NEW LEADER®

MODEL L3020G4

UNIT SERIAL NUMBER _____

MANUAL NUMBER: 97372-F

EFFECTIVE 10/2013

Hi-Way® NEW LEADER®

Highway Equipment Company

Building the best since 1939.

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

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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.

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 (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.

SAFETY

DANGER

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

364–C

DANGER

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

368–C

WARNING

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

39138–C

WARNING

To prevent death or serious injury:
- Do not ride on ladder or fenders.

305274–A

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

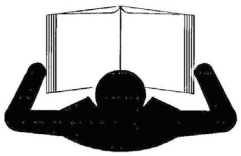
CAUTION

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

CAUTION



TO AVOID INJURY OR MACHINE DAMAGE:

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

150034-C

NOTICE

	No Cooler	With Cooler
Ideal Operating Temp.	140 - 190˚F	115 - 158˚F
Recommended Lubricant	SAE 15W-40	Multi-Purpose Ag Hydraulic Oil
Lubricant Specifications:		
Viscosity Index	>130	>130
Viscosity at 40˚C, cst	<115	<68
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

- 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

Keep valve open
while pump is running.

8664-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

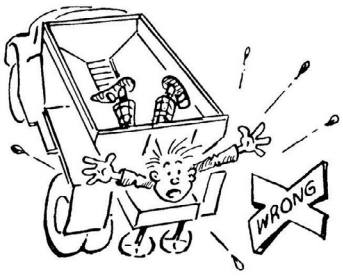
1. Before attempting to operate this unit, read and be sure you understand the operation and maintenance manual. Locate all controls and determine the use of each. Know what you are doing!

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.

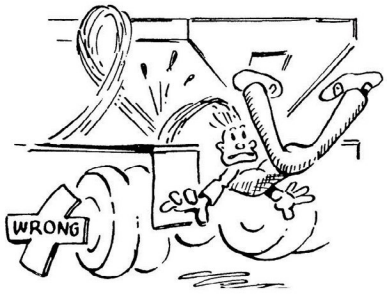


5. Guards and covers are provided to help avoid injury. Stop all machinery before removing them. Replace guards and covers before starting spreader operation.

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.

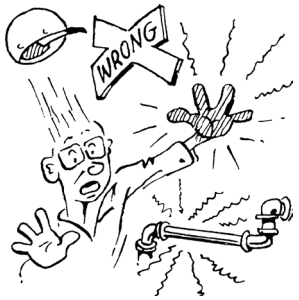
12. Inspect all bolts, screws, fasteners, keys, chain drives, body mountings and other attachments periodically. Replace any missing or damaged parts with proper specification items. Tighten all bolts, nuts and screws to specified torques according to the torque chart in this manual.

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. DO NOT work on system that is hot. Wait until oil has cooled. If an accident occurs, seek immediate medical assistance.

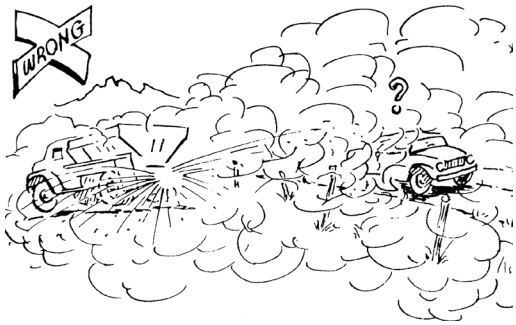


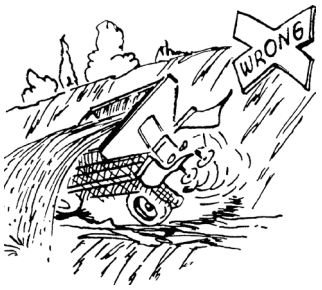
17. Wear eye protection while working around or on unit.

18. Read, understand and follow instructions and precautions given by the manufacturer or supplier of materials to be spread. Improper selection, application, use or handling may be hazardous to people, animals, plants, crops or other property.

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

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





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

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

SAFETY

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

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

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

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

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

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

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

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

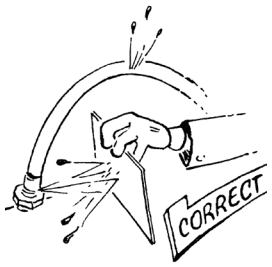
9. Keep a fully charged fire extinguisher readily available at all times. It should be a Type ABC or a Type BC unit.

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

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

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

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

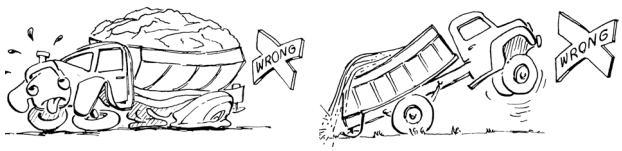


14. The fine spray from a small hydraulic oil leak can be highly explosive—DO NOT SMOKE—STAY AWAY FROM FLAME OR SPARKS.

SAFETY

SAFETY

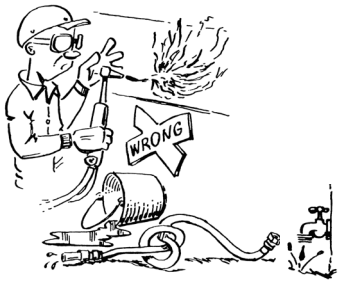
1. The selection of the vehicle on which a spreader body is to be mounted has important safety aspects. To avoid overloading:
   a. Do not mount spreader on a chassis which, when fully loaded with material to be spread, will exceed either the Gross Axle Weight Rating (GAWR) or the Gross Vehicle Weight 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.

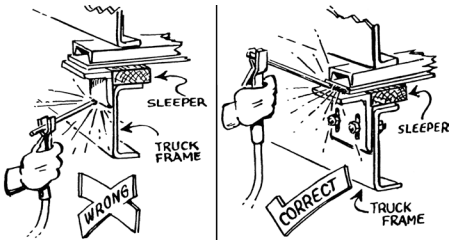
3. When making the installation, be sure that the lighting meets Federal Motor Vehicle Safety Standard (FMVSS) No. 108, ASABE S279 and all applicable local and state regulations.

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.

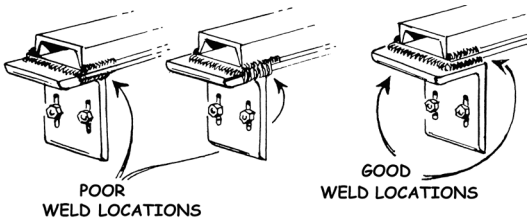


5. When truck frame must be shortened, cut off only the portion that extends behind rear shackle in accordance with the truck manufacturer's recommendations. If a torch is used to make the cut, all necessary precautions should be taken to prevent fire. Cuts should not be made near fuel tanks and hydraulic 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.

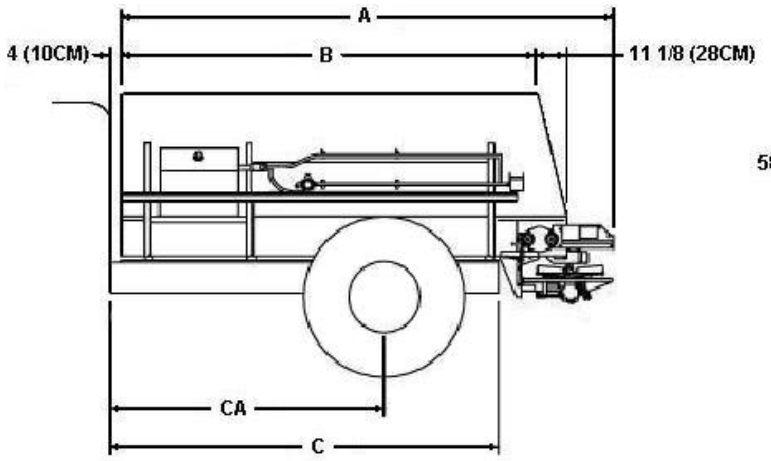
The Model L3020G4 is a hopper type spreader intended for spreading free flowing granular agricultural materials, such as chemical fertilizers, agricultural limestone, and gypsum. It is intended for truck chassis or flotation vehicle mounting.

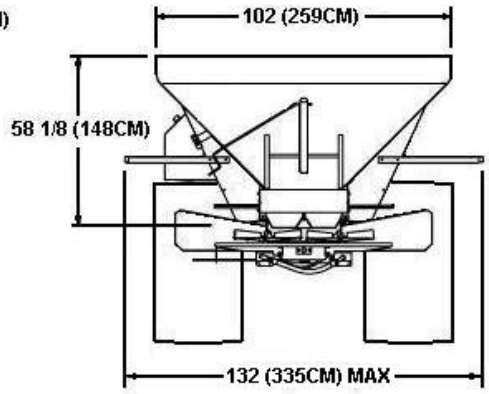
The unit is powered hydraulically and provides independent variable speed control for the spinner and full automatic ground speed control for the conveyor by means of a motorized valve with shaft sensor or Mark series control system. The hydraulic pump which provides the hydraulic power is a gear type pump and is driven by means of a transmission PTO.

The conveyor runs the full length of the hopper bottom to deliver material to the spinners through an adjustable metering gate at the rear of the hopper body. The conveyor is driven by two orbital type hydraulic motors mounted to a 6 to 1 ratio spur gear case. 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 (60.69 cm) 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.





Dimensions				
Body Length	**Overall A**	**Inside B**	**Frame C**	**Cab to Axle or Cab to Tandem – CA/CT**
10’ (3.05 m)	148” (376cm)	120” (305cm)	111” (282cm)	84” (213cm) CA
11’ (3.36 m)	160” (406cm)	132” (335cm)	123” (312cm)	84” (213cm) CA
12’ (3.66 m)	172” (437cm)	144” (366cm)	135” (343cm)	102” (259cm) CA
13’ (3.96 m)	184” (467cm)	156” (396cm)	147” (373cm)	102-108” (259-274cm) CT
14’ (4.27 m)	196” (498cm)	168” (427cm)	159” (404cm)	120” (305cm) CT
15’ (4.57 m)	208” (528cm)	180” (457cm)	171” (434cm)	130” (330cm) CT
16’ (4.88 m)	220” (559cm)	192” (488cm)	183” (465cm)	138” (351cm) CT

Capacities - Struck — Cubic Yards (Meters^3) Cubic Feet			
Body Length	102” Wide Body	88” Wide Body	Spreader Weight Approx. Pounds As Shipped
10’ (3.05 m)	7.8 (5.9) 209.6	6.9 (5.3) 187.3	3875 lbs.
11’ (3.36 m)	8.6 (6.6) 232.1	7.7 (5.9) 207.2	3945 lbs.
12’ (3.66 m)	9.4 (7.2) 254.6	8.4 (6.4) 227.1	4015 lbs.
13’ (3.96 m)	10.3 (7.8) 277.1	9.2 (7.0) 246.9	4085 lbs.
14’ (4.27 m)	11.1 (8.5) 299.6	9.9 (7.6) 266.8	4155 lbs.
15’ (4.57 m)	11.9 (9.1) 322.1	10.6 (8.1) 286.7	4225 lbs.
16’ (4.88 m)	12.8 (9.8) 344.6	11.4 (8.7) 306.6	4295 lbs.

Refer to www.highwayequipment.com for installation instructions. Once on the website, click Customer Support, 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! If skin is pierced with hydraulic fluid at high pressure seek immediate medical attention as fluid injected into the skin could cause gangrene if left untreated. Relieve pressure before disconnecting hydraulic lines or working system. Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system. Wear protective gloves and safety glasses or goggles when working with hydraulic systems.

WARNING DO NOT check for 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 L4000G4 feedgate opening.
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 oil leaks can be dangerous! If skin is pierced with hydraulic fluid at high pressure seek immediate medical attention as fluid injected into the skin could cause gangrene if left untreated. Relieve pressure before disconnecting hydraulic lines or working system. Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system. Wear protective gloves and safety glasses or goggles when working with hydraulic systems.

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

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!	CHANGEHYDRAULICOILFILTERAFTERFIRSTWEEK(ORNOTMORETHAN50HOURS)OFOPERATION ON A UNIT.

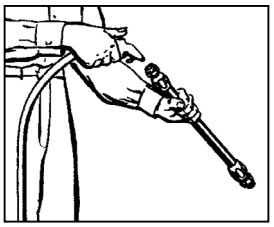
After first filter change, replace filter when indicator reaches Red Zone.

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.

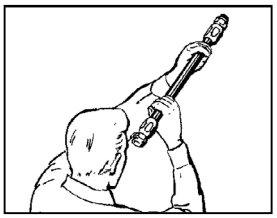
HYDRAULIC HOSE

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.

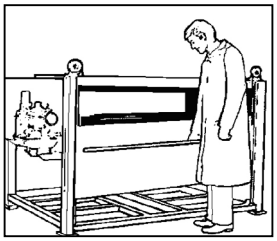
WARNING Testing should be conducted in approved test stands with adequate guards to protect the operator.



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 (65.55° C) maximum may be used.



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



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

Storage and Handling

Hose should be stored in a dark, dry atmosphere away from electrical equipment, and the temperature should not exceed 90° F (32.22° 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!

Lubricate conveyor chain daily. Shut down spinner and run conveyor slowly to lubricate chain. Use a mixture of 75% diesel fuel and 25% SAE 10 oil in a pressurized hand spray gun. Spray oil mixture between links of chain through openings provided at rear end of sill or from front outside body when clearance is adequate. After each unit washing, allow to dry, then lubricate.

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

Proper chain tension is also a factor in chain and sprocket life (Figure 1). 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:
36" to 40"
(91cm - 102cm)

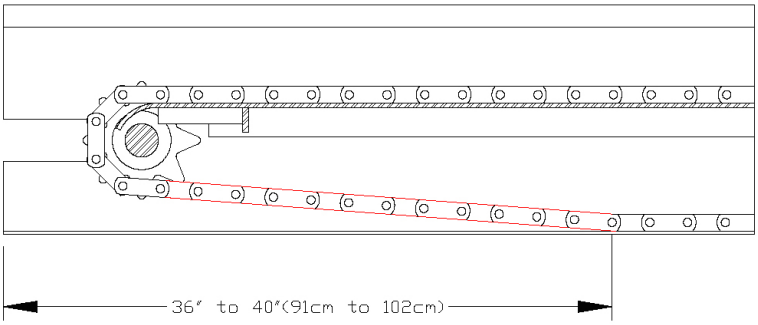


Figure 1 - Chain Tension

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. It also causes fertilizer leakage with chain conveyors.

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 2.

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

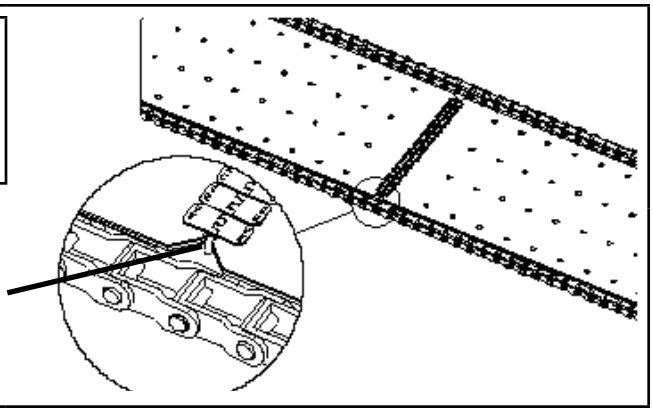


Figure 2 - Conveyor Belt Pin Installation

Hi-Temperature Belt

Achieve maximum life out of high-temperature belting by following the recommendations below:

1. Keep the belt free from build up of asphalt or other material. Keep it clean.
2. Spray the belt often with oil to assure flexibility of the rubber and ease cleaning. Spray the underpart of the conveyor also, as dry heat is very harmful to the life of the belt.
3. Keep asphalt temperature below 350° F (176.7° C) and the belt running as much as possible when loaded. A hot sitting load is more damaging since it does not allow a cooling cycle for the belt.
4. Allow belt to flex and warm up in cold weather before loading it with extremely hot product.
5. Do not operate the belt in temperatures below -10° F (-23.3° C). Operating in temperatures below -10° F (-23.3° C) will cause the belt to crack prematurely.

A properly cared for belt, in normal use, will first experience cracking of the belt cover. This is normal for a belt of this type in an asphalt environment and does not indicate a failing belt. Eventually the belt cover will begin to harden and chunks of the cover begin falling off, exposing the steel. When this happens, replace the belt.

CONVEYOR GEAR CASE

Drain oil in a new unit after first two weeks (or not more than 100 hours) of operation, and flush gear case thoroughly with light oil. Refer to *Lubricant and Hydraulic Oil Specifications* section for proper grade oil. Refill gear case with one and a half (1-1/2) pints (.70 liters) of recommended lubricant. After initial change, oil should be changed every 2,000 hours of operation or annually, whichever occurs first.

Check gear case oil level monthly.

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.

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 - 87.8° C)	115-158°F (46.11-70° 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 (4.44 to 37.77° C). Ambient temperatures below 40° F (4.44° C). require an SAE 80 E.P. lubricant; above 100° F (37.77° 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 (148.8° 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
Swinging Rear Endgate			
Pivot Pins	2	Hand Grease	Annually

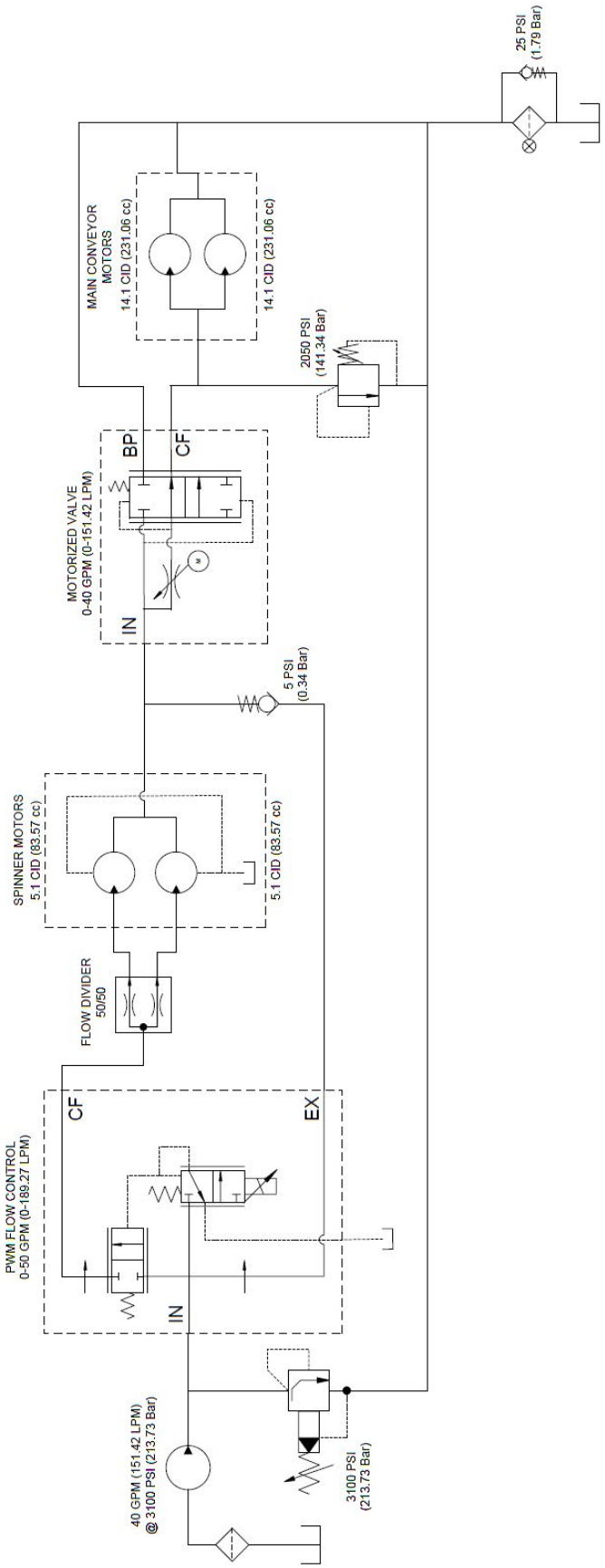
NOTE: Unusual conditions, such as excessive dust, temperature extremes or excessive moisture may require more frequent lubrication of specific parts.

*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 or conveyor does not run when function knob is pulled out and manually rotated. 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 & 11.
- Symptom: Console in operation mode, but the conveyor does not move when the machine moves. See reasons 6, 8, 9, 10 & 11.
- Symptom: Spinner speed does not stay constant. See reasons 4, 5, 12, 13 & 14.
- Symptom: Spinners run with cab control in “Off” position. See reason 15.
- Symptom: Hydraulic oil overheats (200° F (93.3° C) or hotter). See reasons 1, 4, 6, 16, 17, 18 & 19.
- Symptom: Light flashes and buzzer sounds intermittently. Conveyor runs in jerks. See reasons 20, 21, 22 & 27.
- Symptom: Conveyor does not run with cab control “On”, PTO engaged and vehicle driving forward. See reasons 23, 24 & 25.
- Symptom: Conveyor runs when control switch in cab is in “Off” position. See reasons 16 & 26.
- Symptom: Conveyor starts to run when PTO is engaged. See reasons 16, 23, 26 & 27.
- Symptom: Controller application or programming. Refer to the control manual’s Troubleshooting section.

