AL2

OPERATOR MANUAL

PETERSEN INDUSTRIES, INC. | 4000 SR 60 WEST, LAKE WALES, FL 33859

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PART 1: SAFETY PRECAUTIONS

Introduction

Read this manual before operating or working around the loader. It is important that all workers understand the safety and operational requirements of the loader as death or serious injury can result from improper use of the loader. It is the operator's responsibility to control the loader with skill, good judgment, and caution. Following all safety procedures helps to avoid accidents, prevent unnecessary damage to equipment, and ensures safety of the crew.

It is the operator's responsibility to control the loader with skill, good judgment, and caution. Do not allow untrained personnel, even on a temporary basis, to operate this equipment. Always keep children, visitors, and untrained personnel a safe distance from the equipment.

READ, **UNDERSTAND**, and **FOLLOW** the following **Safety Messages**. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in this manual and in the Safety Messages on the implement. Always follow the instruction in this manual and use common sense to avoid hazards

Training

It is essential that all operators read and understand this manual. Before using the loader, operators must be trained by an experienced loader operator. They must be thoroughly familiar with the operation of controls, the correct operating procedures, maximum lifting capacities, and safety precautions of the loader.

The health and safety of each crew member is of primary importance. Consequently, each member has an obligation to himself and his fellow workers to make sure that only safe operating procedures are followed. All operating regulations recommended by the vehicle manufacturer, employer, as well as municipal, state and federal agencies must also be observed. The operating procedures described in this manual are Petersen Industries' recommendations and do not necessarily cover all employer and government regulations. Each operator is responsible for understanding and observing all federal, state, and local regulations pertaining to the operation of this loader.

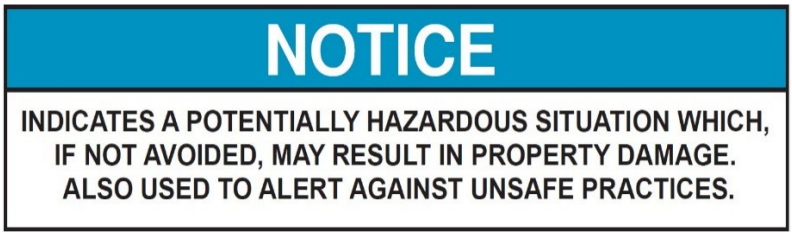
Each crew member must receive instructions on the proper function of this machine and remain alert to spot any abnormalities or malfunctions. This will help prepare each member to recognize if it is not operating properly.

Safety Messaging

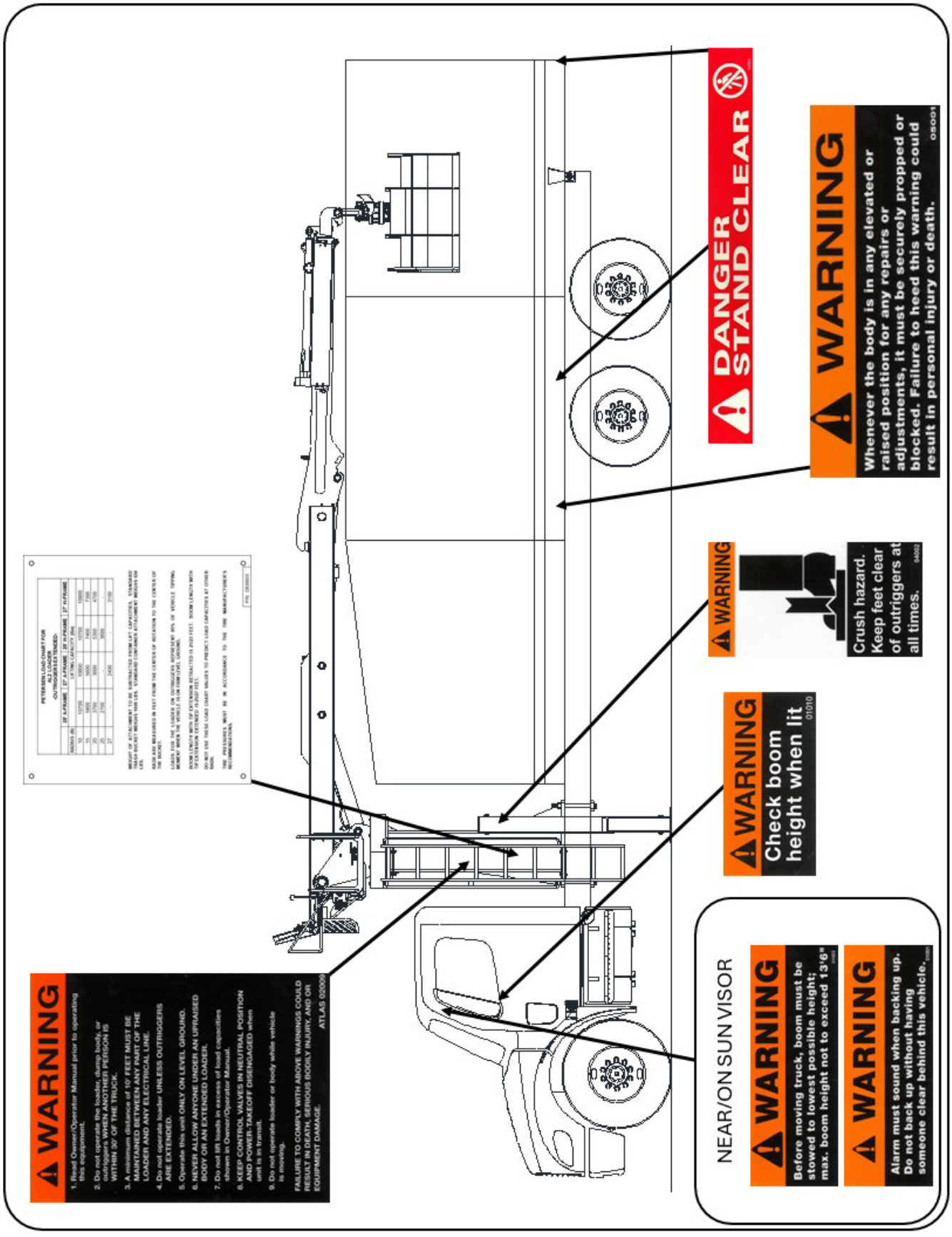
There are various safety messages throughout this manual which utilize symbols and safety words to call out unsafe practices or conditions. Your loader also has required safety decals that are designed to alert those operating, working around, or performing maintenance on the loader to certain safety hazards. The safety decals are used to show the consequence of human interaction with a hazard in terms of:

- **The degree of severity**
  MINOR injury, SEVERE injury, or POSSIBLE death
- **The probability of severity**
  WILL result in, COULD result in injury

There are four classifications of safety messages. The severity of each classification is highlighted through signal words, colors, and symbols. Here is each classification of safety message and what they indicate:

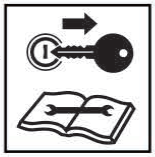


Watch for any of these placards and use the appropriate steps to ensure your safety, and the safety of those around you during the operation, maintenance, or transport of the loader.

