NEW LEADER®

MODEL L3220G4

UNIT SERIAL NUMBER _____

MANUAL NUMBER: 97374-G

EFFECTIVE 11/2012

Hi-Way® NEW LEADER®

Highway Equipment Company

Building the best since 1939.

1330 76TH AVE SW
CEDAR RAPIDS, IA 52404-7052
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Insert Current New Leader Warranty

PREFACE

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 or (319) 363-8281.

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 factory at 1-888-363-8006 or (319) 363-8281.

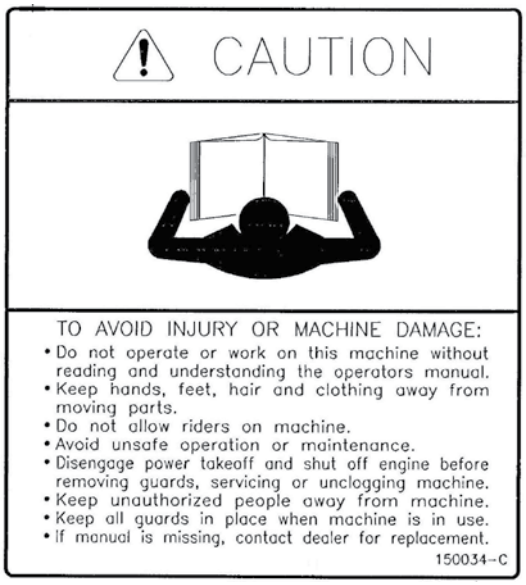
MAINTENANCE INSTRUCTIONS

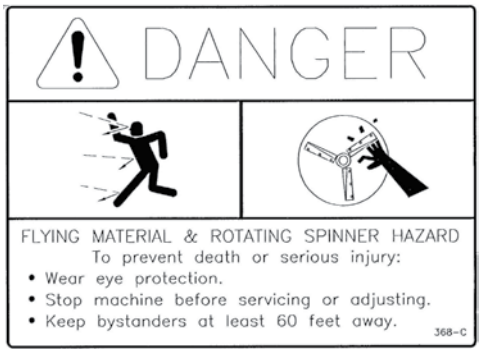
1. Keep safety decals and signs clean and legible at all times.
2. Replace safety decals and signs that are missing or have become illegible.
3. Replaced parts that displayed a safety sign should also display the current sign.
4. Safety decals or signs are available from your dealer's Parts Department or our Cedar Rapids factory.

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.

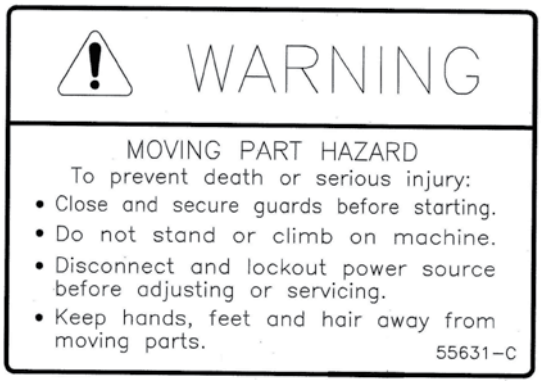

WARNING
HIGH PRESSURE FLUID HAZARD
To prevent death or serious injury:
• Relieve pressure on system before repairing, adjusting, or disconnecting.
• Keep all lines, fittings and couplers tight and free of leaks.
• Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead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

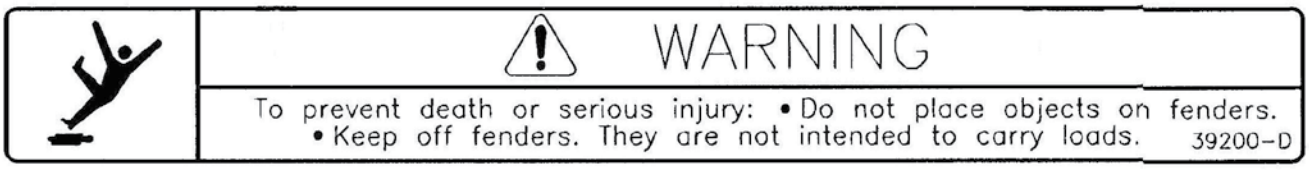

CAUTION
TO AVOID INJURY OR MACHINE DAMAGE:
• Do not operate or work on this machine without reading and understanding the operators manual.
• Keep hands, feet, hair and clothing away from moving parts.
• Do not allow riders on machine.
• Avoid unsafe operation or maintenance.
• Disengage power takeoff 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

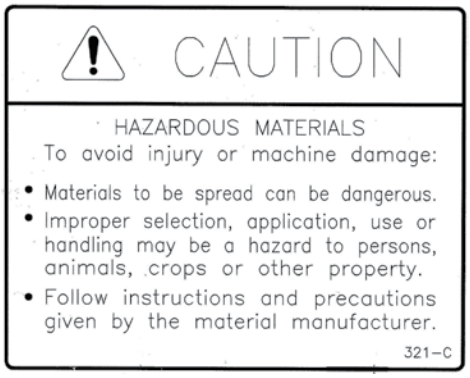

DANGER
FLYING MATERIAL & ROTATING SPINNER HAZARD
To prevent death or serious injury:
• Wear eye protection.
• Stop machine before servicing or adjusting.
• Keep bystanders at least 60 feet away.
368-C

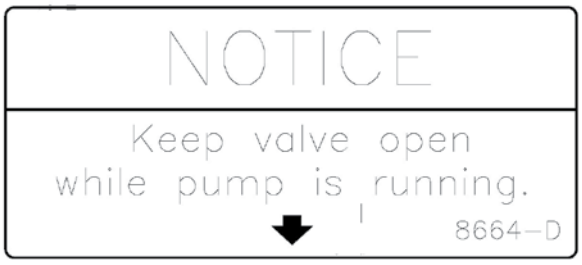

DANGER
MOVING PART HAZARD
To prevent death or serious injury:
• Stay out of box while conveyor is moving.
• Disconnect and lockout power source before adjusting or servicing.
• Do not ride on spreader.
364-C

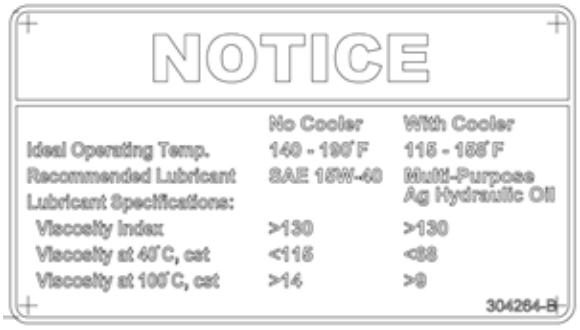

WARNING
FALLING HAZARD
To prevent death, serious injury or machine damage:
• Do not stand or climb on guard.
55630-D

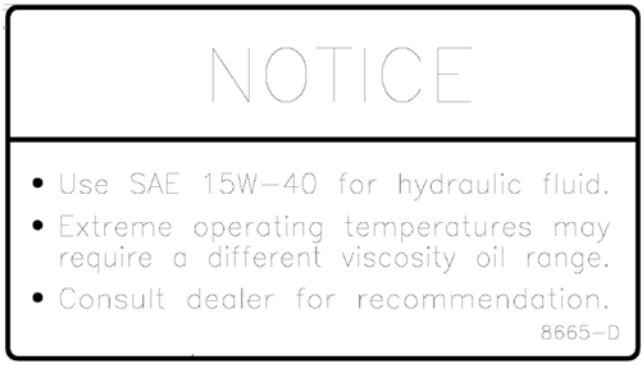

WARNING
MOVING PART HAZARD
To prevent death or serious injury:
• Close and secure guards before starting.
• Do not stand or climb on machine.
• Disconnect and lockout power source before adjusting or servicing.
• Keep hands, feet and hair away from moving parts.
55631-C

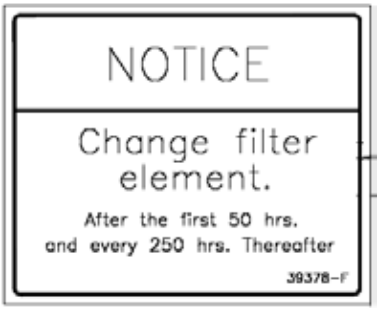

WARNING
To prevent death or serious injury: • Do not place objects on fenders.
• Keep off fenders. They are not intended to carry loads.
39200-D

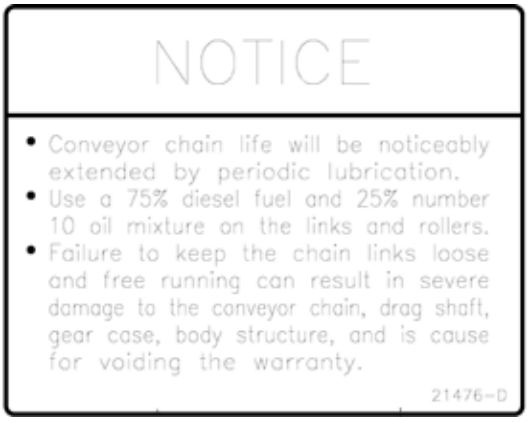

CAUTION
HAZARDOUS MATERIALS
To avoid injury or machine damage:
• Materials to be spread can be dangerous.
• Improper selection, application, use or handling may be a hazard to persons, animals, crops or other property.
• Follow instructions and precautions given by the material manufacturer.
321–C

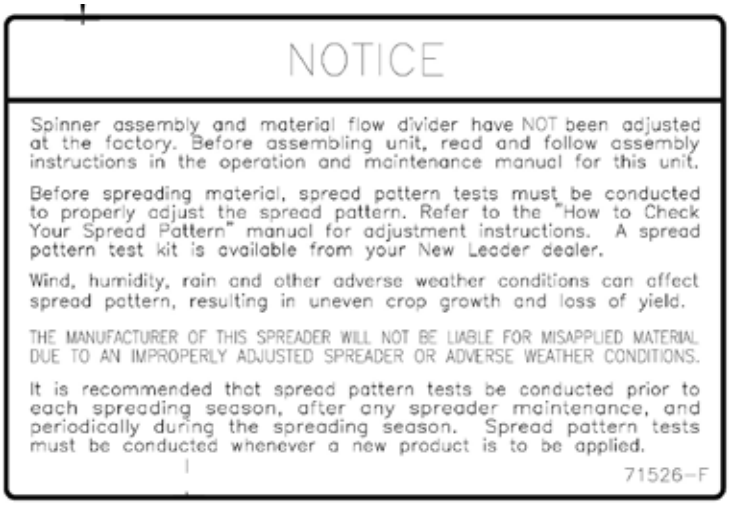

NOTICE
Keep valve open
while pump is running.
8664–D


NOTICE
No Cooler
With Cooler
Ideal Operating Temp.
140 - 190°F
115 - 165°F
Recommended Lubricant
SAE 15W-40
Multi-Purpose Ag Hydraulic Oil
Lubricant Specifications:
Viscosity Index
>130
>130
Viscosity at 40°C, cst
<115
<88
Viscosity at 100°C, cst
>14
>9
304284-B


NOTICE
• Use SAE 15W–40 for hydraulic fluid.
• Extreme operating temperatures may require a different viscosity oil range.
• Consult dealer for recommendation.
8665–D


NOTICE
Change filter element.
After the first 50 hrs.
and every 250 hrs. Thereafter
39378–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–D


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

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.

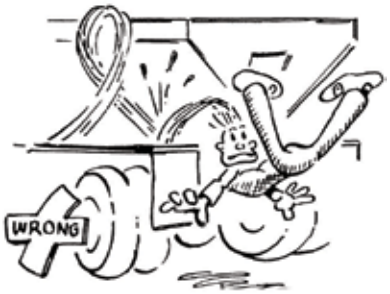
4. Stay out of the spreader. If it's necessary to enter the spreader, return to the shop, empty body, turn off all power, set vehicle brakes, lock engine starting switch and remove keys before entering. Tag all controls to prohibit operation. Tags should be placed, and later removed, only by person working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

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

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. Get medical assistance if such a wound occurs. To check for such leaks, use a piece of cardboard or wood instead of your hand. The fine spray from a small hydraulic oil leak can be highly explosive—DO NOT SMOKE—STAY AWAY FROM FLAME OR SPARKS.

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.

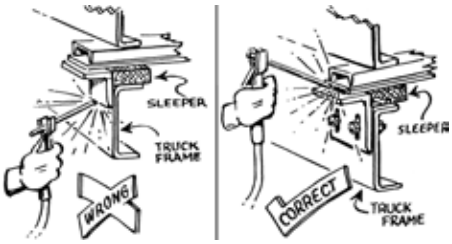
2. Follow mounting instructions in the Installation section of this manual. If mounting conditions require deviation from these instructions refer to factory.

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.

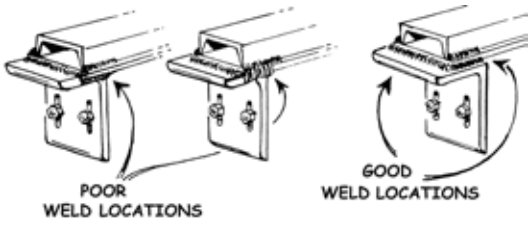
4. When selecting a PTO to drive hydraulic pump, do not use a higher percent speed drive than indicated in the Installation section of this manual. Too high a percent PTO will drive pump at excessive speed, which can ruin the pump, but more importantly, will overheat the hydraulic oil system and increase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

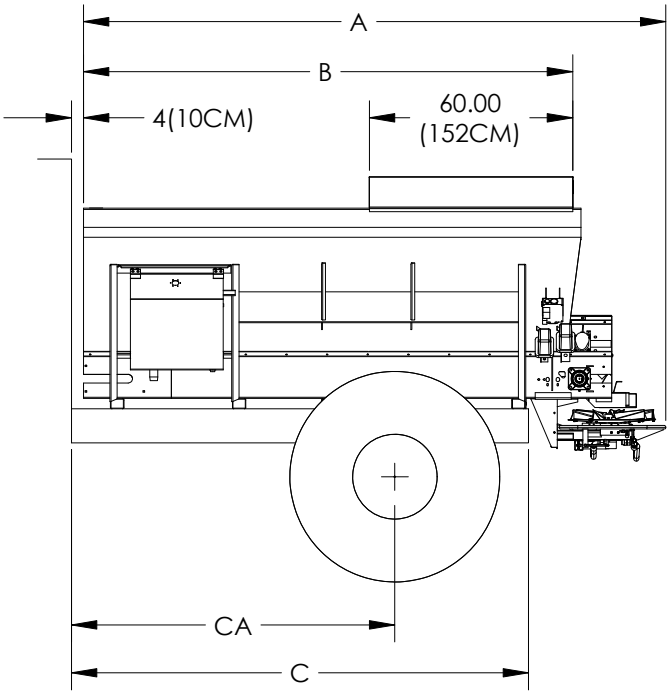
The Model L3220G4 is a hopper type spreader intended for spreading free flowing granular agricultural materials, such as chemical fertilizers, agricultural limestone, and gypsum. The MULTAPPLIER allows you to spread two different materials, individually or combined. It is intended for truck chassis or flotation vehicle mounting.

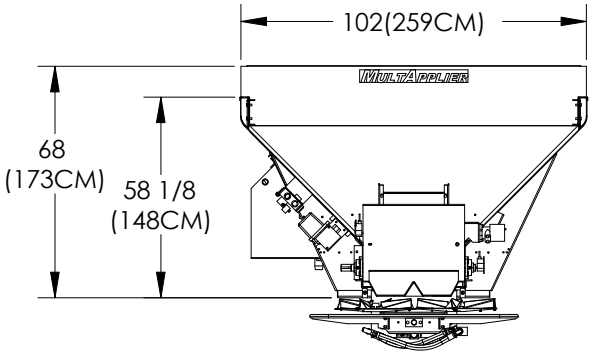
The unit is powered hydraulically and provides independent variable speed control for the spinner and full automatic ground speed control for the conveyor. The hydraulic pump, which provides the hydraulic power, is a gear type pump and is driven by means of a transmission PTO.

The dual conveyors deliver material to the spinners through an adjustable metering gate at the rear of the hopper body. Orbital type hydraulic motors mounted to 6 to 1 ratio spur gear case on the L3220G4 and a direct drive motor on the MULTAPPLIER drive the conveyors. The standard conveyor is a belt-over-chain type having parallel strands of pintle type chain joined by cross bars every other link.

The distributor spinner assembly has two 24-inch 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.

This product is intended for commercial use only.





L3220G4				
Body Length	**Overall A**	**Frame C**	**Cab to Axle or Cab to Tandem – CA/CT**	**Struck Capacity Cu Yd (Cu M) Cu Ft**
12’ (3.66 m)	172” (437cm)	135” (343cm)	102” (259cm) CA	9.4 (7.2) 254.6
13’ (3.96 m)	184” (467cm)	147” (373cm)	102-108” (259-274cm) CT	10.3 (7.8) 277.1
14’ (4.27 m)	196” (498cm)	159” (404cm)	120” (305cm) CT	11.1 (8.5) 299.6

L3220G4	With 5’ MULTAPPLIER	With 7’ MULTAPPLIER
Body Length B	**Struck Capacity Cu Yd (Cu M) Cu Ft**	**Struck Capacity Cu Yd (Cu M) Cu Ft**
12’ (3.66 m)	5.51 (4.21) 149	3.94 (3.01) 106
13’ (3.96 m)	6.34 (4.85) 171	4.72 (3.61) 127
14’ (4.27 m)	7.18 (5.49) 194	5.51 (4.21) 149

MULTAPPLIER	
Length	**Struck Capacity Cu Yd (Cu M) Cu Ft**
12’ (3.66 m)	5.51 (4.21) 149
13’ (3.96 m)	6.34 (4.85) 171
14’ (4.27 m)	7.18 (5.49) 194

Refer to www.highwayequipment.com for installation instructions. Once on the website, click New Leader, then Customer Support, then Other New Leader Manuals & Instructions, then New Leader Installation Instructions.

WARNING Stand clear of moving machinery.

NOTE: Do not load spreader with material.

1. Check entire unit to make sure all fasteners are in place and properly tightened per *Standard Torques National Coarse (NC) Capscrews* section in this manual.
2. Make sure no other persons are in vicinity of truck 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 reservoir; fill as necessary. Refer to *Lubricant & Hydraulic Oil Specifications* section of this manual for proper oil. Completely open gate valve under reservoir.
6. Set throttle so engine runs at about 1000 RPM. Engage PTO driving pump. Allow pump to run and circulate oil for several minutes. Increase warm-up time in cold weather.
7. Manual spinner control valve: Move to position "3''.
   PWM spinner control valve: Run at 300 RPM.
   Spinner should run at slow speed. Allow to run until it is operating smoothly and all air has been purged.
8. Manual spinner control valve: Move to position "0''.
   PWM spinner control valve: Run at 0 RPM.
9. Refer to the control's operation manual for the correct setting to operate the conveyor. Run conveyor until it's operating smoothly.
10. Manual spinner control valve: Move to position "5".
    PWM spinner control valve: Run at 500 RPM.
    Allow both spinner and conveyor to run. Shut down system.

WARNING DO NOT check leaks with hands while system is operating as high pressure oil leaks can be dangerous! DO NOT check for leaks adjacent to moving parts while system is operating as there may be danger of entanglement!

11. Check all connections in hydraulic system to make sure there are no leaks.
12. Check hydraulic oil reservoir and refill to maintain level around mid-point of sight gauge.
    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, that oil reservoir is full and gate valve under reservoir is fully open. Do not load spreader.
3. Manual spinner control valve: Set to position “5”.
   PWM spinner control valve: Run at 500 RPM.

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 truck engine. Turn control to “on’’ position. Engage PTO and allow to run at fast idle long enough to bring hydraulic oil up to operating temperature. Spinners should revolve at moderate speed and the conveyor should not move.
5. Refer to control’s operation manual for conveyor operating instructions. Set program to operational mode and begin forward travel. Move conveyor switch to “on’’ position. Conveyor should start immediately when vehicle moves and should continue to run at speeds which should vary directly with the vehicles road speed; the conveyor should speed up as truck speed increases and slow down as truck 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 body with material to be spread.
3. Drive to location where spreading is to be done.
4. Adjust spinner control valve for material being applied to give spread width desired. See *G4 Spread Pattern* section.
5. Adjust spinner to give spread pattern desired. See *G4 Spread Pattern* section.
6. Set rear feedgate opening to obtain yield desired. Turn feedgate handle to adjust L3220G4 feedgate opening.

   To adjust MULTAPPLIER rear feedgate: pull hairpins and move feedgate. Measure from conveyor to bottom of feedgate to determine opening—holes are at 1/2-inch (13mm) intervals. Replace hairpins.

   To adjust MULTAPPLIERR front feedgate see "Front Feedgate Adjustment" under *Installation Instructions.*

7. Make sure shut-off valve on hydraulic reservoir is fully opened.
8. Turn on power to controller and set program to desired values.
9. Engage pump drive PTO.

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

10. Drive at speeds that allow engine to turn at proper RPM.

    Higher transmission gears may be used with speeds to 30 MPH. If lower speeds must be used, shift transmission into lower gears so that engine speed can be maintained to allow adequate hydraulic oil delivery from pump.

NOTICE!	CHANGE HYDRAULIC OIL FILTER AFTER FIRST WEEK (OR NOT MORE THAN 50 HOURS) OF OPERATION ON A UNIT.

*Visit **www.newleadervip.com** for interactive tools to calculate yield, proper feedgate opening, conveyor revolutions per minute, and mph to maximize the performance of your spreader.

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

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 *Lubricant and Hydraulic Oil Specifications* section for selection of the proper hydraulic fluid for use in the hydraulic system.

Service Schedule

WARNING	DO NOT check leaks with hands while system is operating as high pressure leaks are very dangerous! DO NOT check for leaks adjacent to moving parts while system is operating as there may be danger of entanglement!

1. Check hydraulic oil daily by means of sight gauge on reservoir. Add oil as necessary to maintain level around mid-point of sight gauge. Periodically inspect hoses and fittings for leaks.

NOTICE!	2. CHANGE HYDRAULIC OIL FILTER AFTER FIRST WEEK (OR NOT MORE THAN 50 HOURS) OF OPERATION ON A UNIT.

3. After first filter change, replace filter when indicator reaches Red Zone.
4. Drain reservoir through drain plug (not through suction outlet), flush, and refill and change filter element annually. Oil and filter should also be changed whenever oil shows any signs of breaking down under continued high-pressure operation. Discoloration of oil is one sign of breakdown.

BIN 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.

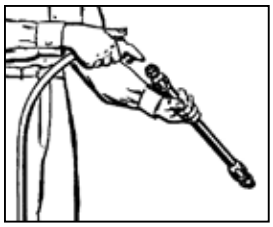
NOTICE!	Wipe sensor clean periodically to prevent accumulation of product. Avoid wet material as it may stick to sensor. If material sticks to sensor it won't warn user when bin is low.

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

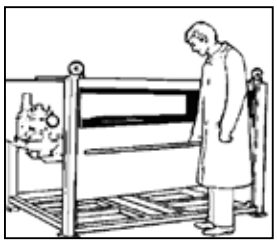
Hose assemblies in operation should be inspected frequently for leakage, kinking, abrasion, corrosion or other signs of wear or damage. Worn or damaged hose assemblies should be replaced immediately.

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 (66° 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).

CONVEYOR CHAIN

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.

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!

Lubrication

Make sure unit is clean and completely dry. Lubricate conveyor chain at the end of each day of usage using a mixture of 75% diesel fuel and 25% SAE 10 oil. Shut down spinner and run conveyor at 20 RPM for two full revolutions to lubricate chain. After each unit washing, allow to dry, then lubricate.

Before filling the unit with spreading material, activate the controller or power switch to run the pump oiler. Bleed all air from the lines and adjust the two spray nozzles (Figure 9) so that the oil mixture sprays vertical onto the sprockets and chain.

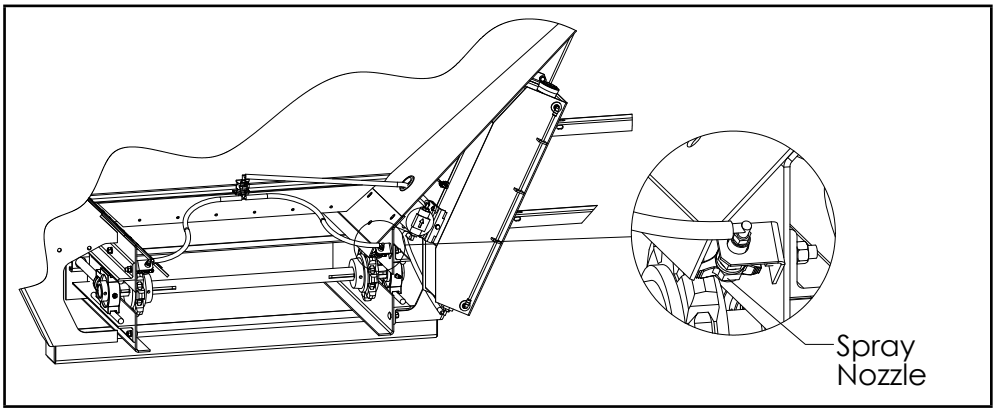


Figure 9 - Spray Nozzle

Tension

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 the idler bearings.

Chain Tension to be Measured from Rear of Sill.

Proper Tension:

L3220G4 main conveyor
36" to 40"
(91cm - 102cm)

MULTAPPLIER conveyor center*

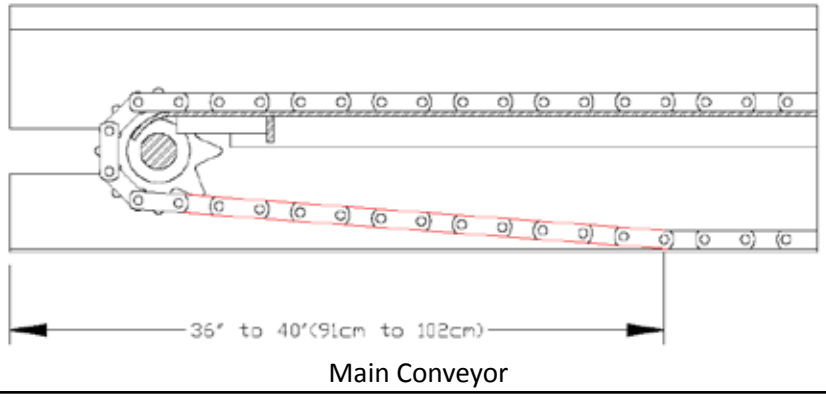


Figure 10 - Adjusting Chain Tension

*NOTE: MULTAPPLIER conveyor touches bottom of sill only 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.

CONVEYOR BELT MAINTENANCE

Standard belt for the #4 chain 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.

BOTH PIN ENDS MUST BE BENT DOWN & TIGHT AGAINST ENDS OF LACING

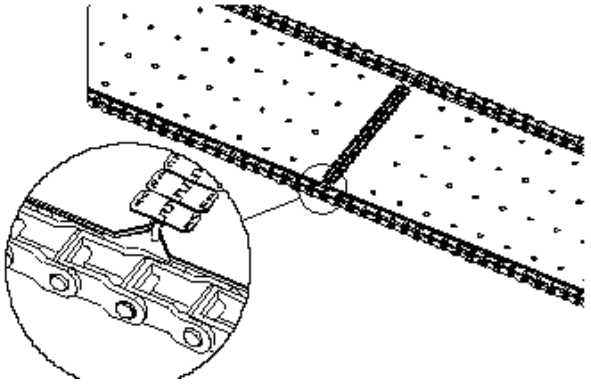


Figure 11 - Conveyor Belt Pin Installation

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.

CLEAN UP

NOTICE!	High pressure wash can inject water and/or fertilizer into control components, causing damage. Use caution when cleaning these areas.

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 screws fasteners to recommended torque’s 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 unquestionable 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

Use premium quality lubricants with 100-200 SUS or 20-43 cSt viscosity at operating temperatures. The hydraulic fluid's specifications in the table below are for normal operating conditions. Extreme environments or dirty conditions may require the use of different oils. Consult your New Leader dealer or the Product Support Department at Highway Equipment Company for systems operating outside normal conditions.

	No Cooler	**With Cooler**
Ideal Oil Operating Temperature	140 - 190°F (60 - 88° C)	115-158°F (46-70° C)
Recommended Premium Lubricant	Automotive Engine Oil	Multi-Purpose Agriculture Hydraulic & Transmission Oil
Lubricant Specifications Viscosity Index Viscosity at 40°C, cst Viscosity at 100°C, cst	 Greater than 130 Less than 115 Greater than 14	 Greater than 130 Less than 68 Greater than 9
Acceptable Fluid Sample	**Valvoline All-Fleet Plus® SAE 15W-40**	**John Deere Hy-Gard® J20C**

GEAR CASE 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 (4.5 to 38° C). Ambient temperatures below 40° F (4.5° C). require an SAE 80 E.P. lubricant; above 100° F (38° C). use an SAE 140 E.P. grade oil. Refill gear case with one and a half (1-1/2) pints (.70 liters) of recommended lubricant.

GREASE GUN LUBRICANT

Use a waterproof ball and roller bearing lithium base lubricant with a minimum melting point of 300°F (149° 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.