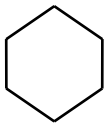
Reason:	Correction:
1. Hydraulic oil level low.	Add hydraulic oil as necessary to maintain level around mid-point of sight gauge.
2. Shut Off valve on oil reservoir not open.	Open valve fully by turning counter clockwise until it stops.
3. Hydraulic Pump is not rotating.	1. PTO is disengaged. Shift into 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 bar). Set spinner control valve to "0". Disconnect pressure line, coming from rear port on spinner control valve, at control. Reconnect this line to flow meter inlet port. Disconnect return line from control where it joins the return tube running to the reservoir. Connect flow meter load valve to return tube. Open load valve fully, run truck engine at max RPM. Slowly close load valve until pressure reaches 3100 PSI (213.7 bar). If this pressure cannot be reached, set up relief valve adjustment until gauge reads 3100 PSI (213.7 bar). **CAUTION:** Do not set pressure above 3100 PSI (213.7 bar).
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 max RPM. Close load valve until pressure reads 1000 PSI. Flow rate should not decrease more than three (3) GPM. If flow loss is greater, replace pump.
6. Mark series 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 bar), 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. Mark series control gears stripped or unpinned.	Remove Mark series service hole cover. With hydraulics off, when control is run in manual mode the idler arm should rotate freely. If it doesn't, examine for stripped gears or unpinned gears. Replace as required. Check also for jammed valve spool. If jammed, replace control unit.
12. Pump speed is not adequate to provide sufficient flow to maintain spinner speed.	Increase engine speed or resize hydraulic pump to meet system requirements.
13. 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).
14. Defective spinner control valve.	Replace valve metering spool spring. If no improvement, replace spinner control valve.
15. 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.

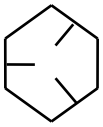
Reason:	Correction:
16. Excessive oil is being pumped.	1. PTO percentage too high. Change PTO to smaller percentage or use smaller pump. 2. Pump is too large. Do not exceed 40 GPM pumping rate. Change to smaller pump or use smaller percentage PTO. 3. Pressure drop in Mark series valve is sufficient to run lightly loaded conveyor motor. Shut off pump drive by disengaging PTO shaft.
17. Worn motor (spinner or conveyor).	Motor heats up at an excessive rate (check for this heating when system is cold). Replace motor.
18. Improper or deteriorated hydraulic oil.	Replace hydraulic oil with proper specification oil and replace filter.
19. Pinched or obstructed hose, hydraulic line or fitting.	Clear obstruction or replace part. Straighten kinked hoses.
20. Driving too fast for application rate.	Shift truck transmission to a lower gear. Will not normally occur if within maximum application rates.
21. Synco-Matic® Mark series cog-belt drive has failed.	Cog-belt is broken or disengaged. Reset or replace. Cog drive pulleys may be unpinned—re-pin to shaft.
22. Synco-Matic® Mark series control gear has failed.	Examine gears for stripping or being disconnected. Replace.
23. Defective radar.	Check speed on console. Repair or replace radar as required.
24. Defective gear train in Mark control.	Remove cover from Mark series valve. Idler arm should rotate around connection gear. If not, replace gear train.
25. Locked spool in Mark series valve.	Check as for defective gear train above. If arm does not rotate, check for stripped gears in gear train. Replace gears if stripped. With new gears, the idler gears will not turn with hand pressure, check for locked valve spool. Replace Mark series valve if spool is jammed.
26. Control processor's power is in "Off" position.	Turn on control processor.
27. Involves the controller.	Refer to control manual.

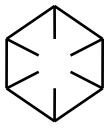

25 PSI
(1.79 Bar)
MAIN CONVEYOR
MOTORS
14.1 CID (231.06 cc)
14.1 CID (231.06 cc)
2050 PSI
(141.34 Bar)
BP
CF
MOTORIZED VALVE
0-40 GPM (0-151.42 LPM)
IN
5 PSI
(0.34 Bar)
SPINNER MOTORS
5.1 CID (83.57 cc)
5.1 CID (83.57 cc)
FLOW DIVIDER
50/50
CF
EX
PWM FLOW CONTROL
0-50 GPM (0-189.27 LPM)
IN
40 GPM (151.42 LPM)
@ 3100 PSI (213.73 Bar)
3100 PSI
(213.73 Bar)

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.

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

NOTES

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NOTES

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

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

1. Always give the pertinent model and serial number.

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

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

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

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

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

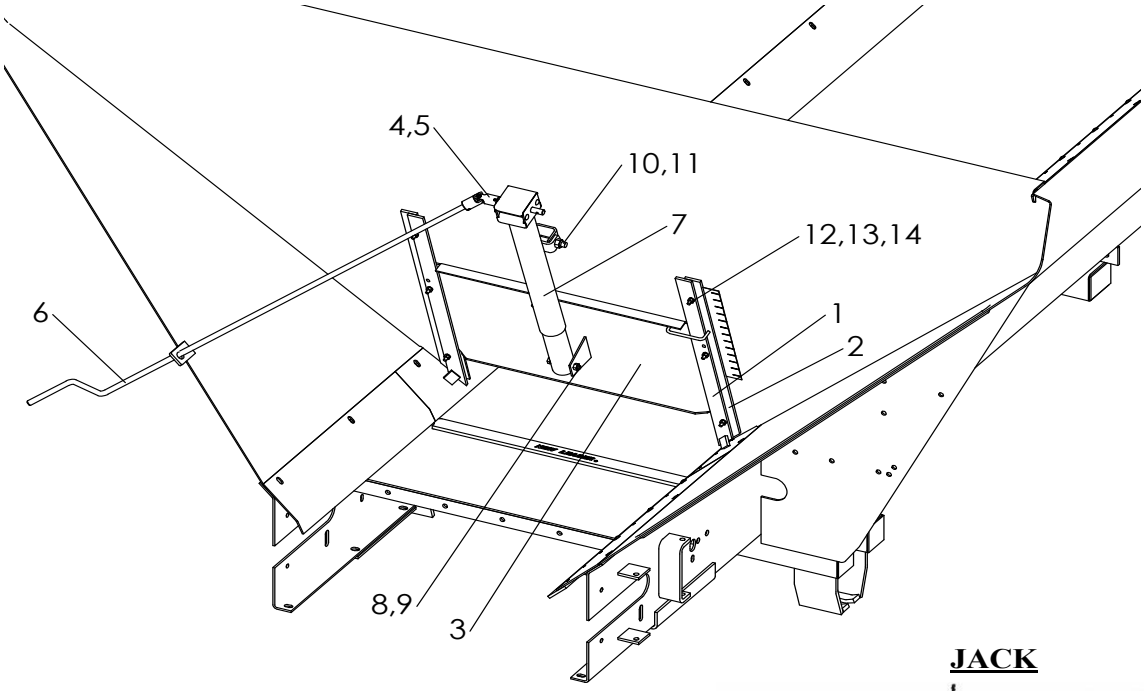
If your claims are not being handled (by the transportation company) to your satisfaction, please call the Parts Manager at Highway Equipment Company (319-363-8281) for assistance.

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

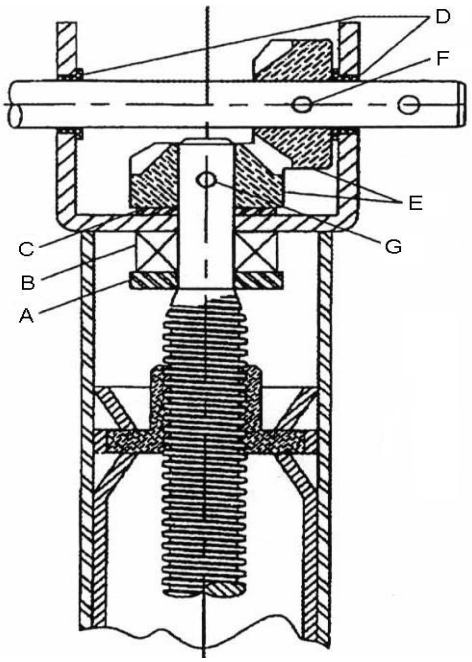
* - Not Shown
AR – As Required
CS – Carbon Steel
SS – Stainless Steel

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

FEEDGATE & JACK



JACK

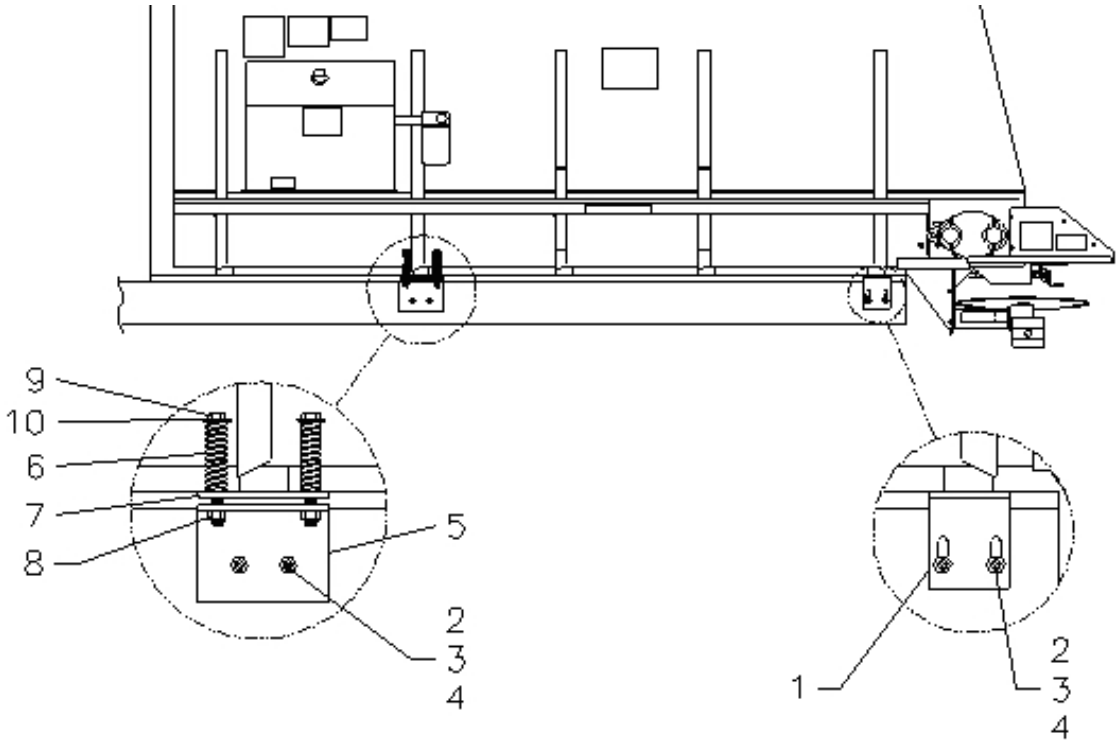


ITEM	PART NO.			DESCRIPTION	QTY
	CS	409 SS	304 SS		
1	2885	36384	36384	Slide – Feedgate RH	1
	2884	36384	36384	Slide – Feedgate LH	1
2	NA	36385	36385	Guide – Feedgate	2
3	98511	98512	303937-AA	Feedgate – Wldmt	1
4	85002	85002	85002	U-Joint	1
5	20918	20918	20918	Pin – Roll	2
6	14382	14382	14382	Handle	1
	*36725	--	--	Handle – Swinging Endgate	1
7	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
8	20075	71827	71827	Cap Screw – 3/8 x 3	1
9	20678	72054	72054	Nut – Lock 3/8	1
10	20138	80798	80798	Cap Screw – 1/2 x 3 3/4	1
11	20680	39016	39016	Nut – Hex 1/2	1
12	20006	40750	40750	Cap Screw – 1/4 x 1 1/4	6
13	20710	36418	36418	Washer – Lock 1/4	6
14	20642	36412	36412	Nut – Hex 1/4	6

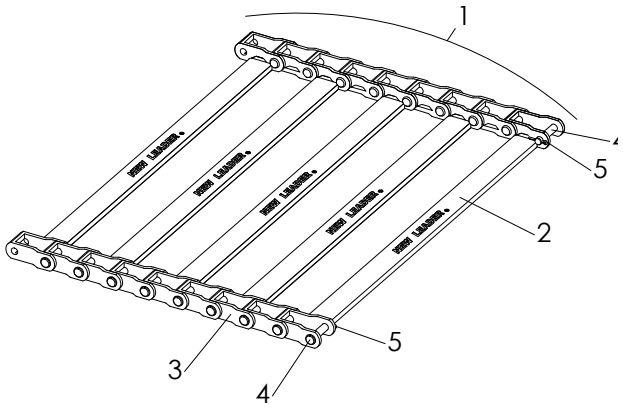
* - Not Shown

PARTS LIST

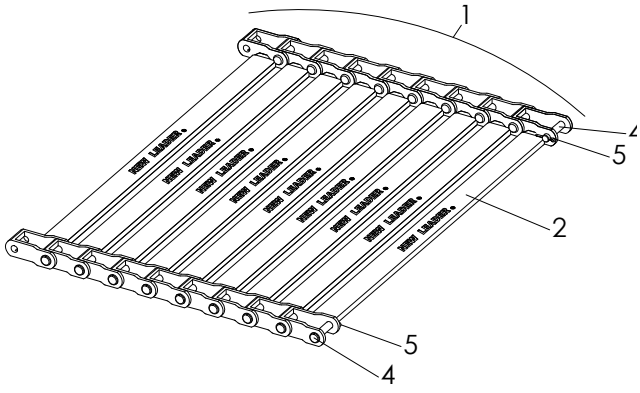
MOUNTING ANGLE



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



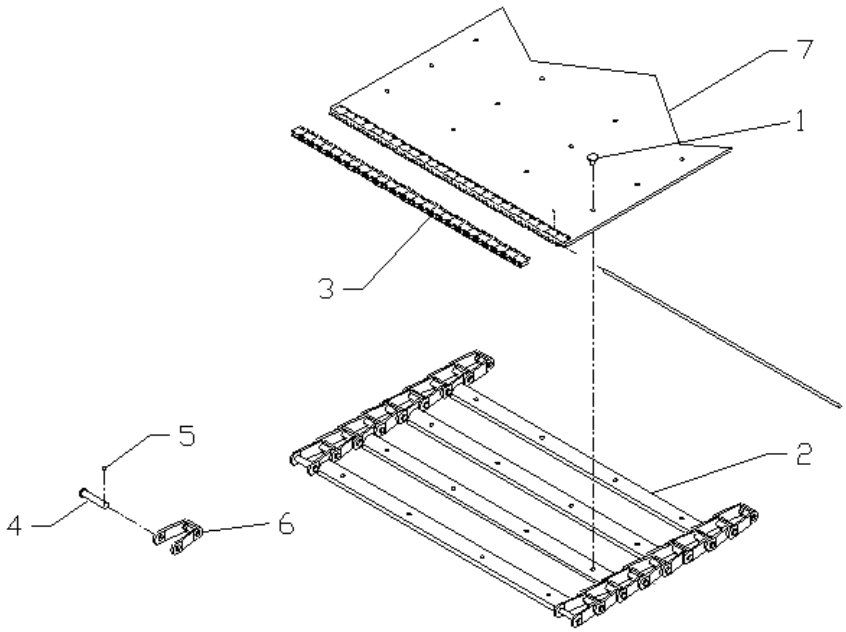
#2 – Cross bars every other link



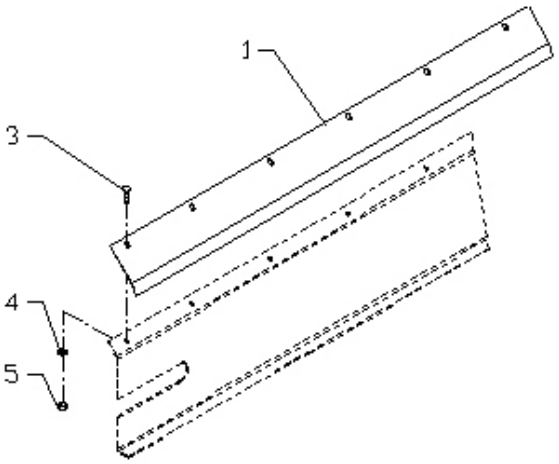
#3 – Cross bars every link

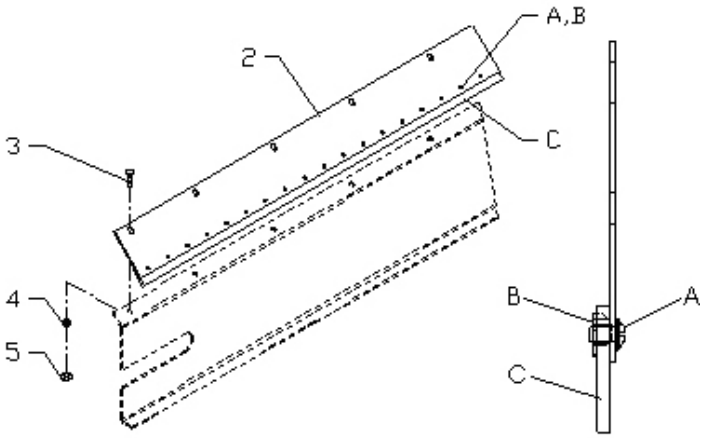
ITEM	PART NO.		DESCRIPTION	QTY
	#2	#3	Chain – Assy	
1	97079	97087	10’ Unit	1
	97080	97088	11’ Unit	1
	97081	97089	12’ Unit	1
	97083	97091	13’ Unit	1
	97084	97092	14’ Unit	1
	97085	97093	15’ Unit	1
	97086	97094	16’ Unit	1
2	88857	88857	Crossbar Wldmt	AR
3	36699	36699	Link – Pintle Chain	AR
4	36697	36697	Pin – Pintle Chain	AR
5	20817	20817	Pin – Cotter	AR

#4 BELT-OVER-PINTLE CHAIN CONVEYOR

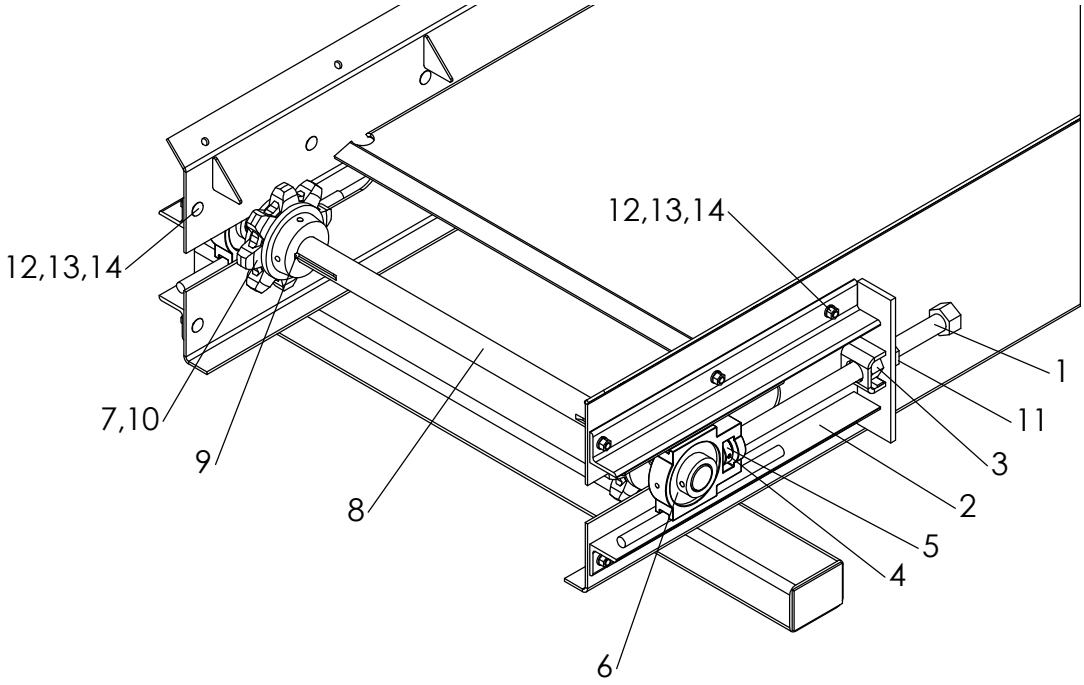


ITEM	PART NO.	DESCRIPTION	QTY
	305614-AC	Belt-Over-Chain - #4 10’ MOR	
	305614-AD	Belt-Over-Chain - #4 11’ MOR	
	305614-AE	Belt-Over-Chain - #4 12’ MOR	
	305614-AG	Belt-Over-Chain - #4 13’ MOR	
	305614-AH	Belt-Over-Chain - #4 14’ MOR	
	305614-AI	Belt-Over-Chain - #4 15’ MOR	
	305614-AJ	Belt-Over-Chain - #4 16’ MOR	
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

