PT 1000A

HIGH-PERFORMANCE REAR LOADER

OPERATION MANUAL

ISSUED JANUARY 2017

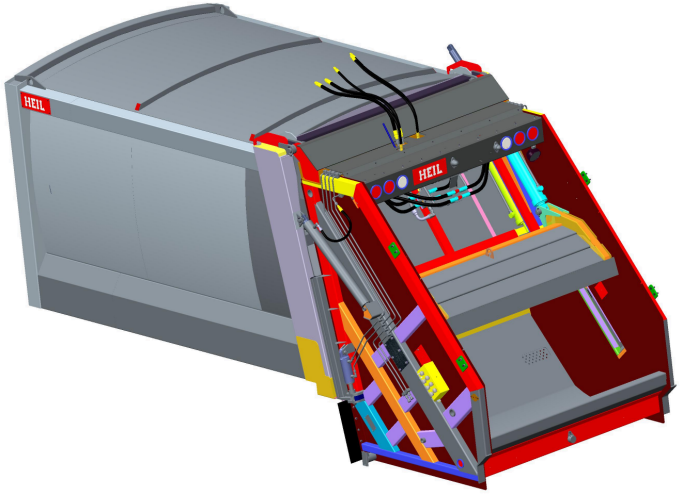
⚠ WARNING

Failure to follow all instructions and safety precautions in this manual, in the Service Manual, in other manufacturers' manuals and on the safety decals attached to the product could result in serious injury or death to operators or bystanders and/or damage to property.

DO NOT operate this vehicle before you READ and UNDERSTAND this Operation Manual, the Service Manual for this unit, other applicable manufacturers' manuals, and the safety decals on the product.

Each operator of this unit must read and understand all directions in this manual before they first operate this vehicle.

Keep this manual in the cab for new operators and to remind all operators about safe use.



TP1PT1A-OM-0117

READ THIS MANUAL!

EVERY PERSON who will **OPERATE, MAINTAIN, REPAIR, OR OTHERWISE WORK** with the Heil unit **MUST READ AND UNDERSTAND** this entire Operator's Manual before starting the engine or activating any switches or controls. **MAKE SURE** to read the Service Manual for the unit **BEFORE** you do any maintenance or repair procedures.

ALL USERS of this equipment must be trained professionals who understand how the machine operates and know how to avoid the risks associated with driving the vehicle and with picking up, compacting, and dumping refuse in an ever-changing traffic environment.

If you do not understand an operation or instruction, seek additional help or instruction from a qualified source **BEFORE** you operate the unit.

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

On-Route Operation Procedures

Landfill/Transfer Station/Recycle Center Procedures

TABLE OF CONTENTS

PT 1000A

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ISSUED JANUARY 2017

TP1PT1A-OM-0117

PT 1000A

NOTES:

SECTION 1
INTRODUCTION

PREVIEW

Read this section to learn about:

- The responsibilities of the owner, the operator, and the mechanic
- Warranty information
- Telephone numbers and website URL for parts, technical support, warranty claims, training and manuals
- Identifying the different models
- Identifying the left (street side) of the unit
- The unit serial plate
- Various parts of the unit

HOW TO USE THIS MANUAL

Product Variance

This manual may cover options not included on your unit. Also, the location and appearance of the controls on your unit may be different than those shown in this manual. Make sure you know the location of the controls and how you operate the controls on your unit before operation.

Manual Sections

This manual is divided into twelve (12) sections.

1. Introduction
2. Safety Messages and Decals
3. Lock-Out/Tag-Out Procedures
4. Controls, Switches, and Indicator Lights
5. Body and Tailgate Props
6. Daily Checklist
7. Before Going on Route
8. On-Route Operation Procedures
9. Landfill/Transfer Station/Recycle Center Procedures
10. End of Day Procedures
11. Preventive Maintenance Chart
12. Lubrication Guide

Terminology

This manual uses terminology that is defined in the **Glossary** which is in Section 1, Introduction.

Directives

When we give directions for using the equipment, we capitalize key words. These words are usually a command followed by a result.

For example, “MOVE the body raise switch to LOWER ...”.

*Use of **Bold** and CAPITAL Letters*

We also put some words in **BOLD AND CAPS** for emphasis, usually related to safety or something of other importance, such as “**MAKE SURE** you close the side doors”.

We put some words in just bold for emphasis, such as “All warranty repairs **must** be performed by …”.

Each DANGER, WARNING, and CAUTION notice precedes its applicable text.

TO THE OWNER

This manual is designed to help ensure safe, efficient and proper operation of The Heil Co. d/b/a Heil Environmental ("Heil") PT 1000A Rear Loader refuse collection vehicle (or the unit).

The manual will familiarize you with the unit and will give you proper operating procedures and tips.

For chassis operation and maintenance instructions, see the Chassis Owner's Manual and the PT 1000A Service Manual.

As the owner, you have several responsibilities:

- You must complete and return the warranty registration for the unit to Heil.
- You must make sure that each operator has the proper driver's license.
- You must make sure that the operator does not operate the unit under the influence of drugs or alcohol.
- You must make sure that the unit is properly maintained to meet all local, state and federal requirements.
- You must keep the vehicle maintained and properly adjusted to meet the manufacturer's standards and recommendations.
- You must keep accurate records of daily inspections, breakdowns, malfunctions, maintenance and repairs of the unit.
- You must make sure that repairs are made that may affect the safe operation of the unit before it is made available for operation.
- You must provide adequate lighting on the unit for safe operation under low light or night conditions.
- You must provide adequate training for each operator and mechanic that will operate the unit BEFORE an operator goes on route or BEFORE a mechanic performs maintenance or repair procedures.
- You must determine if an operator or mechanic has difficulties reading or understanding this manual. When a person has difficulties reading or understanding this manual, you must provide adequate assistance so that the person does understand the material in this manual.
- You must make sure that each operator uses the equipment on a route as given in the instructions of this manual and other manufacturers' manuals.
- You must provide on-going training for each operator and mechanic that operates the unit.
- You must make sure that this manual stays with the vehicle at all times.

Properly operated and maintained, your PT 1000A unit should give you years of low-cost, trouble free service.

TO THE OPERATOR

⚠ DANGER

Do not operate the unit or perform repair or maintenance procedures on the unit until you read and understand all of the instructions in this manual. Failure to do so may result in injury or death to operators or bystanders.

NOTICE

For CNG units, this Operation Manual should be used in conjunction with any associated CNG System Manufacturer's Operation and Maintenance Manuals. Always read and understand all associated manuals alongside the Heil Parts and Service Manual and Heil Operation Manual.

As the operator of the unit, you have several responsibilities:

- You must have a valid driver's license.
- You must understand and follow all manufacturers' instructions for equipment operation.
- You must observe pertinent laws and regulations.
- Do not use drugs or alcohol while you operate the unit.
- You must read, study and understand all procedures and requirements of this Operator's Manual before you operate the unit for the first time.
- If you do not understand or have difficulty reading this manual, YOU MUST tell the owner or designated person before you operate the unit. DO NOT operate the unit until you understand the procedures and requirements of this manual.
- You must receive proper training before you operate (or service and maintain) the unit. If you have not been trained, you must inform the owner.
- You must perform a daily inspection of the unit before you go on route. Refer to the **Daily Checklist**.
- You must make sure that all decals and labels are clean and readable.
- You must report to the owner (or the designated person) any and all deficiencies, malfunctions or problems you find during the daily inspection.
- You must read, understand and obey all safety messages and decals that are on the outside or in the cab the unit.
- You must use and follow **Lock-Out/Tag-Out Procedure** 43 in this manual and any that the owner may have, as necessary.

TO THE OPERATOR (CONTINUED)

- Before you start the engine or operate the unit for the first time
  - You must clear the area of other people.
  - You must learn and practice safe use of all controls and indicators before you operate the unit in a collection route environment or before you do repair or maintenance procedures.
- Before each time you start the engine or operate the unit, you must clear the area of other people.
- Before you operate the unit in reverse, you must make sure the area behind the unit is clear of other people, vehicles or other obstructions.
- You must make sure the unit is on hard, stable ground when you unload refuse at the landfill or transfer station.

TO THE MECHANIC

⚠ WARNING

Do not operate the unit or perform repair or maintenance procedures on the unit until you read and understand all of the instructions in this manual. Failure to do so may result in injury or death to operators or bystanders and/or damage to the unit or other property.

⚠ WARNING

A unit that needs service or repair can malfunction and create a dangerous condition. A part failure during operation can cause serious injury or death to a person or damage to the unit. Repair or replace any failed or defective part immediately.

NOTICE

If you do not understand a procedure or instruction, tell the owner or the designated person immediately. Do not operate the unit if you do not understand all procedures and instructions in this manual. The owner or designated person can contact your Heil dealer or Heil for additional help. See **Customer Service and Repair Parts Contact Information**.

TO THE MECHANIC (CONTINUED)

As the mechanic of the unit, you have several responsibilities:

- You must have a valid driver's license if you operate the unit on a public road.
- You must understand and follow all manufacturers' instructions for equipment operation.
- You must observe pertinent laws and regulations.
- Do not use drugs or alcohol while you service or operate the unit.
- You must read, study and understand all procedures and requirements of this Operation Manual and the Service Manual before you operate the unit for the first time.
- If you do not understand or have difficulty reading this manual or the Service Manual, You must tell the owner or designated person before you operate or service the unit.
- DO NOT operate or service the unit until you understand the procedures and requirements of this manual and the Service Manual.
- You must receive proper training before you operate or service and maintain the unit. If you have not been trained, you must inform the owner.
- You must read, understand and obey all safety messages and decals that are on the outside or in the cab the unit.
- You must use and follow **Lock-Out/Tag-Out procedures** 43, in this manual and any that the owner may have, as necessary.
- Before you start the engine or operate the unit for the first time:
  - You must clear the area of other people
  - You must learn and practice safe use of all controls and indicators before you operate the unit or before you do repair or maintenance procedures.
- Before you operate the unit in reverse, you must make sure the area behind the unit is clear of other people, vehicles or other obstructions.

⚠ WARNING

A unit that needs service or repair can malfunction and create a dangerous condition. A part failure during operation can cause serious injury or death to a person or damage to the unit. Repair or replace any failed or defective part immediately.

WARRANTY CLAIMS AND INQUIRIES

The HEIL ENVIRONMENTAL INTERNATIONAL WARRANTY STATEMENT is printed on the inside, back cover of this manual. Should a failure occur that is covered by this warranty, contact the nearest Heil dealer for warranty repair unless otherwise authorized by Heil.

For all parts, warranty claims, and inquiries, please give the dealer or service center the unit's model and serial number located on the serial plate. The unit has one serial plate, which is for the body. See **Serial Plate Location** page for the location of the serial plates.

CUSTOMER SERVICE AND REPAIR PARTS CONTACT INFORMATION

Customer Care
Phone: 866-275-4345

Tech Services
Phone: 866-310-4345

Parts Central
Phone: 800-528-5308

4301 Gault Avenue North
Ft. Payne, AL 35967
www.heil.com

MODELS

The PT 1000A is a Rear End Loader (REL) and has one body model, the eject model. See the figure below.

The (packer) blade and slide assembly open the hopper for loading refuse into the hopper, sweep the refuse into the body and compacts the refuse.

The unit has an eject mode for dumping the refuse from the body. You remove the refuse from the body by raising the tailgate and then operating the ejector panel which pushes the refuse from the body.

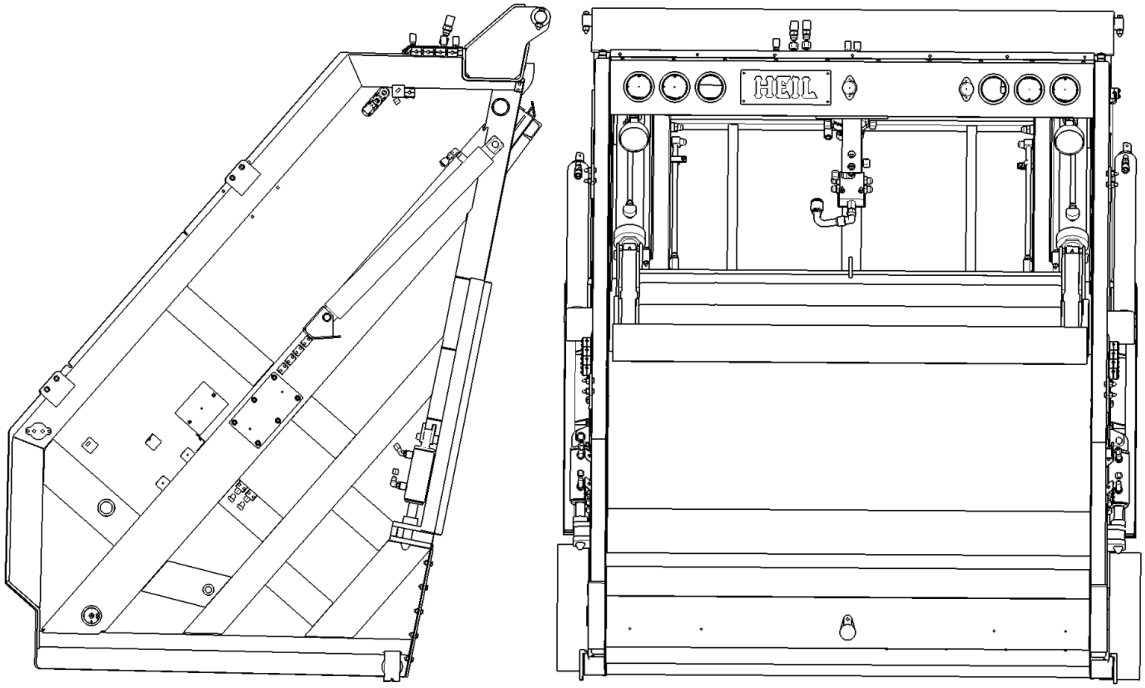


Figure 1. PT 1000A Eject Model

SERIAL PLATE LOCATIONS

You determine the sides of the unit by facing the direction of forward travel. See the figure below. The left side is the “streetside” and the right side is the “curbside”.

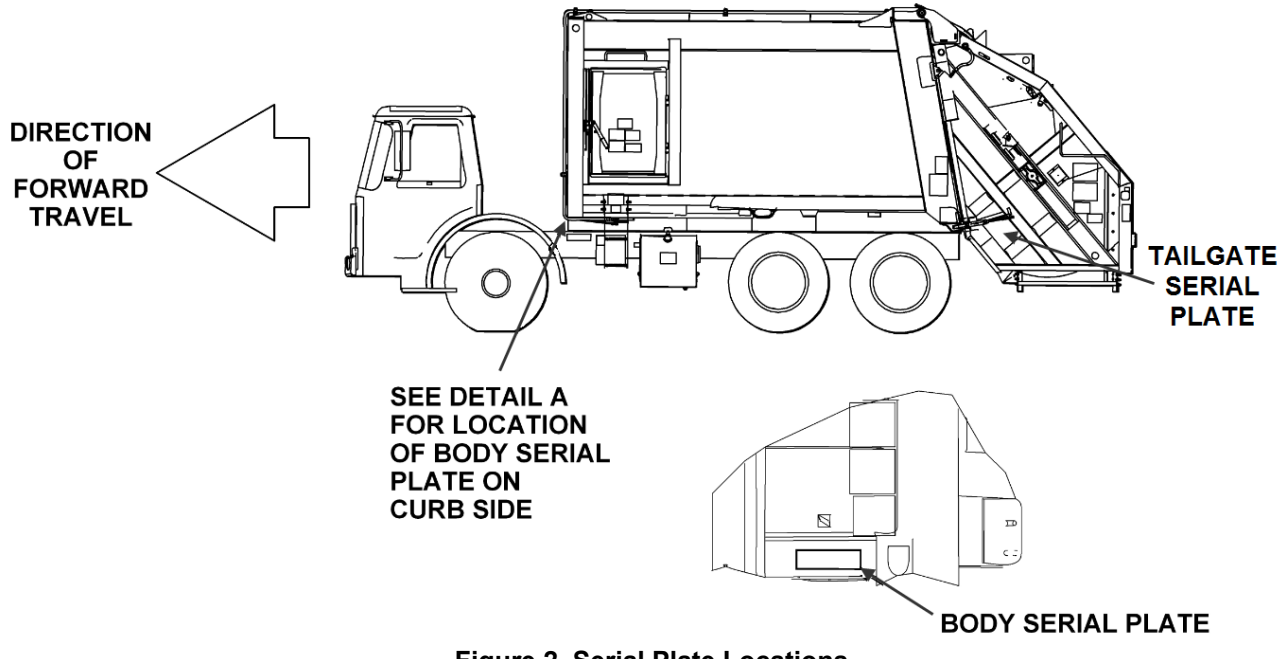


Figure 2. Serial Plate Locations

READING THE SERIAL PLATE

The serial plate is the “birth certificate” of the unit. See the figure below.

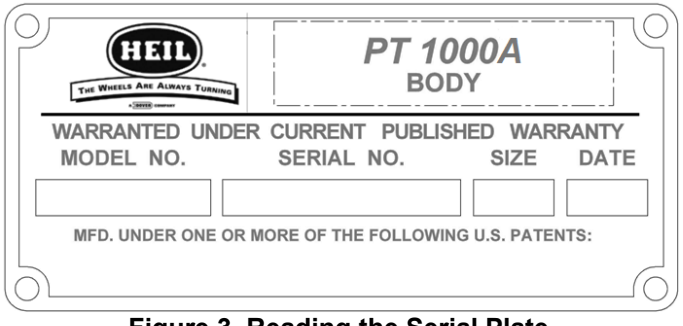


Figure 3. Reading the Serial Plate

Information stamped in the boxes on the serial plate indicates:

Unit’s unique serial number

Body size

Date of manufacture (last number of the year followed by the number of the day of the year, e.g. 5145 is year 2015 and the 145th day of 2015).