LUBRICATION AND MAINTENANCE CHART

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:

LOCATION	PLACES	METHOD	FREQUENCY
Transmission PTO			
Slip Yoke	1	Grease Gun	Weekly
Universal Joint	2	Grease Gun	Monthly
Hydraulic System			
Reservoir	1	Oil	Check Daily. Change Annually
Filter	1	Check daily; Change when indicated (Red)	
Conveyor			
Dragshaft Bearings	2	Grease Gun	Weekly
Idler Shaft Bearings	2	Grease Gun	Weekly
Take-Up Screws	2	Hand Grease	Weekly
Chain	2 Strands	Spray Oil	Daily
Chain Oiler (If so equipped)	1	Oil Mixture	Daily, After Use
Gear Case	1	Gear Oil	Check Monthly; Change Annually
Jack Assembly			
Gears	1	Grease Gun	Annually
Tube	1	Grease Gun	Weekly
Spinner			
Grease Zerks - Shaft	2	Grease Gun	Weekly
Grease Zerks - Jack	2	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.

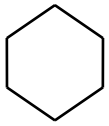
- Symptom: Spinner motors do not turn when spinner control valve is in running position. See reasons 1, 2, 3, 4, 5, 7, 8 & 9.
- Symptom: Spinners turn but conveyor does not run in manual mode. See reasons 6, 8, 9, 10 & 22.
- Symptom: Console in operation mode, but the conveyor does not move when the machine moves. See reasons 6, 8, 9, 10 & 22.
- Symptom: Spinner speed does not stay constant. See reasons 4, 5, 11, 12 & 13.
- Symptom: Spinners run with cab control in "Off" position. See reason 14.
- Symptom: Hydraulic oil overheats (200° F (93.33° C). or hotter). See reasons 1, 4, 6, 15, 16, 17 & 18.
- Symptom: Light flashes and buzzer sounds intermittently. Conveyor runs in jerks. See reasons 19 & 22.
- Symptom: Conveyor does not run with cab control "On", PTO engaged and vehicle driving forward. See reasons 20 & 22.
- Symptom: Conveyor runs when control switch in cab is in "Off" position. See reasons 15 & 21.
- Symptom: Conveyor starts to run when PTO is engaged. See reasons 15, 20, 21 & 22.
- Symptom: Controller application or programming. Refer to the control manual's Troubleshooting section.
- Symptom: Undesirable spread pattern. See G4 spread pattern section at the back of this manual.

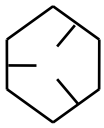
Reason:	Correction:
1. Hydraulic oil level low.	Add hydraulic oil to reservoirto maintain level around mid-point of sight gauge.
2. Shut Off valve on oil reservoir not open.	Open valve fully by turning counter clockwise until it stops.
3. Hydraulic Pump is not rotating.	1. PTO is disengaged. Shift into engagement. 2. Drive line has failed. Repair or replace. 3. Key in pump shaft has failed. Replace key. 4. U-joint pin or key has failed. Replace pin or key.
4. In line relief valve set too low.	In line relief valve pressure should be 3100 PSI (213.7 b) . If unit is not equipped with a pressure gauge, install one at main relief valve. Disconnect pressure line from main relief valve and reconnect to flow meter and load valve. Open load valve fully and run truck engine at field operating speed with pump engaged. Slowly close load valve until pressure reaches 3100 PSI (213.7 b). If this pressure cannot be reached, adjust relief valve until gauge reads 3100 PSI (213.7 b). **CAUTION: Do not set pressure above 3100 PSI (213.7 b).**
5. Worn pump.	With flow meter arranged to check relief valve setting above, open load valve fully. Read flow rate with truck engine running at field operating speed. Close load valve until pressure reads 2000 PSI (137.9 b). Flow rate should not decrease more than ten percent. If flow loss is greater, replace pump.

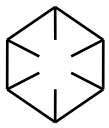
Reason:	Correction:
6. Conveyor relief valve open to return line.	Using relief valve testing adapter and flow meter, test valve for opening pressure. If not 2000 PSI (137.9 b), replace relief valve.
7. Jammed or frozen spinner motors.	Free up. If not possible, replace as required.
8. Jammed or frozen conveyor.	Free up conveyor.
9. Jammed or frozen conveyor hydraulic motor.	Replace motor.
10. Conveyor hydraulic motor shaft key sheared.	Replace key.
11. Pump speed is not adequate to provide sufficient flow to maintain spinner speed.	Increase engine speed.
12. Insufficient hydraulic oil flow at normal driving speeds.	Check PTO-Pump matching. If insufficient flow results, install higher percent PTO or use larger pump (Special).
13. Defective spinner control valve.	Replace valve metering spool spring. If no improvement, replace spinner control valve.
14. Cab control is for conveyor only—spinners run anytime vehicle engine is running, PTO is engaged and spinner control valve is in a running position.	None required. This is a normal condition. To stop spinners, set spinner control valve at "O" position, disconnect PTO, or shut off vehicle engine.
15. Excessive oil is being pumped.	1. PTO percentage too high. Change PTO to smaller percentage or use smaller pump. 2. Pump is too large. Do not exceed 40 GPM (151.4 LPM) pumping rate. Change to smaller pump or use smaller percentage PTO. 3. Pressure drop in control valve is sufficient to run lightly loaded conveyor motor. Shut off pump drive by disengaging PTO shaft.
16. Worn motor (spinner or conveyor)	Motor heats up at an excessive rate (check for this heating when system is cold.) Replace motor.
17. Improper or deteriorated hydraulic oil.	Replace hydraulic oil with proper specification oil and replace filter.
18. Pinched or obstructed hose, hydraulic line or fitting.	Clear obstruction or replace part. Straighten kinked hoses.
19. Driving too fast for application rate.	Shift truck transmission to a lower gear. Will not normally occur if within maximum application rates.
20. Defective radar.	Check speed on console. Repair or replace radar as required.
21. Control processor's power is in "Off" position.	Turn on control processor.
22. Involves the controller.	Refer to control manual.

STANDARD TORQUES NATIONAL COARSE (NC) CAPSCREWS

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.

CAP SCREW SIZE	TORQUE - FOOT-POUNDS					
	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

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 ca 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.

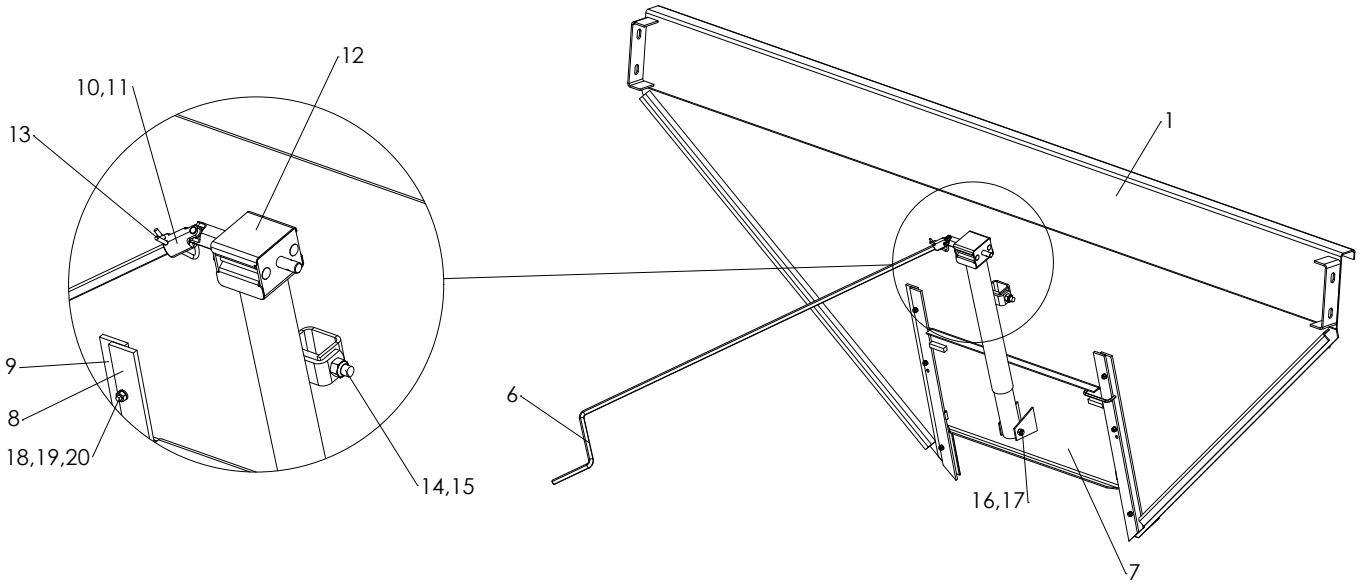
If your claims are not being handled (by the transportation company) to your satisfaction, please call the Parts Manager at Highway Equipment Company (319-363-8281) for assistance.

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

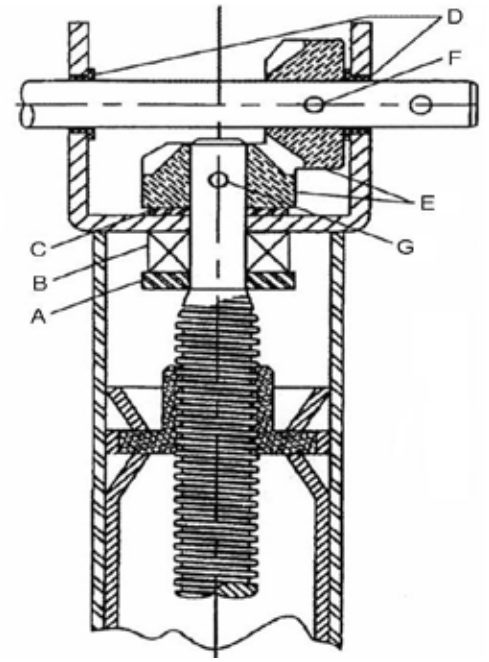
* - Not Shown
AR – As Required
CS – Carbon Steel
SS – Stainless Steel

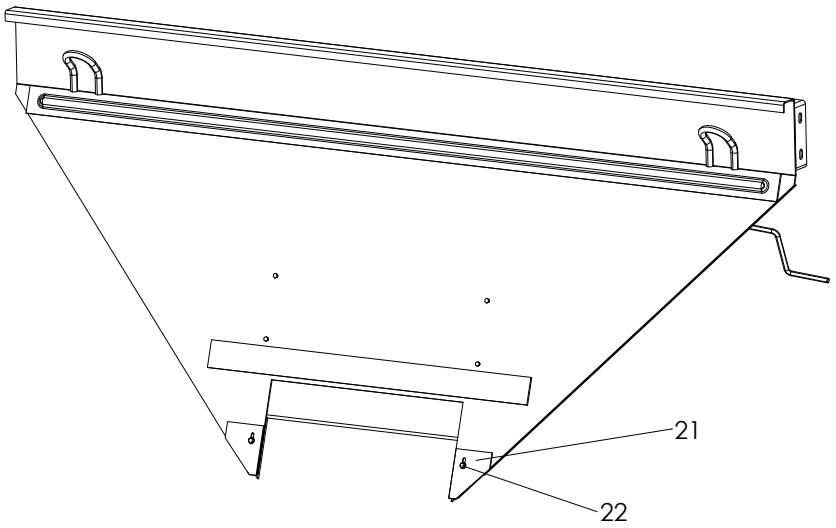
The parts listed under the different steel types (CS, 409 SS and 304 SS) are for that type of unit and do not necessarily mean the part is made of that type of steel.

REMOVABLE ENDGATE, FEEDGATE & JACK



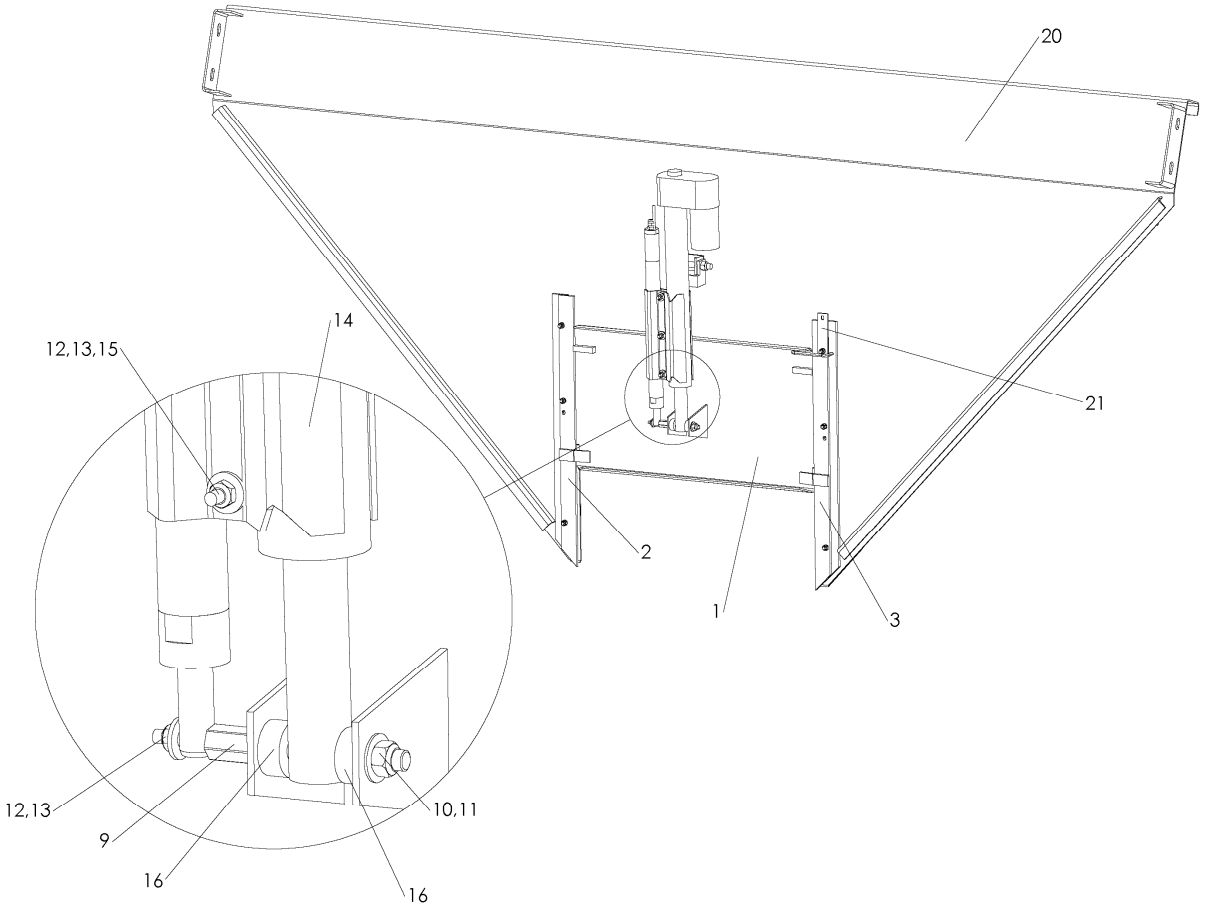
JACK





PARTS LIST

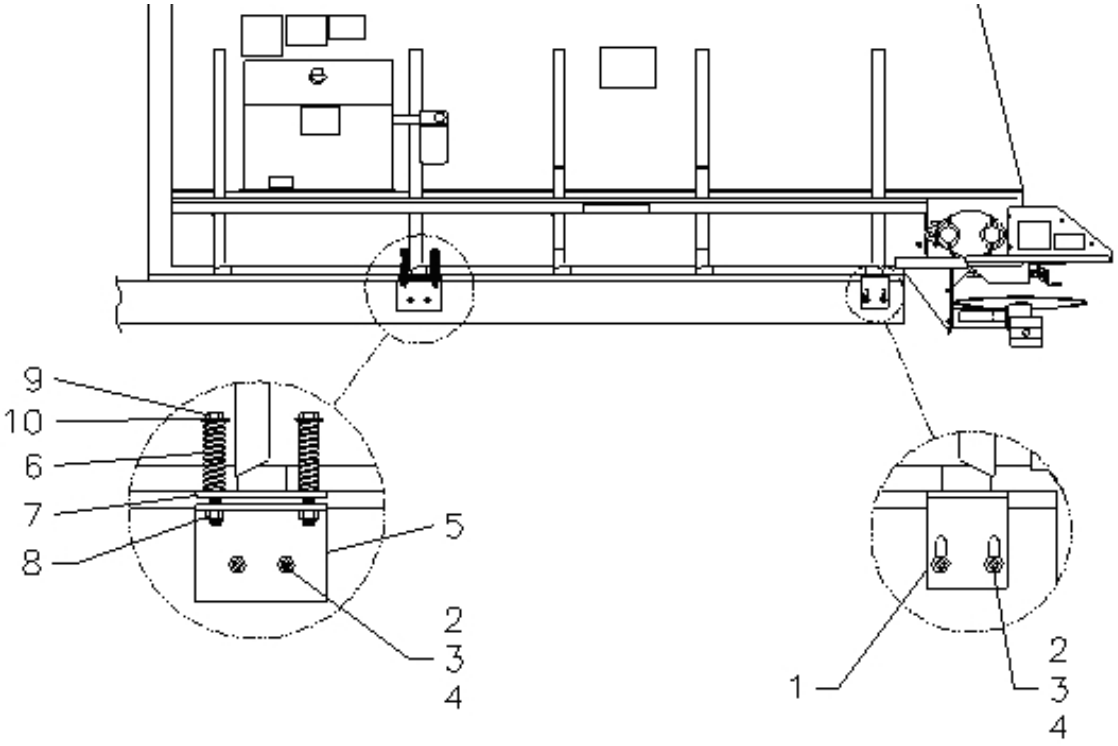
ITEM	PART NO.			DESCRIPTION	QTY
	CS	409 SS	304 SS		
1	96379	86773	86952	Endgate – Removable Weldment	1
2	20128-X1	20128-X1	20128-X1	Cap Screw – 1/2 x 1 1/4 Gr8	4
3	20695	20695	20695	Washer – Flat 1/2	8
4	20714	20714	20714	Washer – Lock 1/2	4
5	20646	20646	20646	Nut – Hex 1/2	4
6	72641	72641	72641	Handle	1
7	98511	98512	303937-AA	Feedgate – Weldment	1
8	2884	36384	36384	Slide – Feedgate RH	AR
	2885	36384	36384	Slide – Feedgate RH	AR
9	NA	36385	36385	Guide – Feedgate	2
10	85002	85002	85002	U-Joint	1
11	20918	20918	20918	Pin – Roll	2
12	40704	40704	40704	Jack	1
A	84210	84210	84210	Washer – Thrust	1
B	84211	84211	84211	Bearing – Thrust	1
C	84212	84212	84212	Washer	1
D	84213	84213	84213	Bushing	2
E	84214	84214	84214	Gear – Miter	2
F	84215	84215	84215	Pin – Groove	1
G	84216	84216	84216	Pin – Roll	1
13	86878	86878	86878	Pin – Hair	1
14	20138	80798	80798	Cap Screw - 1/2 x 3 3/4	1
15	20680	39016	39016	Nut – Hex 1/2	1
16	20074	36296	36296	Cap Screw - 3/8 x 2 3/4	1
17	20678	72054	72054	Nut – Lock 3/8	1
18	20006	40750	40750	Cap Screw – 1/4 x 1-1/4	6
19	20710	36418	36418	Washer – Lock 1/4	6
20	20642	36412	36412	Nut – Hex 1/4	6
21	305078	305078	305078	Sealer – Endgate Bolt-in (inside)	2
22	20691	36423	36423	Washer – Flat 1/4	2


20
14
12,13,15
21
2
1
3
12,13
9
16
16
10,11

ITEM	PART NO.		DESCRIPTION	QTY
	304 SS	409 SS		
1	303937-AA	303937-AA	Feedgate – Weldment Actuator 30” 304	1
2	302792-AA	302792-AA	Slide – Feedgate Stop LH	1
3	302792-AB	302792-AB	Slide – Feedgate Stop RH	1
4	36385	36385	Bar – Feedgate Guide 304	2
5	302767	302767	Actuator – Electric 14” Stroke	1
6	80798	80798	Capscrew – 1/2-13 x 3-3/4 SS	1
7	39016	39016	Nut – Lock 1/2 SS	1
8	302791	302791	Sensor – Assembly 10”	1
9	302769	302769	Pin – Feedgate Sensor	1
10	36425	36425	Washer – Flat 3/8 SS	1
11	72054	72054	Nut – Lock 3/8 SS	1
12	42034	42034	Nut – Lock 1/4-20 SS	4
13	36423	36423	Washer – Flat 1/4 SS	9
14	303940	303940	Clamp – Long 304	2
15	42448	42448	Capscrew - 1/4-20 x 1-1/2 SS	3
16	303941	303941	Spacer – Actuator Mount 304	2
17	40750	40750	Capscrew – 1/4-20NC SS	6
18	36418	36418	Washer – Lock 1/4 SS	6
19	36412	36412	Nut – Hex 1/4-20NC SS	6
20	86952	86773	Endgate – Weldment Removeable	1
21	304512	304512	Mount – Feedgate Cables 304	1
22	*305078	305078	Sealer – Endgate Bolt-in 304	2

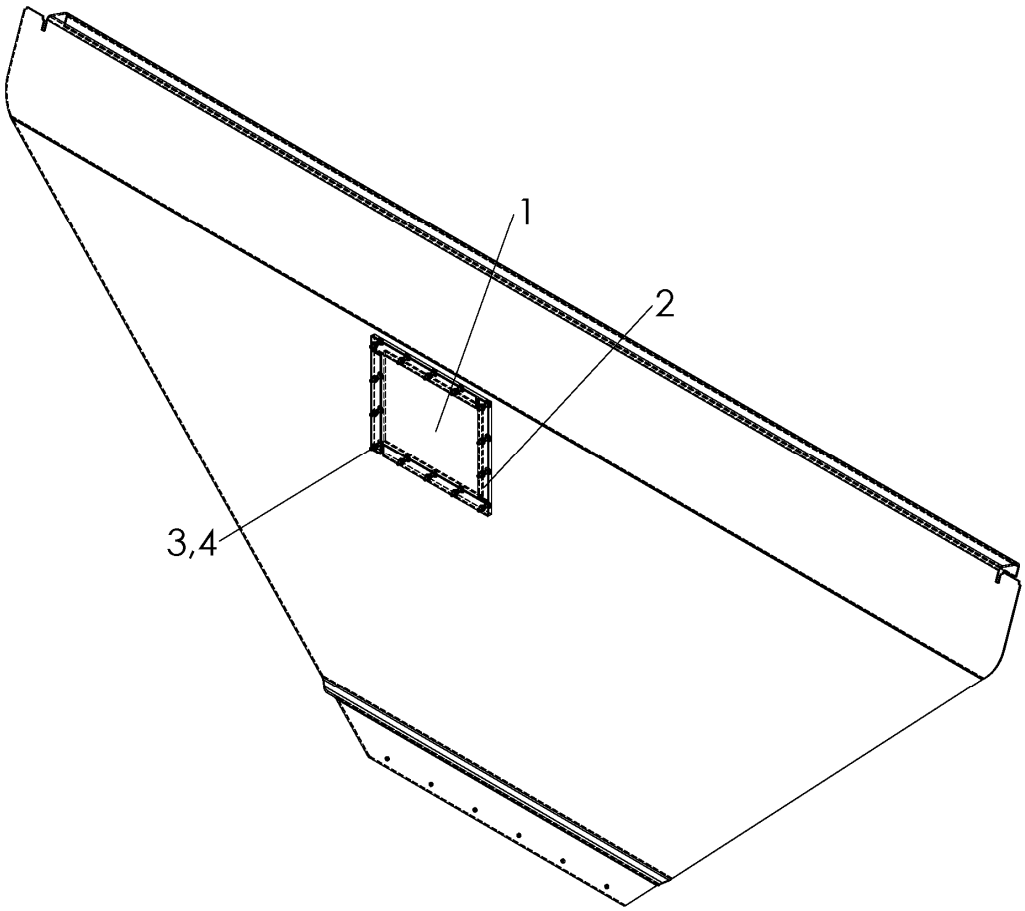
* - Not Shown

MOUNTING ANGLE



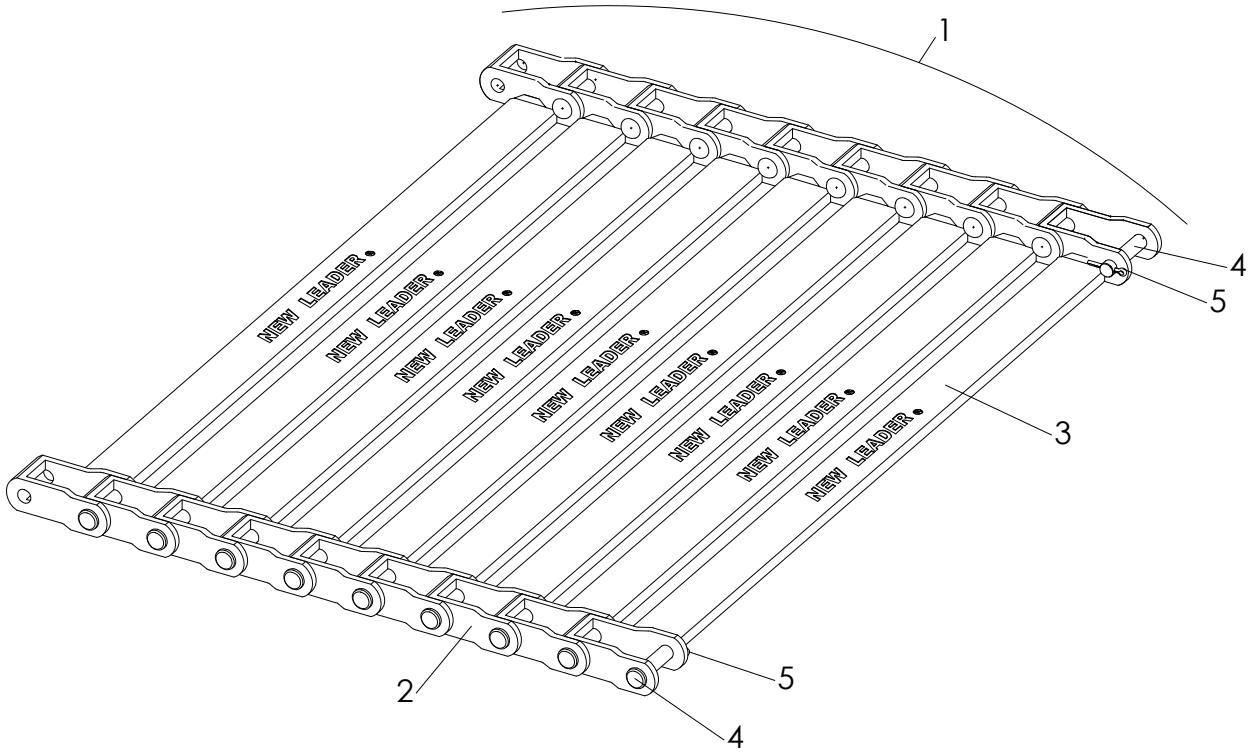
ITEM	PART NO.	DESCRIPTION	QTY
1	31856	Angle - Mounting	4
2	20131	Cap Screw - 1/2 x 2	12
3	20695	Washer – Flat 1/2	12
4	20680	Nut - Lock 1/2	12
5	81847	Angle - Mounting	2
6	81000	Spring	4
7	81848	Mounting - Bar	2
8	41762	Nut – Lock 5/8	4
9	20195	Cap Screw - 5/8 x 6 1/2	4
10	20697	Washer – Flat 5/8	4

SIGHT WINDOW



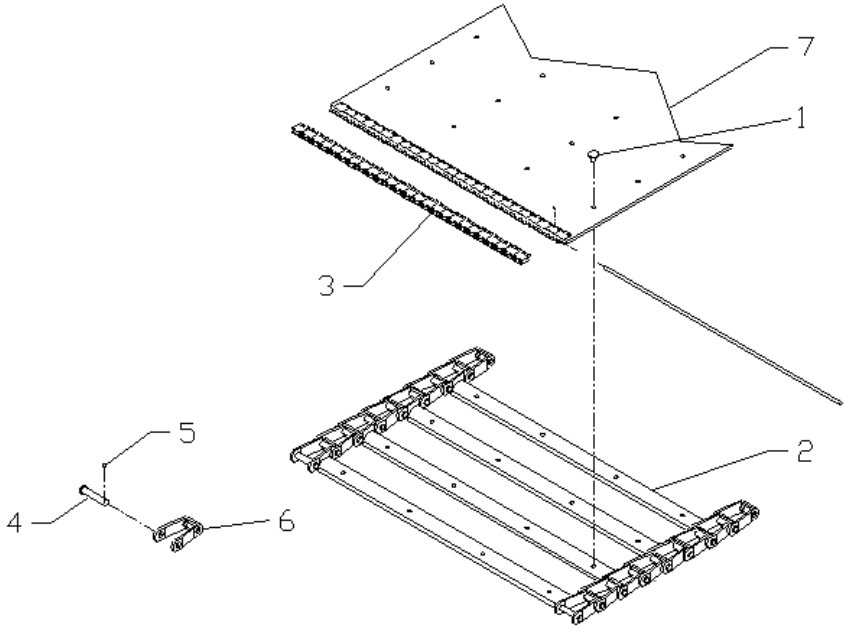
ITEM	PART NO.	DESCRIPTION	QTY
1	302686	Window – Sight 5 x 12	1
2	302687	Window – Frame 5 x 12 304	1
3	42033	Screw – Truss Head 1/4-20NC x 1 SS	8
4	42034	Nut – Lock 1/4-20 SS	8

