



MODEL TGC-18

Operator's/Parts Manual

UNIT SERIAL NUMBER _____

MANUAL NUMBER: 74338-J

EFFECTIVE 12/2022



1330 76TH AVE SW
CEDAR RAPIDS, IA 52404-7052
PHONE (800) 363-1771 | FAX (319) 286-3350
www.newleader.com

Copyright 2021 New Leader Manufacturing

Interactive Features 4

Warranty 6

Preface 7

Safety 8

 Important Safety Information 8

 Safety Alert Symbols 8

General Safety Rules 9

Safety Decals 19

 Safety Decal Maintenance 19

 Safety Decal Installation 19

Safety Decals 20

Installation Instructions 23

 Transmission Pto Drive 24

 Electric Clutch V-Belt Drive 25

 Hydraulic Reservoir & Filter Installation 25

 Cab Control Valve Installation 25

 Mounting The Spreader 26

 Tailgate Baffles 27

 Conveyor Guard 27

 Spinner Installation 28

 Hydraulic Hose Installation 29

 Reusable Non-Skive Type Ends 30

 Hydraulic Hose 31

 Storage and Handling 31

 Hydraulic Hose Installation Guide 32

 Electrical Connections 33

 Filling The Hydraulic System 33

 Control Panel 33

 Mirror Installation 34

Operations and Maintenance 35

 General Description 35

General Description 36

Dimensions & Capacities 37

General Operating Procedures 38

Lubrication and Maintenance 40

 Preventative Maintenance Pays! 40

 Hydraulic System 40

 Chain 41

 Lubrication Of Bearings 42

 Pressure Gun Lubricant 42

 Clean Up 42

 Fasteners 42

 Conveyor Belt Maintenance 43

Lubrication & Maintenance Chart 44

Troubleshooting 45

Standard Torques 46



Parts	49
Instructions for Ordering Parts	49
Conveyor Drive	50
Conveyor Idler and Guard	51
Conveyor - #4 BOC	52
Conveyor Shields	53
Swinging Endgate Assy	54
Hydraulic System	55
Hydraulic Reservoir	58
Mounting Kit	60
Spinner and Material Chute Assy	62
Tailgate Baffles	64
Discharge Chute	65
Conveyor Mirror	66
Control Panel	67
Decals	68
Storage Legs	69
Motor - Hydraulic, Conveyor	70
Motor - Hydraulic, Spinner	71
Pump - Electric Clutch Assembly	72
Pump - Hydraulic with Electric Clutch	73
Pump Assembly	74
Mount - Transmission PTO Pump	75



NOTE:

This manual incorporates several interactive features to provide supplemental information and ease of navigation. The information below is to aid in the identification and use of these features.

Hyperlinks

Hyperlinks provide direct access to a specific destination when clicked. The entire Table of Contents of this manual is hyperlinked to provide quick access to all sections of this manual when viewing the electronic version.

Hyperlinks within the content are denoted by **blue, bold underlined text**. Electronic format viewers can click these links for direct access to New Leader online features. Internet access is required.

This page is intentionally left blank.

Insert Current Hi-Way Warranty

PLEASE ! ALWAYS THINK SAFETY FIRST !!

The purpose of this manual is to familiarize the person (or persons) using this unit with the information necessary to properly install, operate, and maintain this system. The safety instructions indicated by the safety alert symbol in the following pages supersede the general safety rules. These instructions cannot replace the following: the fundamental knowledge that must be possessed by the installer or operator, the knowledge of a qualified person, or the clear thinking necessary to install and operate this equipment. Since the life of any machine depends largely upon the care it is given, we require 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 NLM parts and our authorized dealers for all work other than routine care and adjustments.

New Leader Manufacturing 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 !!!

Important Safety Information

▲ WARNING

Before using this equipment, read, understand and follow all instructions in the Operator's Manual provided with this equipment. If the user and/or assistants cannot read or understand the warnings and instructions, the employer of the user and/or assistants must provide adequate and necessary training to ensure proper operation and compliance with all safety procedures pertaining to this equipment. If Operator's Manual has been lost, visit www.newleader.com or call your authorized dealer or our Product Sales & Support Department at (800) 363-1771 for replacements. Serious injury or death can result from the failure to read, understand, and follow instructions provided in this manual.

Figure 1.1 - The need for safety cannot be stressed strongly enough in this manual. At New Leader Manufacturing, we urge you to make safety your top priority when operating any equipment. We firmly advise that anyone allowed to operate this machine carefully read, learn and understand all messages and information in this manual and on machine's safety decals before operating machine, as well as familiarize themselves with the location and function of all machine controls.

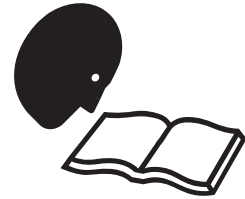


Figure 1.1

The following guidelines are intended to cover general usage and to assist you in avoiding accidents. There will be times when you will run into situations that are not covered in this section. At those times the best standard to use is common sense. If, at any time, you have a question concerning these guidelines, please call your authorized dealer or our Product Sales & Support Department at (800) 363-1771.

Safety Alert Symbols



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

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

▲ WARNING

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

▲ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

NOTE:

Provides additional information to simplify a procedure or clarify a process.

General Safety Rules

Operations

PREPARE FOR EMERGENCIES

Figure 1.2 - Be prepared if a fire starts. Keep a fully charged fire extinguisher and first aid kit in accessible place on the vehicle at all times.

Fire extinguisher must be Type ABC or Type BC.

Keep emergency numbers for doctors, ambulance service, hospital and fire department available at all times.

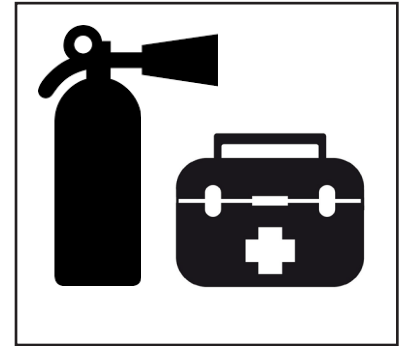


Figure 1.2

INSPECT HARDWARE BEFORE USE

Figure 1.3 - Inspect all bolts, screws, fasteners, keys, chain drives, body mounts and other attachments periodically. Immediately replace any missing or damaged parts with NLM specified parts.

Inspect spinner fins, spinner frame mounting and spinner fin hardware daily. Look for missing or loose fasteners, wear and cracks. Replace immediately with NLM specified parts.

Tighten all bolts, nuts and screws to specified torques. Refer to "Standard Torques" in Maintenance section of this manual.

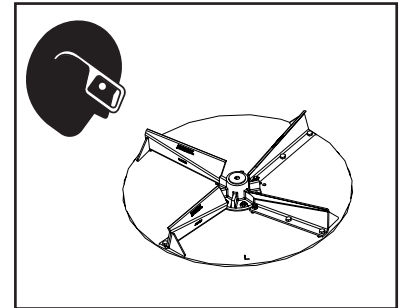


Figure 1.3

HANDLE FLAMMABLE MATERIALS SAFELY

Figure 1.4 - Handle fuel and hydraulic oil with care. They are highly flammable.

Exposure to toxic fluids or fumes may occur during the normal operation of this system. Before attempting to fill, use, or service this system, read Safety Data Sheets (SDS) to know the specific hazards of the fluids you are using. Always use proper Personal Protective Equipment when attempting to fill, use, or service this system.

Always stop engine before refueling machine or filling hydraulic reservoir.

Never smoke while adding fuel or oil to machine. Add fluids in a safe place away from open flame and sparks.

Do not allow overflow. Clean up spilled fuel and oil immediately.

Always have a multipurpose dry chemical fire extinguisher filled and available during machine operation and when adding fuel. Know how to use it.



Figure 1.4

General Safety Rules

Operations

HANDLE HAZARDOUS MATERIALS SAFELY

Figure 1.5 - Materials to spread can be dangerous.

Improper selection, application, use or handling may be a hazard to persons, animals, plants, crops or other property.

A Safety Data Sheet (SDS) provides specific details on chemical products: physical and health hazards, safety procedures and emergency response techniques.

Check all SDS's before starting any job using a hazardous material. Follow all instructions and precautions given by the material manufacturer.



Figure 1.5

WORK IN WELL-VENTILATED AREAS

▲ WARNING	Never run machine engine inside a building unless adequate ventilation is provided to safely and properly remove exhaust fumes. Failure to comply with this requirement could result in death or serious injury.
------------------	--

Figure 1.6 - Always work in a properly ventilated area.

Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, use proper equipment to safely remove exhaust fumes from the working area.

Open building doors and get fresh air into the working area whenever possible.



Figure 1.6

PROTECT AGAINST NOISE

Figure 1.7 - Long periods of exposure to high decibels or loud noise can cause hearing impairment or loss.

Wear proper hearing protection such as earmuffs or earplugs during periods of exposure to high decibels or loud noise.



Figure 1.7

General Safety Rules

Operations

AVOID MOVING PART HAZARDS

Figure 1.8 - Entanglement in rotating drive lines or moving parts will cause serious injury or death.

Stay clear of all moving parts, such as shafts, couplings and universal joints.

Make sure all personnel are clear of machine before starting.



Figure 1.8

Figure 1.9 - Do not operate machine without all guards and shields closed and secured.

Disconnect and lock out power source before removing guards.

Disconnect and lock out power source before adjusting or servicing.

Keep hands, feet, hair and clothing away from moving parts.

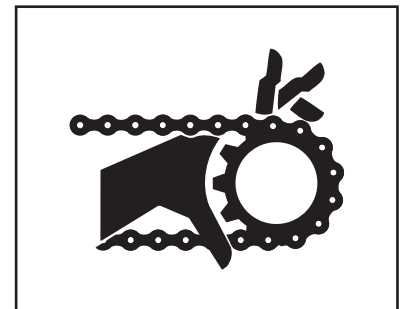


Figure 1.9

Figure 1.10 - Keep away from spinners while they are turning.

Rocks, scrap metal and other material can be thrown from the spinners violently. Stay away from discharge area.

Stop machine before servicing or adjusting. Wear eye protection.

Make sure discharge area is clear before spreading.

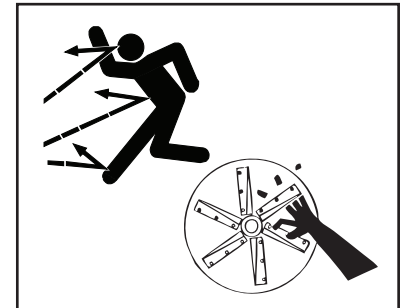


Figure 1.10

Figure 1.11 - Stay out of spreader.

If necessary to enter the spreader, return to shop, empty body, turn off all power, engage brakes, shut down engine and remove keys before entering.

Tag all controls to prohibit operation. Tags should be placed, and removed, by the person working in the body.

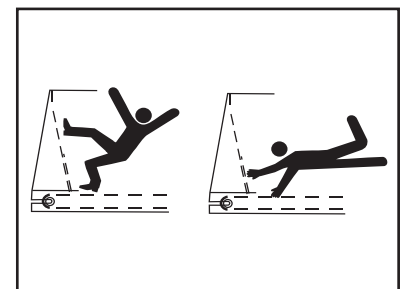


Figure 1.11

General Safety Rules

Operations

DO NOT CLIMB OR STAND ON MACHINE

Figure 1.12 - Never allow any personnel to ride in or on the machine.

Use inspection ladder or portable ladder to view the unit. Use caution when getting on and off the ladder, especially in wet, icy, snowy or muddy conditions. Clean mud, snow and ice from steps and footwear.

Always maintain three-point contact with steps, ladders and handholds. Face the machine when mounting and dismounting inspection ladder. Do not jump off machine.



Figure 1.12

OPERATE MACHINE SAFELY

Always walk around and visually inspect machine before using. Check the immediate vicinity of machine for people and obstructions. Ensure adequate visibility.

Avoid distractions such as reading, eating or operating personal electronics while operating machine. Never operate the machine under the influence of alcohol, drugs or while otherwise impaired.

Always come to a complete stop before reversing. Be sure that all personnel are clear of machine path. Turn around and look directly for best visibility. Ensure all rear view mirrors are properly installed and adjusted. Use a signal person when backing if view is obstructed or when in close quarters.

Always disengage hydraulics before shutting down engine. DO NOT start engine with hydraulics engaged.

General Safety Rules

Transportation & Handling

TRAVELING & TRANSPORTING ON PUBLIC ROADS

Always walk around and visually inspect the machine before traveling on public roads. Check for damage and/or faulty components that can fail and create a hazard or unsafe condition. Make sure all machine systems operate properly, including but not limited to: headlights, tail and brake lights, hazard warning lights, turn indicators, parking brake, horn and rear view mirrors. Repair or replace any component that is not in proper working order.

Never drive machine at a speed that causes it to bounce or cause loss of control.

Obey all traffic safety laws and regulations. Operate the machine with hazard warning lights on, unless prohibited by law. It is the operator's responsibility to activate and use road lights properly while traveling on public roads.

Cover all loads that may spill or blow away. Environmental damage may result. Do not spread dusty materials where dust may create pollution, visibility issues or interfere with traffic on public roads.

When transporting equipment or machine on a trailer, ensure it is properly secured. Be sure that SMV signs on equipment or machine are covered while in transport on a trailer.

Be aware of overhead structures and power lines. Make sure machine can safely pass under. Refer to "Dimensions & Capacities" pages in the Operations section of this manual.

NAVIGATING ROUGH & UNEVEN TERRAIN

Figure 2.1 - Turn slowly and be careful when traveling on rough surfaces and side slopes. Avoid holes, ditches and obstructions that may cause machine to roll over, especially with a loaded spreader.

Never drive near the edge of a gully or steep embankment.

Load may shift, causing vehicle to tip.

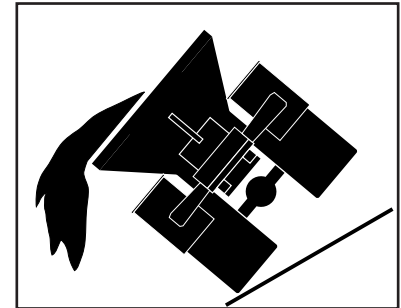


Figure 2.1

General Safety Rules

Maintenance

READ AND UNDERSTAND MAINTENANCE PROCEDURES

Figure 3.1 - Read the maintenance and safety instructions and understand them before performing any maintenance procedure.

Never perform any maintenance procedure or repair if the instructions and safety procedures are not fully understood. Only trained and qualified personnel should perform any maintenance procedure or repair.

Never modify any equipment or add attachments not approved by New Leader Manufacturing.

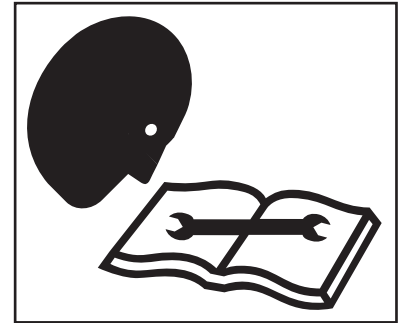


Figure 3.1

DO NOT SERVICE OR ADJUST MACHINE WHILE IN MOTION

Figure 3.2 - Never lubricate, service or adjust the machine or any of its components while they are moving.

Never wear loose clothing or jewelry when working near machine tools or moving parts.

Remove rings and other jewelry to prevent electrical shorts and other personal injury when in contact with machine tools or moving parts.

Close and secure all guards removed for service. Check all screws, bolts, nuts and fasteners for proper torques before operating machine.

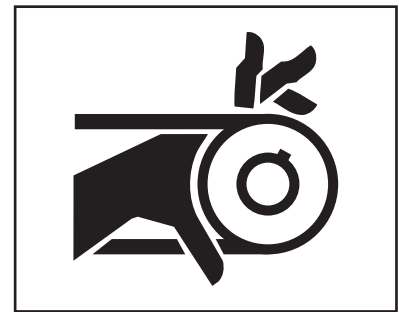


Figure 3.2

WEAR PROPER PROTECTIVE EQUIPMENT

Figure 3.3 - Wear close-fitting clothing and proper safety equipment for the job.

Always wear eye protection when working on or around the machine.

Wear a suitable hearing protection device such as earmuffs or earplugs to protect against high decibels or loud noises.

Prolonged exposure to high decibels or loud noise can cause hearing impairment or loss of hearing.

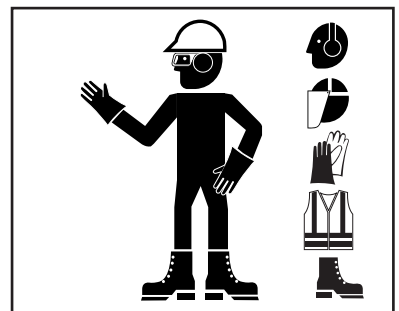


Figure 3.3

Wear protective gloves to protect hands from cuts, abrasions and minor burns.

General Safety Rules

Maintenance

HANDLE FLAMMABLE SOLVENTS SAFELY

Figure 3.4 - Never use diesel fuel, kerosene, gasoline or any flammable solvents for cleaning.

Exposure to toxic fluids or fumes may occur during the normal operation of this system. Before attempting to fill, use, or service this system, read Safety Data Sheets (SDS) to know the specific hazards of the fluids you are using. Always use proper Personal Protective Equipment when attempting to fill, use, or service this system.

Perform work using flammable fluids and solvents in a safe place away from open flame and sparks. Do not smoke.

Do not weld, grind or flame cut on any tank containing oil, fuel, fumes or any other flammable material, or any container that contents or previous contents are unknown. Move all flammable materials and containers away from work area.

Clean up spilled fuel and oil immediately.

Always have a multipurpose dry chemical fire extinguisher filled and available. Know how to use it.

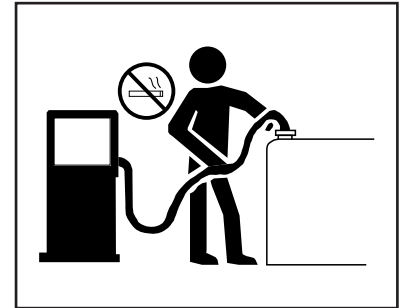


Figure 3.4

USE PROPER LIFTING EQUIPMENT

Figure 3.5 - Use only lifting devices that meet or exceed OSHA standard 1910.184 or ASME B30.20-2013.

Never lift equipment over people.

Never lift a loaded unit. Never lift unit with any loose objects or persons in the body. Loads may shift or fall if improperly supported, causing death, serious injury or machine damage.

Before unfastening heavy parts or assemblies, support with adequate hoist or other device to prevent falling, tipping, swinging or any other movement that may cause injury or damage.



Figure 3.5

USE PROPER TOOLS FOR THE JOB

Figure 3.6 - Use of improper tools (such as a screwdriver instead of a pry bar, pliers instead of a wrench, a wrench instead of a hammer) can cause serious injuries or machine damage.

Use power tools only to loosen threaded parts and fasteners. Using power tools to tighten may cause over-tightening and component damage.

Use only service parts meeting New Leader specifications.

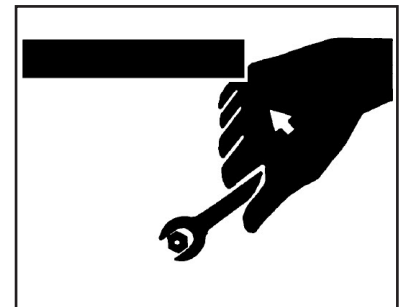


Figure 3.6

General Safety Rules

Maintenance

HIGH PRESSURE FLUID HAZARDS

Figure 3.7 - Escaping fluid under pressure can penetrate the skin causing serious injury.

Always stop machine, allow to cool and relieve pressure before servicing hydraulic system. Never open hydraulic lines under pressure. Make sure all connections are tight and all hoses are in good condition before pressurizing system.

Always use a piece of cardboard or wood to search for leaks instead of hand. Wear impervious gloves and eye protection when servicing system.

Seek medical attention immediately if fluid penetrates your skin. Gangrene may result if wound is left untreated.



Figure 3.7

AVOID HEATING NEAR HIGH PRESSURE FLUID LINES

Figure 3.8 - Flammable spray can be generated by heating near pressurized fluid lines, resulting in burns to yourself and bystanders.

Do not heat by welding, soldering or using a torch near pressurized fluid lines or other flammable materials.

Pressure lines can suddenly burst when heat goes beyond the immediate flame area.

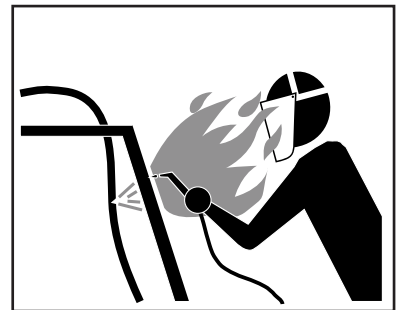


Figure 3.8

AVOID TOXIC FUMES & DUST

Figure 3.9 - Hazardous fumes can be generated when paint is heated from welding, soldering or using a torch.