NOTICE

The code for the year of manufacture is in accordance with FMVSS 115. See the following table.

Year of Manufacture			
Year Code	**Year**	**Year Code**	**Year**
5	2005	F	2015
6	2006	G	2016
7	2007	H	2017
8	2008	J	2018
9	2009	K	2019
A	2010	L	2020
B	2011	M	2021
C	2012	N	2022
D	2013	P	2023
E	2014	R	2024

PRODUCT NOMENCLATURE

The figure below shows the major components and their typical location on the curb side of the unit. See the following pages for brief descriptions of each component shown below.

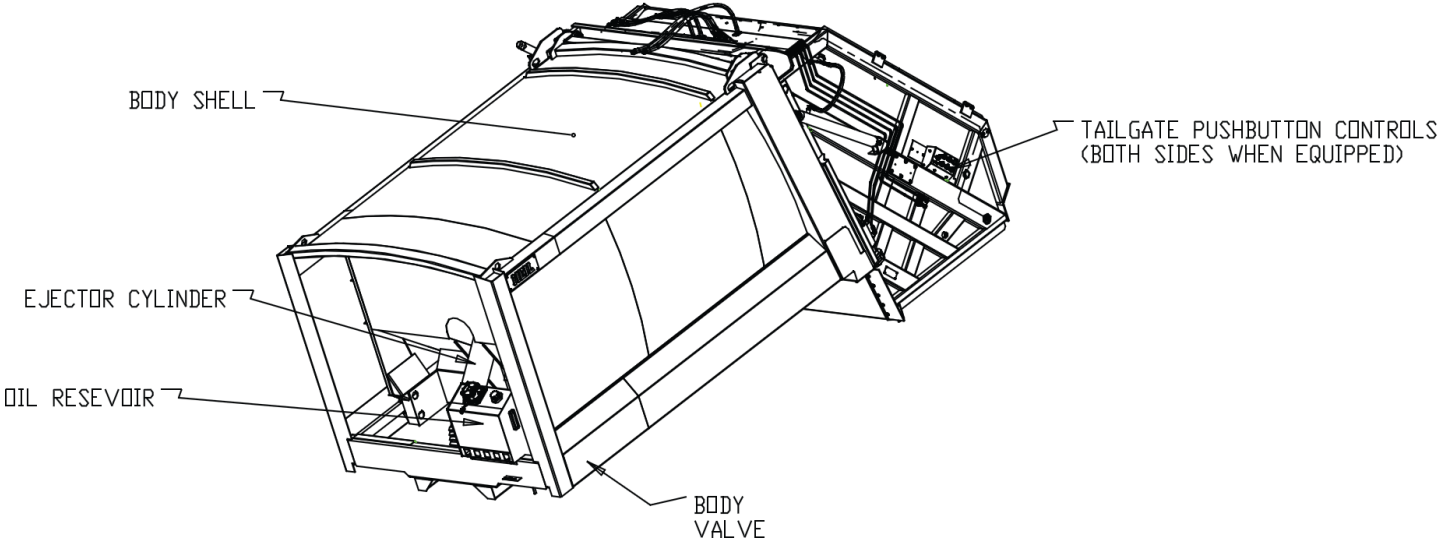


Figure 4. Street Side Product Nomenclature

PRODUCT NOMENCLATURE (CONTINUED)

The figure below shows the major components and their typical location on the street side of the unit. See the following pages for brief descriptions of each component shown below.

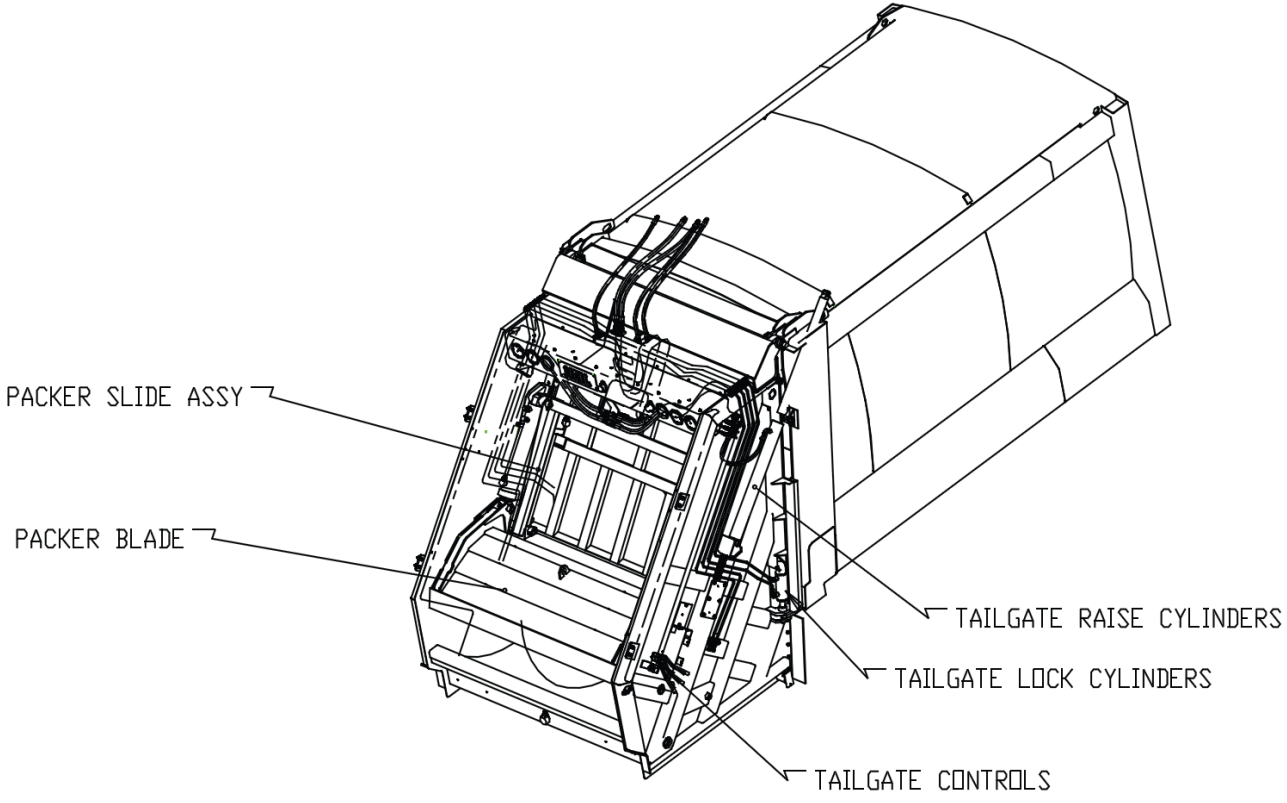


Figure 5. Curb Side Product Nomenclature

PRODUCT NOMENCLATURE (CONTINUED)

⚠ DANGER

Do not use an arm mechanism or roll bar as a riding step. Obey safety messages and use the riding step for when traveling on the unit. Serious injury or death may occur.

Arm Mechanism – This option allows an operator to load refuse from a commercial refuse container into the hopper with the assist of an arm mechanism. After the operator secures the refuse container with notches in the arm mechanism, the operator secures the refuse container with the latch bar and uses the controls to lift the refuse container with the arm mechanism and tilt the container which dumps the refuse into the hopper. The operator then lowers the container to the ground with the arm mechanism.

⚠ DANGER

Make sure the unit is in the Lock-Out/Tag-Out mode before you enter the body. When the unit is not in the Lock-Out/Tag-Out mode and a person is in the body, the packer/ejector panel and/or diverter panels can be operated. Serious injury or death may occur if the packer/ejector panel moves while a person is in the body.

⚠ DANGER

When available, use the side door for entry to the body. When there is no side door, use the front head for entry to the body. Make sure the unit is in the lock-out mode before you enter the body. When the unit is not in the lock-out mode and a person is in the body, the ejector panel, slide assembly or packer blade can be operated. Serious injury or death may occur if the ejector panel, slide assembly or packer blade moves while a person is in the body.

Body – The body stores the compacted refuse until you dump the refuse at the landfill. **DO NOT** enter the body from the hopper. Use the space available at the front head or, if equipped, the side access door.

Cab Controls – The standard cab control panel has two toggle switches to operate the pump and the throttle advance; has indicator lights for the pump and tailgate; and the space for two options: a filter bypassed indicator light and a strobe light switch. See **Cab Controls, Switches and Indicator Lights** for the different controls that may be installed in your unit.

PRODUCT NOMENCLATURE (CONTINUED)

Cart Tipper – One or more optional cart tippers can be located on the tailgate assembly. An operator uses a cart tipper to raise and dump a residential refuse container. The controls will be located on the rear, curb side of the unit.

NOTICE

Do not use the ejector panel to pack refuse against a closed tailgate (backpack). Packing refuse against a closed tailgate may result in damage to body or ejector cylinder.

Ejector Panel & Cylinders – The ejector panel and cylinders push the refuse out of the body when the tailgate is OPEN.

Ejector & Tailgate Controls – These controls are located in the cab of the unit and allow an operator to OPEN the tailgate and fully EXTEND the ejector panel, which pushes the refuse out of the unit. The operator then uses the controls to RETRACT the ejector panel and CLOSE the tailgate.

Front Head – The open area at the front of the body. You can see the ejector panel from the cab through the front head. Use this opening to access the body, **ESPECIALLY** when the unit does not have the optional side access door.

⚠ DANGER

Do not enter the hopper unless the unit is in the Lock-Out/Tag-Out mode. When the unit is not in the Lock-Out/Tag-Out mode, the packer/ejector panel can be operated. DEATH or SERIOUS INJURY may occur if the packer/ejector panel moves while a person is in the hopper.

Hopper – The hopper is the refuse loading chamber of the tailgate. NEVER use the hopper as an entrance to the body.

Hopper Sill – A lip on the hopper over which you dump the refuse into the hopper. The lip provides a resting spot for manual loading of residential refuse containers. NEVER climb or stand on the hopper sill.

Hydraulic Oil Tank - The tank is the reservoir for the hydraulic oil which operates all hydraulic cylinders described above.

PRODUCT NOMENCLATURE (CONTINUED)

⚠ WARNING

Operating the unit's controls with a suspended load, such as a raised tailgate or a container on a lift mechanism, will allow the load to move even when the hydraulic pump is OFF.

Hydraulic Pump – The unit's hydraulic pump provides the oil flow for the hydraulic system. It is located either in front of the unit's engine or underneath the unit, powered by the transmission through a Power Take-Off (PTO). With a front-mount pump, the operator turns the pump ON and OFF as needed with the SYSTEM POWER switch located on the in-cab control panel. With a PTO pump, the operator engages the PTO then turns the SYSTEM POWER switch ON to activate the pump. Depending on the pump and PTO combination, hydraulic oil may flow through the system when the pump is off, however, the operator controls are inoperative and the system hydraulic oil pressure is not sufficient to operate the unit's functions.

⚠ DANGER

The packer blade and slide assembly are dangerous. They can cause serious injury or death if a person is inside the hopper. Make sure no one is inside the hopper before you begin a packer function. Put the unit in the lock-out mode if a person is in the hopper.

⚠ CAUTION

Stand clear when the ejector panel is in motion. Keep side access door closed when ejector panel is in motion. Failure to obey may result in minor or moderate injury.

(Packer) Blade – You MOVE the packer blade UP while you move the slide assembly OUT to load refuse into the hopper. You MOVE the packer blade DOWN while you move the slide assembly IN to sweep refuse from the hopper towards the body.

Slide Assembly – You move the slide assembly OUT while you move the packer blade UP to load refuse into the hopper. You move the blade IN while you move the packer blade DOWN to push the refuse into the body.

PRODUCT NOMENCLATURE (CONTINUED)

Slide/Blade Controls – The operator uses these controls to operate the slide assembly and the packer blade to open the hopper to load refuse and to move refuse from the hopper into the body.

⚠ DANGER

Do not use an arm mechanism or roll bar as a riding step. Obey safety messages and use the riding step for when traveling on the unit. Serious injury or death may occur.

Comb Lift and **Arm Mechanism** options allow operators to lift compatible waste containers and empty them into the hopper. When using either of these optional devices the movement is controlled at the rear of the tailgate using a sustained pressure control. Operators must ensure that nearby personnel are clear of the area around the movement of the lifting mechanism. The area directly behind the containers must also be clear in the event of the loss of the container during the lifting operation. Only containers that are in good condition should be used with a lifting device to prevent them from dislodging from the lifting device. The tailgate mechanics should not be operated while the container and the mechanism are in the raised position to prevent potential impact of the packing mechanism to the container.

⚠ DANGER

A tailgate in motion is dangerous. Serious injury or death may occur if a person is struck by a moving tailgate or becomes trapped between the tailgate and the body. Clear the area near the tailgate of all unnecessary people before you raise or lower the tailgate.

Tailgate – Raise the tailgate at the landfill or transfer station to unload the refuse.

A red light and an alarm inside the cab let the operator know when the tailgate is OPEN (UP). The TAILGATE OPEN red light illuminates (is ON) and the alarm sounds when the tailgate is RAISED. The light is OFF and the alarm stops when the tailgate CLOSED (DOWN).

PRODUCT NOMENCLATURE (CONTINUED)

⚠ DANGER

Always prop a tailgate when you leave it raised for maintenance, service or cleaning procedures. Any part of your body between the unit's body and the tailgate while you prop the tailgate or when the tailgate is propped is dangerous. Serious injury or death may occur if any part of your body is between the tailgate and the body if the tailgate suddenly closes.

Tailgate Props – Always use both tailgate props, one on each side of the unit, when you raise the tailgate for maintenance or service procedures.

Tailgate Cylinders – You use these cylinders to RAISE the tailgate before you unload the compacted refuse at the landfill. After you unload the refuse, you use the cylinders to LOWER the tailgate.

Throttle Advance – The throttle advance is automatically engaged during the tailgate packing cycle. The Operator may use the engine foot feed to raise the engine speed up to 1500 RPM while ejecting the load or raising the tailgate.

GLOSSARY

TERM	DEFINITION
accident	An incident that results in unintended harm
arm mechanism	An option for Rear End Loaders (RELs), an assembly that uses arms that mate with a refuse container's slots to lift, dump and lower a refuse container
bin	The refuse collection container
blade	The assembly that moves refuse into the body. The blade works with the upper panel to open the hopper, move refuse into the body, compact the refuse and to close the hopper.
body	The complete body assembly or the area of the body where the refuse is stored
cart tipper	A Rear End Loader (REL) option attached to the tailgate that allows an operator to secure a residential refuse container and unload its contents into the hopper
CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury
collapsed position	The fully retracted position of a cylinder
DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury
extend/EXTEND	Make a cylinder rod move out its base. / Command to move the packer panel towards the body
fall-back	Material loaded in the body that drops from its initial compacted position into the hopper
fouling	Damage to the lid(s) of the refuse bins (containers) that interferes with unloading the refuse
front head	The part of the body that allows access to the body from the front of the body. This is the ONLY access to the body when the unit does not have an optional side access door.
fully retracted position	The packer/extend cylinder is fully retracted and the packer panel is all the way to the front of the hopper. May also be referred to as "Home Position" or "Front Head"
hand holds (grab handles)	An attachment to the tailgate of a Rear End Loader (REL) that an operator grabs with their hands while using the riding step

GLOSSARY

TERM	DEFINITION
harm	An action that causes death, injury or property damage
hazard	A potential source of harm
hopper	The loading chamber of the unit in front of the packer panel where you dump the refuse material
illuminate	Make a lamp shine light (the lamp is on).
incident	An unintended and undesired event that has the potential to harm
interlock	A safety mechanism that disables a function or action
LATCHED	The side access door is secured closed.
latch bar	The assembly that secures a residential refuse container to the tailgate
LOAD POSITION	Applicable to Rear End Loaders (RELs), the packer panel is UP and the slide assembly is OUT. This opens the hopper for loading.
LOCK	Command to use the tailgate lock/unlock switch and lock the tailgate lock cylinders
lower/LOWER	Move the lift arms, forks, body or tailgate down. / Command to move the lift arms, forks, body or tailgate down
may	You are allowed to do the action, but it is not mandatory. It is understood to be permissive.
must	The action is mandatory.
NOTICE	Alerts you to practices not related to personal injury, such as damage to the unit or other equipment
off/OFF	When a light or lamp does not illuminate / The position of a switch or other control to stop a function
on/ON	When a light or lamp illuminates / The position of a switch or other control to start a function

GLOSSARY

TERM	DEFINITION
operator	Any person who uses the unit and its equipment. One who controls the operation of various unit accessories and mechanisms, loads material, performs functions such as operating the loader, cart tipping and packing of wastes or recycled products, and who may also drive the unit along the route during the collection process. The operator may also be the driver.
(packer) blade	The packer assembly that moves refuse into the body. The blade works with the slide to close the hopper, to move refuse into the body and to open the hopper.
PACK POSITION	Applicable to Rear End Loaders (RELs), the packer blade is DOWN and the slide assembly is IN. The operator uses this position, repeated as necessary, to sweep refuse from the hopper and compact the refuse in the body.
packer panel	The packer panel is comprised of the blade and the upper panel. The packer panel moves refuse out of the hopper and compacts it into the body.
PN	Part Number
PTO	Power Takeoff
raise/RAISE	Move the lift arms, forks, body or tailgate up. / Command to move the lift arms, forks, body or tailgate up
REL	Rear End Loader
retract/RETRACT	Make a cylinder rod go into its base / Command to move the packer panel towards the hopper
reeving mechanism	An option for Rear End Loaders (RELs), a cylinder assembly that is located on the centerline of the roof with which an operator can raise and dump a commercial refuse container
riding step	On Rear End Loaders (RELs), the platform at the side of the tailgate that an operator stands on while riding on the outside of the unit during collection activities.
RPM	Revolutions Per Minute

GLOSSARY

TERM	DEFINITION
should	The action is advised.
side access door	The optional side access door is located on the street side of the unit. This is the preferred access into the body.
throttle advance	On Rear End Loaders (RELs), when the unit is in neutral, you use the throttle advance to increase the RPMs of the engine which results in greater flow of hydraulic fluid for operation of the tailgate, ejector and optional container lifting devices.
top door	This optional top door covers and uncovers the hopper. The cover is closed during transit and must be open during loading of refuse in the hopper.
unit	The Heil PT 1000A refuse collection vehicle referred to in this manual.
UNLATCHED	The side access door is not closed or secured.
UNLOCK	Command to use the tailgate lock/unlock switch and unlock the tailgate lock cylinders
WARNING	Indicates a hazardous situation, which if not avoided, could result in death or serious injury
winch	An option for Rear End Loaders (RELs), a mechanism with a hook and cable that an operator uses to raise, dump and lower a commercial refuse container

NOTES:

SECTION 2
SAFETY MESSAGES AND DECALS

PREVIEW

Read this section to learn about:

- General safety precautions and safety precautions for the safe operation and maintenance of the unit
- The safety precautions for NOT towing another vehicle or machine
- Safety decals on the unit

PRECAUTIONARY STATEMENTS

Read this entire manual and especially this safety section before you operate the vehicle. Failure to follow these important precautions could result in serious injury, death, or property damage.