#3 PINTLE CHAIN CONVEYOR



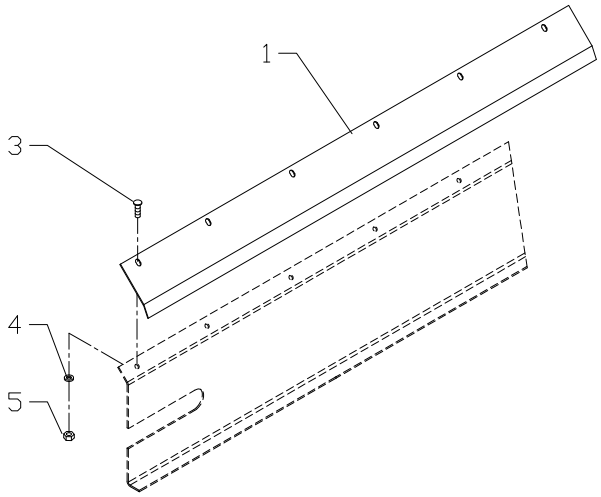
ITEM	PART NO.	DESCRIPTION	QTY
1	97089	#3 Pintle Chain – 12’ Unit Assembly	1
	97091	#3 Pintle Chain – 13’ Unit Assembly	1
	97092	#3 Pintle Chain – 14’ Unit Assembly	1
2	36699	Link - Pintle Chain	AR
3		Bar - Cross Weldment	AR
4	36697	Pin - Pintle Chain	AR
5	20817	Pin - Cotter	AR

#4 BELT-OVER-PINTLE CHAIN CONVEYOR

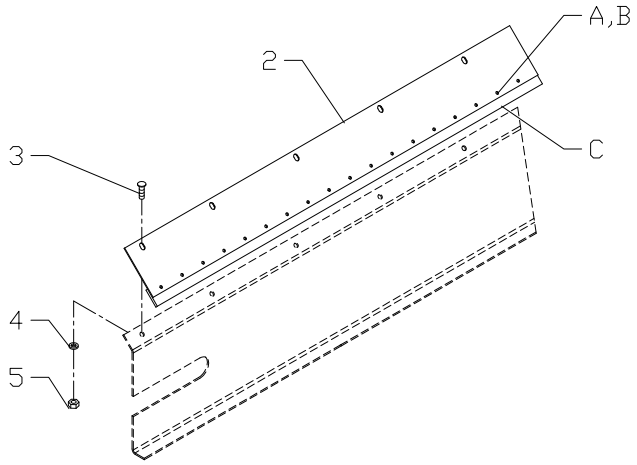


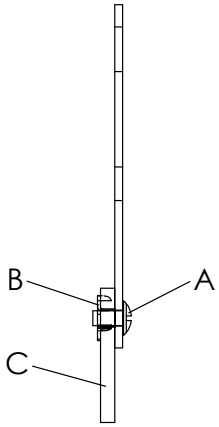
ITEM	PART NO.	DESCRIPTION	QTY
	305614-AE	Belt-Over-Chain - #4 12’ MOR	1
	305614-AG	Belt-Over-Chain - #4 13’ MOR	1
	305614-AH	Belt-Over-Chain - #4 14’ MOR	1
1	305646	Screw - #4BOC 1/4 x 9/16 torx Flat Head	AR
2	305643	Crossbar – Wldmt	AR
3	73317	Kit – Splicer	1
		Lacing Strips 23”	2
	56405	Pin - Connecting	1
		Staples	AR
4	36697	Pin – Pintle Chain	AR
5	20817	Pin – Cotter	AR
6	36699	Link – Pintle Chain	AR
7	56377-AB	Belt – Conveyor	AR

Chain Conveyor



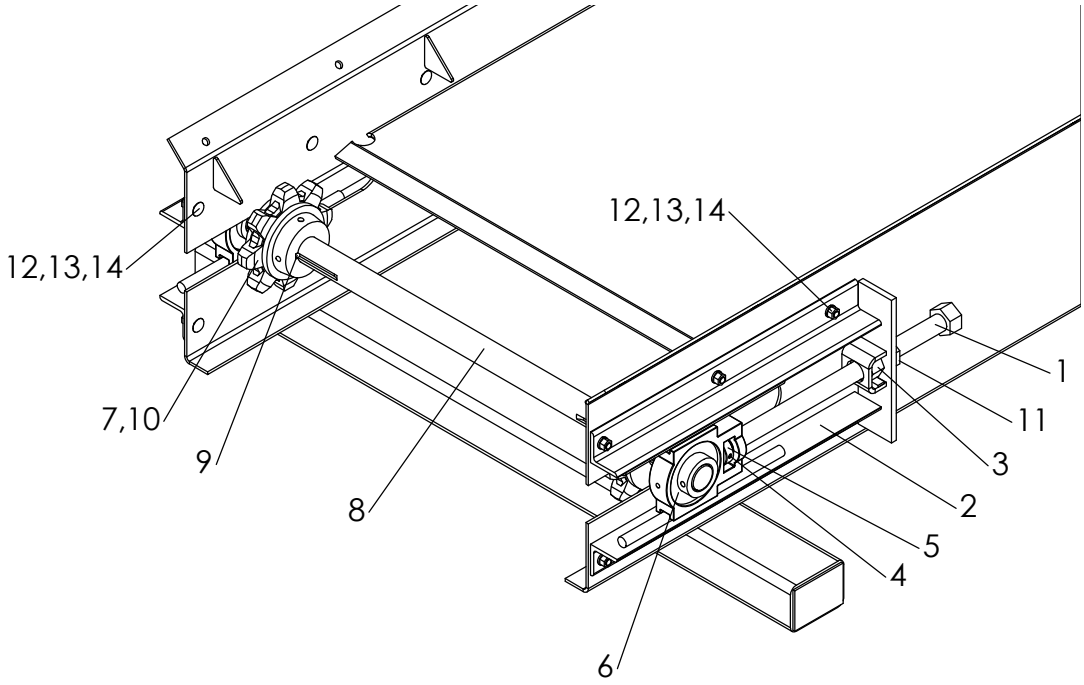
#4 BOC



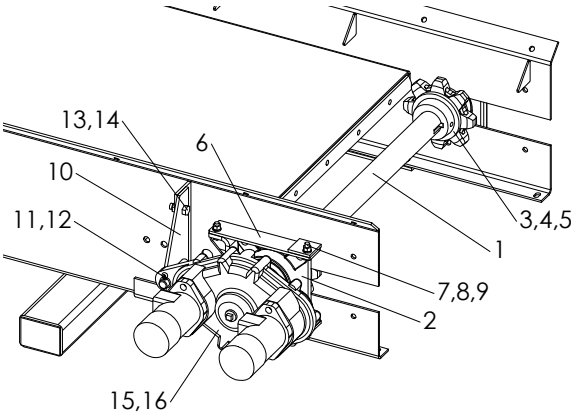


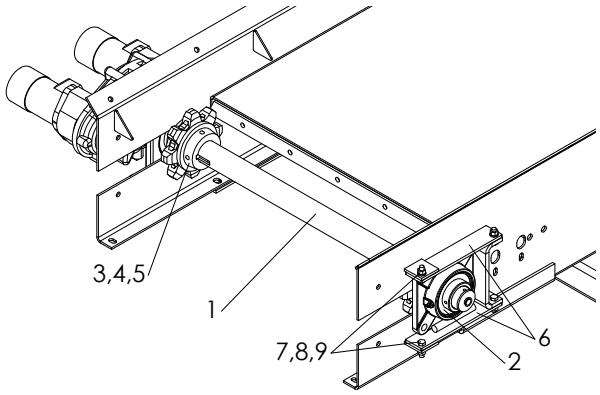
END VIEW

ITEM	PART NO.			DESCRIPTION	QTY
	CS	409 SS	304 SS		
1				Chain Shield Assy – #3 Chain	
	97715-AA	97732-AA	97749-AA	12’ Unit	1
	97715-AB	97732-AB	97749-AB	13’ Unit	1
	97715-AC	97732-AC	97749-AC	14’ Unit	1
2				Chain Shield Assy – #4 BOC	
	97817	97835	97853	12’ Unit	2
	97818	97836	97854	13’ Unit	2
	97819	97837	97855	14’ Unit	2
	86876	86876	86876	Chain Shield – MULTAPPLIER 5’	2
	303977	303977	303977	Chain Shield – MULTAPPLIER 7'	2
A	20624	56258	56258	Screw – Truss Head 1/4 x 1/2	AR
	6244	6244	6244	Rivet – MULTAPPLIER	AR
B	88931	88931	88931	Nut – Tee 1/4 x 1/4	AR
C	305975	305975	305975	Sealer - Belt, #4 BOC Shield (Specify Unit Length)	AR
3	20318	71829	71829	Bolt – Carriage 3/8 x 1	AR
4	20712	36420	36420	Washer – Lock 3/8	AR
5	20644	36414	36414	Nut – Hex 3/8	AR

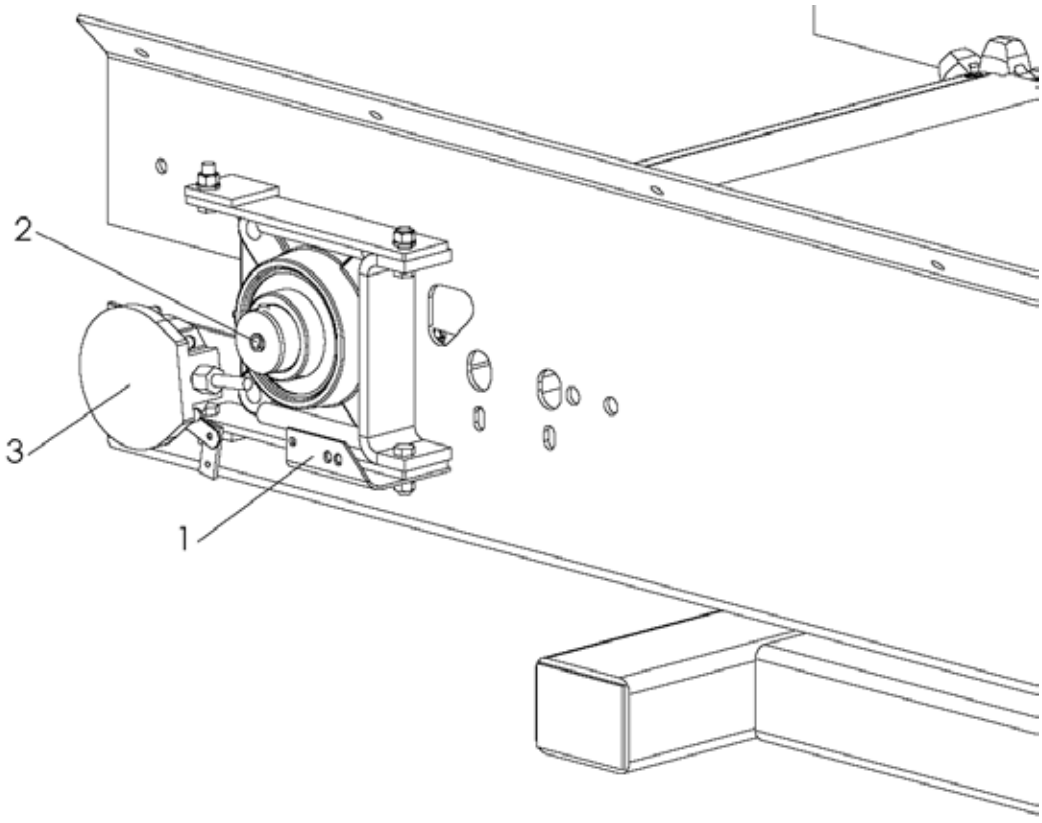


ITEM	PART NO.		DESCRIPTION	QTY
	CS	SS		
1	36508	36508	Tightener – Chain Weldment	2
2	7895	79321	Take-up Weldment	2
3	39110	39110	Nut Weldment	2
4	20925	20925	Pin – Roll 1/4 x 1 1/2	2
5	30725	30725	Collar – Set 1”	2
6	22511	22511	Bearing – Take-up	2
	6070	6070	Zerk – Grease .125 45°	2
7	97051	97051	Sprocket – Idler	2
8	82799	82799	Shaft – Idler	1
9	2135	2135	Key – Square 5/16 x 2 1/2	2
10	20743	20743	Screw – Set 5/16 x 3/8	4
11	36509	36509	Nut – Hex 1-8NC SS	2
12	20318	36408	Bolt – Carriage 3/8 x 1	12
13	20712	36420	Washer – Lock 3/8	12
14	20644	36414	Nut – Hex 3/8	12



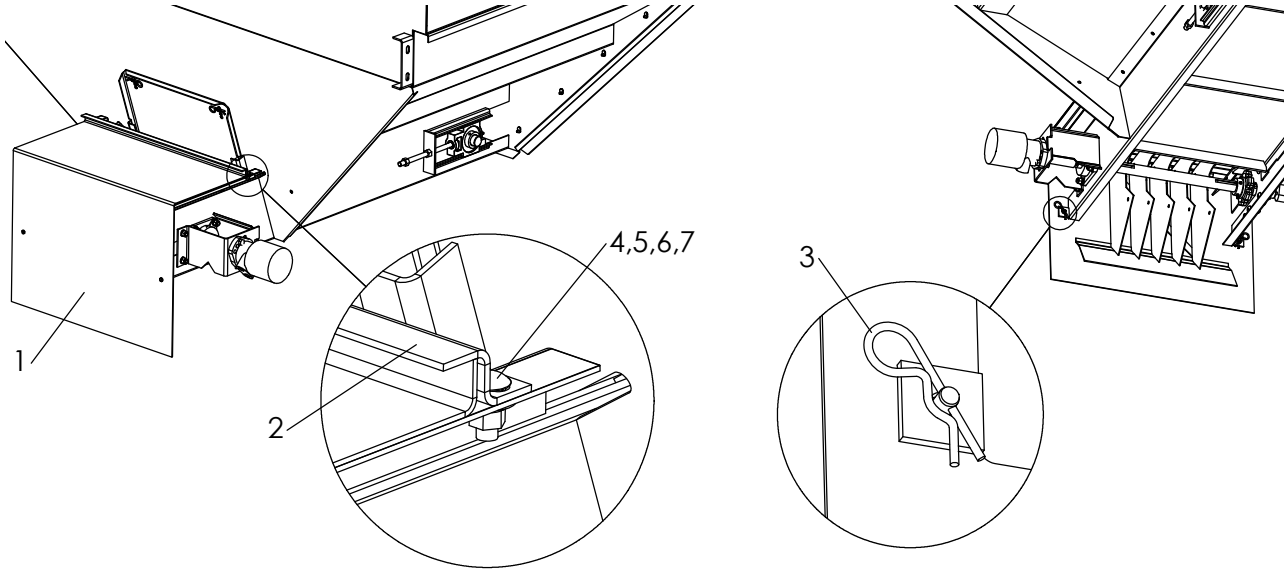


ITEM	PART NO.		DESCRIPTION	QTY
	CS	SS		
1	86999	86999	Shaft – Drive	1
2	6465	6465	Bearing	2
3	88276	88276	Sprocket	2
4	20743	20743	Screw – Set 5/16 x 3/8	4
5	6131	6131	Key – Square 3/8 x 1 1/2	2
6	82882	82885	Guide – Bearing	4
7	20068	36399	Cap Screw - 3/8 x 1 1/4	8
8	20712	36420	Washer – Lock 3/8	8
9	20644	36414	Nut – Hex 3/8	8
10	82550	82552	Bracket – Torque Arm LH	1
11	20833	20833	Pin – Cotter 1/4 x 1 1/2	1
12	2716	2716	Washer – Flat 3/4	2
13	20128	20128	Cap Screw - 1/2 x 1 1/4	2
14	20680	20680	Nut – Lock 1/2	2
15	37010	37010	Key – Square 1/2 x 1 1/2	2
16			Gear Case Assembly – Refer to “Control Hydraulics”	

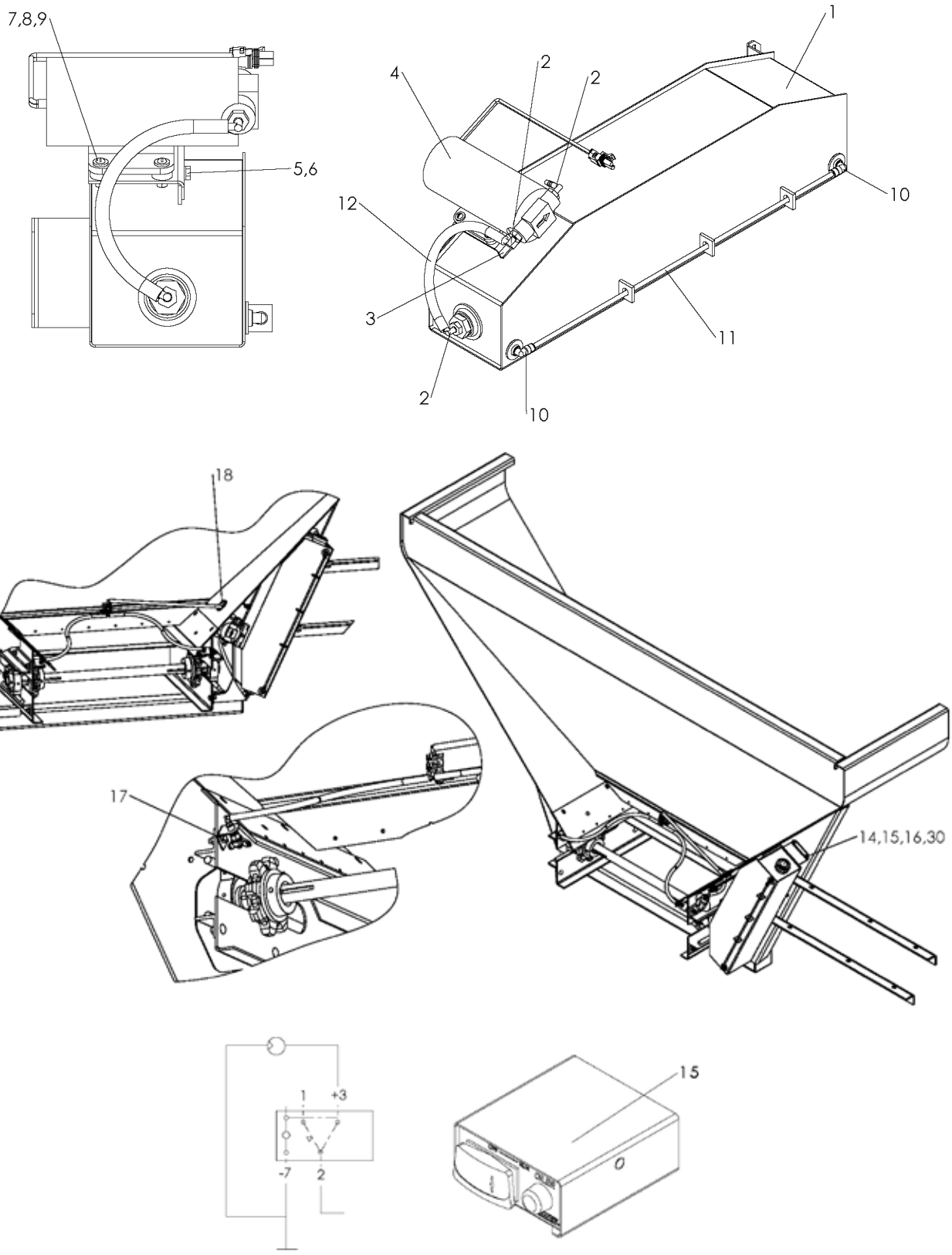


ITEM	PART NO.	DESCRIPTION	QTY
1	304946	Bracket – Rear Shaft	1
2	56263	Sleeve – Rate Sensor	1
3	303994	Encoder – 180 with Hardware	1

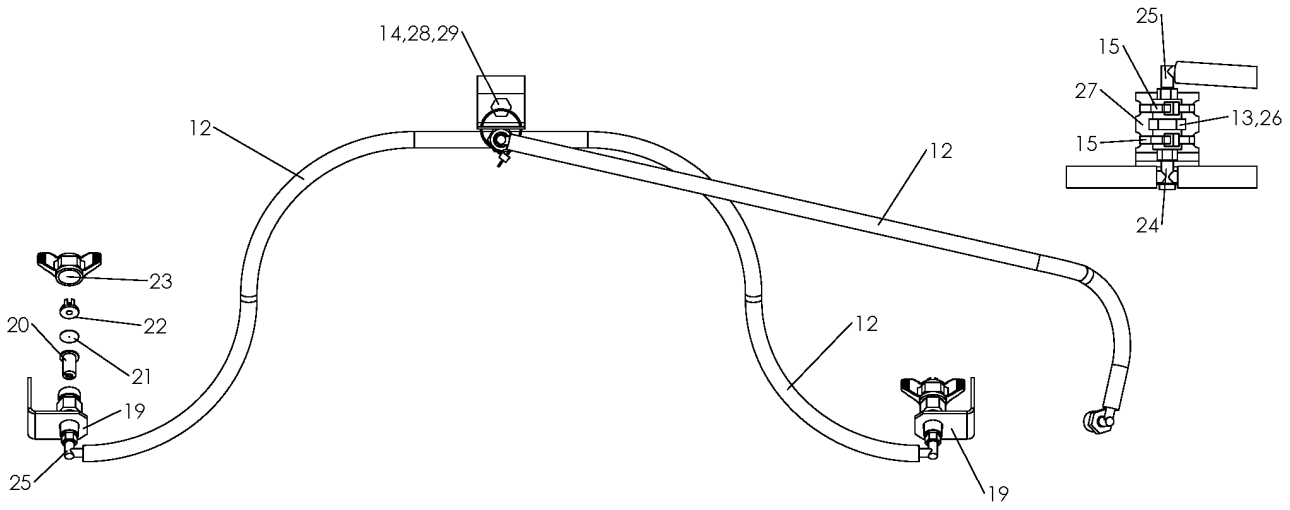
COVER - CONVEYOR



ITEM	PART NO.	DESCRIPTION	QTY
1	98562	Cover – Weldment Rear Conveyor	1
2	98555	Hold-down – Cover Rear	1
3	36429	Pin – Hair 2.562 x .148	2
4	36408	Bolt – Carriage 3/8 x 1	6
5	36425	Washer – Flat 3/8	6
6	36420	Washer – Lock 3/8	6
7	36414	Nut – Hex 3/8	6


7,8,9
5,6
1
2
2
4
10
12
3
11
2
10
18
17
14,15,16,30
1
+3
-7
2
15

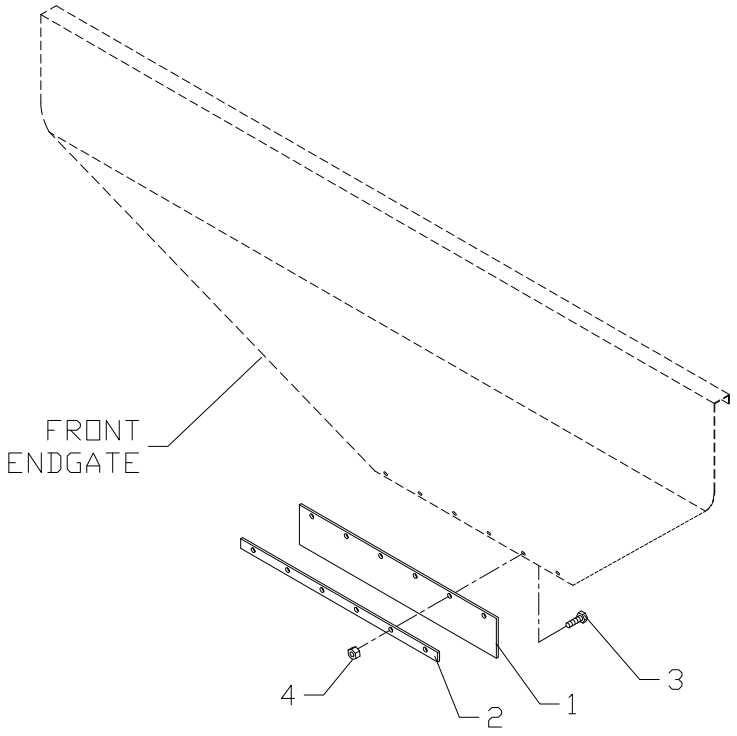
CONVEYOR CHAIN OILER CONTINUED



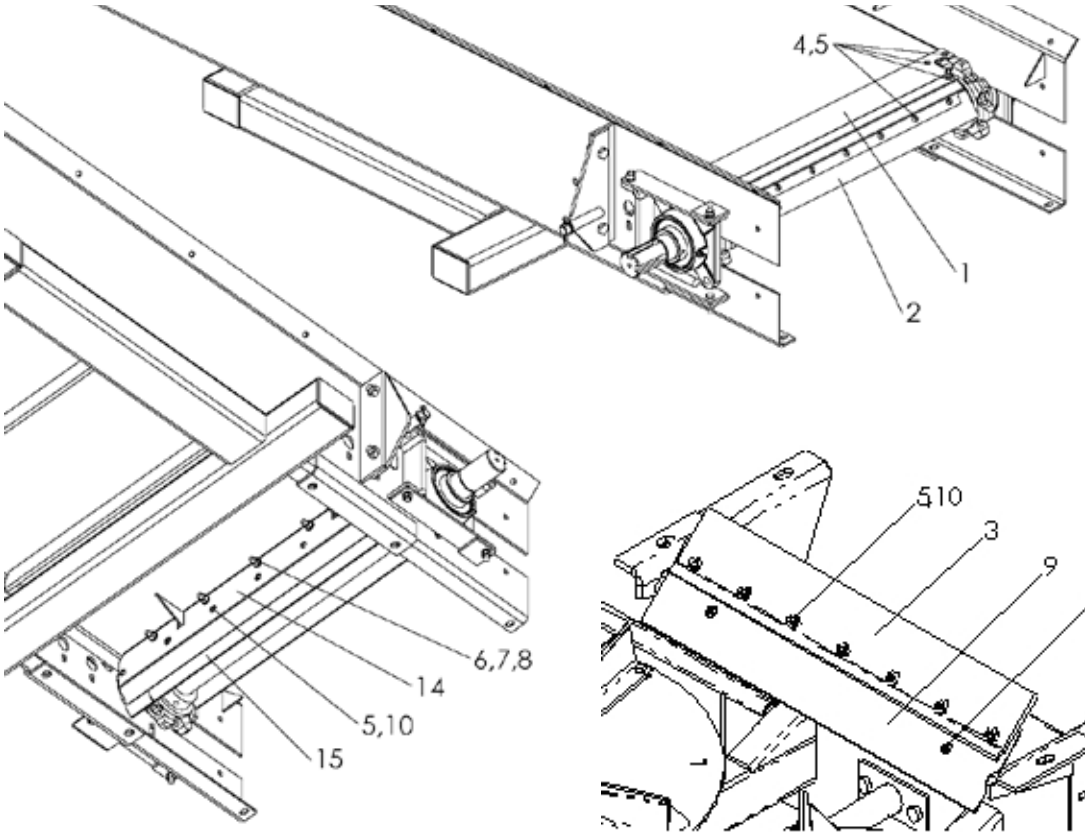
ITEM	PART NO.	DESCRIPTION		QTY
	306063	Tank – Assembly, Includes 1-13		
1	304398	Tank – Weldment		1
2	306657	Elbow		3
3	304409	Mount – Pump		1
4	304390	Pump – Assembly with Connector		1
	304834	Pump – Diagram 1.1 GPM 30 PSI		1
	303730-AB	Connector – FEM Socket Sealed		1
	303730-CC	Terminal – FEM Sealed (Sleeve)		2
	303730-EB	Seal – Cable Lt Gray		2
5	36393	Capscrew – 1/4 x 3/4 SS		5
6	36418	Washer – Lock 1/4 SS		5
7	20574	Screw – Round Head #10 x 1		4
8	171052	Washer – Flat #10 SS		8
9	47295	Nut – Hex #10 SS		4
10	301337	Fitting – 90 Male 1/8 NPT		2
11	306437	Tubing – Clear	Feet	2.1
12	26544	Hose – Low Pressure 1/4 ID x 8	Feet	6.7
13	*306670	Tape – Thread Seal w/PTFE Yellow Gas Line		AR
14	36414	Nut – Hex 3/8 SS		1
15	304391	Panel – Assembly Oiler Control		1
	99676	Fuse – 10AMP Fast Acting		1
16	36412	Nut – Hex 1/4 SS		4
17	36399	Capscrew – 3/8 x 1-1/4 SS		2
18	34129	Grommet – Rubber		1

ITEM	PART NO.	DESCRIPTION	QTY
19	306649	Nozzle – Mount Assembly	2
	304839	Angle – Weldment Nozzle Mount	1
	306650	Body – Male Nozzle Brass	1
20	306651	Strainer – Check Valve	2
21	306652	Plate – Orifice SS	2
22	306654	Nozzle – Even Flat Spray SS	2
23	306653	Cap – Nozzle	2
24	306655	Tee – Black	1
25	306656	Elbow – Black	3
26	306678	Coupling – Polypropylene	1
27	306804	Bracket – Coupling	1
28	36293	Capscrew – 3/8 x 3/4 SS	1
29	36420	Washer – Lock 3/8 SS	1
30	36423	Washer – Flat 1/4 SS	4