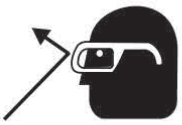


Safety Decal Locations

Pictographs are also used throughout this manual to help draw visual attention to safety issues to avoid, or best practices to promote safety while operating the loader. Here are some examples of the types of pictographs you will find in this manual.

SAFETY HAZARD	SAFETY AVOIDANCE	SAFETY PREVENTION
Pictograph surrounded by a triangle indicates a Safety Hazard that must be avoided. *Example:*  Equipment contacting overhead electrical lines	Pictograph in a circle or inside a box indicates an avoidance procedure that should be followed to prevent injuries. *Example:*  Always shut off engine and remove key before working on equipment.	A circle with a slash through it indicates an action that is prohibited. *Example:*  No Smoking

Always wear protective clothing and personal safety devices issued to you or required by job conditions when operating or working on this loader. Requirements include but are not limited to; wearing a hard hat, safety shoes, goggles, face shield, or safety glasses (with side shields that comply with ANSI Z87 standards), protective gloves, hearing protection, and reflective clothing.

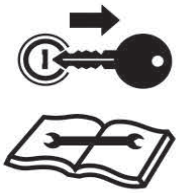
					
Wear Safety Glasses to Comply with ANSI Z87	Wear Hard Hat	Wear Safety Shoes	Wear Hearing Protection	Wear Protective Gloves	Wear Safety Reflective Vest

WARNING

NEVER WEAR LOOSE CLOTHING OR JEWELRY WHEN WORKING ON OR AROUND THE EQUIPMENT. SUCH ITEMS CAN CATCH ON CONTROLS OR BE DRAWN INTO OTHER PARTS OF THE LOADER.

Safe Operating Practices

Safe operation of the loader is everyone's responsibility and becomes paramount during the operation and working around the loader. As the operator, it is your responsibility to ensure your safety, as well as the safety of others. These are some **requirements to ensure safety of the entire crew:**

				
Read and Understand Operator's Manual	DO NOT USE DRUGS or ALCOHOL before or while operating equipment	Always shut off engine and remove key before working on equipment	Always install Debris Body and tail gate props before working under equipment	Always wear your seatbelt

Always maintain three-point contact with the machine during entry and exit of the cab or operator's station. Use provided hand bars and never grab control levers or the steering wheel when mounting or dismounting the machine. Always face the machine when mounting or dismounting and do so only after the truck and all moving parts have stopped completely.

		
ALWAYS maintain three points of contact when mounting & dismounting from the cab and operator's station of the loader.	Position outriggers before loading to prevent truck from tipping over.	ALWAYS watch for overhead obstructions or wires when operating boom or raising body. Keep **10 feet minimum distance** from any power lines.

High-Pressure Fluid Safety

Ensure that all hydraulic hoses, lines, and fittings are tight and in good condition and do not operate the loader if there are oil or fuel leaks. Have hydraulic hoses replaced or tested by a qualified service facility if there is a suspected leak.

DANGER

HIGH-PRESSURE FLUID LEAKS CAN BE INVISIBLE. IF A LEAK IS SUSPECTED, USE PAPER OR CARDBOARD TO INSPECT LEAKS. DO NOT USE BODY PARTS OR HANDS TO LOCATE A POTENTIAL LEAK.

Keep hands and all body parts away from suspected pin holes in hydraulic lines or any areas ejecting hydraulic fluid. High-pressure hydraulic fluid can be invisible and will impregnate skin. If injured, seek immediate medical attention. The fluid will need to be surgically removed from the body. Failure to seek proper medical attention will result in serious injury or death.

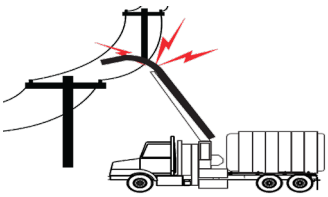
			
High pressure oil penetrating skin.	High pressure oil eroding skin.	Using cardboard to check for oil leaks.	Tank contents under pressure. Allow oil to cool before slowly removing cap.

Always disengage the PTO, shut off the engine, and wear appropriate PPE whenever investigating a potential hydraulic leak. Use a piece of cardboard when trying to locate a hydraulic leak. **DO NOT** use your hand, or any other body part.

Power Lines/Electrical Hazard Safety

Always survey the work site for any potential power lines before performing any function. If power lines are present, follow all requirements for operating mobile equipment around power lines. Extreme care must be used to prevent electrocution. Always ensure that the appropriate power or utility company has de-energized the lines before operating the loader.

WARNING



Contacting power lines will result in death or serious injury. **DO NOT** allow any part of the machine within 10 feet of power lines or electrical shock can result.

If shutting down the line is not an option, ask if the utility company can install insulation over the lines for the duration of the time you will be operating in the area. A minimum safe distance of 10 feet must be maintained. Do not allow any team member to approach or carry any conductive object closer than 10 feet to any potentially energized power line.

PART 2: DAILY INSPECTIONS

Daily inspections are a vital step in identifying and limiting potential hazards that might arise from improperly functioning equipment. Operators should never take another person's word but should always personally check the equipment each day before use to ensure safe operation.

The following **daily inspections** should be made prior to using the loader:

- Perform all functions of a CDL Class-B, pre-trip inspection of the truck.
- Inspect the battery terminals for corrosion.
- Check the back-up alarm. The backup alarm MUST always sound when the transmission is in Reverse (R).
- Verify that the boom-up alarm sounds when the boom is set above the vehicle's pre-set travel limit.
- If your unit is equipped with any additional alarms or warning lights (outriggers, body dump, etc.) check these items for proper operation.
- Visually inspect the PTO support bracket for cracks, damage, or loose fasteners.
- Check the hydraulic system for puddles of hydraulic fluid or lubricating oil under the chassis, any outrigger which may have crept down, or any signs of damage or improper maintenance. Hydraulic hoses should be free from cuts and abrasions and there should be no evidence of binding or leaks at connections.
- Ensure outriggers are fully retracted and open bucket is resting on the body floor. If the body contains debris, the bucket should be open and resting on the load.
- On top-seat models, check the operator-station seat belt safety switch for proper function.
- Check the load-holding valves on the main boom cylinder, tip boom cylinder, tip extension cylinder, and each cylinder that raises or lowers the outriggers.
- Perform the chassis manufacturer's recommended pre-trip inspections.