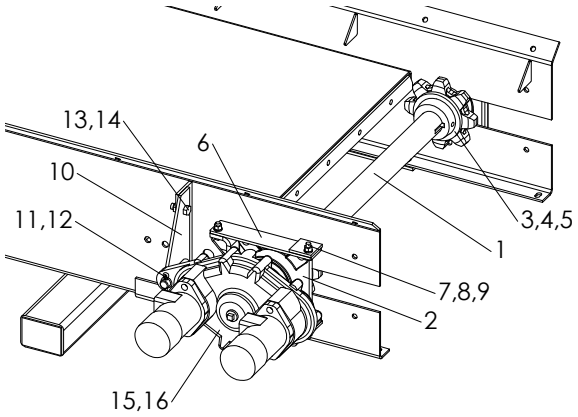


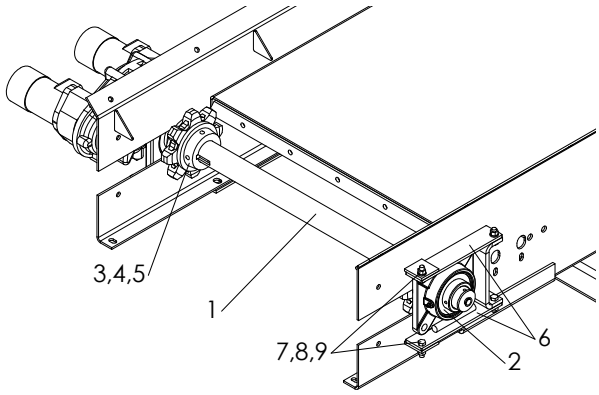


ITEM	PART NO.			DESCRIPTION	QTY
	CS	409 SS	304 SS		
1				Chain Shield – #2 & #3 Chain	
	97713-AC	97730-AC	97747-AC	10’ Unit	2
	97713-AD	97730-AD	97747-AD	11’ Unit	2
	97715-AA	97732-AA	97749-AA	12’ Unit	2
	97715-AB	97732-AB	97749-AB	13’ Unit	2
	97715-AC	97732-AC	97749-AC	14’ Unit	2
	97715-AD	97732-AD	97749-AD	15’ Unit	2
	97715-AE	97732-AE	97749-AE	16’ Unit	2
2				Chain Shield – #4 BOC	
	97815	97833	97851	10’ Unit	2
	97816	97834	97852	11’ Unit	2
	97817	97835	97853	12’ Unit	2
	97818	97836	97854	13’ Unit	2
	97819	97837	97855	14’ Unit	2
	97820	97838	97856	15’ Unit	2
	97821	97839	97857	16’ Unit	2
A	20624	56258	56258	Screw – Truss Head 1/4 x 1/2	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

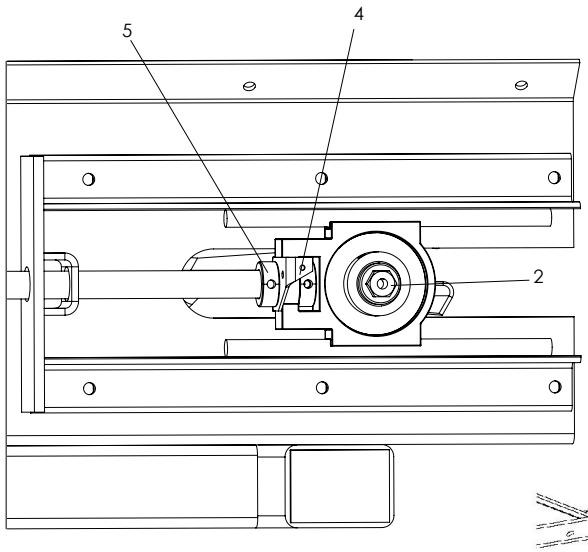


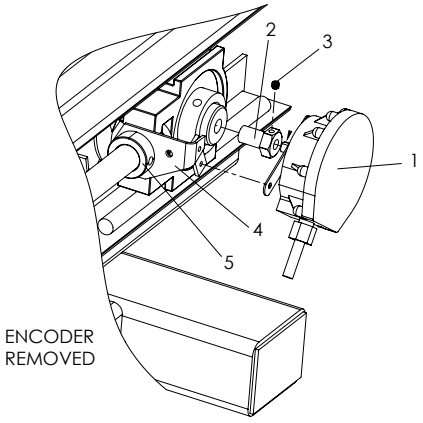
ITEM	PART NO.		DESCRIPTION	QTY
	CS	SS		
1	36508	36508	Screw - Wldmt Adjusting	2
2	7895	7895	Take-up Wldmt	2
	---	79321	Take-up Wldmt, Conveyor Take-Up Only	2
3	39110	39110	Nut Wldmt	2
4	20925	20925	Pin – Roll 1/4 x 1 1/2	2
5	30725	30725	Collar – Set 1”	2
6	22511	22511	Bearing – Take-up	2
	6070	6070	Zerk – 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	20319	36409	Bolt – Carriage 3/8 x 1-1/4	12
13	20712	36420	Washer – Lock 3/8	12
14	20644	36414	Nut – Hex 3/8	12

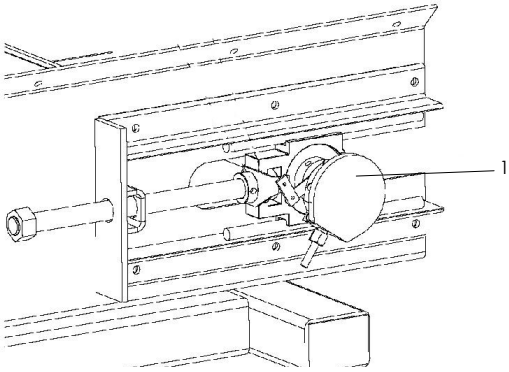




ITEM	PART NO.		DESCRIPTION	QTY
	CS	SS		
1	86999	86999	Shaft – Drive	1
	56264	56264	Cap/Plug	1
2	6465	6465	Bearing	2
3	88276	88276	Sprocket	2
4	20743	20743	Screw – Set 5/16 x 3/8	4
5	6131	6131	Key – Square 3/8 x 1 1/2	2
6	82882	82885	Guide – Bearing	4
7	20068	36399	Cap Screw - 3/8 x 1 1/4	8
8	20712	36420	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”	

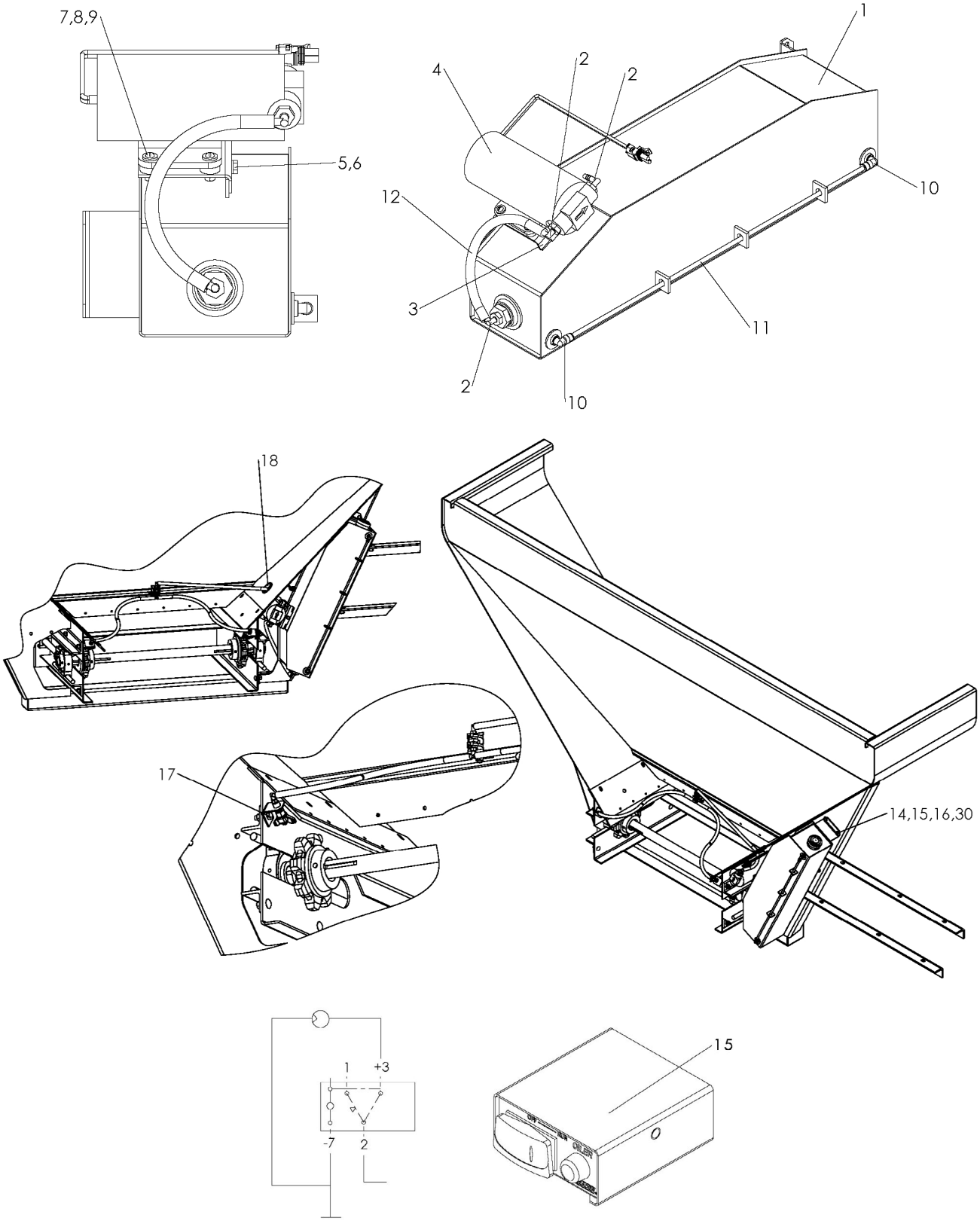


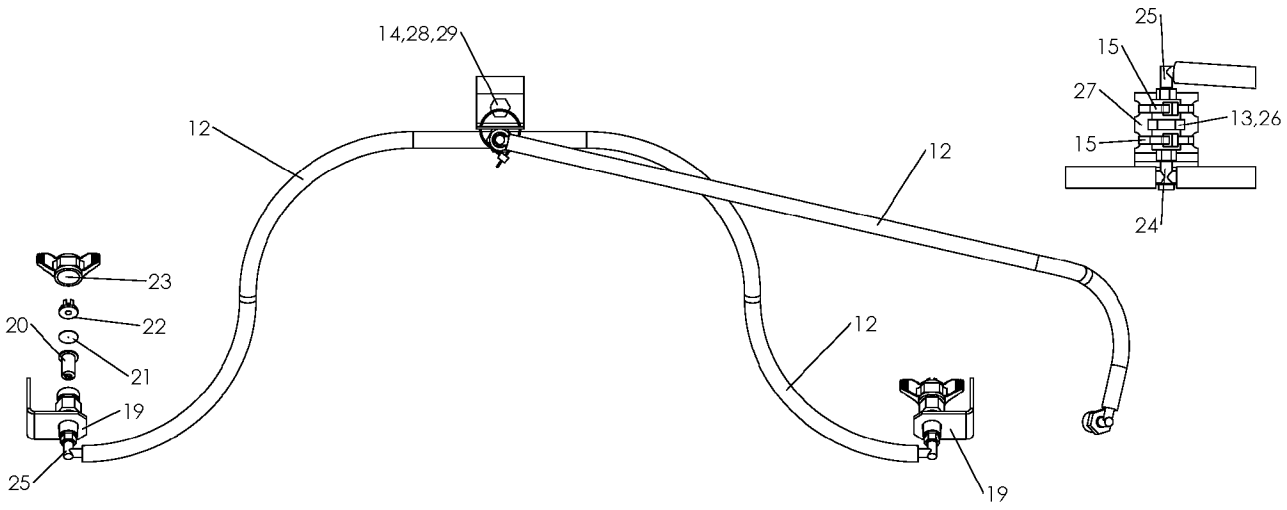




ITEM	PART NO.	DESCRIPTION	QTY
1	5895303994	Encoder – 180 with Hardware	1
2	310601	Coupler - Rate Sensor SS	1
3	310603	Screw - Set 1/4-20NC x 1/4 SS	1
4	81949	Bracket - Sensor, Idler Mount	1
5	2696	Collar - Set 1”	1

CONVEYOR CHAIN OILER

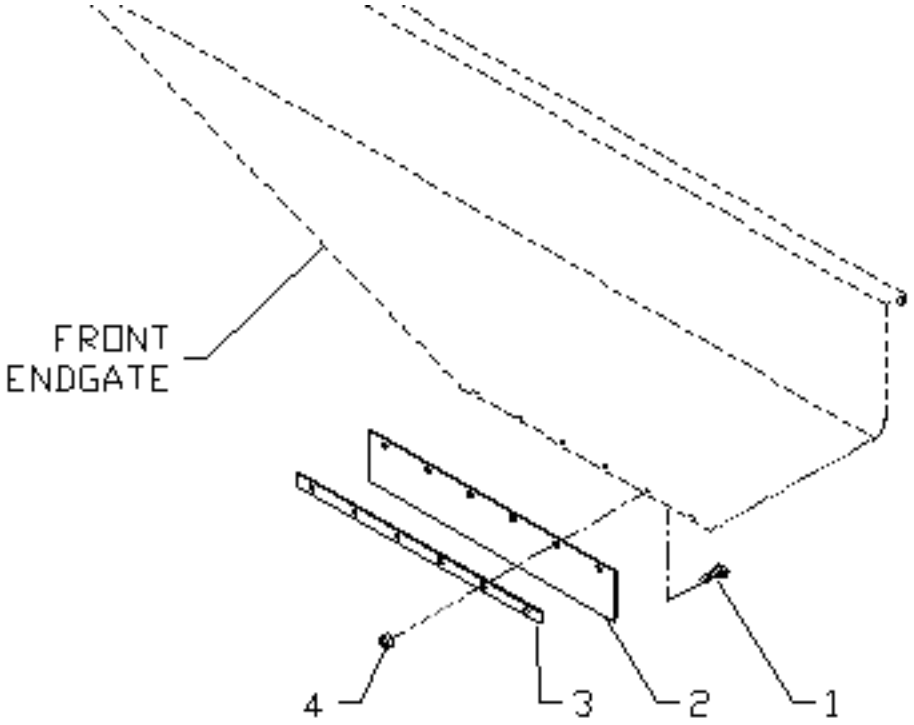




ITEM	PART NO.	DESCRIPTION	QTY
	306063	Tank – Assy, Includes 1-13	
	306658	Nozzle & hose - Assy, Includes 14,19-29	
1	304398	Tank – Wldmt	1
2	306657	Elbow	3
3	304409	Mount – Pump	1
4	304390	Pump – Assy with Connector	1
	304834	Pump – Diagram 1.1 GPM 30 PSI	1
	303730-AB	Connector – FEM Socket Sealed	1
	303730-CC	Terminal – FEM Sealed (Sleeve)	2
	303730-EB	Seal – Cable Lt Gray	2
5	36393	Cap Screw – 1/4 x 3/4 SS	5
6	36418	Washer – Lock 1/4 SS	5
7	44454	Screw – Socket Head #10 x 1	4
8	171052	Washer – Flat #10 SS	8
9	56355	Nut – Hex #10 SS	4
10	301337	Fitting – 90 Male 1/8 NPT	2
11	306437	Tubing – Clear	2.063 ft.
12	26544	Hose – Low Pressure 1/4 ID	6.667 ft.
13	*306670	Tape – Thread Seal w/PTFE Yellow Gas Line	AR
14	36414	Nut – Hex 3/8 SS	1
15	304391	Panel – Assy Oiler Control	1
	99676	Fuse – 10AMP Fast Acting	1
16	36412	Nut – Hex 1/4 SS	4
17	36399	Cap Screw – 3/8 x 1-1/4 SS	2

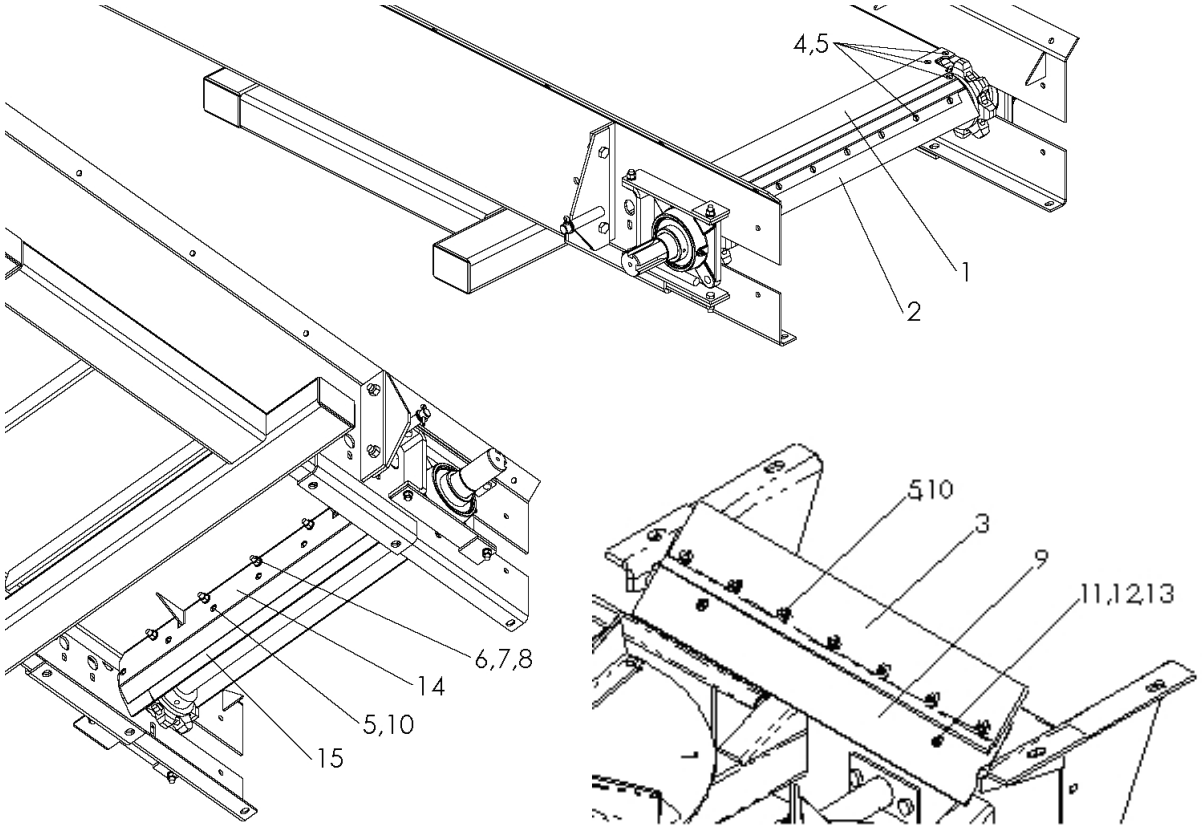
ITEM	PART NO.	DESCRIPTION	QTY
18	34129	Grommet – Rubber	1
19	306649	Nozzle – Mount Assy	2
	304839	Angle – Wldmt Nozzle Mount	2
	306650	Body – Male Nozzle Brass	2
20	306651	Strainer – Check Valve	2
21	306652	Plate – Orifice SS	2
22	306654	Nozzle – Even Flat Spray SS	2
23	306653	Cap – Nozzle	2
24	306655	Tee – Black	1
25	306656	Elbow – Black	3
26	306678	Coupling – Polypropylene	1
27	306804	Bracket – Coupling	1
28	36293	Cap Screw – 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