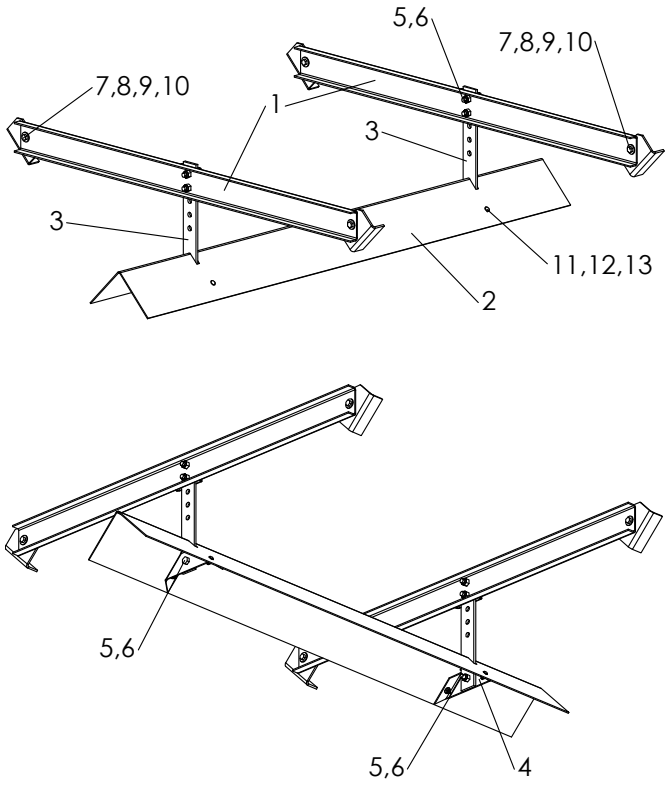
* - Not Shown AR – As Required



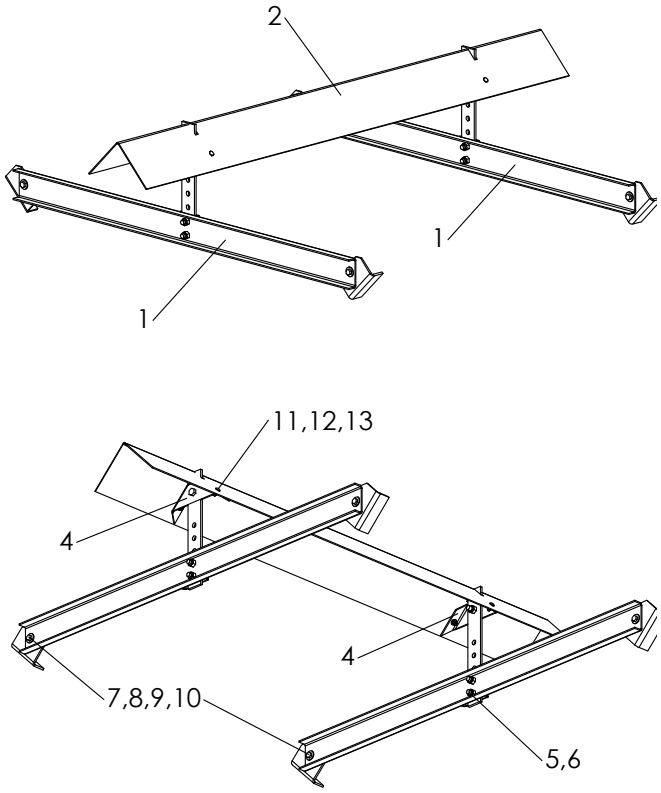
ITEM	PART NO.			DESCRIPTION	QTY
	CS	409 SS	304 SS		
1	20583	36393	36393	Screw - Machine 1/4 x 3/4	6
		36395	39395	Cap Screw - 1/4 x 1, MULTAPPLIER	5
2	14743	14743	14743	Wiper - Belt L3220G4	1
	39426	39426	39426	Wiper - Belt MULTAPPLIER	1
3	14742	55834	71656	Retainer - Belt	1
	54230	54230	54230	Retainer - Belt MULTAPPLIER	1
4	20642	36412	36412	Nut – Hex 1/4	19



ITEM	PART NO.		DESCRIPTION	QTY
	CS	SS		
1	98028	98030	Lip – Weldment Rear	1
2	305331	305331	Wiper – 30” Rear Lip	1
3	304418	304418	Belt – Rear Wiper	1
4	20617	56400	Screw – Flat Head 1/4 x 1/2	13
5	88931	88931	Nut – Tee 1/4	27
6	20068	36399	Cap Screw – 3/8 x 1	5
7	20712	36420	Washer – Lock 3/8	5
8	20644	36414	Nut – Hex 3/8	5
9	96746	96746	Plate – Wiper Belt	1
10	56258	56258	Screw – Truss Head 1/4 x 1/2	14
11	32446	32446	Screw – Truss Head 1/4 x 3/4	2
12	36418	36418	Washer – Lock 1/4	2
13	36412	36412	Nut – Hex 1/4	2
14	304421	304422	Mount – 30” Internal Wiper	1
15	304423	304423	Rubber – 30” Internal Wiper	1



STANDARD ASSEMBLY

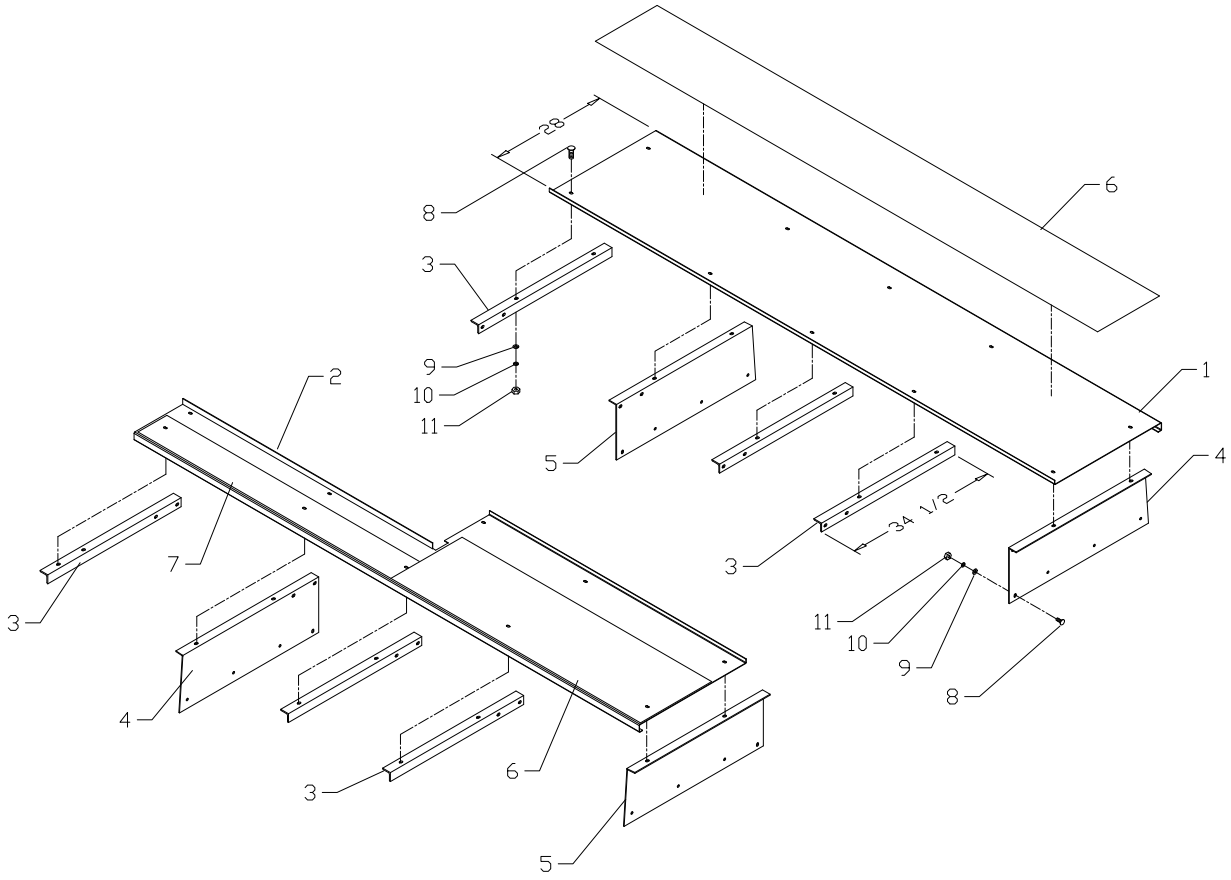


HIGH YIELD ASSEMBLY

ITEM	PART NO.			DESCRIPTION	QTY
	CS	409 SS	304 SS		
1	81261	81262	81263	Hanger – V Weldment	AR
2	82613	82617	82621	Inverted V – 5’ (8’ – 10’ Units)	1
	82614	82618	82622	Inverted V – 7’ (11’ – 12’ Units)	1
	82615	82619	82623	Inverted V – 9’ (13’-14’ Units)	1
	82616	82620	82624	Inverted V – 11’ (15’ – 16’ Units)	1
3	302368	302369	302369	Bar – Adjusting	AR
4	302370	302371	302371	Bracket – V Bolt-on	AR
5	20176	58800	58800	Cap Screw – 5/8 x 1-3/4	AR
6	20682	41762	41762	Nut – Lock 5/8	AR
7	20128	36402	36402	Cap Screw – 1/2 x 1-1/4	AR
8	20695	36426	36426	Washer – Flat 1/2	AR
9	20714	36422	36422	Washer – Lock 1/2	AR
10	20646	36416	36416	Nut – Hex 1/2	AR
11	20291	42639	42639	Bolt – Carriage 5/16 x 1	AR
12	20692	36424	36424	Washer – Flat 5/16	AR
13	20677	42221	42221	Nut – Lock 5/16	AR

AR - As Required

FENDERS - FULL FLOATATION TIRES

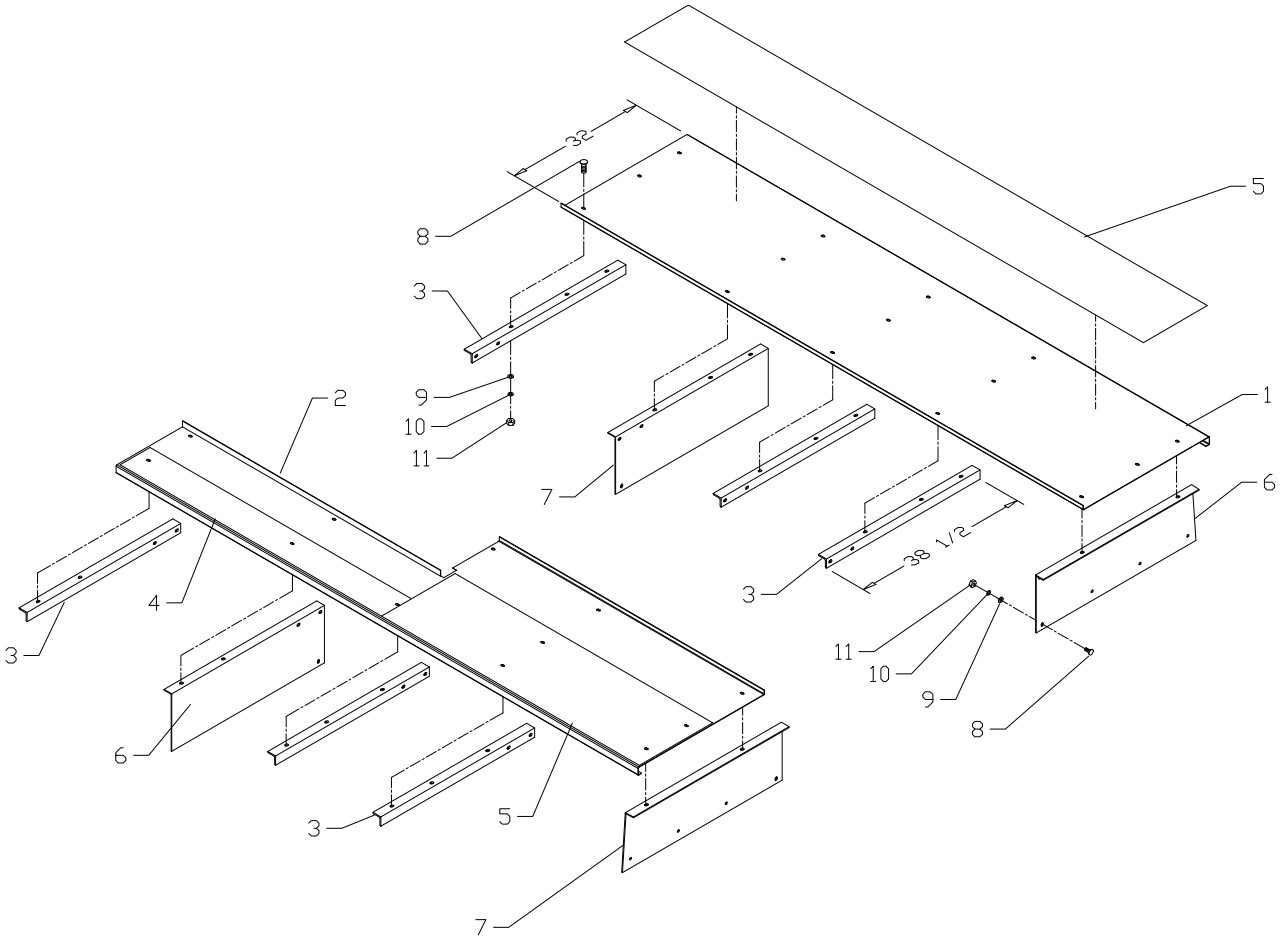


PARTS LIST

FENDERS - FULL FLOATATION TIRES CONTINUED

ITEM	PART NO.			DESCRIPTION	QTY
	CS	409 SS	304 SS		
1	83026	83042	83058	Fender - RH, 12’ Unit	1
	83027	83043	83059	Fender - RH, 13’ Unit	1
		86614-X1	305097	Fender - RH, 13’ Unit	1
				w/ Case Mounting and Tank Cutout	
	83072	83078	83084	Fender - RH, 14’ Unit	1
		305090	305584	Fender - RH, 14’ Unit	1
				w/ Case Mounting and Tank Cutout	
2	83034	83050	83066	Fender - LH, 12’ Unit	1
	83035	83051	83067	Fender - LH, 13’ Unit	1
		83051-X2	305096	Fender - LH, 13’ Unit	1
				w/ Case Mounting and Tank Cutout	
	83075	83081	83087	Fender - LH, 14’ Unit	1
		305091	305585	Fender - LH, 14’ Unit	1
				w/ Case Mounting and Tank Cutout	
3	83021	--	96969	Angle - Mounting	AR
4	83019	--	96967	Formed Angle - RH	2
5	83020	--	96968	Formed Angle - LH	2
6	83124	83124	83124	Material - Non-Skid, 16” Wide	Inches
7	21699	21699	21699	Material - Non-Skid, 8” Wide	Inches
8	20318	36408	36408	Bolt – Carriage 3/8 x 1	AR
9	20693	36425	36425	Washer – Flat 3/8	AR
10	20712	36420	36420	Washer – Lock 3/8	AR
11	20644	36414	36414	Nut – Hex 3/8	AR

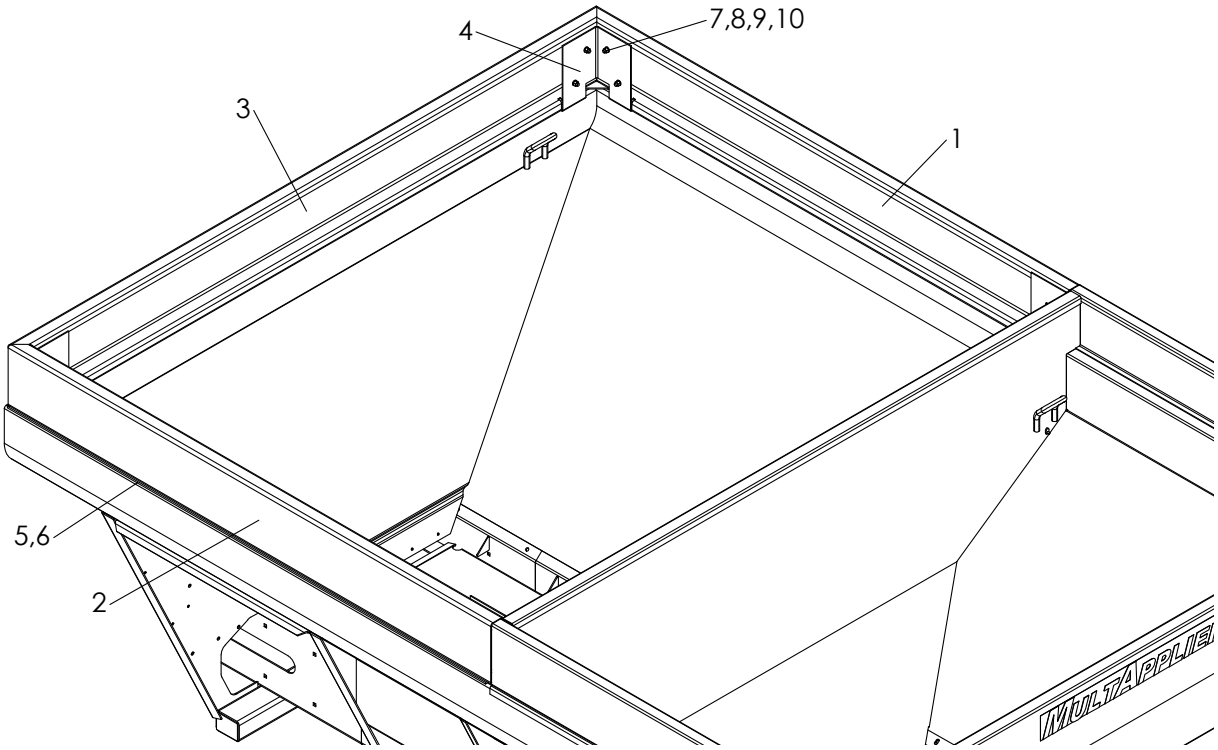
NOTE: 409 fenders come with carbon steel mounting angles. AR - As Required


32
8
3
9
10
11
2
7
5
1
6
38 1/2
4
3
6
3
5
7

ITEM	PART NO.			DESCRIPTION	QTY
	CS	409 SS	304 SS		
1	83261	83277	83293	Fender – RH, 12’ Unit	1
	83262	83278	83294	Fender – RH, 13’ Unit	1
	83307	83313	83319	Fender – RH, 14’ Unit	1
2	83269	83285	83301	Fender – LH, 12’ Unit	1
	83270	83286	83302	Fender – LH, 13’ Unit	1
	83310	83316	83322	Fender – LH, 14’ Unit	1
3	83256	--	96972	Angle – Mounting	AR
4	21699	21699	21699	Material - Non-Skid, 8” Wide	Inches
5	83124	83124	83124	Material - Non-Skid, 16” Wide	Inches
6	83254	--	83254-X10	Angle – Formed RH Rear	1
	82390	--	82390-X5	Angle – Formed RH, 12’6” Units	2
7	83255	--	83255-X10	Angle – Formed LH Rear	1
	82391	--	82391-X4	Angle – Formed LH, 12'6” Units	2
8	20318	36408	36408	Bolt – Carriage 3/8 x 1	AR
9	20693	36425	36425	Washer – Flat 3/8	AR
10	20712	36420	36420	Washer – Lock 3/8	AR
11	20644	36414	36414	Nut – Hex 3/8	AR

NOTE: 409 fenders come with carbon steel mounting angles. AR - As Required

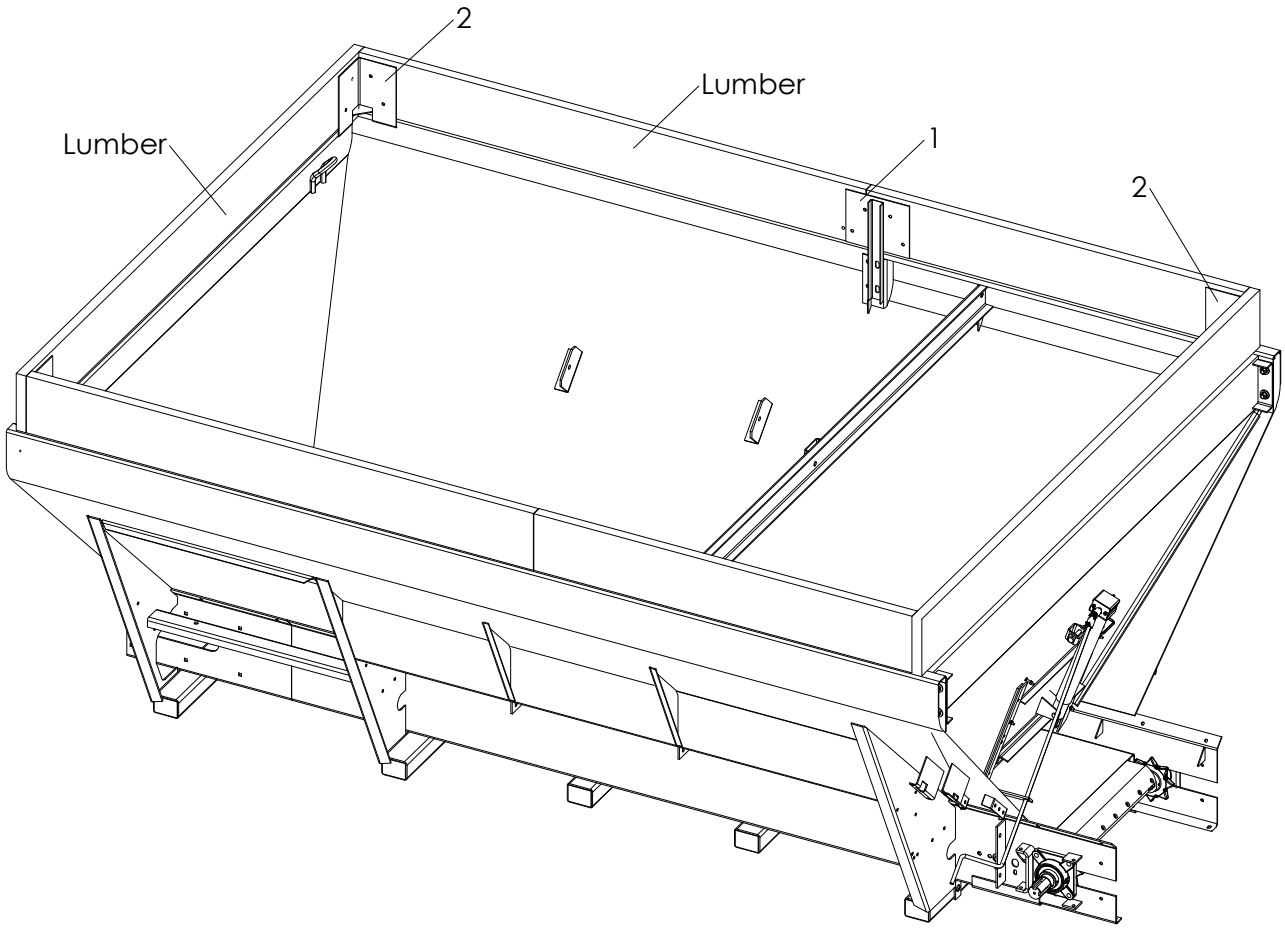
SIDE BOARDS



ITEM	PART NO.	DESCRIPTION	QTY
1	98752-AA	Side Board – RH 12’ Weldment	1
	98752-AB	Side Board – RH 13’ Weldment	1
	98752-AC	Side Board – RH 14’ Weldment	1
2	98755-AA	Side Board – LH 12 Weldment	1
	98755-AB	Side Board – LH 13’ Weldment	1
	98755-AC	Side Board – LH 14’ Weldment	1
3	98758	Side Board – Front Weldment	1
4	86867	Pocket – Side Board	2
5	53950	Rubber – 1/4 x 2-1/4	AR
6	98766	Adhesive – Loctite 454*	AR
7	36398	Cap Screw – 3/8 x 1	12
8	36425	Washer – Flat 3/8	12
9	36420	Washer – Lock 3/8	12
10	36414	Nut – Hex 3/8	12

* - Use adhesive to attach rubber to bottom of side boards.

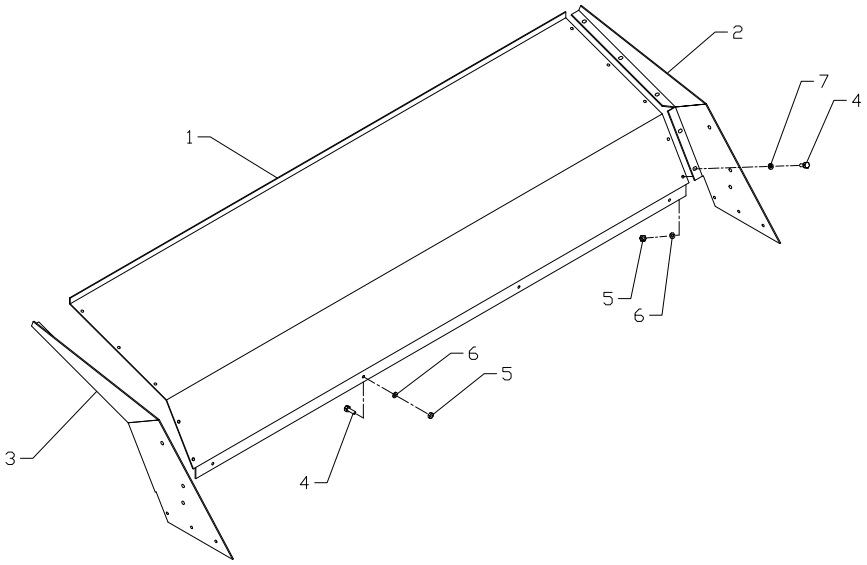
SIDE BOARD MOUNTS (WOOD)



ITEM	PART NO.	DESCRIPTION	QTY
1	96285	Mount – Weldment Side Board	2
2	86867	Pocket – Side Board	4
3	36401	Cap Screw – 1/2 x 1	4
4	36426	Washer – Flat 1/2	8
5	36422	Washer – Lock 1/2	4
6	36416	Nut – Hex 1/2	4

Note: Lumber not provided. Use 2 x 10 lumber cut to length for side boards. Attach to mounts with 3/8” carriage bolts (not provided).