Perform a complete walk-around inspection of the truck, looking for any damage, leaks or unsafe conditions. Any insufficiencies found during this inspection must be corrected prior to use of the loader.

⚠ WARNING

DO NOT OPERATE THE LOADER UNDER ANY CIRCUMSTANCE IF THERE IS REASON TO BELIEVE THE UNIT IS BROKEN OR MALFUNCTIONING. ANY ATTEMPT TO USE OR MOVE THE BROKEN OR MALFUNCTIONING UNIT COULD RESULT IN SERIOUS BODILY INJURY OR DEATH.

PART 3: SAFETY DEVICES

Operator Station Safety Switch (top-seat models only)

The seat belt is to be worn whenever the operator is seated in the top-seat operator's station and during all operations of the loader or outriggers. The truck must never be moved while someone is seated in the operator's station.

To prevent accidental movement of the loader or outriggers while an operator enters the operator's station, the Power-Take-Off (PTO) will remain off until the operator is seated in the control station and the operator station safety switch is engaged. The safety switch is designed to allow PTO operation only when the operator's presence is detected in the operator's seat. The loader must not be used if the switch has been bypassed or has failed in the "on" state.

The function of the switch can be easily and safely tested by an operator. With the PTO engaged and the engine throttled up, disconnect the seat belt and rise out of the operator's seat. The PTO should disengage and the engine throttle down. If the PTO and engine do not respond accordingly, have the switch repaired immediately by a qualified technician.

Load-Holding Valves

Load-holding valves are a key safety component of the loader's hydraulic system. The valves are plumbed directly onto the main boom lift cylinder, tip boom cylinder, tip boom extension cylinder, and the outrigger down cylinders. These valves are designed to support the load by preventing any unwanted transfer of hydraulic fluid in, or out of the cylinder. They prevent the cylinder from moving until sufficient hydraulic pressure is applied to the release port of the valve to allow the load to be lowered. These valves provide hose rupture protection as well as prevent leak-down if the control valves are approaching the end of their service life.

To test the function of a specific load-holding valve, raise the component that is being tested (the main boom for example) so that there would be room for gravity to lower the component. Then, with the PTO off, attempt to move that component with its joystick, foot pedal, or lever. If the load moves, the load-holding valve is not working properly. Perform this test for each cylinder listed above.

The main boom and tip boom cylinders have load-holding valves for one direction only, whereas the tip boom extension cylinder has load-holding valves for both directions of movement. Test each direction of the tip boom extension cylinder with the tip boom angled downhill so gravity would cause the load to move if the valves were not present. To test each outrigger load-holding valve, extend the outrigger foot pads down until the loader noticeably lifts. This will make it noticeable if the cylinder allows the loader to lower during the PTO-off test.

Note: If a load-control valve malfunctions, do not attempt to adjust the valve or continue to use the loader. Have the truck repaired by a qualified repair professional.

Pressure Relief Valves

Pressure relief valves are used to maintain safe and effective fluid pressures throughout the hydraulic system. You must not adjust, remove, or tamper with the manufacturer's recommended settings of pressure relief devices.

Back-Up Alarm

All truck-mounted loaders have a back-up alarm that must sound any time the gear shift selector is in Reverse (R). The back-up alarm is to be checked daily prior to use. If the back-up alarm is not working, it must be repaired before putting the vehicle into service.

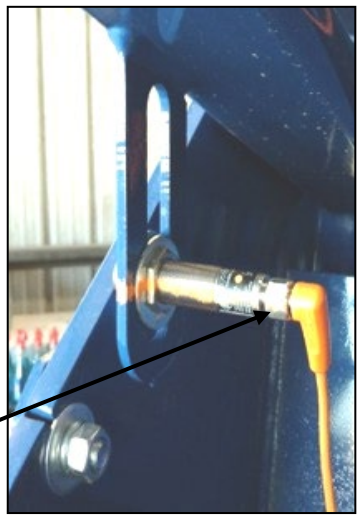
Always honk horn as a warning before moving loader. Look out and avoid other personnel, machinery, and vehicles in the area. Use a spotter if you do not have a clear view of the area behind the loader.

Boom-Up Alarm

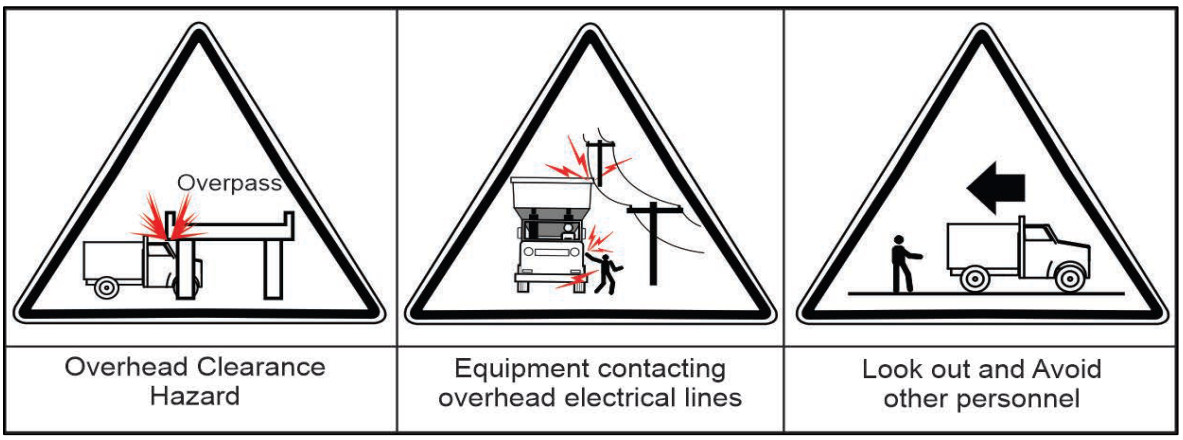
All truck-mounted loaders have a warning system to alert the loader operator when the boom is not properly stowed. The system consists of a sensor installed on the boom and an audible alarm and red light installed in the truck cab. This system is designed to warn the loader operator when the boom is above the safe height for travel. **It is not intended to replace an operator's good judgment on safe travel height of the boom according to surrounding conditions.**

The boom-up alarm may have a round dial attached to the light, which can be turned to adjust the volume of the audible alarm.

The boom-up alarm will sound if the sensor passes the head side plate.



Operators should always be aware that some routes may have streets, roads, alleys, etc. that have overhead obstructions below the current set point of the boom sensor and should conduct their operations accordingly. It is the operator's responsibility to be aware of all potential operating hazards and to take every reasonable precaution to ensure their safety, as well as the safety of other people, animals, and property. Look out and avoid other personnel, machinery, and vehicles in the area. **DO NOT** operate the loader if passersby or untrained people are within 30 feet of the active job site.