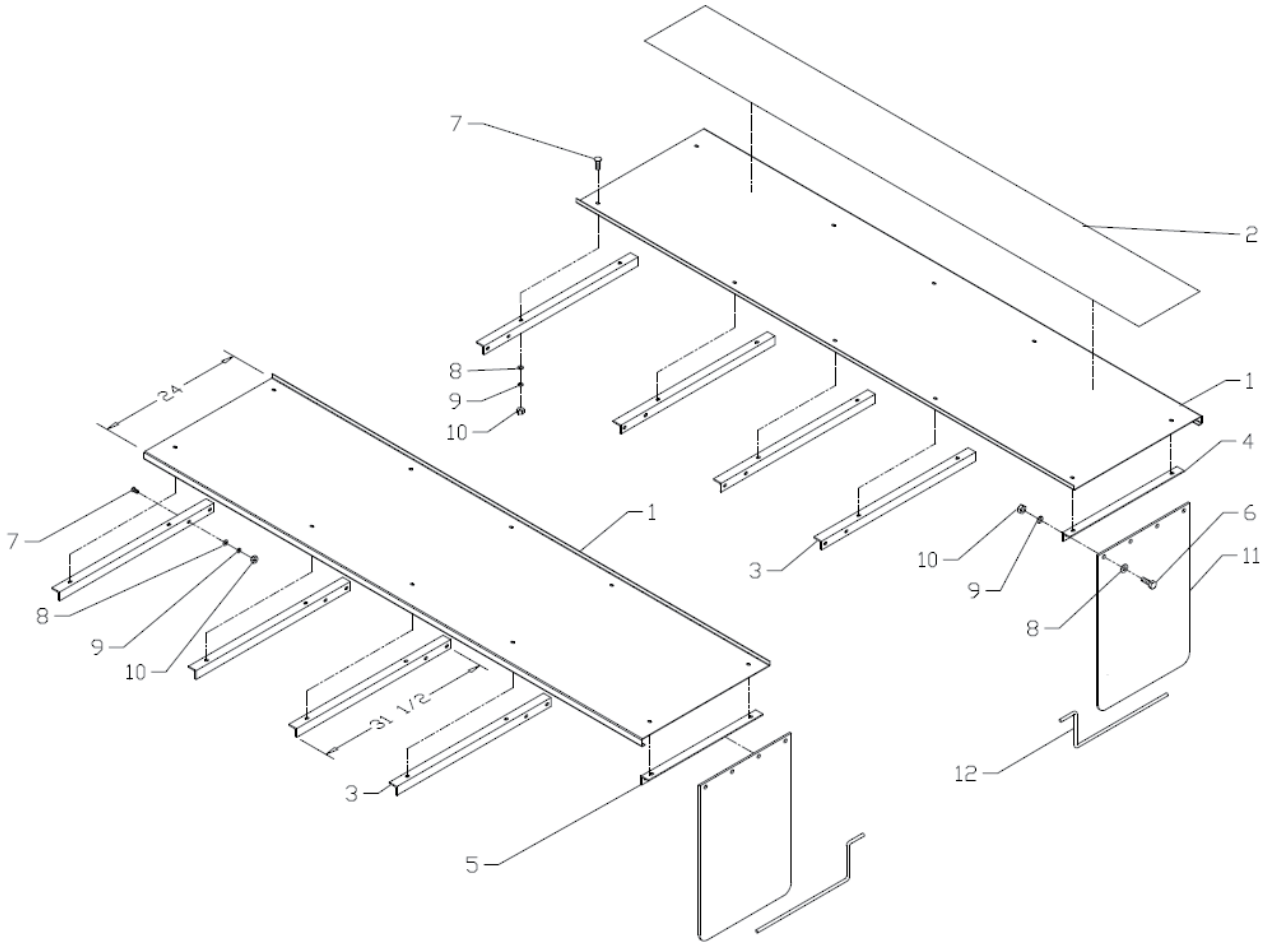


ITEM	PART NO.			DESCRIPTION	QTY
	CS	409 SS	304 SS		
1	20583	32446	32446	Screw – Machine 1/4 x 3/4	6
2	14743	14743	14743	Wiper – Belt	1
3	71656	71656	71656	Retainer – Belt	1
4	20642	36412	36412	Nut – Hex 1/4	6

REAR WIPER - #2 & #3 CONVEYORS



ITEM	PART NO.		DESCRIPTION	QTY
	CS	SS		
1	98028	98030	Lip – Wldmt 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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31 1/2
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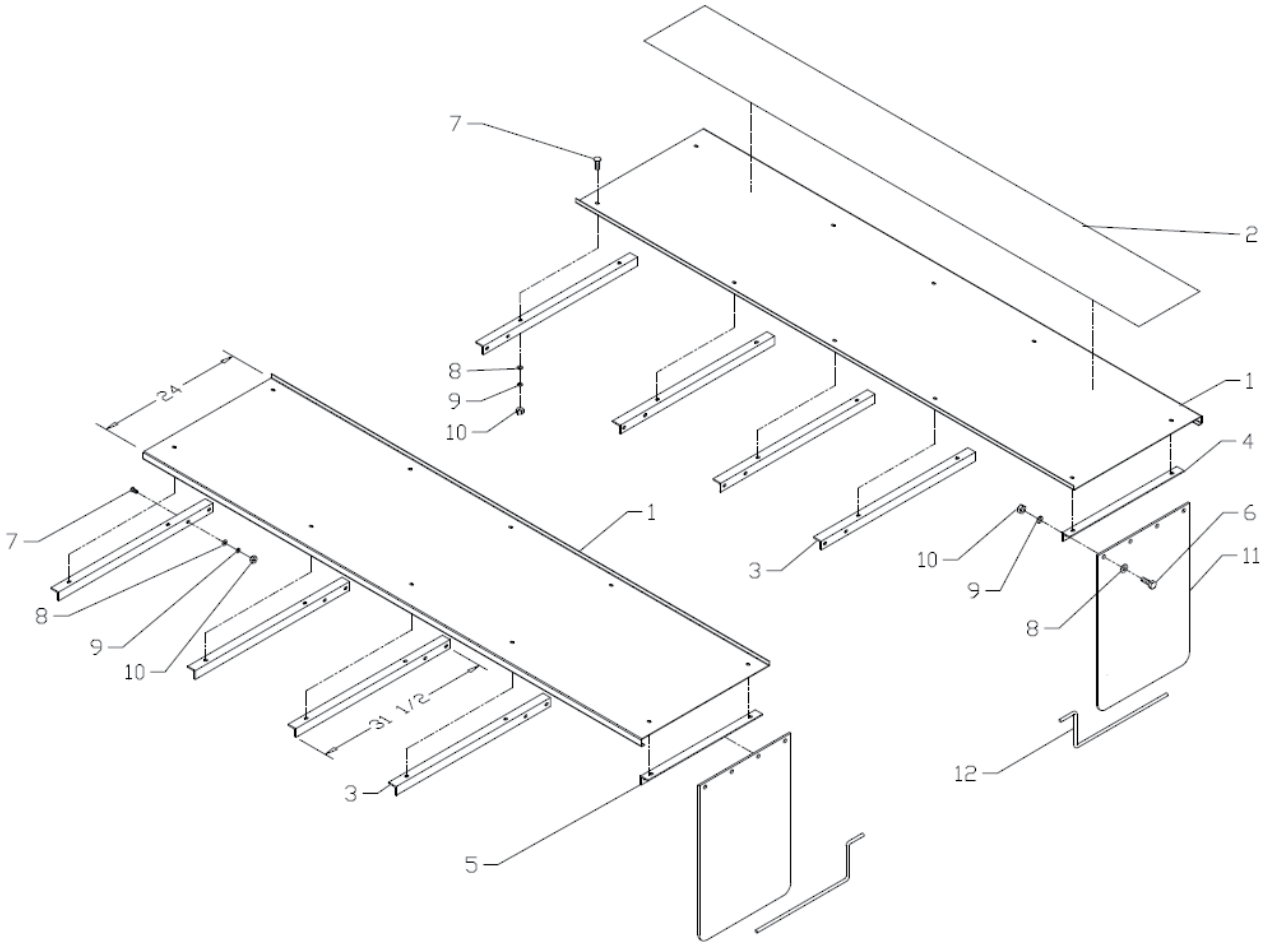
12
5

FENDERS - TRUCK TIRES CONTINUED

ITEM	PART NO.			DESCRIPTION		QTY
	CS	409 SS	304 SS			
1	83385	83461	83471	Fender – 10’ Unit		2
	83386	83462	83472	Fender – 11’ Unit		2
	83387	83463	83473	Fender – 12’ Unit		2
	83388	83464	83474	Fender – 13’ Unit		2
	83415	83484	83487	Fender – 14’ Unit		2
	83416	83485	83488	Fender – 15’ Unit		2
	83417	83486	83489	Fender – 16’ Unit		2
2	21699	21699	21699	Material – Non-Skid, 8” Wide	Inches	AR
3	85855	83514	83514	Angle – Mounting		AR
4	55854	83522	83524	Bracket – Mudflap RH		1
5	55855	83523	83525	Bracket – Mudflap LH		1
6	20067	36398	36398	Cap Screw – 3/8 x 1		AR
7	20318	36408	36408	Bolt – Carriage 3/8 x 1		AR
8	20693	36425	36425	Washer – Flat 3/8		AR
9	20712	36420	36420	Washer – Lock 3/8		AR
10	20644	36414	36414	Nut – Hex 3/8		AR
11	21770	21770	21770	Mudflap – Plain		2
12	36844	36844	36844	Rod – Anti-Sail		2

AR - As Required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31 1/2
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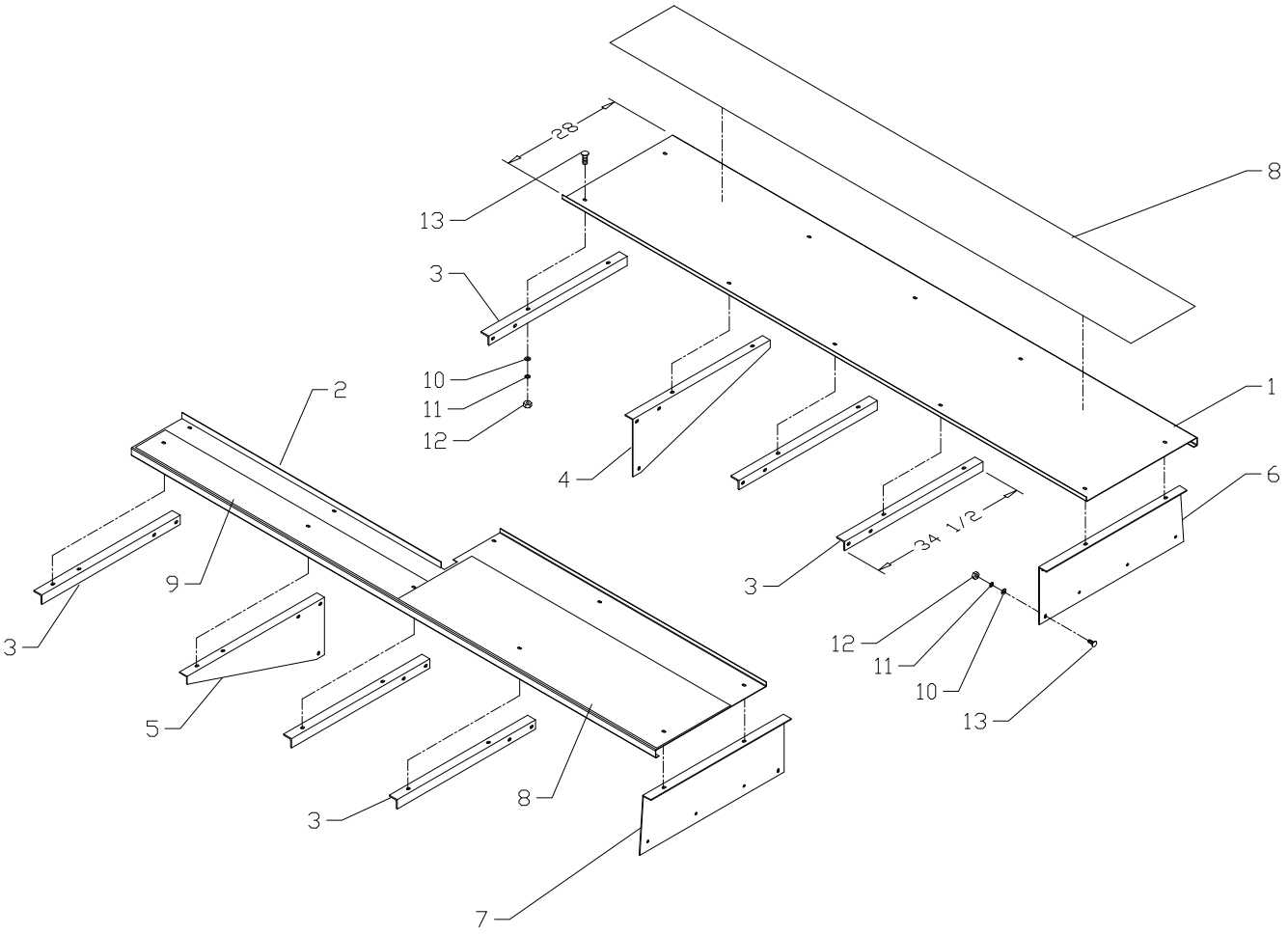
5

FENDERS - SEMI-FLOAT TRUCK TIRES CONTINUED

ITEM	PART NO.			DESCRIPTION		QTY
	CS	409 SS	304 SS			
1	83451	83461	83471	Fender – 10’ Unit		2
	83452	83462	83472	Fender – 11’ Unit		2
	83453	83463	83473	Fender – 12’ Unit		2
	83454	83464	83474	Fender – 13’ Unit		2
	83481	83484	83487	Fender – 14’ Unit		2
	83482	83485	83488	Fender – 15’ Unit		2
	83483	83486	83489	Fender – 16’ Unit		2
2	21699	21699	21699	Material – Non-Skid, 8” Wide	Inches	AR
3	83514	83514	83514	Angle – Mounting		AR
4	83520	83522	83524	Bracket – Mudflap RH		1
5	83521	83523	83525	Bracket – Mudflap LH		1
6	20067	36398	36398	Cap Screw – 3/8 x 1		AR
7	20318	36408	36408	Bolt – Carriage 3/8 x 1		AR
8	20693	36425	36425	Washer – Flat 3/8		AR
9	20712	36420	36420	Washer – Lock 3/8		AR
10	20644	36414	36414	Nut – Hex 3/8		AR
11	21770	21770	21770	Mudflap – Plain		2
12	36844	36844	36844	Rod – Anti-Sail		2

AR - As Required

FENDERS - SUPER FLOATATION TIRES 124”

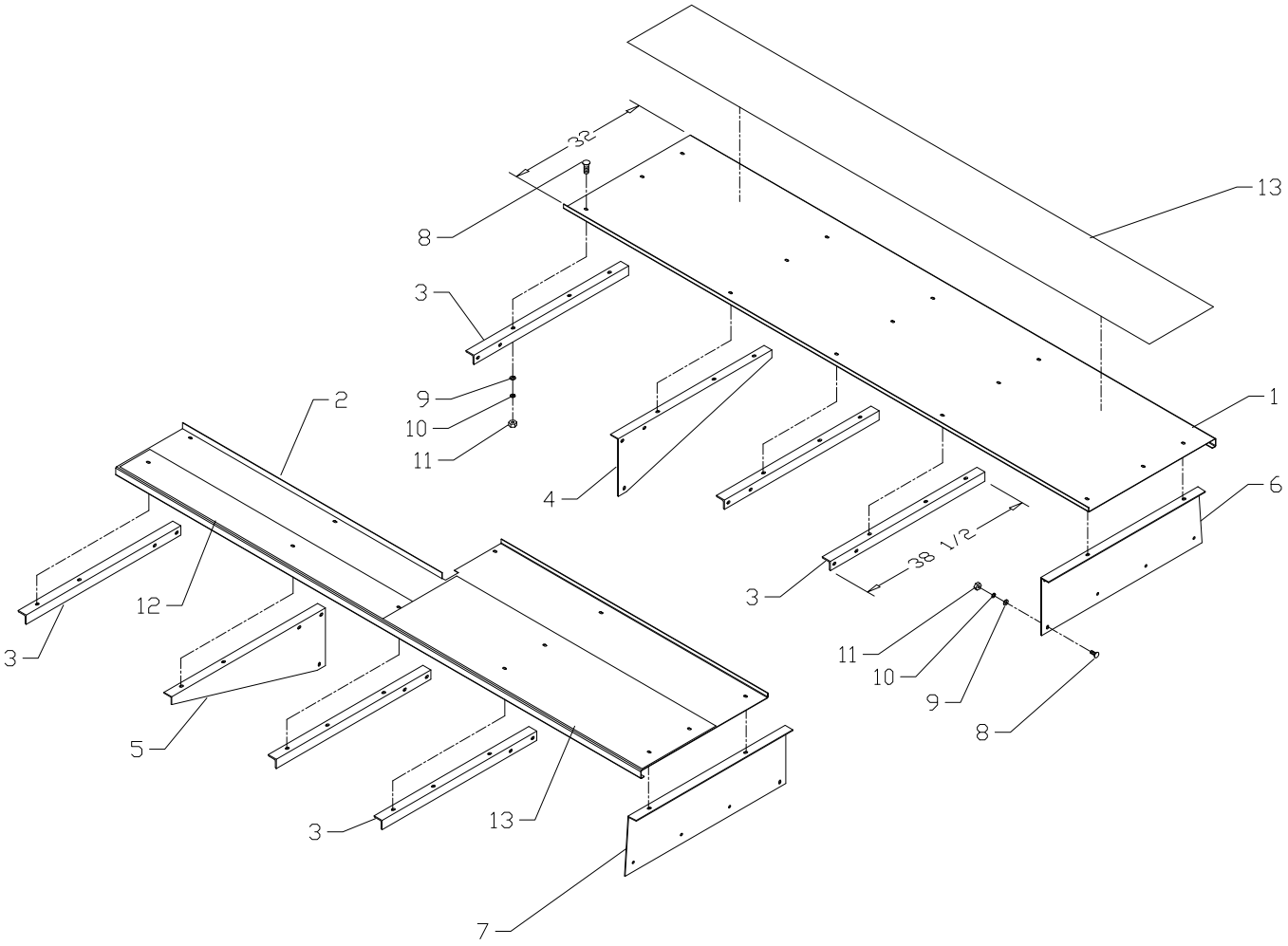


FENDERS - SUPER FLOATATION TIRES 124" CONTINUED

ITEM	PART NO.			DESCRIPTION		QTY
	CS	409 SS	304 SS			
1	83024	83040	83056	Fender – RH 10' Unit		1
	83025	83041	83057	Fender – RH 11' Unit		1
	83026	83042	83058	Fender – RH 12' Unit		1
	83027	83043	83059	Fender – RH 13' Unit		1
	86542	86614-X1	305097	Fender – RH 13' Unit w/ Light Mounting & Tank Cutout		1
	83072	83078	83084	Fender – RH 14' Unit		1
	86546	305090	305584	Fender – RH 14' Unit w/ Light Mounting & Tank Cutout		
	83073	83079	83085	Fender – RH 15' Unit		1
	83074	83080	83086	Fender – RH 16' Unit		1
2	83032	83048	83064	Fender – LH 10' Unit		1
	83033	83049	83065	Fender – LH 11' Unit		1
	83034	83050	83066	Fender – LH 12' Unit		1
	83035	83051	83067	Fender – LH 13' Unit		1
	83270-X5	83051-X2	305096	Fender – LH 13' Unit w/ Light Mounting & Tank Cutout		1
	83075	83081	83087	Fender – LH 14' Unit		1
	83310-X4	305091	305585	Fender – LH 14' Unit w/ Light Mounting & Tank Cutout		1
	83076	83082	83088	Fender – LH 15' Unit		1
	83077	83083	83089	Fender – LH 16' Unit		1
3	83021	83021	96969	Angle – Mounting		AR
4	83017	83017	96965	Formed Angle – RH		1
5	83018	83018	96966	Formed Angle – LH		1
6	83019	83019	96967	Formed Angle – RH Rear		AR
7	83020	83020	96968	Formed Angle – LH Rear		AR
8	21699	21699	21699	Material – Non-Skid, 8" Wide	Inches	AR(2)
9	21699	21699	21699	Material – Non-Skid, 8" Wide	Inches	AR
10	20693	36425	36425	Washer – Flat 3/8		AR
11	20712	36420	36420	Washer – Lock 3/8		AR
12	20644	36414	36414	Nut – Hex 3/8		AR
13	20318	36408	36408	Bolt – Carriage 3/8 x 1		AR