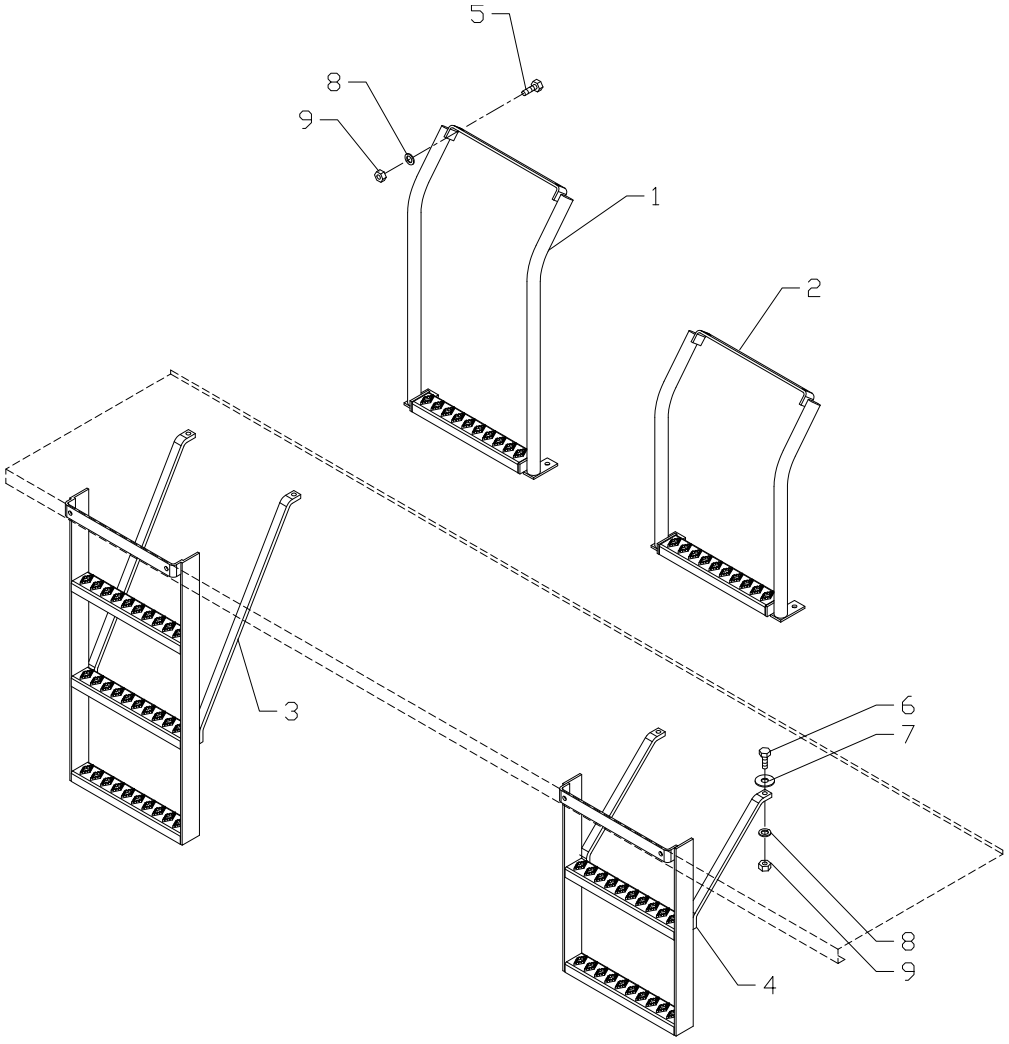
CAB SHIELD



ITEM	PART NO.			DESCRIPTION	QTY
	CS	409 SS	304 SS		
1	55926	79161	79160	Panel – Cab Shield, 57” x 88”	1
	55927	79163	79162	Panel – Cab Shield, 63” x 88”	1
	55928	79165	79164	Panel – Cab Shield, 69” x 88”	1
	82777	82778	82779	Panel – Cab Shield, 57” x 102”	1
	82780	82781	82782	Panel – Cab Shield, 63” x 102”	1
	82783	82784	82785	Panel – Cab Shield, 69” x 102”	1
2	31788	79167	79166	Support – RH Support, 57”	1
	39813	79171	79170	Support – RH Support, 63”	1
	39819	79175	79174	Support – RH Support, 69”	1
3	31789	79169	79168	Support – LH Support, 57”	1
	39815	79173	79172	Support – LH Support, 63”	1
	39821	79177	79176	Support – LH Support, 69”	1
4	20067	36398	36398	Cap Screw – 3/8 x 1	AR
5	20644	36414	36414	Nut – Hex 3/8	AR
6	20712	36420	36420	Washer – Lock 3/8	AR
7	20693	36425	36425	Washer – Flat 3/8	AR

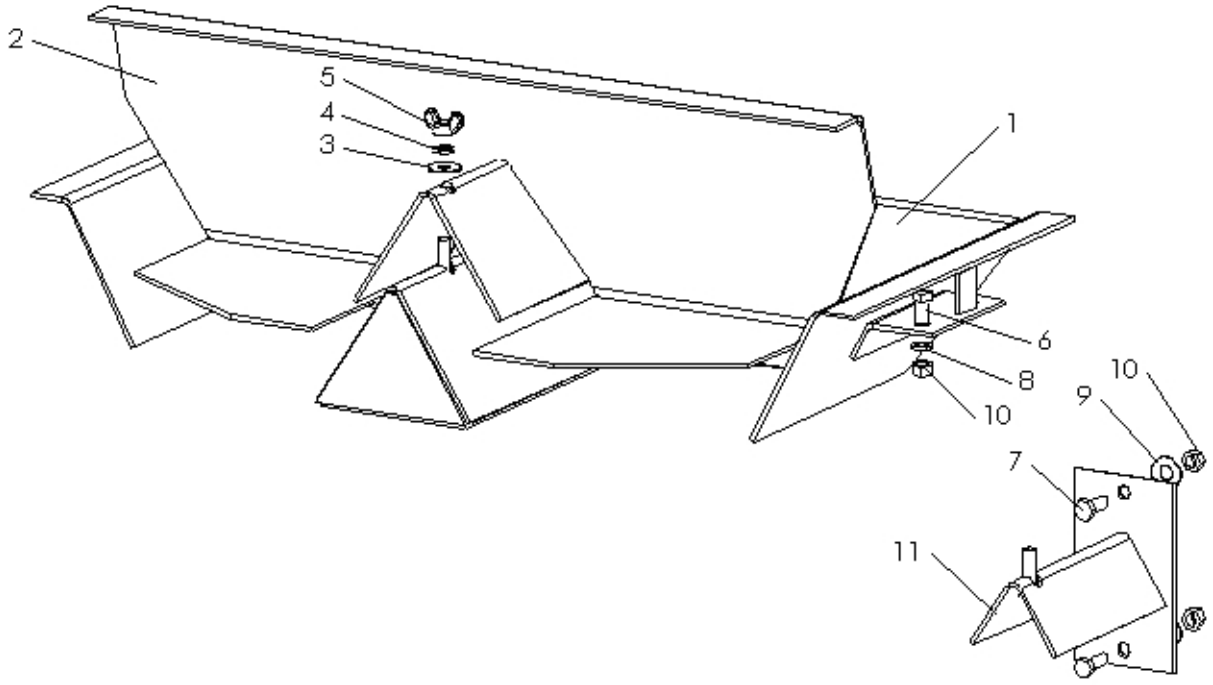
AR - As Required

PARTS LIST



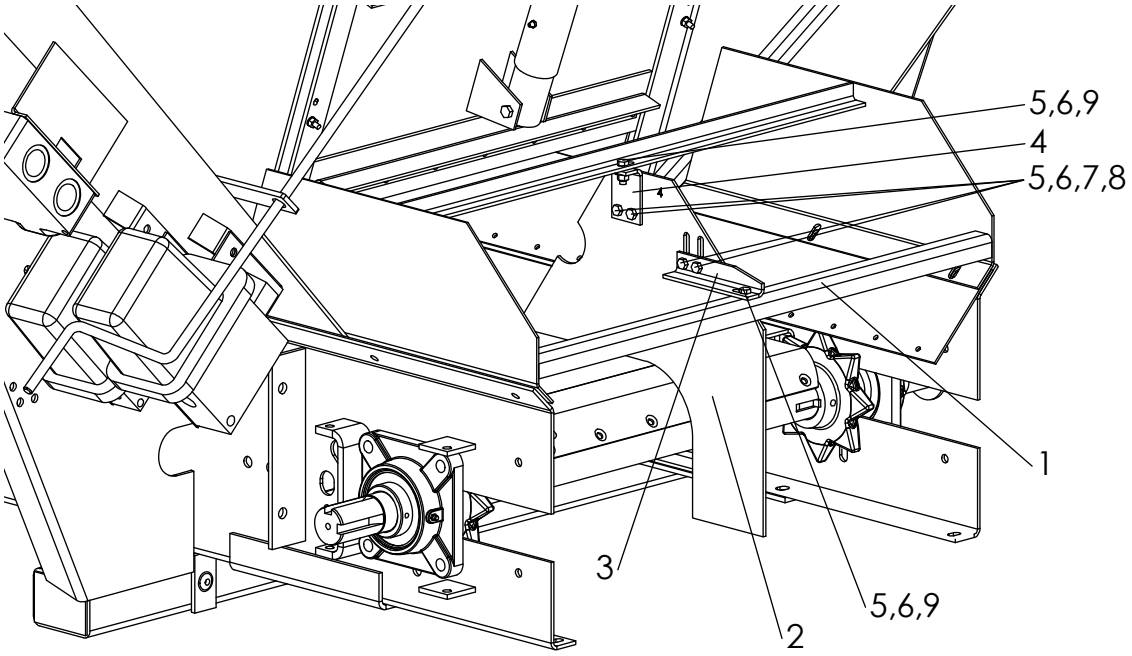
ITEM	PART NO.	DESCRIPTION	QTY
1	72779	Ladder – Upper, Used on 102” Wide Body/Standard Fenders	2
2	72778	Ladder – Upper, Used on 102” Wide Body/Raised Fenders	2
3	72796	Ladder – Lower, Used on Raised Fenders	1
4	72797	Ladder – Lower, Used on Standard Fenders	
5	20068	Cap Screw - 3/8 x 1 1/4	6
6	20069	Cap Screw - 3/8 x 1 1/2	2
7	20693	Washer – Flat 3/8	4
8	20712	Washer – Lock 3/8	8
9	20644	Nut - Hex 3/8	8

* - Not Shown



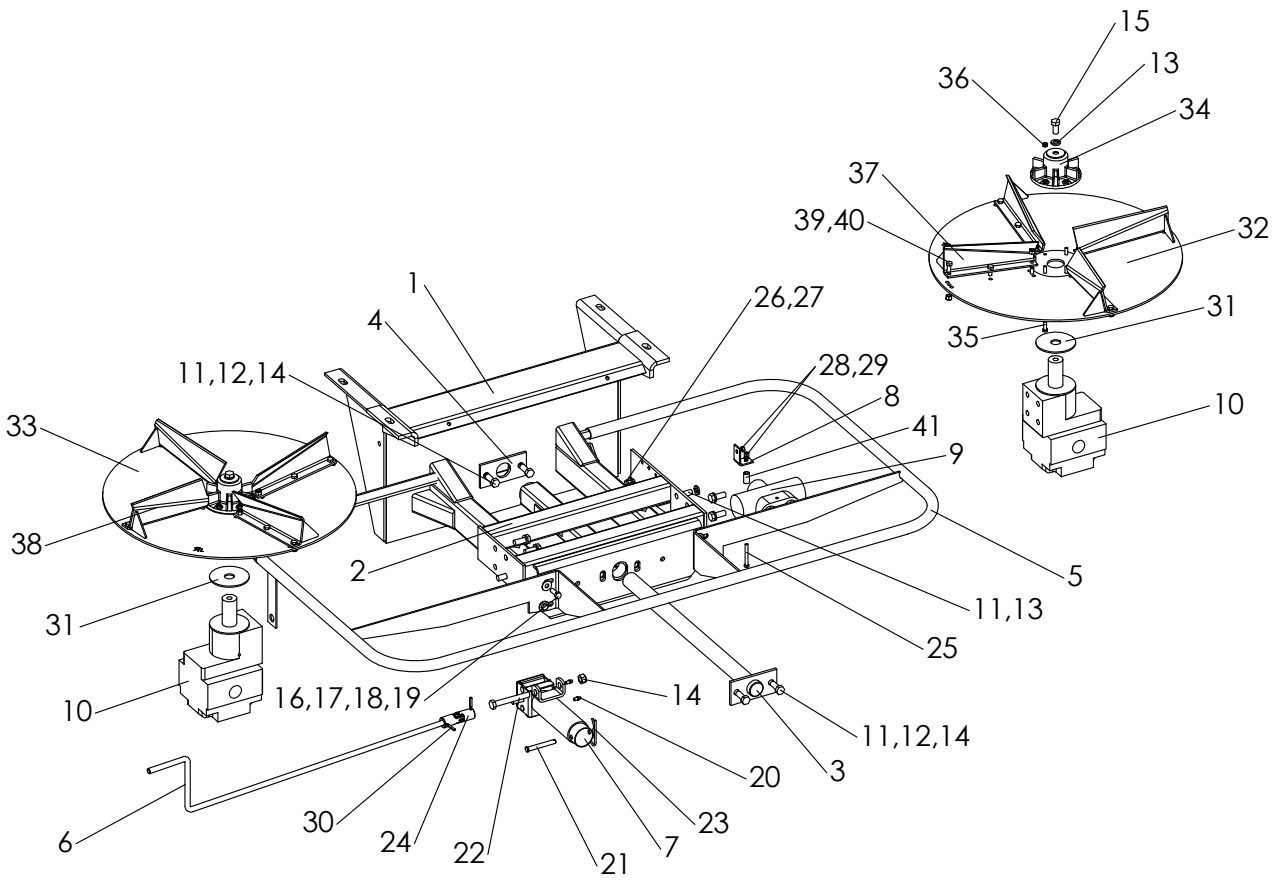
ITEM	PART NO.		DESCRIPTION	QTY
	87108	87108	Divider – Material Assembly	
1	87054	87054	Divider – Weldment	1
2	87064	87064	Deflector – Rear Weldment	1
3	36425	36425	Washer – Flat 3/8 SS	1
4	36420	36420	Washer – Lock 3/8 SS	1
5	20673	20673	Nut – Wing 3/8	1
6	20065	36293	Cap Screw – 3/8 x 3/4	2
7	20067	20067	Cap Screw – 3/8 x 1	2
8	20712	36420	Washer – Lock 3/8	2
9	20693	20693	Washer – Flat 3/8	2
10	20644	36414	Nut – Hex 3/8	4
11	87381	87381	Mount – Divider Weldment	1

Mount Item 11 on truck to hold Item 2 when not in use.



ITEM	PART NO.	DESCRIPTION	QTY
1	86788	Bracket – Weldment Support	1
2	82288	Panel – Hillside Divider	1
3	56879	Bracket – Clamp	1
4	56880	Angle – Clamp	1
5	34580	Cap Screw – 5/16 x 1	6
6	36424	Washer – Flat 5/16	8
7	36419	Washer – Lock 5/16	4
8	36413	Nut – Hex 5/16	4
9	42221	Nut – Lock 5/16	2

Note: Use chain shield hardware to attach Item 1 to sills.

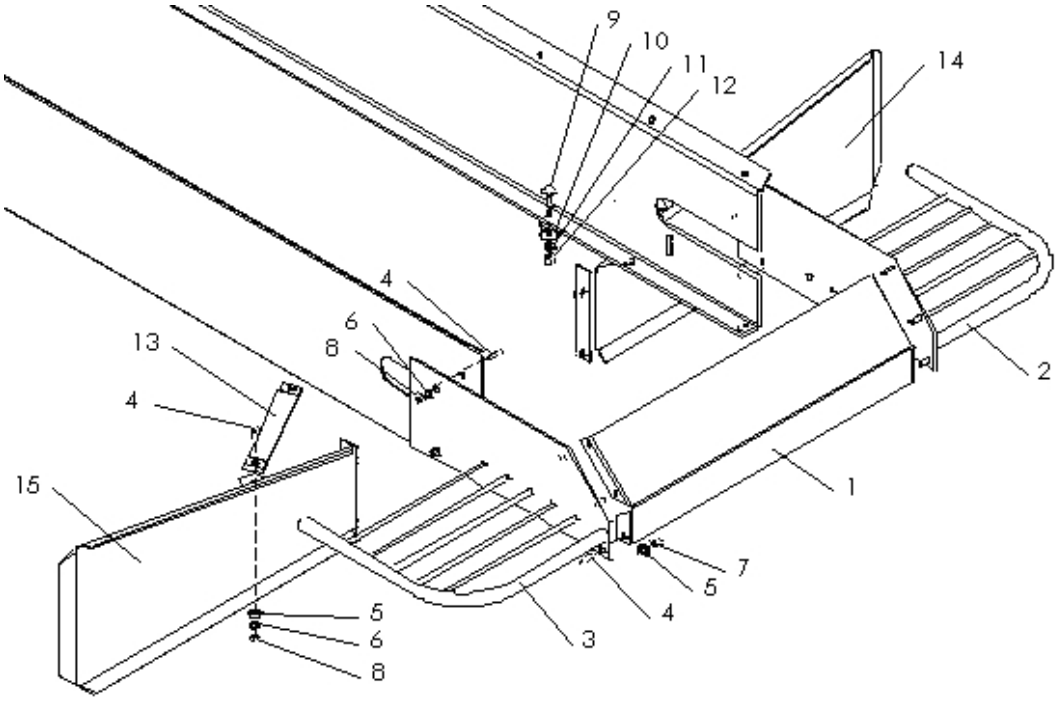


ITEM	PART NO. CS	PART NO. SS	DESCRIPTION	QTY
	87096	87095	24" Hydraulic Fan Assembly NOTE: Assembly does not include guards.	
	87106	87106	Fan – LH Assembly, Includes Items 33-40	1
	87105	87105	Fan – RH Assembly, Includes Items 32 & 34-40	1
1	87051	87090	Plate – Back	1
2	87013	87082	Mount – Motor Weldment	1
3	87021	87021	Shaft – Support Weldment	1
4	87065	87023	Plate – Shaft Mount	1
5	87032	87032-X1	Guard – Spinner Weldment	1
6	87024	87024	Handle	1
7	87170	87170	Jack – Coated Assy	1
8	87025	87025	Angle – Valve Mount	1
9	71781	71781	Valve – Flow Divider	1

ITEM	PART NO.		DESCRIPTION	QTY
	56369	53639	Spool – Compensating	1
10	305950	305950	Motor – Hydraulic	2
11	20128	36402	Cap Screw – 1/2 x 1 1/4	12
12	20695	36426	Washer – Flat 1/2	4
13	20714	36422	Washer – Lock 1/2	10
14	20680	39016	Nut – Lock 1/2	5
15	20127	36401	Cap Screw – 1/2 x 1	2
16	20067	36398	Cap Screw – 3/8 x 1	4
17	20693	36425	Washer – Flat 3/8	4
18	20712	36420	Washer – Lock 3/8	4
19	20644	36414	Nut – Hex 3/8	4
20	6072	6072	Zerk – Grease	4
21	6547	6547	Pin – Clevis	1
22	20138	80798	Cap Screw – 1/2 x 3-3/4	1
23	40576	40576	Pin – Hair	2
24	85002	85002	U-Joint	1
25	20010	34865	Cap Screw – 1/4 x 2 1/4	1
26	20005	36395	Cap Screw – 1/4 x 1	1
27	20691	36423	Washer – Flat 1/4	1
28	20710	36418	Washer – Lock 1/4	2
29	20642	36412	Nut – Hex 1/4	2
30	20918	20918	Pin – Roll	2
31	72294	72294	Washer – Rubber	2
32	27056-X4	27056-X4	Disc – Distributor RH	1
33	27056-X5	27056-X5	Disc – Distributor LH	1
34	10877	10877	Hub	2
35	20004	20004	Cap Screw – 1/4 x 7/8	12
36	20676	20676	Nut – Lock 1/4	12
37	309091	25870-X1	Fin – RH Weldment	4
38	309092	25871-X1	Fin – LH Weldment	4
39	20034	20034	Cap Screw – 5/16 x 3/4	24
40	20677	20677	Nut – Lock 5/16	24
41	6461	76825	Spacer	1
42	* 36940	36940	Bolt – Carriage 1/2 x 2	4
43	* 36426	36426	Washer – Flat 1/2	4
44	* 36422	36422	Washer – Lock 1/2	4
45	* 36416	36416	Nut – Hex 1/2	4

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

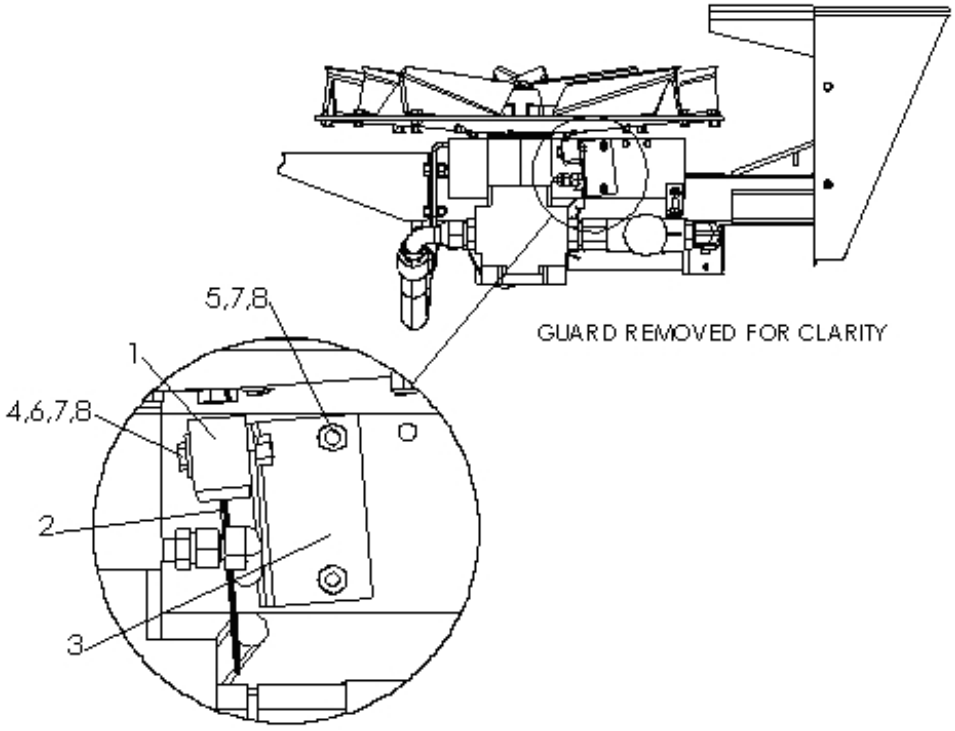
SPINNER GUARD & SHIELDS



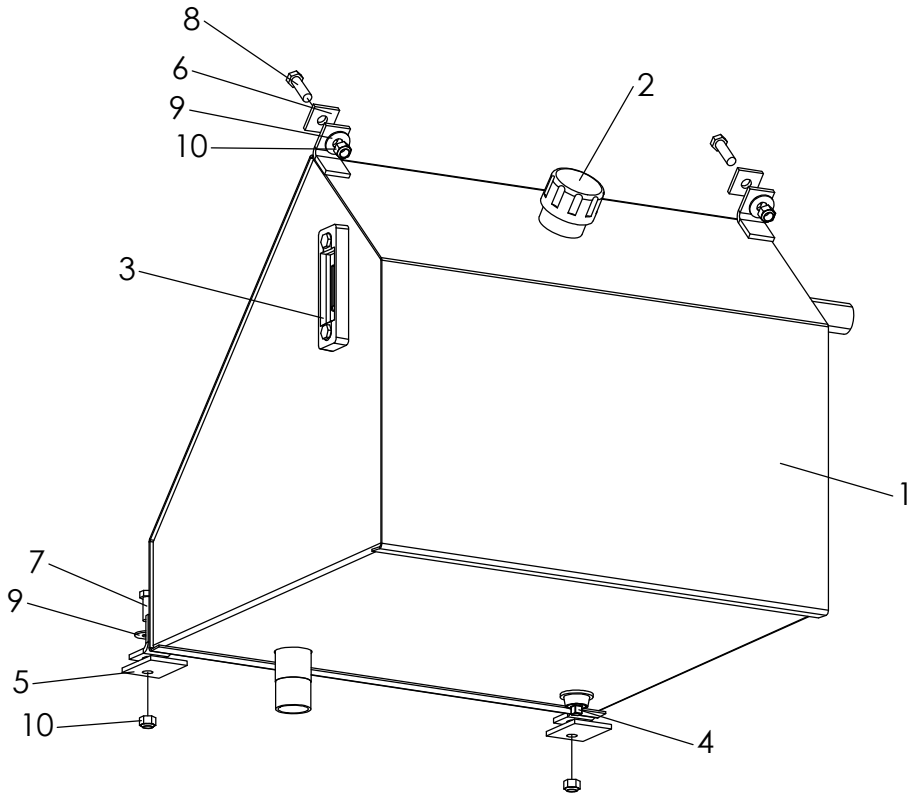
WARNING Guards are intended to reduce hazard of entanglement with machinery and injury. All guards must be installed per this drawing before spreader is put into operation.

ITEM		PART NO.	DESCRIPTION	QTY
	CS	SS		
1	87066	87066-X1	Guard – Center Section Weldment	1
2	87027	87027-X1	Guard – RH Weldment	1
3	87031	87031-X1	Guard – LH Weldment	2
4	36398	36398	Cap Screw - 3/8 x 1	16
5	36425	36425	Washer – Flat 3/8	12
6	36420	36420	Washer – Lock 3/8	10
7	72054	72054	Nut – Lock 3/8	6
8	36414	36414	Nut - Hex 3/8	10
9	36940	36940	Bolt – Carriage 1/2	2
10	36426	36426	Washer – Flat 1/2	2
11	36422	36422	Washer - Lock 1/2	2
12	36416	36416	Nut – Hex 1/2	2
13	87067	87068	Bar – Stiffener	2
		305040	Bar – Stiffener Lower	1
14	82960	82964	Shield – RH Weldment	1
		305075	Shield – RH Weldment 126”	1
15	82961	82965	Shield – LH Weldment	1
		305076	Shield – LH Weldment 126”	1

SPINNER SENSOR

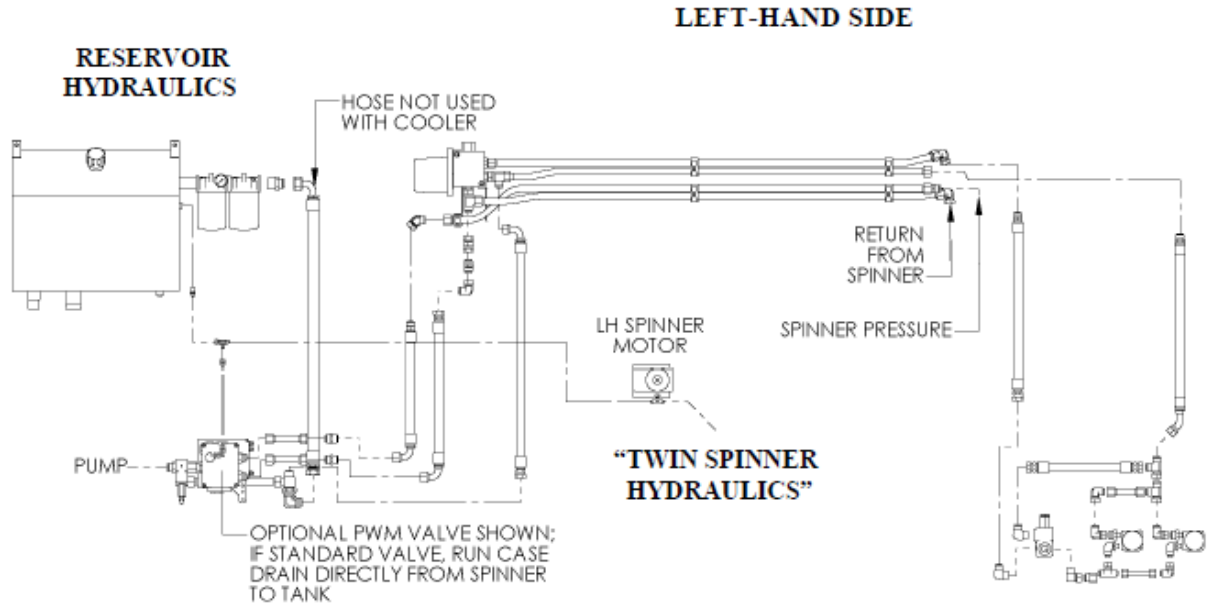


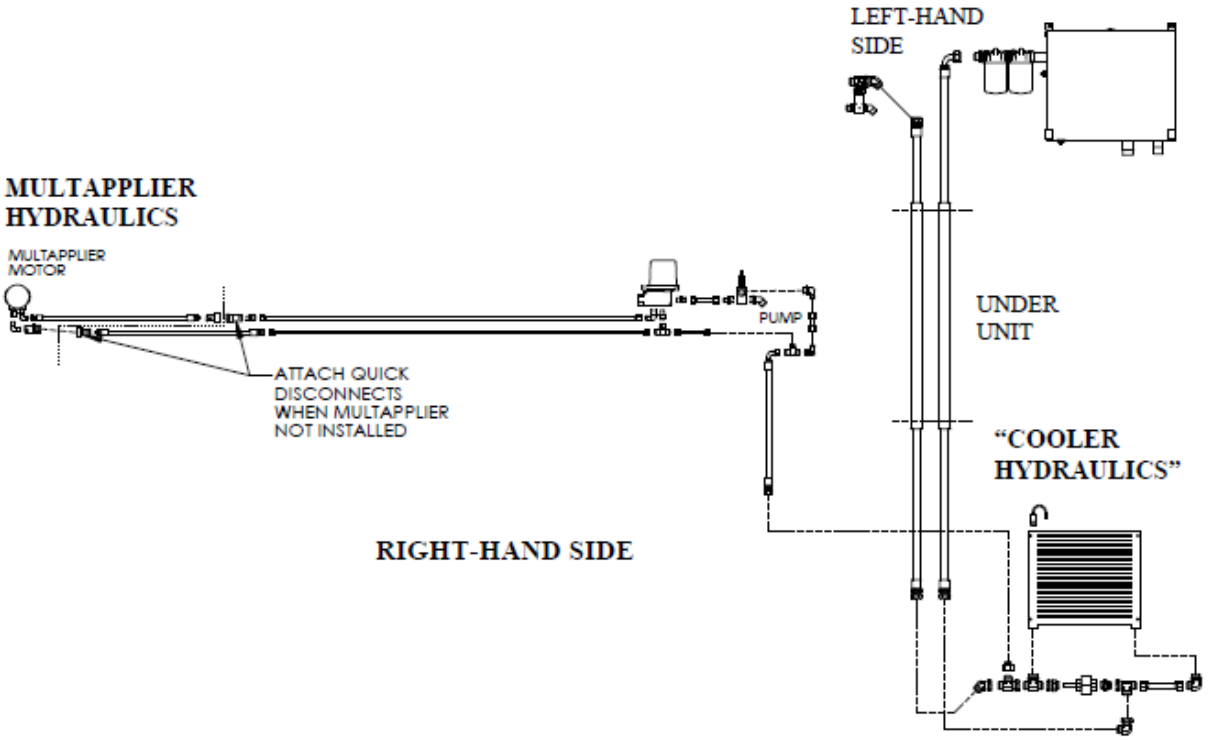
ITEM	PART NO.	DESCRIPTION	QTY
	97310	Sensor – Kit Spinner	
1	89011	Sensor – Assembly	1
2	89009	Cable – Sensor Extension	1
3	86672	Bracket	1
4	42448	Cap Screw – 1/4 x 1-1/2 SS	2
5	36393	Cap Screw – 1/4 x 3/4 SS	2
6	36423	Washer – Flat 1/4 SS	3
7	36418	Washer – Lock 1/4 SS	6
8	36412	Nut – Hex 1/4 SS	6