Remove paint before heating:

- Remove a minimum of 4 in (100 mm) from area to be affected by heating. If paint cannot be removed, wear an approved respirator while heating or welding.
- Avoid breathing dust from sanding or grinding on paint.
- If a solvent or paint stripper is used, wash stripper away with soap and water before heating or welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse for at least 15 minutes before heating or welding.

Do not use chlorinated solvents in areas where welding will take place.

Perform all work in a well-ventilated area that will carry all toxic fumes and dust away.



Figure 3.9

General Safety Rules

Maintenance

CLEAN MACHINE OF HAZARDOUS CHEMICALS

CAUTION

During application of hazardous chemicals, residue can build up on the inside or outside of the vehicle. Clean vehicle according to use instructions of hazardous chemical. Failure to comply with this requirement may result in minor or moderate injury.

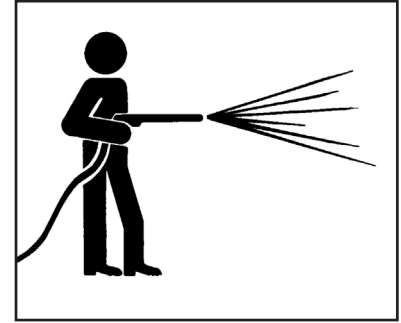


Figure 3.10

Figure 3.10 - When exposed to hazardous chemicals, clean exterior and interior of vehicle daily to keep free of the accumulation of visible dirt and contamination.

1. Clean operator's station to maintain unobstructed visibility of all windows and mirrors, and safe operation of all controls.

NOTICE

Directing pressurized water at electronic/ electrical components, bearings and hydraulic seals or other sensitive parts and components may cause product malfunctions. Reduce pressure and spray at 45 to 90 degree angles.

2. Wash entire exterior of vehicle.
3. Dispose of any wash water with hazardous concentrations of active or non-active ingredients according to published regulations or directives.

HANDLE BATTERIES SAFELY

WARNING

Sulfuric acid in battery electrolyte is poisonous. It can burn skin, eat holes in clothing, and cause blindness if it contacts eyes. Keep sparks and flame away from batteries. Wear proper safety equipment. Failure to comply with this requirement could result in death or serious injury.

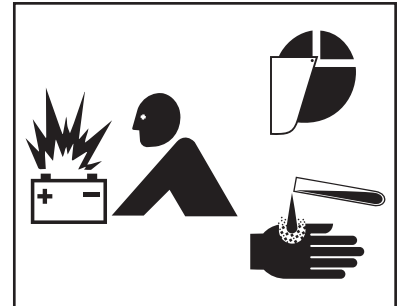


Figure 3.11

Figure 3.11 - Lead acid batteries generate flammable and explosive gases. Keep sparks and flame away from batteries. Do not smoke.

If acid contacts eyes, skin or clothing, flush with water immediately. Seek immediate medical attention if acid contacts eyes.

PROPER TIRE MAINTENANCE

Figure 3.12 - Never weld on a wheel or rim that has a tire on it.

Never attempt to mount or remove a tire unless using the proper equipment, tire safety cage, instructions, training, and you are qualified to perform the work safely. Failure to follow the correct procedures when mounting a tire on a wheel or rim can cause an explosion and serious injury.

Tire service procedures must be performed by trained and qualified personnel.



Figure 3.12

General Safety Rules

Storage

PARK VEHICLE SAFELY

Figure 4.1 - When leaving the vehicle unattended for any reason, be sure to:

- Shut down PTO.
- Shut off vehicle's engine, and unit's engine if applicable.
- Place vehicle transmission in "Neutral" or "Park".
- Set parking brake firmly.
- Remove ignition key and take it with you.
- Block wheels.

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

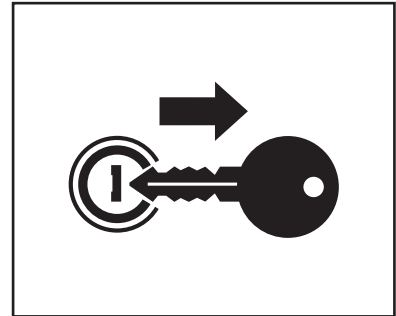


Figure 4.1

SUPPORT MACHINE PROPERLY

Figure 4.2 - When machine is removed from vehicle, always store on adequate supports on a firm level surface. Improper supporting or storage of spreader may cause machine to fall, resulting in serious injury or death.

Never use lifting device to free machine from a chassis, storage stands or frozen ground, or to lift the chassis in any way. Shock loading is prohibited and sudden accelerations must be avoided. Lifting in such a manner could result in injury or machine damage.



Figure 4.2

DISPOSE OF WASTE PROPERLY

Figure 4.3 - Improper disposal of waste can threaten the environment and ecology. Potentially harmful waste used with equipment include items such as fuel, oil, filters and batteries.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them. Do not pour waste onto the ground, down a drain, or into any water source.

Comply with all OSHA, local, City, State, Province, Country and jurisdiction regulations, ordinances and standards, related to your particular work area and environment. Inquire on proper disposal methods from your local environmental or recycling center, or from your local dealer.

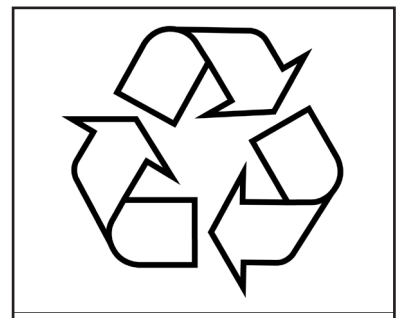


Figure 4.3

Safety Decals

Safety Decal Maintenance

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

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

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

Safety decals or signs are available from your dealer's Parts Department or from New Leader Manufacturing by calling (800) 363-1771.

Safety Decal Installation

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.

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.

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.

Apply Safety Decal

Tack decal in place with thumb pressure in upper corners. 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. Pull up tack points before squeegeeing over them to avoid wrinkles.

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.

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.

Re-Squeegee All Edges

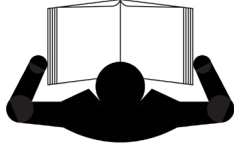
⚠ CAUTION

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

⚠ 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

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.

315641-A

NOTICE

- This unit is equipped with an oil and heat resistant belt.
- It has a temperature range of -10°F to 350°F.
- Operating outside of this range will cause the outer skin to crack prematurely.

79985-D

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-E

NOTICE

Keep valve open while pump is running.

↓

8664-D

NOTICE

Change filter element.

After the first 50 hrs. and every 250 hrs. Thereafter

39378-F

This page is intentionally left blank.

INSTALLATION

Due to the variations in type and model of trucks, dump bodies and PTO assemblies, no one set of instructions will be applicable to all units. The following is offered as a guide for laying out an individual unit. Considerable latitude is permitted in mounting of parts to allow mounting on most any type of truck. Read the material in this manual carefully before attempting installation.

1.) How will the hydraulic pump be driven?

The answer to this question will depend upon the means to drive the pump that exists on your particular unit. You can purchase one of the following pumps to meet your requirements:

PUMP DRIVE PUMP NUMBER

Electric Clutch V Belt Drive 34569

Transmission PTO 24516

Except for the Electric Clutch V-Belt Drive arrangement which is based on driving pump at engine speed (3000 RPM expected) the above pump selections are based on expected engine operating speed of 3000 RPM and a 55% PTO. This results in an expected pump speed of 1650 RPM. (Pump speed equals engine speed times PTO percentage divided by 100.) If the PTO percentage available on the truck used differs by more than 10% from this figure, consult your dealer for recommendations. Too high a PTO percentage may overspeed the pump and may cause the pumping of excess oil so that overheating of the hydraulic system results. Too low a PTO percentage may pump too little oil so that inadequate spinner and conveyor speeds result, especially at lower engine speeds.

If you are supplying your own hydraulic pump system, it must be capable of delivering 20-25 GPM at the desired engine speed and be rated for 1500 PSI operation.

Pumps for Electric Clutch V-Belt Drive must operate in engine rotation direction (pump shaft must rotate in same direction as engine crankshaft). Those used for transmission PTO mounting are through-shafted and can operate on PTO's of either direction of rotation.

Recommended sequence of installation is as follows:

- 1.) Mounting of pump and pump drive.
- 2.) Installation of cab controls.
- 3.) Mounting of spreader.
- 4.) Installation of hydraulic hoses.
- 5.) Filling hydraulic reservoir and lubrication.
- 6.) Checking for leaks and functioning.



Transmission Pto Drive

The thru-shaft pump and mounting bracket may be used on most any truck with an existing transmission PTO and continuously operating dump hoist pump installation.



Block raised dump body securely before disconnecting hoist pump to avoid risk of injury from falling dump body. Failure to comply with this requirement will result in death or serious injury.

The pump is installed between the PTO and the existing pump. Determine the best location for the pump and mount on the bracket supplied. It may be necessary to modify the bracket to fit your truck since many variable factors such as PTO make and model, muffler position, transmission make and model, etc., affect mounting position. **DO NOT WELD THE BRACKET TO THE TRUCK FRAME.** Install with mounting hardware supplied in the kit. Welding may void the truck manufacturer's warranty.

Position the mounting brackets so the pump drive shaft will be as straight as possible. In no case should the angle at any universal joint exceed 15 degrees. The pump shaft and PTO shaft should be parallel as shown in Figure 1.

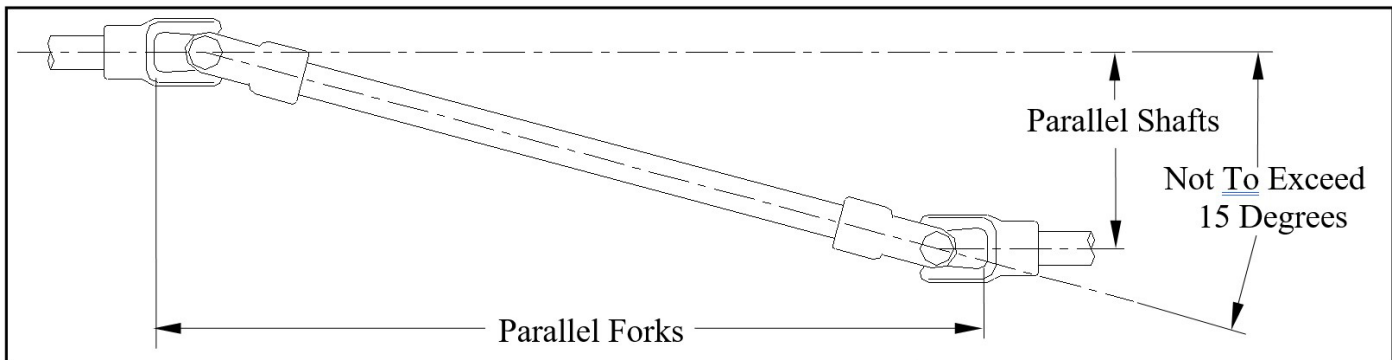


Figure 1 - Timing of Universal Joints

Check the rotation of the PTO for proper pump mounting. Make sure the pump is installed so it rotates in the proper direction.

HYDRAULIC PUMP DRIVESHAFT INSTALLATION - Figure 1

The pump driveshaft included may be too long for some installations. It may be cut and re-drilled as necessary. When re-drilling the shaft be sure the universal joints will be properly "timed" for smooth operation.

Install the slip joint at the end of the pump driveshaft. Failure to install the slip joint will result in bearing failure in pump or PTO, or both.

All set screws in U-joint must be properly tightened. Cotter pins must be installed in shear pins and properly spread.

Electric Clutch V-Belt Drive

As available space around truck engine varies greatly from model to model, no specific mounting instructions can be given. The electric clutch pump assembly supplied will be rear ported and have two 7.082 inch (18cm) diameter V-Belt pulleys for 1/2" (1.27cm) A-section V-belts. Two equal V-belt sheaves of approximately 6" (15.24cm) to 7" (17.78cm) diameter must be mounted on the front end of the engine crankshaft. Two V-belts of 1/2" (1.27cm) A-section rated at 100 pounds per belt must be procured.

A mounting bracket to provide adequate belt adjustment must be fabricated locally. Your local truck dealer may be able to provide a bracket that can be readily adapted for this use. Check to be sure adequate belt, electric clutch, pump, hose and adjustment clearances are obtained.

Hydraulic hose and electric wire connections must be made to provide for adequate V-belt adjustment and to avoid interference with moving parts. Hot surfaces such as exhaust manifolds must be avoided.

Hydraulic Reservoir & Filter Installation

The hydraulic reservoir is mounted on the truck frame on either side. It should be as close to the truck cab as practical and where the filler neck is accessible with the suction line being as short as possible. Drill four 7/16" (1.1cm) diameter holes through the frame channel for mounting the tank brackets. Bolt the reservoir into place.

The filter is installed on the tank using a pipe coupling and a close nipple. Use thread sealer as explained under "Hydraulic Hose" later in this section. The oil must flow through the filter in the direction of the arrow on the filter head casting. After installation, the element should be down and vertical.

NOTICE

DO NOT PUT HOLES INTO TOP OR BOTTOM FRAME FLANGES. To do so may void truck manufacturer's warranty. When drilling holes in frame member, drill only through vertical web portions.

Cab Control Valve Installation

When selecting a location for the cab control, there are a number of things to consider:

1. Select a suitable location for the operator to adjust the control and to turn it On and Off.
2. Check for clearance with the seat in all positions.
3. Check the transmission gear shift in all gears for clearance with the valve, and with the valve lever in the On and Off positions.
4. If there are any other controls such as parking brake, plow and wing controls, check for clearance.
5. Check under the cab for interference with transmission, etc.
6. Check to see that control valve location does not interfere with entering or leaving the cab.
7. Install control valve, fittings, tubes, and hoses.

CAUTION

All holes in the truck cab walls, floor and firewall for control wires, hoses and cables are to be grommetted, plugged and sealed to prevent entrance of engine fumes, dust, dirt, water and noise. Failure to follow this requirement may result in injury or machine damage.



Installation Instructions Cont.

Mounting The Spreader

Locate the LH and RH mounting brackets on each side of the dump box. Position the center of the pivot $9 \frac{3}{4}$ " (10.9cm) below the dump box floor and $1 \frac{1}{4}$ " (3.18cm) from the rear of the dump box. If the unit will use the spinner attachment, the brackets may have to be mounted further to the rear. Drill mounting holes in the dump box and bolt the brackets in place.

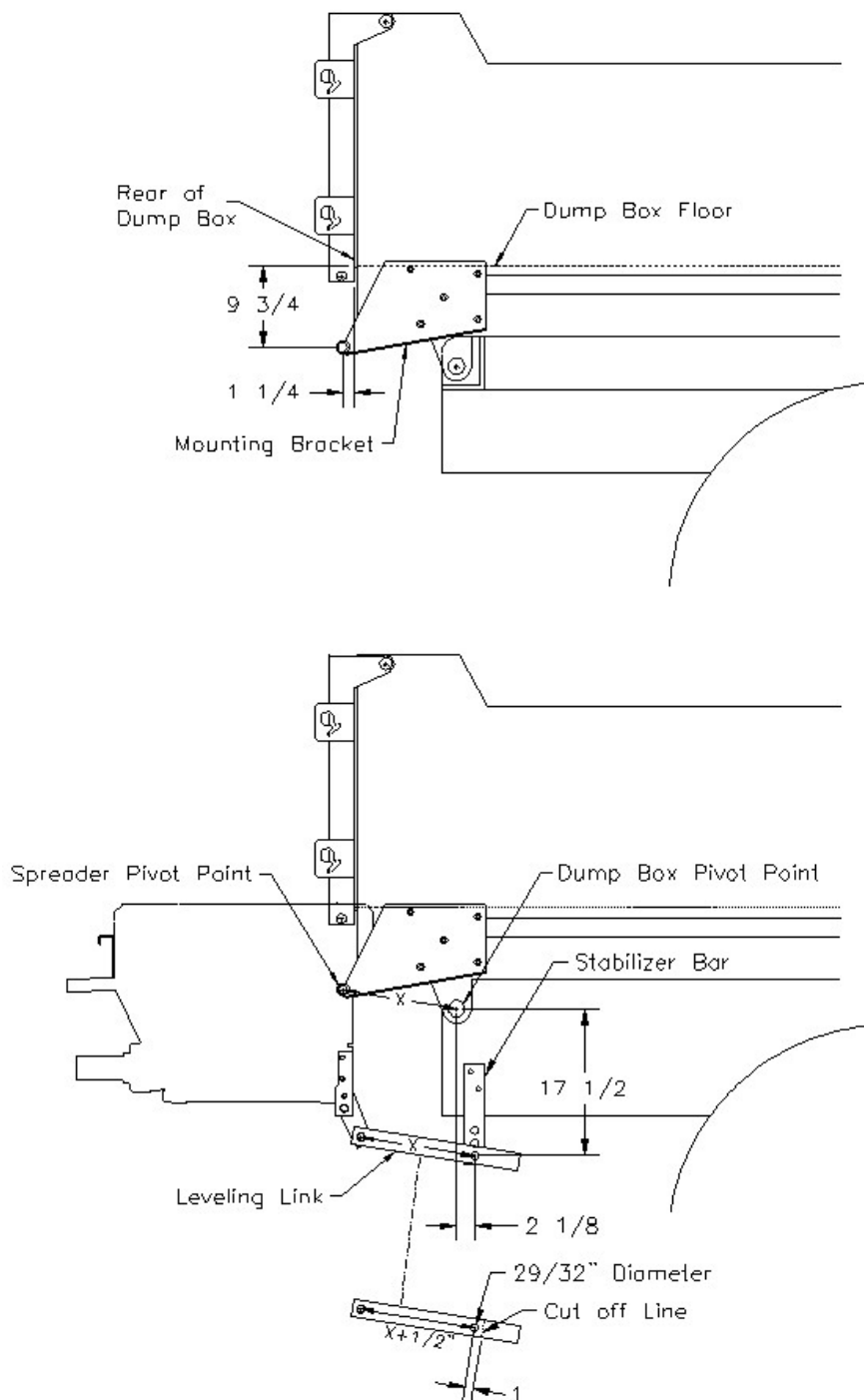


Figure 2 - Mounting Spreader

Installation Instructions Cont.

To locate the stabilizer bar measure down 17 1/2" (44.45cm) from the dump box pivot point and forward 2 1/8" (35.4cm). Clamp the stabilizer bar to the truck frame when one of the three pivot holes are at the measured location. Mark and drill two 9/16" (1.43cm) holes in the truck frame and attach using 1/2" hardware. See "Mounting Kit" parts list.

To determine the second hole location in the leveling, measure the distance between the spreader pivot point and the dump body pivot point. This is the X dimension shown in Figure 2. Mark the leveling link the X dimension plus 1/2" (1.27cm) from the center of the single hole and drill 29/32" (2.3cm) diameter in all four links. (The extra 1/2" (1.27cm) is to allow for settling of the spreader when it is attached.) Cut off the remaining material 1" (2.54cm) past the center of the drilled hole.

Lift the spreader into place and pin in all three pivot point locations being sure to use the pin locking devices (cotter pin, pin catch) at each location.

WARNING

Use only lifting devices that meet or exceed OSHA standard 1910.184. Never lift equipment over people. Never lift unit with material in the body. Loads may shift or fall if improperly supported, causing injury or damage to the unit. Failure to comply with this requirement could result in death or serious injury.

Carefully raise the dump body through its complete range of movement. Make sure the spreader stays level. If not, adjust the position of the stabilizer bars until it does stay level.

If there is a gap between the spreader and the rear of the dump box, install the spill guard belting and belt retainer that is supplied in the mounting kit.

Tailgate Baffles

Tailgate filler brackets are furnished to weld or bolt to the inside rear corner of the tailgate. Any holes in either plate are meant to bolt against the tailgate proper. Three carriage bolts per side are furnished for bolting. When the tailgate is fully closed, slide each bracket down until it clears the floor by 1/8" (.32cm). Clamp into position with 1/8" (.32cm) clearance between the bracket and the side of the dump body. Then, swing the tailgate open approximately 8" (20.32cm) checking to see that the proper clearance is maintained between brackets and the floor. At an 8" (20.32cm) gate opening, the leading edge of the bracket should almost touch the floor itself. Trim the top edge of the bracket to suit the respective dump body, and bolt or weld in place.

Conveyor Guard

The conveyor can be set up to discharge out either side. Install the conveyor guard (see "Conveyor Idler" and "Guard" parts lists) on the end opposite of the discharge end. The guard will help prevent accidental entanglement with the conveyor. It bolts to four tabs that are welded to the spreader body.



Spinner Installation

The spinner assembly is installed by bolting to mounting holes in the left-hand end of the spreader. (Figure 3) A material chute is installed on the left-hand end of the spreader to direct material onto the spinner disc. Install the conveyor guard on the right-hand end of the unit when using the spinner attachment.