This safety alert symbol indicates important safety messages in this manual and in safety decals attached to the equipment. Make sure you read all of these messages and follow the instructions and precautions.

In the general text of the manual and in the safety labels attached to the product, signal words indicate the type and seriousness of risk that you could encounter if you do not follow the precautions. The signal words and their definitions follow:

DANGER

DANGER indicates a hazardous situation which, if not avoided, WILL result in DEATH or SERIOUS INJURY.

WARNING

WARNING indicates a hazardous situation which, if not avoided, COULD result in DEATH or SERIOUS INJURY.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, COULD result in MINOR or MODERATE INJURY.

NOTICE

NOTICE addresses practices not related to personal injury, such as property damage or damage to the equipment.

The following pages provide a summary of some of the more important safety precautions that are in this manual. There are additional safety precautions in other sections of this manual that are not contained in this section. You must also read, understand and follow those messages.

GENERAL SAFETY PRECAUTIONS

- **DO NOT** operate the unit under the influence of alcohol or drugs or when extremely tired or when you are not alert, as this may result in an accident that can cause serious injury or death.
- **DO NOT** operate the unit unless you have the proper training and vehicle operator license.
- **ALWAYS** carry and maintain a fire extinguisher and first aid kit in the unit. **MAKE SURE** you know how to use them.
- **CLEAN AS NECESSARY** any safety decals that you cannot read at a safe viewing distance from the hazard because of dirt. If any decals are illegible from damage or wear, **REPLACE** them **IMMEDIATELY**. Get decals from your Heil dealer or Heil.
- **DO NOT** use this refuse collection vehicle to TOW another vehicle or equipment. It **IS NOT DESIGNED** or equipped to tow another vehicle or other equipment. Towing another vehicle or equipment may result in injury or death to the operator or other people or damage to the unit.
- **MAKE SURE** all individuals are clear of any moving parts, mechanisms or components of the unit before you operate the controls.
- **DISENGAGE** the PTO or MOVE the PUMP ON switch to OFF so the pump shuts off when you are not using the unit, when you are repairing the unit, when you are working on the unit, or when traveling in the unit for longer than two minutes.
- Engage the PTO or MOVE the PUMP ON switch to ON ONLY when you are on route OR as necessary to perform repairs.
- When the unit is stored or not in use, you **MUST** do the following:
  - SET all lift cylinders to the collapsed position.
  - For units with manual transmissions, DISENGAGE the PTO and MOVE the PUMP ON switch to OFF.
  - For units with automatic transmissions, MOVE the PUMP ON switch to OFF.
  - **REMOVE** the key from the ignition. This helps prevent tampering by unauthorized persons.
  - Refer to **Lock-Out/Tag-Out Procedure** 43.
- You must be attentive at all times while you operate the controls and be ready to stop or reverse the function if necessary.

BEFORE OPERATING THE EQUIPMENT

- **DO NOT** operate or service this machine until you are fully trained and have read and understand this entire manual.
- **NEVER** operate the unit UNLESS you are fully knowledgeable of all control functions. See the **Controls, Switches, and Indicator Lights** section of this manual.
- **MAKE SURE BEFORE** you operate the vehicle or its controls that all individuals are at a safe distance.
- **DO NOT** operate the unit when it needs service or repair.
- **DO A VISUAL CHECK** at the beginning of each shift of the unit and run it through several cycles to find fluid leaks, broken, missing or malfunctioning, and excessively worn components (including hoses). See the **Daily Checklist section** of this manual. If you find leaks, broken, missing or malfunctioning parts, immediately stop and get the condition repaired or serviced.

USE PERSONAL PROTECTIVE EQUIPMENT

- **ALWAYS WEAR** the proper safety equipment, such as hard hats, safety shoes, protective eye wear, reflective clothing and gloves. Confirm with the owner/operator that you are using proper safety equipment.
- **WEAR PROPER EYE PROTECTION** and avoid contact with oil if possible whenever you work on or about hydraulic lines or components. **NEVER** check for oil leaks with your bare hands.

BEWARE OF OVERHEAD OBSTRUCTIONS

- **KNOW** the clearance required for **ALL** overhead obstructions (such as viaducts and bridges) that you may encounter when you drive the unit. See the decal in the chassis cab for your unit's overall height.
- **NEVER** drive the unit under any overhead obstruction of unknown height clearance.
- Become familiar with your route. Be aware of all overhead trees and obstructions that could cause problems during refuse collection.
- **CHECK** the height of the unit after you do any modifications to the chassis suspension. Any chassis suspension modification may change the height of the unit. See Tables 1 and 2.

- **LOOK UP AND LIVE. MAKE SURE** there is enough clearance between a lowered or raised container and overhead power lines. It is not necessary for the unit or container to touch the electric cable for the electricity to pass through the unit. See Tables 1 and 2.
- **STAY IN THE CAB** and **KEEP AWAY FROM ALL METAL PARTS OF THE UNIT** if the unit does touch a power line. **STAY IN THE UNIT UNTIL HELP ARRIVES.**

OVERHEAD CLEARANCES

NOTICE

Tables 1 and 2 is in accordance with OSHA 29CFR 1910.333. (Also refer to ANSI Standard B30.5-2004, 5-3.4.5.) If local rules and laws require more clearance, you must follow them.

Table 1. Overhead Clearances When Operating the Unit

Voltage of Electric Line	Minimum Clearance
50,000 or less	10 feet (3 m)
Above 50,000 to 200,000	15 feet (4.6m)
Above 200,000 to 350,000	20 feet (6.1 m)
Above 350,000 to 500,000	25 feet (7.6 m)
Above 500,000 to 750,000	35 feet (10.7 m)
Above 750,000 to 1,000,000	45 feet (13.7 m)

Table 2. Overhead Clearances When Driving the Unit

Voltage of Electric Line	Minimum Clearance
750 or less	4 feet (1.2 m)
Above 750 to 50,000	6 feet (1.8 m)
Above 50,000 to 345,000	10 feet (3 m)

Table 2. Overhead Clearances When Driving the Unit

Voltage of Electric Line	Minimum Clearance
Above 345,000 to 750,000	16 feet (4.9 m)
Above 750,000 to 1,000,000	20 feet (6.1 m)

LOADING REFUSE INTO THE UNIT

- **YOU MUST BE ATTENTIVE** at all times when you load refuse and be ready to stop or reverse the function in use if necessary.
- **ALL PERSONS MUST STAND CLEAR** when the tailgate is in motion and during the unloading cycle. **MAKE SURE** no one stands under or crosses under a raised tailgate.
- **LOOK UP AND LIVE**. Make sure there is enough clearance between a raised container and overhead power lines. Refer to Tables 1 and 2.

COMPACTING THE LOAD

- MAKE SURE the side access door is CLOSED when the packer pump is in operation and in motion. The packer pump will not operate if the side door is open.
- DO NOT compact refuse when the unit is in congested traffic. YOU MUST pay attention to driving when you pack on-the-move.
- Operating the packer on-the-move REDUCES POWER available for vehicle acceleration.

DUMPING THE LOAD

- **MAKE SURE** the dump area is clear of all personnel.
- **ALL PERSONS MUST STAND CLEAR** when the tailgate is in motion and during the unloading cycle. **MAKE SURE** no one stands under or crosses under a raised tailgate.
- While you raise the body, be attentive at all times and be ready to stop or reverse the function if necessary.

WHEN WORKING IN OR AROUND THE VEHICLE

- **MAKE SURE** the unit is in **Lock-Out/Tag-Out** 43 condition **BEFORE** you work in or around the unit.
- **DO NOT** go under the chassis or enter the body area unless the unit is locked-out. To lock-out the unit, stop the engine, apply the brakes and make sure the brakes hold and work properly, chock all wheels, remove the keys from the cab, and insert a lock-out tag on the steering wheel. See the **Lock-Out/Tag-Out Procedure** 43.

TOWING OF ANY EQUIPMENT

Heil **DOES NOT** recommend that you tow any kind of equipment with the unit. The unit was **NOT DESIGNED** nor intended for towing.

DECALS

The following pages show the DANGER, WARNING and CAUTION decals and list the reflective safety materials that are on the vehicle. See the Parts and Service Manual for the location and part numbers of all decals on the unit.

NOTICE

Replace any decal with a new decal if the old decal is lost, destroyed, painted over or cannot be read. When you replace a part that had decals, make sure you install new decals on each new part. Decal part numbers can be found below and in the Parts Manual. You can purchase replacement decals from your **Heil Dealer** or from the **Heil Parts Central**, 800-528-5308.

There are informational decals on the unit's body or in the unit's cab. They are not illustrated in this manual. Refer to the Parts and Service Manual for the location of these decals. These decals give information about:

212-1600 Hopper Light
212-1782 Hydraulic Oil Only
212-1839 Winch Mechanism
212-1841 A.N.S.I. Standards
212-1903 Buzzer
212-1904 Throttle
212-1906 Tailgate/Ejector Operation
212-1915 Heil Warranty
212-1918 Safety Instructions, Back-up Alarm
212-1969 Blade/Slide Operation
212-1970 Tailgate Raise Alarm
212-2205 Grease Fitting
212-2275 Oil Level
212-2689 Flag, I.S.O.
212-2736 PT 1000 Lubrication Guide

DECAL IMAGES

Figure 6. Danger: Do not enter under, PN 212-1764-E

Figure 7. Danger: Stay clear container, PN 212-1899-E

Figure 8. Caution: Throttle, PN 212-1904-E

Figure 9. Warning: Lockout/Tagout, PN 212-1781-E

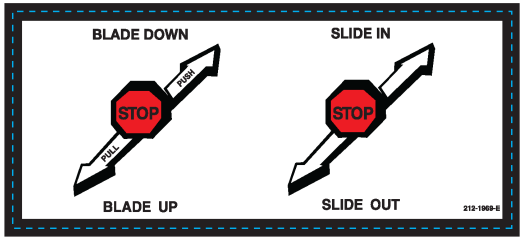


Figure 10. Blade Down/Up, Slide In/Out, PN 212-1969-E

DECAL IMAGES (CONTINUED)

Figure 11. Warning: Operations Manual, PN 212-1783-E

Figure 12. Caution: Hydraulic Oil Only, PN 212-1782-E

Figure 13. Danger: Stand Clear Packer, PN 212-1802-E

Figure 14. Caution: Buzzer, PN 212-1903-E

DECAL IMAGES (CONTINUED)

Figure 15. Heil Replacement Parts, PN 212-1915-E

Figure 17. Caution: Stand Clear Panel, PN 212-1911-E

Figure 16. Danger: Stand Clear Tailgate, PN 212-1801-E

DECAL IMAGES (CONTINUED)

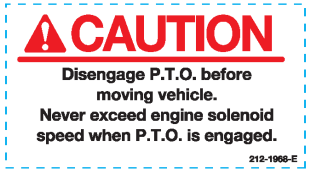


Figure 18. Caution: Disengage P.T.O., PN 212-1968-E

Figure 20. Safety Installations, PN 212-1918-E

Figure 19. Warning: Do not cross behind, PN 212-2691-E

CARE OF DECALS

It is important that the decals are properly cleaned to make sure that they are readable and do not come off the unit. Use the following steps to clean the decals.

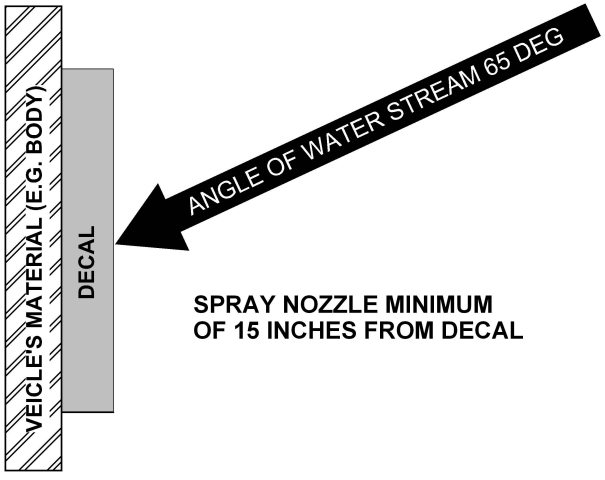
General Instructions

- Wash the decals with a blend of mild car wash detergent and clean water.
- Rinse with clean water.
- Let the vehicle air-dry or dry with a micro-fiber cloth.
- Do not allow fuels to stay in contact with the decal for an extended period of time. Remove the fuel contamination as quickly as possible.
- Do not use carnauba-based wax over the decals.
- Do not use a mechanical brush while washing the decals.

Pressure Washer Precautions

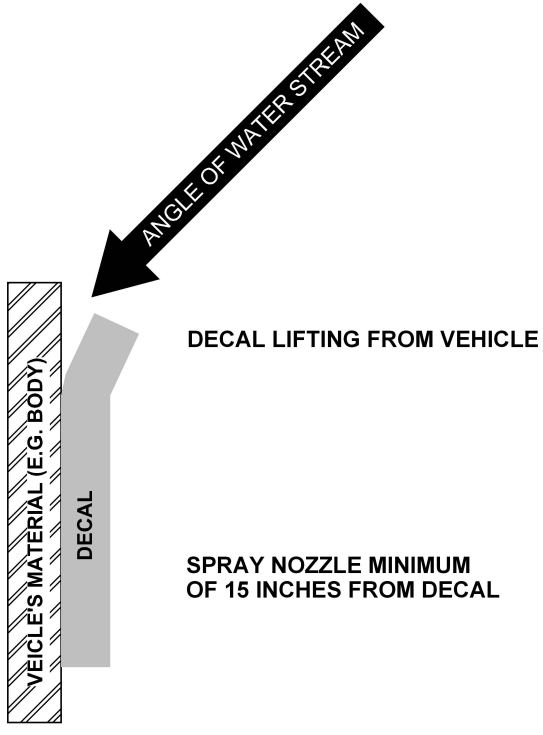
- Pressure washing can cause damage to decals. It can cause the edges of the decals to lift and peel the decal away from the unit. Over time, the decal can fade, crack or chip away.
- See the following figures for correct and incorrect methods of pressure washing.
- Use pressure washing only when other cleaning methods are not effective. If you use a pressure washer, use the following precautions.
    - Spray nozzle opening: 40° wide pattern
    - Spray angle: 65° from vehicle' s body
    - Distance of nozzle to decal: 15" minimum
    - Water pressure: <= 800 psi
    - Length of time: not more than 30 sec.
    - Do not use sharp angles to clean the decals – this can lift the decals from the unit.
    - NEVER use a "turbo pressure nozzle".

PRESSURE WASHER TECHNIQUE



RECOMMENDED TECHNIQUE

Figure 21. Recommended Technique



INCORRECT TECHNIQUE

Figure 22. Incorrect Technique

ALTERNATIVE CLEANING PROCEDURE

When normal cleaning procedures do not remove difficult debris from the decals, try the following:

⚠ WARNING

Isopropyl alcohol is flammable and is harmful to eyes and skin. Keep isopropyl alcohol away from heat or open sources of ignition. Flush eyes and skin with water for 15 minutes after contact. Seek immediate medical help.

- Spot clean the decal with Isopropyl Alcohol and a micro-fiber cloth (rag).
- If these methods do not work on a problem area, call a Heil Dealer or Heil Customer Service.

SECTION 3
LOCK-OUT/TAG-OUT PROCEDURE

PREVIEW

Read this section to learn about the proper Lock-Out/Tag-Out procedures.