AR - As Required

FENDERS - SUPER FLOATATION TIRES WITH 132” STRAIGHT FLARE

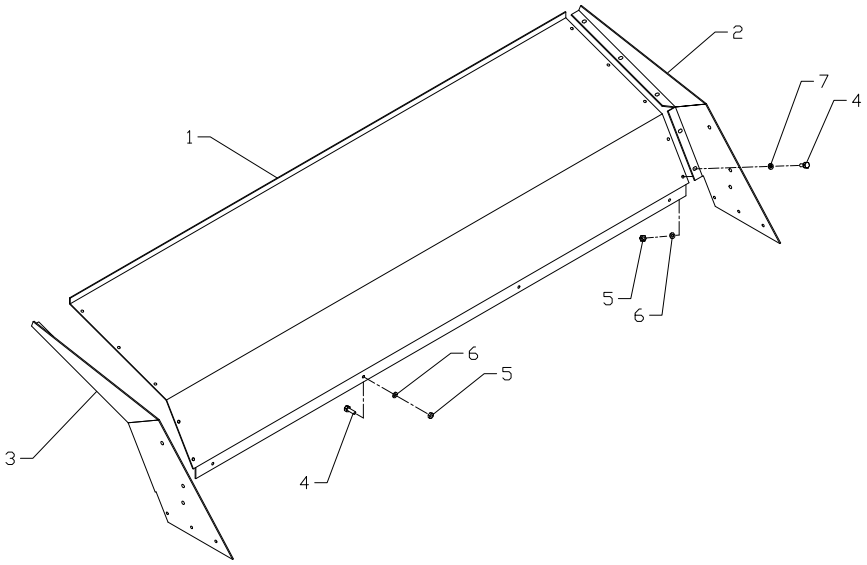


FENDERS - SUPER FLOATATION TIRES WITH 132" STRAIGHT FLARE CONTINUED

ITEM	PART NO.			DESCRIPTION		QTY
	CS	409 SS	304 SS			
1	83259	83275	83291	Fender – RH 10' Unit		1
	83260	83276	83292	Fender – RH 11' Unit		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
	83308	83314	83320	Fender – RH 15' Unit		1
	83309	83315	83321	Fender – RH 16' Unit		1
2	83267	83283	83299	Fender – LH 10' Unit		1
	83268	83284	83300	Fender – LH 11' Unit		1
	83269	83285	83301	Fender – LH 12' Unit		1
	83270	83286	83302	Fender – LH 13' Unit		1
	83310	83316	83322	Fender – LH 14' Unit		1
	83311	83317	83323	Fender – LH 15' Unit		1
	83312	83318	83324	Fender – LH 16' Unit		1
3	83256	83256	96972	Angle – Mounting		AR
4	83252	83252	96970	Formed Angle – RH		1
5	83253	83253	96971	Formed Angle – LH		1
6	83254	83254	83254-X10	Formed Angle – RH Rear		AR
7	83255	83255	83255-X10	Formed Angle – LH Rear		AR
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
12	21699	21699	21699	Material – Non-Skid, 8" Wide	Inches	AR
13	21699	21699	21699	Material – Non-Skid, 8" Wide	Inches	AR (2)

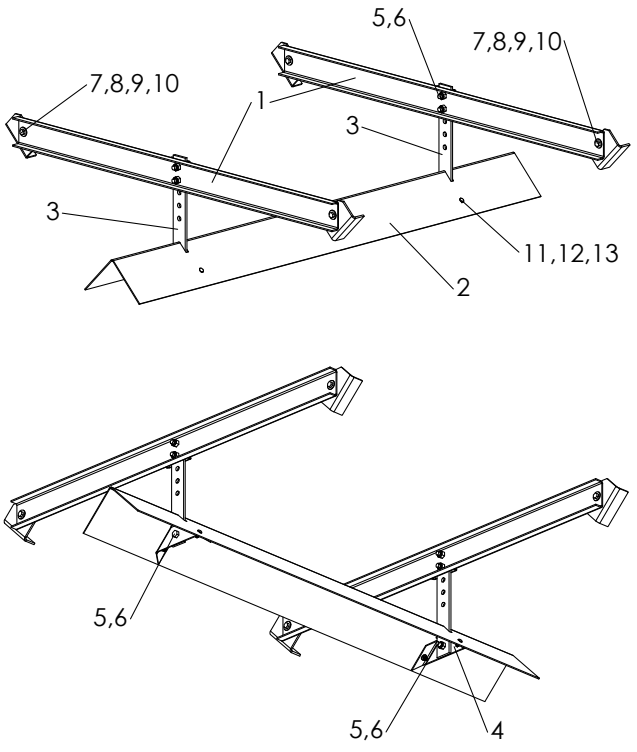
* - Not Shown AR - As Required

CAB SHIELD

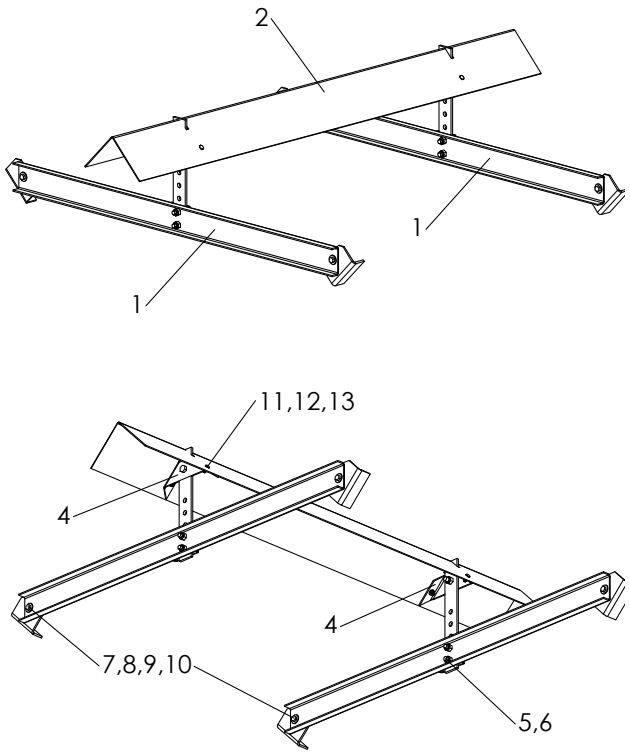


ITEM	PART NO.			DESCRIPTION	QTY
	CS	409 SS	304 SS		
				Cab Shield Assy:	
1	55926	79161	79160	Panel – Cab Shield, 57” x 88”	1
	55927	79163	79162	Panel – Cab Shield, 63” x 88”	1
	55928	79165	79164	Panel – Cab Shield, 69” x 88”	1
	82777	82778	82779	Panel – Cab Shield, 57” x 102”	1
	82780	82781	82782	Panel – 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



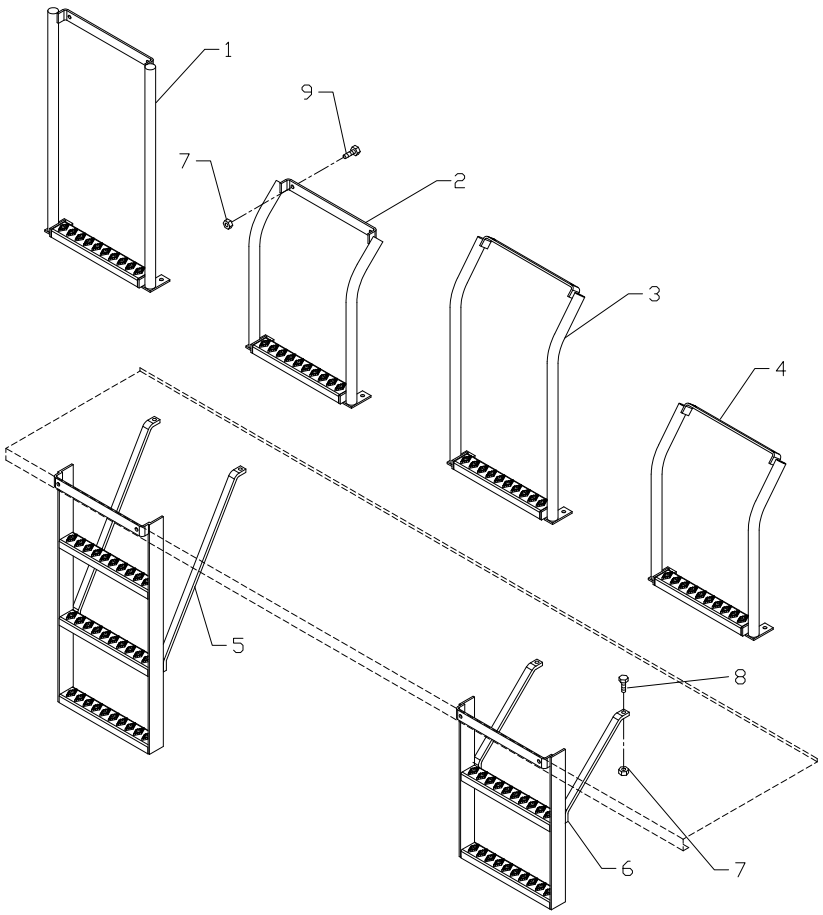
STANDARD ASSEMBLY



HIGH YIELD ASSEMBLY

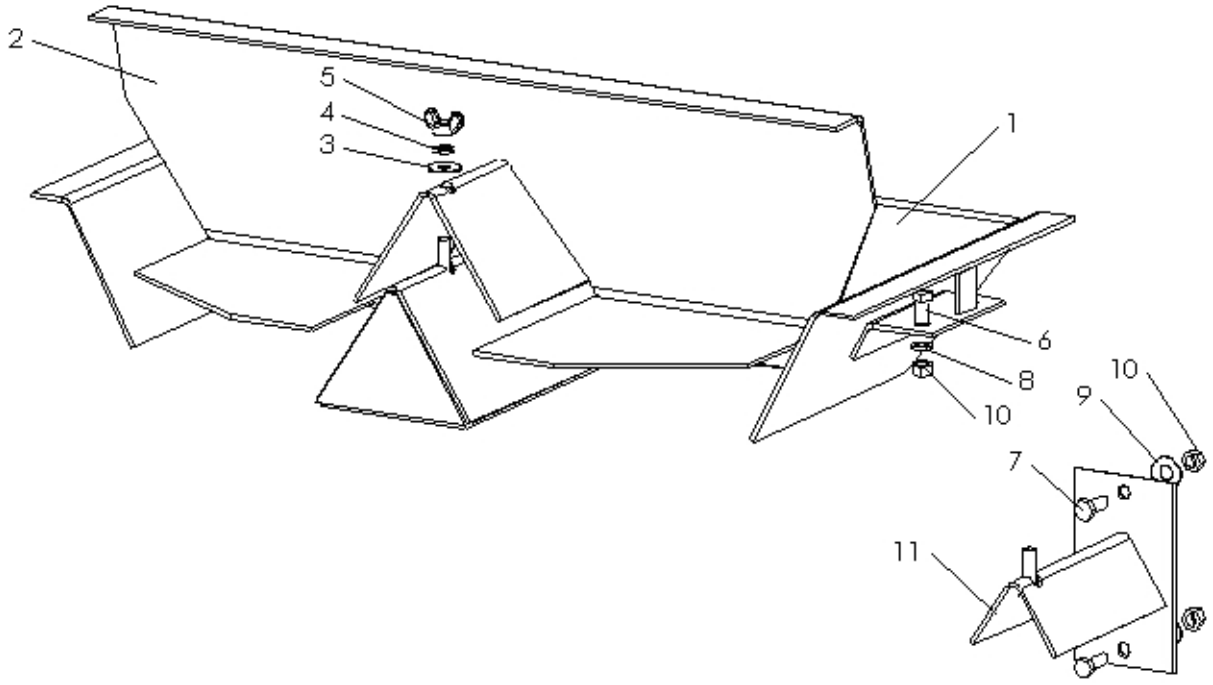
ITEM	PART NO.			DESCRIPTION	QTY
	CS	409 SS	304 SS		
1	81261	81262	81263	Hanger – V Wldmt	AR
2	82613	82617	82621	Inverted V – 5’ (8’ – 10’ Units)	1
	82614	82618	82622	Inverted V – 7’ (11’ – 12’ Units)	1
	82615	82619	82623	Inverted V – 9’ (13’-14’ Units)	1
	82616	82620	82624	Inverted V – 11’ (15’ – 16’ 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



ITEM	PART NO.	DESCRIPTION	QTY
1	72776	Ladder – Upper, Used on 88” Wide Body/Standard Fenders	
2	72799	Ladder – Upper, Used on 88” Wide Body/Raised Fenders	1
3	72779	Ladder – Upper, Used on 102” Wide Body/Standard Fenders	2
4	72778	Ladder – Upper, Used on 102” Wide Body/Raised Fenders	2
5	72796	Ladder – Lower, Used on Raised Fenders	1
6	72797	Ladder – Lower, Used on Standard Fenders	
7	20644	Nut – Hex 3/8	8
8	20069	Cap Screw – 3/8 x 1 1/2	2
9	20068	Cap Screw – 3/8 x 1 1/4	6
10	* 20693	Washer – Flat 3/8	4
11	* 20712	Washer – Lock 3/8	8

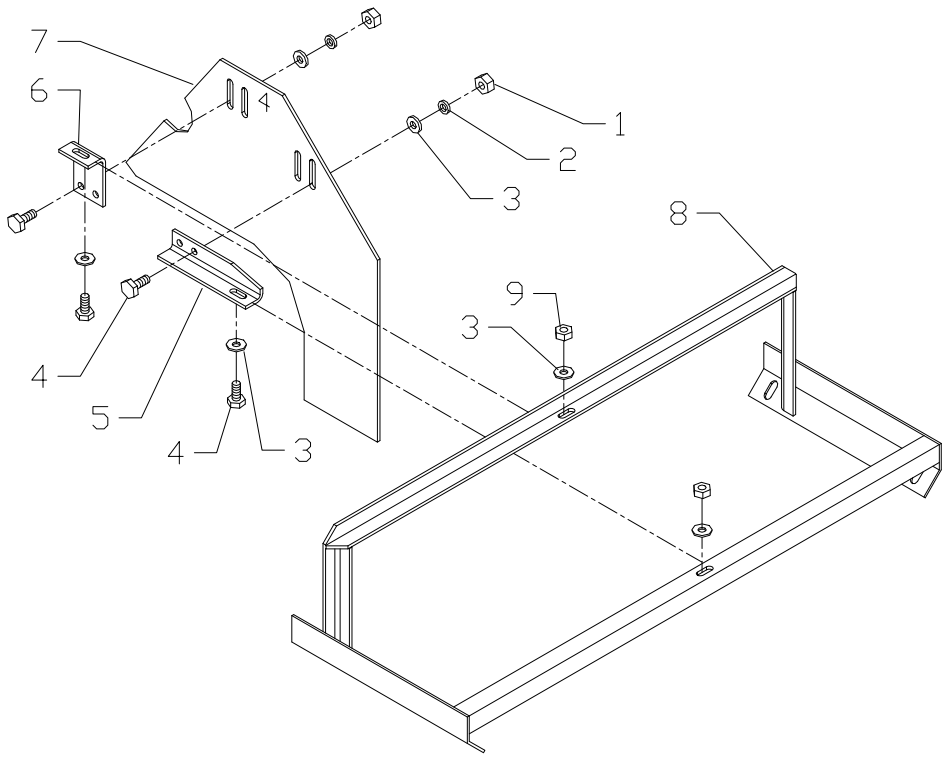
* - Not Shown



ITEM	PART NO.	DESCRIPTION	QTY
	87108	Divider – Material Assy	
1	87054	Divider – Wldmt	1
2	87064	Deflector – Rear Wldmt	1
3	36425	Washer – Flat 3/8 SS	1
4	36420	Washer – Lock 3/8 SS	1
5	20673	Nut – Wing 3/8	1
6	36293	Cap Screw – 3/8 x 3/4	2
7	36398	Cap Screw – 3/8 x 1 Ss	2
8	36420	Washer – Lock 3/8	2
9	36425	Washer – Flat 3/8 SS	2
10	36414	Nut – Hex 3/8	4
11	87381	Mount – Divider Wldmt	1

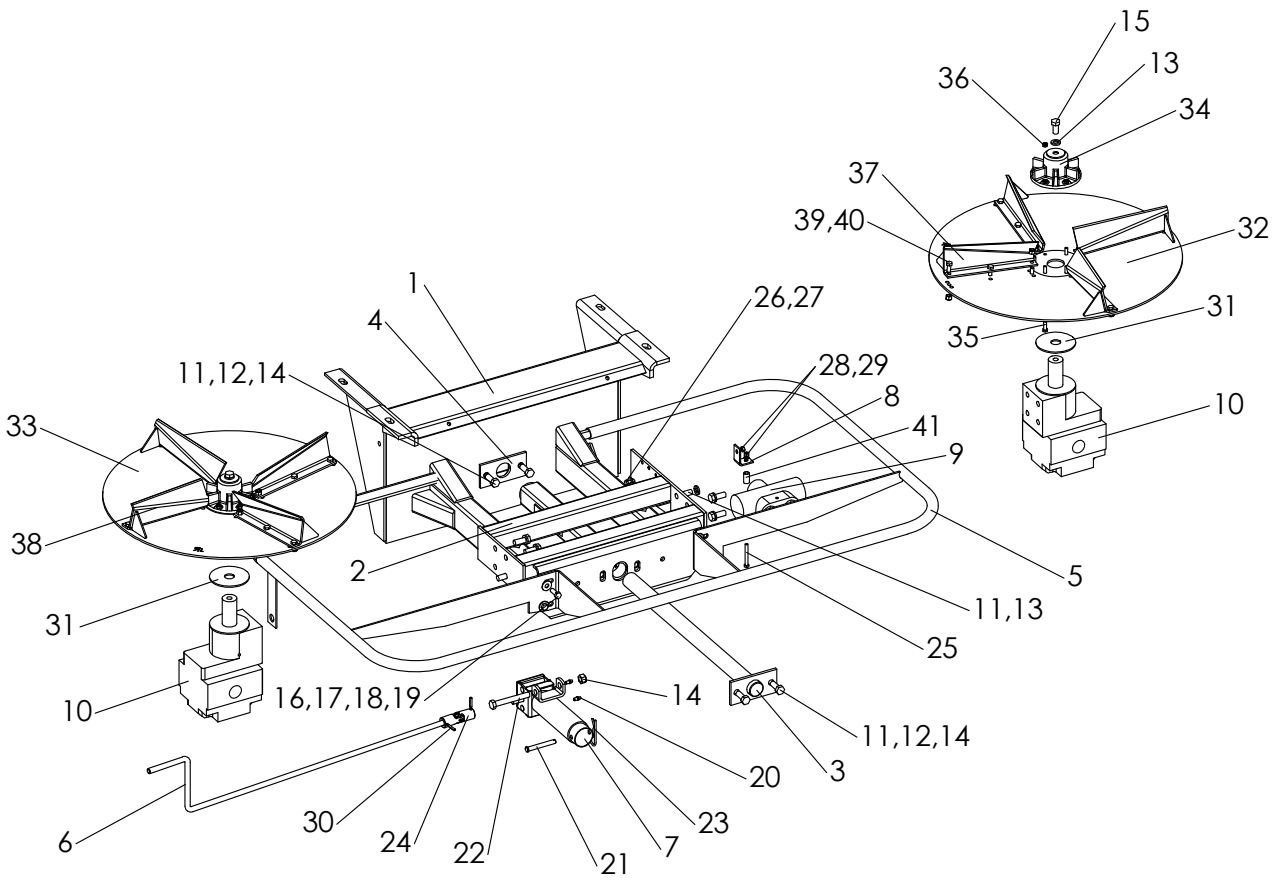
Mount Item 11 on truck to hold Item 2 when not in use.