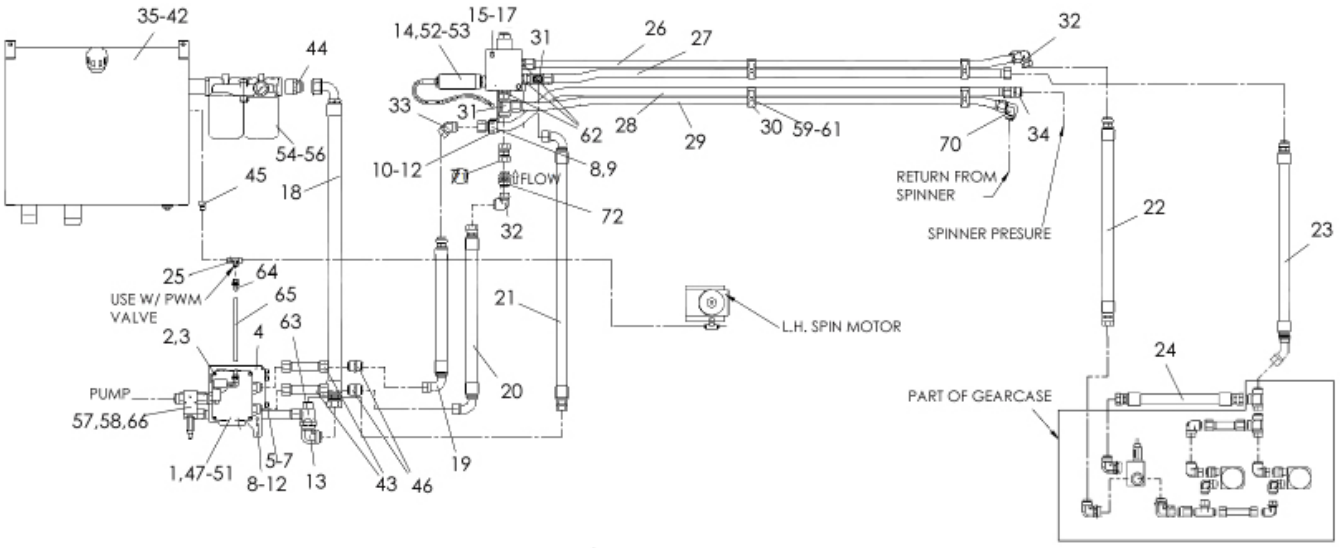


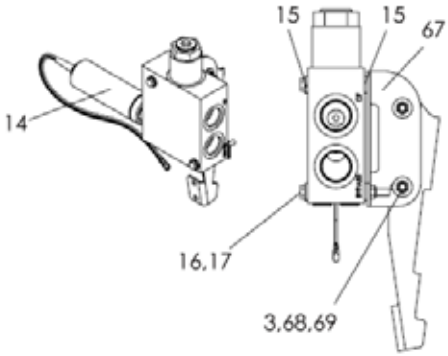
ITEM	PART NO.	DESCRIPTION	QTY
1	97977	Tank – Weldment 40 Gallon, Includes Item 2	1
2	96747	Cap – Filler	1
3	38575	Gauge – Assembly Sight & Temperature	1
4	6033	Plug – Pipe 3/4	1
5	39158	Belt – Flex Mount	2
6	39159	Belt – Flex Mount	2
7	36402	Cap Screw - 1/2 x 1 1/4	2
8	71832	Cap Screw - 1/2 x 1 3/4	2
9	36426	Washer – Flat 1/2	4
10	39016	Nut – Lock 1/2	4
11	*6031	Plug – Pipe 3/8	1

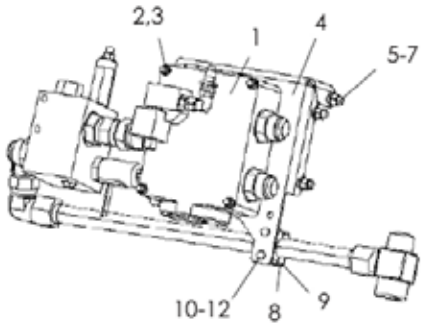
* - Not Shown


LEFT-HAND SIDE
RESERVOIR HYDRAULICS
HOSE NOT USED WITH COOLER
RETURN FROM SPINNER
SPINNER PRESSURE
LH SPINNER MOTOR
PUMP
"TWIN SPINNER HYDRAULICS"
OPTIONAL PWM VALVE SHOWN; IF STANDARD VALVE, RUN CASE DRAIN DIRECTLY FROM SPINNER TO TANK


LEFT-HAND SIDE
MULTAPPLIER HYDRAULICS
MULTAPPLIER MOTOR
PUMP
ATTACH QUICK DISCONNECTS WHEN MULTAPPLIER NOT INSTALLED
UNDER UNIT
"COOLER HYDRAULICS"
RIGHT-HAND SIDE


35-42
44
54-56
45
18
14,52-53
15-17
31
26
27
32
33
31
62
28
29
30
59-61
70
34
10-12
FLOW
8,9
72
32
RETURN FROM SPINNER
SPINNER PRESURE
22
23
25
64
USE W/ PWM VALVE
65
63
21
L.H. SPIN MOTOR
2,3
4
PUMP
57,58,66
20
24
PART OF GEARCASE
1,47-51
5-7
8-12
13
43
46
19


15
15
67
14
16,17
3,68,69

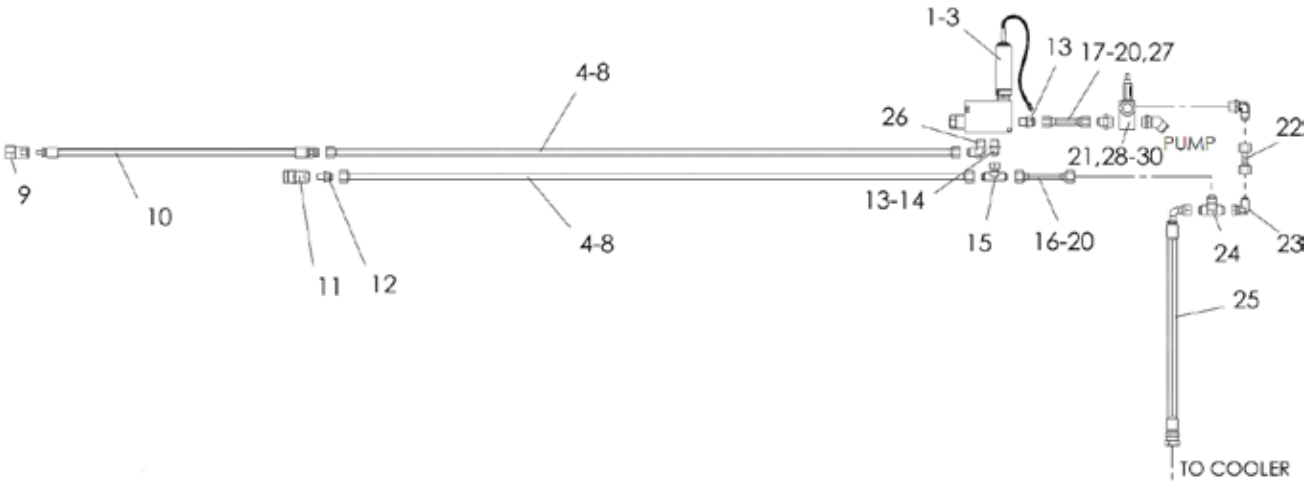

2,3
1
4
5-7
10-12
8
9

ITEM	PART NO.	DESCRIPTION	QTY
1	302461	Valve - Control PWM Assy, Includes 47-51	1
2	42794	Cap Screw - 5/16-18 x 3-3/4 SS	4
3	42221	Nut - lock 5/16-18 SS	4
4	302395	Bracket – Valve Mount	1
5	36398	Cap Screw – 3/8-16 x 1 SS	3
6	36420	Washer – Lock 3/8 SS	3
7	36414	Nut – Hex 3/8 SS	3
8	86557	Clamp – Pair 1 Tube	2
9	86556	Plate – Top 1 Tube	2
10	34865	Cap Screw – 1/4-20 x 2-1/4 SS	2
11	36418	Washer – Lock 1/4 SS	2
12	36412	Nut – Hex 1/4-20 SS	2
13	29783	Adapter – 90° Elbow	1
14	306270	Valve – Control 40 GPM SFP, Includes 52 & 53	1
15	302099	Washer - Step	4
16	34860	Cap Screw - 3/8 x 4 SS	2
17	72054	Nut – Lock 3/8 SS	2
18	98662	Hose - Assembly 1.25 x 48	1
19	56424	Hose - Assembly 1 x 25	1
20	56418	Hose - Assembly 1 x 34	1
21	96452	Hose - Assembly 1 x 47.25 Return	1
22	56419	Hose - Assembly 1 x 37.5	1
23	42996	Hose – Assembly 1 x 32.88 Return	1
24	82319	Hose – Assembly 1 x 19 Return	1
25	98724	Fitting – 6-6-6 070432, Use w/ PWM Valve	1
26	302407	Tube – Assembly 1 x 61, 11’	1
	302408	Tube – Assembly 1 x 73, 12’	1
	302410	Tube – Assembly 1 x 85, 13’	1
	302411	Tube – Assembly 1 x 97, 14’	1
	302413	Tube – Assembly 1 x 121, 16’	1
27	302414	Tube – Assembly 1 x 57, 11’	1
	302415	Tube – Assembly 1 x 69, 12’	1
	302417	Tube – Assembly 1 x 81, 13’	1
	302418	Tube – Assembly 1 x 93, 14’	1
	302420	Tube – Assembly 1 x 117, 16’	1
28	302421	Tube – Assembly 1 x 67, 11’	1
	302422	Tube – Assembly 1 x 79, 12’	1

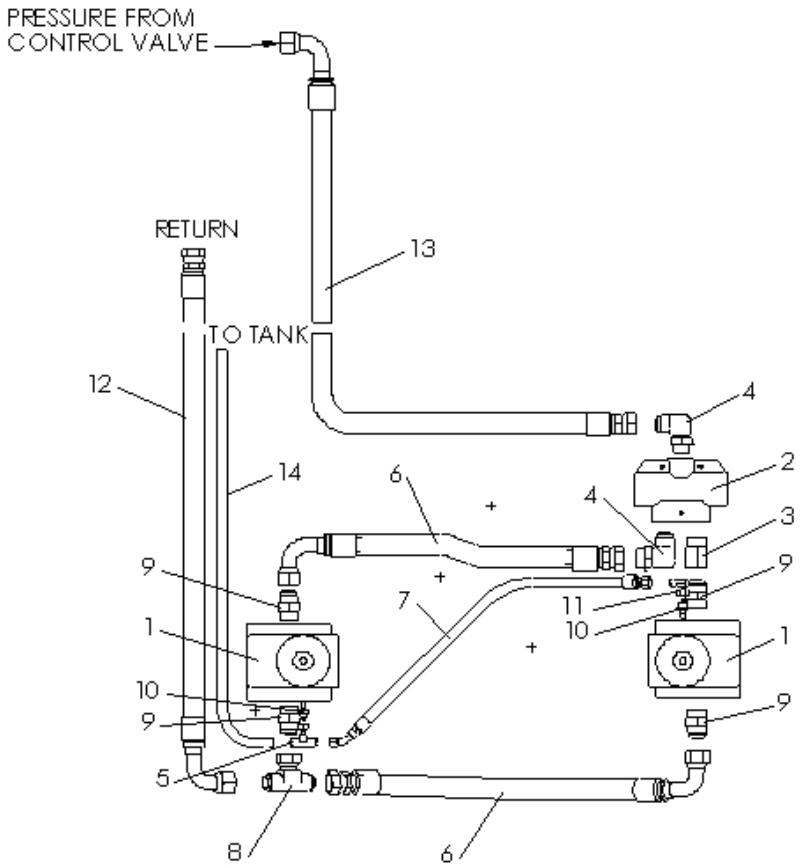
ITEM	PART NO.	DESCRIPTION	QTY
	302424	Tube – Assembly 1 x 91, 13’	1
	302425	Tube – Assembly 1 x 103, 14’	1
	302427	Tube – Assembly 1 x 127, 16’	1
29	302428	Tube – Assembly 1 x 61, 11’	1
	302429	Tube – Assembly 1 x 76, 12’	1
	302431	Tube – Assembly 1 x 88, 13’	1
	302432	Tube – Assembly 1 x 100, 14’	1
	302434	Tube – Assembly 1 x 121, 16’	1
30	300033	Clamp – Twin 1 Tube	AR
31	29850	Adapter – Tee Swivel	2
32	29807	Fitting – Elbow 90°	2
33	29806	Adapter – 45° Elbow	1
34	34719	Fitting – Union	1
35	86466	Tank – 40 Gallon Weldment	1
	96747	Cap – Pipe Reservoir	1
36	71832	Cap Screw - 1/2-13 x 1-3/4 SS	2
37	36402	Cap Screw - 1/2-13 x 1-1/4 SS	2
38	36426	Washer - Flat 1/2 SS	4
39	39016	Nut - Lock 1/2-13	4
40	39158	Belt - Flex Mount	2
41	39159	Belt - Spacer	2
42	38575	Gauge - Sight & Tempt	1
43	N/A	Used only on units w/ stakes	2
44	96911	Fitting	1
45	29766	Fitting - 6-6 070102	1
46	34719	Fitting - 16-16 070101	2
47	38576-X4	Valve - Hydraulic	1
	38576-AA	Cartridge - Press Reg	
	38576-AB	Coil	
	38576-AC	O-Ring	
	38576-AD	Screw - Set	
	38576-AE	Nut - Jam	
	38576-AF	Block - Cartridge	
	38576-AG	Cartridge - Nut	
	38576-AH	Seal Kit	
48	29803	Adapter 1.31 x 1.31	3
49	34757	Adapter .44 x .56	1
50	34816	Elbow - Hydraulic Fitting	1

ITEM	PART NO.	DESCRIPTION	QTY
51	34761	Fitting - Socketless	1
52	306271	Manifold - 40 GPM SFP	1
53	306272	Valve - Flow Control 40 GPM SFP	1
54	98589	Filter - Assy w/ Indicator, Includes 55 & 56	1
55	43530	Filter	1
56	43534	Indicator	1
57	302451	Valve - Relief Assy 3100 PSI, Includes 58 & 66	1
58	300701	Valve - Relief Assy 3100 PSI	1
59	71830	Cap Screw - 5/16-18 x 2-1/2 SS	4
60	36419	Washer - Lock 5/16 SS	4
61	36413	Nut - Hex 5/16-18 SS	4
62	29803	Fitting - 16-16 070120	3
63	96912	Fitting - 16-20-16 070401	1
64	34761	Fitting - Hose End	1
65	34195	Hose - Drain .38 x 102	AR
66	302436	Tube - 1 x 14.375 Assy 304	1
67	303115	Bracket - Wldmt Valve Mounting	1
68	42639	Bolt - Carriage 5/16-18 x 1 SS	2
69	36424	Washer – Flat 5/16 SS	2
70	29783	Adapter - Elbow 90°	1
71	302449	Fitting - Union	1
72	302160-AB	Valve - Check	1
73	*307399	Pigtail - 3-Pin Metripack to Flying Lead (optional) 11’ Unit Only, Reservoir Tank	AR
74	*23716	Valve - Gate 2”	1
75	*21409	Valve - Gate 1.5”	1
76	*23713	Plug - Pipe	

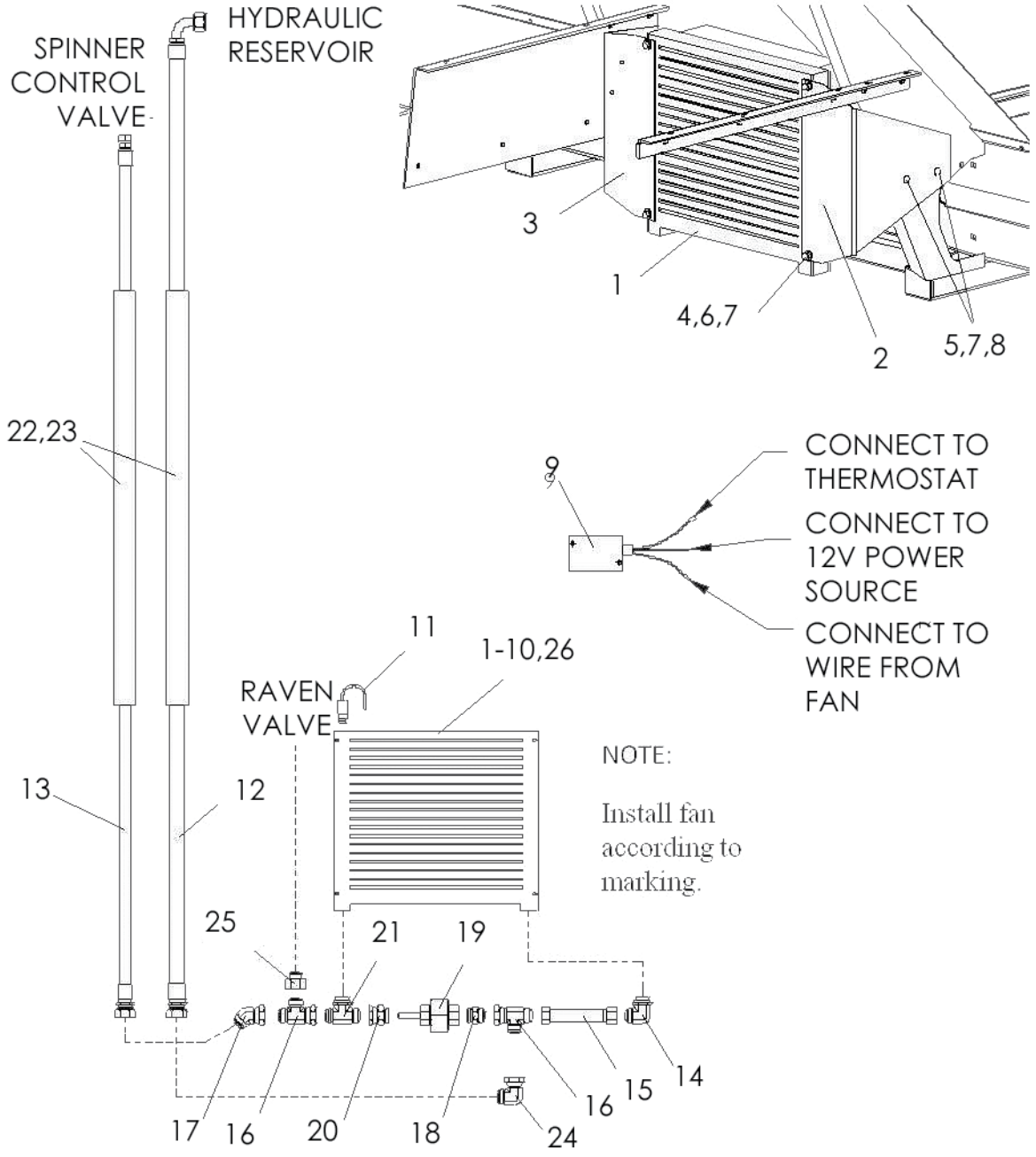
* - Not Shown AR- As Required


1-3
13
17-20,27
4-8
26
PUMP
22
21,28-30
9
10
13-14
4-8
15
16-20
24
23
25
11
12
TO COOLER

ITEM	PART NO.	DESCRIPTION	QTY
1	306276	Valve - Assy Control 9 GPM SFP, Includes 2 & 3	1
2	306274	Manifold - 5-25 GPM SFP	1
3	306277	Valve - Flow Control 9 GPM	1
4	302851	Tube - .75 x 68” Assy 304	2
5	75036	Clamp - Tubing .75	3
6	71830	Cap Screw - 5/16-18 x 2-1/2 SS	3
7	36419	Washer - Lock 5/16 SS	3
8	36413	Nut - Hex 5/16-18 SS	3
9	96651	Disconnect - Quick Hex Nut	1
10	98668	Hose - Assy .5 x 36” 100R1	1
11	96652	Disconnect - Quick Nipple	1
12	29784	Connector - .5 NPT x 1.06 JIC	1
13	29789	Fitting - 12-12 070120	1
14	303226	Fitting - 12-12 Special	1
15	29809	Tee-Branch	1
16	302720	Tube - .75 x 8.5” Assy 304	1
17	98649	Clamp - Pair .75” Tube	2
18	34865	Cap Screw - 1/4-20 x 2-1/4 SS	4
19	36418	Washer - Lock 1/4 SS	4
20	36412	Nut - Hex 1/4-20 SS	4
21	98650	Valve - Relief Assy 1500 PSI Soft Start, Includes 28-30	1
22	98643	Tube - .75 x 2.875” Assy 304	1
23	34709	Adapter - 90°	1
24	29792	Tee - Union	1
25	98669	Hose - Assy .75 x 30”	1
26	29847	Fitting - 12-12 070220	1
27	302719	Tube - .75 x 7” Assy 304	1
28	77498	Valve - Relief 1500 PSI	1
29	29835	Adapter	1
30	29829	Adapter - Elbow 90°	2


PRESSURE FROM
CONTROL VALVE
RETURN
TO TANK
13
12
14
6
4
2
4
3
9
9
11
10
7
1
1
10
9
9
5
8
6

ITEM	PART NO.	DESCRIPTION	QTY
1	305950	Motor - Spinner	2
2	71781	Valve - Flow Divider	1
	56369	Spool - Compensating	1
3	34810	Adapter	1
4	29840	Adapter - 90°	2
5	29825	Tee - Swivel Nut	1
6	87111	Hose - Assembly	1
7	87112	Hose - Assembly	1
8	29836	Tee - Swivel Nut	1
9	29803	Adapter	4
10	34763	Adapter	2
11	34816	Adapter - 90°	1
12	87113	Hose - Return Assembly, Raven & Manual Dual Hydraulics	1
13	98102	Hose - Pressure Assembly	1
14	83600	Hose - 12’ & 12’6” Units Drain Line	1
	83601	Hose - 13’ Unit Drain Line	1
	83602	Hose - 14’ Unit Drain Line	1
	83603	Hose - 15’ Unit Drain Line	1
	83604	Hose - 16’ Unit Drain Line	1


HYDRAULIC RESERVOIR
SPINNER CONTROL VALVE
3
1
4,6,7
2
5,7,8
22,23
9
CONNECT TO THERMOSTAT
CONNECT TO 12V POWER SOURCE
CONNECT TO WIRE FROM FAN
11
1-10,26
RAVEN VALVE
NOTE:
Install fan according to marking.
13
12
25
21
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17
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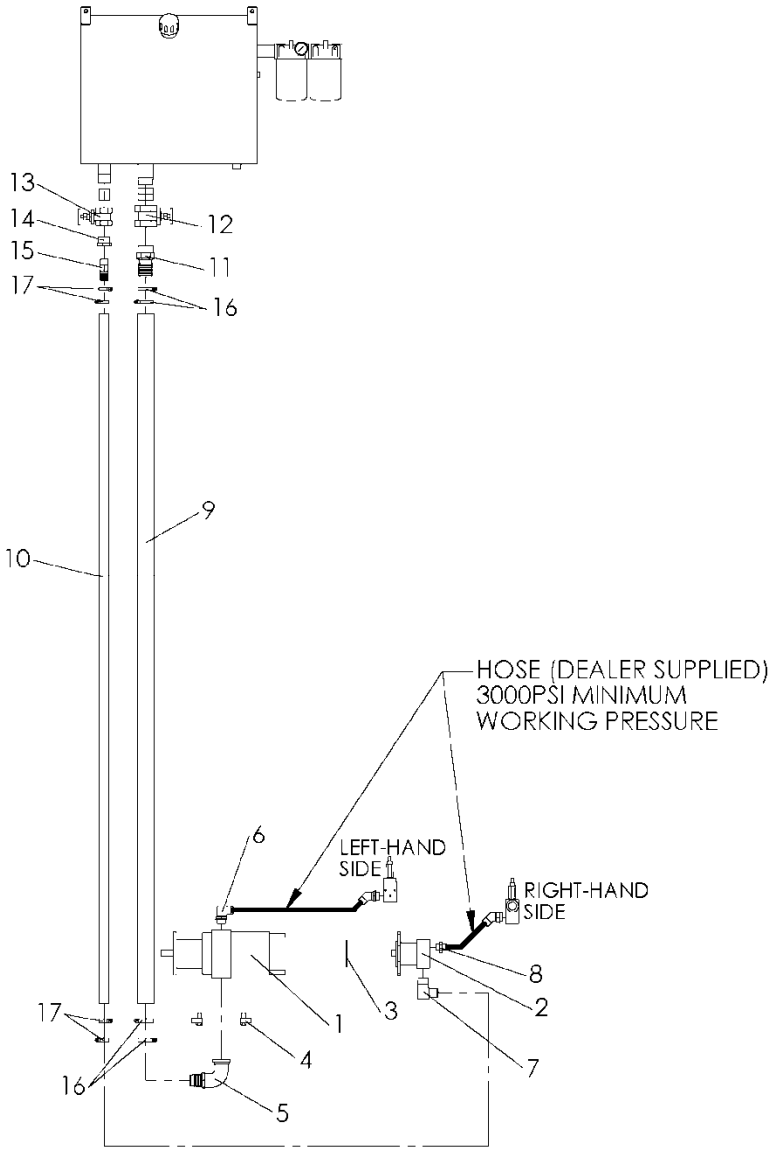
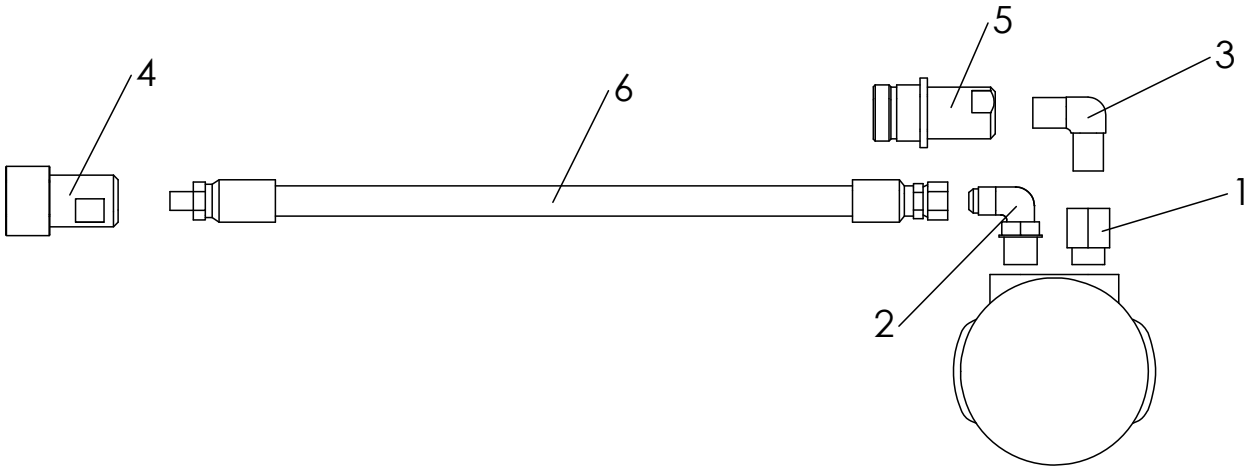
18
24
16
15
14

ITEM	PART NO.	DESCRIPTION	QTY
1	96917	Cooler – Assembly 50 Gallon	1
	96917-AA	Core	
	96917-AC	Housing	
	96917-AD	Fan	
2	96920	Bracket - Cooler Mount Front	1
3	302722	Bracket - Wldmt Cooler Mount Rear	1
4	96921	Cap Screw – M10 x 20	4
5	20318	Bolt – Carriage 3/8 x 1	4
6	36425	Washer – Flat 3/8	4
7	36420	Washer – Lock 3/8	8
8	36414	Nut – Hex 3/8	4
9	96750-X1	Relay – 12 VDC 40A	1
10	56258	Screw - Truss head 1/4 x 1/2 SS	1
11	96927	Switch – Temp 117°	1
12	98646-X1	Hose – Assembly 1-1/4 x 127	1
13	302447	Hose – Assembly 1-1/4 x 58	1
14	96916	Adapter – Elbow 90°	1
15	96924	Tube – Assembly 1-1/4 x 7-1/4, Includes	1
	302896	Sleeve – Flareless Tube	1
	302897	Nut – Flareless Tube	1
16	96909	Tee – Run	2
17	96910	Adapter – Elbow 45°	1
18	96907	Adapter – Connector	1
19	96932	Valve – Check	1
20	96905	Adapter – Connector	1
21	96914	Tee – Branch	1
22	96906	Sleeve – Abrasive	8
23	96942	Tie – Wrap 29”	4
24	98568	Adapter – Elbow 90°	1
25	34819	Adapter – Bushing	1
26	42034	Nut- Lock 1/4 SS	1


13
14
15
17
12
11
16
9
10
HOSE (DEALER SUPPLIED)
3000PSI MINIMUM
WORKING PRESSURE
6
LEFT-HAND
SIDE
RIGHT-HAND
SIDE
8
2
7
1
3
4
5
17
16

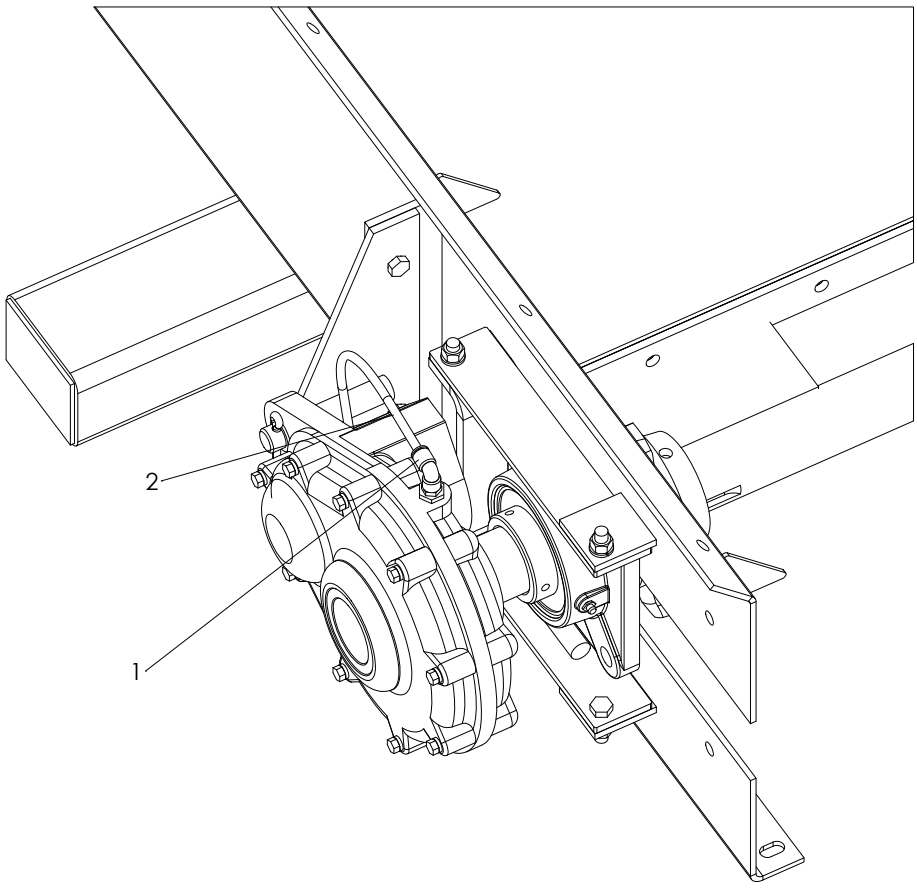
ITEM	PART NO.	DESCRIPTION	QTY
1	304424	Pump – 4.46 CID (Front section)	1
	* 300493	Gasket – Paper Pump	1
	* 300492	Cover – Pump Rear	1
2	304425	Pump – .93 CID (Rear section)	1
3	300669	O-Ring – 4” ID	1
4	41015	Kit – Flange Split -32	1
5	34806	Fitting – 32-32 12151-3-E90S-L	1
6	29840	Adapter – Elbow 90	1
7	304427	Fitting – 20-20 430260	1
8	29789	Fitting – 12-12 070120	1
9	32401-108	Hose – Suction 2 x 108	1
10	23184-108	Hose – Suction 1-1/4	1
11	29811	Fitting – Hose End	1
12	23716	Valve – Gate 2”	1
13	21409	Valve – Gate 1-1/2	1
14	16505	Bushing – Reducer	1
15	16582	Fitting – Hose Barb	1
16	22380	Clamp – Hose	4
17	6335	Clamp – Hose	4

* - Not Shown – Use when .93 CID pump add-on not installed.