You MUST Lock-Out/Tag-Out a unit BEFORE:

- You enter the body
- Do maintenance or repair procedures.

LOCK-OUT/TAG-OUT PROCEDURE

NOTICE

Always use your employer's Lock-Out/Tag-Out procedures. If your employer does not have Lock-Out/Tag-Out procedures, use the procedures that follow. Contact your supervisor or Heil Technical Service if you have any questions about Lock-Out/Tag-Out procedures.

Put the unit in a Lock-Out/Tag-Out mode:

- BEFORE you enter the unit's body.
- BEFORE you perform maintenance, repair, or cleaning procedures on the unit.

☑ Follow These Steps:

1. APPLY the brakes. MAKE SURE the brakes do not let the unit move and they work properly.
2. Chock all wheels.
3. **SET the tailgate props** when you raise the tailgate for service, maintenance or cleaning.
4. If equipped, **SET the body props** when you raise the body for service, maintenance or cleaning.
5. When there are in-cab controls, turn the ignition switch to ON, then:
   a. Move the switches of the hydraulic controls. This relieves the pressure in the cylinders.
   b. Turn the ignition switch to OFF.
6. When there are no in-cab controls, move the outside control levers to relieve the pressure in the cylinders.
7. Put a LOCK-OUT/TAG-OUT tag onto the steering wheel.
8. Remove the ignition key from the cab, lock the vehicle, and put the key in a secure location.

Figure 23. Lock-Out/Tag-Out Tag
(Do Not Operate Tag)

NOTICE

You can order Lock-Out/Tag-Out tags (Part No. 212-1586) through your Heil dealer or through Heil.

PT 1000A

NOTES:

SECTION 4
CONTROLS, SWITCHES, AND INDICATOR LIGHTS

PREVIEW

Read this section to learn about the operation of the in-cab and outside controls, switches, buttons, and indicator lights.

NOTICE

The location and appearance of the controls may be different than those shown in this manual. Make sure you know the location of the controls and the how you operate the controls on your unit before you use the vehicle.

This section tells you:

- The in-cab cab controls, switches and buttons
- How the in-cab controls work
- The in-cab indicator lights available
- The outside controls and how they work

CONTROLS

The unit's standard controls are located on the In-Cab Control Panel and on the tailgate.

The standard controls in the cab enable the hydraulic pump and the throttle advance. The unit can be equipped with either outside push button controls (both sides) or lever controls (curb side).

The controls for optional equipment are located on the curb side of the body. These controls include cart tippers, reeving mechanism, and winch.

IN-CAB CONTROL PANEL

There is one basic main control panel for different models of truck chassis. The control panel can be assembled in various enclosures or locations depending on the truck chassis. See the figure on the right side of this page.

The control panel has labels or markings that identify each standard function and its operations. The panel has the capacity for two options, an indicator light for a filter bypassed condition and a switch to operate a strobe light. Make sure you are familiar with the control panel in your unit.

The labeling/marking scheme is straight-forward and identifies a function and its operations. For example, look at the figure below and find the PUMP ON switch and its ON operation. The marking identifies the function (PUMP ON) and its operation (ON). When you want to enable the pump, for example, you MOVE the PUMP ON switch to the ON position.

Similarly, the following instructions tell you to MOVE a switch to a position (as given by the panel's label/marking) for the operation shown on the panel's label/marking.

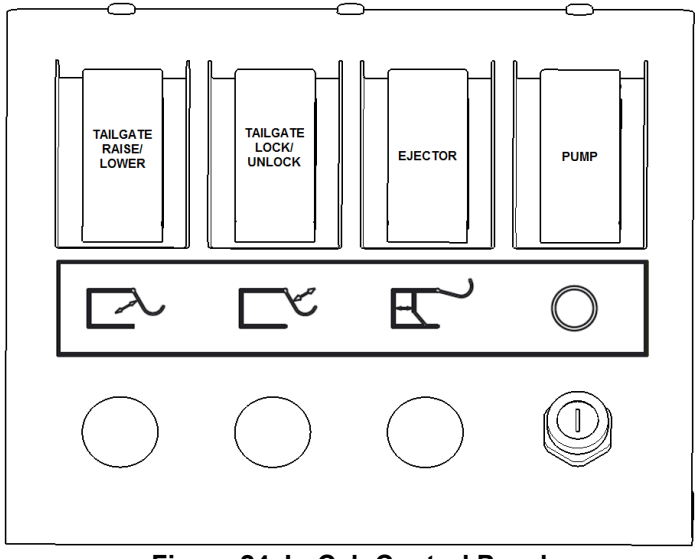


Figure 24. In-Cab Control Panel

IN-CAB CONTROL PANEL (CONTINUED)

Use the switches and indicator lights described in the following paragraphs to enable the standard hydraulic pump and throttle advance functions and to monitor standard indicator lights.

Standard Rocker Switches

The following paragraphs describe the standard toggle switches that are on your unit.

While the control panel may be in different locations in different cabs, the panel and its label/markings will look similar to the panel and labels/markings shown on the figure of the previous page.

1. PUMP ON - This toggle switch enables and disables the hydraulic pump.
   - MOVE the switch to the ON position to enable the hydraulic pump.
   - MOVE the switch to the OFF position to disable the hydraulic pump.
2. TAILGATE RAISE/LOWER - This switch raises and lowers the tailgate.
   - MOVE the switch to the RAISE position to raise the tailgate.
   - MOVE the switch to the LOWER position to raise the tailgate.
3. TAILGATE LOCK/UNLOCK - This switch locks and unlocks the tailgate.
   - MOVE the switch to the LOCK position to lock the tailgate.
   - MOVE the switch to the UNLOCK position to unlock the tailgate.
4. EJECTOR EJECT/RETRACT - This switch ejects the load.
   - MOVE the switch to the EJECT position to unload.
   - MOVE the switch to the RETRACT position to retract the ejector panel.

Standard Indicator Lights

The following paragraphs describe the standard indicator lights that are on your unit.

While the control panel may be in different locations in different cabs, the panel and its label/markings will look similar to the panel and labels/markings shown on the figure of the next page.

1. PUMP INDICATOR - This green indicator light embedded in the switch illuminates (turns ON) when the pump is ON. When the pump is OFF, the light is OFF.
2. TAILGATE OPEN - When the tailgate is NOT FULLY CLOSED, an alarm sounds in the cab.
3. FILTER BYPASSED - This red light illuminates when the filter monitor switch on the hydraulic oil tank senses the pressure in the oil flow returning to the hydraulic oil tank. When the pressure is greater than a preset limit, current flows in the switch and turns the FILTER BYPASSED light ON. When the pressure in the oil flow is lower than the preset limit, the filter monitor switch is OFF, current does not flow to the FILTER BYPASSED indicator light and it is

OFF.

IN-CAB CONTROL PANEL (CONTINUED)

Optional Toggle Switches

The optional toggle switch in the control panel is for an optional strobe light. The switch operates in the same manner as the standard toggle switches to control turning the optional light ON or OFF.

Other optional toggle switches may be located in other areas of the cab. Each such switch will be labeled with its function and operations. You must become familiar with the location and operation of any optional toggle switches that are not located in the Control Panel.

Optional Indicator Lights

The optional indicator light in the control panel is for the FILTER BYPASSED function. The filter monitor switch on the hydraulic oil tank senses the pressure in the oil flow returning to the hydraulic oil tank. When the pressure is lower than a preset limit, current flows in the switch and turns the FILTER BYPASSED light ON. When the pressure in the oil flow is greater than the preset limit, the filter monitor switch is OFF, current does not flow to the FILTER BYPASSED indicator light and it is OFF.

Other optional indicator lights may be located in other areas of the cab. Each such switch will be labeled with its function and operations. You must become familiar with the location and operation of any optional indicator light that is not located in the Control Panel.

STANDARD OUTSIDE CONTROLS

The unit can be equipped with either outside push button controls (both sides) or lever controls (curb side).

If your unit is equipped with tailgate lever controls, refer to **TAILGATE Lever Controls** 55. If your unit is equipped with tailgate push button controls, refer to the information below.

⚠ DANGER

Your body or clothing can become caught by the blade while it moves. Serious injury or death may occur if a person is in or near the hopper when the blade and slide assembly move. Clear the area near the hopper of all unnecessary people before you move the blade and slide assembly and keep all parts of your body away from the blade.

TAILGATE Push Button Controls

To start the cycle, PRESS and RELEASE the BLADE UP push button. The blade will raise up and slide out. After verifying the pinch point between the packer blade tip and hopper lip is clear, the operator may press and release the BLADE DOWN push button. The blade down and slide in function will operate in sequence.

Using the SLIDE IN and SLIDE OUT push button will operate these functions individually and should only be used in a condition where the automatic cycle fails to complete as a normal cycle.

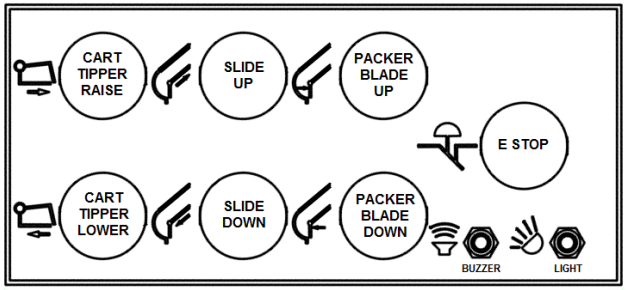


Figure 25. Tailgate Push Button Control Panel

The operator must PUSH the button to the DOWN position until the function activates. Then operator can RELEASE the button. Operator may PUSH and HOLD the button if the function does not complete automatically. See the figure above.

A. BLADE RAISE/LOWER Button

- PUSH the corresponding button to LOWER the blade. PUSH the Red System Power button to stop the function.
- PUSH the corresponding button to RAISE the blade. PUSH the Red E-Stop button to stop the function.

B. SLIDE IN/OUT Button

- PUSH the corresponding button to MOVE the slide up. PUSH the Red E-Stop button to stop the function.
- PUSH the corresponding button to MOVE the slide down. PUSH the Red E-Stop button to stop the function.

STANDARD OUTSIDE CONTROLS (CONTINUED)

C. EMERGENCY STOP (E-STOP) Button

- PUSH the button to stop all functions.
- PULL the button OUT to allow functions to restart.

D. BUZZER Toggle Switch

- PUSH the switch ON to activate the buzzer in the cab when the helper is on the riding step and ready for the unit to move to the next pickup location.
- RELEASE the switch to STOP the buzzer in the cab.
- MAKE SURE you (the helper) are ready for the unit to move. This means that you observe the safety message for using the riding step.

E. HOPPER LIGHT Toggle Switch

- PUSH the switch ON to activate the hopper light.
- PUSH the switch OFF to deactivate the hopper light.

NOTICE

Hopper Lights are also automatically energized when the vehicle is placed in reverse gear.

STANDARD OUTSIDE CONTROLS (CONTINUED)

TAILGATE Lever Controls

If your unit is equipped with tailgate push button controls, refer to **TAILGATE Push Button Controls** 53. If your unit is equipped with tailgate lever controls, refer to the information below and the figures on the next two pages.

⚠ DANGER

Your body or clothing can become caught by the blade while it moves. Serious injury or death may occur if a person is in or near the hopper when the blade and slide assembly move. Clear the area near the hopper of all unnecessary people before you move the blade and slide assembly and keep all parts of your body away from the blade.

A. PACKER BLADE Lever

This lever is on the curb side of the tailgate next to the SLIDE lever. It is the bottom most lever. See Figure 26.

- PUSH the lever to the FULL down position and RELEASE it to MOVE the blade UP.
- PULL the lever to the FULL up position and RELEASE it to MOVE the blade DOWN.
- MOVE the lever in the opposite direction to stop an UP or DOWN operation at any time.
- You usually operate this lever at the same time you operate the SLIDE lever to:
  - OPEN the hopper to load refuse
  - CLOSE the hopper for the in-transit position
  - MOVE and COMPACT the refuse in the hopper to the body.

B. SLIDE Lever

This lever is on the curb side of the tailgate next to the BLADE lever. See the Figure 27.

- PULL the lever to the UP position and RELEASE it to MOVE the slide assembly IN.
- PUSH the lever to the DOWN position and RELEASE it to MOVE the slide assembly OUT.
- MOVE the lever in the opposite direction to stop an IN or OUT operation at any time.
- You usually operate this lever at the same time you operate the BLADE lever to:
  - OPEN the hopper to load refuse
  - CLOSE the hopper for the in-transit position
  - MOVE and COMPACT the refuse in the hopper to the body.

STANDARD OUTSIDE CONTROLS (CONTINUED)

TAILGATE Lever Controls (Continued)

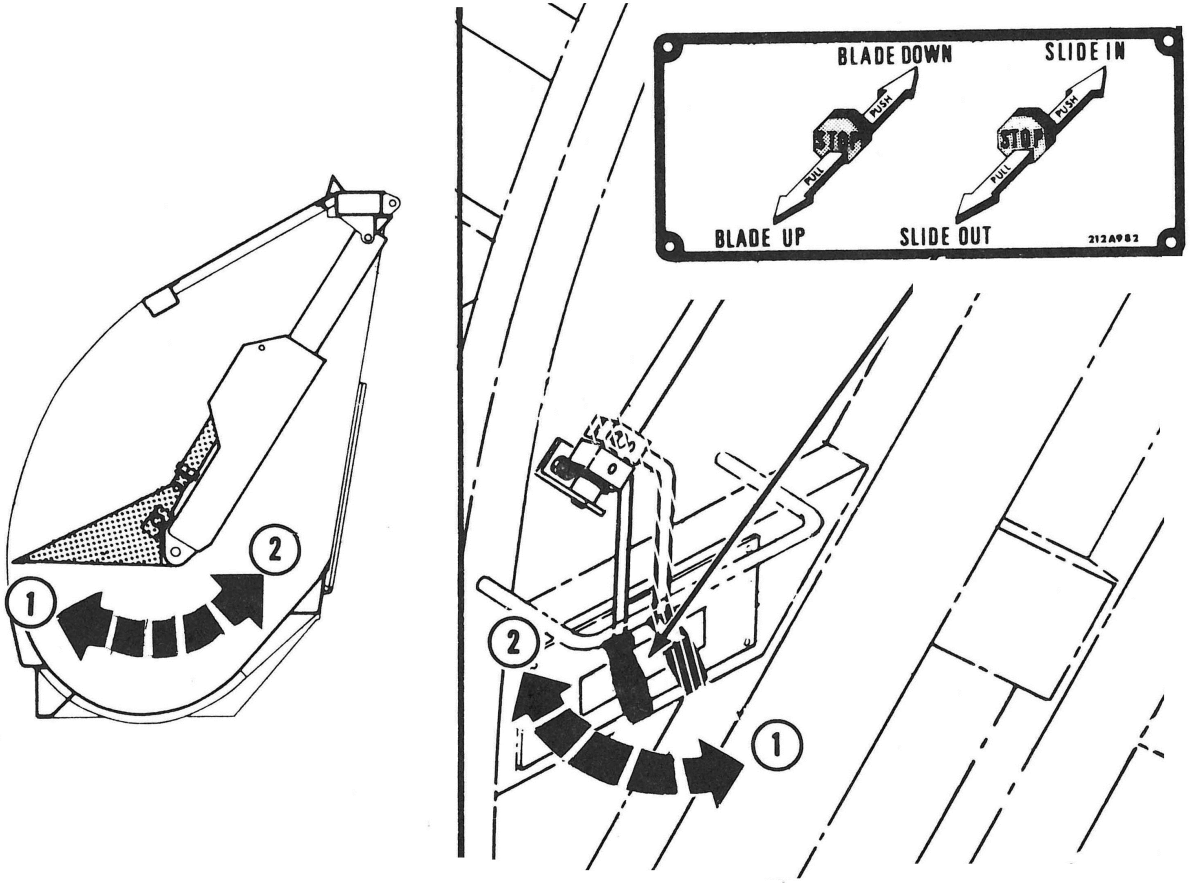


Figure 26. Packer Blade Control Lever

STANDARD OUTSIDE CONTROLS (CONTINUED)

TAILGATE Lever Controls (Continued)

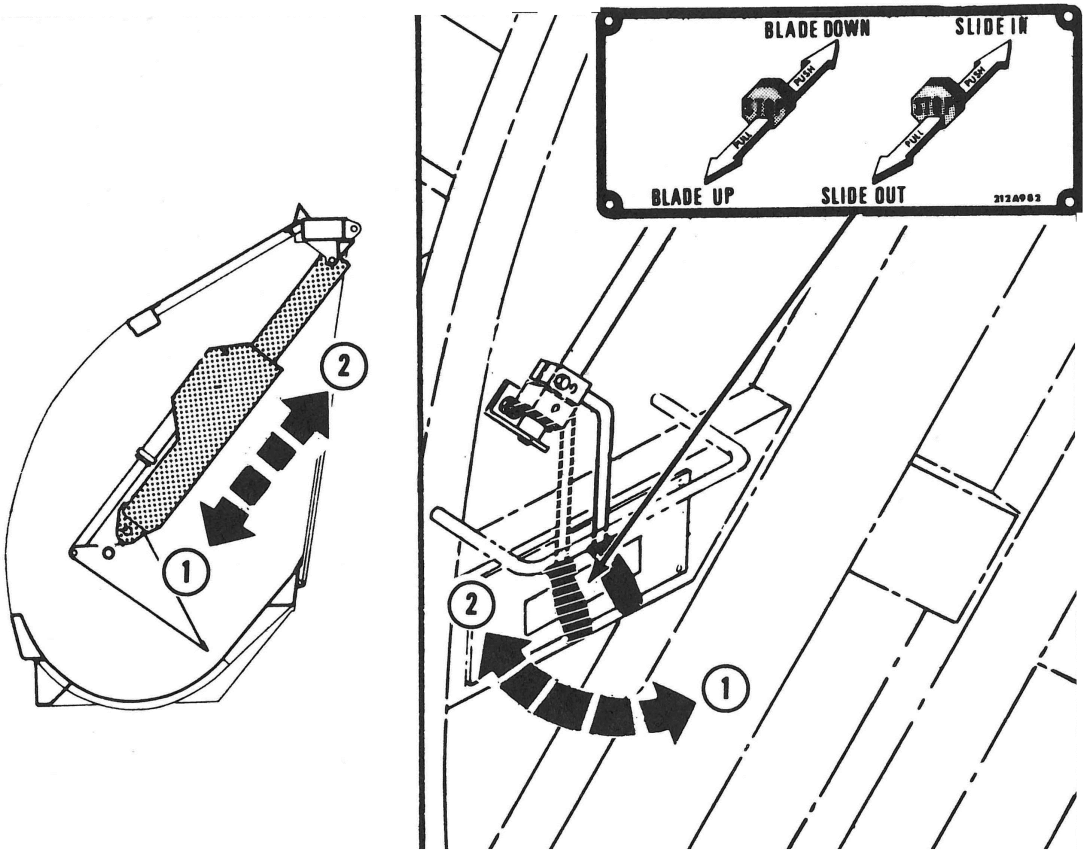


Figure 27. Slide Control Lever

STANDARD OUTSIDE CONTROLS (CONTINUED)

TAILGATE Lever Controls (Continued)

C. BUZZER Toggle Switch

1. PUSH the switch ON to activate the buzzer in the cab when the helper is on the riding step and ready for the unit to move to the next pickup location.
2. RELEASE the switch to STOP the buzzer in the cab.
3. MAKE SURE you (the helper) are ready for the unit to move. This means that you observe the safety message for using the riding step.