HILLSIDE FLOW DIVIDER



ITEM	PART NO.	DESCRIPTION	QTY
1	36413	Nut – Hex 5/16 SS	4
2	36419	Washer – Lock 5/16 SS	6
3	36424	Washer – Flat 5/16 SS	8
4	34580	Cap Screw – 5/16 x 1 SS	6
5	56879	Bracket – Clamp	1
6	56880	Angle – Clamp	1
7	82288	Panel – Divider	1
8	56871	Bracket – Support Wldmt	1
	42221	Nut – Lock 5/16	AR

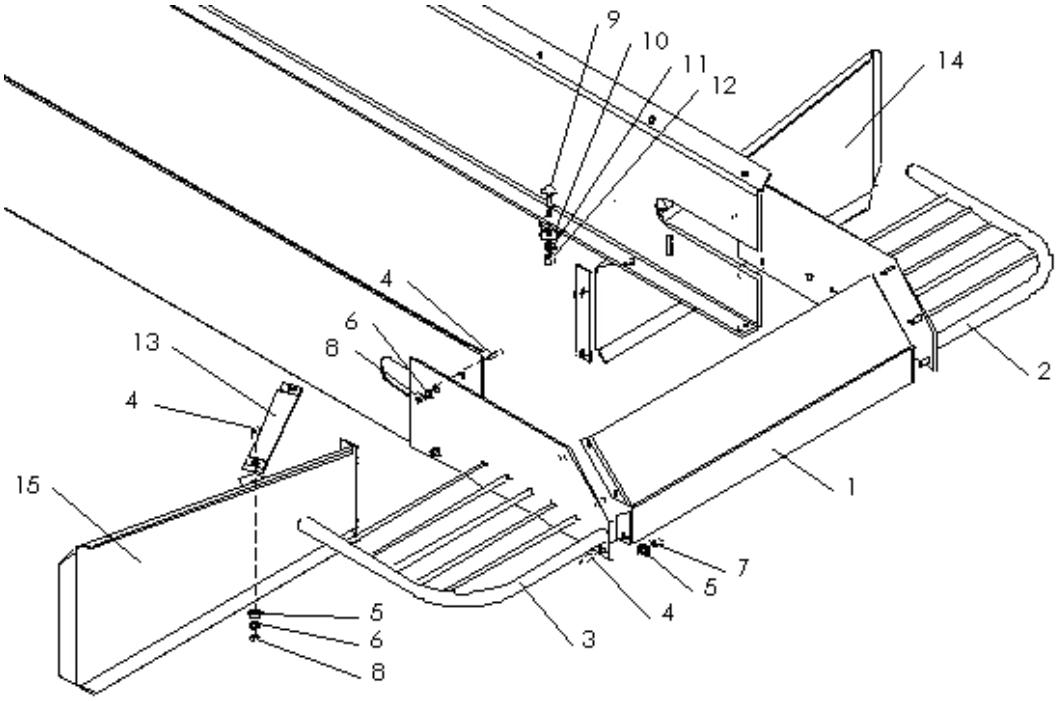
AR - As Required



ITEM	PART NO. CS	PART NO. SS	DESCRIPTION	QTY
	87096	87095	24" Hydraulic Fan Assy NOTE: Assy does not include guards.	
	87106	87106	Fan – LH Assy, Includes Items 33-36,38-40	1
	87105	87105	Fan – RH Assy, Includes Items 32,34-37,39-40	1
1	87051	87090	Plate – Back	1
2	87013	87082	Mount – Motor Wldmt	1
3	87021	87021	Shaft – Support Wldmt	1
4	87065	87023	Plate – Shaft Mount	1
5	87032	87032-X1	Guard – Spinner Wldmt	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
	56369	53639	Spool – Compensating	1

ITEM	PART NO.		DESCRIPTION	QTY
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	305571	305571	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 Wldmt	4
38	309092	25871-X1	Fin – LH Wldmt	4
39	20034	20034	Cap Screw – 5/16 x 3/4	24
40	20677	20677	Nut – Lock 5/16	24
41	6461	76825	Hinge - Pipe 1/4 x 1	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

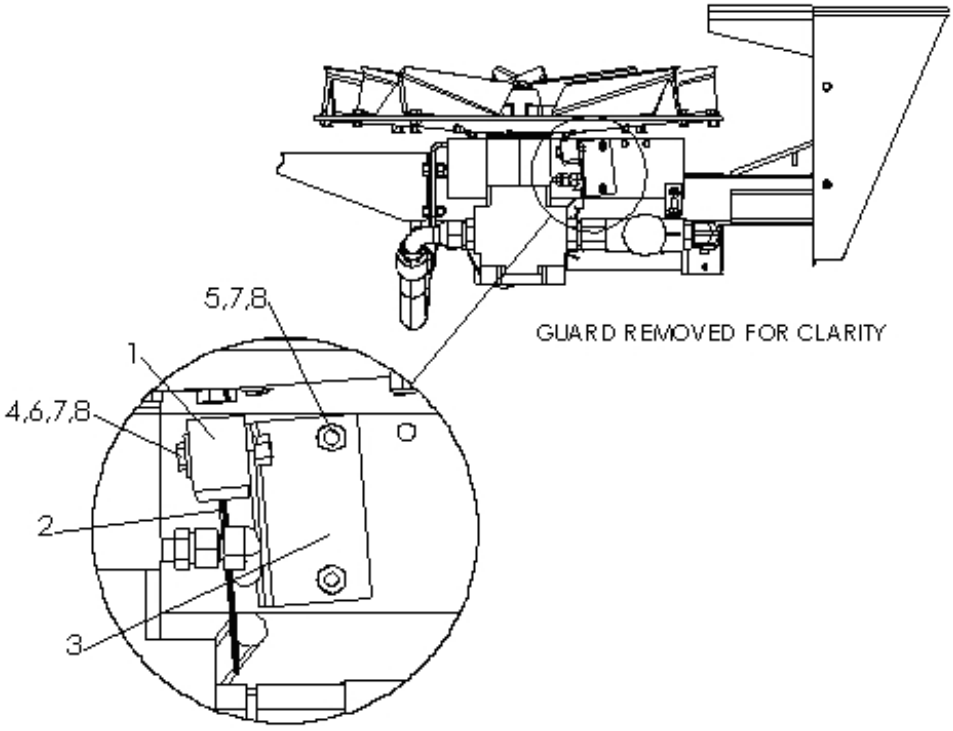
* - Not Shown – Used to attach spinner to sills.



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.

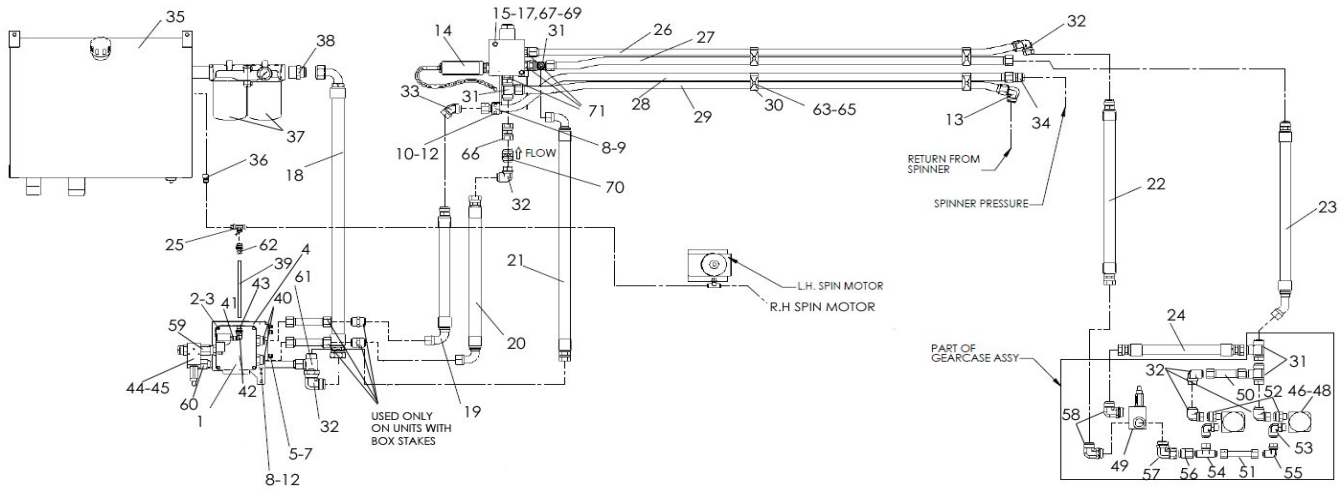
ITEM	PART NO.		DESCRIPTION	QTY
	CS	SS		
1	87066	87066-X1	Guard – Center Section Wldmt	1
2	87027	87027-X1	Guard – RH Wldmt	1
3	87031	87031-X1	Guard – LH Wldmt	2
4	36398	36398	Cap Screw - 3/8 x 1	16
5	36425	36425	Washer – Flat 3/8	12
6	36420	36420	Washer – Lock 3/8	10
7	72054	72054	Nut – Lock 3/8	6
8	36414	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 Wldmt	1
		305075	Shield – RH Wldmt 126”	1
15	82961	82965	Shield – LH Wldmt	1
		305076	Shield – LH Wldmt 126”	1

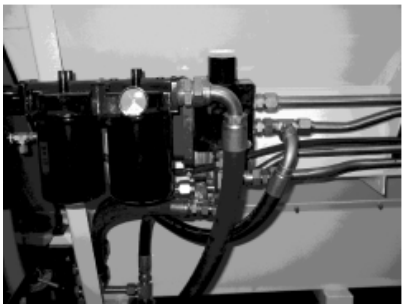
SPINNER SENSOR

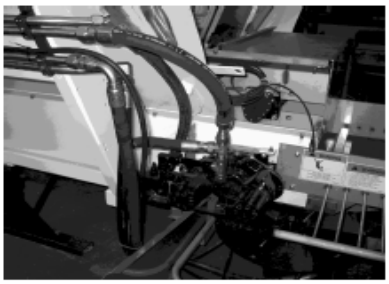


ITEM	PART NO.	DESCRIPTION	QTY
	97310	Sensor – Kit Spinner	
1	89011	Sensor – Assy	1
2	89009	Cable – Sensor Extension	1
3	86672	Bracket	1
4	42448	Cap Screw – 1/4 x 1-1/2 SS	2
5	36393	Cap Screw – 1/4 x 3/4 SS	2
6	36423	Washer – Flat 1/4 SS	3
7	36418	Washer – Lock 1/4 SS	6
8	36412	Nut – Hex 1/4 SS	6
9	*88260	Control - Box Spinner	1

* - Not Shown







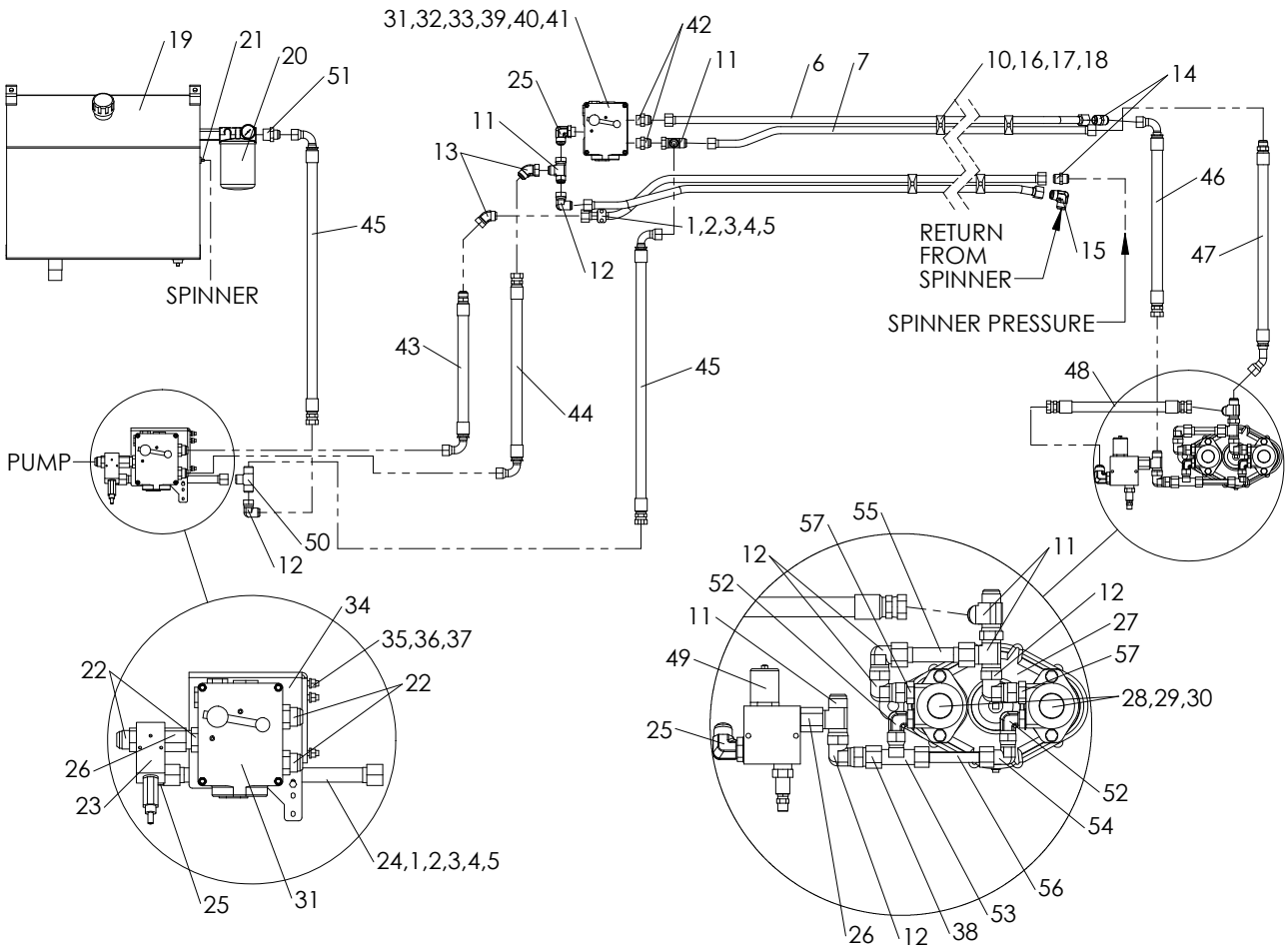
ITEM	PART NO.	DESCRIPTION	QTY
1	38576-X4	Valve – PWM Hydraulic	1
	38576-AA	Cartridge Presure Regulating	
	38576-AB	Coil	
	38576-AC	O-Ring	
	38576-AD	Screw - Set 5/16-24 x 1 1/2	
	38576-AE	Nut - jame 5/16-24	
	38576-AF	Cartridge Valve Body	
	38576-AG	Cartridge Nut	
	*38576-AH	Valve - Seal Kit	
	*38576	Valve- Hydraulic	1
2	42794	Cap Screw – 5/16 X 3-3/4	4
3	42221	Nut – Lock 5/16	8
4	302395	Bracket – Valve	1
5	36398	Cap Screw – 3/8 x 1	3
6	36420	Washer – Lock 3/8	3

ITEM	PART NO.	DESCRIPTION	QTY
7	36414	Nut – Hex 3/8	3
8	86557	Clamp – Pair 1 Tube	2
9	86556	Plate – Top 1 Tube	2
10	34865	Cap Screw – 1/4 x 2-1/4	2
11	36418	Washer – Lock 1/4	2
12	36412	Nut – Hex 1/4	2
13	29783	Adapter – 90° Elbow	1
14	306270	Valve – Assy Control 40 GPM	1
	306271	Manifold - 40 GPM SFP	1
	306272	Valve - Flow Control 40 GPM SFP	1
15	42794	Cap Screw – 5/16 x 3 3/4	2
16	302099	Washer – Step 3/8	2
17	42221	Nut – Lock 5/16	2
18	82599-X1	Hose - Assy 1 x 41	1
19	302345	Hose – Assy 1 x 22.5	1
20	29748	Hose – Assy 1 x 30	1
21	82599-X1	Hose – Assy 1 x 41	1
22	302346	Hose – Assy 1 x 31	1
23	42996	Hose – Assy 1 x 32.875	1
24	82319	Hose – Assy 1 x 19	1
25	98724	Fitting – Tee Run, Use with PWM only	1
26	300702	Tube – Assy 1 x 49, 10’	1
	302407	Tube – Assy 1 x 61, 11’	1
	302408	Tube – Assy 1 x 73, 12’	1
	302410	Tube – Assy 1 x 85, 13’	1
	302411	Tube – Assy 1 x 97, 14’	1
	302412	Tube – Assy 1 x 109, 15’	1
	302413	Tube – Assy 1 x 121, 16’	1
27	300703	Tube – Assy 1 x 45, 10’	1
	302414	Tube – Assy 1 x 57, 11’	1
	302415	Tube – Assy 1 x 69, 12’	1
	302417	Tube – Assy 1 x 81, 13’	1
	302418	Tube – Assy 1 x 93, 14’	1
	302419	Tube – Assy 1 x 105, 15’	1
	302420	Tube – Assy 1 x 117, 16’	1
28	300704	Tube – Assy 1 x 55, 10’	1
	302421	Tube – Assy 1 x 67, 11’	1

ITEM	PART NO.	DESCRIPTION	QTY
	302422	Tube – Assy 1 x 79, 12’	1
	302424	Tube – Assy 1 x 91, 13’	1
	302425	Tube – Assy 1 x 103, 14’	1
	302426	Tube – Assy 1 x 115, 15’	1
	302427	Tube – Assy 1 x 127, 16’	1
29	300705	Tube – Assy 1 x 49, 10’	1
	302428	Tube – Assy 1 x 61, 11’	1
	302429	Tube – Assy 1 x 76, 12’	1
	302431	Tube – Assy 1 x 88, 13’	1
	302432	Tube – Assy 1 x 100, 14’	1
	302433	Tube – Assy 1 x 109, 15’	1
	302434	Tube – Assy 1 x 121, 16’	1
30	300033	Clamp – Twin 1 Tube	AR
31	29850	Adapter – Tee Swivel	5
32	29807	Fitting – Elbow 90°	3
33	29806	Adapter – 45° Elbow	1
34	34719	Fitting – Union	1
35	86466	Tank – 40 Gallon Wldmt (see *Reservoir* parts page)	1
	96747	Cap – Pipe Reservoir	1
36	29766	Adapter – Connector	1
37	39845	Filter – Assy with Indicator	1
38	34724	Adapter	1
39	34195-28	Hose – Drain Line, Use with PWM only	1
40	29803	Adapter – O-Ring	4
41	34757	Adapter – Connector, Use with PWM only	1
42	34816	Adapter – 90° Elbow, Use with PWM only	1
43	34761	Fitting – Socketless, Use with PWM only	1
44	300701	Valve – Relief Assy 3100 PSI	1
45	302436	Tube Assy – 1 X 14.375	1
46	82459	Motor - Hydraulic 1-1/4	2
47	20714	Washer - Lock	4
48	20129	Cap Screw – 1/2 x 1-1/2	4
49	304818	Valve - Relief 2050 PSI Soft Start	1
50	80888	Tube Assy – 1 X 4.625	1
51	80886	Tube Assy - .75 X 4.875	1
52	29778	Adapter	2
53	29773	Adapter – 90° Elbow	2
54	29809	Adapter – Tee Branch	1

ITEM	PART NO.	DESCRIPTION	QTY
55	34709	Adapter – 90° Elbow	1
56	34712	Bushing	1
57	29807	Adapter - Elbow 90°	4
58	29840	Fitting - 16-16	2
59	34810	Adapter – Connector	1
60	29840	Adapter – 90° Elbow	1
61	34711	Adapter - Tee	1
62	34761	Fitting – Hose End, Use with PWM only	1
63	71830	Cap Screw – 5/16-18 x 2-1/2	AR
64	36419	Washer – Lock 5/6	AR
65	36413	Nut – Hex 5/16-18	AR
66	302449	Fitting – Union -16 Swivel	1
67	303115	Bracket – Wldmt Raven Valve Mount	1
68	42639	Bolt – Carriage 5/16-18 x 1	2
69	36424	Washer – Flat 5/16	2
70	302160-AB	Valve – Check 1”	1
71	29803	Fitting - 16-16	3
72	*74524	Gasket - Motor Flange	1
73	*307399	Pigtail - 3-Pin Metripack to Flying Lead (optional)	AR

* - Not Shown AR- As Required



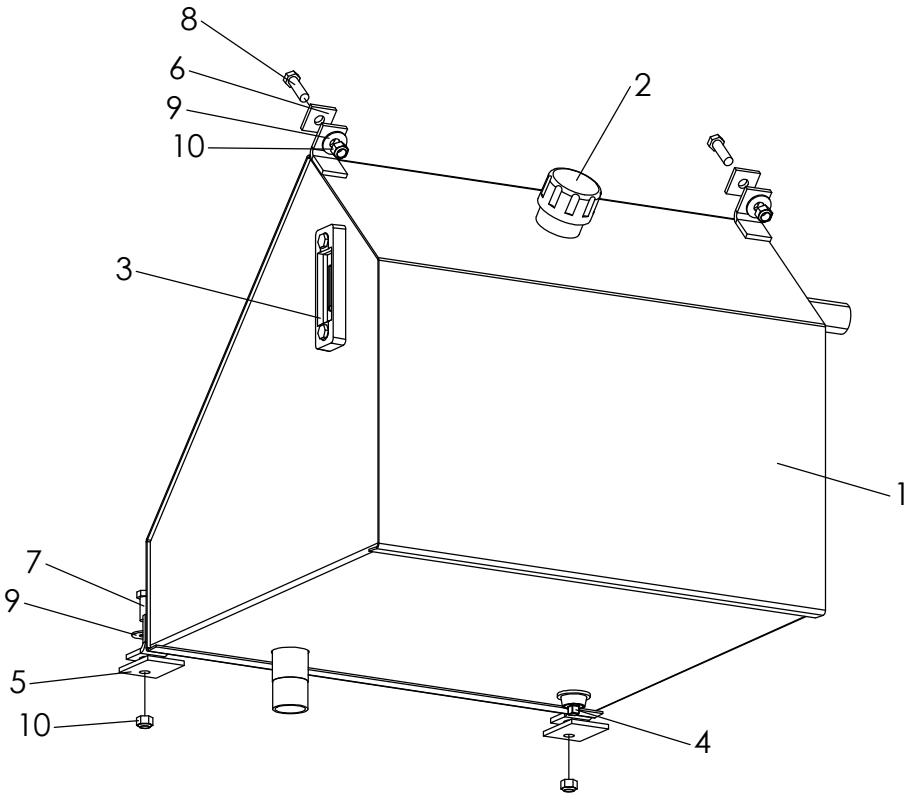
ITEM	PART NO.	DESCRIPTION	QTY
1	86557	Clamp – Pair 1 Tube	2
2	86556	Plate – Top 1 Tube	2
3	34865	Cap Screw – 1/4 x 2-1/4	4
4	36418	Washer – Lock 1/4	4
5	36412	Nut – Hex 1/4	4
6	300702	Tube – Assy 1 x 49, 10’	1
	302407	Tube – Assy 1 x 61, 11’	1
	302408	Tube – Assy 1 x 73, 12’	1
	302410	Tube – Assy 1 x 85, 13’	1
	302411	Tube – Assy 1 x 97, 14’	1
	302412	Tube – Assy 1 x 109, 15’	1
	302413	Tube – Assy 1 x 121, 16’	1
7	303418	Tube – Assy 1 x 44, 10’	1