With the spinner installed, the unit is 7" (17.78cm) deeper and 10" (25.4cm) higher. On some trucks, particularly with tandem axles, clearance between the spinner boom and the tire may be a problem. Check for clearance with the box in all positions. If necessary, move the entire unit further to the rear to gain adequate clearance.

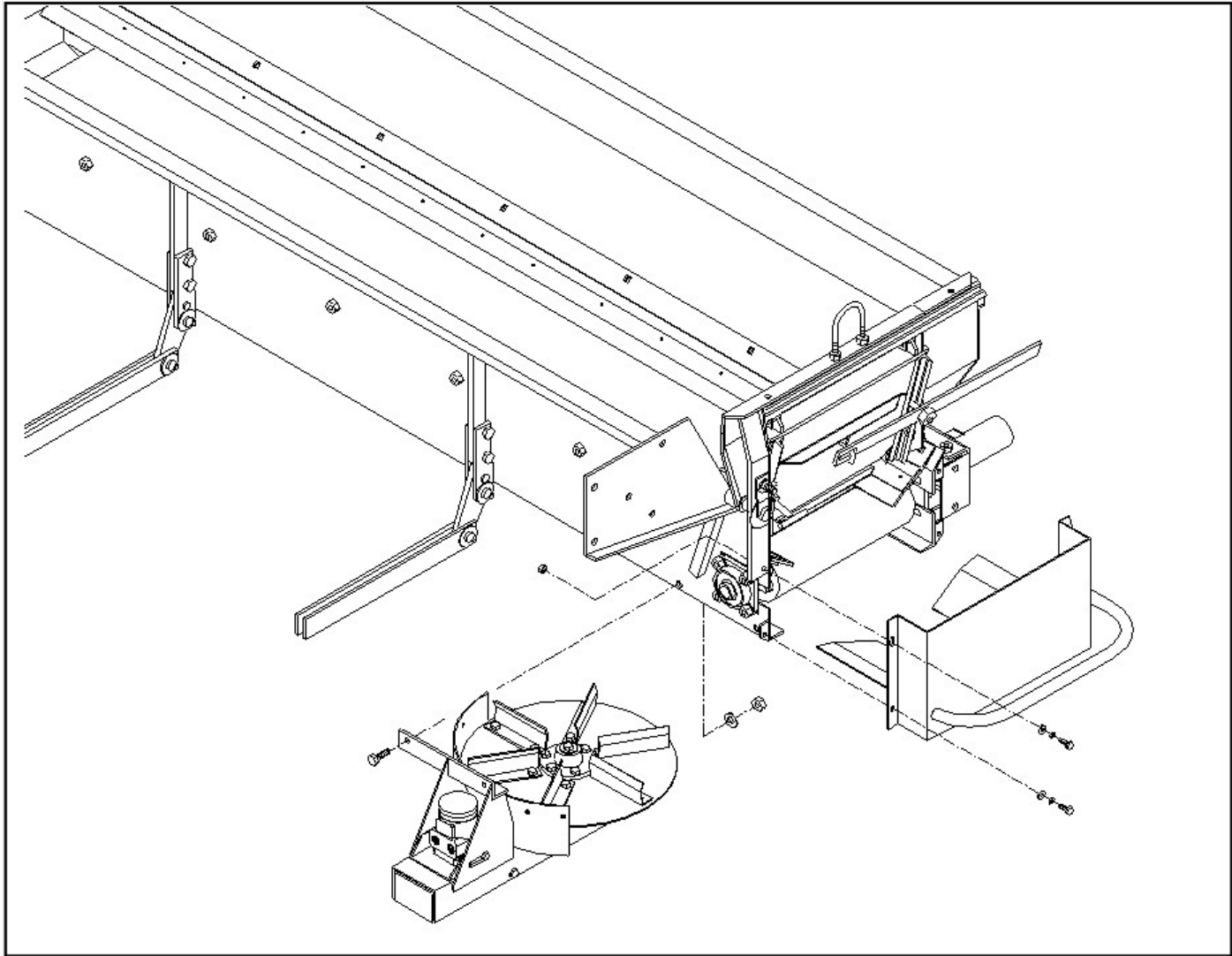


Figure 3 - Installing Spinner and Material Chute

Installation Instructions Cont.

Hydraulic Hose Installation

Determine the pressure port of the pump. Install the pressure hose into this port as shown in Figure 4. Connect the suction hose to the opposite port and to the tank outlet on the reservoir. If necessary, use plastic tie straps to support hoses so that they will not catch on field obstructions or contact the muffler or moving parts.

Use thread sealer on all fittings, except "O" ring and JIC adapters, "O" ring valves and motors, etc. When using thread sealer, do not put it on the first three threads of the fitting. Too much sealer on the fitting or on the first three threads will force it into the oil stream where it could damage the system.

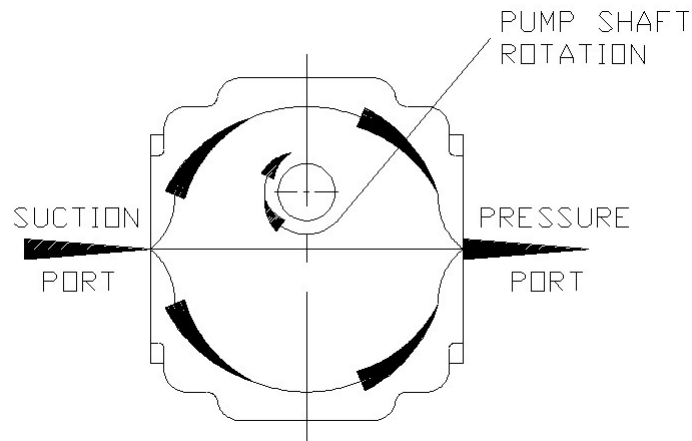


Figure 4 – Hydraulic Pump

CAUTION

If a threaded connection is tightened too tightly, the fitting or housing into which the fitting is placed could be distorted and an unstoppable leak could occur. Failure to follow this requirement may result in injury or machine damage.

Assemble the system as shown in the "Hydraulics System" parts list. Place the hose clamps as needed to keep hoses away from hot or moving parts. Do not let hoses hang so low as to be snagged. Do not stretch hoses tight.

The hydraulic hoses supplied are as follows:

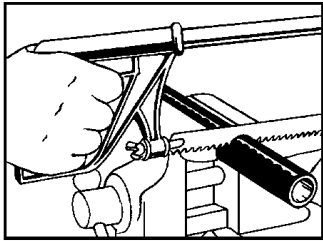
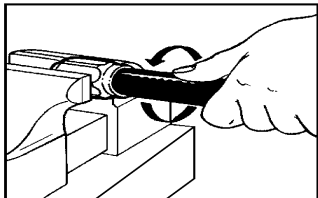
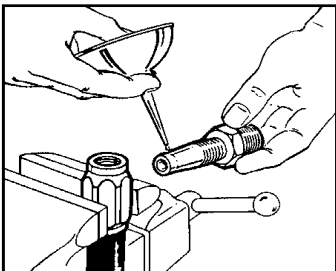
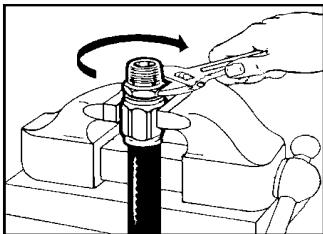
Pressure Line: Two wire braid hose, one end fitting crimped on, other end fitting to be field installed after cutting hose to length. See assembly instructions on the following page.

Suction Line: Single spiral wire reinforced to be cut to length. Fittings to be assembled with double hose clamps.

All return lines: Double cotton braid with crimped on end fittings.



Reusable Non-Skive Type Ends

	<p>Step 1 Cut hose to length required using a fine tooth hacksaw or cut-off machine. Clean hose bore.</p>
	<p>Step 2 Liberaly lubricate hose cover with hose assembly lube. Place socket in vise and turn hose into socket counterclockwise until it bottoms. When assembling long lengths of hose, it may be preferred to put hose in the vise just tight enough to prevent from turning, and screw socket onto the hose counterclockwise until it bottoms.</p>
	<p>Step 3 Liberaly lubricate nipple threads and inside of hose. Use heavy weight oil.</p>
	<p>Step 4 Screw nipple clockwise into socket and hose. Leave 1/32" (.08cm) to 1/16" (.16cm) clearance between nipple hex and socket. Disassemble in reverse order. Used with permission of the Aeroquip Company</p>

⚠ WARNING

Do not use one manufacturer's hose with another manufacturer's fittings! Such use will void any warranty and may cause premature burst or leak of hydraulic fluids! Such bursting or leaking may cause severe injury and/or fire! Failure to comply with this requirement could result in death or serious injury.

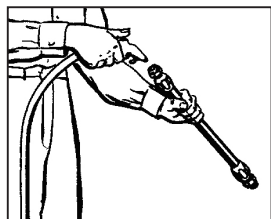
Installation Instructions Cont.

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.

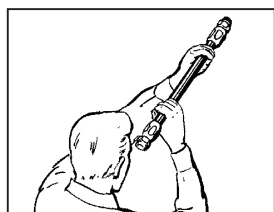
▲ WARNING

Testing should be conducted in approved test stands with adequate guards to protect the operator. Failure to comply with this requirement could result in death or serious injury.



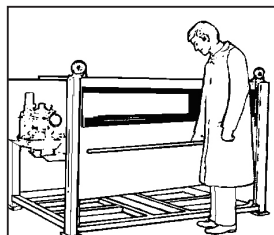
Clean

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



Inspect

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



Test

The hose assembly should be hydrostatically tested at twice the recommended working pressure of the hose.

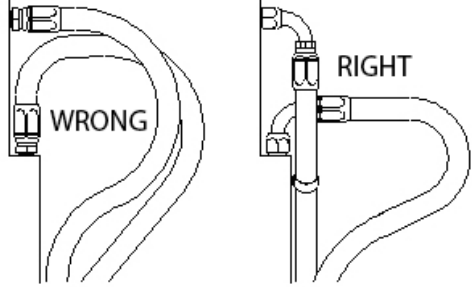
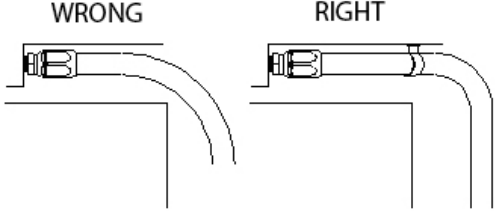
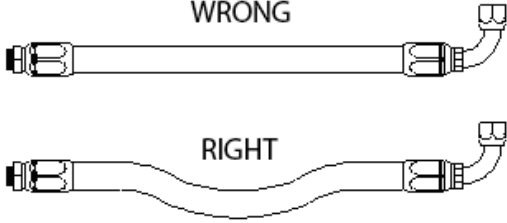
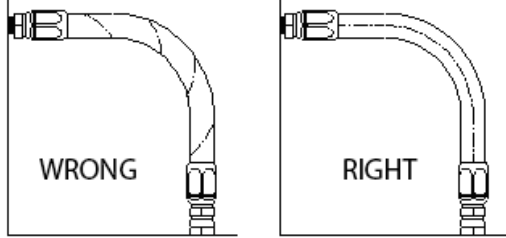
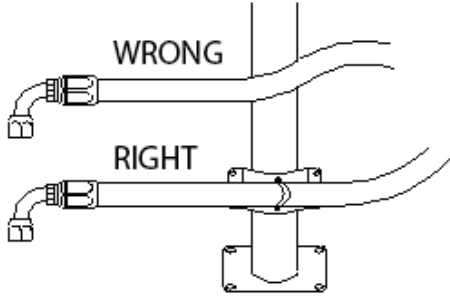
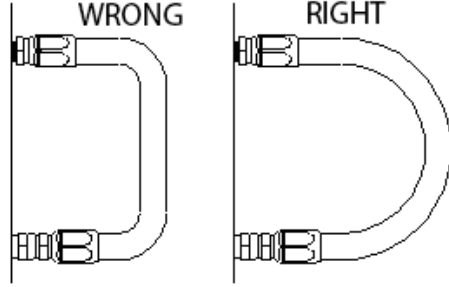
Test pressure should be held for not more than one minute and not less than 30 seconds. When test pressure is reached, visually inspect hose assembly for: 1. Any leaks or signs of weakness. 2. Any movement of the hose fitting in relation to the hose. Any of these defects are cause for rejection.

Storage and Handling

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



Hydraulic Hose Installation Guide

	
<p>1. Use elbows and adapters in the installation to relieve strain on the assembly, and to provide easier and neater installations that are accessible for inspection and maintenance. Remember that metal end fittings cannot be considered as part of the flexible portion of the assembly.</p>	<p>2. Install hose runs to avoid rubbing or abrasion. Clamps are often needed to support long runs of hose or to keep hose away from moving parts. It is important that the clamps be of the correct size. A clamp that is too large will allow the hose to move in the clamp causing abrasion at this point.</p>
	
<p>3. In straight hose installations allow enough slack in the hose line to provide for changes in length that will occur when pressure is applied. This change in length can be from +2% to -4%.</p>	<p>4. Do not twist hose during installation. This can be determined by the printed layline on the hose. Pressure applied to a twisted hose can cause hose failure or loosening of the connections.</p>
	
<p>5. Keep hose away from hot parts. High ambient temperature will shorten hose life. If you cannot route it away from the heat source, insulate it.</p>	<p>6. Keep the bend radii of the hose as large as possible to avoid hose collapsing and restriction of flow. Follow catalog specs on minimum bend radii.</p>

(Used with the permission of The Weatherhead Company.)

Installation Instructions Cont.

Electrical Connections

Connect any electrical control circuits. The supply conductor should be connected to the accessory terminal of the truck ignition switch through a five amp line fuse. All wiring should be approved automotive insulated wire. It should be supported adequately with insulating ties or straps and be located where there won't be interference with any control access, does not contact any moving parts or sharp edges, and is kept away from any hydraulic lines or heated parts. All lights and reflectors which are blocked by the spreader must be moved to meet all applicable local, regional or national codes.

Filling The Hydraulic System

NOTICE DO NOT attempt to run pump without first filling hydraulic oil reservoir and opening suction line gate valve, or pump may be ruined.

Lubricate all points requiring lubrication per the lube chart in the manual.

Control Panel

The control panel is equipped with a conveyor indicator light. The purpose of the indicator light is to be aware when the conveyor is running. The control panel must be mounted in the cab such that the indicator light is clearly visible. The pressure switch that activates the indicator light must be plumbed into the conveyor hydraulic circuit. (See "Hydraulic System" parts list, item 52) Wire as shown in figure 5. (See "Control Panel" parts list)

NOTICE The conveyor must be moving (Indicator light on) whenever the dump box is being raised. Failure to do so will result in the shearing of the leveling link shear pin and possible damage to the conveyor hopper.

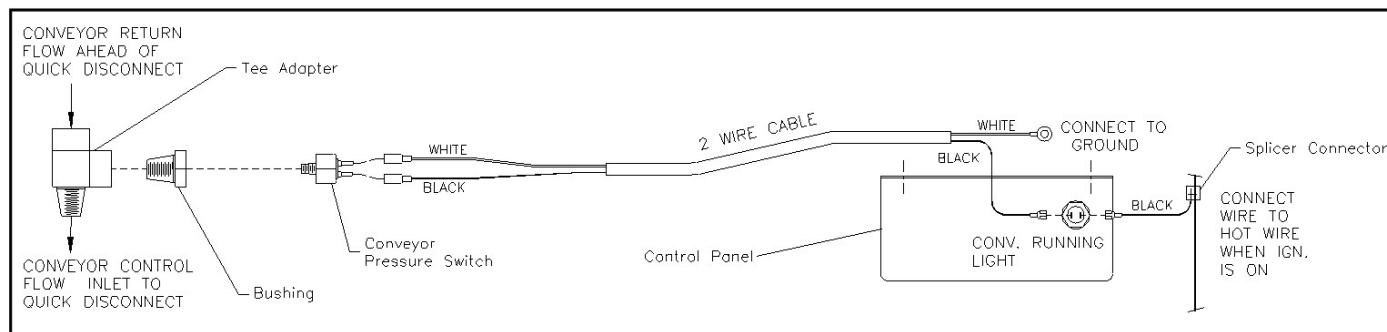


Figure 5 - Conveyor Indicator Light



Mirror Installation

The mirror is used to monitor the material flow into the conveyor. It can be mounted to the left or the right side of the spreader. Bolt the mirror mount to the spreader through the existing hole in the lip of the spreader, and attach mirror (Figure 6). Rotate the mounting weldment and /or adjust mirror so that from the driver's seat the conveyor is visible. Drill a 9/32" (.71cm) diameter hole for the lower mounting hole and secure with the enclosed hardware.

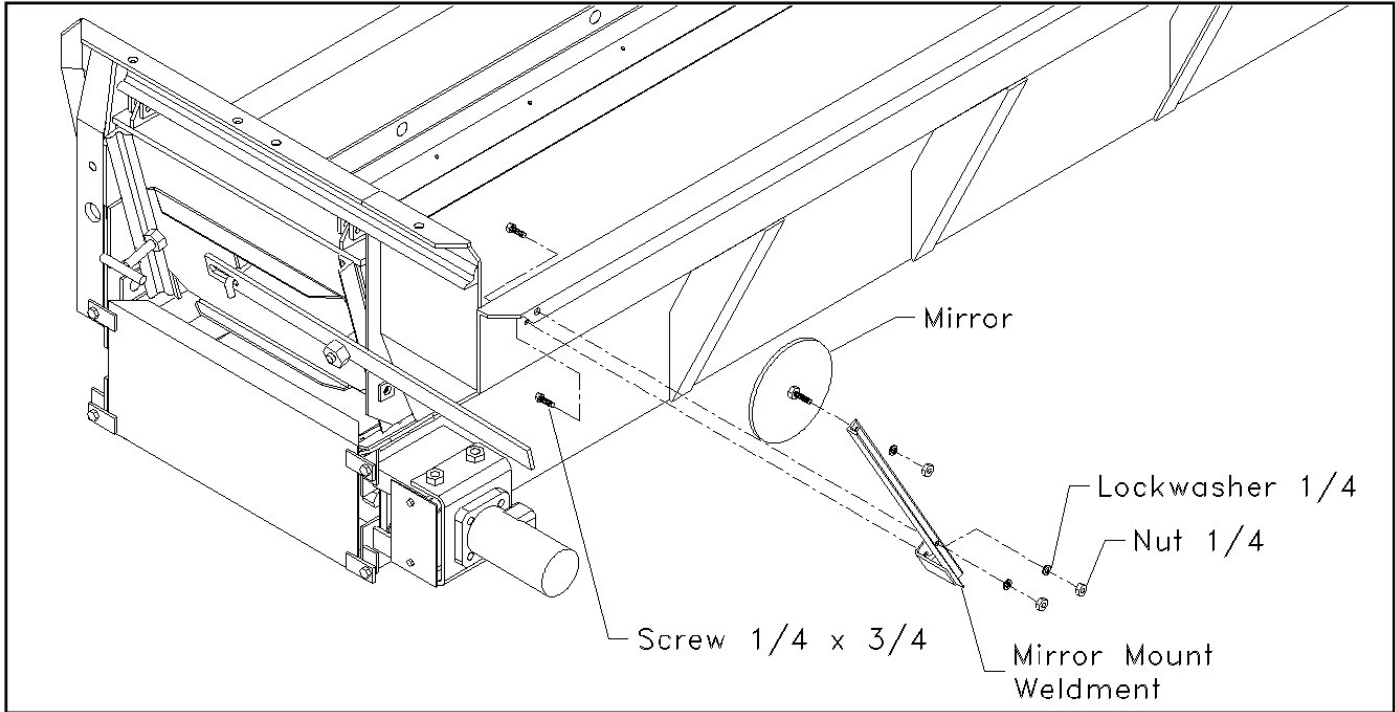


Figure 6 - Conveyor Mirror

**OPERATIONS
&
MAINTENANCE**

Operations and Maintenance

General Description

The TGC-18 is an under tailgate type conveyor/spreader designed for conveying material along the edge or shoulder of a roadway. The TGC-18 has a reversible conveyor allowing it to discharge material from either side for applications along left hand or right hand shoulders. The unit is equipped with a lever operated feedgate and swinging endgate at each end. The swinging endgate is used for high volume output. Standard equipped, without the optional spinner attachment, the TGC-18 is ideally suited for centerline spreading of deicing materials.

The standard unit is equipped with a High Temperature Oil Resistant (HI-TEMP) belt-over-chain conveyor. The HI-TEMP belt has an operating temperature range from -10° F to +350° F and is required if conveying petroleum based materials, such as asphalt. For applications of materials below -10° F, the optional Non-HI-TEMP belt-over-chain conveyor should be used. However, the Non-HI-TEMP belt is not recommended for use with petroleum based products.

The unit can also be easily converted to a broadcast spreader when equipped with the optional spinner attachment. With the spinner installed, the unit can be used for spreading chemicals or abrasives for ice and snow control as well as sand and gravel for roadwork.