D. HOPPER LIGHT Toggle Switch

1. PUSH the switch ON to activate the hopper light.
2. PUSH the switch OFF to deactivate the hopper light.

OPTIONAL OUTSIDE CONTROLS

The optional outside controls include levers to operate the optional hydraulic equipments such as:

- Comb Lift
- Arm Mechanism
- Reeving Mechanism
- Cart Tipper

There are several combinations of optional equipment. The controls for optional equipment are usually located on the curb side of the unit, but may also be located on the street side of the unit. You must become familiar with the optional equipment and their controls that are on your unit. See the figure to the right.

An additional throttle advance toggle switch may be installed with optional lifting equipment. The switch is a momentary switch which means that you must PRESS and HOLD the switch to increase the engine RPMs. It is located on the same plate as the buzzer. The engine RPMs decrease as soon as you release the switch. You use the switch to increase the RPMs of the engine which increases the hydraulic oil flow. The increased flow of hydraulic oil increases the speed of the optional lifting equipment.

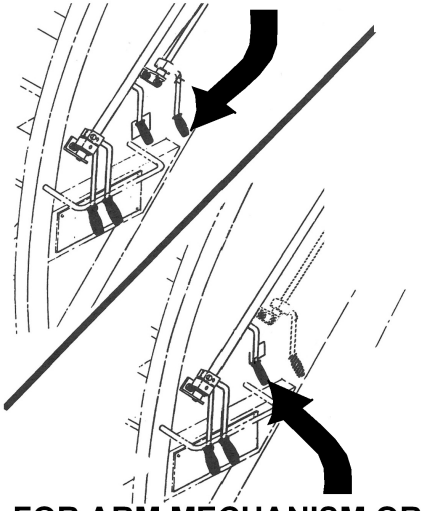


Figure 28. Optional Container Lift Controls

OPTIONAL OUTSIDE CONTROLS (CONTINUED)

⚠ DANGER

Container lifting equipment in motion is dangerous. Serious injury or death may occur if a person is struck by a refuse container or the lifting equipment. Clear the area near the tailgate of all unnecessary people before you use the container lifting equipment.

⚠ WARNING

A refuse container that is not in good condition with retaining washers in place may not be secured with the latch bar and can suddenly move. Death or serious injury can occur when a person is struck by a moving container that is not properly secured. Make sure the refuse container is properly secured to the latch bar before you raise or lower the container.

A. WINCH

An optional winch will be mounted at the top, center of the tailgate. You use the winch and its hook to secure a commercial refuse bin, pull it to the hopper, tip the bin to empty the refuse into the hopper and lower the bin to the ground. The lever controls the RAISE and LOWER operations of the winch.

1. PUSH the lever to the LOWER position and HOLD it there to UNWIND the cable.
2. PUSH the lever to the RAISE position and HOLD it there to the WIND the cable.
3. RELEASE the lever to stop an LOWER or RAISE operation at any time or when the cable hook is at the position you want.
4. Attach the latch bar to the refuse bin BEFORE you attach the hook to the refuse container.
5. PUSH/PULL the lever to RAISE the container over the hopper lip, dump the refuse from the container and lower the container to the ground.

B. COMB LIFT and ARM MECHANISM

The optional arm mechanism consists of a lift arm on each side of the tailgate connected by a cross tube. Each lift arm hooks onto a trunnion bar on the refuse container. Each arm is raised and lowered by a cylinder. The two cylinders are controlled by a single lever.

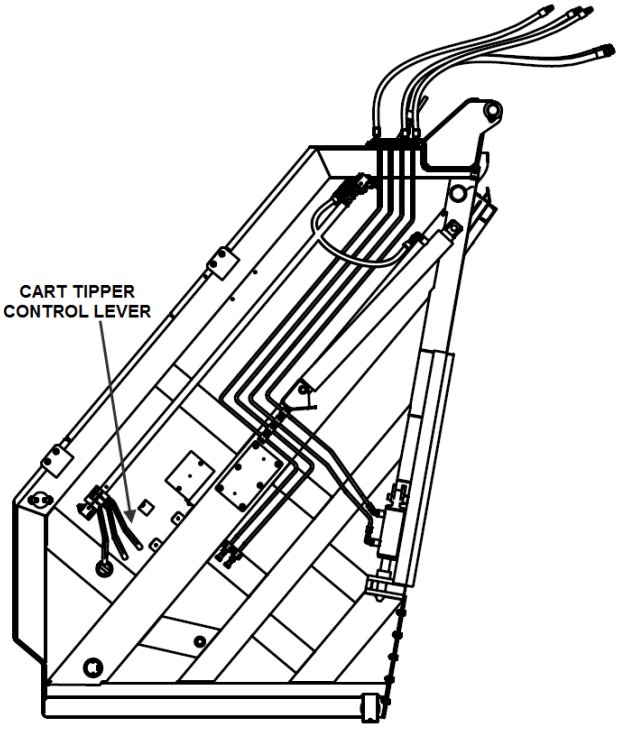
1. PUSH the lever to the LOWER position and HOLD it there to LOWER the roll bar.
2. PUSH the lever to the RAISE position and HOLD it there to RAISE the roll bar.
3. RELEASE the lever to stop an LOWER or RAISE operation at any time or when the roll bar is at the position you want.
4. MAKE SURE the refuse container is SECURED by the arm mechanism **BEFORE** you RAISE or LOWER the refuse container.
5. PUSH/PULL the lever to RAISE the container over the hopper lip, dump the refuse from the container and lower the container to the ground.

OPTIONAL OUTSIDE CONTROLS (CONTINUED)

C. CART TIPPER (Lever Controlled)

One or two optional cart tippers can be installed on the unit. When equipped with a control lever, the control lever for a single cart tipper will be located on the curb side of the tailgate as shown in the figure to the right.

1. Bring the refuse container to the cart tipper and secure the container to the cart tipper with the cart tipper lock.
2. PULL and HOLD the lever to RAISE the cart tipper. The cart tipper will RAISE and (by continuing to PULL the lever) tip the container, thereby dumping the refuse in the hopper.
3. MAKE SURE the container latch bar is over the cart tipper saddle **BEFORE** you RAISE the container.
4. MAKE SURE the cart tipper slider latch EXTENDS and LOCKS the container when you RAISE the container.
5. If the latch does not extend, LOWER the container, make sure the container latch bar is over the cart tipper saddle and RAISE the container again. DO NOT continue to RAISE a refuse container when the slider latch does not extend and lock the container.
6. When the refuse container is empty, PUSH and RELEASE the lever to LOWER the cart tipper. At the end of the LOWER cycle, the cart tipper will stop lowering.
7. RELEASE the refuse container from the cart tipper's lock.



29. Cart Tipper Control Lever

OPTIONAL OUTSIDE CONTROLS (CONTINUED)

C. CART TIPPER (Push Button Controlled)

One or two optional cart tippers can be installed on the unit. When equipped with push buttons, the push button controls will be located on the tailgate push button control panel. See the figure to the right.

1. Bring the refuse container to the cart tipper and secure the container to the cart tipper with the cart tipper lock.
2. PRESS the CART TIPPER RAISE button to RAISE the cart tipper. The cart tipper will RAISE and (by continuing to PRESS the button) tip the container, thereby dumping the refuse in the hopper.
3. At any time, you can RELEASE the button to STOP the cart lifter movement.
4. MAKE SURE the container latch bar is over the cart tipper saddle **BEFORE** you RAISE the container.
5. MAKE SURE the cart tipper slider latch EXTENDS and LOCKS the container when you RAISE the container.
6. If the latch does not extend, LOWER the container, make sure the container latch bar is over the cart tipper saddle and RAISE the container again. DO NOT continue to RAISE a refuse container when the slider latch does not extend and lock the container.
7. When the refuse container is empty, PUSH and HOLD the CART TIPPER LOWER button to LOWER the cart tipper.
8. At any time, you can RELEASE the button to STOP the cart lifter movement.
9. RELEASE the refuse container from the cart tipper's lock.

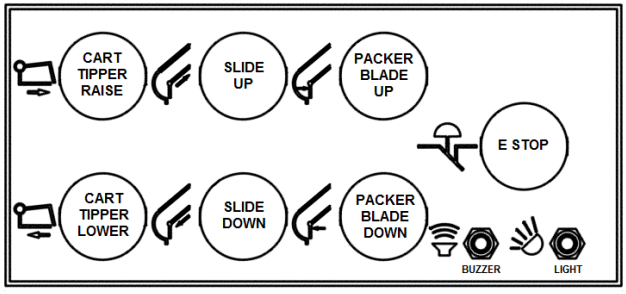


Figure 30. Tailgate Push Button Control Panel

SECTION 5
BODY AND TAILGATE PROPS

PREVIEW

Read this section to learn about:

- Using the body props
- Using the tailgate props

PROPPING THE BODY

There are no body props as you cannot raise the body of the unit since the unit is an eject model and not a dump model.

PROPPING THE TAILGATE

YOU MUST prop the tailgate when you open it for service or maintenance. Use the instructions that follow and prop the tailgate with the factory-installed tailgate props.

Observe and obey the following DANGER and WARNING notices while you prop the body with the factory body props.

⚠ DANGER

A tailgate is dangerous while you raise or lower it. A prop may fail and cause the tailgate to close suddenly which can result in serious injury or death if you become trapped between the tailgate and the body. Do not walk under or go between the body and the tailgate when the tailgate is in motion, while you prop the tailgate or while the tailgate is propped.

Factory Tailgate Props

YOU MUST USE BOTH of the two support props at the rear of each unit whenever you open the tailgate for service or maintenance.

☑ Follow These Steps:

1. **MAKE SURE** the unit is on flat, stable ground and apply the parking brake and chock the wheels.
2. UNLOCK the tailgate using the TAILGATE UNLOCK switch on the in-cab control panel. See **In-Cab Control Panel** 50.

PROPPING THE TAILGATE (CONTINUED)

⚠ DANGER

Always prop the tailgate when you leave it raised for maintenance, service or cleaning procedures. Any part of your body between the unit's body and the tailgate while you prop the tailgate or when the tailgate is propped is dangerous. Serious injury or death may occur if any part of your body is between the tailgate and the body if the tailgate suddenly closes.

3. PULL the TAILGATE RAISE/LOWER control lever to raise the tailgate enough to swing each tailgate prop away from the frame (body), which RELEASES the props. See the figure to the right.
4. The TAILGATE OPEN light is ON.
5. LOWER the tailgate until each prop securely rests in its prop bracket on the tailgate. See the figures on the next page.
6. Put the unit in the Lock-Out/Tag-Out mode and remove the ignition keys. Refer to **Lock-Out/Tag-Out Procedure** 43.
7. When you complete the service or maintenance action, take the unit out of the Lock-Out/Tag-Out mode, insert the ignition key and start the engine.
8. RAISE the tailgate enough so that you can swing each prop towards the frame (body) and secure the prop in its prop bracket in the stored position. See the figures on the next page.
9. PUSH the TAILGATE RAISE/LOWER control lever until the tailgate is completely CLOSED.
10. The TAILGATE OPEN light is OFF.
11. LOCK the tailgate using the TAILGATE LOCK switch on the in-cab control panel. See **In-Cab Control Panel** 50.

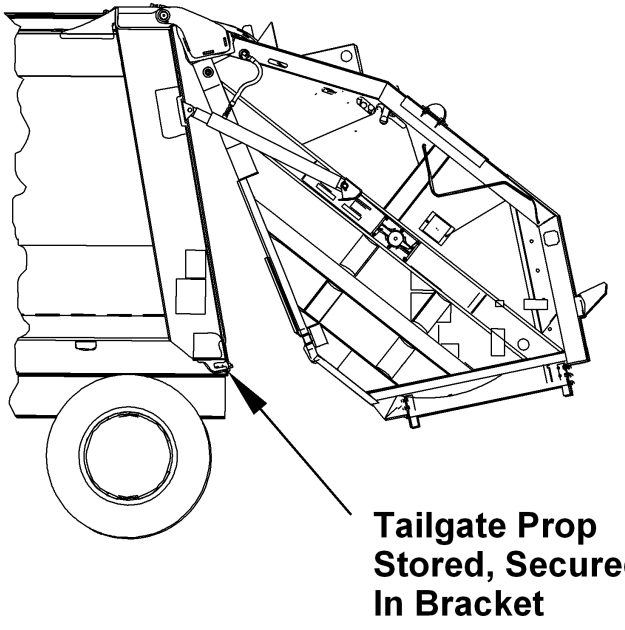


Figure 31. Open Tailgate for Tailgate Props

PROPPING THE TAILGATE (CONTINUED)

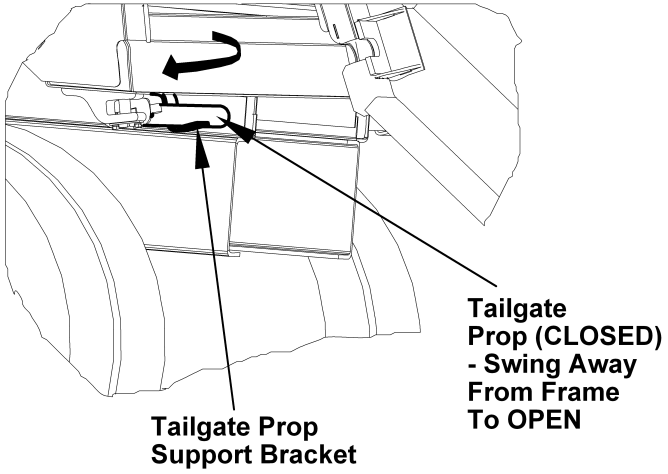


Figure 32. Setting Tailgate Props

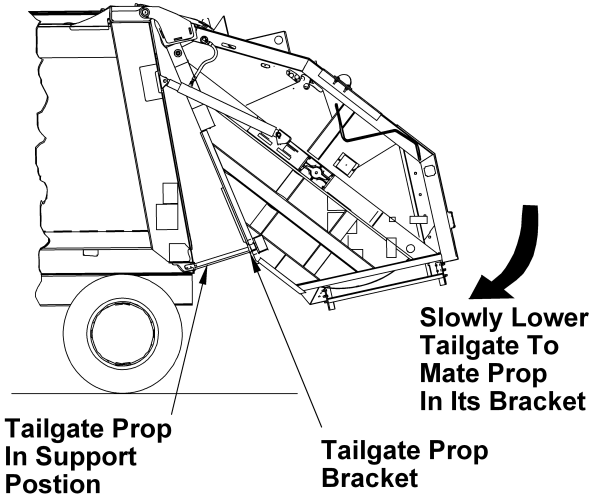


Figure 33. Setting Tailgate Props Details

PT 1000A

NOTES:

SECTION 6
DAILY CHECKLIST

DAILY CHECKLIST MAINTENANCE ITEMS

Make sure you perform a daily check of the unit. Make copies of the **Refuse Vehicle Daily Inspection** on the next several pages to have the Operator mark completed items before each route. Many checks in the Daily Checklist are maintenance related, such as checking tire pressures and hoses for wear and damage.

Refer to the **Daily Checklist Maintenance Items Chart** below for items to check and the required action.

