



## MODEL PS400

MANUAL NUMBER: 300749-E

EFFECTIVE 05/2013



**Highway Equipment Company**

*Building the best since 1939.*

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# Insert Current Hi-Way Warranty



**PREFACE**

PLEASE ! ALWAYS THINK SAFETY FIRST !!

The purpose of this manual is to familiarize the person (or persons) using this unit with the information necessary to properly install, operate, and maintain this system. The safety instructions indicated by the safety alert symbol in the following pages supersede the general safety rules. These instructions cannot replace the following: the fundamental knowledge that must be possessed by the installer or operator, the knowledge of a qualified person, or the clear thinking necessary to install and operate this equipment. Since the life of any machine depends largely upon the care it is given, we suggest that this manual be read thoroughly and referred to frequently. If for any reason you do not understand the instructions, please call your authorized dealer or our Product Sales and Support Department at (319) 363-8281 or 1-800-363-8006.

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

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

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

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

ACCIDENTS HURT !!!

ACCIDENTS COST !!!

ACCIDENTS CAN BE AVOIDED !!!



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

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



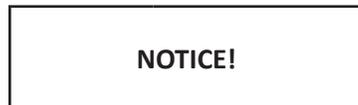
Indicates an imminently hazardous situation that, if not avoided, WILL result in death or serious injury. This signal word is to be limited to the most extreme situations and typically for machine components that, for functional purposes, cannot be guarded.



Indicates a potentially hazardous situation that, if not avoided, COULD result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.



Indicates a potentially hazardous situation that, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.



Is used for informational purposes in areas which may involve damage or deterioration to equipment but generally would not involve the potential for personal injury.

**NOTE:**

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

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

The following guidelines are intended to cover general usage and to assist you in avoiding accidents. There will be times when you will run into situations that are not covered in this section. At those times the best standard to use is common sense. If, at any time, you have a question concerning these guidelines, please call your authorized dealer or our factory at (319) 363-8281 or 1-800-363-8006.



**MAINTENANCE INSTRUCTIONS**

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

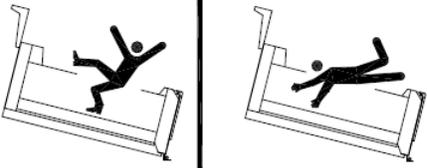
**INSTALLATION INSTRUCTIONS**

1. Clean Surface  
Wash the installation surface with a synthetic, free-rinsing detergent. Avoid washing the surface with a soap containing creams or lotion. Allow to dry.
2. Position Safety Decal  
Decide on the exact position before application. Application marks may be made on the top or side edge of the substrate with a lead pencil, marking pen, or small pieces of masking tape. NOTE: Do not use chalk line, china marker, or grease pencil. Safety decals will not adhere to these.
3. Remove the Liner  
A small bend at the corner or edge will cause the liner to separate from the decal. Pull the liner away in a continuous motion at a 180-degree angle. If the liner is scored, bend at score and remove.
4. Apply Safety Decal
  - a. Tack decal in place with thumb pressure in upper corners.
  - b. Using firm initial squeegee pressure, begin at the center of the decal and work outward in all directions with overlapping strokes. NOTE: Keep squeegee blade even—nicked edges will leave application bubbles.
  - c. Pull up tack points before squeegeeing over them to avoid wrinkles.
5. Remove Pre-mask  
If safety decal has a pre-mask cover remove it at this time by pulling it away from the decal at a 180 degree angle. NOTE: It is important that the pre-mask covering is removed before the decal is exposed to sunlight to avoid the pre-mask from permanently adhering to the decal.
6. Remove Air Pockets  
Inspect the decal in the flat areas for bubbles. To eliminate the bubbles, puncture the decal at one end of the bubble with a pin (never a razor blade) and press out entrapped air with thumb moving toward the puncture.
7. Re-Squeegee All Edges.

**SAFETY DECALS**

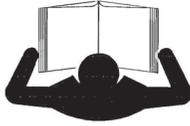
 <h2 style="margin: 0;">CAUTION</h2>
<p style="text-align: center;"><b>HAZARDOUS MATERIALS</b></p> <p>To avoid injury or machine damage:</p> <ul style="list-style-type: none"> <li>• Materials to be spread can be dangerous.</li> <li>• Improper selection, application, use or handling may be a hazard to persons, animals, crops or other property.</li> <li>• Follow instructions and precautions given by the material manufacturer.</li> </ul> <p style="text-align: right; font-size: small;">321-C</p>

 <h2 style="margin: 0;">WARNING</h2>
<p style="text-align: center;"><b>MOVING PART HAZARD</b></p> <p>To prevent death or serious injury:</p> <ul style="list-style-type: none"> <li>• Stay away from swinging endgate.</li> <li>• Do not stand or climb on machine.</li> <li>• Disconnect and lockout power source before adjusting or servicing.</li> <li>• Keep hands, feet and hair away from moving parts.</li> </ul> <p style="text-align: right; font-size: small;">366-C</p>

 <h2 style="margin: 0;">DANGER</h2>

<p style="text-align: center;"><b>SLIPPING HAZARD</b></p> <p>To prevent death or serious injury:</p> <ul style="list-style-type: none"> <li>• Stay out of box at all times.</li> <li>• Disconnect and lockout power source before adjusting or servicing.</li> <li>• Do not ride on dump body.</li> </ul> <p style="text-align: right; font-size: small;">301088-A</p>

 <h2 style="margin: 0;">WARNING</h2>

<p style="text-align: center;"><b>HIGH PRESSURE FLUID HAZARD</b></p> <p>To prevent death or serious injury:</p> <ul style="list-style-type: none"> <li>• Relieve pressure on system before repairing, adjusting, or disconnecting.</li> <li>• Keep all lines, fittings and couplers tight and free of leaks.</li> <li>• Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.</li> <li>• Do not use hydraulic lines for hand holds or steps.</li> <li>• Components may be hot.</li> </ul> <p style="text-align: right; font-size: small;">39138-C</p>

 <h2 style="margin: 0;">CAUTION</h2>

<p style="text-align: center;"><b>TO AVOID INJURY OR MACHINE DAMAGE:</b></p> <ul style="list-style-type: none"> <li>• Do not operate or work on this machine without reading and understanding the operators manual.</li> <li>• Keep hands, feet, hair and clothing away from moving parts.</li> <li>• Do not allow riders on machine.</li> <li>• Avoid unsafe operation or maintenance.</li> <li>• Disengage power takeoff and shut off engine before removing guards, servicing or unlogging machine.</li> <li>• Keep unauthorized people away from machine.</li> <li>• Keep all guards in place when machine is in use.</li> <li>• If manual is missing, contact dealer for replacement.</li> </ul> <p style="text-align: right; font-size: small;">150034-C</p>

**CAUTION**

**OPERATION SAFETY**  
To avoid injury or machine damage:

- Do not operate or work on this machine without reading and understanding the operators manual.
- Body must be securely propped or blocked when in a raised position for service or inspection.
- Do not exceed rated capacity of hoist or truck.
- Keep dump body and surrounding area clear of personnel and property when operating.
- Completely lower body and remove ignition key before leaving truck.

96716-A

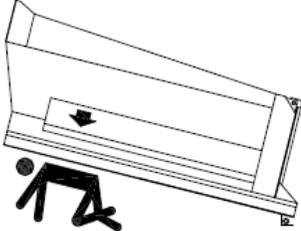
**CAUTION**

**RAISED BODY SAFETY**  
To avoid injury or machine damage:

- Do Not leave raised body unattended.
- Do Not raise loaded body on unlevel ground.
- Do Not raise loaded body with tailgate latched.
- Check for overhead power lines and other obstructions before raising body.

96715-A

**DANGER**



**CRUSHING HAZARD**  
To prevent death or serious injury:

- Empty box and install safety prop before working beneath dump body.

96712-A

**DANGER**



**CRUSHING HAZARD**  
To prevent death or serious injury:

- Empty box and install safety prop before working beneath dump body.

96704-A

**WARNING**



To prevent death or serious injury:

- Do not place objects on fenders.
- Keep off fenders. They are not intended to carry loads.

39200-D

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

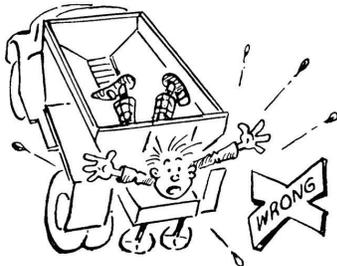


2. When leaving the unit unattended for any reason, be sure to:
  - a. Take power take-off out of gear.
  - b. Shut off conveyor and spinner drives.
  - c. Shut off vehicle engine and unit engine (if so equipped).
  - d. Place transmission of the vehicle in "neutral" or "park".
  - e. Set parking brake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

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

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

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



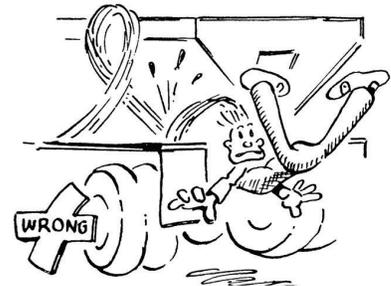
5. Guards and covers are provided to help avoid injury. Stop all machinery before removing them. Replace guards and covers before starting spreader operation.