The unit mounts to the sides of a dump truck body on pivots. It is positioned below the floor of the dump box. Linkages between the spreader and the truck frame keep the spreader level as the dump box is raised to discharge material.

A gear type hydraulic pump provides power to operate the unit. Available pump drives are:

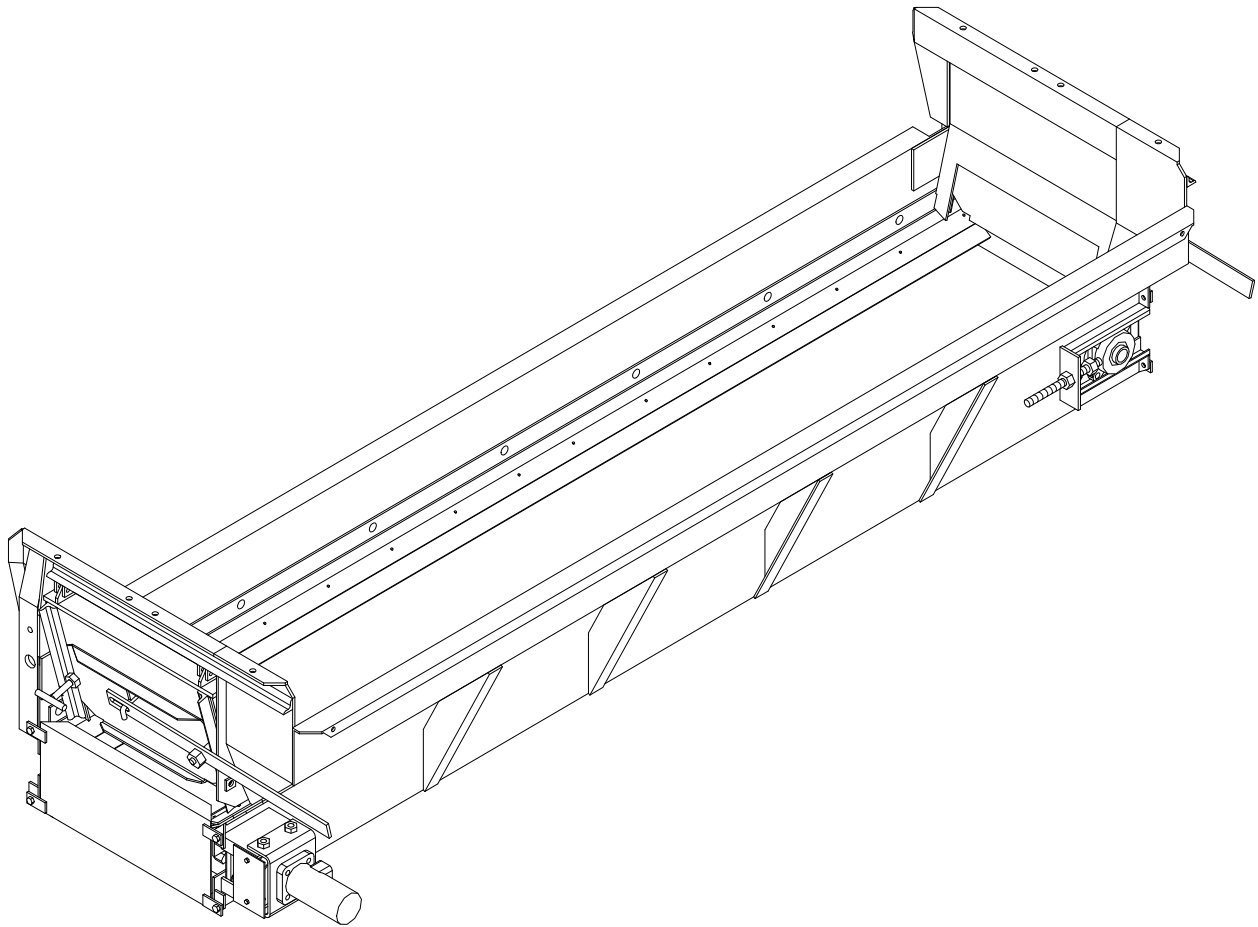
- 1.) Transmission PTO drive.
- 2.) Electric clutch engaged "V" belt drive from crankshaft pulley.

The standard control system is a manual hydraulic system. It provides variable speed control for the conveyor and the optional spinner attachment.

A hydraulic motor direct drives the conveyor. A second hydraulic motor provides power to the optional spinner through a chain and sprockets reduction drive.

This product is intended for commercial use only.





DIMENSIONS			
	HEIGHT inches (mm)	WIDTH inches (mm)	LENGTH inches (mm)
With Spinner	34-1/2 (876)	42-1/2 (1079)	108 (2743)
Without Spinner	24-1/2 (622)	31 (787)	102 (2591)

Check over entire unit to be sure all fasteners are in place and properly tightened per Torque Chart in this manual. Disengage PTO driving pump. Be sure "On-Off" control is in the "Off" position.

NOTE: Stand clear of moving machinery. Do not load spreader with material.

1. Check to see that no other person(s) is in the vicinity of the truck or spreader.
2. Check to see that no loose parts are in the body, on the conveyor or on the spinner.
3. Open the feedgate until it is completely clear of the conveyor.
4. Fill the hydraulic reservoir with oil. Refer to the Lubricant Specifications section of this manual for proper oil.
5. Start engine. Engage PTO or actuate electric clutch switch (if applicable). Let the engine run at approximately 1000 RPM for a few minutes allowing the oil to circulate through pump and back to reservoir. In cold weather, increase warm-up time.
6. Place the cab "On - Off" control in the "On" position and open the spinner control approximately 1/4 (Position #3). Let the unit run until air is expelled from the circuit and the spinner is running smoothly. The spinner should rotate counter-clockwise when viewed from the top. Turn the spinner knob the "Off" position.
7. Open conveyor knob approximately 1/4 (Position #3) on the valve. Let the unit run a few minutes until the conveyor is running smoothly.
8. Move the spinner and conveyor knob to Position #5 and allow both spinner and conveyor to run. Shut down the system.

⚠ WARNING

Stand clear of moving machinery. Failure to comply with this requirement could result in death or serious injury.

9. Check all connections in the hydraulic system to make sure that there are no leaks.

⚠ 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. Failure to comply with this requirement could result in death or serious injury.

⚠ WARNING

DO NOT check for leaks adjacent to moving parts while system is operating as there may be danger of entanglement! Failure to comply with this requirement could result in death or serious injury.

10. Check hydraulic oil reservoir and refill as necessary. Unit is now ready for road testing.



Before taking the unit out to use, make a walk around inspection to assure that the spreader is not damaged, that all essential parts are in place, that all fasteners are tight, and all guards are in place. Check controls to be sure they are operating satisfactory.

Open the feedgate the desired amount. Tighten the "T" screw to hold the feedgate in position.

Adjust the dump body's tailgate chains to hold the tailgate open only enough to keep the material freely flowing to the conveyor. This adjustment is by trial and error and depends on the flow characteristics of the material being spread. The maximum length of chain (dimension "A" Figure 1) or tailgate opening must provide a minimum of 3/4" (1.91cm) clearance from the bottom of the tailgate to the inside of the spreader hopper when raised to 50° elevation. If the tailgate is not chained properly, the tailgate could cause damage to the hopper as the dump body is raised.

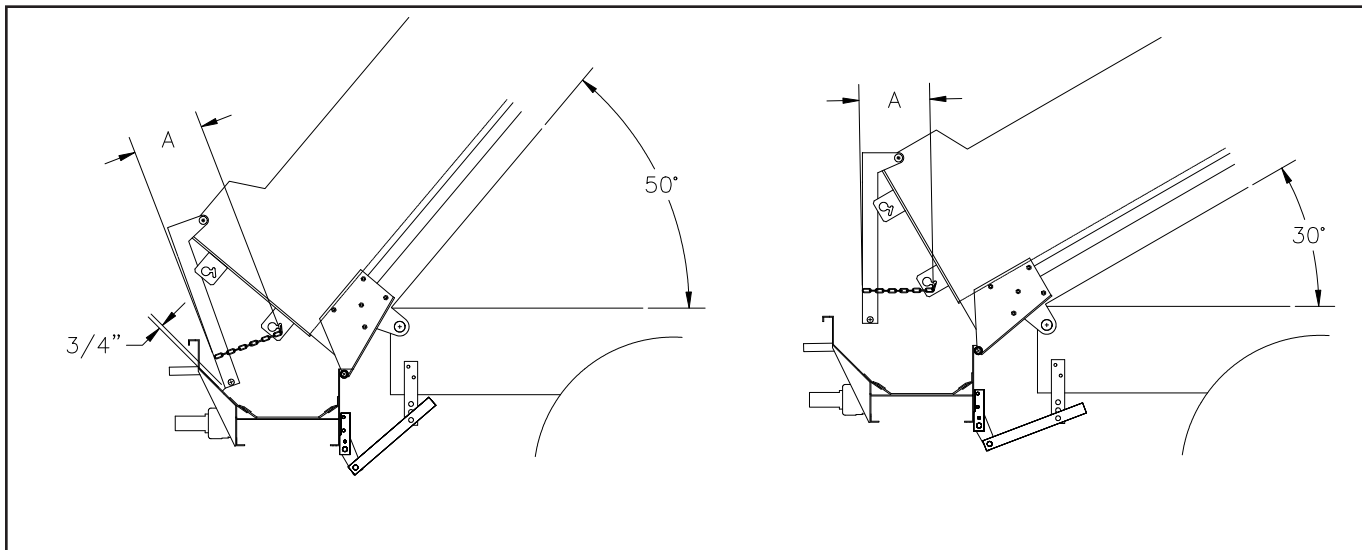


Figure 1 - Tailgate Opening

If the material to be spread is not already in the dump body, have the unit loaded. With the TGC-18 manual dual hydraulic valve's "On-Off" lever in the "Off" position, engage pump drive and allow oil to circulate until it is warm. This may be done while traveling to loading area or starting point. The colder the weather, the more important this "warm-up" becomes.

Set the variable speed control knob for the conveyor, on the manual dual hydraulic valve, to the desired rate of material delivery. Since delivery will be affected by feedgate opening, conveyor speed, as well as material size, density, and moisture content, the proper setting will be gained by trial and experience.

To convert the unit for LH delivery, reverse the hose connections on the conveyor motor. Remove the conveyor guard and install on RH end of machine. Close the RH feedgate and adjust the LH feedgate as necessary.

General Operating Procedures

Adjust conveyor mirror so driver can see the conveyor from his seat.

Set variable speed control knob for the spinner (if installed) to obtain desired spread width. Since spinner speed and position, as well as material granule size, density and moisture content affect spread width; proper settings are gained by trial and experience.

Spinner speed selected should be the lowest required to obtain the desired spread width with the material being spread. Use of higher spinner speeds will increase wear and tear on parts, and can create excessive damage to vehicle finish through uncontrolled throwing and bounce of materials. It also wastes material and can be a safety hazard.

NOTICE

When spreading is complete or before transporting to another location, lower truck dump body, close tailgate and secure, convey all material out of spreader hopper. Failure to remove material from the spreader hopper will result in shearing of the leveling link shear pins and possible damage to the spreader

NOTE: Disengage PTO when spreader is not in use for long periods of time or when moving to and from the job after initial warm-up.

NOTICE

Always have conveyor running when raising the dump body. If the dump body is raised without the conveyor running, the shear pins on the leveling link could shear due to the load placed on the conveyor. (Figure 2) ALWAYS USE SHEAR PINS TO AVOID SEVERE DAMAGE to the conveyor hopper. No substitutions can be made.

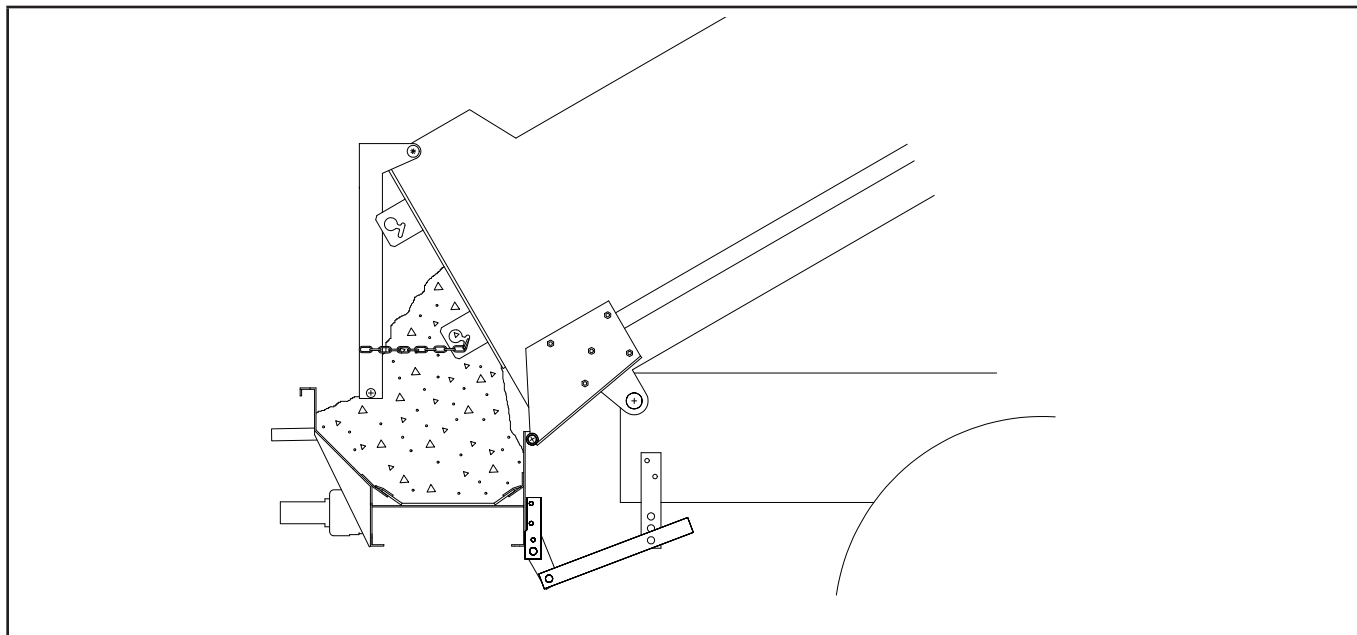


Figure 2 - Keep Conveyor Running When Raising Dump Body

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 provide longer life, more satisfactory performance and more economical use.

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

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

Service Schedule

1. Check the hydraulic oil daily. Add oil if required. Frequently inspect the hoses and fittings for leaks.

⚠ 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. Failure to comply with this requirement could result in death or serious injury.

⚠ WARNING

DO NOT check for leaks adjacent to moving parts while system is operating as there may be danger of entanglement! Failure to comply with this requirement could result in death or serious injury.

NOTICE

Change hydraulic oil filter after first week (or not more than 50 hours) of operation on a unit.

2. After first filter change, replace filter when indicator reaches Red Zone.
3. The reservoir should be drained through drain plug (not through suction outlet), flushed, and refilled and the filter element should be changed annually, or the oil and filter should be changed if oil shows any sign of breaking down under continued high-pressure operation. Discoloration of oil is one sign of breakdown.

Hydraulic Lubricant Specifications

The recommended lubricant is an automotive engine oil SAE 15W-40 for diesel engine service. The normal system operating temperature range, with 15W-40 oil, is between 140° and 180° F. Extreme operating temperatures may require a different viscosity oil range. If the temperature rises above 180°, there may be defective components in the system causing excessive heat. Consult your authorized dealer for additional information or the Product Support Department at Highway Equipment Company.

⚠ WARNING

Shut off all power and allow all moving parts to come to rest before performing any maintenance operation. Failure to comply with this requirement could result in death or serious injury.

Chain

Conveyor

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

NOTICE

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

Shut down spinner and run conveyor slowly to lubricate chain. Spray oil mixture between links of chain.

⚠ DANGER

Stay out of body when conveyor is running. Stay clear of all moving parts. Entanglement of clothes, any part of your body or anything you have in your hands can cause serious injury. Do not use a bar, rod or hammer on conveyor while it is moving—if it gets caught it could cause injury! Failure to comply with this requirement will result in death or serious injury.

Proper chain tension is also a factor in chain and sprocket life (Figure 3). Make sure chain is tensioned equally on both sides. This adjustment is made on each side of the unit at the idler bearings.

Conveyor chains that are too tight will tend to stretch, causing excess sprocket wear and eventually breakage.

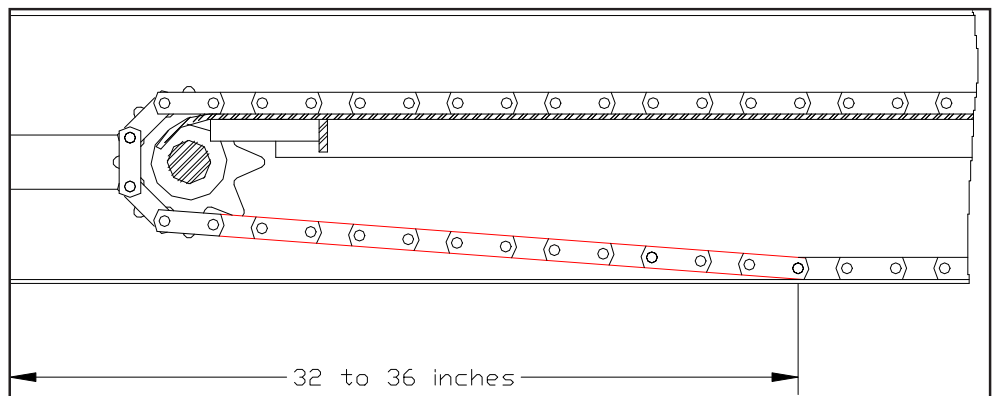


Figure 3 - Adjusting Conveyor Chain Tension

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.

Spinner



Twice a year remove spinner drive chain. Soak the chain in solvent to remove all old or contaminated oil. Check the chain at this time for any frozen links. Soak the chain in SAE 10 oil. Soak the chain until, when flexed, no bubbles appear on the chain. Reinstall the chains. Chain should be tensioned enough to prevent whipping at operating speed. Over-tensioning of chain will create excessive heat that may freeze the chain or cause damage to other parts of the drive system.

To adjust the spinner chain, loosen the cap screws in the motor mount. Use a pry bar to move the motor mount and tighten the chain. Tighten mounting cap screws to maintain chain adjustment.

Chain Lubricant Specifications

Lubricate chain at least once a week and after each washing. Allow to dry before lubricating. Use a mixture of 75% No.1 or No.2 fuel oil and 25% SAE 10 oil in a pressurized hand spray gun.

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.

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.

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.

Pressure Gun Lubricant

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

Clean Up

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

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

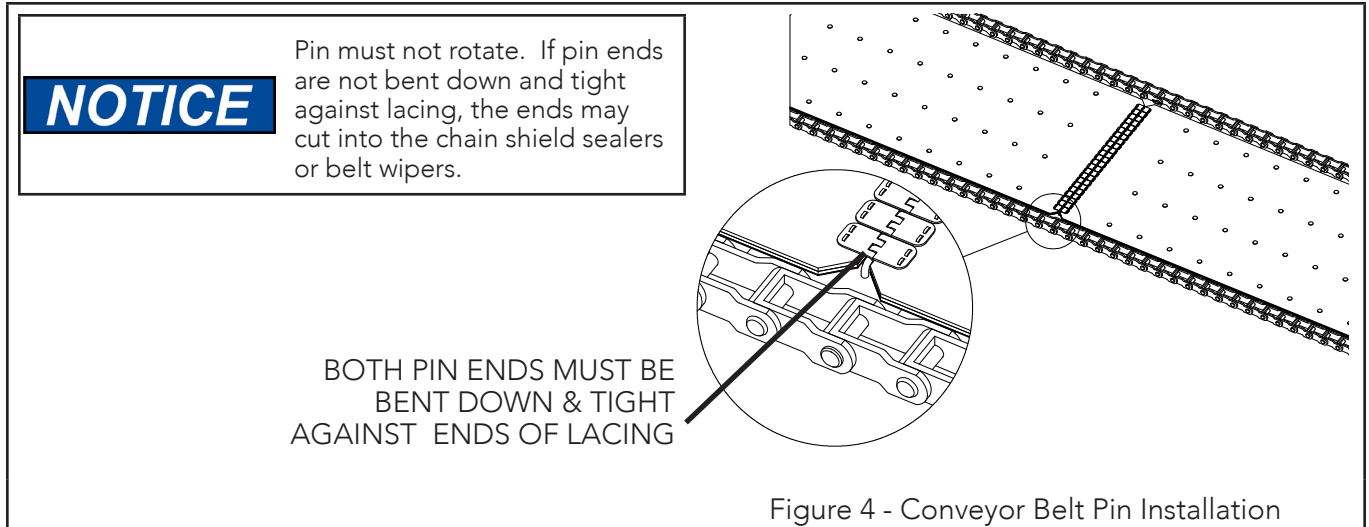
Fasteners

Tighten all screw fasteners to recommended 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.