DAILY CHECKLIST MAINTENANCE ITEMS	
Item	**Required Action**
Low air pressure in tires	Inflate the tire to the correct air pressure given on the tire
Worn tire	Replace when the wear is greater than allowed by law or before the tread is no longer visible
Damaged tire	Replace immediately BEFORE going on route.
Hydraulic pump for leaks	Determine the cause of the leak and repair immediately
Damaged hydraulic pump	Repair or replace IMMEDIATELY
Loose or missing hardware for the hydraulic pump	Tighten loose hardware Replace missing hardware immediately
Damaged decal or decal not readable	Replace decal immediately
Low level of hydraulic oil	Fill the hydraulic oil tank immediately
Worn or damaged hoses	Replace immediately
Leaks at cylinders, hoses or fittings.	Tighten loose connection
Loose or missing hardware	Tighten loose connections. Replace missing hardware
Wet fiber guards	Replace hoses/fittings as necessary. Install new fiber guard on new hoses
Worn or damaged tailgate lock components	Replace worn or damaged components
Loose or missing tailgate lock hardware	Tighten loose hardware Replace missing hardware
Damaged tailgate seal	Replace seal

DAILY CHECKLIST MAINTENANCE ITEMS	
Item	**Required Action**
Body structure has loose or missing hardware	Tighten loose hardware Replace missing hardware
Body structure has cracked weld joints	Repair immediately
Body mounting brackets have loose hardware, damaged hardware or cracked welds	Tighten loose hardware Replace missing hardware Repair cracked welds
Air regulator	90 PSI locate it on your unit – generally at front of body

PT 1000A

REFUSE VEHICLE DAILY INSPECTION

DATE: _____/_____/_____

UNIT NO. _____

Enter one of the following codes in the Inspection Results Code column:

Use a √ to indicate inspected and no repair, service or adjustment is necessary.
Use an **R** to indicate repair, service or adjustment is necessary.
Use an **N** to indicate vehicle not equipped.

FOLLOW ALL APPLICABLE LOCK-OUT / TAG-OUT PROCEDURES

Printed Name of Operator:

_____

I certify with the signature that follows that I performed a complete inspection in accordance with the following check list on the date given above.

Signature of Operator:

_____

Refer to **Preventative Maintenance Chart** and **Lubrication Guide** for additional information and requirements.

PT 1000A

CHECKS AND INSPECTIONS	INSPECTION RESULTS CODE (√/R/N)
INSPECT PER APPLICABLE MANUFACTURER MANUAL	
Cab/Drive	
Wheels and Tires	
Tractor and Chassis Electrical	
Chassis	
Engine & Transmission & Fluid Levels	
Chassis Lubrication	
REFUSE COLLECTION SYSTEMS AND COMPONENTS	
CAB OUTSIDE AREA	
Check air pressure of tires. Add air if air pressure lower than recommended on any tire before going on route	
Check wear of tire tread. Replace any tire worn below tire manufacturer's recommendation or state requirement before going on route	
Check tires for damage. Replace any damaged tire before going on route	
Inspect pump for leaks	
Inspect pump for damage or loose hardware	
Inspect all decals on cab for damage and readability	

PT 1000A

CHECKS AND INSPECTIONS	INSPECTION RESULTS CODE (√/R/N)
Inspect unit for refuse on or about the engine or exhaust components. **Remove all refuse to prevent a fire**	
BODY AND CHASSIS CURB SIDE INSPECTION	
Inspect level of hydraulic oil if tank is mounted on curb side. It must be full. **Add recommended oil as necessary**	
Inspect body structure for damage, loose or missing nuts and bolts and for cracked welds and metal	
Inspect body mounting brackets for cracked welds, missing bolts or nuts or movement	
Inspect decals on curb side body for damage and readability	
Check air pressure of tires. Add air to any tire with air pressure lower than recommended before going on route	
Check wear of tire treads. Replace any tire worn below tire manufacturer's recommendation or state requirement before going on route	
Check tires for damage. Replace any damaged tire before going on route	
Inspect tailgate raise components	
Cylinder, hoses and fittings for leaks	
Hoses for wear and damage	
Cylinder for damage	
Loose or missing mounting hardware	

CHECKS AND INSPECTIONS	INSPECTION RESULTS CODE (√/R/N)
Inspect tailgate lock components	
Clamp components for wear and damage	
Loose or missing mounting hardware	
Tailgate is locked	
TAILGATE	
Inspect decals on tailgate and underride bumper for damage and readability	
Inspect tailgate seal for visible damage	
Inspect underride bumper for damage and loose components	
Inspect slide assembly	
Cylinders, hoses and fittings for leaks	
Hoses for wear and damage	
Cylinder for damage	
Loose or missing mounting hardware for hydraulics	
Loose or missing hardware for slide assembly	
Inspect packer blade	
Cylinders, hoses and fittings for leaks	
Hoses for wear and damage	

PT 1000A

CHECKS AND INSPECTIONS	INSPECTION RESULTS CODE (√/R/N)
Cylinder for damage	
Loose or missing mounting hardware for hydraulics	
Loose or missing hardware for packer blade	
BODY AND CHASSIS STREET SIDE INSPECTION	
Tailgate is locked	
Inspect tailgate lock components	
Clamp components for wear and damage	
Loose or missing mounting hardware	
Inspect tailgate raise components	
Cylinder, hoses and fittings for leaks	
Hoses for wear and damage	
Cylinder for damage	
Loose or missing mounting hardware	
Check air pressure of tires. Add air to any tire with air pressure lower than recommended before going on route	
Check wear of tire treads. Replace any tire worn below tire manufacturer's recommendation or state requirements before going on route	
Check tires for damage. Replace any damaged tire before going on route	

PT 1000A

CHECKS AND INSPECTIONS	INSPECTION RESULTS CODE (√/R/N)
Inspect all decals on street side body for damage and readability	
Inspect body structure for damage, loose or missing nuts and bolts and for cracked welds	
Inspect body mounting brackets for cracked welds, missing bolts or nuts or movement	
Inspect level of hydraulic oil if tank is mounted on streetside. It must be full. **Add recommended oil as necessary**	
Battery disconnect switch is turned to OFF then:	
Check wiring and battery cables from the battery box to the engine starter for wear and other damage. **IMMEDIATELY REPLACE WORN OR DAMAGED WIRING**	
Check wiring and cables for loose connections. **IMMEDIATELY TIGHTEN LOOSE CONNECTIONS**	
OPERATION OF UNIT - *Skip this section if the unit will not be operated today*	
Close the air tank drain valve	
Turn battery disconnect to ON	
Apply parking brake	
Make sure the starter interlock operates – make sure unit will not start in gear	
Start the engine. Indicator lights and gauges show normal operation of engine	
Make sure the parking brake does not allow the vehicle to move forward or reverse at idle	

PT 1000A

CHECKS AND INSPECTIONS	INSPECTION RESULTS CODE (√/R/N)
Make sure the throttle advance (if equipped) operates only in neutral	
Make sure all cab, body and tailgate lights operate	
Make sure the backup alarm operate	
Make sure all people not necessary and any hazards are clear of the area and then:	
Operate the in-cab controls and make sure:	
If equipped, engage the PTO	
MOVE the PUMP ON switch UP – the switch's green light is ON and the PUMP ON light is ON	
MOVE the PUMP ON switch DOWN – the switch's green light is OFF and the PUMP ON light is OFF	
MOVE the PUMP ON switch UP – the switch's green light is ON and the PUMP ON light is ON	
If equipped, The FILTER BYPASSED light is OFF. If not, and the filter was not changed before starting the unit, report this to your supervisor immediately. DO NOT go on route until the unit is repaired if the filter was not changed	
Operate all optional equipment switches and make sure the option operates correctly, such as a light	
Check the operation of all optional lights. Report any light that is ON and should be OFF or is OFF and should be ON	

PT 1000A

CHECKS AND INSPECTIONS	INSPECTION RESULTS CODE (√/R/N)
Operate the standard outside controls located at the tailgate:	
At the same time, PUSH the SLIDE and BLADE levers	
The blade should move DOWN	
The slide should move IN	
At the same time, PULL the SLIDE and BLADE levers	
The blade should move UP	
The slide should move OUT	
Operate each installed optional outside control located at the tailgate:	
Winch	
Release the cable hook from it storage eye and hold the hook	
PUSH the control lever – the winch spool should UNWIND the cable from the spool	
PULL the control lever – the winch spool should WIND the cable on the spool	
Attach the cable hook to its storage eye	
Arm Mechanism	
PULL the control lever – the lift arms should RAISE	
PUSH the control lever – the lift arm should LOWER	

PT 1000A

CHECKS AND INSPECTIONS	INSPECTION RESULTS CODE (√/R/N)
Make sure the arm mechanism is at the full LOWER position	
Roll Bar	
PULL the control lever – the roll bar should RAISE	
PUSH the control lever – the roll bar should LOWER	
Make sure the roll bar is at the full LOWER position	
Cart Tipper	
PULL the control lever – the cart tipper should RAISE	
PUSH the control lever – the cart tipper should LOWER	
Make sure the cart tipper is at the full LOWER position	
PRESS the Buzzer – the in-cab alarm should sound	
Operate the standard outside controls located at the front, street side of body:	
If the body has refuse, do not operate the controls:	
If the body does not have refuse:	
PULL the tailgate lever and RAISE the tailgate sufficiently to set the tailgate props	
The TAILGATE OPEN light and alarm are ON	
Set the tailgate props	
Inspect the tailgate seal for damage	

CHECKS AND INSPECTIONS	INSPECTION RESULTS CODE (√/R/N)
Inspect the floor, ejector rails and ejector shoes	
Store the tailgate props and RAISE the tailgate completely	
PULL the ejector lever and FULLY EXTEND the ejector panel	
PUSH the ejector lever and FULLY RETRACT the ejector panel	
CLOSE the tailgate	
The TAILGATE OPEN light and alarm are OFF	
Keep the engine running and continue the inspection	
IN-CAB INSPECTION	
Inspect all in-cab decals for damage and readability	
Make sure the following lights are OFF:	
TAILGATE OPEN	
PUMP INDICATOR light is OFF – if it is ON, MOVE the PUMP ON switch to OFF	
If equipped, the FILTER BYPASSED	
All other optional lights	
All switches are at their OFF position:	
PUMP ON	
THROTTLE ADVANCE	

CHECKS AND INSPECTIONS	INSPECTION RESULTS CODE (√/R/N)
All optional switches	
If equipped, check the operation of each camera	
FINAL INSPECTION	
While you walk completely around the vehicle, look for:	
Fluid leaks	
Cracked or damaged welds and metal	
Loose or missing bolts, nuts and clamps	

SECTION 7
BEFORE GOING ON ROUTE

PREVIEW

Read this section to learn proper procedures for:

- Checking the unit each day
- Starting the unit in cold weather
- Setting the unit up for the route
- Removing power to the unit during periods of not using the unit

BEFORE STARTING A ROUTE

Before you start a route, do the following:

- ☐ Perform an inspection of the unit with the **Daily Checklist**.
- ☐ Check the **Hydraulic Oil Tank**.
- ☐ Cycle all **Hydraulic Functions**.
- ☐ If equipped, close the **Sliding Top Door (Hopper Cover)**.
- ☐ Check the **"In-transit" Settings**.

Use the Daily Checklist to Inspect the Unit

It is the operator's responsibility to do a visual inspection of the unit and make sure the unit is in good operating condition before you start a route.

The requirements for the daily checks are given in the **Daily Checklist section**. Make sure you complete the inspections on the checklist and you make all entries, including your signature.

COLD WEATHER WARMUP PROCEDURE

When ambient air temperature is cold (below 0 degrees F), it is necessary to warm up the unit's hydraulic oil before you start your daily route operation or to check the oil level. The hydraulic oil is sufficiently warmed when the temperature is between 120° and 160°F.

⚠ WARNING

Moving parts on the unit are dangerous. Serious injury or death can occur if a person is struck by the equipment. Clear all people from the area before you operate the unit

Follow the steps below to warm up the hydraulic oil.

1. START the TRUCK and let the engine idle.
2. APPLY the PARKING BRAKE and make sure it holds.
3. ENGAGE the HYDRAULIC PUMP for approximately five minutes.
4. MAKE SURE the AREA IS CLEAR of all unnecessary people BEFORE you operate the controls.
5. OPERATE the PACKER EXTEND and PACKER RETRACT functions through ten (10) cycles while the engine idles. See the Operator's Manual for operation instructions.
6. Make sure the oil temperature on the site gauge is between 120° and 160°F. If not, repeat step 5.
7. Check for fluid leaks. Repair if necessary.
8. The unit is now ready to go on route.

PREPARING THE UNIT TO CHECK THE HYDRAULIC OIL LEVEL

Before checking the oil level or adding oil, make sure the oil is warmed up and the unit is in the following position with all cylinders collapsed:

- Truck – on level ground
- Tailgate and Body – fully down and locked
- Ejector Panel – at the front of the body
- Packer Panel – in the in-transit position with all cylinders retracted

CHECK HYDRAULIC OIL LEVEL

Check the hydraulic oil level (after warming up the oil) daily or every eight (8) hours, whichever comes first. Fill as necessary.

CYCLE ALL HYDRAULIC FUNCTIONS

☑ Follow These Steps:

1. Operate the tailgate functions two or three times each. See **Section 3** for proper operation of controls.
2. Put the unit back in the position described above and check the oil level again.
3. Add oil if necessary. See the "Recommended Hydraulic Oil" chart below. Refer to the Service Manual for instructions for filling the oil tank.

RECOMMENDED HYDRAULIC OIL
The following oils by brand name are approved for use in the hydraulic system on this equipment and considered to be all-temperature hydraulic fluids: • Shell Tellus T32 • Mobil DTE 13M • Texaco Rando HDZ 32
NOTE: Cold weather operation requires special oil considerations. Viscosity should not exceed 7500 SSU at lowest startup temperature. Continuous operation should range between 40–1000 SSU for all temperature ranges.

NOTICE

Contamination is a hydraulic system's worst enemy. DO NOT let dirt enter the system. Use a clean rag and remove dirt or other contamination around any system component before you disconnect or remove it. While you fill the reservoir, filter the oil through a 200 mesh (or finer) screen. NEVER use a cloth to filter the oil.

HYDRAULIC OIL TANK WITH SIGHT GAUGE

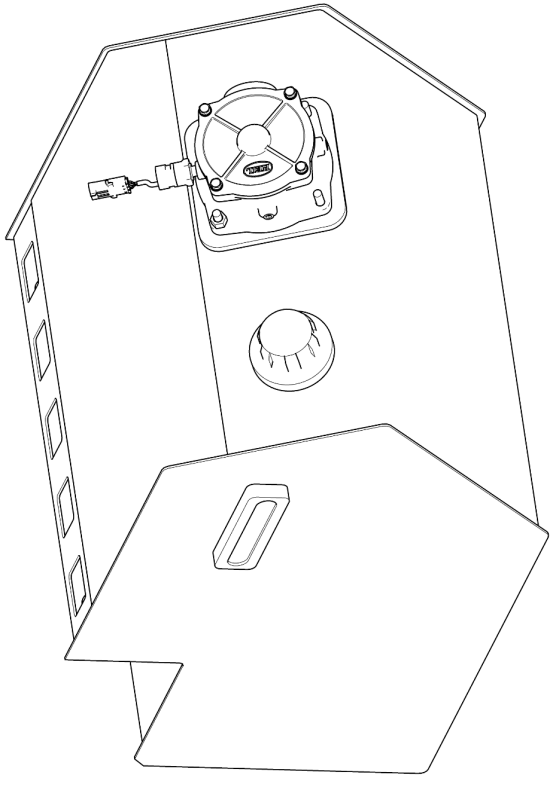


Figure 34. Typical Hydraulic Oil Tank

CYCLE ALL HYDRAULIC FUNCTIONS

Check the operation of all hydraulic controls on the unit. See **Section 4** for proper operation of controls.

⚠ WARNING

Moving equipment can be dangerous to bystanders. Serious injury or death can occur if a person is in the area of operation or is not attentive to the operations. Clear the area of all unnecessary people before you operate the controls.

☑ Perform These Steps:

⚠ DANGER

Your body or clothing can become caught by the packer blade while it moves. Serious injury or death may occur if a person is in or near the hopper when the packer blade and slide assembly move. Clear the area near the hopper of all unnecessary people before you move the packer blade and slide assembly and keep all parts of your body away from the packer blade.

1. Slide/Blade

   Use the controls and MOVE the slide/blade through at least one cycle of the start, sweep and pack positions.

⚠ DANGER

A tailgate in motion is dangerous. Serious injury or death may occur if a person is struck by a moving tailgate or becomes trapped between the tailgate and the body. Clear the area near the tailgate of all unnecessary people before you lower the tailgate.

2. Tailgate Raise Cycle

   If the body is empty, do a tailgate RAISE and LOWER cycle. DO NOT raise the tailgate with refuse in the body or in the hopper.

⚠ CAUTION

Stand clear when the ejector panel is in motion. Keep side access door closed when ejector panel is in motion. Failure to obey may result in minor or moderate injury.

NOTICE

Do not use the ejector panel to pack refuse against a closed tailgate (backpack). Packing refuse against a closed tailgate may result in damage to body or ejector cylinder.

3. Ejector Panel

   Do not operate the ejector panel if the body has refuse. When the body does not have refuse, UNLOCK and RAISE the tailgate, then do at least one EJECTOR PANEL cycle, which includes a full EXTEND cycle and a full RETRACT cycle.