PART 4: CONTROLS

The layout of your loader control station is designed to provide the best view of the working area and ensure the highest possible safety for the operator. Do not alter or modify any of the loader's control systems and have any malfunctioning components repaired immediately.

The optimum and safest method of operating the joystick and foot pedal controls is by feathering the input of each function. Do not jerk a control lever to full speed or from one extreme to the other. Activate the controls by moving the joystick or foot pedal smoothly from the neutral position. After a slow, smooth start, then continue to move the joystick control further to increase speed. Just before stopping any movement, reverse the procedure, moving the joystick control smoothly back to the neutral position.

Placards show the specific movements of controls for each function according to the type of controls installed on the loader. The loader control placards indicate the direction to move control handles for various functions, such as boom elevation, boom swing, tip boom elevation, tip boom extension, bucket grab, bucket rotation, and body dump. The outrigger placard gives visual instructions for horizontal outrigger in/out, and vertical outrigger up/down.

Parking Brake

The truck's cab-operated parking brake must be set before leaving the cab for any reason. Use the vehicle's service brakes to stop the vehicle, put the transmission into Neutral (N), and apply the parking brake.

Power-Take-Off (PTO) Switch

The PTO switch is located on the dashboard in the cab of the truck. The recommended procedure for engaging the PTO is to bring the vehicle to a full stop, place the vehicle's transmission into Neutral (N), set the parking brake, and then engage the PTO switch. At the completion of loading operations, turn off the PTO switch, apply the service brakes, disengage the parking brake, and then select the appropriate transmission gear.

When operating a loader with a top-seat configuration, in addition to the in-cab PTO switch being on, the operator presence safety switch must also be activated to enable the PTO. If the loader doesn't respond to joystick or foot pedal inputs when the in-cab PTO switch is activated, check the top-seat operator seat belt switch for proper operation.

NOTICE

HIGH ENGINE RPM EXPERIENCED DURING AN ACTIVE, STATIONARY REGEN MAY PREVENT PTO ENGAGEMENT. TO TEMPORARILY LOWER ENGINE RPM DURING REGEN, DEPRESS THE BRAKE PEDAL SLIGHTLY, THEN ATTEMPT TO ENGAGE THE PTO.

Throttle-Up Switch

A throttle-up control switch is installed in the top-seat and DWT control stations. There is a push/pull-type switch to permit the operator to easily increase the loader's engine speed for most efficient loading or decrease it whenever the loader is at rest. Pulling out the switch activates the throttle-up function, raising the engine's speed. Pushing in the switch lowers engine speed to allow better communication with crew members or to allow slower and more precise operation of the loader.

The throttle-up feature is dependent on the in-cab PTO switch being activated. If the loader does not respond to control input and the engine speed does not increase when the throttle-up switch is activated, check that the in-cab PTO switch has been engaged. If the engine doesn't respond to the throttle-up switch on top-seat models when the in-cab PTO switch is on, check the boom-operator seat belt switch for proper operation.

Horn & Engine Shut Off

On the same console as the throttle-up control, there are two momentary push buttons. One button operates the horn and the other activates the engine shut off. Each function should be clearly marked with decals. Familiarize yourself on which button operates each function.

Outriggers

There are levers at each valve bank to control the outrigger on the corresponding side of the loader. For top-seat models, a lever is located on each side of the seat. The right lever operates the outrigger on the driver's (street) side, and the left operates the passenger (curb) side outrigger. There are switches on the dashboard of AL2 top-seat control stations to operate the horizontal, in/out function of outriggers for trucks equipped with H-frame style outriggers.

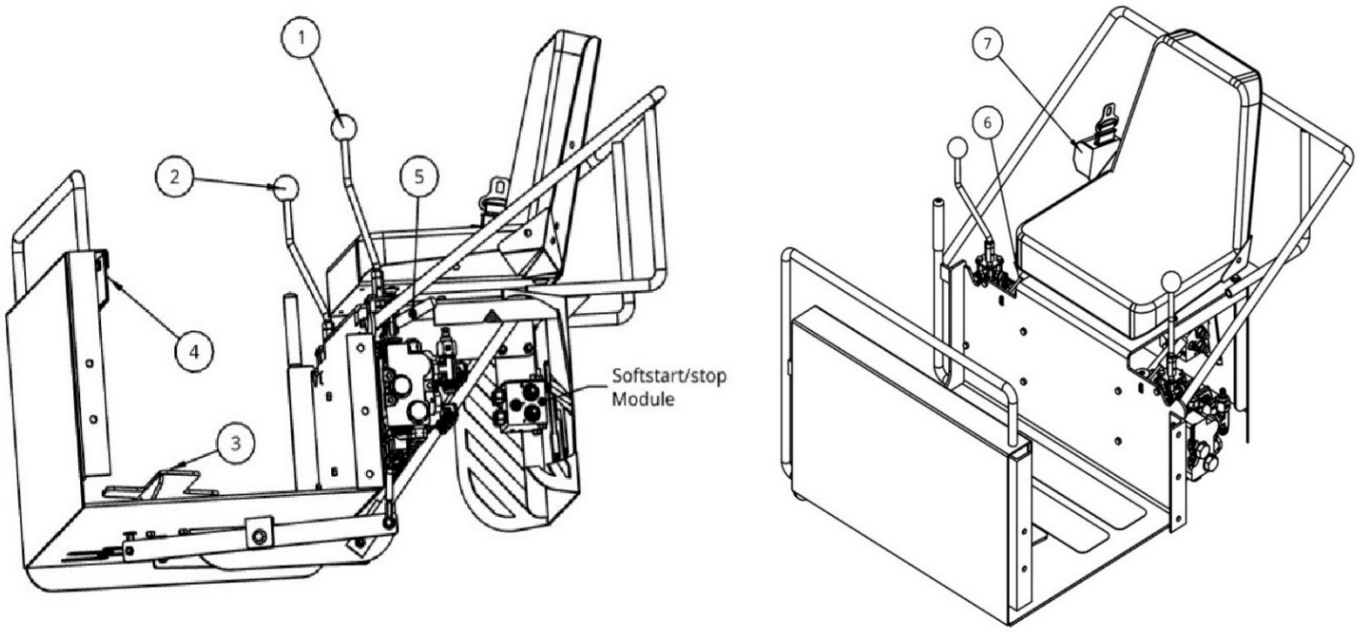
Dual-Walk-Through (DWT) models control A-frame outrigger up/down function, or H-frame outrigger in/out, up/down functions via one control lever for each outrigger in the center of the platform. On DWT loaders, extending or withdrawing each outrigger is accomplished by moving the outrigger lever in the direction of intended travel. On both top-seat and DWT loaders, push DOWN on the appropriate lever to lower the outrigger on that side of the loader and pull UP to raise the same outrigger.