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



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

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



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



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



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

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



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



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



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

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



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

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

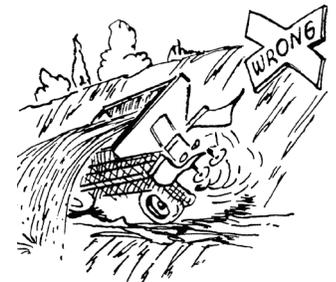
	<p><b>CAUTION</b></p> <p>If spreader is used to transport chemicals, check with your chemical supplier regarding DOT (Department of Transportation) requirements.</p>
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19. Cover all loads that can spill or blow away. Do



not spread dusty materials where dust may create pollution or a traffic visibility problem.

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



21. Read and understand the precautionary decals on the spreader. Replace any that become defaced, damaged, lost or painted over. Replacement decals can be ordered from your dealer's parts department or from Highway Equipment Company by calling (319) 363-8281 or 1-800-363-8006.

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



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

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



4. Before attempting any maintenance work (including lubrication), shut off power completely. DO NOT WORK ON RUNNING MACHINERY!
5. When guards and covers are removed for any maintenance, be sure that such guards are reinstalled before unit is put back into operation.
6. Check all screws, bolts and nuts for proper torques before placing equipment back in service. Refer to torque chart in this manual.

7. Some parts and assemblies are quite heavy. Before attempting to unfasten any heavy part or assembly, arrange to support it by means of a hoist, by blocking or by use of an adequate arrangement to prevent it from falling, tipping, swinging or moving in any manner which may damage it or injure someone. Always



use lifting device that is properly rated to lift the equipment. Do not lift loaded spreader. NEVER LIFT EQUIPMENT OVER PEOPLE.

8. If repairs require use of a torch or electric welder, be sure that all flammable and combustible materials are removed. Fuel or oil reservoirs must be emptied, steam cleaned and filled with water before attempting to cut or weld them. DO NOT weld or flame cut on any tank containing oil, gasoline or their fumes or other flammable material, or any container whose contents or previous contents are unknown.
9. Keep a fully charged fire extinguisher readily available at all times. It should be a Type ABC or a Type BC unit.

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



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



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

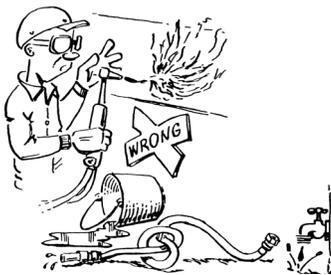
13. Hydraulic fluid under high pressure leaking from a pin hole are dangerous as they can penetrate the skin as though injected with a hypodermic needle. Such liquids have a poisonous effect and can cause serious wounds. To avoid hazard, relieve pressure before disconnecting hydraulic lines or performing work on system. Any fluid injected into the skin must be treated within a few hours or gangrene may result. Get medical assistance immediately if such a wound occurs. To check for such leaks, use a piece of cardboard or wood instead of your hand. Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to system. Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
14. The fine spray from a small hydraulic oil leak can be highly explosive—DO NOT SMOKE—STAY AWAY FROM FLAME OR SPARKS.



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



2. Follow mounting instructions in the Installation section of this manual. If mounting conditions require deviation from these instructions refer to factory.
3. When making the installation, be sure that the lighting meets Federal Motor Vehicle Safety Standard (FMVSS) No. 108, ASABE S279 and all applicable local and state regulations.
4. When selecting a PTO to drive hydraulic pump, do not use a higher percent speed drive than indicated in the Installation section of this manual. Too high a percent PTO will drive pump at excessive speed, which can ruin the pump, but more importantly, will overheat the hydraulic oil system and increase the possibility of fire.

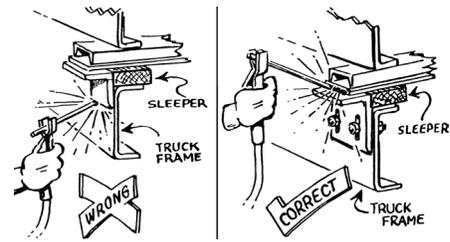


5. When truck frame must be shortened, cut off only the portion that extends behind rear shackle in accordance with the truck manufacturer's recommendations.

If a torch is used to make the cut, all necessary precautions should be taken to prevent fire. Cuts should not be made near fuel tanks and hydraulic oil reservoirs, fuel, brake, electric or hydraulic lines and such lines should be protected from flame, sparks or molten metal. Tires should be removed if there is any chance of their being struck by flame, sparks or molten metal. Have a fire extinguisher

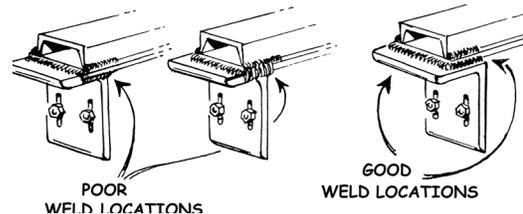
handy.

6. Do not weld on vehicle frame as such welding can lead to fatigue cracking



and must be avoided. When drilling holes in frame member, drill only through the vertical web portions do not put holes in top or bottom flanges. Refer to truck manufacturer's recommendations.

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



8. Install controls so that they are located of convenient use. Position them so that they do not interfere with any vehicle control and that they do not interfere with driver or passenger or with access to or exit from the vehicle.
9. Check for vehicle visibility, especially toward the rear. Reposition or add mirrors so that adequate rearward visibility is maintained.
10. Add Caution, Warning, Danger and Instruction decals as required. Peel off any label masking which has not been removed.
11. Install all guards as required.
12. Check installation completely to be sure all fasteners are secure and that nothing has been left undone.

**GENERAL DESCRIPTION**

Refer to [www.highwayequipment.com](http://www.highwayequipment.com) for installation instructions. Once on the website, click Customer support, then Other Hi-Way Manuals and Instructions, then Dump Body Installation Instructions.

The PS400 is designed to haul and dump. The flat dump body floor allows hauling of pallets and barrels.

This product is intended for commercial use only.

**DIMENSIONS & CAPACITIES**

**DIMENSIONS & CAPACITIES**

BODY LENGTH feet	REQUIRED FRAME LENGTH inches (cm)	CA/CT* inches (cm)	HEIGHT inches (cm)	WEIGHT (EMPTY) pounds (kg)	STRUCK CAPAC- ITY cu yd (cu m)
13	156 (396.4)	108 (274)	36 (92)	3450 (1565)	9.93 (7.59)
			44 (112)	3710 (1683)	12.15 (9.28)
			52 (132)	3910 (1774)	14.33 (10.96)
14	168 (426.7)	120 (305)	36 (92)	3620 (1642)	10.70 (8.18)
			44 (112)	3900 (1769)	13.07 (9.99)
			52 (132)	4110 (1865)	15.48 (11.84)
15	180 (457.2)	132 (335)	36 (92)	3800 (1724)	11.48 (8.78)
			44 (112)	4090 (1855)	14.04 (10.73)
			52 (132)	4300 (1950)	16.59 (12.68)
16	192 (487.7)	144 (366)	36 (92)	3970 (1801)	12.22 (9.34)
			44 (112)	4280 (1942)	14.96 (11.44)
			52 (132)	4500 (2041)	17.70 (13.53)

**\*NOTICE!** The Cab to Axle/Tandem dimensions are only guidelines. Consult federal, state and local weight laws and chassis manufacturer's ratings to ensure neither government weight restrictions, nor GVWR and GAWRs are exceeded.

PART		WEIGHT (APPROX.) pounds
CRADLE & HOIST		650 - 800
TAILGATE	44" (112 cm)	360
	52" (132 cm)	420
	60" (152 cm)	450
CAB SHIELD		200 - 300
RESERVOIR		275





**CAUTION** Make sure all fasteners are tight to avoid dump body or any parts from coming loose.

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

Before testing the unit, make sure the controls are off. Do not load dump body.

1. Make sure that no loose parts or other material are in the body.
2. Fill the hydraulic reservoir with oil. Refer to the Lubricant and Hydraulic Oil Specifications section for proper oil.
3. Start engine and engage PTO. Let engine run for a few minutes, allowing oil to circulate through the pump and back to the reservoir. In cold weather, allow more warm-up time.
4. Open tailgate latch air control and make sure tailgate latch releases.
5. Open hoist control and slowly lift and lower dump body to check lift angle and range of motion. Make sure tailgate opens and closes correctly.
6. Check all connections in the hydraulic system to make sure there are no leaks.
7. Check hydraulic reservoir and refill.