Conveyor Belt Maintenance

The standard HI-TEMP oil resistant belting is highly recommended where an asphalt mix is going to be run through the spreader. The optional Non-HI-TEMP belt for the conveyor has a nylon fabric that is impervious to moisture, weathering or normal action except oil.

- Inspect belt fastener occasionally for wear or “raveling” of belt grip area.
- Make sure belt connecting pin is positioned correctly as shown in Figure 4.



Hi-Temp Belt

In order to achieve maximum life out of high-temperature belting, follow the recommendations below:

1. Keep belt clean and free from build up of asphalt or other material.
2. Spray the belt often with oil to assure flexibility of rubber and ease cleaning. Spray the under part of the conveyor also as dry heat is very detrimental to the life of the belt.
3. Keep asphalt temperature below 350° F and the belt running as much as possible when loaded. A hot sitting load is more detrimental 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. Operating in temperatures below -10 F 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 cover begin falling off, exposing the steel. When this happens, replace the belt.

Non-Hi-Temp Belt

In order to achieve maximum life out of the Non-HI-TEMP belt, the following recommendations should be followed:

1. Do not expose the belt to any petroleum based products such as oil, asphalt, etc.
2. Do not operate the belt in temperatures below -30° F. or above 180° F.

Location	Places	Method	Frequency
Hydraulic System			
Reservoir	1		Check daily; Change annually.
Filter	1		Check daily; Change when indicator is red.
Hex Valve Stem (Under hand knob)	2	Hand Grease	Annually
Conveyor			
Drag-shaft Bearings	2	Grease Gun	Weekly
Idler Shaft Bearings	2	Grease Gun	Weekly
Take-up Screws	2	Hand Grease	Weekly
Conveyor Chain	2	Spray Oil	Weekly
Spinner			
Bearings	2	Grease Gun	Weekly
Drive Chain	1	Spray Oil	Daily
Pump Drive			
Slip Joint	1	Grease Gun	Weekly
U-Joints	2	Grease Gun	Monthly

Hydraulic System Lubricant: Use an automotive engine oil SAE 15W-40 for diesel engine service.

Conveyor Lubricant: Use non-corrosive type SAE 90 (40° to 100° F.) SAE 80 (below 40° F.) SAE 140 (above 100° F.) E.P. (extreme pressure) multi-purpose gear lubricating oil

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

Grease Gun Lubricant: Use lithium base lubricant with a minimum melting point of 300° F.

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

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



Reason:

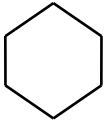
Correction:

1. Symptom: Neither conveyor nor spinner will operate.	
A. Low reservoir oil level.	Check and fill as required.
B. PTO not engaged.	Engage PTO. Check for broken or disconnected control cable.
C. PTO malfunction.	Check PTO.
D. Electric clutch malfunction.	Check electric clutch.
E. Drive belts slipping or broken.	Check belts. Replace or adjust tension as required.
F. Pump driveshaft.	Check for broken or disconnected pump driveshaft.
G. Worn pump.	Check for broken key in pump. Also see C-F above.
H. Worn pump.	Check with flow meter.
I. Relief valve set too low.	Adjust relief valve setting.
J. Spinner pressure line quick disconnect not completely connected to return line quick disconnect.	Completely connect spinner pressure line to return line whenever spinner is removed.
2. Symptom: Conveyor operates but spinner does not.	
A. Jammed spinner	Turn spinner control "Off", then check for jam.
B. Motor not turning spinner	Check for broken key or failed motor. Repair or replace.
C. Pinched or crushed hoses or lines	Repair or replace as required.
D. Broken drive chain	Repair or replace as required.
3. Symptom: Spinner operates but conveyor does not.	
A. Jammed conveyor	Turn control "Off", then check for jams.
B. Frozen bearings	Turn conveyor control "Off", then check bearings. Replace as required.
C. Motor doesn't turn conveyor	Check for broken key or failed motor. Repair or replace as required.
D. Pinched or crushed hoses or lines	Repair or replace as required.
4. Symptom: Hydraulic oil overheats	
A. Low oil level	Check oil level; Add as necessary.
B. Check for proper pump/PTO matching	Install proper fixed pump.
C. Incorrect relief valve setting	Check setting. Adjust to proper setting of 1500 PSI (103.4 bar)
D. Pinched or crushed hoses and lines	Repair or replace as required.
E. Worn motor in system	Repair or replace as required.



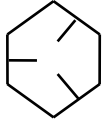
CAP SCREW GRADE IDENTIFICATION - MARKINGS ON HEAD

SAE
GRADE 2



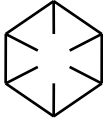
NO MARKINGS

SAE
GRADE 5



THREE MARKS - 120 DEGREES APART

SAE
GRADE 8



SIX MARKS - 60 DEGREES APART

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

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

PARTS

Instructions for Ordering Parts

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

Always give the pertinent model and serial number.

Give part name, part number and the quantity required.

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 New Leader Manufacturing.

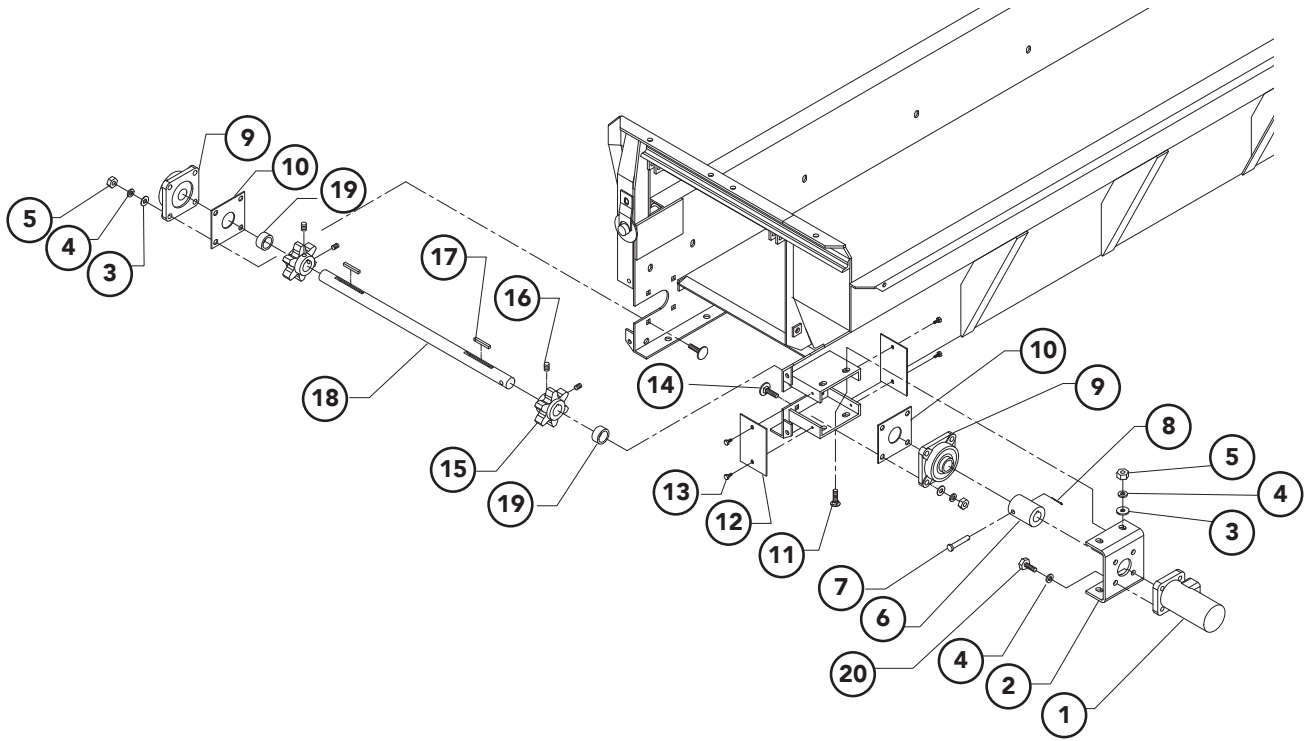
If your claims are not being handled (by the transportation company) to your satisfaction, please call our Product Sales & Support Department at New Leader Manufacturing at 888-363-8006 for assistance.

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

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

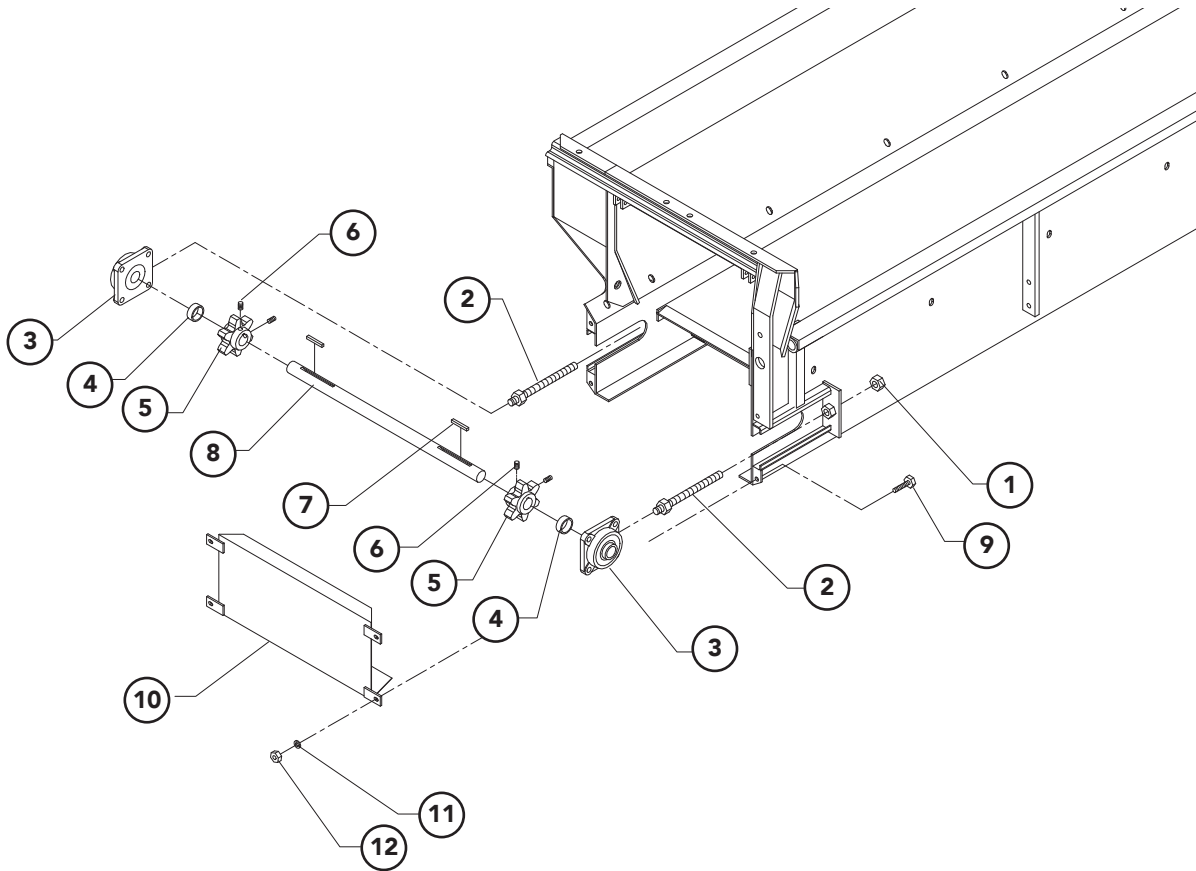
The parts listed under the different steel types (CS, 409 SS and 304 SS) are for that type of unit and do not necessarily mean the part is made of that type of steel.



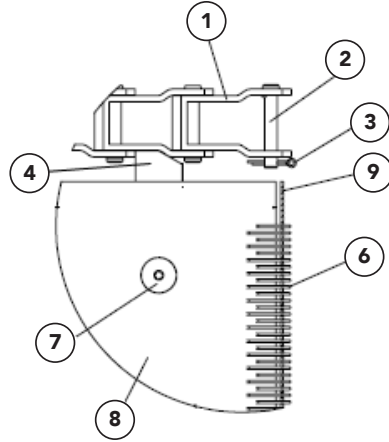


ITEM	PART NO.		DESCRIPTION	QTY
	CS	SS		
1	73399	73399	Motor- Hydraulic	1
2	79710	79710	Mount- Motor	1
3	20693	36425	Washer – Flat, 3/8 SS	12
4	20712	36420	Washer – Lock, 3/8 SS	16
5	20644	36414	Nut – Hex, 3/8-16 SS	12
6	79709	79709	Coupling- Drive	1
7	6123	6123	Pin- Shear	1
8	20811	20811	Pin- Cotter	1
9	942	942	Bearing	2
10	74319	74319	Guard- Bearing	2
11	20319	36409	Bolt – Carriage, 3/8-16 x 1.25	4
12	79758	79758	Guard- Drive	2
13	72071	72071	Screw – Self Tapping	4
14	20320	317119	Bolt – Carriage, 3/8-16 x 1 1/4	8
15	26653	26653	Sprocket	2
16	20735	20735	Screw- Set	4
17	79856	79856	Key- Square	2
18	79708	79708	Shaft	1
19	73557	73557	Spacer	2
20	20067	36398	Screw – 3/8-16 x 1	4

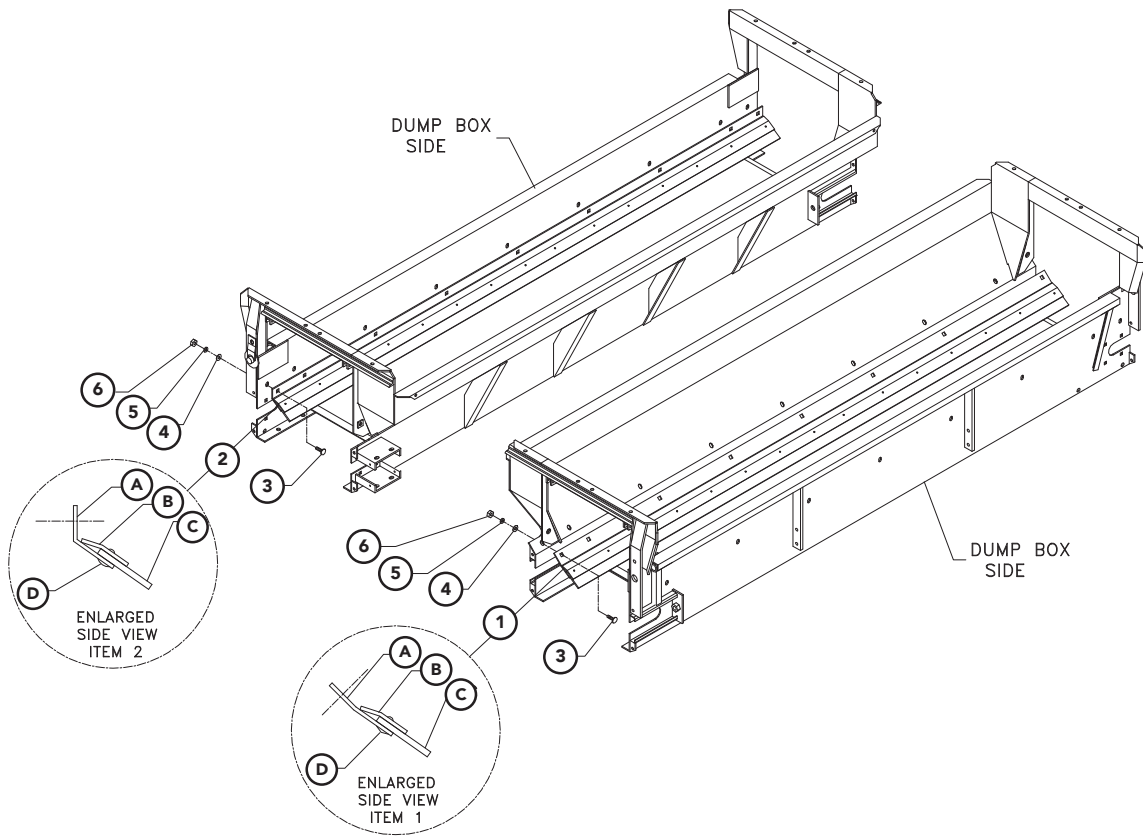




ITEM	PART NO.	DESCRIPTION	QTY
1	20648	Nut – Hex, 5/8	2
2	86246	Bolt – Take-up Wldmt	2
3	942	Bearing	2
4	73557	Spacer	2
5	26653	Sprocket	2
6	20735	Screw – Set, 1/4-20 x 1/4	4
7	79856	Key- Square	2
8	74323	Shaft	1
9	20005	Cap Screw – 1/4-20 x 1	2
10	79757	Guard – Conveyor, Wldmt	1
11	20710	Washer – Lock, 1/4	2
12	20642	Nut – Hex, 1/4-20	2



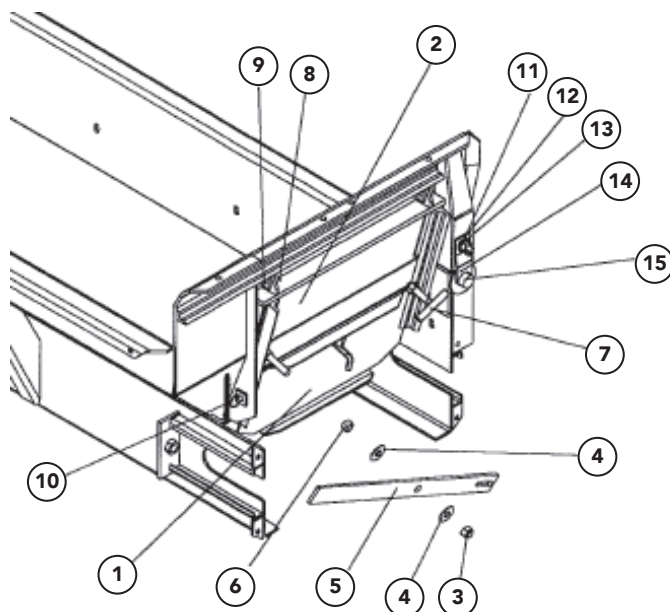
ITEM	PART NO.	DESCRIPTION	QTY
	305619	Chain – Standard Belting Assy	
	305620	Chain – Hi-Temp Belting Assy	
1	305631	Chain – Conveyor Wldmt	1
2	26702	Pin- Chain	2
3	20811	Pin- Cotter	2
4	305645	Bar – Cross Wldmt	40
5	*26701	Link	AR
6	73559	Lacing	1
7	305646	Screw – #4 BOC	120
8	52540	Belting- Standard	17
	52541	Belting – Hi-Temp	17
9	73558-14	Pin- Notched	1
*- Not Shown AR- As Required			