Safety information regarding outriggers:

- Always keep feet clear of outriggers to avoid serious crushing injury.
- Failure to use the outriggers when loading may create an unstable condition which could result in the loader overturning and cause serious injury or death.
- Provide blocks, if necessary, to level the unit on sloping ground, or weight-bearing pads if the outriggers tend to sink into soft terrain.
- Some concrete surfaces are relatively thin and cannot withstand outrigger loading. Thin concrete can break apart and cause instability while loading.

Top Seat Model Controls

There is one joystick handle on each side of the operator's seat for controlling the main boom, tip boom, and bucket functions. The foot pedal controls the swing of the boom and extends or retracts the tip boom extension.



Top Seat Controls

TOP SEAT CONTROL STATION COMPONENTS			
Number	**Location**	**Operation**	**Direction(s)**
1	Left Control Lever	Main Boom / Bucket Grab	Fwd. - Back /Left - Right
2	Right Control Lever	Tip Boom / Bucket Release	Fwd. - Back /Left - Right
3	Foot Pedestal	Boom Swing / Tip Extend	Fwd. - Back /Left - Right
4	Operator Control Dash Panel	Push-Pull / Momentary Switches	Throttle-Up / Horn / Emerg. Engine Shut Off
5	Left Outrigger Lever	Left Outrigger Up / Down	Up / Down
6	Right Outrigger Lever	Right Outrigger Up / Down	Up / Down
7	Seat Belt	Operator Safety	Used During ALL Functions

NOTE: Do not store any items on the floor of the operator's station, as anything can create a tripping hazard or become lodged in the foot pedal assembly.

Left Joystick

Main Boom — Pull the joystick **BACK** to raise the boom.
Push the joystick **FORWARD** to lower the boom.

Bucket Grab — Move the joystick **LEFT** to open the bucket.
Move the joystick **RIGHT** to close the bucket.

Right Joystick

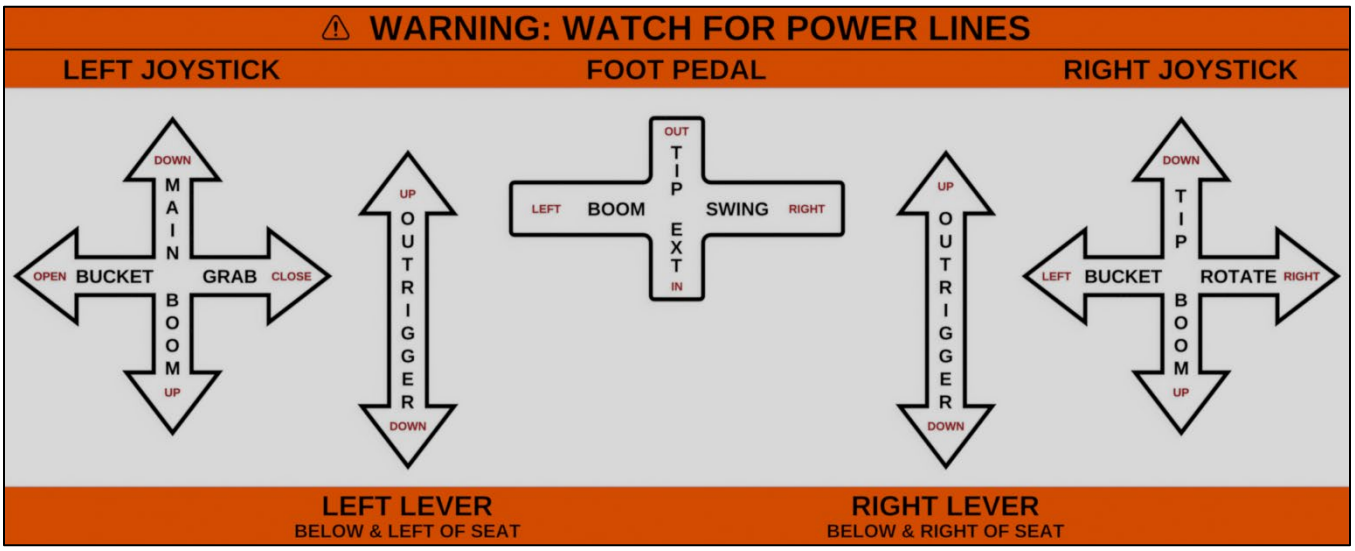
Tip Boom — Pull the joystick **BACK** to raise the tip boom.
Push joystick **FORWARD** to lower the tip boom.

Bucket Rotate — Move the joystick to the **LEFT** to rotate the bucket left (counterclockwise).
Move the joystick to the **RIGHT** to rotate the bucket right (clockwise).

Foot Pedal

Boom Swing — Push down on the **LEFT SIDE** to make boom swing to the left.
Push down on the **RIGHT SIDE** to make boom swing to the right.

Tip Extension — Push down on your **TOES** to extend the tip extension.
Push down on your **HEEL** to retract the tip extension.