**DANGER**

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

**WARNING**

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

**DANGER**

Open tailgate before hoisting dump body with material in it. TRUCK COULD TIP, causing serious injury or death, if body is raised with material in it and the tailgate closed

**CAUTION**

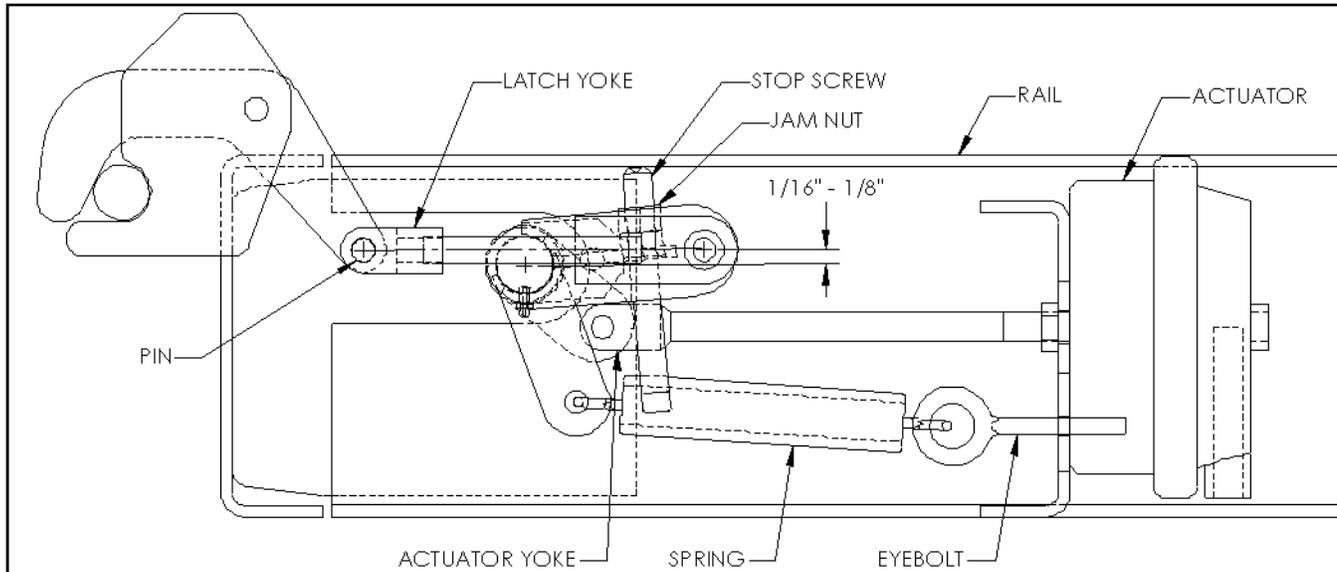
Make sure latches are closed before filling dump body. If equipped with air latch, always disengage tailgate air with body completely down.

**WARNING**

Air latch – tailgate latch springs must be in place during operation to keep latch closed. If springs are not in place, tailgate could open inadvertently and drop load.

**TAILGATE LATCH ADJUSTMENTS****CAUTION**

Keep hands clear of latch during adjustment. Tag, lock or disconnect latch from air supply to prevent operation.



**Figure 1 - Latch-Over-Center**

Proper tailgate locking requires the latch linkage to toggle over center when air pressure is released from the actuator. Test tailgate latch mechanism by opening latch with about 85 PSI. When air pressure is released, the actuator and auxiliary spring should toggle linkage over center  $1/16''$  (.16 cm) to  $1/8''$  (.32 cm) and the stop screw should touch top of rail as shown in Figure 1. The actuator yoke should also be free from load.

Adjust tailgate latch by the following:

1. Lower the body, close the tailgate and disconnect air supply to latch actuator.
2. Detach springs and remove pin from actuator yoke.
3. Rotate mechanism to open latch and permit adjustment.
4. Remove pin from latch yoke.
5. Screw latch yoke in (shorten) to decrease tailgate gap and increase latch force. Screw latch yoke out (lengthen) to decrease latch force and allow mechanism to toggle over center.
6. Push mechanism over center. Latch should be tight enough to close tailgate with a good seal, but not so tight the linkage can't be manually snapped over center.
7. Make sure stop screw is touching rail when tailgate gap is adjusted.

Tip: The stop screw can be used to make sure the linkage is  $1/16''$  (.16 cm) to  $1/8''$  (.32 cm) over center at this point. Loosen jam nut and turn stop screw clockwise until latch toggles just off over center. Turn stop screw counter-clockwise three turns. Tighten jam nut. Repeat steps 6 & 7.

8. Attach spring and tighten eyebolt nut finger tight. Tighten one more turn and secure with jam nut.
9. Adjust actuator yoke so it's free from load. Secure with pin.
10. Make sure all pins are in place.
11. Connect latch to air supply and test. Repeat steps as necessary.

**TAILGATE ADJUSTMENT****CAUTION**

Secure load if hauling without a tailgate or with it laying flat to prevent injury or damage due to loss of contents.

**NOTICE!**

Laying the tailgate flat is not recommended. Removal of the tailgate is preferred. Highway Equipment Company is not responsible for damage caused by such use.

Attach chains (not supplied) from tailgate bolsters to dump body hooks to lay tailgate flat. Use suitable lifting device to lower tailgate. Do not let tailgate hang below horizontal. Tailgate latches must be locked closed with clevis pins to prevent tailgate from dropping.

**OPERATION**

Make sure unit has been properly serviced and is in good operating condition.

**CAUTION**

Make sure dump body is completely down and latches are closed before filling body with material.

**CAUTION**

Open tailgate before hoisting dump body with material in it. TRUCK COULD TIP if body is raised with the tailgate closed, causing serious injury or death.

**DANGER**

Check for overhead power lines and other obstructions before raising body. Lower dump body before leaving job site.

**CAUTION**

Make sure tailgate latch is open before lowering dump body. Close latch when tailgate is closed. If tailgate does not latch shut, tailgate will swing loose and material could be lost or injury could occur.

If dumping:

1. Open tailgate latch.
2. Engage pump drive PTO.
3. Raise dump body as necessary.

**DANGER**

Raise dump body slowly—only enough for metering with coal chute feedgate. If material is raised in the dump body, the center of gravity will rise and move rearward, causing instability. TRUCK COULD TIP backwards, causing serious injury or death.

If metering with coal chute feedgate:

1. Fold down rear spinner cover, if applicable.
2. Open coal chute feedgate.
3. Engage pump drive PTO.
4. Slowly raise dump body.

**TAILGATE AIR KIT**

See operating instructions on valve knob.

**PREVENTATIVE MAINTENANCE PAYS!**

A frequent, periodic preventative maintenance program should be established to prevent rapid damage to spreading equipment. Proper cleaning, lubrication and maintenance will provide longer life, more satisfactory service and more economical use of the equipment.

**WARNING**

Shut off all power before performing any maintenance operation. Otherwise, you could be injured.

**WARNING**

Turn off all power, set vehicle brakes, lock engine starting switch and remove keys before getting into dump body. Tag all controls to prohibit operation. Tags should be placed, and later removed, only by the person working in the body.

**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.

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

**Service Schedule**

1. Check the hydraulic oil daily by means of dipstick. Add oil if required. Periodically inspect the hoses and fittings for leaks.

**NOTICE!**

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

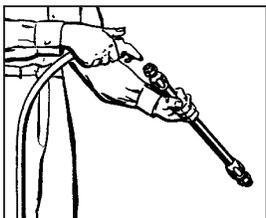
2. After first filter change, replace filter when indicator reaches Danger Zone.
3. The reservoir should be drained through drain plug (not through suction outlet), flushed, and refilled annually, or the oil should be changed if it shows any signs of breaking down under continued high-pressure operation.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

**HYDRAULIC HOSE**

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

**WARNING**

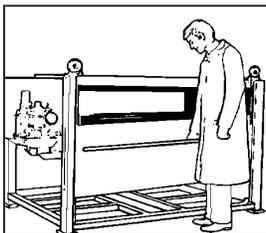
Testing should be conducted in approved test stands with adequate guards to protect the operator.

**Clean**

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

**Inspect**

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

**Test**

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

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

**Storage and Handling**

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

**TAILGATE & TAILGATE LATCH**

Pump multi-purpose grease into zerks. Oil all pivots and yoke threads monthly with heavy oil.

**GREASEABLE HINGE**

Make sure all fittings are thoroughly cleaned before lubricating. Slowly pump grease until it forms a slight bead around the seals. This bead indicates adequate lubrication and also provides additional protection against the entrance of dirt. Points to be lubricated by means of a grease gun have standard grease fittings.

**HOIST CYLINDER**

Make sure all fittings are thoroughly cleaned before lubricating. Cylinder should be lubricated by pumping grease into the zerk slowly until slight bead forms around the seals. This bead indicates adequate lubrication and also provides additional protection against the entrance of dirt. Points to be lubricated by means of a grease gun have standard grease fittings.

**FASTENERS**

Tighten all screw fasteners to recommended torques after first week of operation and annually thereafter. If loose fasteners are found at anytime, tighten to recommended torques. Replace any lost or damaged fasteners or other parts immediately upon finding such damage or loss.

**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.

**HOIST CYLINDER REMOVAL****NOTICE!**

Disconnect hoist cylinder hose and drain oil if raising body with an outside lifting device. This will let air into the cylinder, making it easier to extend the cylinder.

1. Raise body and set on body props. Secure body with suitable lifting device for added safety and stability when removing the hoist cylinder.
2. Tightly secure hoist cylinder with lifting device.
3. Disconnect hydraulic hose and drain oil if haven't already. Cap cylinder port and hose.
4. Remove upper cap blocks.
5. Remove lower cap blocks.
6. Restrain cylinder's lower and upper trunnion pins together before lifting so cylinder will not extend. Crimped steel banding may be used.
7. Remove cylinder and service as required.

Reinstall by following the directions under "Cradle & Hoist Cylinder to Truck" and "Hoist Cylinder to Dump Body" in Installation Instructions.