ITEM	PART NO.	DESCRIPTION	QTY
	303419	Tube – Assy 1 x 56, 11’	1
	303420	Tube – Assy 1 x 68, 12’	1
	303422	Tube – Assy 1 x 80, 13’	1
	303423	Tube – Assy 1 x 92, 14’	1
	303424	Tube – Assy 1 x 104, 15’	1
	303425	Tube – Assy 1 x 116, 16’	1
8	300704	Tube – Assy 1 x 55, 10’	1
	302421	Tube – Assy 1 x 67, 11’	1
	302422	Tube – Assy 1 x 79, 12’	1
	302424	Tube – Assy 1 x 91, 13’	1
	302425	Tube – Assy 1 x 103, 14’	1
	302426	Tube – Assy 1 x 115, 15’	1
	302427	Tube – Assy 1 x 127, 16’	1
9	303426	Tube – Assy 1 x 54.2, 10’	1
	303427	Tube – Assy 1 x 66.2, 11’	1
	303428	Tube – Assy 1 x 78.2, 12’	1
	303430	Tube – Assy 1 x 90.2, 13’	1
	303431	Tube – Assy 1 x 102.2, 14’	1
	303432	Tube – Assy 1 x 114.2, 15’	1
	303433	Tube – Assy 1 x 126.2, 16’	1
10	300033	Clamp – Twin 1 Tube	AR
11	29850	Adapter – Tee Swivel	5
12	29807	Adapter – 90° Elbow	6
13	29806	Adapter – 45° Elbow	2
14	34719	Fitting – Union	2
15	29783	Adapter – 90° Elbow	1
16	71830	Cap Screw – 5/16-18 x 2-1/2	AR
17	36419	Washer – Lock 5/6	AR
18	36413	Nut – Hex 5/16-18	AR
19	86466	Tank – 40 Gallon Wldmt	1
	96747	Cap – Pipe Reservoir	1
20	39845	Filter – Assy with Indicator	1
21	29766	Adapter – Connector	1
22	29803	Adapter – O-Ring	4
23	98109	Valve – Relief Soft Start	1
24	302436	Tube Assy – 1 X 14.375	1
25	29840	Adapter – 90° Elbow	3
26	34810	Adapter – Connector	2

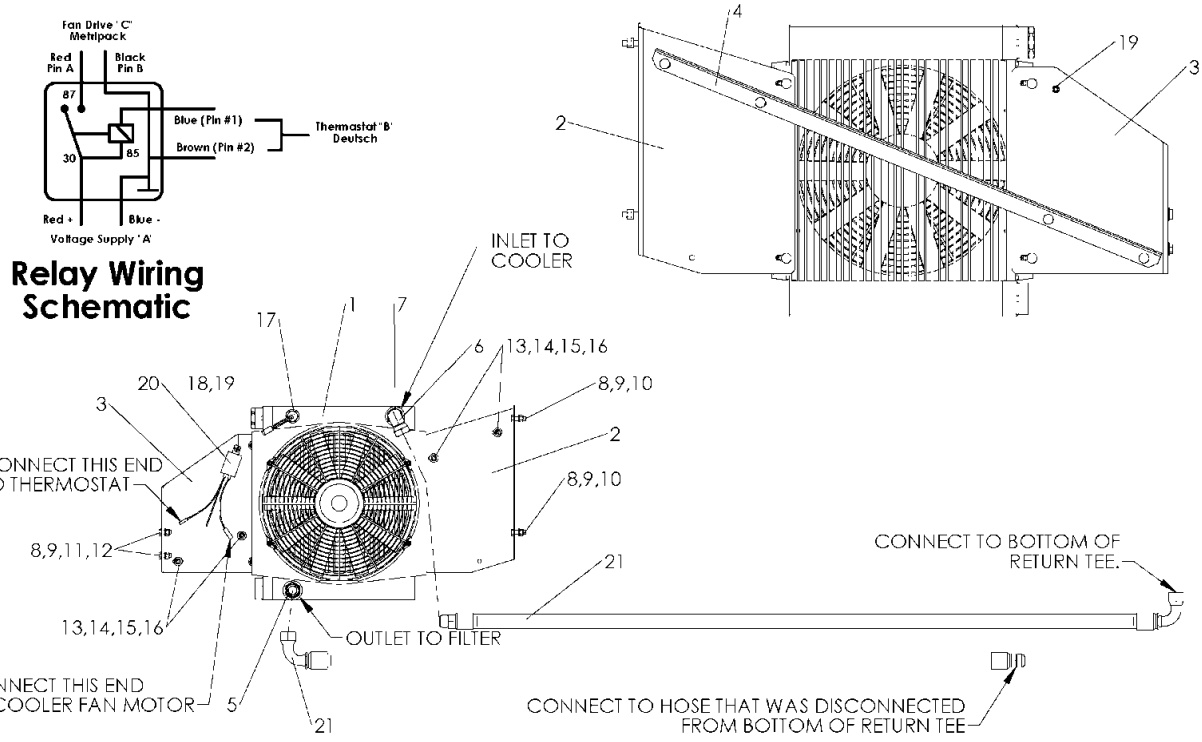
ITEM	PART NO.	DESCRIPTION	QTY
27	37985	Gear Case – Dual Pinion	1
28	55970	Motor – Hydraulic 11.3 CID 1”	2
	82459	Motor – Hydraulic 14.1 CID 1-1/4”	2
	38897	Motor – Hydraulic 17.9 CID 1-1/2”	2
29	20129	Cap Screw – 1/2 x 1-1/2	4
30	20714	Washer – Lock 1/2	4
31	38576	Valve – Control 40 GPM Valve – Hydraulic	2
32	42794	Cap Screw – 5/16 X 3-3/4	8
33	42221	Nut – Lock 5/16	10
34	302395	Bracket – Valve	1
35	36398	Cap Screw – 3/8 x 1	3
36	36420	Washer – Lock 3/8	3
37	36414	Nut – Hex 3/8	3
38	34712	Bushing	1
39	303118	Bracket – Wldmt Valve Mount	1
40	42639	Bolt – Carriage 5/16-18 x 1	2
41	36424	Washer – Flat 5/16	2
42	29803	Adapter – O-Ring	2
43	302345	Hose – Assy 1 x 22.5	1
44	56394	Hose – Assy 1 x 27.5	1
45	82599-X1	Hose – Assy 1 x 41	2
46	56394	Hose – Assy 1 x 27.5	1
47	42996	Hose – Assy 1 x 32.875	1
48	82527	Hose Assy - 1 x 20.5	1
49	56297	Valve – Dump Relief 2050 PSI	1
50	34711	Adapter – Tee	1
51	34724	Adapter – 90° Elbow	1
52	29773	Adapter – 90° Elbow	2
53	29809	Adapter – Tee Swivel	1
54	34709	Adapter – 90° Elbow	1
55	80888	Tube Assy – 1 X 4.625	1
56	80886	Tube Assy - .75 X 4.875	1
57	29778	Adapter	2

* - Not Shown AR - As Required

RESERVOIR

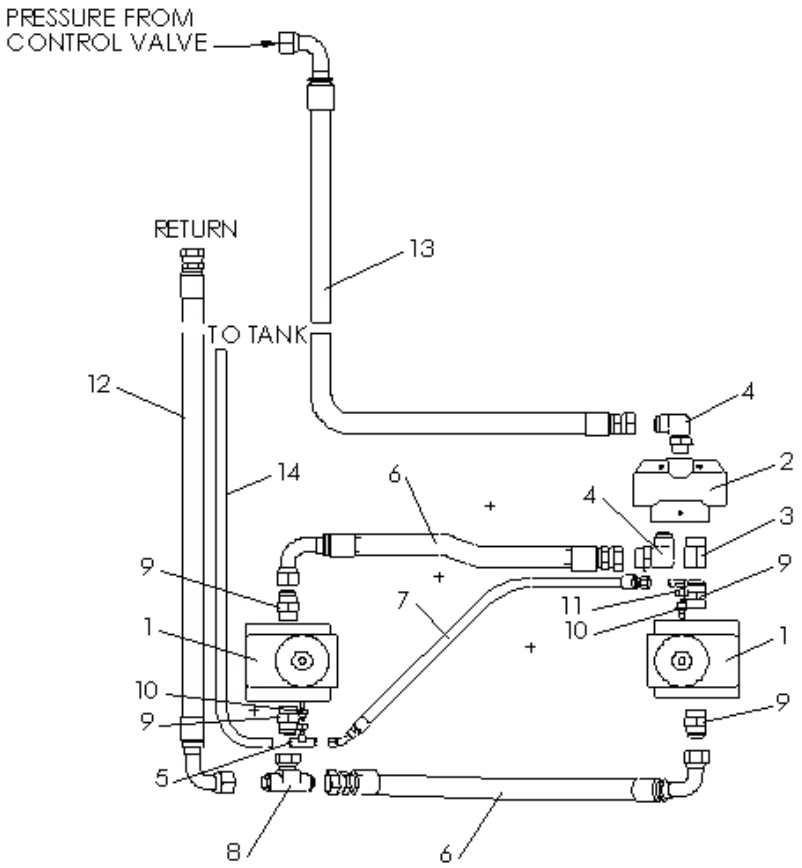


ITEM	PART NO.	DESCRIPTION	QTY
1	86466	Tank – Wldmt 40 Gallon	1
2	96747	Cap – Filler	1
3	38575	Gauge – Assy Sight & Temperature	1
4	6033	Plug – Pipe 3/4	1
5	39158	Belt – Flex Mount	2
6	39159	Belt – Flex Mount	2
7	36402	Cap Screw - 1/2 x 1 1/4	2
8	71832	Cap Screw - 1/2 x 1 3/4	2
9	36426	Washer – Flat 1/2	4
10	39016	Nut – Lock 1/2	4

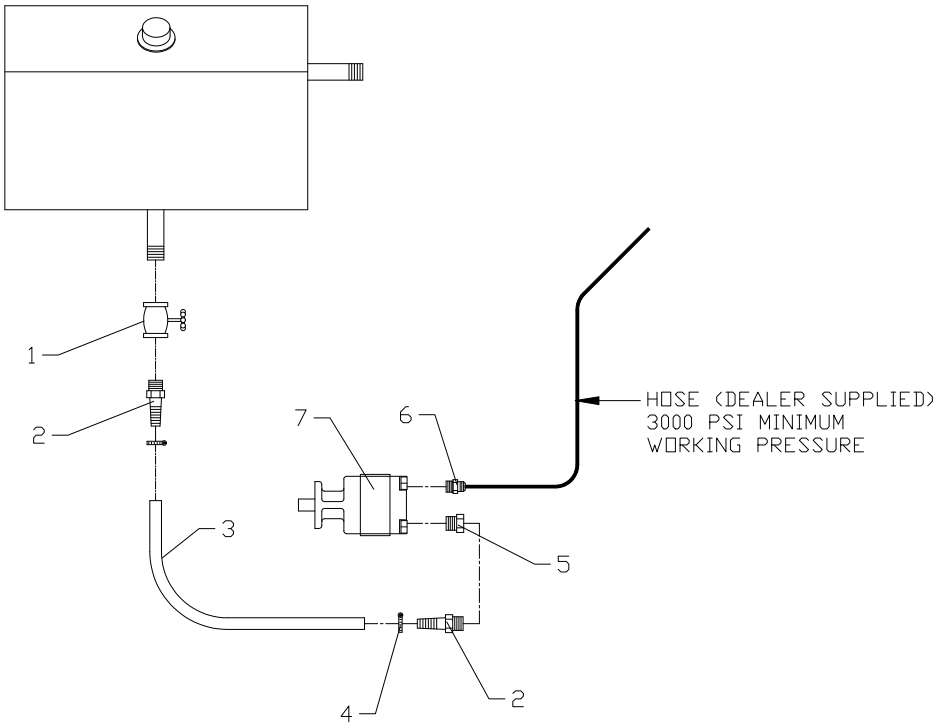

Fan Drive 'C'
Metripack
Red
Pin A
Black
Pin B
87
30
85
Blue (Pin #1)
Brown (Pin #2)
Thermastat 'B'
Deutsch
Red +
Blue -
Voltage Supply 'A'
Relay Wiring
Schematic
4
19
3
2
INLET TO
COOLER
17
1
7
6
13,14,15,16
8,9,10
20
18,19
3
2
CONNECT THIS END
TO THERMOSTAT
8,9,10
8,9,11,12
21
CONNECT TO BOTTOM OF
RETURN TEE.
13,14,15,16
OUTLET TO FILTER
CONNECT THIS END
TO COOLER FAN MOTOR
5
21
CONNECT TO HOSE THAT WAS DISCONNECTED
FROM BOTTOM OF RETURN TEE

ITEM	PART NO.	DESCRIPTION	QTY
1	305064	Cooler – Assy	1
	305064-AA	Core - Cooler	1
	305767-AB	Fan - Assy Cooler	1
	305064-AC	Housing - Cooler	1
2	306314	Bracket – RH Rear Cooler Mount	1
3	306315	Bracket – RH Front Cooler Mount	1
4	306318	Angle – Support Cooler Mount	1
5	29803	Fitting – 16-16 070120	1
6	29807	Fitting – 16-16 070221	1
7	34810	Fitting – 16-16 S1040-30	1
8	36414	Nut – Hex 3/8-16NC SS	4
9	36420	Washer – Lock 3/8 SS	4
10	36399	Cap Screw – 3/8 x 1-1/4 SS	2
11	36425	Washer – Flat 3/8 SS	2
12	36398	Cap Screw – 3/8-16NC x 1 SS	2
13	36413	Nut – Hex 5/16-18NC SS	8
14	36419	Washer – Lock 5/16 SS	8
15	36424	Washer – Flat 5/16 SS	8
16	42639	Bolt – Carriage 5/16 x 1 SS	8
17	305074	Switch – Temperature	1
18	42034	Nut – Lock 1/4-20 SS	1
19	56258	Screw – Truss Head 1/4-20 x 1/2 SS	1
20	96750-X1	Relay – 12VDC	1
21	306319	Hose Assy – Return 1 x 75	2
22	*96906	Sleeve – Abrasive	8

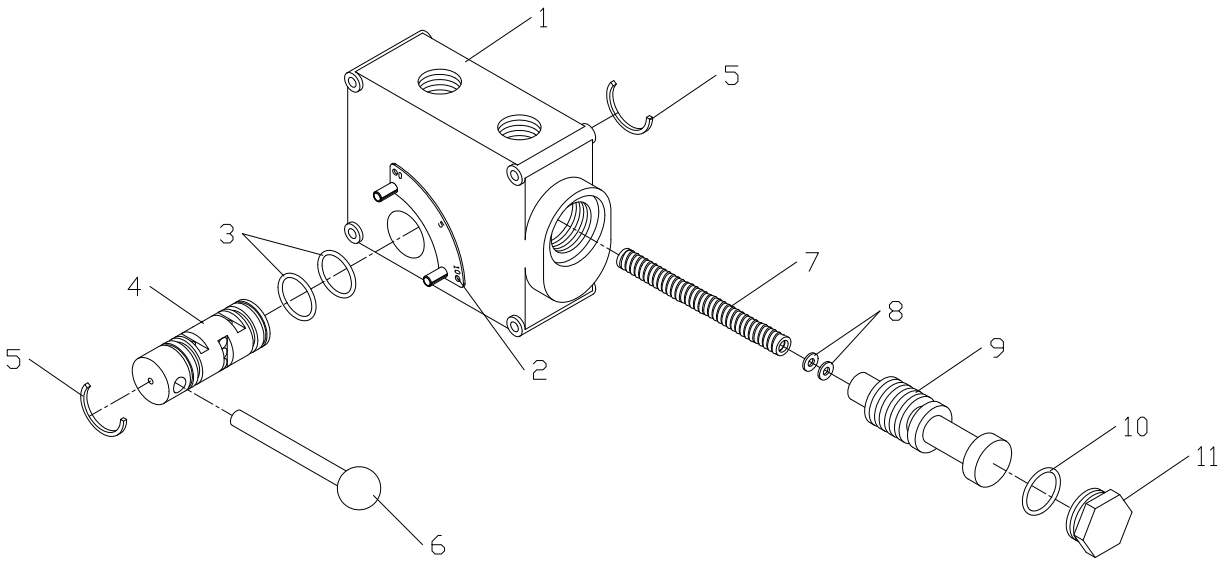
* - Not Shown


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

ITEM	PART NO.	DESCRIPTION	QTY
1	36580	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 - Assy	1
7	87112	Hose - Assy	1
8	29836	Tee - Swivel Nut	1
9	29803	Adapter	4
10	34763	Adapter	2
11	34816	Adapter - 90°	1
12	87113	Hose - Return Assy, Raven & Manual Dual Hydraulics	1
	56109-X1	Hose - Return Assy, Mark Hydraulics	1
13	98102	Hose - Pressure Assy	1
14	98101	Hose - Assy 1 x 16-1/2	1
15		Hose - Drain Line	
	83598	10’ Unit	1
	83599	11’ Unit	1
	83600	12’ Unit	1
	83601	13’ Unit	1
	83602	14’ Unit	1
	83603	15’ Unit	1
	83604	16’ Unit	1



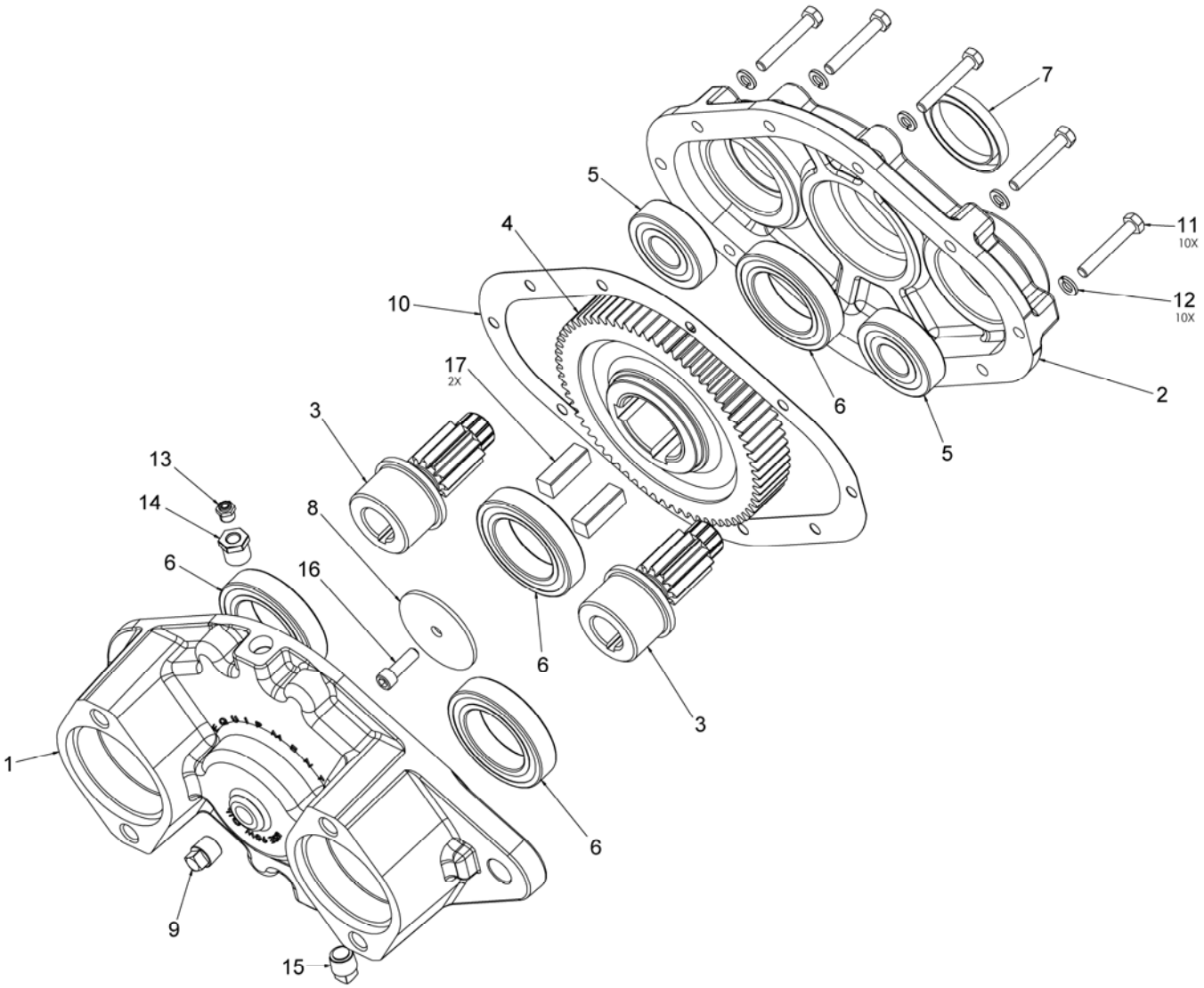
ITEM	PART NO.	DESCRIPTION	QTY
1	21409	Valve - Gate	1
2	31680	End - Hose	2
3	21878-108	Hose - Direct Mount Pump	1
	21878-72	Hose - Driveline Pump	1
4	6288	Clamp	4
5	29780	Bushing	1
6	34845	Adapter	1
7	86664	Pump - 3.85 CID	1
	86665	Pump - 4.38 CID	1
	86664-AH	Seal Kit - Pump	1