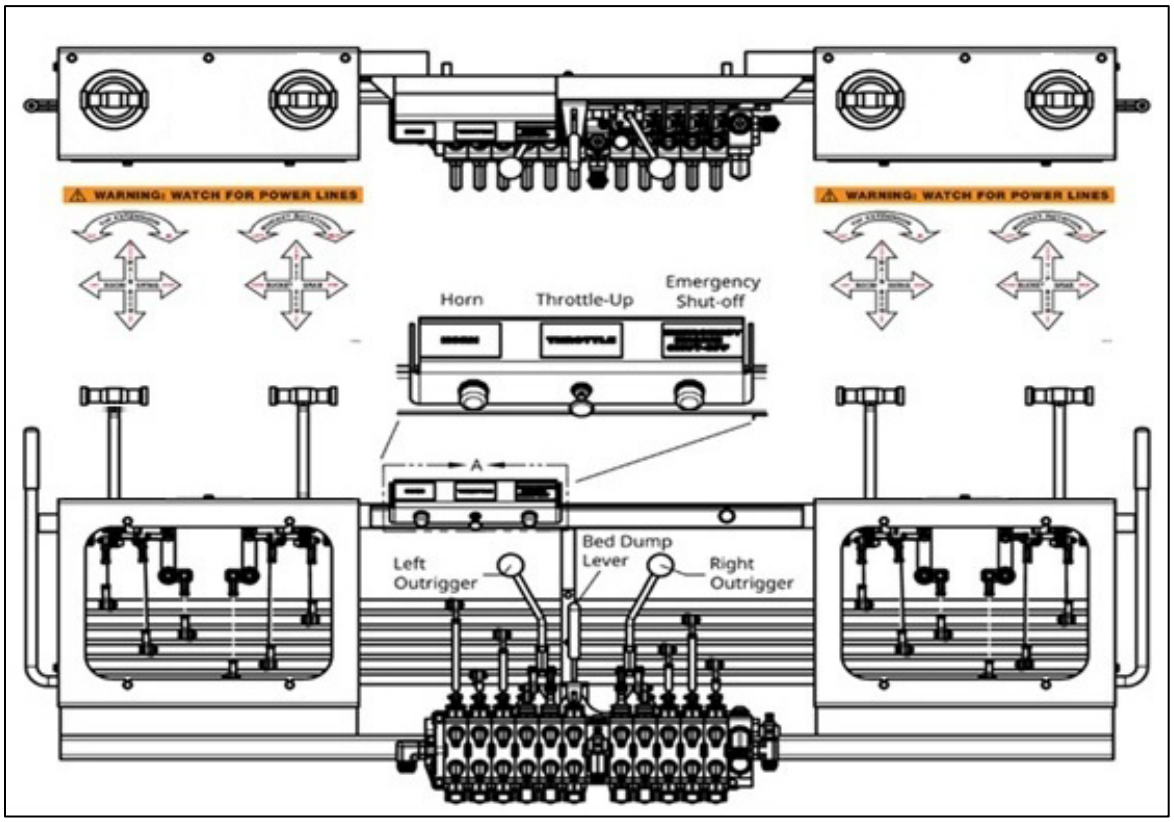


Body Dump Switch

All top-seat models have a dead-man switch located inside the truck cab to control the hoist for dumping. This switch is located inside the cab to ensure the operator's safety when dumping. No one should **EVER** be on the top-seat control station when the body dump feature is being used.

Dual Walk-Through (Quadstick) Controls

There are two T-handle joysticks on each side of the operator's platform. The operating functions of the two sides are identical, so the operator can easily use the operating station closest to the material to be loaded. Always operate the Dual-Walk-Through controls that offer the best view of the work being completed.



AL2 Dual-Walk-Through (DWT) Controls

Left Joystick

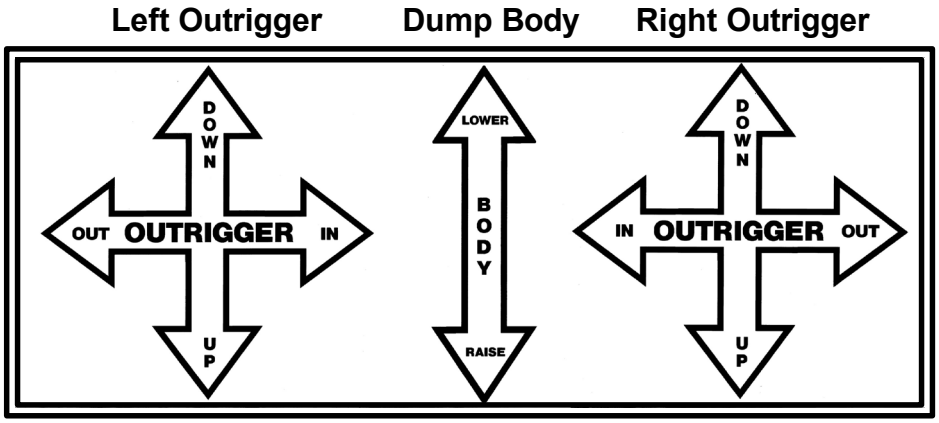
Boom Swing	Move handle **RIGHT** to make boom swing right. Move handle **LEFT** to make boom swing left.
Main Boom	Pull handle **BACK** to raise boom. Push handle **FORWARD** to lower boom.
Tip Extension	Twist handle **COUNTERCLOCKWISE** to extend tip out. Twist handle **CLOCKWISE** to retract tip extension inward.

Right Joystick

Tip Boom	Pull handle **BACK** to raise the tip boom. Push handle **FORWARD** to lower the tip boom.
Bucket Grab	Move handle **RIGHT** to open the bucket. Move handle **LEFT** to close the bucket.
Bucket Rotate	Twist handle **CLOCKWISE** to rotate bucket clockwise. Twist handle **COUNTERCLOCKWISE** to rotate bucket counterclockwise.

Outrigger & Body Dump

At the valve body in the center of the DWT work platform, there are three control handles. The two levers with the round knobs are outrigger control handles. When facing the load, the round knob on the left controls the curb side outrigger, and the round knob on the right controls the street side outrigger. The lever between the outrigger control handles is the body dump control.



Curb Side Outrigger

Move the handle to the **LEFT** to extend the left horizontal outrigger.

Move the handle to the **RIGHT** to retract the left horizontal outrigger.

Push the handle **FORWARD** to lower the left vertical outrigger foot.

Pull the handle **BACK** to raise the left vertical outrigger foot.

Street Side Outrigger

Move the handle to the **RIGHT** to extend the right horizontal outrigger.

Move the handle to the **LEFT** to retract the right horizontal outrigger.

Push the handle **FORWARD** to lower the right vertical outrigger foot.

Pull the handle **BACK** to raise the right vertical outrigger foot.

Body Dump

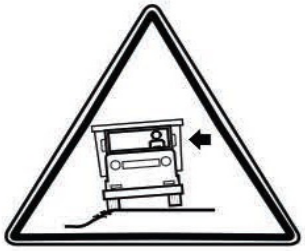
Pull the handle **BACK** to raise the dump body.

Push the handle **FORWARD** to lower the dump body.

PART 5: SETTING UP AT THE JOB SITE

Safely positioning the vehicle is an important first step at the job site. Inspect the job site to ensure there are no unsafe conditions and identify any potential hazards for operators or others nearby. Do not operate the loader if unsafe conditions cannot be controlled.

Plan the lift and seek the best possible work site before positioning the vehicle. A firm and level surface near the debris being loaded is an ideal location. Avoid uneven, rocky or muddy terrain, or steep grades. The location should be selected such that outriggers can be fully extended horizontally with the outrigger pads landing on a firm surface.

		
ALWAYS keep a safe distance from any power lines to prevent electrocution.	Use care whenever operating loader and outriggers to prevent crushing/pinching harm.	ALWAYS ensure the loader is positioned on firm, level ground and the parking brake is engaged before operating.

If it is necessary to use the loader on an inclined surface, extreme care should be used, as loader slewing torque, stability, lifting capacity, and other functions may be affected adversely. Increased caution must be exercised with the swing function since an inclined surface will increase the downhill slewing speed and, as a result, lengthen the time it takes to stop the motion.

If possible, the truck should be positioned in an area free from overhead obstructions which allows performance of the entire task without repositioning. The operator must be familiar with the swing arc of the loader and position the truck so that the load is well within this arc.