CHECK THE TRAVELING OR "IN-TRANSIT" POSITION

When you travel to and from the landfill or transfer station, make sure the unit is in the in-transit mode as follows (see the figure to the right):

For all units:

- The tailgate is fully LOWERED and CLOSED. Check the TAILGATE UP light in the cab. It must be OFF.
- The tailgate is locked.
- For a unit with refuse, the blade is up tight against refuse. For a unit with no refuse, the blade is at the START POSITION.
- The ejector panel is at the front of the body.
- If equipped, the PTO is DISENGAGED.
- The PUMP ON switch is OFF.
- You properly ADJUST and CLEAN the mirrors.
- All outside lights turn ON and OFF.
- If equipped, the side access door is CLOSED and LOCKED.

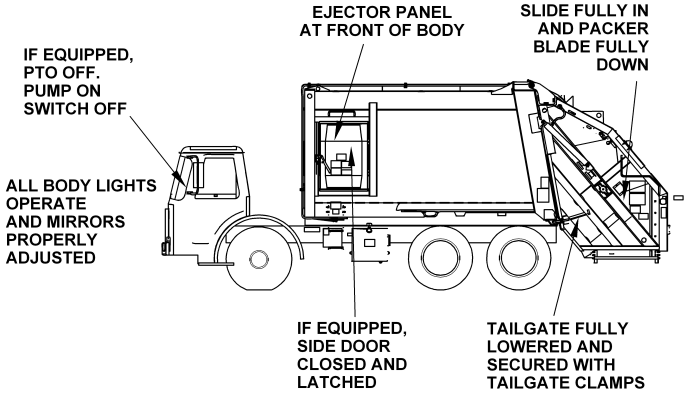


Figure 35. In-Transit Position

PT 1000A

NOTES:

SECTION 8
ON-ROUTE OPERATION PROCEDURES

PREVIEW

Read this section to learn about:

- Setting up the unit for a route
- Loading refuse
- Packing the load
- Packing on-the-move
- Washout system
- Setting up the unit for the landfill or transfer station

DRIVING TO PICK-UP LOCATIONS

Whenever you drive the unit to and from a route, along the route, to the landfill, etc., make sure the unit is set up as follows:

- The tailgate is fully lowered and CLOSED. Check the TAILGATE UP light in the cab. It must be off.
- The tailgate is locked.
- For a unit with refuse, the blade is up tight against refuse. For a unit with no refuse, the blade is at the START POSITION.
- The ejector panel is at the front of the body.
- If equipped, the PTO is disengaged.
- The PUMP ON switch is OFF.
- You properly ADJUST and CLEAN the mirrors.
- All outside lights turn ON and OFF.
- If equipped, the side access door is CLOSED and LOCKED.

Use of Curb Side Drive

If equipped, drive from the curb-side driver position **ONLY** on the collection route. **DO NOT** use this station during travel to or from a route, landfill or transfer station.

BEFORE LOADING

Before you start to load refuse, make sure the packing mechanism is in the correct position.

1. If equipped, the PTO is engaged. The PUMP ON switch is ON.

⚠ CAUTION

Stand clear when the ejector panel is in motion. Keep side access door closed when ejector panel is in motion. Failure to obey may result in minor or moderate injury.

NOTICE

The ejector panel should never be used to "backpack" (operating the ejector extend function with the tailgate closed against trash in a fully or partially loaded unit). This can possibly result in damage to the unit including structural components and cylinder failure. The resulting damage will NOT be covered by warranty.

2. The ejector panel should be:
   - For normal route pickup, about three (3) feet from the tailgate.
   - If starting with bulk refuse, the ejector panel should be about six (6) feet from the tailgate.
3. The packing mechanism should in the START POSITION with the slide fully IN and the packer blade fully DOWN. See the figure below.

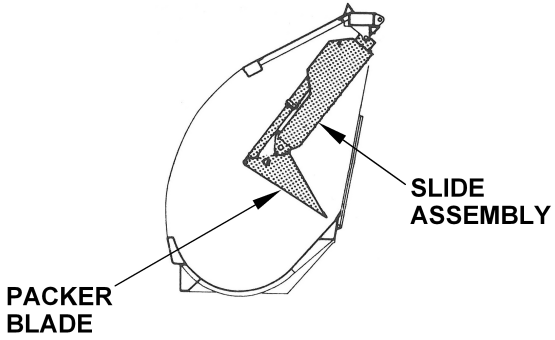


Figure 36. Packer Blade Starting Position

LOADING REFUSE MANUALLY (CONTINUED)

Use the following procedures at each stop along the route to manually load refuse into the unit with the lift arm. Observe the DANGER and WARNING notices

If your unit is equipped with tailgate lever controls, refer to **TAILGATE Lever Controls** 97. If your unit is equipped with tailgate push button controls, refer to the information below.

⚠ DANGER

Your body or clothing can become caught by the blade while it moves. Serious injury or death may occur if a person is in or near the hopper when the blade and slide assembly move. Clear the area near the hopper of all unnecessary people before you move the blade and slide assembly and keep all parts of your body away from the blade.

⚠ CAUTION

The slide in/out and blade up/down operations can push refuse out of the hopper or break objects. Refuse broken by the blade can cause moderate or minor injury. Stay clear of the packer panel during slide in/out and blade up/down operations.

Tailgate Push Button Controls

1. Move the slide and blade into the START position. The start position is blade fully DOWN and slide is in the UP position. See Figure 36.

   The hopper is now ready to receive refuse.

2. Load the refuse from a container into the hopper and then return the container to the pick-up location.

⚠ DANGER

If equipped, do not use riding step when vehicle speed is more than 15 KMPH or to travel more than 2 tenths (0.2) of a mile. Do not use riding step when vehicle operates in reverse. Always face vehicle when using riding step.

⚠ DANGER

Do not ride on or in the hopper opening.

3. Sweet the refuse from the hopper and pack it into the body.
4. PUSH and RELEASE the blade UP push button. The blade will raise up and slide out.
5. Verify that the pinch point between the packer blade tip and the hopper lip is clear. PUSH and RELEASE the blade down push button.

   The Blade Down and Slide In functions will operate in sequence.

6. Repeat Steps 2 and 3 as necessary to compact the refuse.

LOADING REFUSE MANUALLY (CONTINUED)

⚠ WARNING

Moving equipment can be dangerous. Serious injury or death may occur if a person is in the wrong area or is not attentive to the operations. Clear the area of all unnecessary people before you operate the controls.

7. Leave the blade against the refuse.
8. Each helper must PRESS the buzzer on their side of the tailgate and let the driver know each helper is ready to move to the next location.

⚠ DANGER

Do not use riding step when vehicle speed is more than 15 KMPH or to travel more than 2 tenths (0.2) of a mile. Do not use riding step when vehicle operates in reverse. Always face vehicle when using riding step.

⚠ DANGER

Do not ride on or in the hopper opening.

9. Go to the next stop on the route.

LOADING REFUSE MANUALLY (CONTINUED)

Use the following procedures at each stop along the route to manually load refuse into the unit with the lift arm. Observe the DANGER and WARNING notices.

⚠ DANGER

Your body or clothing can become caught by the blade while it moves. Serious injury or death may occur if a person is in or near the hopper when the blade and slide assembly move. Clear the area near the hopper of all unnecessary people before you move the blade and slide assembly and keep all parts of your body away from the blade.

⚠ CAUTION

The slide in/out and blade up/down operations can push refuse out of the hopper or break objects. Refuse broken by the blade can cause moderate or minor injury. Stay clear of the packer panel during slide in/out and blade up/down operations.

Tailgate Lever Controls

1. Move the slide and blade into the START position. See figure 36.
   - PUSH the slide and blade levers at the same time and RELEASE the levers. The levers will self-center at the end of the commanded position by way of valve internal hydraulic pressure.
   - The slide will move IN and the blade will move DOWN.
   - The hopper is now ready to receive refuse.
2. Load the refuse from a container into the hopper and then move the container to the pick-up location.

LOADING REFUSE MANUALLY (CONTINUED)

3. Sweep the refuse from the hopper and pack it into the body.
   - PULL the slide and blade levers at the same time and RELEASE the levers. The levers will self-center at the end of the commanded position by way of valve internal hydraulic pressure. See the figure below.
   - The slide will move OUT and the blade will move UP. STOP the blade UP operation when the blade is at the pinch point with the hopper sill.
   - Watch for refuse that is pushed out of the hopper.

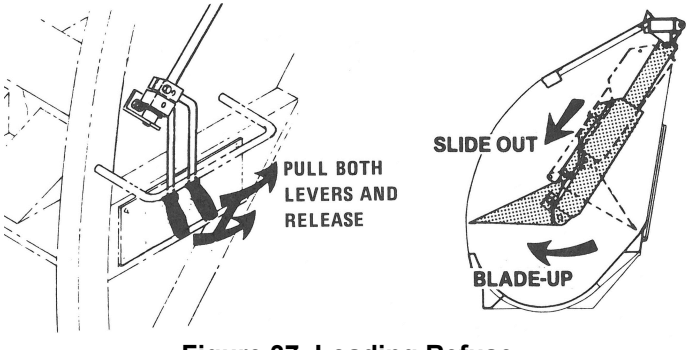


Figure 37. Loading Refuse

   - PUSH the slide and blade levers at the same time and RELEASE the levers. The levers will self-center at the end of the commanded position by way of valve internal hydraulic pressure. See the figure below.
   - The slide and blade move and compact the refuse into the body.

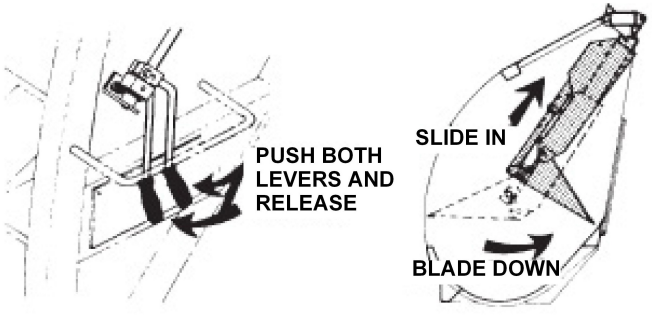


Figure 38. Packing the Refuse

4. Repeat Steps 1 and 3 as necessary to compact the refuse.
5. Leave the blade against the refuse.
6. Move the refuse container to its pick-up location.

LOADING REFUSE WITH AN ARM MECHANISM

Use the instructions that follow to load refuse from a commercial refuse container into the hopper with an arm mechanism.

Observe the DANGER and WARNING notices.

⚠ DANGER

Your body or clothing can become caught by the blade while it moves. Serious injury or death may occur if a person is in or near the hopper when the blade and slide assembly move. Clear the area near the hopper of all unnecessary people before you move the blade and slide assembly and keep all parts of your body away from the blade.

1. Move the slide and blade into the START position.
   - PUSH the slide and blade levers at the same time and RELEASE the levers. The levers will self-center at the end of the commanded position by way of valve internal hydraulic pressure.
   - The slide will move IN and the blade will move DOWN.
   - The hopper is now ready to receive refuse.
2. Load the refuse from a container into the hopper.

⚠ CAUTION

A refuse container that is not in good condition may not be secured by the arm mechanism and can suddenly move. Minor or moderate injury can occur when a person is struck by a moving container that is not properly secured. Make sure the refuse container is properly secured to the arm mechanism before you raise or lower the container.

- Manual Rotate the lifting arms toward the rear of the vehicle, ensuring the spring mechanism locks the arms into the open position.
- Inspect the container lifting trunnions to verify they are in good condition and securely attached to the container
- Move the container to the rear of the tailgate where the lifting trunnions on container are positioned above the hooks on the ends of the lifting arms.
- Slightly raise the container to engage the trunnions are supported in the lifting arms
- Visually verify trunnions on both sides of the container are engaged in the lifting arms
- Verify area around and the rear of the container is clear of people and property then Activate lever/ push button to raise the container and empty into the hopper.

LOADING REFUSE WITH AN ARM MECHANISM (CONTINUED)

When the refuse container's cover is not closed because it is overfilled with refuse:

- Raise the container enough to empty part of the refuse from container into the hopper.
- Lower the container to the ground.
- Do Step 3 (sweep the refuse and compact it into the hopper).
- RAISE the container and finish emptying the container.

- After the refuse container is empty of refuse, PUSH the control lever for the arm mechanism until the refuse bin rests firmly on the ground. (RELEASE the Throttle Advance Switch if you pressed it during loading.)
- RELEASE the container from the arm mechanism.
- Rotate the lifting arms back toward the center of the vehicle to the stored position. PULL the lever to rotate the arm mechanism to a position that does not block the rear stop lights.
- MOVE the container to its pick-up location.

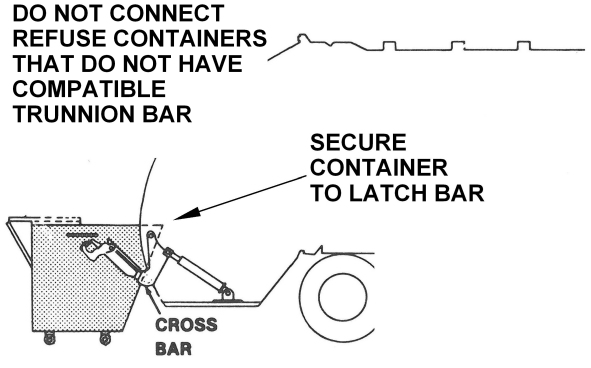


Figure 39. Arm Mechanism Setup

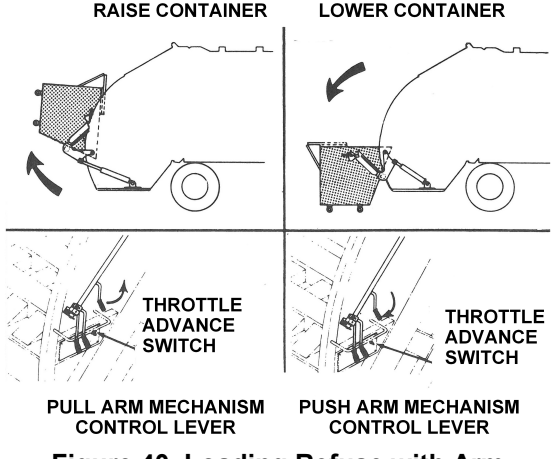


Figure 40. Loading Refuse with Arm Mechanism

LOADING REFUSE WITH AN ARM MECHANISM (CONTINUED)

⚠ DANGER

Your body or clothing can become caught by the blade while it moves. Serious injury or death may occur if a person is in or near the hopper when the blade and slide assembly move. Clear the area near the hopper of all unnecessary people before you move the blade and slide assembly and keep all parts of your body away from the blade.

⚠ CAUTION

The slide in/out and blade up/down operations can push refuse out of the hopper or break objects. Refuse broken by the blade can cause moderate or minor injury. Stay clear of the packer panel during slide in/out and blade up/down operations.

3. Sweep the refuse from the hopper and pack it into the body.
   - PULL the slide and blade levers at the same time and RELEASE the levers. The levers will self-center at the end of the commanded position by way of valve internal hydraulic pressure. See **Loading Refuse Manually (Continued)**.
   - The slide will move OUT and the blade will move UP. STOP the blade UP operation when the blade is at the pinch point with the hopper sill.
   - Watch for refuse that is pushed out of the hopper.
   - PUSH the slide and blade levers at the same time and RELEASE the levers. The levers will self-center at the end of the commanded position by way of valve internal hydraulic pressure.
   - The slide and blade move and compact the refuse into the body.
4. Repeat Steps 1 and 3 as necessary to compact the refuse.
5. Leave the blade against the refuse.

⚠ DANGER

If equipped, do not use riding step when vehicle speed is more than 10 MPH or to travel more than 2 tenths (0.2) of a mile. Do not use riding step when vehicle operates in reverse. Always face vehicle when using riding step.

⚠ DANGER

Do not use an arm mechanism or roll bar as a riding step. Obey safety messages and use the riding step for when traveling on the unit. Serious injury or death may occur.

LOADING REFUSE WITH AN ARM MECHANISM (CONTINUED)

⚠ DANGER

Do not ride on or in the hopper opening. Use riding step and obey all safety messages.

6. Each helper must PRESS the buzzer on their side of the tailgate and let the driver know each helper is ready to move to the next location.
7. Go to the next stop on the route.

LOADING REFUSE WITH A CART TIPPER

Use the instruction that follow to load refuse from a commercial refuse container into the hopper with a cart tipper. See the figure to the right for the location of the cart tipper control lever.

Observe the DANGER and WARNING notices.

⚠ DANGER

Your body or clothing can become caught by the blade while it moves. Serious injury or death may occur if a person is in or near the hopper when the blade and slide assembly move. Clear the area near the hopper of all unnecessary people before you move the blade and slide assembly and keep all parts of your body away from the blade.

1. Move the slide and blade into the START position. See figure to the right.
   - PUSH the slide and blade levers at the same time and RELEASE the levers. The levers will self-center at the end of the commanded position by way of valve internal hydraulic pressure.
   - The slide will move IN and the blade will move DOWN.
   - The hopper is now ready to receive refuse.