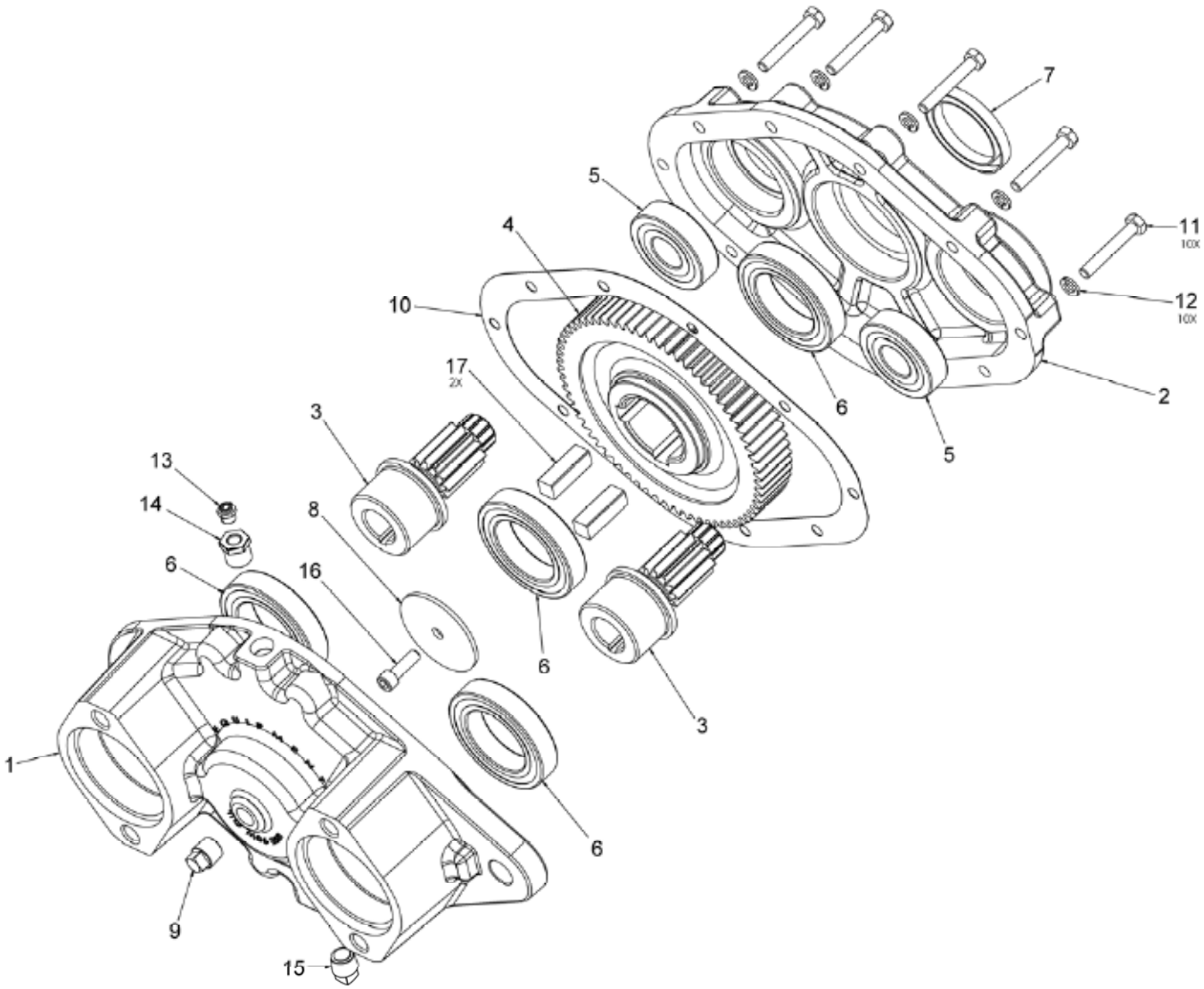


ITEM	PART NO.	DESCRIPTION	QTY
1	22020	Bushing	1
2	29772	Adapter – Elbow 90°	1
3	34742	Adapter – Elbow 90°	1
4	96651	Disconnect – Quick Female	1
5	96652	Disconnect – Quick Male	1
6	98667	Hose Assembly – 1/2 x 36	1

GEAR CASE - BREATHER TUBE



ITEM	PART NO.	DESCRIPTION	QTY
1	306891	Fitting - 4-2 630202K	1
2	9005-0-7761	Tubing - 1/4 OD Air Brake Black	1.5 ft

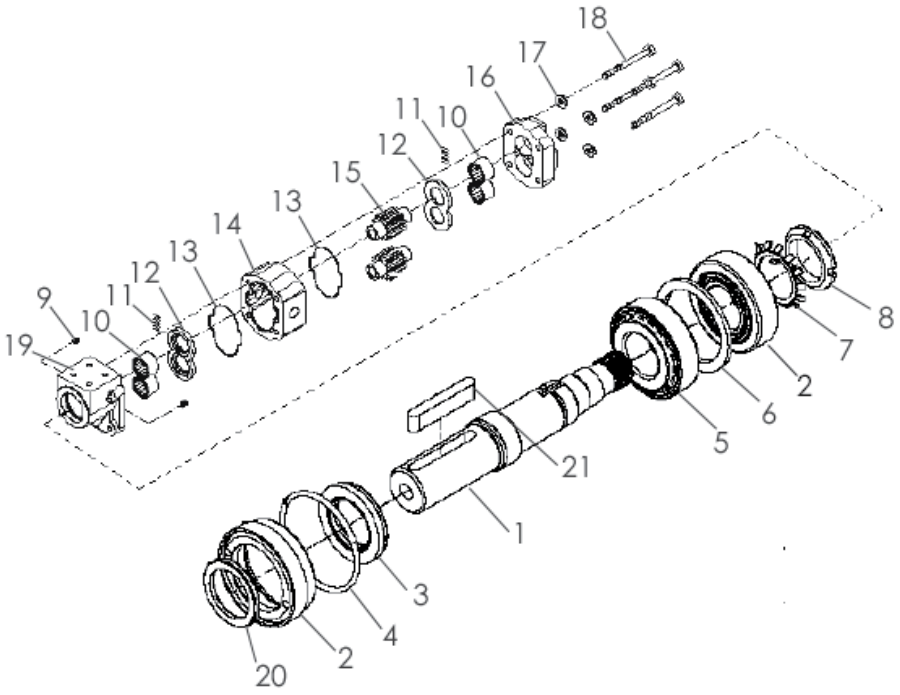


STYLE I

STYLE II

GEAR CASE - DUAL PINION CONTINUED

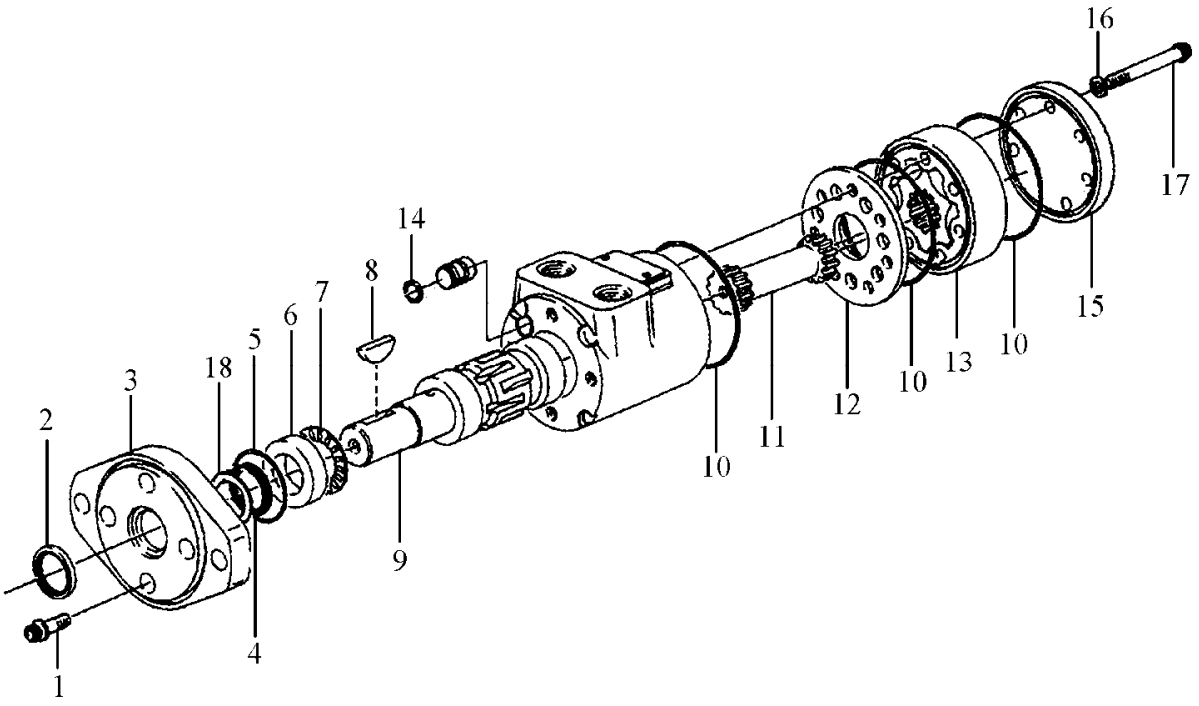
ITEM	PART NO.		DESCRIPTION	QTY
	37985		Gear Case – Assembly Dual Pinion	
	Style I	Style II		
	304268-AA	304268-AB	Parts – Service, Includes 1–17	
1	38983	304557	Housing – Outboard	1
2	38982	304558	Housing – Inboard	1
3	37003	304561	Gear – Pinion 11 Tooth	2
4	38981	304562	Gear – Driven 67 Tooth	1
5	37007	37007	Bearing	2
6	37008	37008	Bearing	4
7	37006	37006	Seal – Oil	1
8	38979	38979	Washer – Flat 2-1/2 x 11/32	2
9	6031	6031	Plug – Pipe	1
10	38978	304564	Gasket – Housing	1
11	20040	20040	Cap Screw – 5/16NC x 2	10
12	20711	20711	Washer – Lock 5/16	10
13	2564	2564	Cap – Breather	1
14	27465	27465	Bushing – Pipe 1/8 x 3/8	1
15	21490	21490	Plug – Pipe Magnetic	1
16	38980	38980	Screw – Allen Head 5/16-18 x 1	1
17	37010	37010	Key – 1/2 x 1/2 x1-1/2	2



PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
	306093	Shaft Assy - Output	
		Includes: 1-8, 20, 21	
	72548	Kit - Seal, Includes: 3, 4, 20 & 27	
	305950	Motor - Hydraulic	
1	306088	Shaft - Output	1
2	306091	Ring - Retainer	1
3	71980	Seal	1
4	28494	"O" Ring	1
5	28491	Bearing - Tapered Roller Assy	2
	41014	Cone - Bearing	1
	41013	Cup - Bearing	1
6	28454	Spacer	1
7	306092	Washer - Lock	1
8	306089	Nut - Lock	1
9	58797	Plug	1
10	23806	Bearing	4
11	23819	Seals - Pocket (Makes 12 Seals)	1
12	23818	Plate	2
13	23820	Gasket	2
14	41954	Housing	1
15	23824	Gear Set	1
16	23812	Cover - Port End	1
17	N/A	Washer	4
18	20190	Cap Screw	4
19	306087	Cover - Shaft End	1
20	33809	Seal - Excluder	1
21	24458	Key	1
22	*30723	Tool - Wrench Spinner	1
23	*24536	Tool - Seal Driver	1
24	*23940	Tool - Seal Sleeve	1
25	* 306429	Tool - Speedi	1
26	*305824	Retainer - Assy w/Seals, Includes 2-4, 20 & 27	1
27	*306090	Sleeve - Speedi	1

* - Not Shown


16
17
14
8
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2
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10
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11
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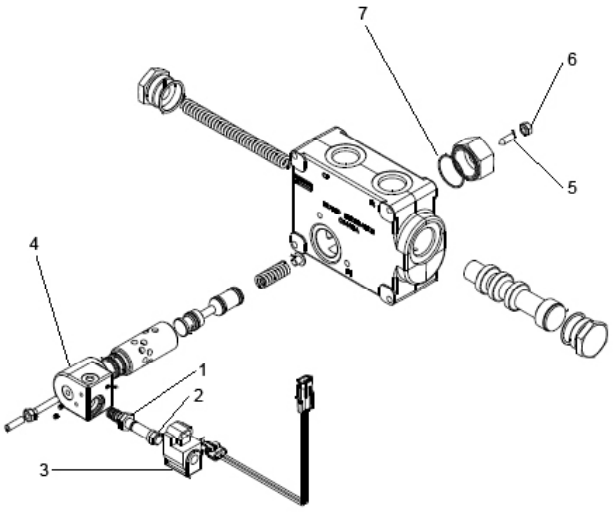
9
4
1

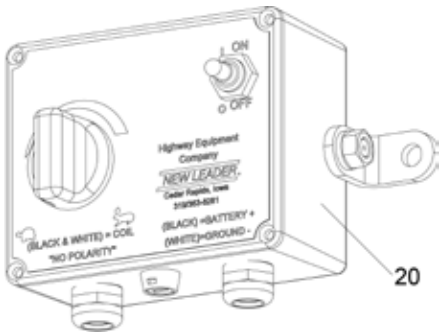
ITEM	PART NO.	DESCRIPTION	QTY
	82459	Motor - Hydraulic, 1 1/4" Standard	
	82462	Motor - Hydraulic, 1 1/4" Modified	
1	30665	Cap Screw	4
2	73471	Seal	1
3	73555	Flange - Mounting (Used on 82459)	1
	73556	Flange - Mounting (Used on 82462)	1
4	73473	Seal	1
5	73474	Seal - "O" Ring	1
6	37385	Race - Bearing	1
7	37401	Bearing - Thrust Needle	1
8	3065	Key	1
9	37386	Shaft - Output Keyed	1
10	73480	Seal - "O" Ring	1
11	83014	Drive	1
12	37388	Plate - Spacer	1
13	83015	Gerotor - 1 1/4"	1
14	22068	Seal - "O" Ring	1
15	37400	Cap - End	1
16	37381	Washer - Seal	7
17	83016	Cap Screw	7
18	73472	Washer - Back-up	1
19	* 73477	Seal - "O" Ring	1
	39137	Kit - Seal, Includes Items 2,4,5,10,16,18 & 19	

* - Not Shown

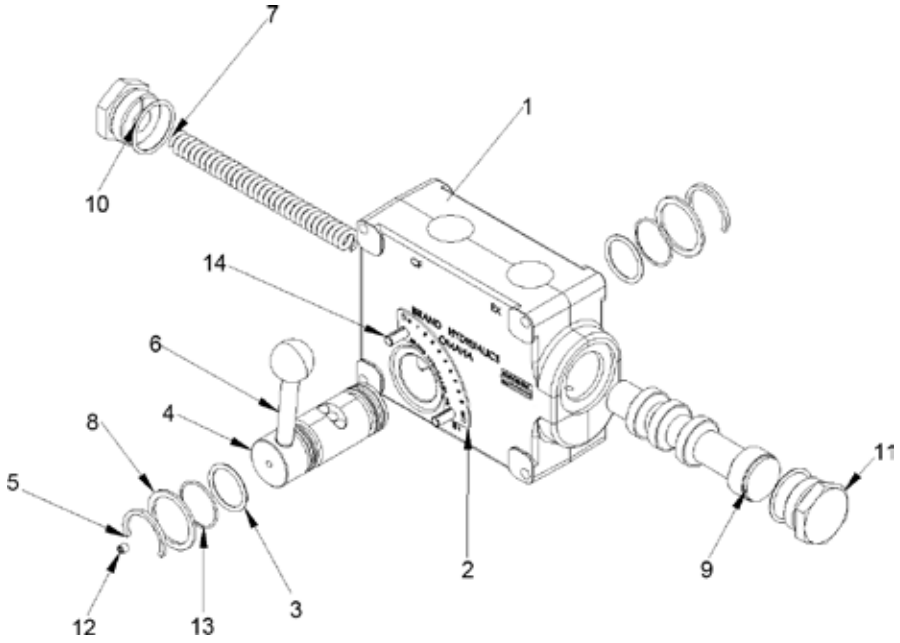
PWM VALVE



PWM CONTROL

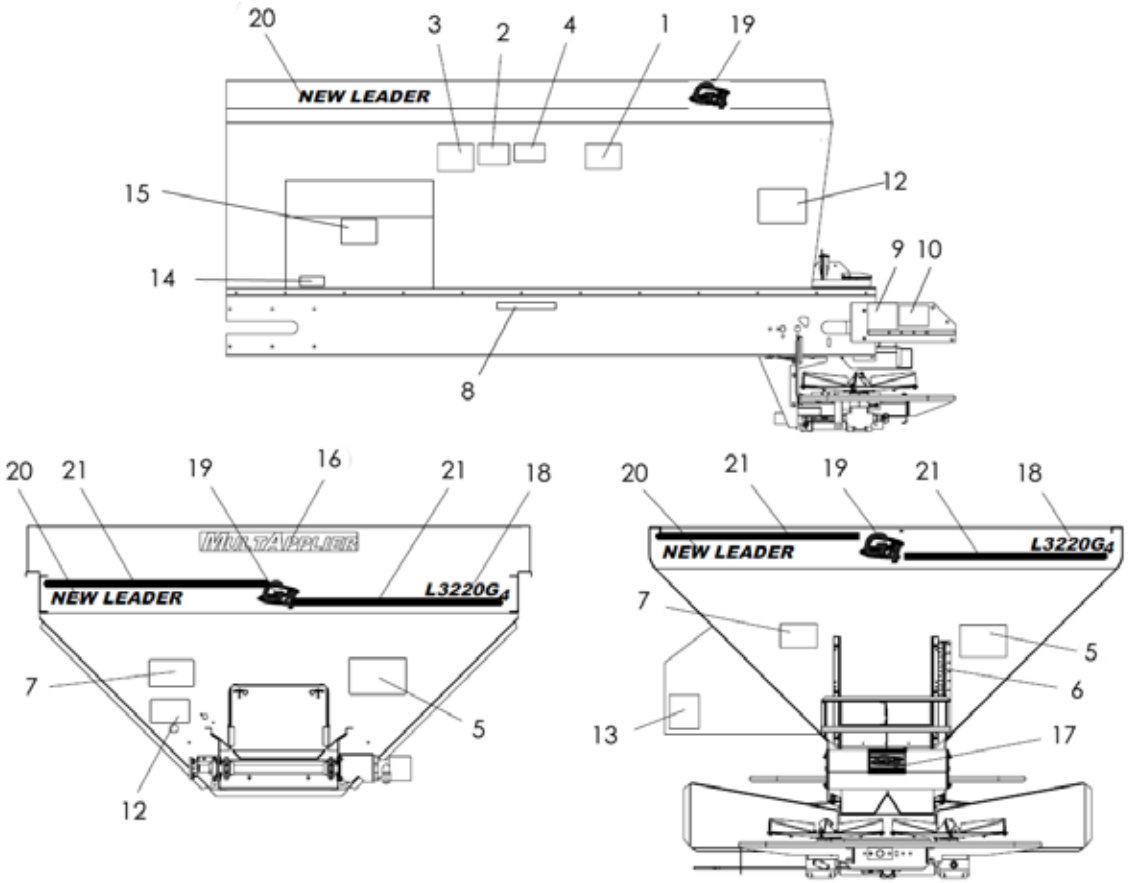


MANUAL VALVE



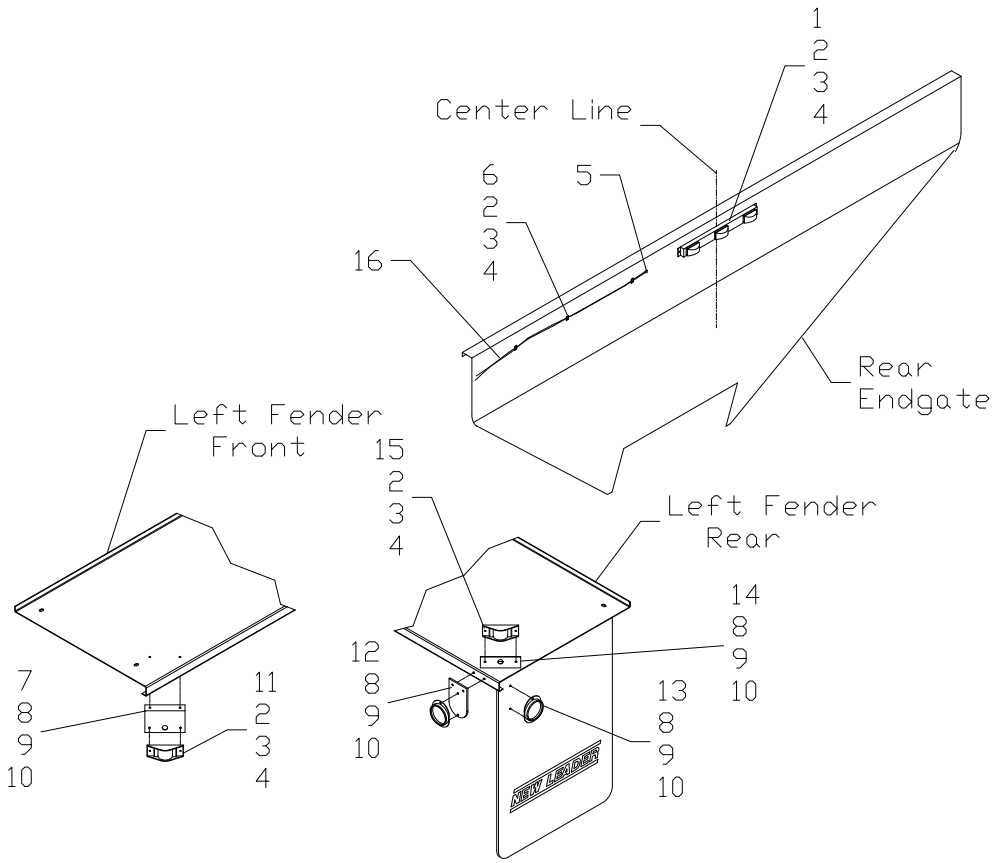
ITEM	PART NO.	DESCRIPTION	QTY
1	38576	Valve - Flow Control, Includes: 2-14	1
	38576-X4	Valve - Flow Control Electric Actuated Includes: 7, 9-22	1
2	43116	Scale	1
3	29887	O-Ring	2
4	53962	Spool - Rotary	1
5	53963	Ring - Snap	2
6	53961	Handle - Spool	1
	45950	Knob - Lever	1
7	53960	Spring	1
8	90696	Shim	2
9	90697	Spool	1
10	90698	O-Ring	1
11	90699	Plug	2
12	--	Set Screw	1
13	--	O-Ring	2
14	--	Pin - Roll	2
15	38576-AA	Cartridge	1
16	38576-AB	Coil	1
17	38576-AC	O-Ring	1
18	38576-AD	Screw - Set	1
19	38576-AE	Nut - Jam	1
20	88260	Control Box - w/27’ Cable	1
21	38576-AG	Nut	1
22	38576-AF	Block - Cartridge	1

* - Not Shown


20
3
2
4
1
19
NEW LEADER
15
12
14
9
10
8
20
21
19
16
21
18
NEW LEADER
L3220G4
7
5
12
20
21
19
21
18
NEW LEADER
L3220G4
7
5
6
13
17

ITEM	PART NO.	DESCRIPTION	QTY
1	39198	Decal - Warning, Hot Components	1
2	364	Decal - Warning, Stay Our of Box	2
3	150034	Decal – Caution, Improper Operation	1
4	321	Decal – Caution, Material to be Spread	1
5	368	Decal – Flying Material	1
6	23769	Decal – Feedgate Slide Scale	1
7	71526	Decal – Notice, Adjust Spinner	1
8	39200	Decal – Fender Capacity	2
9	55630	Decal – Warning, No Step	2
10	55631	Decal – Warning, Guard for Protection	2
11	87110	Decal – Scale Spinner	1
12	21476	Decal – Notice, Conveyor Chain Life	2
13	39378	Decal – Change Filter	1
14	8664	Decal – Caution, Keep Valve Open	1
15	304264	Decal – Notice Cooler	1
	8665	Decal – Notice Hyd. Oil (Cooler not installed)	1
16	88245	Decal – MULTAPPLIER	1
17	87109	Decal – G4	1
18	86895	Decal – L3220G4, Black	1
	86896	Decal – L3220G4, White	1
19	87122	Decal – G4 Black/Red	3
	87129	Decal – G4 Black/White	3
	87123	Decal – G4 White/Red	3
20	87164	Decal – New Leader, Black	3
	87165	Decal – New Leader, White	3
21	87162	Decal – Striping Black (per foot)	AR
	87163	Decal – Striping White	AR
22	300403	Decal – MULTAPPLIER-Ready	1
	300404	Decal – MULTAPPLIER-Ready White	1