⚠ WARNING

JOB SITE HAZARDS COULD CAUSE DEATH OR SERIOUS INJURY. REMAIN ALERT AND USE CORRECT EQUIPMENT WORK METHODS, PERSONAL PROTECTION GEAR, AND ALL AVAILABLE SAFETY DEVICES WHILE OPERATING LOADER.

Precautions and Procedures for Loading:

- Before leaving the cab, engage all safety lights, place the transmission in neutral, and set the parking brake.
- Use extreme care and consider using safety cones to mark the outriggers when operating around traffic. Use safety cones to mark the vehicle if the truck interferes with traffic flow or conditions make the vehicle not easily visible.
- Before commencing work, make sure the debris you are going to load does not conceal any fixed objects, such as fire hydrants or guy wires.
- Ensure it is impossible for any portion of the loader to come within 10 feet of any power line. **NOTE:** power lines deflect in wind and additional clearances may be necessary.
- Do not operate the loader during electrical storms, when high wind conditions exist, or in poorly lit conditions.
- Do not operate the loader, outriggers, or dump body if another person, other than the operator, is within 30 feet of any moving part of the loader, body, or debris.
- Do not allow any person under a raised body, boom, bucket, or debris at any time.
- When accessing the loader control station, always mount and dismount keeping a three-point contact. Use the provided handholds and steps and face the steps when getting on and off.
- Never use controls as handholds. If handholds or steps are broken or missing, have them repaired before using the loader.
- Do not attempt to lift more than the capacities shown on the load chart for a given radius. Refer to the Load Capacity Chart IN THIS MANUAL or riveted to the pedestal of the loader.

PART 6: OPERATING THE LOADER

1. Engage the PTO. For operations below 40°F, a hydraulic tank heater is recommended. Allow the hydraulic oil to reach 40°F before commencing work.
2. Using the ladder and handholds, climb into the operator's station. On top-seat models, secure yourself with the seat belt. Do not use controls as handholds.
3. Before conducting any boom operations, extend all outriggers to level the loader side to side and ensure that the vehicle is stabilized.
4. Raise boom from inside of dump body and swing to trash pile. Use tip extension, if needed, and rotate bucket so that it is aligned with trash.
5. Open the bucket and lower it over the trash. Close the bucket so that you have a firm grip on the trash. Raise the boom slightly and activate the bucket grab once again to ensure the grapple has a firm grip on the trash.
6. Lift and swing the load over the dump body. It is recommended to load the front of the body first, with the tip extension retracted prior to swinging the load to minimize stress on the boom and swing gearbox.
7. Observe that the load or boom does not contact overhead wires, outside structures, or the loader. The tip boom's extension cylinder return line, cylinder rod, and the rear door air latch valve can easily get damaged by careless contact with debris or structures.
    - **DO NOT** use the bucket to sweep the load to the front of the dump body as you can damage the bucket and other loader components.
    - **DO NOT** overload the dump body. You must have room to stow the bucket within the body sides for travel.
    - **DO NOT** allow limbs or other debris to protrude from the dump body.
    - **DO NOT** excessively pack the load. Excess packing could result in dump body floor damage and/or loader damage.
    - **DO NOT** allow the bucket to swing beyond parallel to the tip boom. If the bucket flips up beyond parallel to the tip boom the gimbal can damage the end of the tip boom.
    - **DO NOT** leave a load suspended when the operator is away from the control station. If it is necessary for the operator to manually rake any remaining trash into a smaller pile, the boom must be stowed in the dump body.
    - Operate the loader **ONLY** from the operator's station. Do not attempt to operate the loader from any position other than the operator's station.
    - **NEVER** climb on operator controls or other loader components.

- **DO NOT** sit or stand at operator control station when the truck is in motion. The control station is to be manned only when the vehicle has been parked and the proper procedures for setting up to load have been followed.
- **DO NOT** attempt to lift loads exceeding the safe working capacity shown on the Load Capacity Chart (shown below). **DO NOT** test the loader's ability to pick up a load that might exceed the safe working capacity by seeing if the loader leans when the load is lifted.
- **DO NOT** impose lateral loads on the boom.

NOTE: If the hydraulic system ever fails, call a qualified recovery professional and, if necessary, arrange for an auxiliary service vehicle that can provide a hydraulic power source for stowing the boom and preparing the truck for safe transport to the repair facility.

PETERSEN LOAD CHART FOR AL2 LOADER			
25' A-FRAME		**25' H-FRAME** (Extended)	
RADIUS (FT)	**LIFTING CAPACITY** (LBS)	**RADIUS** (FT)	**LIFTING CAPACITY** (LBS)
10'	10,700	10'	10,700
15'	5,800	15'	7,400
20'	3,700	20'	5,300
25'	2,700	25'	3,600
27' A-FRAME		**27' H-FRAME** (Extended)	
RADIUS (FT)	**LIFTING CAPACITY** (LBS)	**RADIUS** (FT)	**LIFTING CAPACITY** (LBS)
10'	10,800	10'	10,800
15'	5,600	15'	7,400
20'	3,600	20'	5,200
27'	2,400	27'	3,300

- *Lifted material and bucket weight must be less than chart's maximum lifting capacity. (Standard Bucket = 1,000 lbs., Big Bite bucket = 1,110 lbs., C&D bucket = 1,250 lbs.)*
- *Radius is measured in feet from the center of rotation to the center of the bucket.*
- *Lifting capacity for the loader is 85% of vehicle tipping moment when outriggers are fully extended on firm, level ground.*
- *Boom length measured with tip extension extended.*
- *Do not use these load chart values to predict load capacities at other radii.*
- *Tire pressures must be in accordance with the tire manufacturer's recommendations.*

Covering The Load

If the loader is equipped with a tarp to cover the load, always make sure the tarp is properly stored before attempting to load or unload the dump body. When operating the tarp, watch that the tarp assembly does not contact the boom or other nearby objects as it moves over the load.

Using A Petersen Industries Self-Winding Load Cover:

1. Maneuver the bucket to the front of the dump body.
2. Hook the tarp chain to the hook on the bucket.
3. Extend the boom to cover the debris and rest the bucket on the load.

When using “goalpost-style” load covers, raise the boom to clear the arc of the tarp frame before moving the frame in either direction.

Using A Powered Tarp Cover

If the loader is equipped with a powered tarp, you will find the rotary control switch toward the front of the dump body on the driver’s (street) side. Top-Seat models have the tarp cover switch in the control station and are operated in the top-seat area. The rotary switch control panel houses a 40-amp manual breaker. If the tarp assembly fails to operate properly, push the reset button on the front of the switch housing to reset the breaker.

The hinged arms of the “goalpost” tarp assembly are designed with springs at the mounting points with the body which roll out the tarp as the electric motor unwinds the tarp axle. Retracting the tarp winds the axle in the opposite direction, overcoming the force of the springs in the hinges.