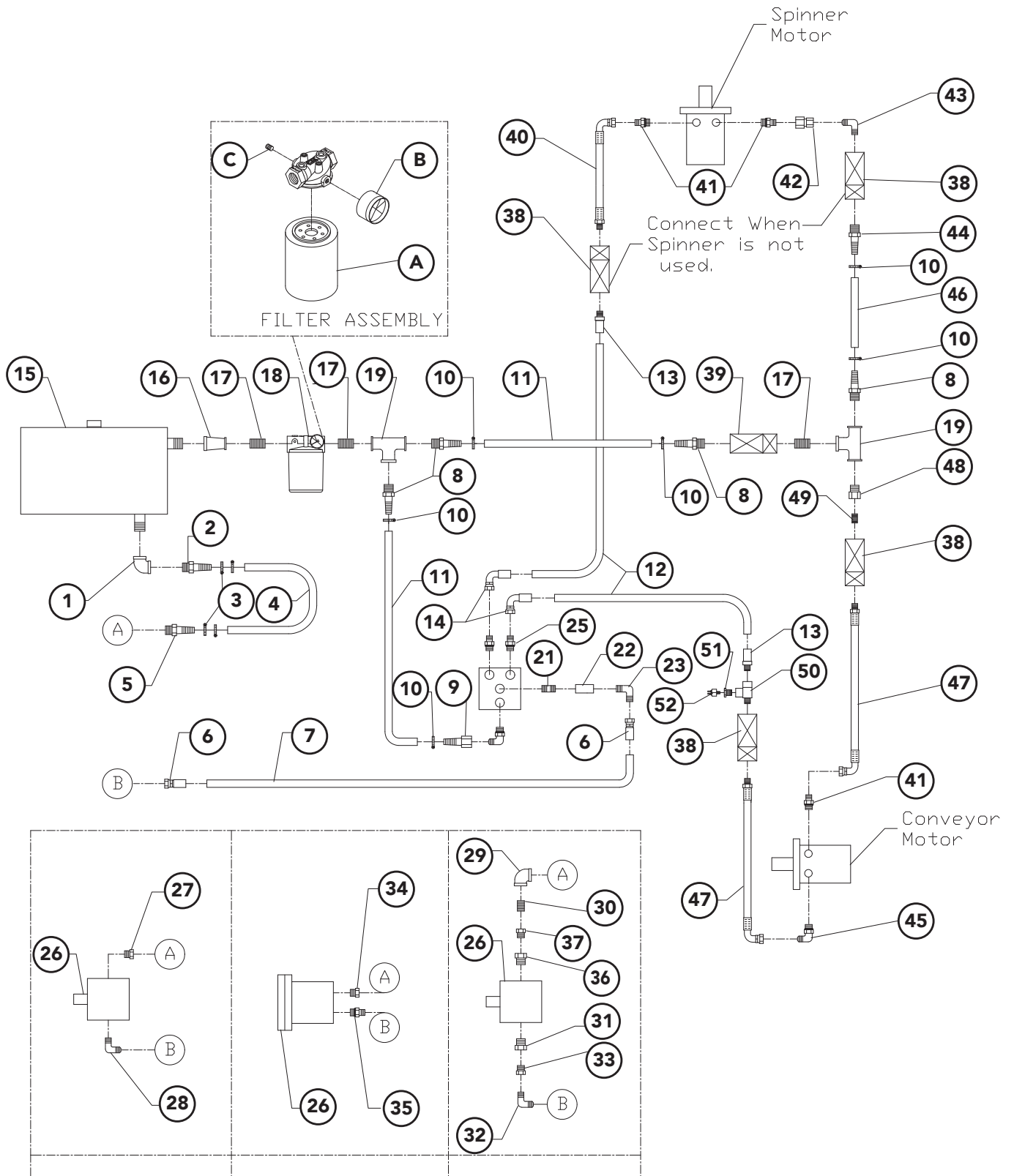
ITEM	PART NO.		DESCRIPTION	QTY
	CS	SS		
1	74464	74464	Chain Shield Rear, Non Hi-Temp Belting Assy	1
	74470	74470-X1	Chain Shield Rear, Hi-Temp Belting Assy	1
A	314507	314507	Chain Shield	1
B	56258	56258	Screw- Truss Head .25-20NC x .5 SS	34
C	313235	313235	Belt- Sealer, Non Hi-Temp Belting Ft	8.33
	74469	74469	Belt- Sealer, Hi-Temp Belting	1
D	88931	88931	Nut- Tee .25 X .25	34
2	74460	74460	Chain Shield Front, Non Hi-Temp Belting	1
	74467	74467-X1	Chain Shield Front, Hi-Temp Belting	1
A	314508	314510	Chain Shield	1
B	56258	56258	Screw- Truss Head .25-20NC x .5 SS	34
C	313235	313235	Belt- Sealer, Non Hi-Temp Belting Ft	8.33
	74469	74469	Belt- Sealer, Hi-Temp Belting	1
D	88931	88931	Nut- Tee .25 X .25	34
3	20318	71829	Bolt- Carriage, 3/8-16 x 1	18
4	20693	36425	Washer- Flat, 3/8	18
5	20712	36420	Washer- Lock, 3/8	18
6	20644	36414	Nut- Hex, 3/8-16NC	18



Swinging Endgate Assy



ITEM	PART NO.		DESCRIPTION	QTY
	CS	SS		
1	74552	74552-X1	Feedgate Wldmt	2
2	79743	79743-X1	Frame – Endgate, L.H. Wldmt	1
	* 79735	* 79735-X1	Frame – Endgate, R.H. Wldmt	1
3	20680	39016	Nut – Hex, 1/2-13	2
4	20695	36426	Washer – Flat, 1/2	4
5	74253	74253	Lever	2
6	271642	271642	Bushing	2
7	74471	74471-X1	T-Bolt Wldmt	2
8	20817	36427	Pin- Cotter	4
9	74358	74358	Pin- Clevis	4
10	70791	70791	Pin	4
11	20673	20673	Nut- Wing 3/8 SS	2
12	36425	36425	Washer- Flat 3/8 SS	2
13	36420	36420	Washer- Lock 3/8 Ss	2
14	79725	79725-X1	Bar- Pin Catch	2
15	79732	79732-X1	Pin- Mounting Wldmt	2
*- Not Shown NOTE: Quantities listed are for right and left endgate assemblies.				



Hydraulic System Continued

TGC-18

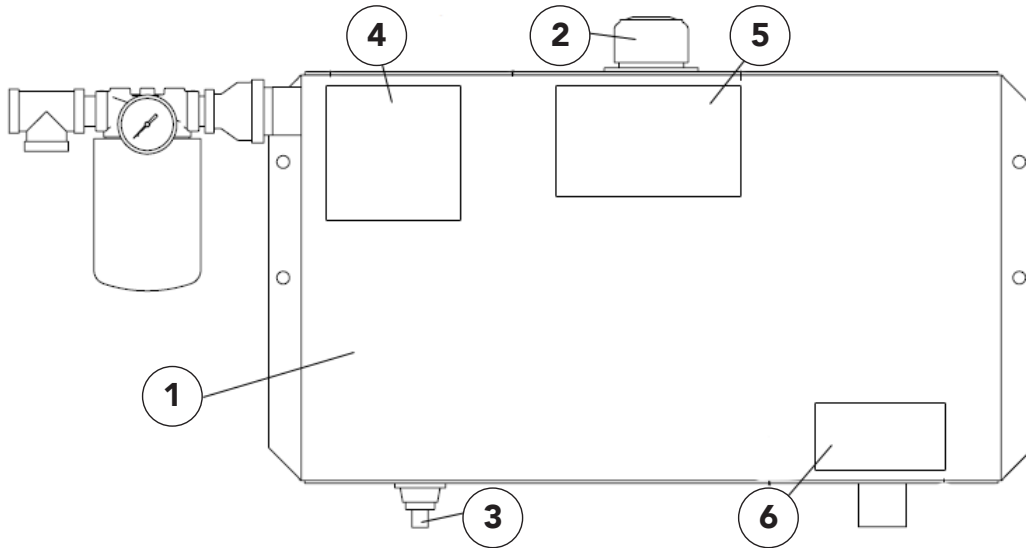
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1	6011	Elbow- Pipe	1
2	16582	End- Hose	1
3	6335	Clamp- Hose	4
4	23184-72	Hose- Suction	1
5	16572	End- Hose	1
6	56508	End- Hose	2
7	56459-72	Hose- Hydraulic	1
8	22425	End- Hose	4
9	11424	End- Hose	1
10	22381	Clamp- Hose	6
11	16529-240	Hose- Return	1
12	56453-300	Hose- Hydraulic	1
13	31599	End- Hose	1
14	56485	End- Hose	2
16	8809	Coupling- Pipe	1
17	6026	Nipple- Close	3
18	30743	Filter – Oil Assy	1
A	39934	Filter Element	1
B	43534	Indicator	1
C	21835	Plug	1
19	6020	Tee- Pipe	2
20	*310650	Valve- Control	1
21	16362	Nipple- Close	1
22	16276	Coupling- Pipe	1
23	29764	Adapter	2
24	*29767	Adapter	1
25	29808	Adapter	1
26	37469	Pump – Hydraulic Assy (w/ Crankshaft PTO)	AR
	24516	Pump – Hydraulic Assy (w/ Trans. PTO)	AR
	34569	Pump – Hydraulic Assy (w/ Electric Clutch)	AR
27	22016	Adapter	1
28	29764	Adapter	1
29	6011	Elbow- Pipe	1
30	6028	Nipple- Close	1
31	21506	Adapter – Bushing	1
32	29764	Adapter	1
33	16277	Bushing- Pipe	1
34	22018	Adapter	1



Hydraulic System Continued

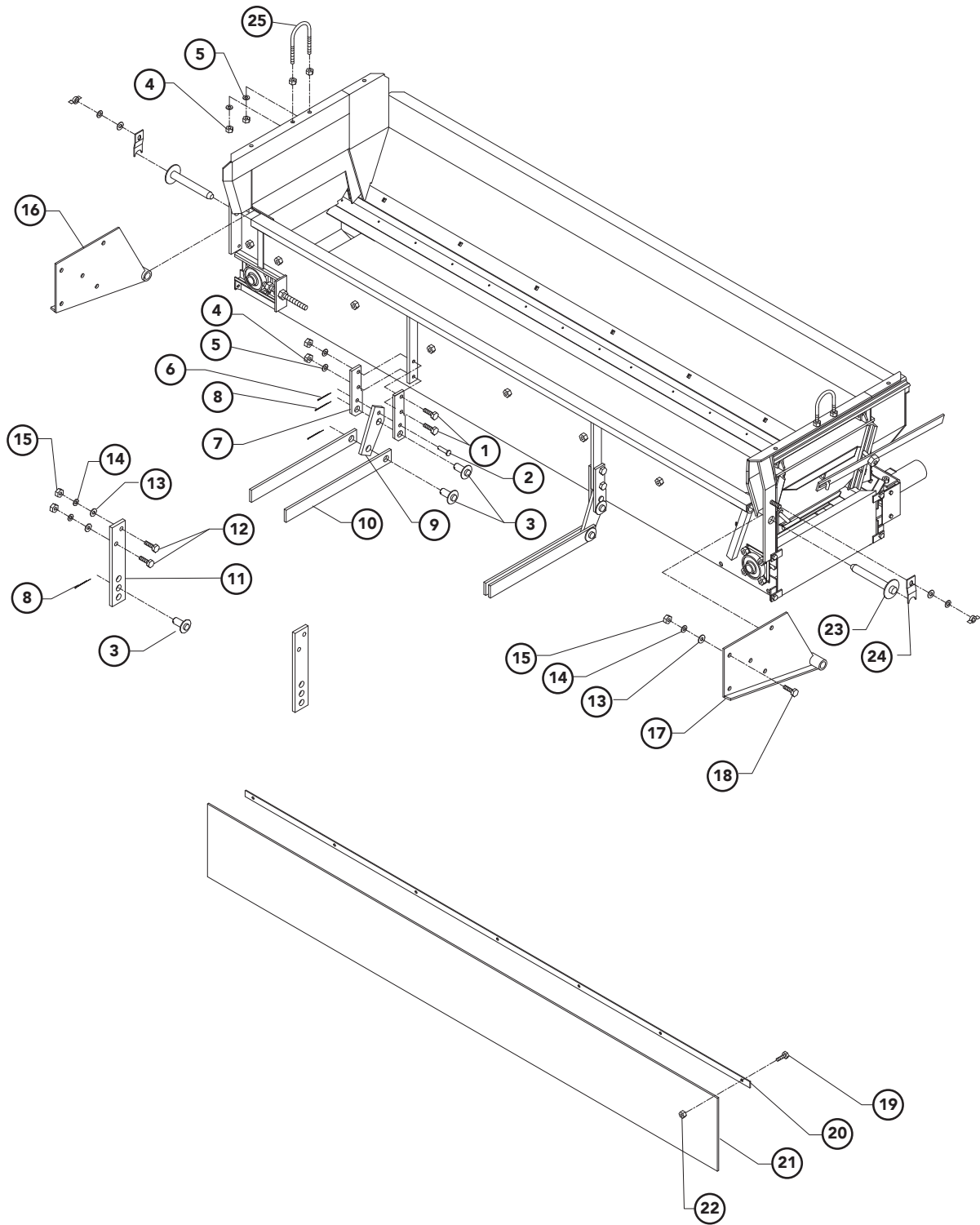
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
35	29835	Adapter	1
36	29780	Adapter- Bushing	1
37	16505	Bushing- Pipe	1
38	40006	Quick Disconnect- Hydraulic	4
39	39904	Quick Disconnect- Hydraulic	1
40	74393	Hose Assy	1
41	29771	Adapter	3
42	34802	Adapter- Connector	1
43	34742	Adapter- Elbow	1
44	16574	End- Hose	1
45	29772	Adapter- Elbow	1
46	16529-48	Hose- Return	1
47	74393	Hose Assy	2
48	22203	Bushing- Pipe	1
49	6025	Nipple- Close	1
50	34840	Adapter- Tee	1
51	22211	Bushing- Pipe	1
52	37037	Switch- Pressure	1
* - Not Shown AR- As Required			





ITEM	PART NO.	DESCRIPTION	QTY
1	39796	Tank- Hydraulic Wldmt	1
2	39929	Cap- Filler Assy	1
3	6033	Pipe- Plug	1
4	39378	Decal- Change Filter Element	1
5	8665	Decal- Important Hydraulic Oil Only	1
6	8664	Decal- Important Keep Valve Open	1
7	*20069	Cap Screw- 3/8-16 x 1-1/2	4
8	*20712	Washer- Lock 3/8	4
9	*20644	Nut- Hex 3/8	4
10	*20693	Washer- Flat 3/8	4
*- Not Shown			

This page is intentionally left blank.

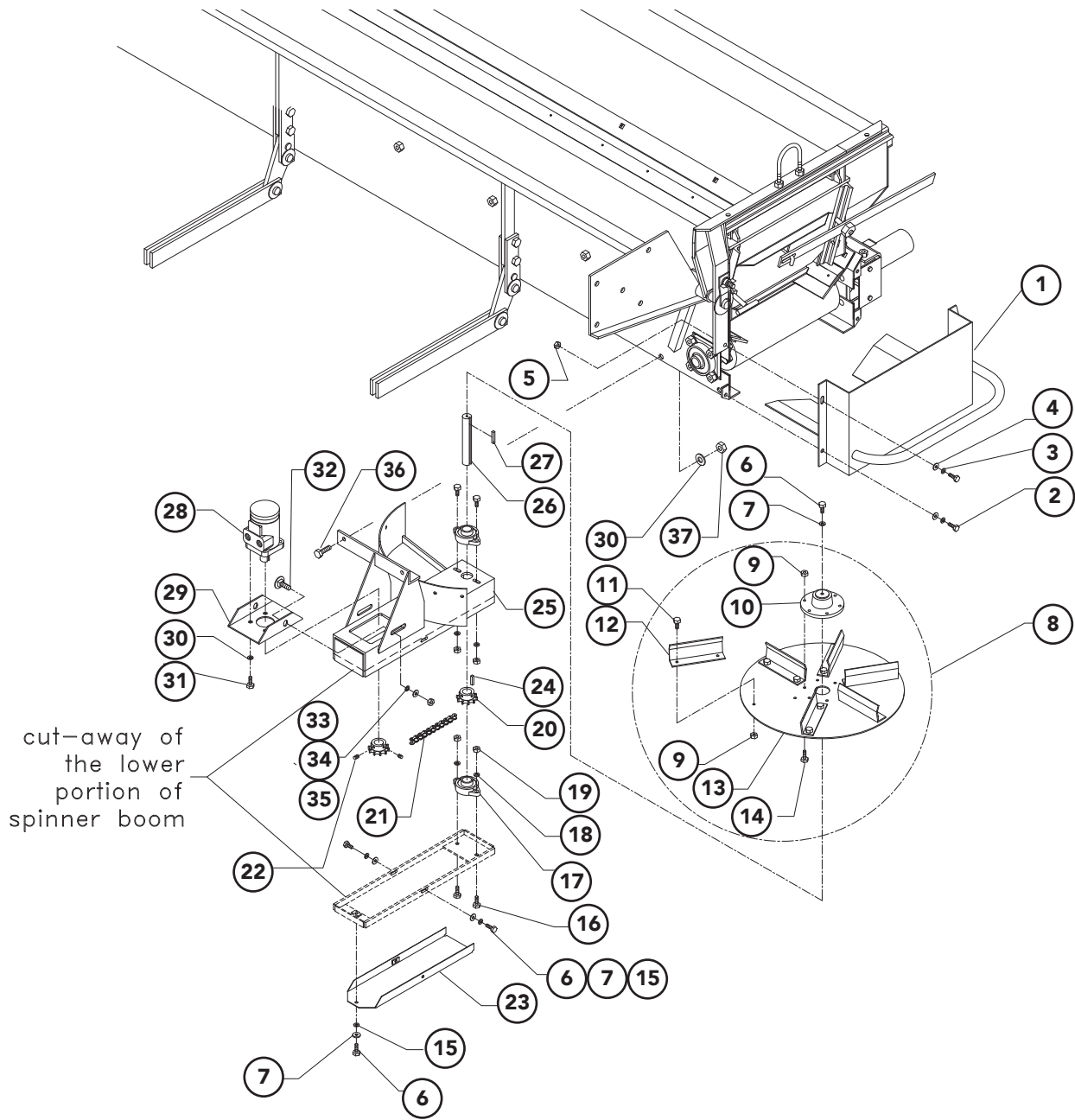


Mounting Kit Continued

ITEM	PART NO.	DESCRIPTION	QTY
1	20070	Cap Screw – 3/8-16 x 1 3/4	4
2	6121	Pin- Shear	2
3	74266	Pin – Pivot Wldmt	6
4	20644	Nut – Hex, 3/8-16	8
5	20712	Washer – Lock, 3/8	4
6	20811	Pin – Cotter, 3/32 x 3/4	2
7	79749	Leveling Link – Bolting Tab	4
8	20823	Pin- Cotter	6
9	79750	Leveling Link	2
10	74265	Leveling Link- Bar	4
11	74264	Bar- Stabilizer	2
12	20131	Cap Screw – 1/2-13 x 2	4
13	20695	Washer – Flat, 1/2	14
14	20714	Washer – Lock, 1/2	14
15	20646	Nut – Hex, 1/2-13	14
16	79727	Hinge – R.H. Wldmt	1
17	79730	Hinge – L.H. Wldmt	1
18	20129	Cap Screw – 1/2-13 x 1 1/2	10
19	20007	Cap Screw – 1/4-20 x 1 1/2	7
20	74263	Retainer- Belt	1
21	74269	Belting – Spill Guard	1
22	20642	Nut – Hex, 1/4-20	7
23	79732	Pin – Mounting Wldmt	2
24	79725	Bar – Pin Catch	2
25	79331	U-Bolt – Lifting, 3/8-16 x 3 1/8	2
26	*78850	Clamp- Hose Support	

* Not Shown





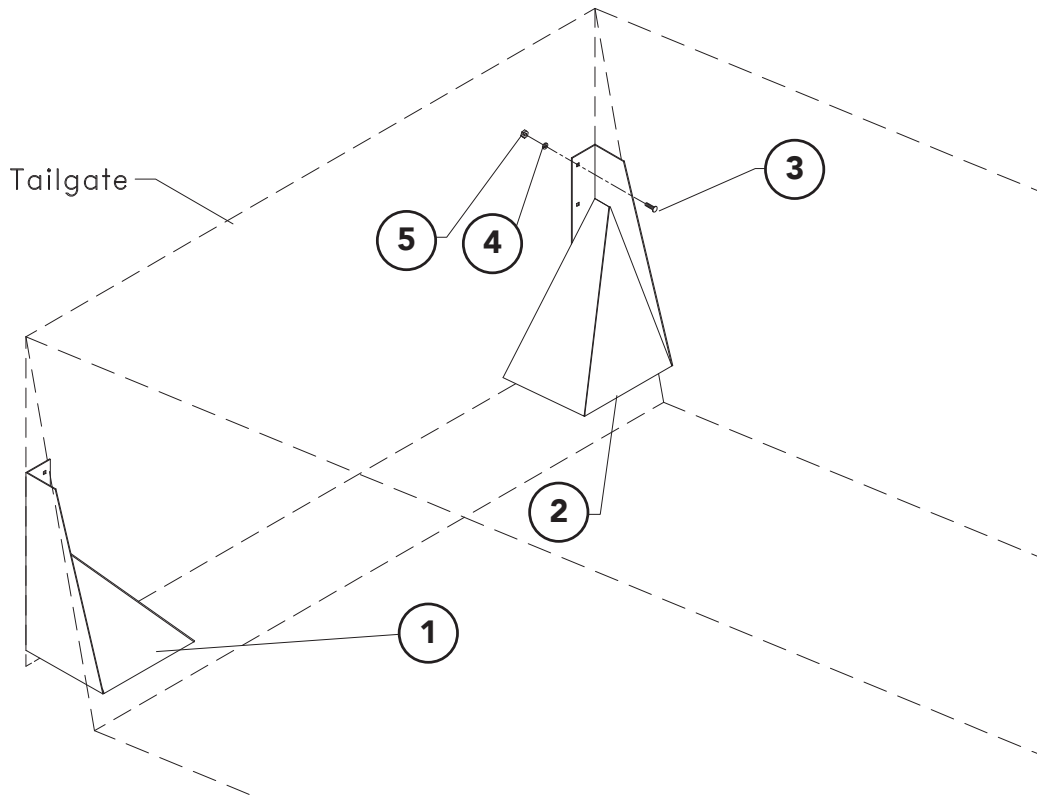
ITEM	PART NO.		DESCRIPTION	QTY
	CS	SS		
1	74386	74386-X1	Chute – Material Wldmt	1
2	20005	36395	Cap Screw – 1/4-20 x 1	4
3	20691	36423	Washer – Flat, 1/4	4
4	20710	36418	Washer – Lock, 1/4	4
5	20642	36412	Nut – Hex, 1/4-20	3
6	20002	20002	Cap Screw – 1/4-20 x 5/8	4
7	20710	36418	Washer – Lock, 1/4	4