**NOTICE!**

The lubricant distributor and/or supplier is to be held responsible for the 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 following are the recommended procedures for selecting the proper hydraulic fluid for use in the hydraulic system. Select a major brand industrial PREMIUM QUALITY (anti-wear type) hydraulic oil to provide viscosity between 100-200 SSU at operating temperature. Premium hydraulic oils with viscosity indexes of 95 or above will provide the following temperature ranges :

INDUSTRY IDENTIFICATION VISCOSITY GRADE	OPERATING TEMPERATURE	VISCOSITY
150 SSU	122° F (50° C) 84° F (28.9° C)	100 SSU 200 SSU
225 SSU	140° F (60° C) 107° F (41.7° C)	100 SSU 200 SSU
300 SSU	150° F (66.6° C) 116° F (46.1° C)	100 SSU 200 SSU
450 SSU	165° F (73.9° C) 130° F (54.5° C)	100 SSU 200 SSU
600 SSU	182° F (83.3° C) 145° F (62.8° C)	100 SSU 200 SSU

If, because of necessity or convenience, it is desirable to use an automotive engine oil, multi-viscosity oils of SC rating (formerly MS quality) which will provide between 100-200 SSU at operating temperature can be used. These will provide proper viscosity over a wide range. For example:

SAE VISCOSITY GRADE	OPERATING TEMPERATURE	VISCOSITY
10W-30	130° F (54.5° C)	100 SSU
	100° F (37.8° C)	200 SSU
10W-40	190° F (87.8° C)	100 SSU
	140° F (60° C)	200 SSU

The above recommendations cover the normal system operating temperatures. For system temperatures above or below those shown in the chart above, contact the Product Support Department of Highway Equipment Company. For additional information contact your Highway Equipment Company dealer.

**PRESSURE GUN LUBRICANT**

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



**LUBRICATION CHART**

The dump body should be regularly lubricated with the lubricants recommended in this manual in accordance with the following chart:

LOCATION	PLACES	METHOD	FREQUENCY
<b>Pump Drive - Transmission PTO</b>			
Slip Yoke	1	Grease Gun	Weekly
Universal Joint	2	Grease Gun	Monthly
<b>Pump Drive - Crankshaft PTO</b>			
Sliding Spline	1	Grease Gun	Weekly
Universal Joint	2	Grease Gun	Monthly
<b>Hydraulic System</b>			
Reservoir	1	Check Daily; Change Annually	
Filter	1	Check Daily; Change when indicator is red	
<b>Tailgate</b>			
Hinge Pins	2	Oil	Monthly
Latch Pivots	2	Grease Gun	Monthly
Latch Yoke Threads	2	Oil	Monthly
<b>Hoist / Hinge</b>			
Zerks	2	Grease Gun	Weekly
Hinge Point Fittings	2	Grease Gun	Daily
Hoist Mount Fittings	2	Grease Gun	Every 50 Hours of Operation

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

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

LUBRICATION CHART



**TROUBLESHOOTING**

- Symptom: Hoist will not raise body. See reasons 1, 2 & 3.
- Symptom: Hydraulic oil overheats. See reasons 1, 4, 5 & 6.

<u>Reason:</u>	<u>Correction:</u>
1. Hydraulic oil level low.	Add hydraulic oil to reservoir up to "Full" mark.
2. Hydraulic Pump is not rotating.	<ol style="list-style-type: none"> <li>1. PTO is disengaged. Shift into engagement.</li> <li>2. Drive line has failed. Repair or replace.</li> <li>3. Key in pump shaft has failed. Replace key.</li> <li>4. U-joint pin or key has failed. Replace pin or key.</li> </ol>
5. Worn pump.	Replace pump.
6. Excessive oil is being pumped.	<ol style="list-style-type: none"> <li>1. PTO percentage too high. Change PTO to smaller percentage or use smaller pump.</li> <li>2. Pump is too large. Do not exceed 25 GPM pumping rate. Change to smaller pump or use smaller percentage PTO.</li> <li>3. Pressure drop in control valve is sufficient to run lightly loaded conveyor motor. Shut off pump drive by disengaging PTO shaft.</li> </ol>
4. Improper or deteriorated hydraulic oil.	Replace hydraulic oil with proper specification oil and replace filter.
5. Pinched or obstructed hose, hydraulic line or fitting.	Clear obstruction or replace part. Straighten kinked hoses.

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

TORQUES CHART



Order from the AUTHORIZED DEALER in your area.

1. Always give the pertinent model and serial number.
2. Give part name, part number and the quantity required.
3. Give the correct address to where the parts are to be shipped, and the carrier if there is a preference.

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

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

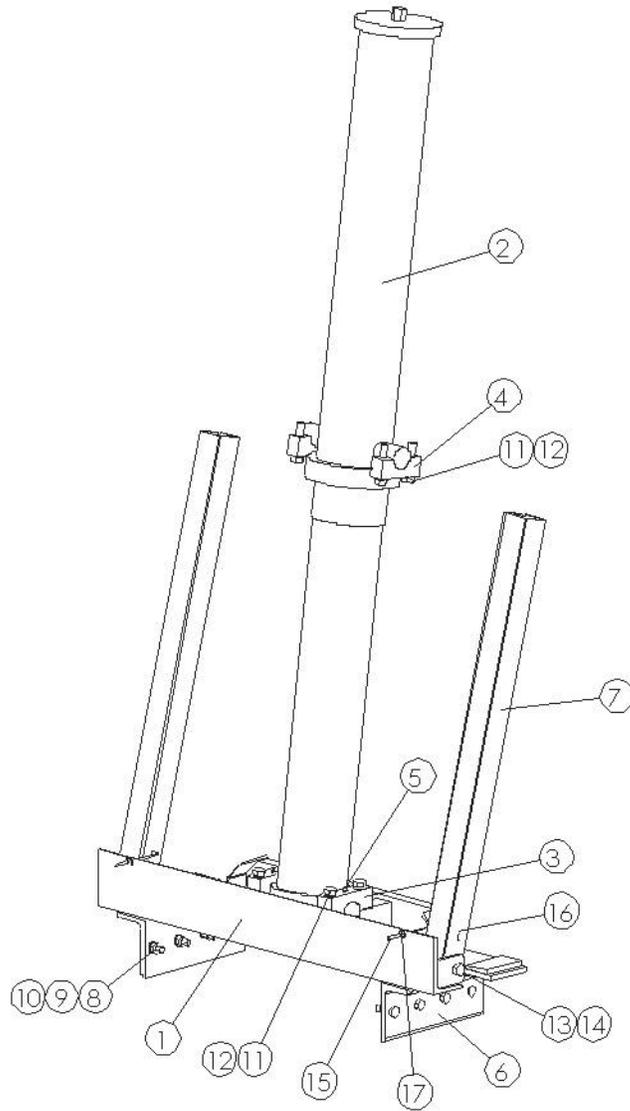
No responsibility is assumed for delay or damage to merchandise while in transit. Our responsibility ceases upon delivery of shipment to the transportation company from whom a receipt is received showing that shipment was in good condition when delivered to them, therefore, claims (if any) should be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

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

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

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

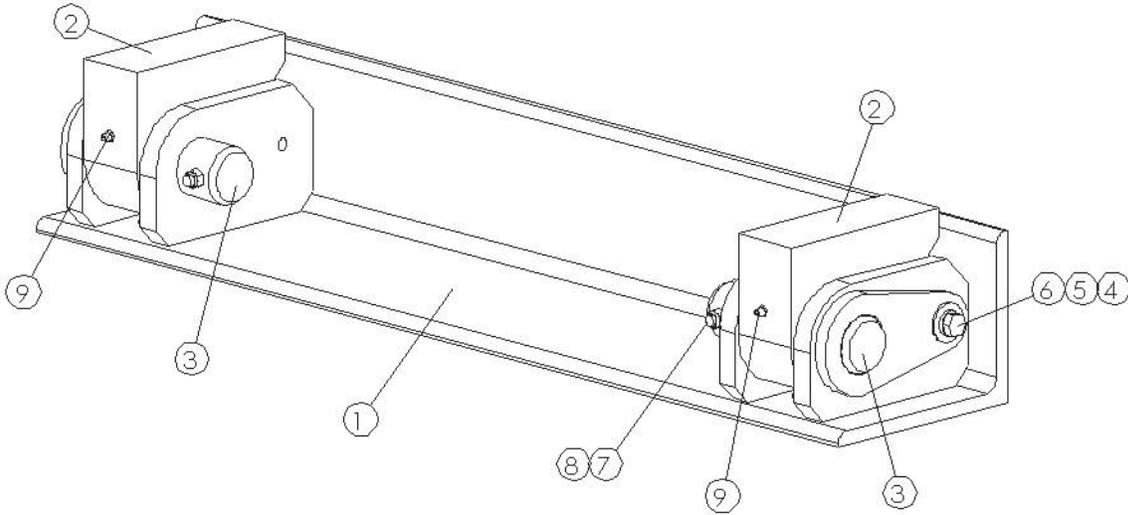
The parts listed under the different steel types (CS, 409 SS and 304 SS) are for that type of unit and do not necessarily mean the part is made of that type of steel.