ITEM	PART NO.	DESCRIPTION	QTY
1	38576	Valve - Flow Control	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
7	53960	Spring	1
8	N.S.	Shim	2
9	N.S.	Spool	1
10	N.S.	“O” Ring	1
11	N.S.	Plug	2

N.S. - Not Serviced Separately

GEAR CASE - DUAL PINION

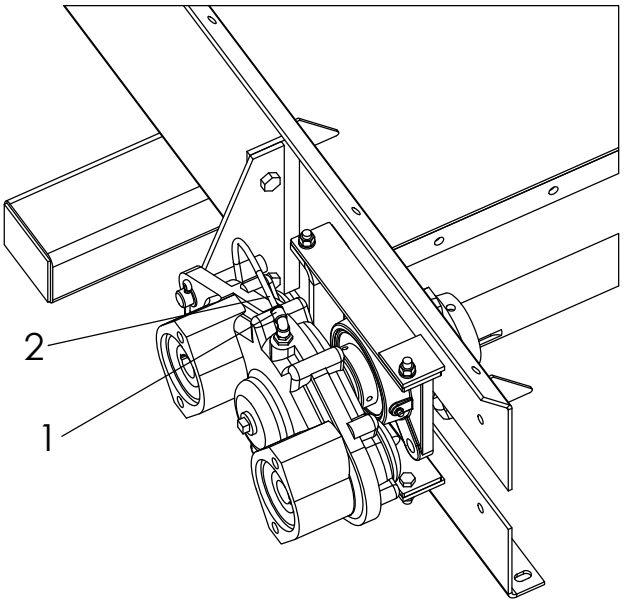


STYLE I

STYLE II

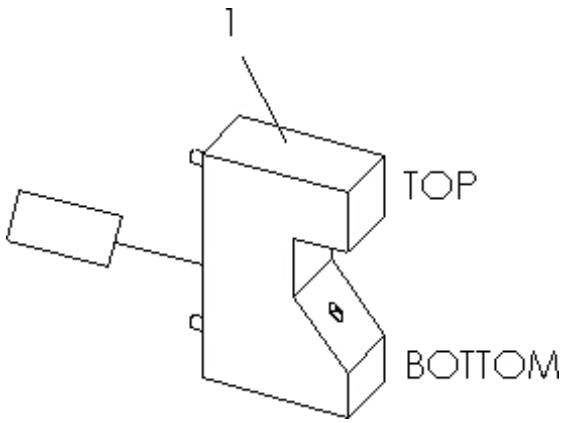
ITEM	PART NO.		DESCRIPTION	QTY
	37985		Gear Case – Assy Dual Pinion	
	Style I	Style II		
	304268-AA	304268-AB	Parts – Service, Includes 1–17	
1	38983	304557	Housing – Outboard	1
2	38982	304558	Housing – Inboard	1
3	37003	304561	Gear – Pinion 11 Tooth	2
4	38981	304562	Gear – Driven 67 Tooth	1
5	37007	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

GEAR CASE BREATHER KIT



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

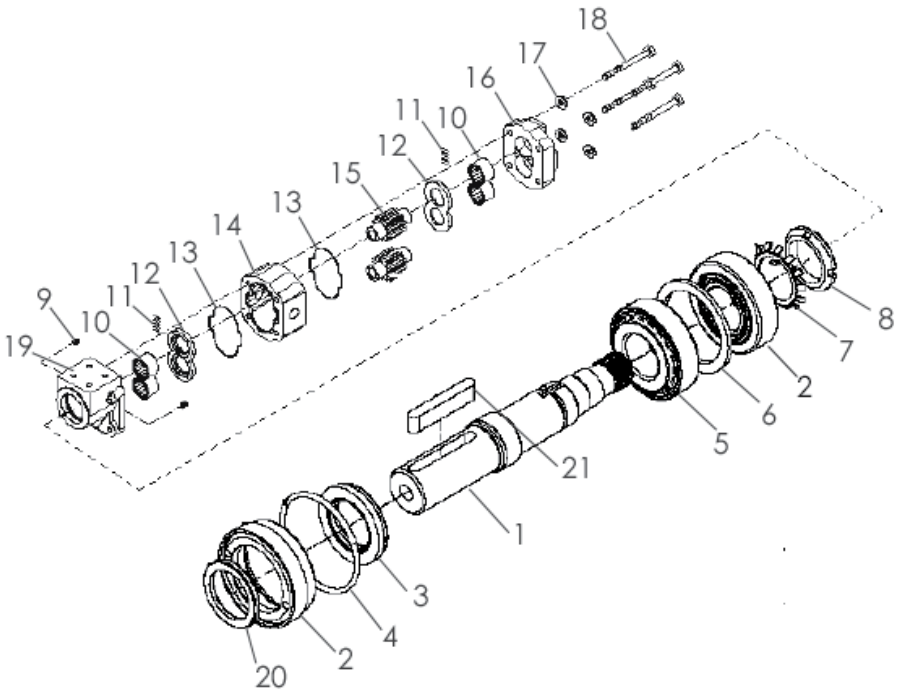
BIN SENSOR



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

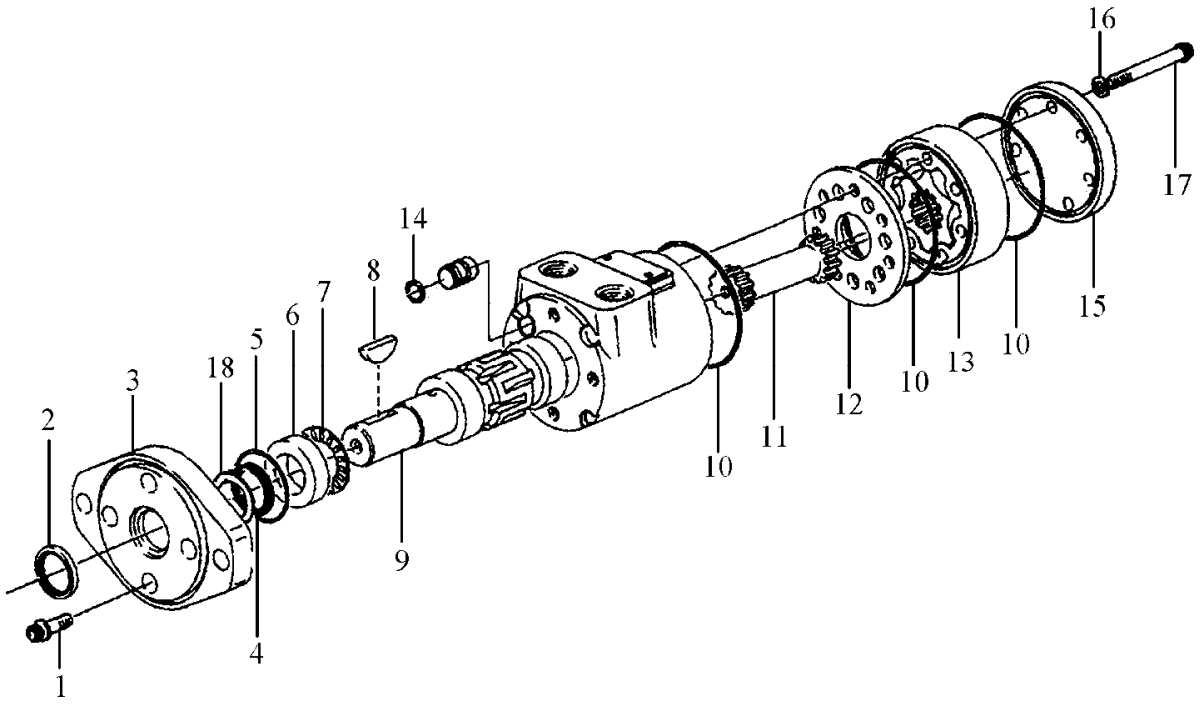
* - Not Shown

SPINNER MOTOR



ITEM	PART NO.	DESCRIPTION	QTY
	306093	Shaft Assy - Output Includes: 1-8, 20, 21	1
	72548	Kit - Seal, Includes: 3, 4, 20	1
	305950	Motor - Hydraulic	1
1	306088	Shaft - Output	1
2	306091	Ring - Retainer	2
3	71980	Seal	1
4	28494	“O” Ring	1
5	28491	Bearing - Tapered Roller Assy	1
	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

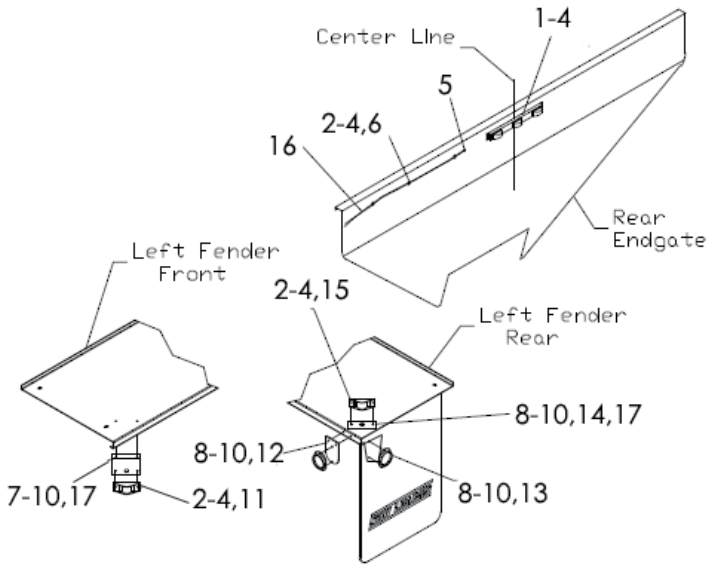
* - Not Shown



PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
	55970	Motor – Hydraulic, 1” Standard	
	55972	Motor – Hydraulic, 1” Modified	
	82459	Motor – Hydraulic, 1-1/4” Standard	
	82462	Motor – Hydraulic, 1-1/4” Modified	
	38897	Motor – Hydraulic, 1-1/2” Standard	
	46395	Motor – Hydraulic, 1-1/2” Modified	
1	30665	Cap Screw	4
2	73471	Seal	1
	73555	Flange – Mounting, Used on Standard	1
	73556	Flange – Mounting, Used on Modified	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	73551	Gerotor – 1”	1
	83015	Gerotor – 1-1/4”	1
	73553	Gerotor – 1-1/2”	1
14	22068	Seal – O-Ring	1
15	37400	Cap - End	1
16	37381	Washer - Seal	7
17	83016	Cap Screw – 1-1/4” Motor	7
	16937	Cap Screw – 1-1/2” Motor	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	

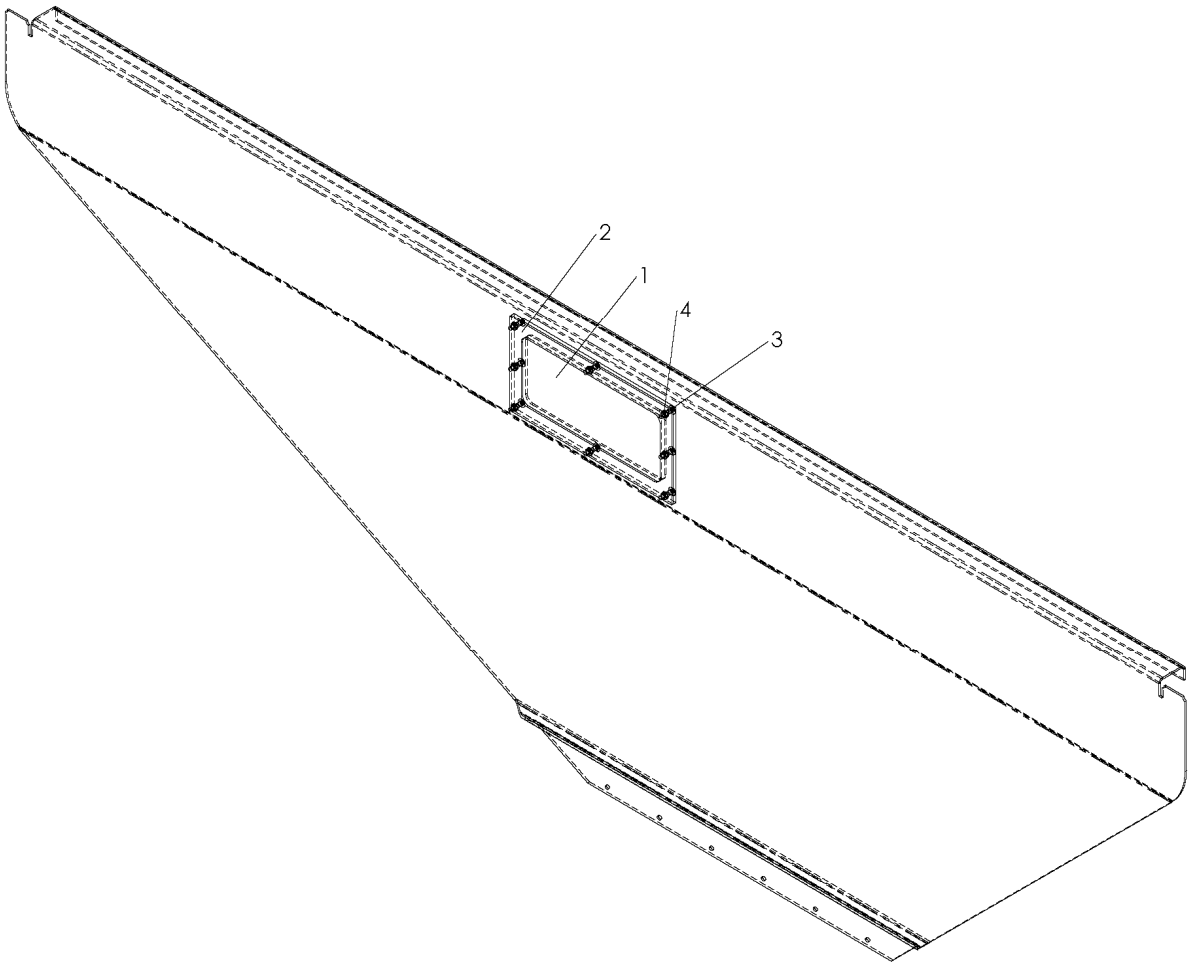
* - Not Shown



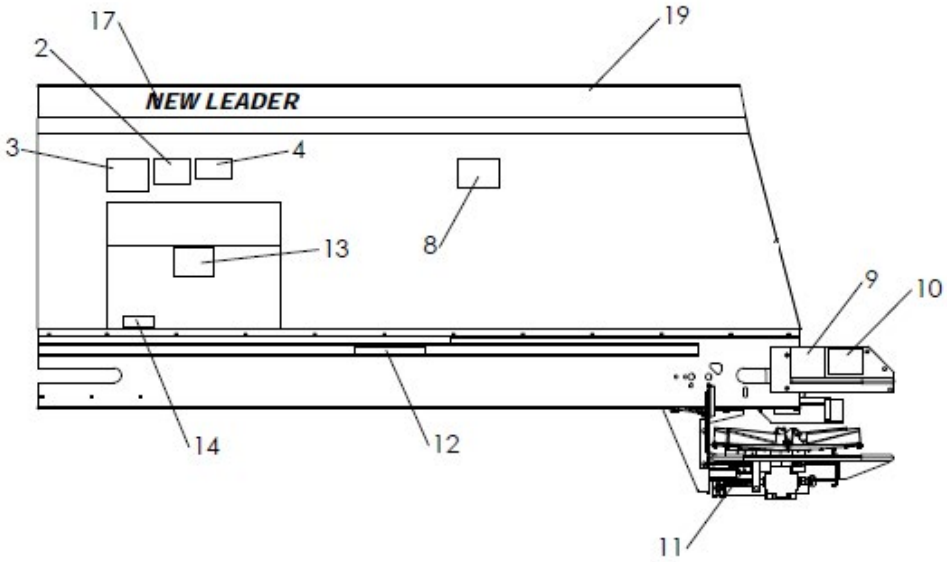
ITEM	PART NO.	DESCRIPTION		QTY
1	6114	Cluster - Light, Red		1
2	20572	Screw - Machine 3/16 x 3/4		33
3	20709	Washer - Lock 3/16		33
4	20641	Nut - Hex 3/16		33
5	21986	Grommet - Rubber		10
6	6198	Clamp - Wire		21
7	38611	Bracket - Front Light, Amber		2
8	20003	Cap Screw - 1/4 x 3/4		24
9	20691	Washer - 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
17	20710	Washer - Lock		8

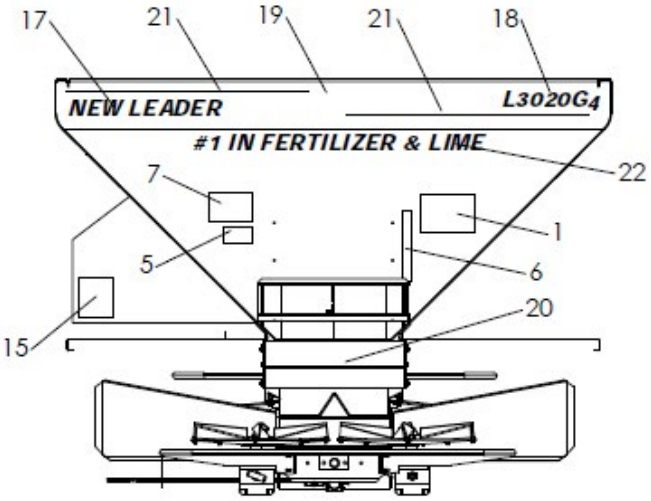
AR - As Required

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


17
19
2
NEW LEADER
3
4
13
8
9
10
14
12
11


17
21
19
21
18
NEW LEADER
L3020G4
#1 IN FERTILIZER & LIME
22
7
1
5
6
20
15

ITEM	PART NO.	DESCRIPTION	QTY
1	368	Decal – Flying Material	1
2	364	Decal – Warning, Stay Out of Box	2
3	150034	Decal – Caution, Improper Operation	1
4	321	Decal – Caution, Material to be Spread	1
5	6541	Decal – Oil Lube Chart	1
6	23769	Decal – Feedgate Slide Scale	1
7	71526	Decal – Notice, Adjust Spinner	1
8	39138	Decal – Warning, Hot Components	1
9	55630	Decal – Warning, No Step	2
10	55631	Decal – Warning, Guard for Your Protection	2
11	87110	Decal – Scale Spinner	1
12	39200	Decal – Fender Capacity	2
13	8665	Decal – Caution, Hydraulic Oil Only	1
14	8664	Decal – Caution, Keep Valve Open	1
15	39378	Decal – Filter	1
16	*21476	Decal – Notice, Conveyor Chain Life	1
17	87164	Decal – New Leader, Black	3
	87165	Decal – New Leader, White	3
18	87124	Decal – L3020G4, Black	1
	87125	Decal – L3020G4, White	1
19	87122	Decal - G4 Black/Red	3
	87129	Decal - G4 Black/White	3
	87123	Decal - G4 White/Red	3
20	87109	Decal - G4	1
21	87163	Decal – Striping White	AR
	87162	Decal – Striping Black	AR
22	96894	Decal - #1 in Fertilizer & Lime Black	1
	96895	Decal - #1 in Fertilizer & Lime White	1
23	* 366	Decal – Warning Swinging Endgate	1
24	* 31736	Paint - Touch Up, New Leader Ed	AR
	* 31740	Paint – Touch Up, White	AR

* - Not Shown AR - As Required

PRESSURE GAUGE KIT

ITEM	PART NO.	DESCRIPTION	QTY
1	*56114	Hose Assy - 1/4 100R2 x 318	1
2	*34718	Adapter - Connector	1
3	*56505	End- Hose Reusable	1
4	*76044	Gauge - Hydraulic 5000PSI w/Snubber	1
5	*304948	Bracket - Wldmt Gauge	1
6	*34580	Cap Screw - 5/16-18NC x 1 SS	2
7	*36424	Washer - Flat 5/16 SS	2
8	*36419	Washer - Lock 5/16 SS	2
9	*36413	Nut - Hex 5/16-18NC SS	2

* - Not Shown

ITEM	PART NO.	DESCRIPTION	QTY
	*55324	Mudflap - Kit	
1	*21770	Mudflap - Plain	2
	*304245	Mudflap - Midguard	2
2	*36844	Rod - Mudflap	2
3	*46474	Hardware - Kit Mudflap	1
a	*20067	Cap Screw - 3/8-16 x 1	8
b	*20693	Washer - Flat 3/8	8
c	*20712	Washer - Lock 3/8	8
d	*20644	Nut - 3/8-16	8

* - Not Shown