ITEM	PART NO.		DESCRIPTION	QTY
8	74379	74379	Spinner – 18” Assy, Includes Items 9-14	1
9	20676	20676	Nut – Lock, 1/4-20	18
10	74381	74381	Hub – Spinner Wldmt	1
11	20002	20002	Cap Screw – 1/4-20 x 5/8	12
12	2240	2240	Fin	6
13	2238	2238	Disc- Spinner	1
14	20004	20004	Cap Screw – 1/4-20 x 7/8	6
15	20691	36423	Washer – Flat, 1/4	3
16	20037	36937	Cap Screw – 5/16-18 x 1 1/4	4
17	22563	22563	Bearing	2
18	20711	36419	Washer – Lock, 5/16	4
19	20643	36413	Nut – Hex, 5/16-18	4
20	73402	73402	Sprocket	2
21	74378	74378	Chain- Roller	1
	71160	71160	Link- Connecting	1
22	20735	20735	Screw – Set, 1/4-20 x 1/4	4
23	74383	74383	Cover Wldmt	1
24	6137	6137	Key – Square, 1/4 x 1	1
25	74368	74368-X1	Boom – Spinner Wldmt	1
26	74376	74376	Shaft- Spinner	1
27	2212	2212	Key – Square, 1/4 x 1 1/2	1
28	37336	37336	Motor- Hydraulic	1
29	74377	74377	Mount- Motor	1
30	20712	36420	Washer – Lock, 3/8	8
31	20065	36293	Cap Screw – 3/8-16 x 3/4	4
32	20365	36411	Bolt – Carriage, 1/2-13 x 1 1/4	2
33	20695	36426	Washer – Flat, 1/2	2
34	20714	36422	Washer – Lock, 1/2	2
35	20646	36416	Nut – Hex, 1/2-13	2
36	20068	36399	Cap Screw – 3/8-16 x 1 1/4	4
37	20644	36414	Nut – Hex, 3/8-16	3
38	*32996	*32996-X1	Panel - Baffle Curved (mounts to back-side of fixed baffle)	1
39	*20005	*36395	Cap Screw - 1/4-20NC x 1 SS	2
40	*6126	*32445	Nut - Wing 1/4-20NC SS	2
41	*20691	*36423	Washer - Flat 1/4 SS	2

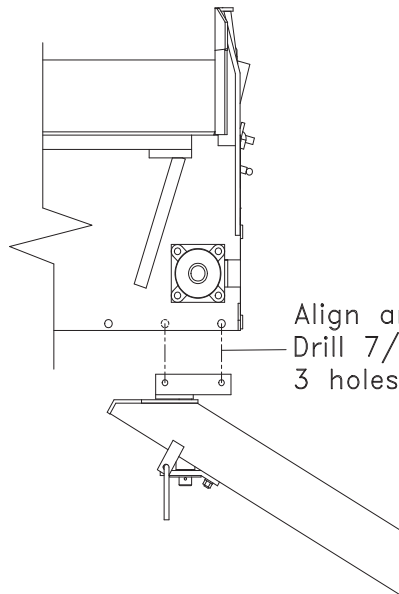
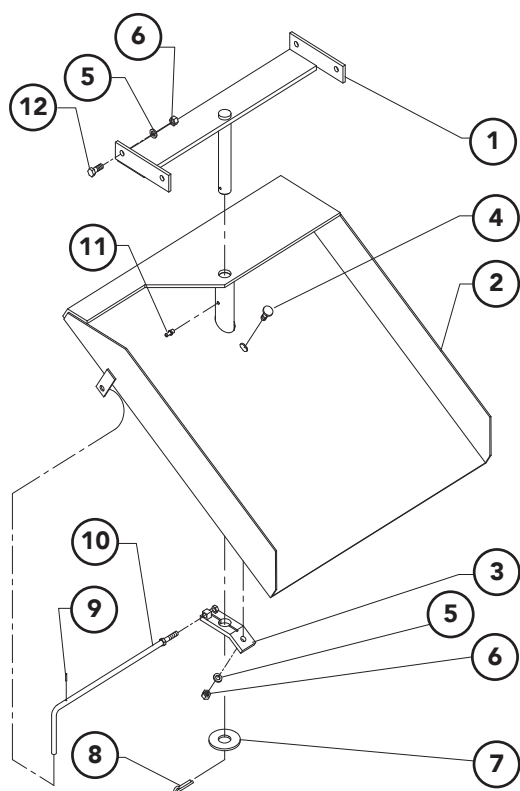
*Not Shown





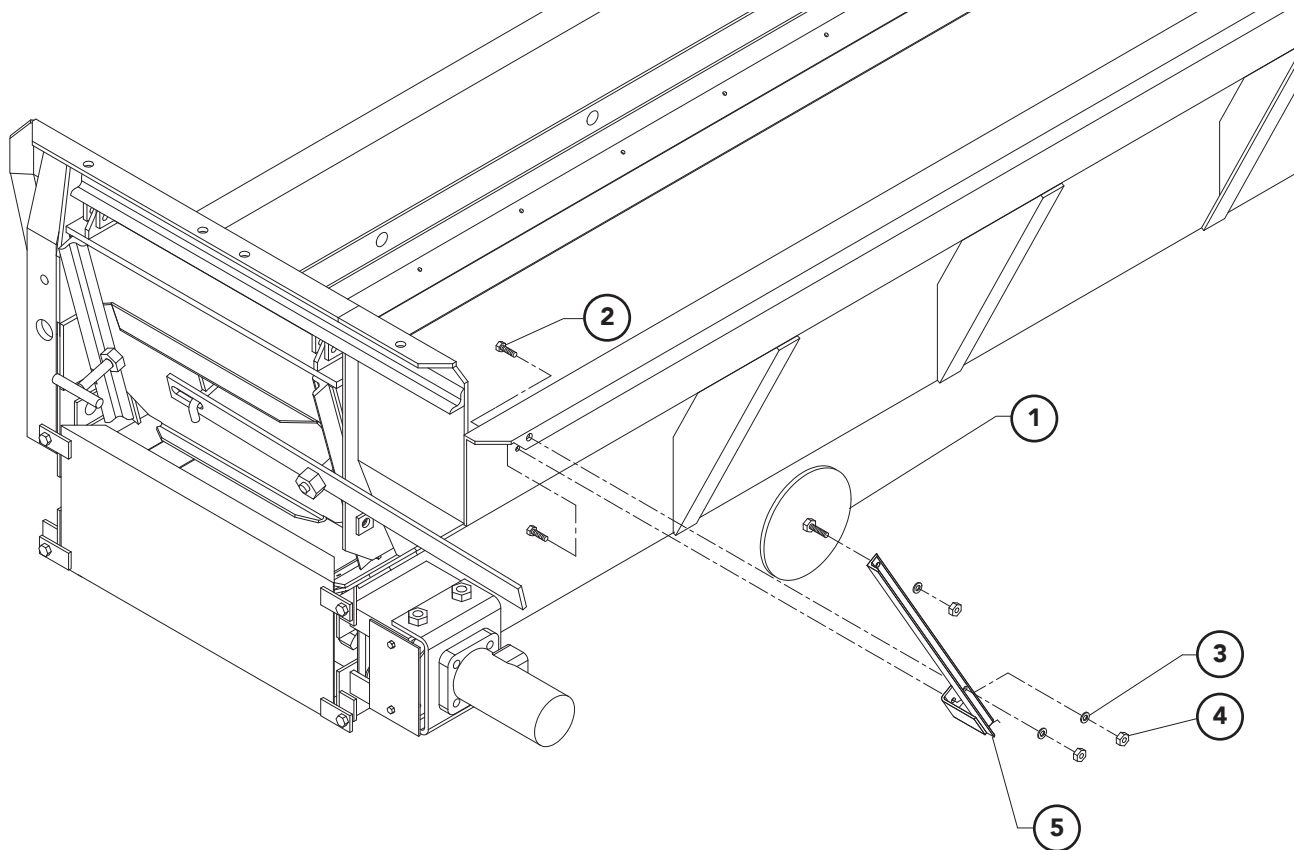
ITEM	PART NO.	DESCRIPTION	QTY
1	74296	Baffle – Tailgate, R.H. Wldmt	1
2	74559	Baffle – Tailgate, L.H. Wldmt	1
3	20317	Bolt – Carriage, 3/8-16 x 3/4	10
4	20712	Washer – Lock, 3/8	10
5	20644	Nut – Hex, 3/8-16	10

Discharge Chute



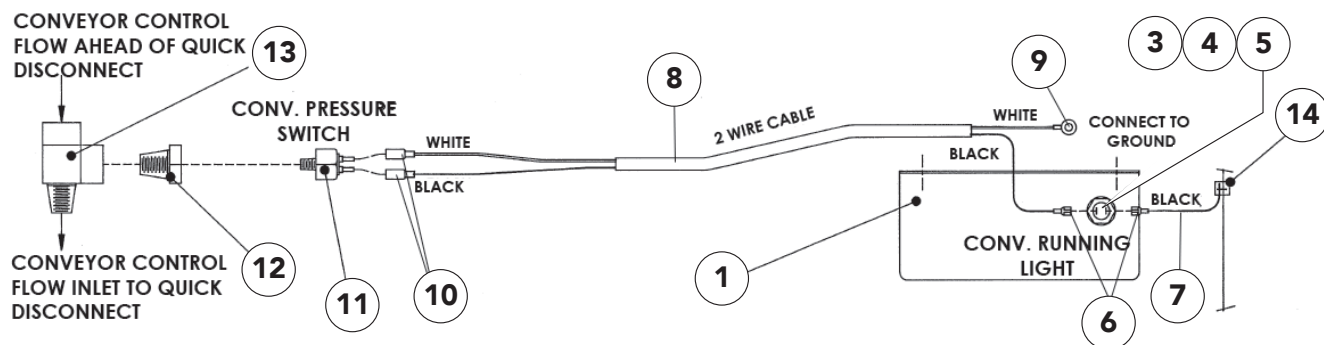
Side View

ITEM	PART NO.		DESCRIPTION	QTY
	CS	SS		
1	77548	77548-X1	Mount – Pivot Wldmt	1
2	77552	77552-X1	Chute Wldmt	1
3	77557	77557-X1	Clamp Wldmt	1
4	20318	36408	Bolt – Carriage 3/8-16 x 1	1
5	20712	36420	Washer – Lock 3/8	5
6	20644	36414	Nut – Hex 3/8-16	5
7	21425	20700-X1	Washer – Flat 1	1
8	20828	20828	Pin – Cotter 3/16 x 1-1/2	1
9	20914	44463	Pin – Roll 3/32 x 5/8	1
10	77560	77560-X1	Handle – Clamp Wldmt	1
11	6072	6072	Zerk- Grease	1
12	20067	36398	Cap Screw- 3/8-16 x 1	4



<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1	74365	Mirror	1
2	20003	Cap Screw – 1/4-20 x 3/4	2
3	20710	Washer – Lock, 1/4	3
4	20642	Nut – Hex, 1/4-20	3
5	74362	Mount – Mirror Wldmt	1

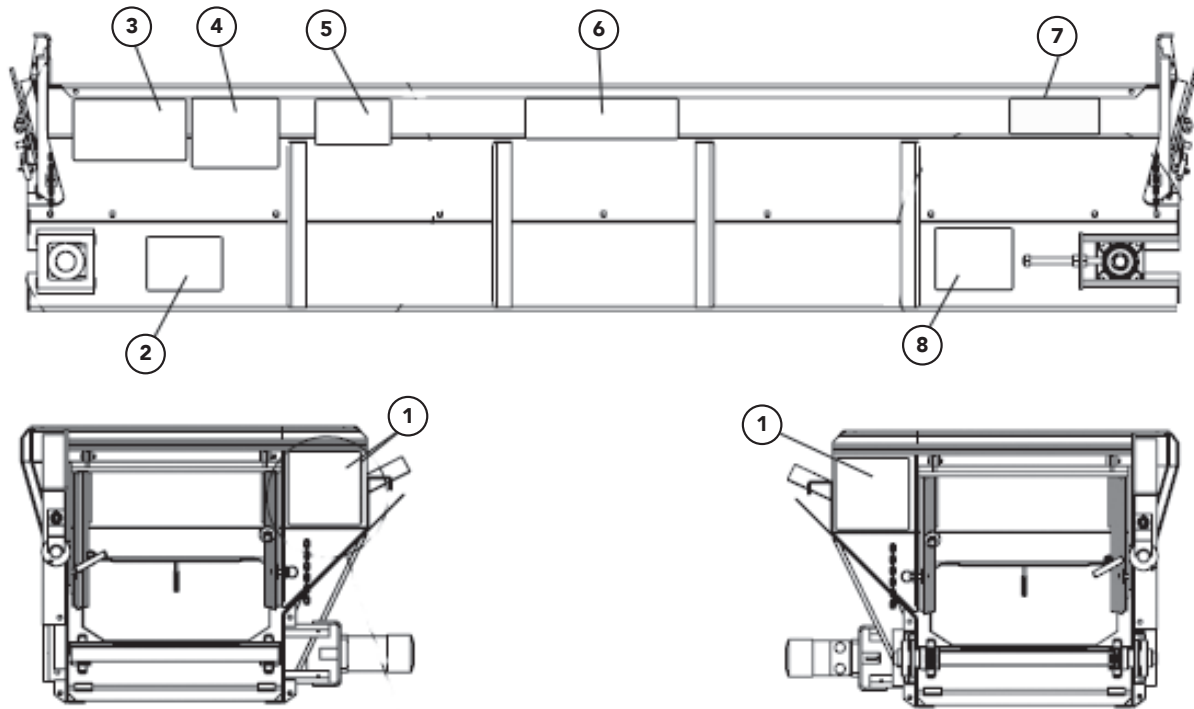
Control Panel



ITEM	PART NO.	DESCRIPTION	QTY
1	77438	Control Panel	1
2	* 77437	Decal – Caution	1
3	44523	Light – Indicator	1
4	44526	Lamp	1
5	44525	Lens – Amber	1
6	44527	Terminal – Push On	2
7	21960-36	Wire – Black	1
8	74493-240	Cable – Wire	1
9	12079	Terminal – Ring	1
10	39293	Plug – Connector	2
11	37037	Switch – Pressure	1
12	22211	Pipe Bushing	1
13	34840	Adapter – Tee	1
14	* 20005	Cap Screw – 1/4-20 x 01	2
15	* 20642	Nut – Hex, 1/4-20	2
16	* 20691	Washer – Flat, 1/4	2
17	* 20710	Washer – Lock, 1/4	2
18	* 22377	Clip – Rubber Covered	1

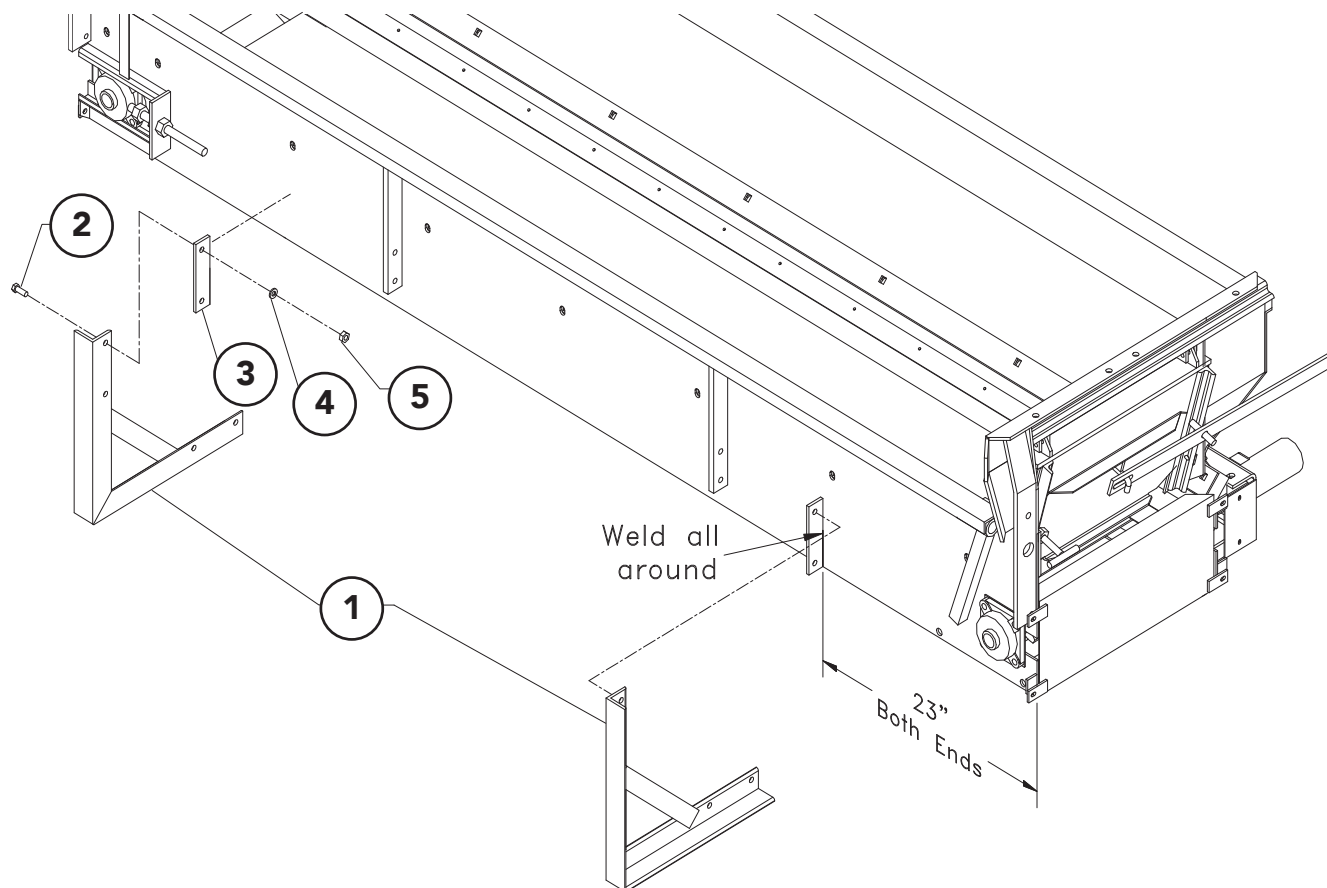
* - Not Shown





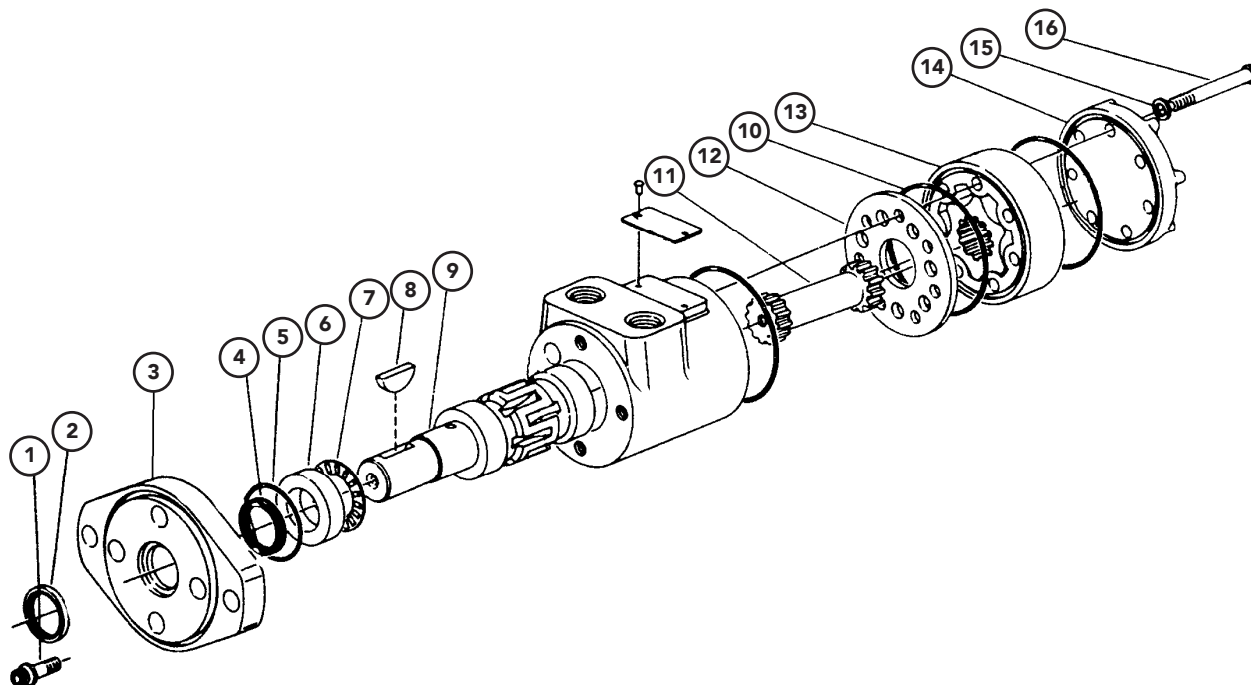
ITEM	PART NO.	DESCRIPTION	QTY
1	364	Decal – Danger “Moving Parts”	2
2	55631	Decal – Warning	1
3	368	Decal – Danger “Flying Material”	1
4	150034	Decal – Caution “Improper Operation”	1
5	321	Decal – Caution “Material to be Spread”	1
6	315809	Decal – “HI-WAY”	1
7	79985	Decal – Important “Heat Resistant Belt”	AR
8	21476	Decal – Important “Conveyor Life”	1
AR- AS REQUIRED		See Hydraulic Reservoir page for more decals	