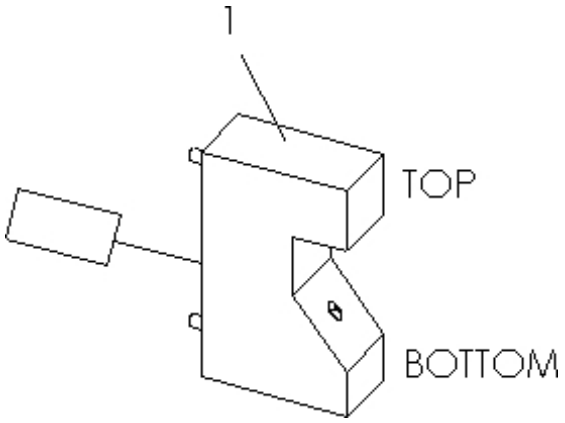
AR - As Required



ITEM	PART NO.	DESCRIPTION		QTY
1	6114	Cluster - Light, Red		1
2	20572	Screw - Machine 3/16 x 3/4		33
3	20709	Washer - Lock 3/16		33
4	20641	Nut - Hex 3/16		33
5	21986	Grommet - Rubber		AR
6	6198	Clamp - Wire		AR
7	38611	Bracket - Front Light, Amber		2
8	20003	Cap Screw - 1/4 x 3/4		24
9	20691	Washer - Flat 1/4		24
10	20642	Nut - Hex 1/4		24
11	6108	Clearance Lamp - Amber		2
12	3824	Mount - Belt Reflector		4
13	6107	Reflector - Red		4
14	3775	Bracket - Rear Light, Red		2
15	6110	Clearance Lamp - Red		2
16	21580	Wire - 14 Gauge, Black	Inches	AR

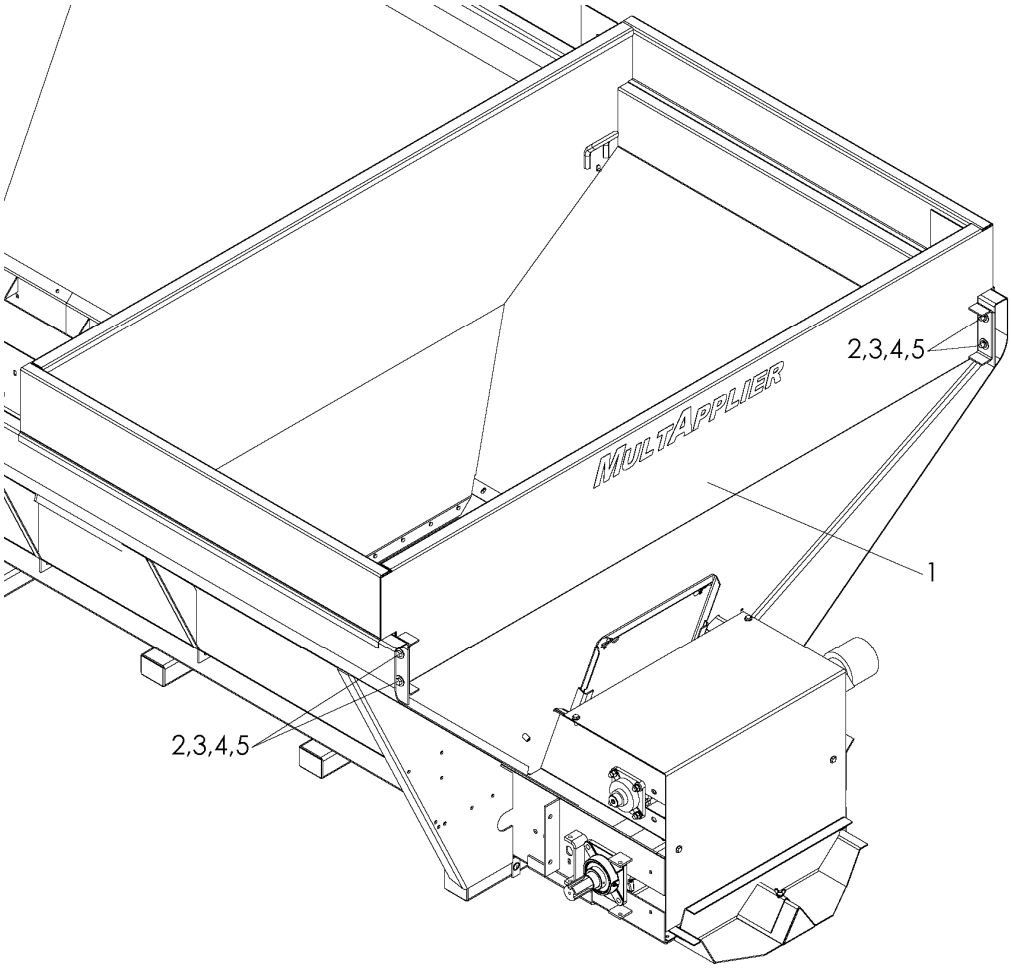
AR - As Required

BIN SENSOR

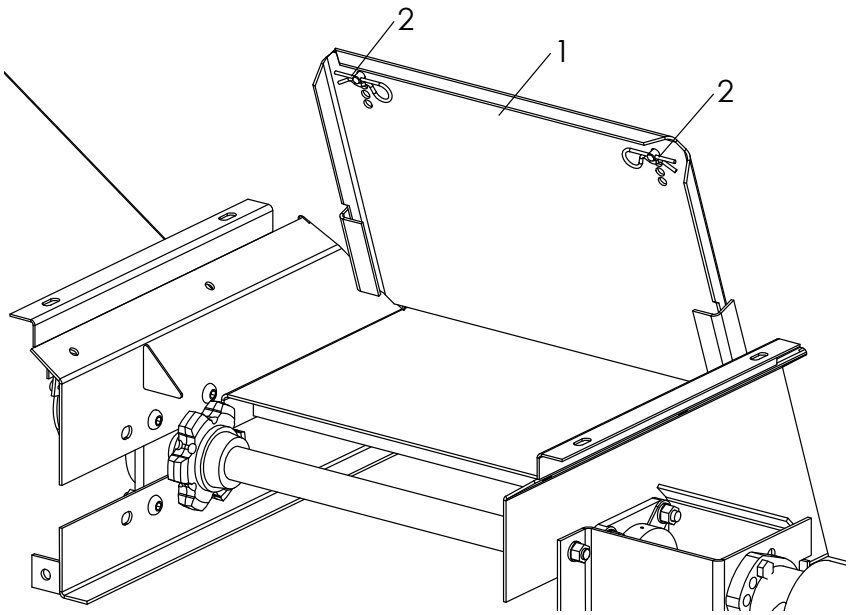


ITEM	PART NO.	DESCRIPTION	QTY
1	98787-AB	Lead - 18” Bin Level Sensor	AR
2	*98787-AD	Cable - 27’ Bin Level Sensor	AR
3	*307130	Cable - Jumper 102”	AR
4	*307124	Mount - Sensor 304	AR
5	*36393	Cap Screw - 1/4-20NC x 3/4 SS	AR

* - Not Shown

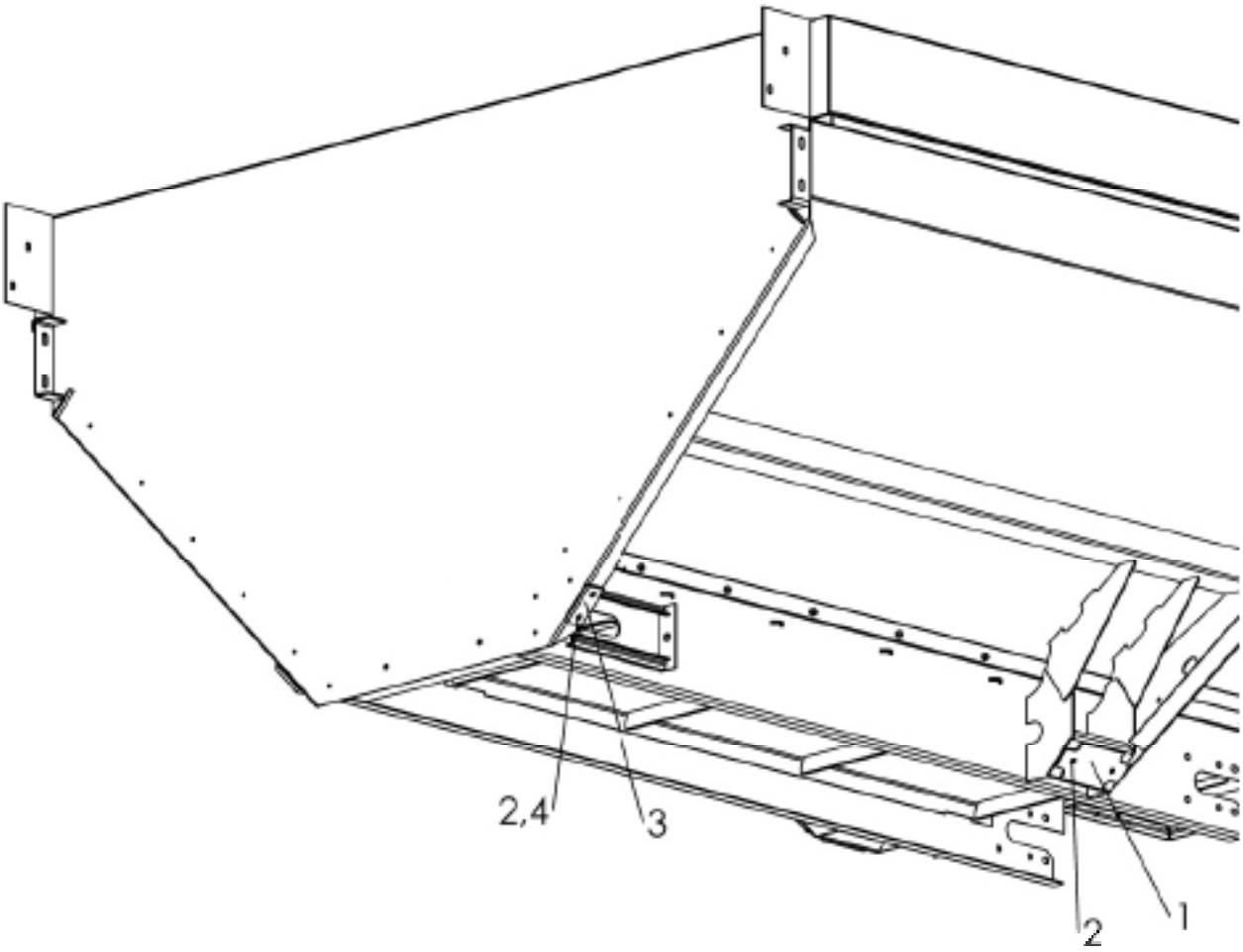


ITEM	PART NO.	DESCRIPTION	QTY
	86951	Hardware – Kit Mount	
1	98552	MULTAPPLIER – 5' SHELL INSERT	1
	303964	MULTAPPLIER – 7' Shell Insert	1
2	20128-X1	Cap Screw – 1/2 x 1 1/4 Grade 8	8
3	20695	Washer – Flat 1/2	16
4	20714	Washer – Lock 1/2	8
5	20646	Nut – Hex 1/2	8

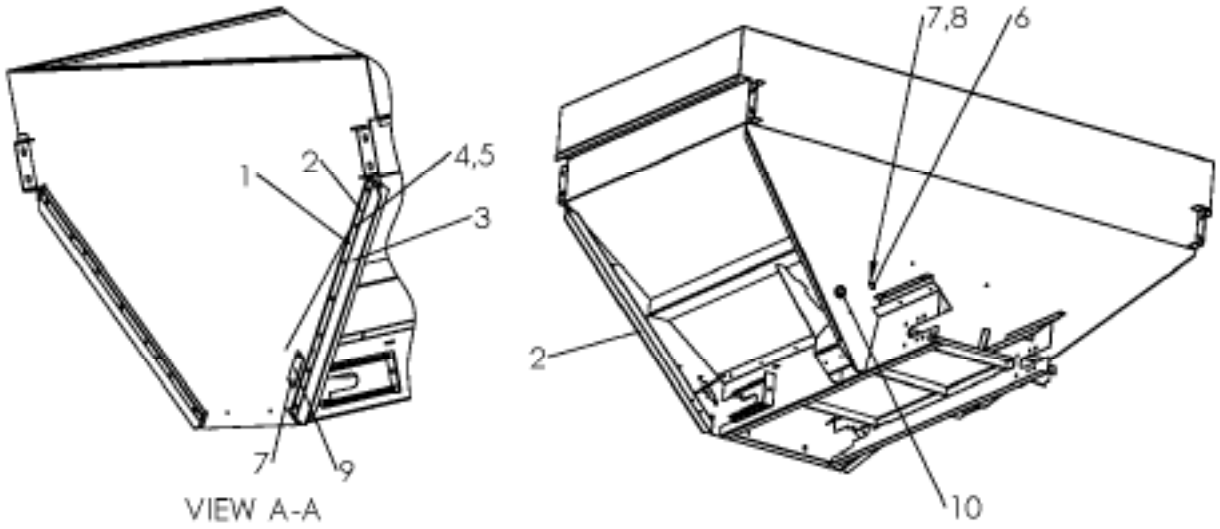


ITEM	PART NO.	DESCRIPTION	QTY
1	98557	Panel – Feedgate	1
2	36429	Pin – Hair 2.562 x .148	2

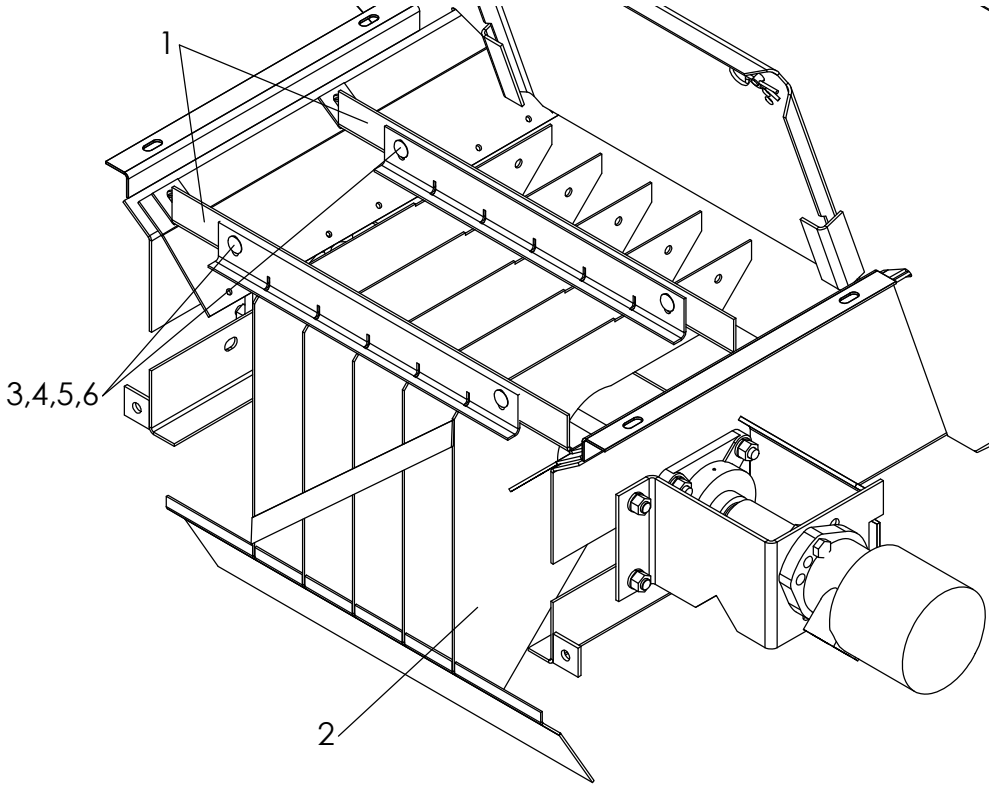
MULTAPPLIER MOUNTING PADS



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

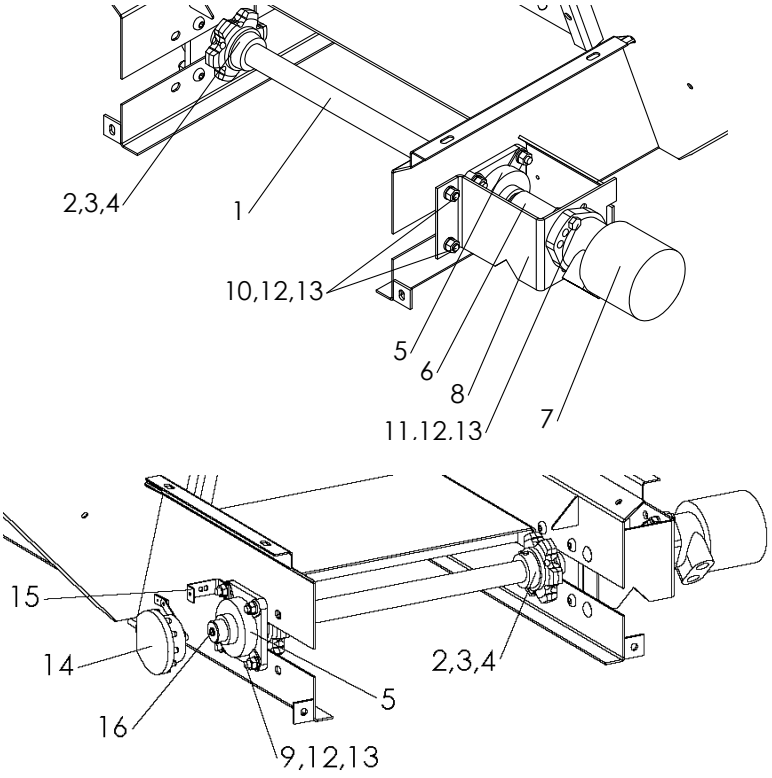


ITEM	PART NO.	DESCRIPTION	QTY
1	36395	Capscrew – 1/4-20NC x 1 SS	10
2	97966	Retainer – Seal 304	1
3	97968	Seal – 3 x 1/4 x 47-7/8	1
4	88931	Nut – Tee 1/4 x 1/4	7
5	56258	Screw – Truss Head 1/4-20 x 1/2 SS	7
6	305832	Plate – Bin Sensor	1
7	36393	Capscrew – 1/4-20NC x 3/4 SS	4
8	42034	Nut – Lock 1/4-20 SS	2
9	307125	Plate – Bin Sensor 304	1

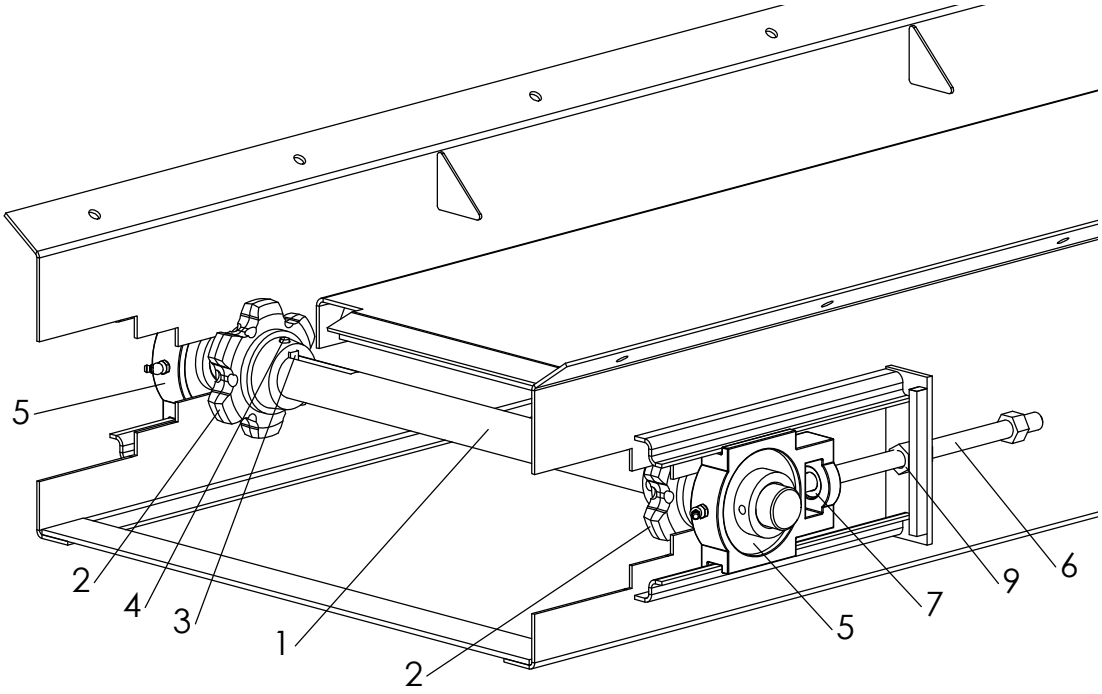


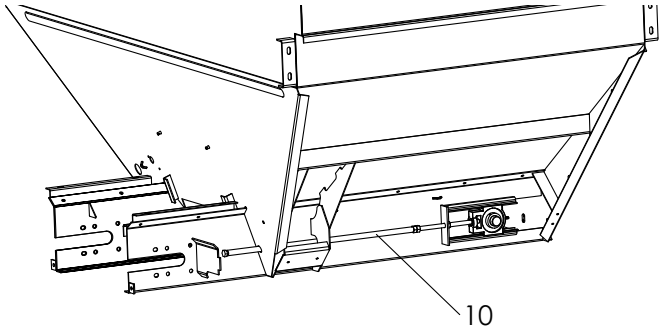
ITEM	PART NO.	DESCRIPTION	QTY
1	86825	Support – Divider	2
2	98553	Divider – Weldment Hillside	1
3	36408	Bolt – Carriage 3/8 x 1	4
4	36425	Washer – Flat 3/8	4
5	36420	Washer – Lock 3/8	4
6	36414	Nut – Hex 3/8	4

Note: Use chain shield hardware to attach Item 1 to sills.



ITEM	PART NO.	DESCRIPTION	QTY
1	86761-X2	Shaft – Drive 1-1/2 x 33	1
2	86757	Sprocket	2
3	2135	Key – Square	2
4	20743	Screw – Set	4
5	6697	Bearing	2
6	86762	Coupling	1
7	86765	Motor – Hydraulic	1
	56293	Seal Kit – Hydraulic Motor	1
8	86766	Mount – Motor	1
9	21101	Screw – Button Head 1/2 x 1 1/2	8
10	72056	Bolt – Carriage 1/2 x 1	2
11	36539	Cap Screw – 1/2 x 1 1/2	2
12	36422	Washer – Lock 1/2	12
13	36416	Nut – Hex 1/2	12
14	303994	Encoder – DJ 180 with Hardware	1
15	304953-X1	Bracket – DJ Encoder	1
16	56263	Sleeve – Rate Sensor	1

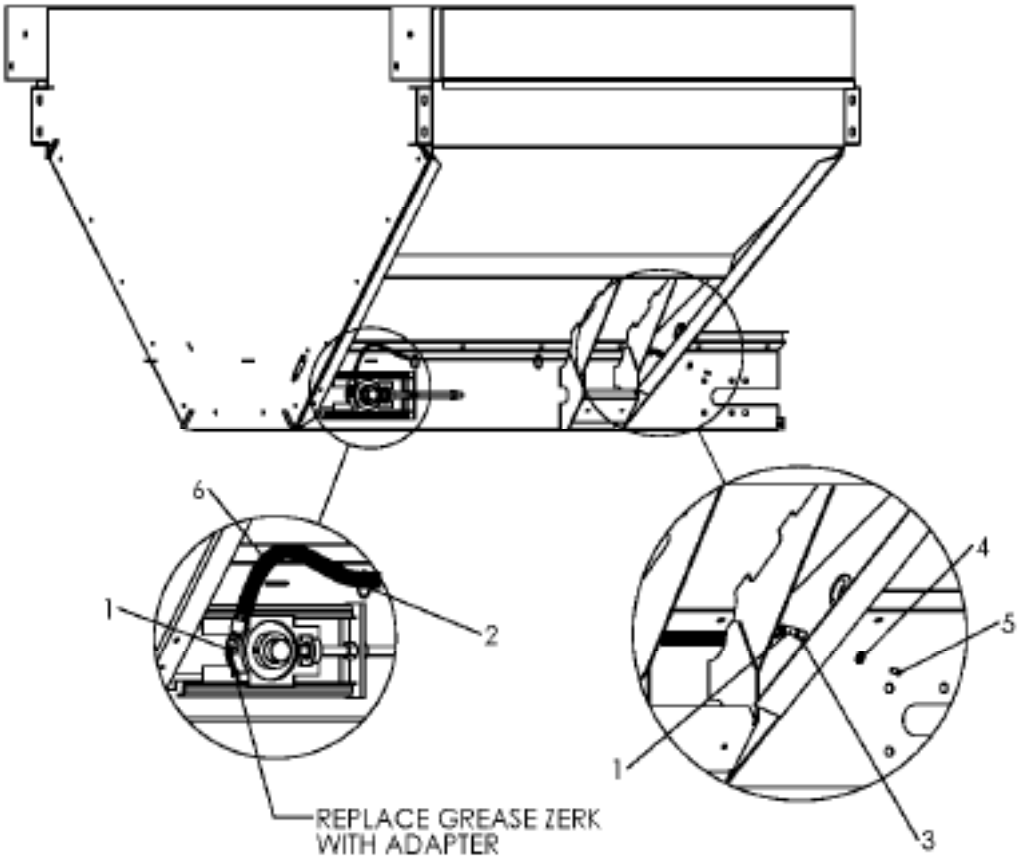




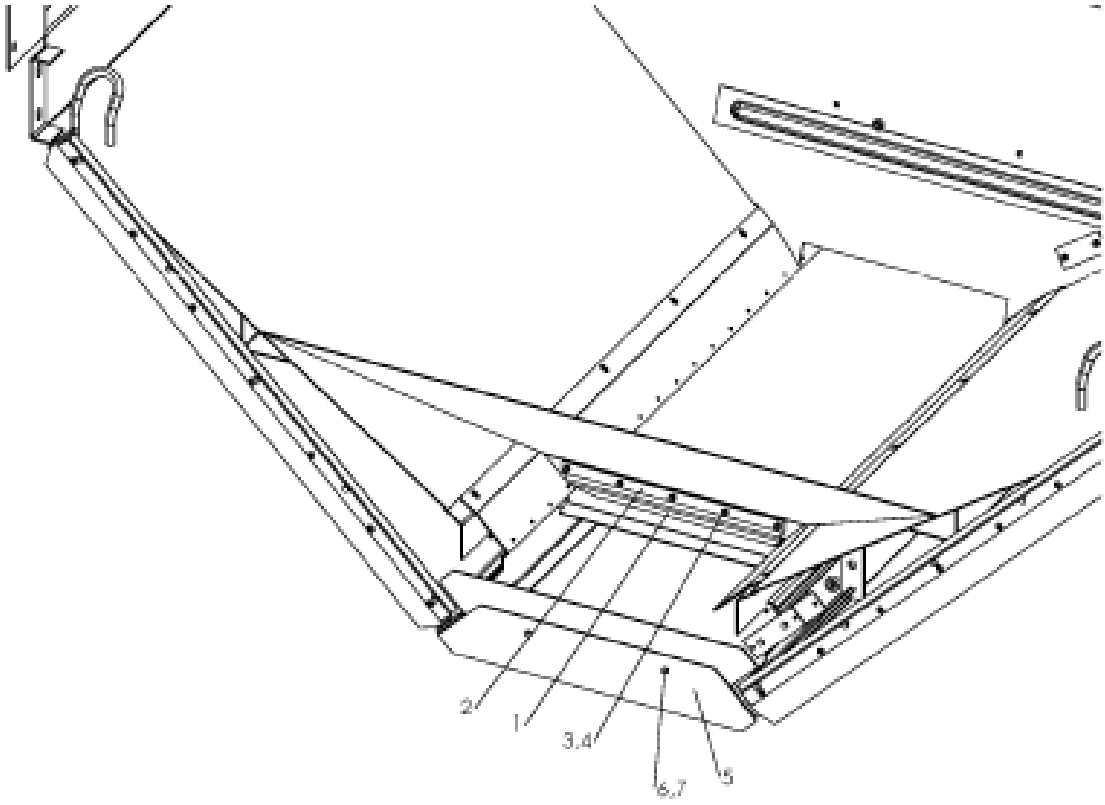
ITEM	PART NO.	DESCRIPTION	QTY
1	89779	Shaft – Idler	1
2	86757	Sprocket	2
3	6131	Key – Square	2
4	20743	Screw – Set 5/16 x 3/8	2
5	22511	Bearing	2
6	87857	Bolt Weldment	2
7	17078	Collar – Set	2
8	*36417	Nut – Hex 5/8	2
9	87794	Nut Weldment	2
10	306973	Extended Idler - Pipe Weldment Adj 5’ 304	2

* - Not Shown

MULTAPPLIER REAR IDLER ZERKS



ITEM	PART NO.	DESCRIPTION	QTY
1	34374	Fitting – 90° Elbow Male	2
2	99674	Tie – Cable	8
3	301332	Connector – Bulkhead	2
4	301333	Nut – Lock Connector	2
5	6072	Zerk – Grease	2
6	307131	Hose – Assembly 1/4 100R1 x 56 5’	2
	307128	Hose – Assembly 1/4 100R1 x 80 7’	2



Note: Front endgate removed for clarity.

ITEM	PART NO.	DESCRIPTION	QTY
1	39426	Wiper – Belt Front	1
2	54230	Retainer – Wiper	1
3	36395	Cap Screw – 1/4 x 1	5
4	36412	Nut – Hex 1/4	5
5	86868	Feedgate – 1.5”	1
	96984	Feedgate – Panel 2”	1
6	36398	Capscrew – 3/8 x 1	2
7	36420	Washer – Lock 3/8	2

* - Not Shown