**HOIST CONTINUED**

ITEM	PART NO.		DESCRIPTION	QTY
	Single	Double		
1	300773-AA	300773-AA	Cradle – Weldment 4”-5” Cylinder	1
	300773-AB	300773-AB	Cradle – Weldment 6” Cylinder	1
2	300334-AC	300359-AC	Cylinder – 13’	1
	300334-AD	300359-AD	Cylinder – 14’	1
	300334-AE	300359-AE	Cylinder – 15’	1
	300334-AF	300359-AF	Cylinder – 16’	1
3	300649-AC	300649-AC	Block – Cap Lower 4”-5” Cylinder	2
	300649-AD	300649-AD	Block – Cap Lower 6” Cylinder	2
4	300649-AA	300649-AA	Block – Cap Upper 4”-5” Cylinder	2
	300649-AB	300649-AB	Block – Cap Upper 6” Cylinder	2
5	34874	34874	Zerk – Grease	4
6	300769	300769	Angle – 6 x 4 x 1/2 x 14	2
7	300777	300777	Prop – Body Tube	2
8	89526	89526	Cap Screw – 5/8 x 2	8
9	20716	20716	Washer – Lock 5/8	8
10	89591	89591	Nut – Hex 5/8	8
11	300644	300644	Cap Screw – 5/8 x 3-1/2 4”-5” Cylinder	8
	300645	300645	Cap Screw – 3/4 x 3-1/2 6” Cylinder	8
12	20716	20716	Washer – Lock 5/8 4”-5” Cylinder	8
	20717	20717	Washer – Lock 3/4 6” Cylinder	8
13	300668	300668	Cap Screw – 3/4 x 5	2
14	20683	20683	Nut – Lock 3/4	2
15	300774	300774	Latch – Body Prop	2
16	20805	20805	Pin – Cotter 1/16 x 1/2	2
17	300763	300763	Nut – Flange 1/4	2

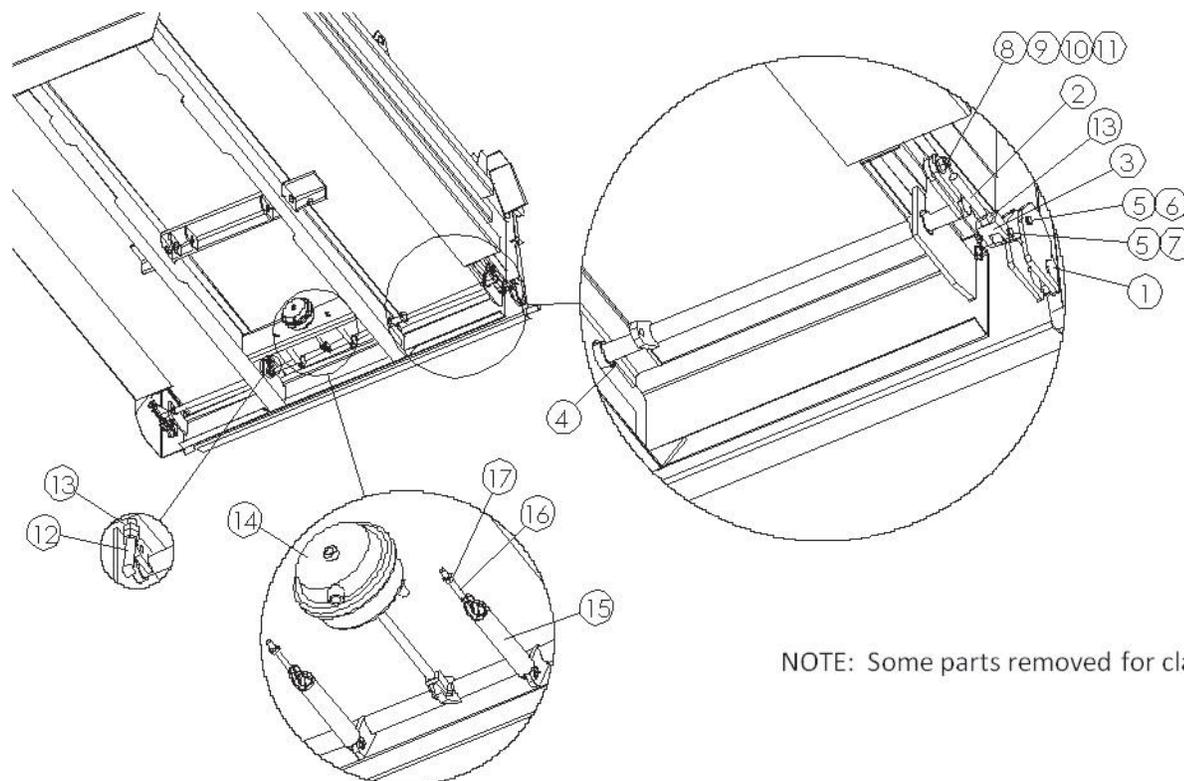




<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
	300764	Hinge – Assembly Greaseable	
1	88608	Hinge – Weldment Angle	1
2	300399	Block – Hinge Greaseable	2
3	300767	Pin – Weldment Hinge	2
4	20695	Washer – Flat 1/2	2
5	20714	Washer – Lock 1/2	2
6	20129	Cap Screw – 1/2 x 1-1/2	2
7	20073	Cap Screw – 3/8 x 2-1/2	2
8	20678	Nut – Lock 3/8	2
9	6072	Zerk – Grease	2

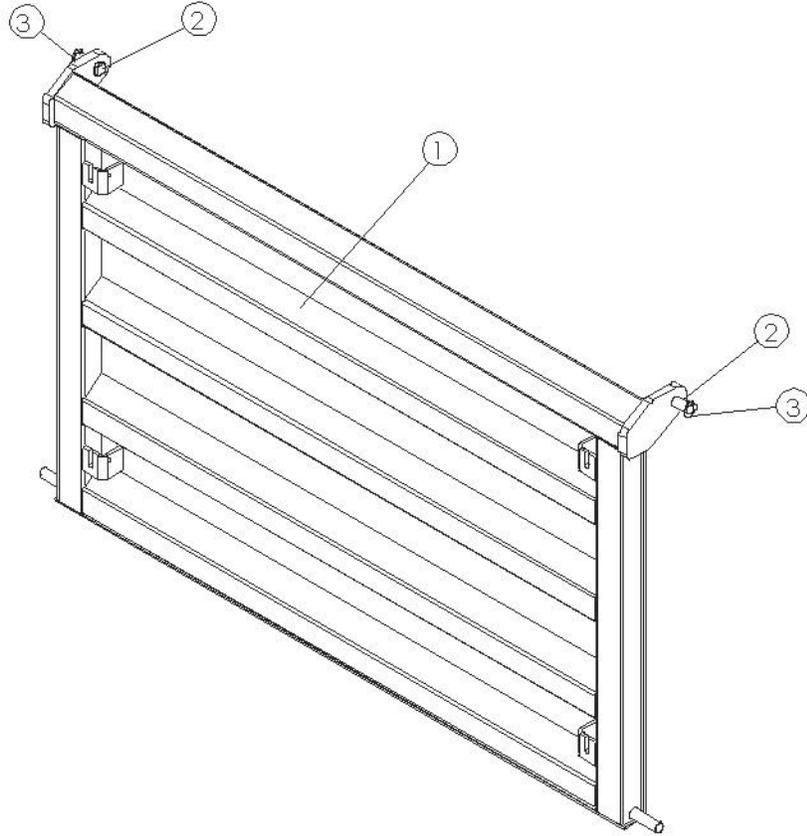
PARTS LIST

**TAILGATE LATCH**



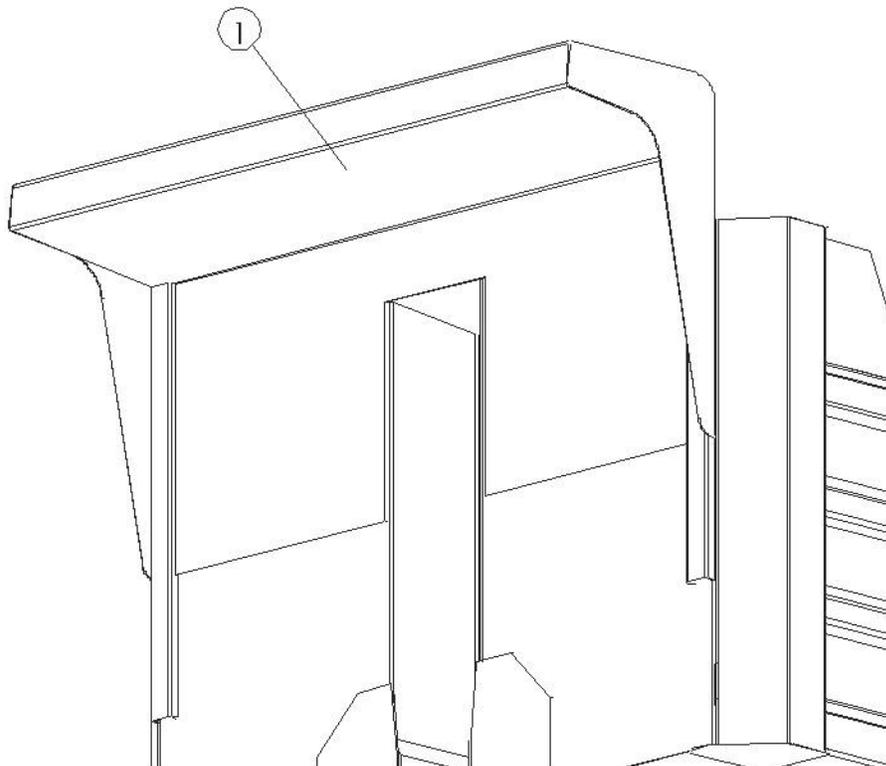
NOTE: Some parts removed for clarity.