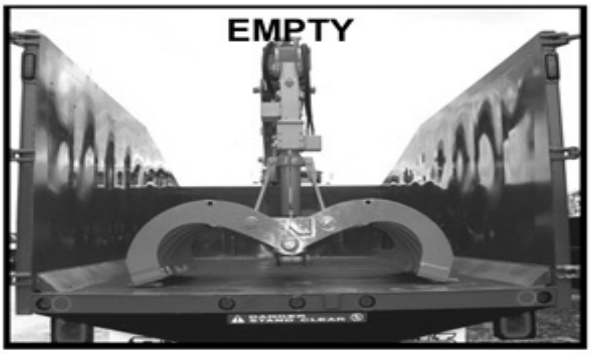
Stowing The Bucket For Transport

Leave room in the dump body to stow the boom and bucket. Stow the bucket in the open position with its sides parallel to the sides of the dump body. The operator should rest the bucket on the body floor or on top of the load. When stowing the boom over a load, visually observe that debris does not make contact which could damage any hoses or a cylinder.

Always ensure that the uppermost part of the boom is below the state-regulated maximum truck height before travel. Once the bucket has been properly stowed for travel, retract all outriggers, disengage the PTO, and pick up any safety cones or markers before moving the loader.

CORRECT METHODS OF STOWING THE BOOM & BUCKET

EMPTY



- BUCKET OPEN AND AT REST ON DUMP BODY FLOOR.

NOTE: FOR ILLUSTRATION PURPOSES REAR DUMP BODY DOORS ARE SHOWN OPEN. REAR DUMP BODY DOORS MUST BE CLOSED AND LOCKED EXCEPT WHEN DUMPING THE LOAD

LOADED

- BUCKET ROLLED OVER WITH JAWS TO RIGHT REAR OF DUMP BODY
- BOOM AT SAFE TRAVEL HEIGHT & BOOM TIP BELOW TOP OF BODY SIDES
- MORE THAN 1/2 OF BUCKET MUST BE BELOW TOP OF BODY SIDES
- LOAD COVER DEPLOYED

INCORRECT METHODS OF STOWING THE BOOM & BUCKET

- BUCKET NOT CONFINED INSIDE OF DUMP BODY
- DEBRIS HANGING OUTSIDE OF DUMP BODY
- BOOM OVER LEGAL HEIGHT OF 13 FT. 6 IN.

- BOOM OVER LEGAL HEIGHT OF 13 FT. 6 IN.
- BUCKET NOT CONFINED INSIDE OF DUMP BODY
- DEBRIS HANGING OUTSIDE OF DUMP BODY

WARNING! – Failure to stow the boom and bucket properly could result in damage to property or injure people in the vicinity of the grapple truck.

PART 7: DUMPING THE LOAD

As you prepare to dump the load, it is important that you choose a level, firm area. The procedure must not be done in a hurried manner. Each of the following steps must be followed precisely and in sequence.

Dumping Precautions:

- **DO NOT** use the loader boom to force the dump body down.
- **DO NOT** attempt to dump the load until the single rear door, or both barn doors are fully open and latched to anchor points on the side(s) of dump body.
- **DO NOT** travel with rear doors open. They must be closed and locked for travel.
- Ensure the boom assembly is **ALWAYS** below the regulated maximum height before moving the loader.

To Dump The Load

1. **Always ensure the truck is in Neutral** (N) and set the parking brake before leaving the cab of the loader.
2. **Before attempting to raise the body**, open the rear dump body door(s) and fasten each door to its anchor point on the side of the dump body**. Note:** Keep the supplied chain(s) fastened when unlatching doors. This adds another layer of safety as items inside the body could slide to the back and press against the doors during transit and potentially cause injury when the doors are unlatched.

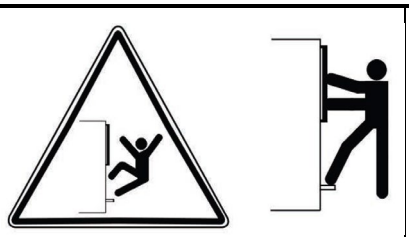
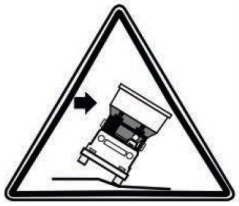
If the loader is equipped with a single door, there will be a control knob toward the rear of the body on the driver's (street) side. Unlatch the door by pulling on the knob, pushing in engages the latch.

3. Engage the PTO.
4. Extend the outriggers on both sides and lower the feet to the minimum ground clearance that will allow the truck to pull forward without dragging. This provides emergency stabilization while allowing the truck to be pulled forward to completely empty the body.
5. If your load is covered with a powered tarp, lift the boom and retract the tarp. If the tarp is a self-winding tarp, remember to unhook the tarp from the bucket after uncovering the load.
6. Raise the main boom to the maximum elevation and keep it centered over the dump body during the entire dumping procedure as the outriggers are not fully lowered.
7. Place the tip boom in a position so that it will not contact the headboard of the dump body when the body is raised.

⚠ WARNING

DO NOT LIFT BODY UNTIL REAR DOORS ARE OPEN AND SECURED TO ANCHOR POINTS ON SIDES OF BODY.

8. Activate the cab-located body dump switch (top-seat), or hydraulic lever (DWT) to raise the body and empty the load. Be sure to avoid contact between the boom and the dump body.
9. If the pile of debris on the ground behind the truck prevents complete dumping of body contents, disengage the PTO and SLOWLY move the truck forward to complete dumping. Extreme caution should be used during this movement as the outriggers are only partially down, and the boom is raised.
10. If there is debris stuck in the dump body, lower the dump body and dislodge the debris with the loader.
11. After dumping the load, lower the dump body. Stow the boom and bucket in the dump body with the bucket open and resting on the body floor as shown previously.
12. Retract the outriggers and disengage the PTO.
13. Close and lock the rear door(s) of the dump body.

		
ALWAYS maintain three points of contact when mounting & dismounting the loader.	Use care when dumping to prevent truck from tipping over.	ALWAYS watch for overhead obstructions or wires when operating boom or raising body. Keep 10 feet distance from any power lines.

PART 8: IDENTIFYING POTENTIAL HAZARDS

The daily inspections are designed to identify any potential hazards or maintenance items that require attention before using the loader. Throughout the course of the day, you, as the loader operator, are also in the best position to identify any items before they can become potential hazards.

It is your responsibility to report any noticeable changes in the operation of the loader or any items that could become larger issues if left unaddressed such as wear, rust, or a lack of lubrication. Report any observations to your supervisor to determine the best course of action to resolve the issue. Careful attention during the operation of the loader not only prolongs the life of the equipment, but also prevents downtime in the field, and helps ensure the safety of the entire crew.