESCRIPTION	QTY
1	306924	Mount - Foot Pad	2
2	47268	Screw - Flathead 1/4-20NC x 1 SS	8
3	307097	Mount - Pad	2
4	42034	Nut - Lock 1/4-20NC SS	4

MULTAPPLIER IDLER GREASE ZERKS



ITEM	PART NO.		DESCRIPTION	QTY
	Style I	Style II		
1	34734	34734	Adapter - Elbow	4
2	99674	311806	Tie - Cable	AR
3	301332	301332	Connector - Bulkhead	2
4	301333	301333	Nut - Lock Connector	2
5	6072	6072	Zerk - Grease	2
6	307131	307131	Hose - Assembly 5’	2

AR - As Required



ITEM	PART NO.	DESCRIPTION	QTY
1	306740	Fitting - 8-10 070120S 304	2
2	310584	Hose - Assy 1/2 100R1 x 25-1/2" SS	1