<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1	300935	Latch – Tailgate	2
2	300960	Yoke – Latch Driver	2
3	88771	Yoke – Driven Latch	2
4	6072	Zerk – Grease	4
5	21024	Pin – Clevis 1/2 x 2-1/4	4
6	20817	Pin – Cotter 1/8 x 1	2
7	40576	Pin – Hair 2-9/16 x 1/8	2
8	20129-X1	Cap Screw – 1/2 x 1-1/2 GR8	2
9	20695	Washer – Flat 1/2	2
10	20680	Nut – Lock 1/2	2
11	300971	Spacer – Latch Pivot	2
12	21398	Screw – Set 5/8 x 5	2
13	20648	Nut – Hex 5/8	4
14	307024	Modification - Air (tailgate)	1
15	88604	Spring – Extension	2
16	88773	Eyebolt – Tension	2
17	20678	Nut – Lock 3/8	2

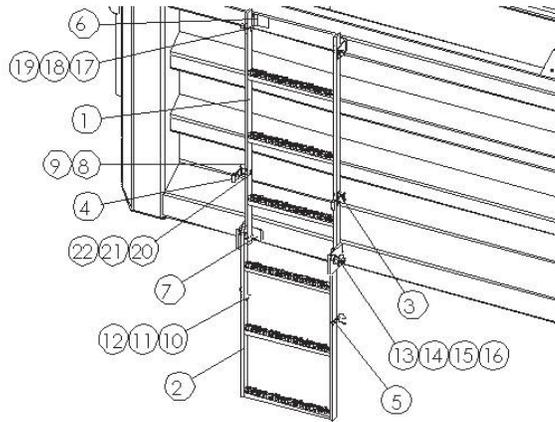


<u>ITEM</u>	<u>PART NO.</u>			<u>DESCRIPTION</u>	<u>QTY</u>
	Grade 50	SS	201		
1	300877-AA	300878-AA	309859-AA	Tailgate – Weldment 44”	1
	300877-AD	300878-AD	309859-AD	Tailgate – Weldment 44” Heavy Duty	1
	300877-AB	300878-AB	309859-AB	Tailgate – Weldment 52”	1
	300877-AE	300878-AE	309859-AE	Tailgate – Weldment 52” Heavy Duty	1
	300877-AC	300878-AC	309859-AC	Tailgate – Weldment 60”	1
	300877-AF	300878-AF	309859-AF	Tailgate – Weldment 60” Heavy Duty	1
2	88780	88780	88780	Pin – Clevis 1-1/4 x 4	2
3	88824	88824	88824	Pin – Lynch 1/4 x 1-1/4	2
4	--	*305896-x1	*305896-x1	Tailgate - Hook Modif. 304	1

\* - Not Shown



<u>ITEM</u>	<u>PART NO.</u>			<u>DESCRIPTION</u>	<u>QTY</u>
	CS	SS	201		
1	301046-AA	300924-AA	309538-AA	Cab Shield - Weldment 78" x 16"	1
	301046-AB	300924-AB	309538-AB	Cab Shield - Weldment 78" x 22"	1
	301046-AG	300924-AG	309538-AG	Cab Shield - Weldment 78" x 30"	1
	301046-AC	300924-AC	309538-AC	Cab Shield - Weldment 78" x 40"	1
	301046-AD	300924-AD	309538-AD	Cab Shield - Weldment 84" x 16"	1
	301046-AE	300924-AE	309538-AE	Cab Shield - Weldment 84" x 22"	1
	301046-AH	300924-AH	309538-AH	Cab Shield - Weldment 84" x 30"	1
	301046-AF	300924-AF	309538-AF	Cab Shield - Weldment 84" x 40"	1

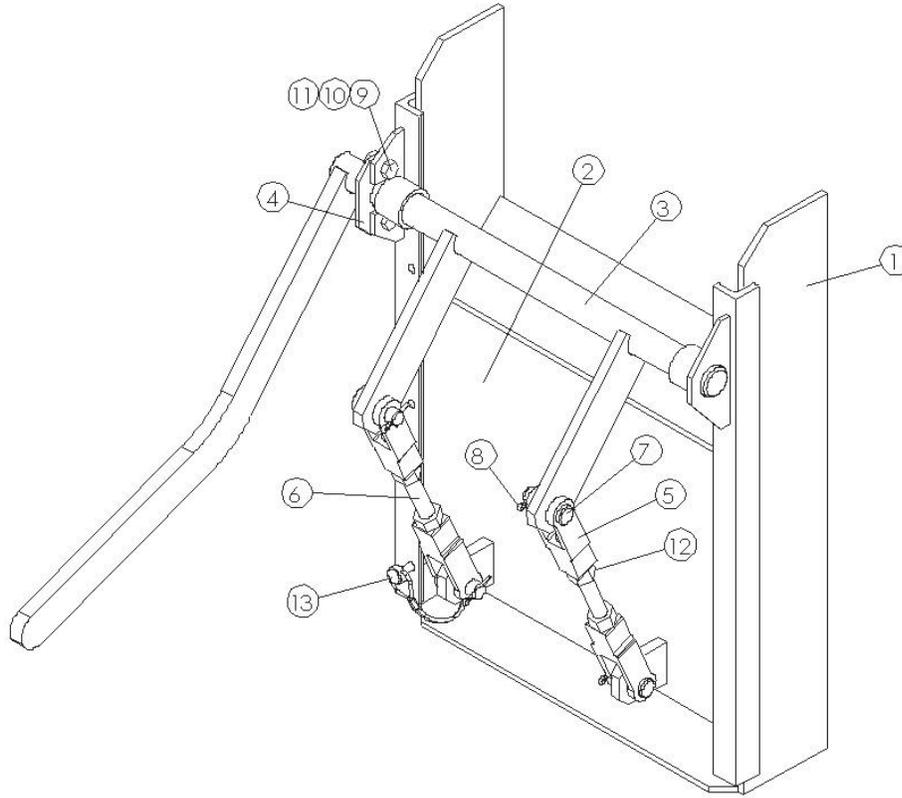


ITEM	PART NO.		DESCRIPTION	QTY
	CS	SS		
	300807	300810	Ladder – Kit Inspection 36” Sides	
	300808	300811	Ladder – Kit Inspection 44” Sides	
	300809	300812	Ladder – Kit Inspection 52” Sides	
1	300801	300804	Ladder – Weldment Upper 36” Sides	1
	300802	300805	Ladder – Weldment Upper 44” Sides	1
	300803	300806	Ladder – Weldment Upper 52” Sides	1
2	89044	300456	Ladder – Weldment Lower	1
3	73344	73344	Bracket – Anchor	2
4	73343	73343	Hook – Rubber	2
5	150043	150043	Bracket – Hood	2
6	301006	300950	Angle – Mount Ladder	2
7	301012	300997	Angle – Mount Ladder	2
8	20007	42448	Cap Screw – 1/4 x 1-1/2	2
9	20676	42034	Nut – Lock 1/4	2
10	20572	44483	Screw - #10 x 3/4	4
11	20709	44451	Washer – Lock #10	4
12	20641	47295	Nut – Hex #10	4
13	20366	36411	Bolt – Carriage 1/2 x 1-1/2	2
14	88638	88638	Tube – 3/4 x 3/8	2
15	20695	36426	Washer – Flat 1/2	2
16	20680	39016	Nut – Lock 1/2	2
17	20129	36539	Cap Screw – 1/2 x 1-1/2	4
18	20714	36422	Washer – Lock 1/2	4
19	20646	36416	Nut – Hex 1/2	4
20	20035	300458	Cap Screw – 5/16 x 7/8	2
21	20711	36419	Washer – Lock 5/16	2
22	20643	36413	Nut – Hex 5/16	2

PARTS LIST

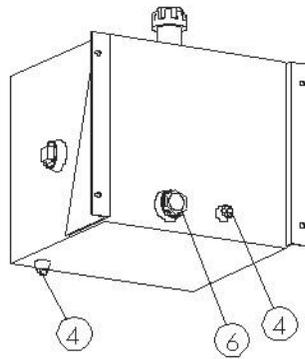
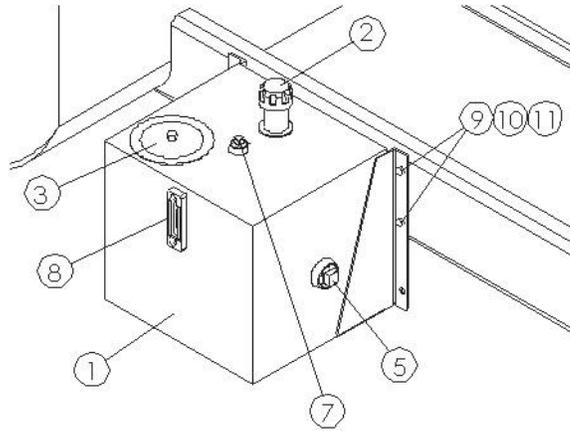