Storage Legs



ITEM	PART NO.	DESCRIPTION	QTY
1	77441	Storage Leg Wldmt	2
2	20068	Cap Screw	4
3	77550	Mounting Bar	2
4	20712	Washer – Lock	4
5	20644	Nut – Hex	4



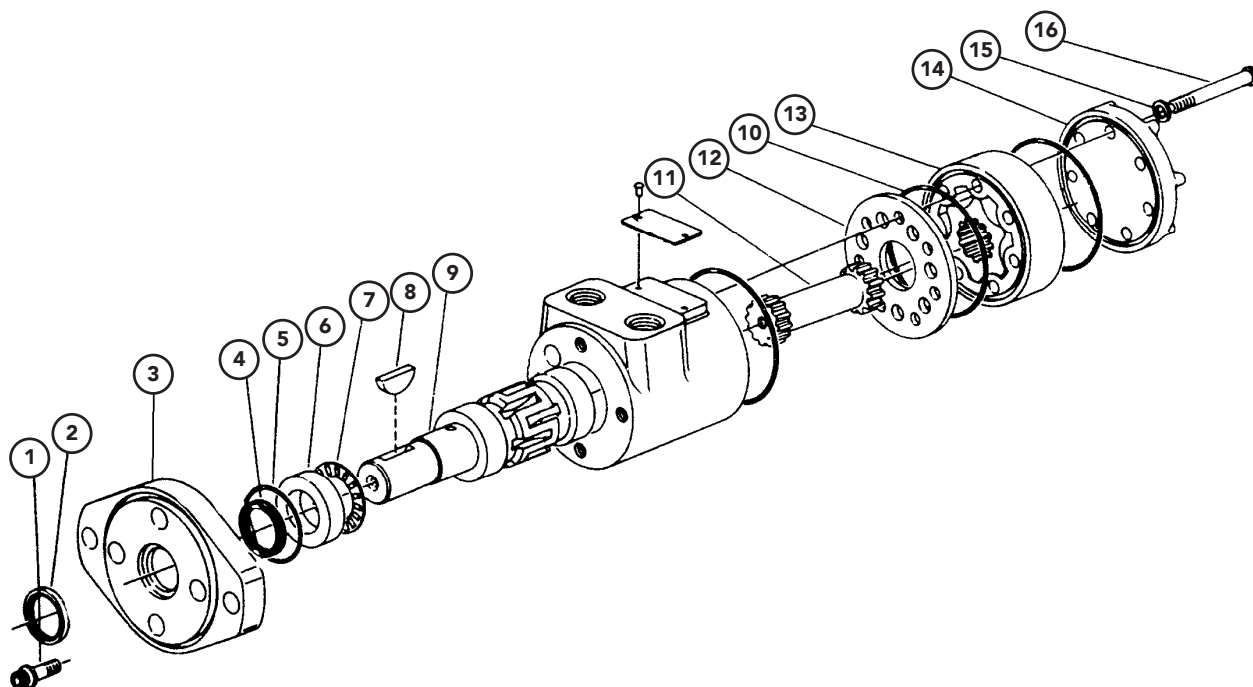


ITEM	PART NO.	DESCRIPTION	QTY
	73399	Hydraulic Motor – 1 1/2	
1	30665	Cap Screw	4
2	NSS	Seal	1
3	73470	Flange – Mounting, 4-Bolt	1
4	73473	Seal	1
5	NSS	O-Ring Seal	1
6	37385	Race – Bearing	1
7	37401	Needle Bearing – Thrust	1
8	3065	Key – Woodruff	1
9	37386	Shaft – Output	1
10	NSS	O-Ring Seal	3
11	16946	Drive	1
12	37388	Plate – Spacer	1
13	NSS	Gerotor – 1 1/2	1
14	37400	Cap – End	1
15	37381	Washer – Seal	7
16	16937	Cap Screw	7
17	* 22068	O-Ring Seal	1
	39137	Seal Kit, Includes Items 2,4,5,10,15,17	

* - Not Shown NSS- Not Serviced Separately



Motor - Hydraulic, Spinner

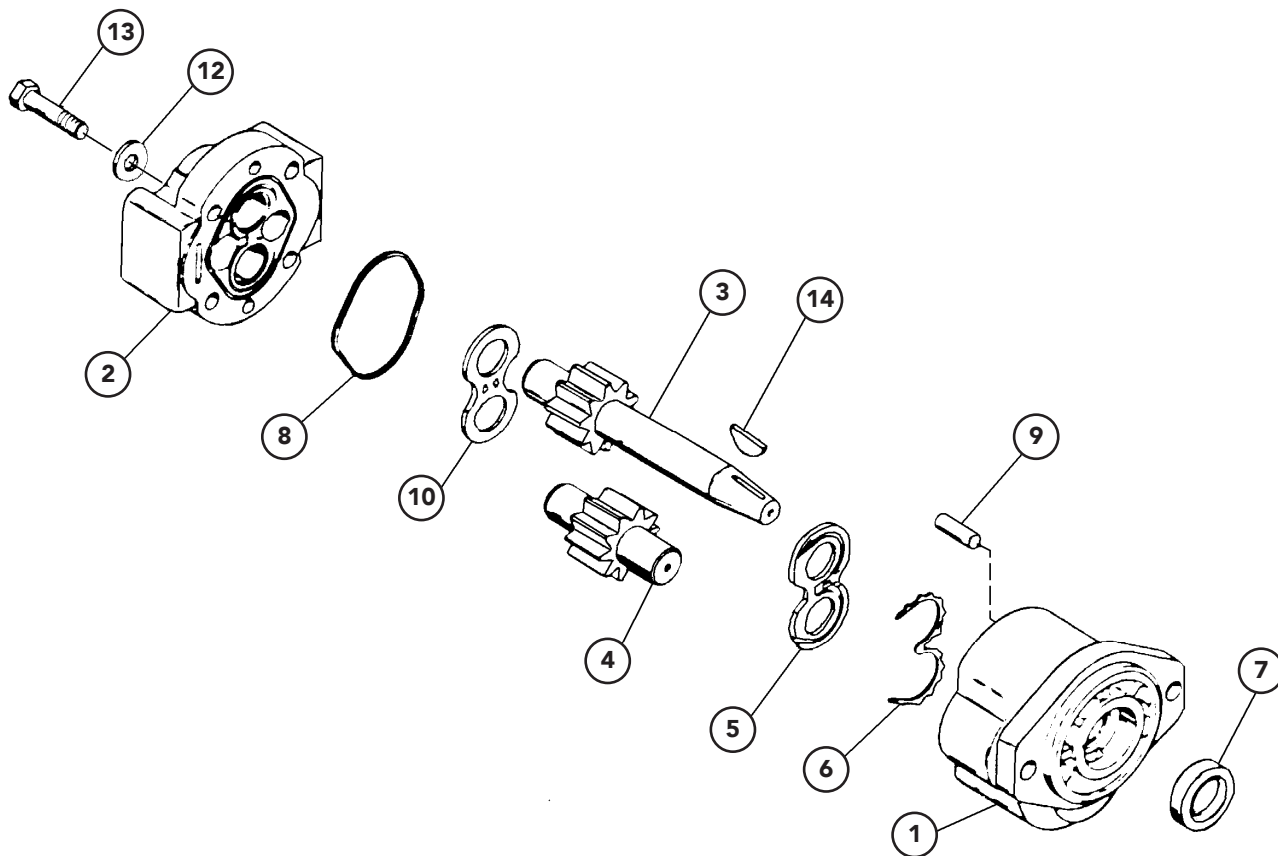


ITEM	PART NO.	DESCRIPTION	QTY
	37336	Hydraulic Motor – 1 1/4	
1	30665	Cap Screw	4
2	NSS	Seal	1
3	73470	Flange – Mounting, 4-Bolt	1
4	73473	Seal	1
5	NSS	O-Ring Seal	1
6	37385	Race – Bearing	1
7	37401	Needle Bearing – Thrust	1
8	3065	Key – Woodruff	1
9	37386	Shaft – Output	1
10	NSS	O-Ring Seal	3
11	16945	Drive	1
12	37388	Plate – Spacer	1
13	NSS	Gerotor – 1 1/2	1
14	37400	Cap – End	1
15	37381	Washer – Seal	7
16	16931	Cap Screw	7
17	* 22068	O-Ring Seal	1
	39137	Seal Kit, Includes Items 2,4,5,10,15,17	

*- Not Shown NSS- Not Serviced Separately

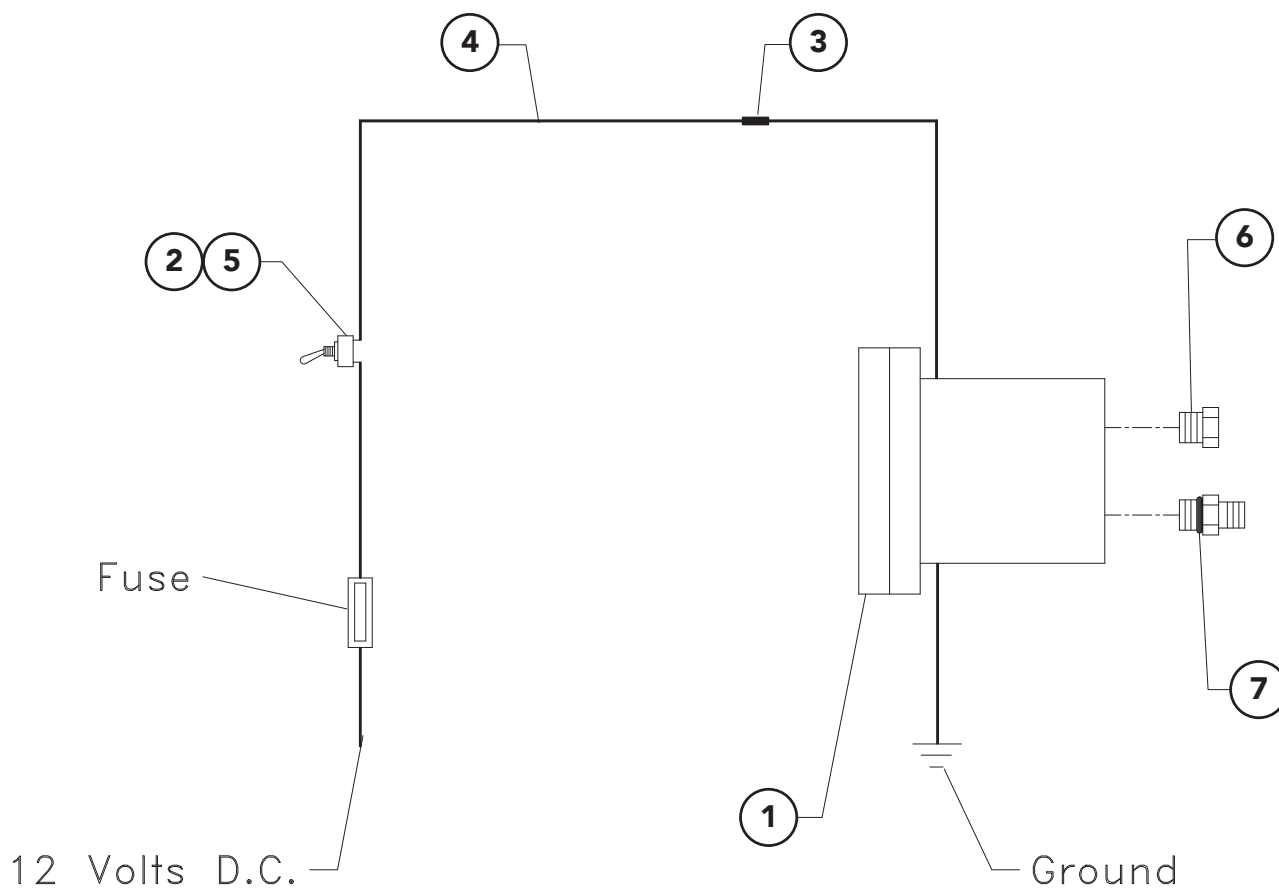


Pump - Electric Clutch Assembly

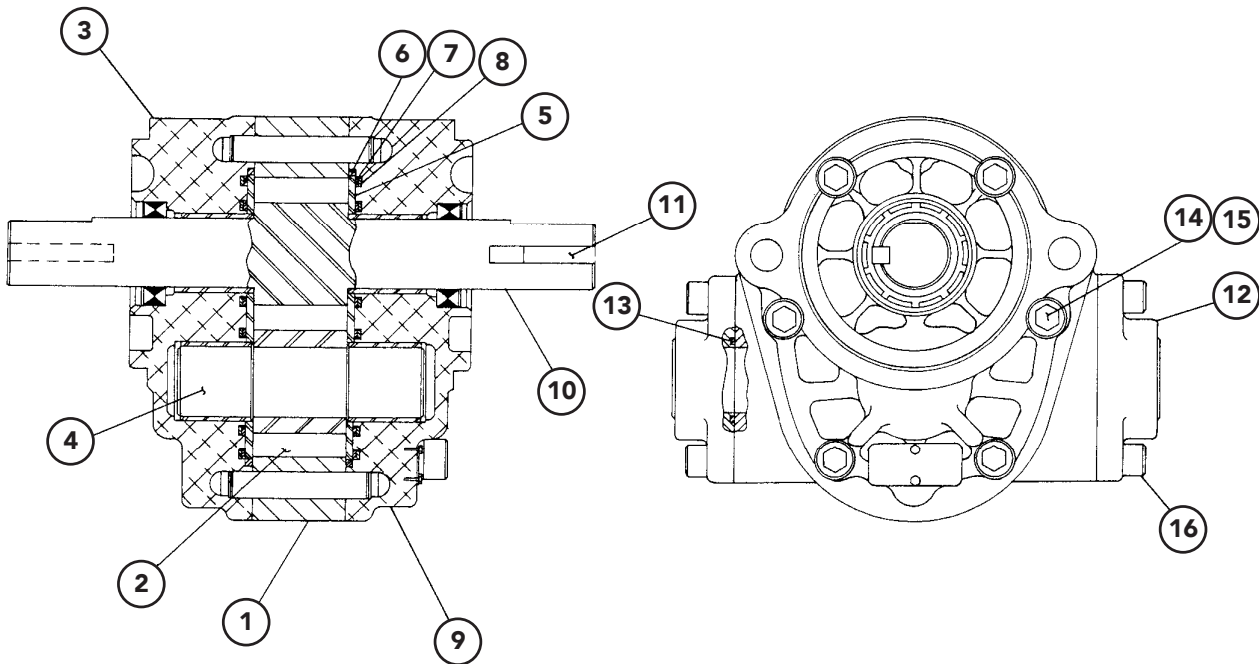


ITEM	PART NO.	DESCRIPTION	QTY
	34577	Pump Assy	
1	34546	Pump Body Assy	1
2	34549	Cover Assy	1
3	34564	Gear – Drive	1
4	34566	Gear – Driven	1
5	34554	Wear Plate	1
6	34555	Seal – Pressure Loading	1
7	34556	Seal – Shaft	1
8	34557	Ring – Square Cut	1
9	34558	Pin – Dowel	1
10	34559	Plate – Thrust	1
11	Not Used		
12	34560	Washer	4
13	34561	Cap Screw	4
14	34562	Key – Woodruff	1
	34563	Seal Kit, Includes Items 6-8	

Pump - Hydraulic with Electric Clutch

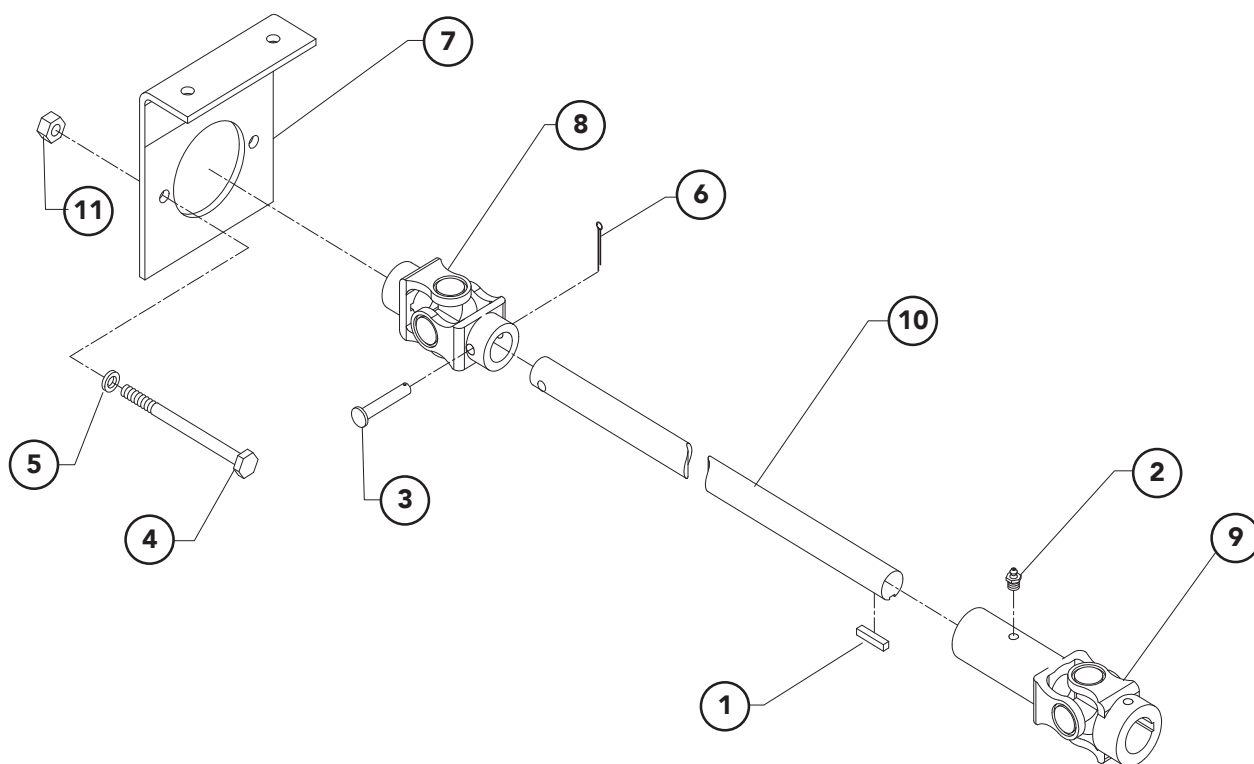


ITEM	PART NO.	DESCRIPTION	QTY
	71196	Electric Clutch Shipping Kit	
1	34569	Pump – Hydraulic w/ Electric Clutch Assy	1
	34577	Pump – Hydraulic	1
	34570	Clutch – Electric	1
	34571	Bracket – Mounting	1
2	21679	Spade Terminal	1
3	6549	Connector	1
4	21580-120	Wire – Black, 14 Ga.	1
5	21681	Switch – Toggle	1
6	22018	Adapter	1
7	29835	Adapter	1



ITEM	PART NO.	DESCRIPTION	QTY
	24516	Pump Assy	
	3904	Seal Kit, Includes Items 5-8,11,13	
1	5676	Gear – Housing	1
2	5680	Pin – Dowel	2
3	58621	Plate – End	1
4	58622	Idler Gear	1
5	5665	Wear Plate	2
6	5678	Seal – Ring	2
7	5666	Washer – Backup	2
8	5677	Seal – Pre-load	2
9	58623	Plate – End	1
10	5682	Shaft – Drive	1
11	6137	Key – Square	1
12	58624	Flange	2
13	5685	O-Ring	2
14	5683	Bolt – Socket Head	6
15	58625	Washer	6
16	58626	Bolt – Socket Head	4

Mount - Transmission PTO Pump



ITEM	PART NO.	DESCRIPTION	QTY
1	2211	Key - Square	1
2	6069	Zerk - Grease	1
3	6123	Pin - Shear	1
4	20085	Cap Screw - 3/8-16 x 5 1/2	2
5	20712	Washer - Lock, 3/8	2
6	20817	Pin - Cotter	1
7	22337	Bracket - Mounting Wldmt	1
8	22465	U-Joint	1
9	56745	U-Joint	1
10	17932	Shaft - Drive	1
11	20644	Nut - Hex, 3/8-16	2



This page is intentionally left blank.