COAL CHUTE



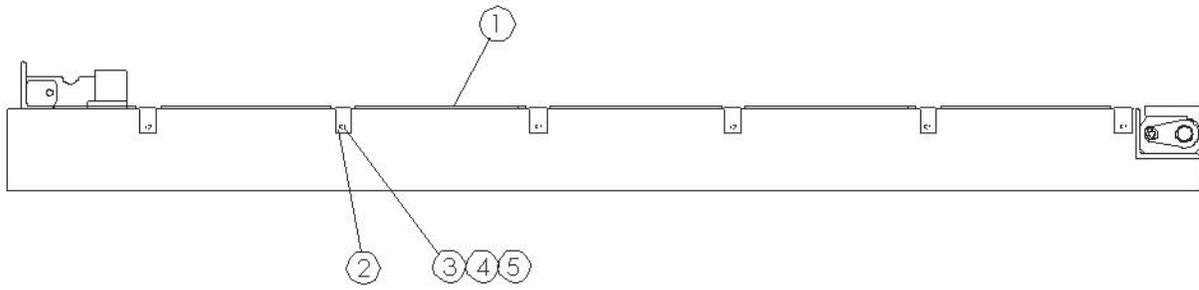
ITEM	PART NO.		DESCRIPTION	QTY
	CS	SS		
	301135	301136	Chute – Coal Assembly	
1	301131	301132	Frame – Coal Chute Weldment	1
2	301109	301110	Door – Coal Chute Weldment	1
3	301133	301133	Handle – Pivot Weldment	1
4	88650	88650	Retainer – Spill Shield	1
5	9342	9342	Yoke – Female	4
6	301137	301137	Rod – Chute Linkage	2
7	21027	21027	Pin – Clevis 1/2 x 1-1/2	4
8	20817	20817	Pin – Cotter 1/8 x 1	4
9	20034	56858	Cap Screw – 5/16 x 3/4	2
10	20711	36419	Washer – Lock 5/16	2
11	20643	36413	Nut – Hex 5/16	2
12	20663	20663	Nut – Hex 1/2-20 NF	4
13	85359	85359	Pin – Snap Safety	1

RESERVOIR - FRAME MOUNT

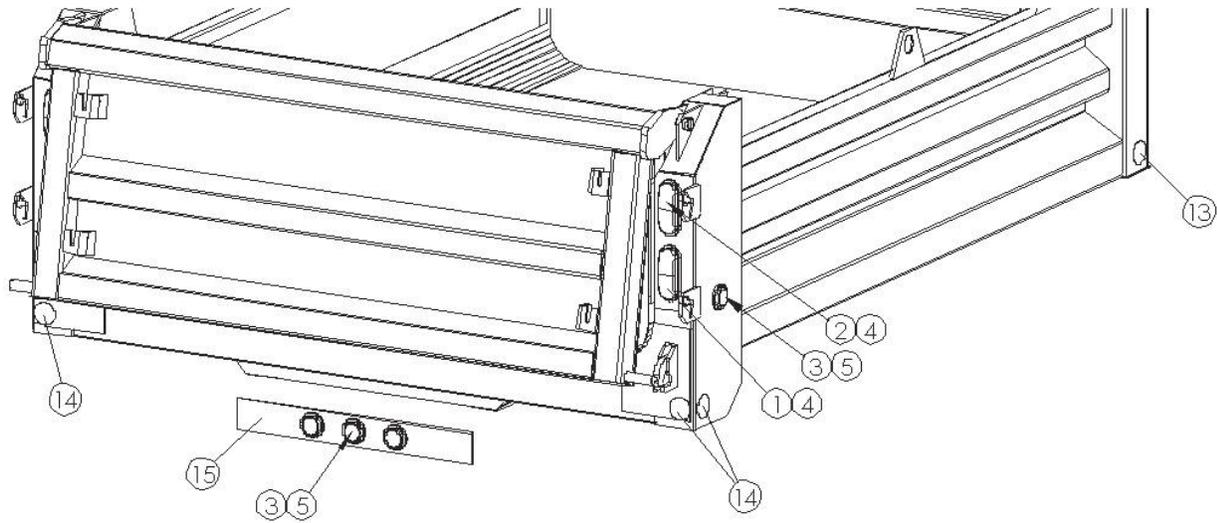


ITEM	PART NO.	DESCRIPTION	QTY
	96997	Reservoir – Assembly Frame Mount	
1	96999	Reservoir – Frame Mount	1
2	96995	Filler – Cap Breather	1
3	96996	Cover – Panel	1
4	6033	Plug – Pipe 3/4	2
5	6321	Plug – Pipe 2	2
6	96994	Filter – Tank External	1
7	6035	Plug – Pipe 1-1/4	1
8	38575	Gauge – Sight & Temperature	1
9	20129-X1	Cap Screw – 1/2 x 1-1/2 GR8	4
10	20695	Washer – Flat 1/2	4
11	20680	Nut – Lock 1/2	4
	96992	Hardware – Kit, Includes 5-7	

PARTS LIST



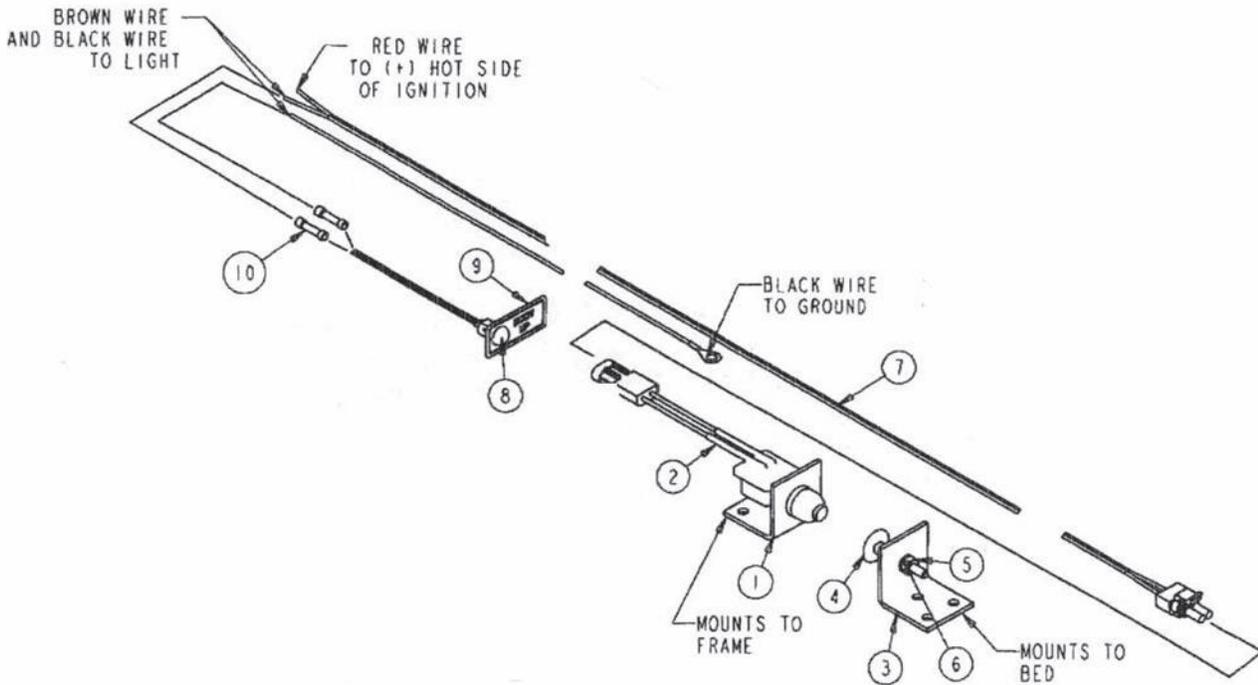
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1	89974	Pad – Mount	AR
2	89977	Angle – Mount	AR
3	20068	Cap Screw – 3/8 x 1-1/4	AR
4	20712	Washer – Lock 3/8	AR
5	20644	Nut – Hex 3/8	AR
AR - As Required			



## LIGHTS CONTINUED

<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
	88903	Light – Kit Incandescent, 2 Rear Lights/Side	
	300870	Light – Kit Incandescent, 1 Rear Light/Side	
	88904	Light – Kit LED	
1	89988	Light – Red Oval	2
	97633	Light – Red Oval LED	2
2	89989	Light – Yellow Oval, Used with 88903 only	2
	97634	Light – Yellow Oval LED	2
3	89990	Light – Red Round	5
	97635	Light – Red Round LED	5
4	89991	Grommet – Oval	AR
5	89992	Grommet – Round	5
6	* 89993	Junction Box	1
7	* 89994	Fitting – Compression	1
8	* 89995	Fitting – Compression	2
9	* 89996	Fitting – Compression	1
10	* 89997	Harness	1
11	* 89998	Harness – RH, 2 Rear Lights/Side	1
	* 300867	Harness – RH, 1 Rear Light/Side	1
12	* 89999	Harness – LH, 2 Rear Lights/Side	1
	* 300868	Harness – LH, 1 Rear Light/Side	1
13	89978	Reflector – Yellow	2
14	89979	Reflector – Red	4
15	88688	Bar – 3-Light Cluster	1
16	* 97636	Adapter – LED only	1
17	* 300869	Harness – Side Marker, Used with 300870 only	1

\* - Not Shown

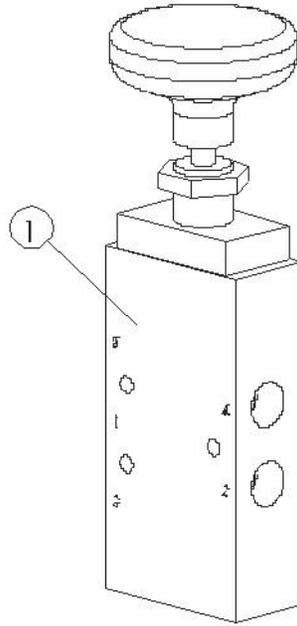


<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
	97138	Indicator – Kit Body-Up Switch, Includes	1
1	NSS	Bracket – Frame	1
2	NSS	Switch – Body-Up	1
3	NSS	Bracket – Stop	1
4	NSS	Bolt – Elevator	1
5	NSS	Nut	1
6	NSS	Washer	1
7	NSS	Harness – Wiring	1
8	NSS	Light – Indicator	1
9	NSS	Decal – Body-Up	1
10	NSS	Connector	2

NSS - Not Serviced Separately

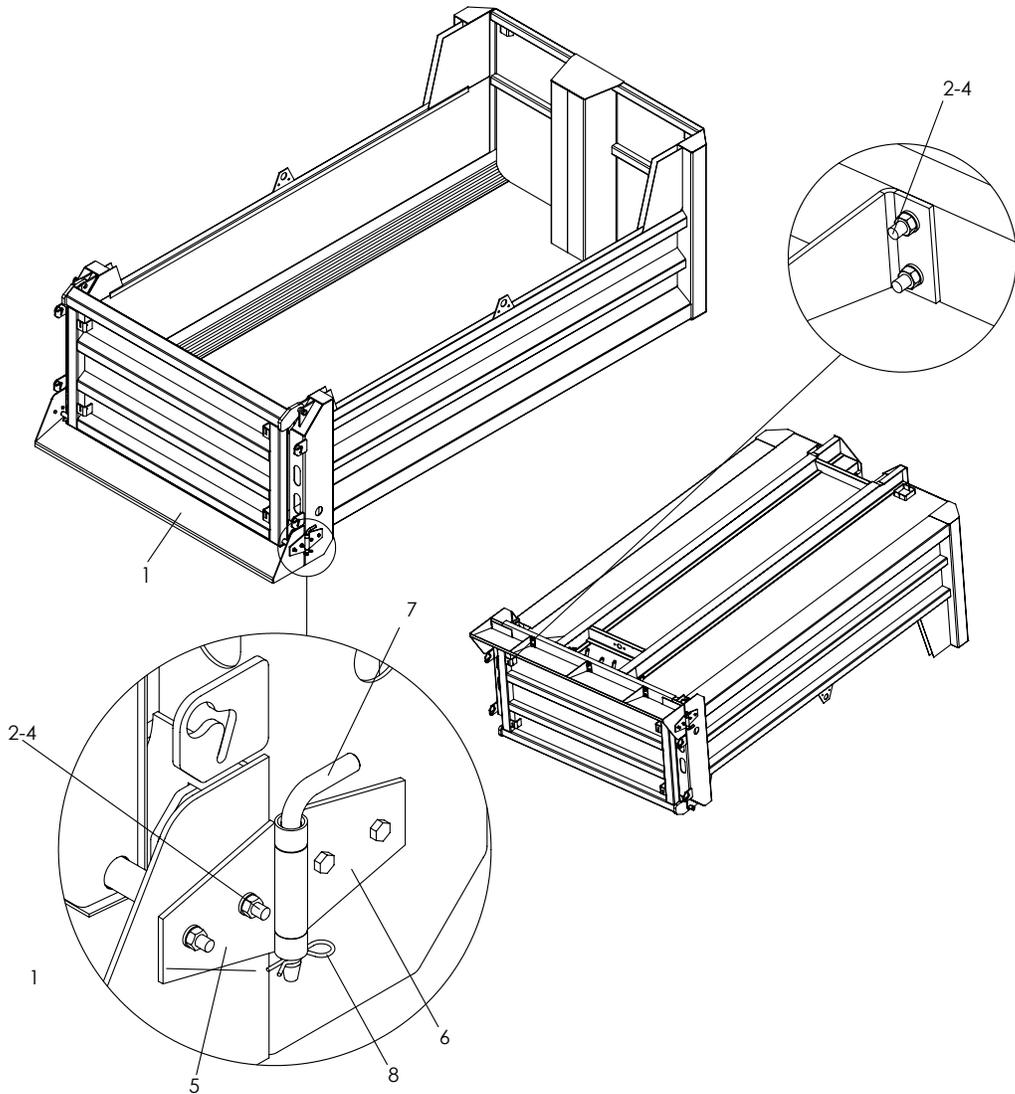
PARTS LIST

**TAILGATE AIR KIT**



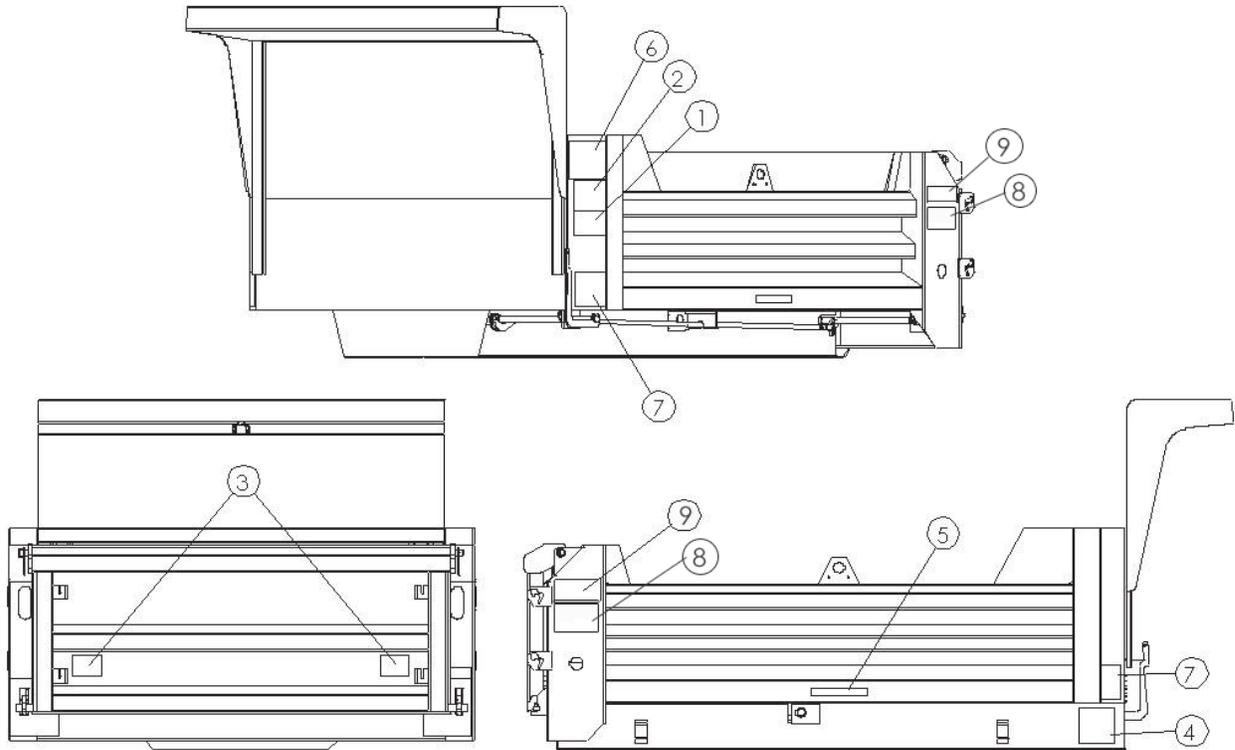
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1	96691	Valve – Air, 4-Way 3-Position	1
2	* 96692	Install – Kit Hose & Fittings, Includes	1
	NSS	Tube – Nylon 100'	1
	NSS	Elbow – 90°	2
	NSS	Bushing - Reducer	2
	NSS	Elbow – 90° Tube	2
	NSS	Elbow – 90° Swivel	1

NSS - Not Serviced Separately



<u>ITEM</u>		<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
	CS	SS		
1	305817	--	Lip - Wldmt Asphalt 8"	1
	--	309342	Lip - Wldmt Asphalt 12"	1
2	20129	36539	Cap Scre w- 1/2-13NC x 1-1/2	14
3	20714	36422	Washer - Lock 1/2	14
4	20646	36416	Nut - Hex 1/2-13NC	14
5	23236	23236-X1	Mount - Quick Disconnect	2
6	23244	23244-X1	Mount - Quick Disconnect	2
7	23248	23248-X1	Rod - Lock Pin Quick Disconnect	2
8	40576	36429	Pin - Hair	2

PARTS LIST



**IMPORTANT!** Install “Danger – Crushing Hazard” decals (PN 96704) on front of both truck frame rails, in clear view. Install “Caution – Operation Safety” (PN 96716) and “Caution – Raised Body” (PN 96715) decals in clear view in truck cab.

ITEM	PART NO.	DESCRIPTION	QTY
1	321	Decal – Hazardous Material	1
2	301088	Decal – Slipping Hazard	2
3	366	Decal – Moving Part Hazard	2
4	39138	Decal – High Pressure Hazard	1
5	39200	Decal – Slipping Hazard	2
6	150034	Decal – Operation & Maintenance	1
7	96712	Decal – Danger Crushing Hazard	2
8	301084	Decal – Hi-Way PS (black)	2
	307180	Decal - Hi-Way PS (white)	
9	39870	Decal - Hi-Way (black)	2
	90639	Decal - Hi-Way (white)	
9	* 96704	Decal – Danger Crushing Hazard, On Front Truck Rails	2
10	* 96715	Decal – Caution Raised Body, In Truck Cab	1
11	* 96716	Decal – Caution Operation Safety, In Truck Cab	1
12	* 8665	Decal – Important Hydraulic Oil Only, On Reservoir	1

\* - Not Shown