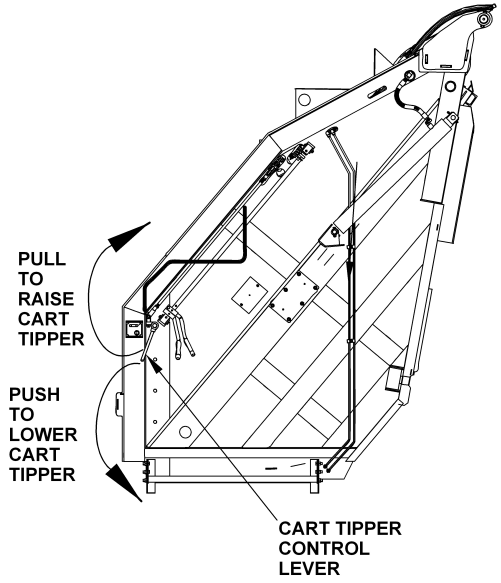


Figure 41. Cart Tipper Control Lever

2. Load the refuse from a container into the hopper. See the figures in two pages. Set the refuse container in front of the cart tipper until the container latch bar is over the cart tipper saddle.

⚠ CAUTION

A refuse container that is not in good condition may not be secured by the cart tipper's latch and can suddenly move. Minor or moderate injury can occur when a person is struck by a moving container that is not properly secured. Make sure the refuse container is properly secured to the cart tipper before you raise or lower the container.

LOADING REFUSE WITH A CART TIPPER (CONTINUED)

- PULL the control lever for the cart tipper until the refuse container lifts over the hopper sill and the refuse empties into the hopper. RELEASE the control lever.
  When the refuse container's cover is not closed because it is overfilled with refuse:
  - Raise the container enough to empty part of the refuse from container into the hopper
  - MAKE SURE the cart tipper slide latch extends and LOCKS the container when you RAISE the container
  - If the latch does not extend, lower the container, make sure the container latch bar is over the cart tipper saddle and RAISE the container again. DO NOT continue to RAISE a refuse container when the slide latch does not extend and lock the container
  - Lower the container to the ground.

⚠ DANGER

Your body or clothing can become caught by the blade while it moves. Serious injury or death may occur if a person is in or near the hopper when the blade and slide assembly move. Clear the area near the hopper of all unnecessary people before you move the blade and slide assembly and keep all parts of your body away from the blade.

⚠ CAUTION

The slide in/out and blade up/down operations can push refuse out of the hopper or break objects. Refuse broken by the blade can cause moderate or minor injury. Stay clear of the packer panel during slide in/out and blade up/down operations.

  - Perform Step 3 (sweep the refuse and compact it into the hopper)
  - Raise the container and finish emptying the container.
- After the refuse container is empty of refuse, PUSH and RELEASE the control lever for the cart tipper. The cart tipper will LOWER the refuse bin to the ground.
- If the cart tipper does not operate at the speed given on the tipper or in the cart tipper Operator's Manual, refer to the tipper's Service Manual or call the manufacturer.
- Release the refuse container from the cart tipper.
- Move the container to its pick-up location.

LOADING REFUSE WITH A CART TIPPER (CONTINUED)

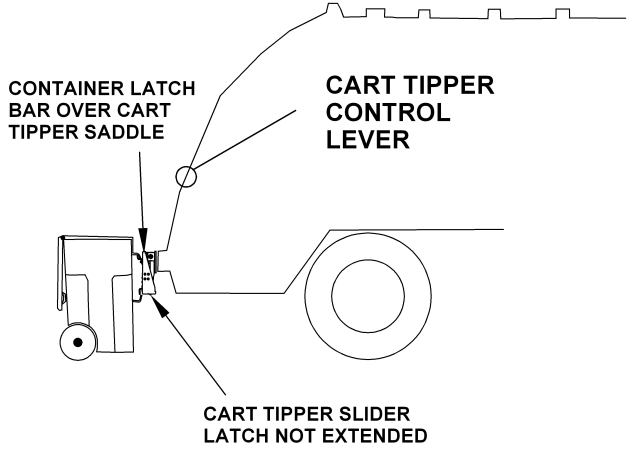


Figure 42. Cart Tipper Setup

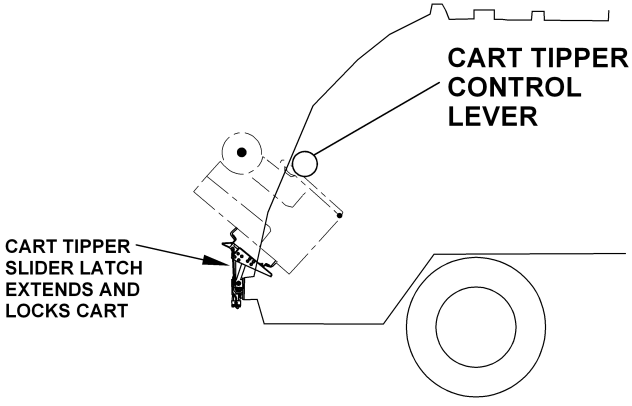


Figure 43. Loading Refuse with Cart Tipper

⚠ DANGER

Your body or clothing can become caught by the blade while it moves. Serious injury or death may occur if a person is in or near the hopper when the blade and slide assembly move. Clear the area near the hopper of all unnecessary people before you move the blade and slide assembly and keep all parts of your body away from the blade.

⚠ CAUTION

The slide in/out and blade up/down operations can push refuse out of the hopper or break objects. Refuse broken by the blade can cause moderate or minor injury. Stay clear of the packer panel during slide in/out and blade up/down operations.

3. Sweep the refuse from the hopper and pack it into the body.
   - PULL the slide and blade levers at the same time and RELEASE the levers. The levers return to their center position. See the figure on two pages back..
   - The slide will move OUT and the blade will move UP. STOP the blade UP operation when the blade is at the pinch point with the hopper sill.
   - Watch for refuse that is pushed out of the hopper.

LOADING REFUSE WITH A CART TIPPER (CONTINUED)

- PUSH the slide and blade levers at the same time and RELEASE the levers. The levers will self-center at the end of the commanded position by way of valve internal hydraulic pressure.
- The slide and blade move and compact the refuse into the body.

4. Repeat Steps 1 and 3 as necessary.
5. Leave the blade against the refuse.

⚠ DANGER

Do not use riding step when vehicle speed is more than 10 MPH or to travel more than 2 tenths (0.2) of a mile. Do not use riding step when vehicle operates in reverse. Always face vehicle when using riding step.

⚠ DANGER

If equipped, do not ride on or in the hopper opening. Use riding step and obey all safety messages.

6. Each helper must PRESS the buzzer on their side of the tailgate and let the driver know each helper is ready to move to the next location.
7. Go to the next stop on the route.

ACHIEVING PAYLOADS

Read this section for advice and tips on how to pack the most efficient loads with your unit.

Payloads in any refuse/waste handling vehicle will vary greatly, depending on the type of material loaded. Dry bulk cardboard and reconstruction/building materials, Styrofoam, foam packing materials, loose plastic, etc. cannot be compressed and packed as effectively as wet, soft, garbage type materials. If dry materials can be mixed with some wet material, more effective payloads can be achieved.

Follow these techniques to attain greater efficiency in packing the load in your unit:

1. After you empty the first few bins, the body begins to fill and material can begin to “fall back” into the hopper
2. If the route allows, mix some wet bins in with dry bins. This helps compact the dry material more. Wet material also helps lubricate the body, which results in better packing.

LEAVING THE ROUTE FOR THE LANDFILL/ TRANSFER STATION

At the end of the route, or when the unit has a full load, prepare the unit to go to the landfill. See **Driving to Pick-up Locations** and make sure the unit is properly set up for travel.

- The tailgate is fully LOWERED and CLOSED. Check the TAILGATE UP light in the cab. It must be OFF.
- The tailgate is locked.
- If equipped with a winch or reeving mechanism, the cable hook is secured in the eye on the tailgate.
- For a unit with refuse, the blade is up tight against refuse. For a unit with no refuse, the blade is at the START POSITION.
- If equipped, the PTO is disengaged.
- The PUMP ON switch is OFF.
- You properly ADJUST and CLEAN the mirrors.
- All outside lights turn ON and OFF.
- If equipped, the side access door is CLOSED and LOCKED.

PT 1000A

NOTES:

SECTION 9
LANDFILL/TRANSFER STATION/ RECYCLE CENTER PROCEDURES

PREVIEW

Read this section to learn about:

- Setup conditions to dump the refuse
- Unloading the refuse
- Using the sump and (optional) washout system
- Preparing the unit to return to route.

OVERVIEW OF LANDFILL/TRANSFER STATION/RECYCLE CENTER PROCEDURES

Use the following information as an overview of the steps to follow when you dump a load of refuse at the landfill.

For each step in this overview, read and follow the detailed instructions that follow the overview:

1. Set the unit in position for dumping.
2. UNLOCK the tailgate, PRESS and HOLD switch in cab.
3. Fully RAISE the tailgate.
4. Fully EXTEND the EJECTOR panel.
5. Fully LOWER and secure the tailgate.
6. Prepare the unit to return to the route.

NOTICE

The location of the controls on your unit may be different than those shown in this manual. Make sure you know your unit's control pattern before you operate the the unit.

A. Setting Up the Unit for Dumping

After you position the unit on firm ground for dumping at the landfill, set it up properly before dumping the refuse.

☑ Follow These Steps:

1. Some suspensions allow more movement in the chassis than others. Always stop the unit on the most stable, hard, dry and level surface you can find before you empty the refuse.

NOTICE

Open the valves on the side of the tailgate to empty the sumps in a designated location prior to emptying the body.

2. Shift the transmission to NEUTRAL.
3. SET the parking brake.
4. For a manual transmission, engage the PTO and MOVE the PUMP ON switch to ON. For automatic transmissions, just MOVE the PUMP ON switch to ON.
5. MOVE the in-cab THROTTLE ADVANCE switch to ON.
6. If refuse is in the hopper, cycle the blade til the hopper is empty.
7. To drain the sump tank, open the valve on either side of the tailgate. Make sure this is done in a designated area for unloading waste water at the transfer station.

B. Raising the Tailgate

The unit has tailgate lock cylinders. Before raising tailgate, unlock the tailgate lock cylinders with in-cab controls.

⚠ DANGER

A tailgate in motion is dangerous. Serious injury or death may occur if a person is struck by any moving object on the tailgate and/or the body. First, Clear the area near the tailgate.

B. Raising the Tailgate (Continued)

1. On the In-Cab Control Panel, PRESS the TAILGATE switch UP and HOLD while you PRESS the foot feed to maintain the engine speed between between 1200 and 1400 RPM.
2. HOLD the switch until the tailgate is COMPLETELY raised.
3. RELEASE the TAILGATE switch and the foot feed THROTTLE ADVANCE.

NOTICE

The TAILGATE UP light turns ON and the in-cab alarm will sound to indicate the tailgate is open.

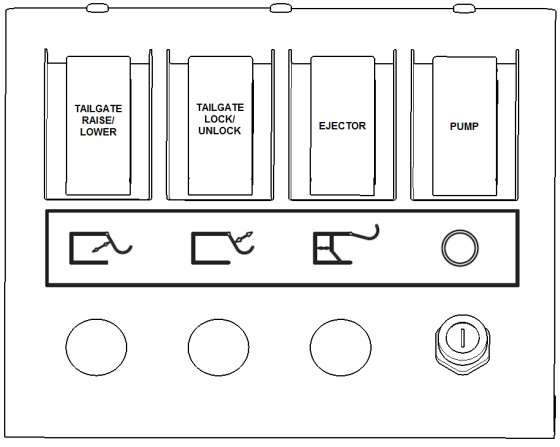


Figure 44. In-Cab Control Panel

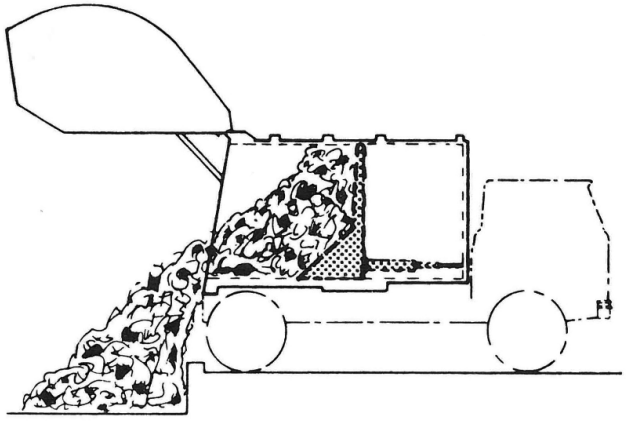
⚠ CAUTION

Do not drive the unit for an extended distance. The unit may become unstable and you may cause damage to the tailgate cylinders.

C. Unloading Refuse

1. Extend the Ejector Panel
   a. PRESS the EJECT switch and HOLD while you PRESS the foot feed to maintain the engine speed between 1200 and 1400 RPM until the ejector panel fully EXTENDS and comes to a complete stop.
   b. The refuse is now unloaded from the unit.
   c. RELEASE the EJECT switch and the foot feed THROTTLE ADVANCE.
2. Retract the Ejector Panel
   a. PRESS the EJECT switch DOWN and HOLD until the ejector panel is fully RETRACTED and at the front of the body.
   b. RELEASE the eject switch.

C. Unloading Refuse (Continued)



PUSH EJECTOR SWITCH TO RETRACT AND SETUP EJECTOR PANEL

45. Unloading Refuse

NOTICE

Allow unit to creep forward if space is available to remove all of the refuse. Make sure the front of the chassis is clear of obstacles.

D. Clean and Inspect the Tailgate

⚠ DANGER

Always prop the tailgate when you leave it raised for maintenance, service or cleaning procedures. Any part of your body between the unit's body and the tailgate while you prop the tailgate or when the tailgate is propped is dangerous. Serious injury or death may occur if any part of your body is between the tailgate and the body if the tailgate suddenly closes.

- **BEFORE** you lower the tailgate, **MAKE SURE** the area where the tailgate seal mates with the body is CLEAN AND FREE of any refuse and debris.
- **DO NOT** drive the unit for an extended distance if you must move the vehicle to another area to clean and inspect the tailgate seal.
- **DO NOT** go under the tailgate to clear refuse, instead, use a broom or pole to clean the tailgate seal.
- Inspect the seal for possible wear or damage and replace if necessary.

E. Lowering the Tailgate

⚠ DANGER

A tailgate in motion is dangerous. Serious injury or death may occur if a person is struck by a moving tailgate or becomes trapped between the tailgate and the body. Clear the area near the tailgate of all unnecessary people before you lower the tailgate.

⚠ WARNING

Tailgate will lower under its own weight even when the pump is in the OFF position when controls are operated.

1. PUSH the TAILGATE switch to LOWER the tailgate.
2. HOLD the TAILGATE switch until the tailgate is COMPLETELY down then RELEASE the switch.

NOTICE

The TAILGATE OPEN warning light will go OFF and the alarm will stop when body is FULLY down and the tailgate is completely closed.

F. Locking the Tailgate

Lock the Tailgate with the in-cab controls.

G. Clean and Inspect the Hopper and Packer Panel

1. Put the unit in the Lock-Out/Tag-Out mode, turn the engine OFF and REMOVE the ignition keys.
2. Remove any remaining refuse in the hopper.
3. INSPECT the packer panel and hopper floor for excessive wear or possible damage. If there is excessive wear or other damage, get the damage repaired or parts replaced as soon as possible.
4. Take the unit out of Lock-Out/Tag-Out, then use the ignition keys and start the unit.
5. MOVE the PUMP ON switch to ON.
6. Use the blade and slide controls and do at least one cycle of the blade and slide: STARTING POSITION, OPEN and PACK. If the blade and slide do not operate correctly, report the problem to your supervisor for maintenance action.

H. Remove Refuse from the Engine and Exhaust Areas

IMPORTANT! Inspect unit for refuse on or about the engine or exhaust components. Remove all refuse to prevent a fire.

I. Sump Doors and Washout System

The PT 1000A unit does not have sump doors.

If equipped, use the optional washout system to clean out the body and hopper at the end of a work day.

To drain the sump tank, open the valve on either side of the tailgate. Make sure this is done in a designated area for unloading waste water at the transfer station.

J. Preparing to Return to Route

See **Driving to Pick-up Locations** and make sure the unit is properly set up for travel.

- The tailgate is fully LOWERED and CLOSED. Check the TAILGATE UP light in the cab. It must be OFF.Lock the Tailgate with the in-cab controls.
- For a unit with refuse, the blade is up tight against refuse. For a unit with no refuse, the blade is at the START POSITION.
- If equipped, the PTO is DISENGAGED.
- The PUMP ON switch is OFF.
- You properly ADJUST and CLEAN the mirrors.
- All outside lights turn ON and OFF.
- If equipped, the side access door is CLOSED and LOCKED.

PT 1000A

NOTES:

SECTION 10
END OF DAY PROCEDURES

PREVIEW

Read this section to learn about:

- Parking the Unit
- Washout System
- Final Inspection
- Report to Employer/Supervisor
- Ignition Keys

END OF DAY PROCEDURES

Parking the Unit

1. Park the unit in the space designated by your employer/supervisor.
2. Set the parking brake.

Washout System

If the unit has a washout system and you did not use it at the landfill/transfer station, you should clean the body and hopper, unless your employer has a different policy. If your employer's policy is different from this manual, follow their policy.

Final Inspection

Do a final inspection of the unit:

1. Clear the area of all people.
2. Start the engine if it is not running.
3. Make sure all lights and in-cab control switches operate correctly.
4. Put the transmission in reverse while you press the service brake.
5. The backup alarm should sound in the cab. If the alarm does not sound in the cab, report this to your employer/supervisor immediately.
6. Check the unit for fluid leaks from the hoses, cylinders, valves, pump and fittings. Report any leaks to your employer/supervisor.
7. Make sure all cylinders are in their retracted position.
8. APPLY the parking brake.
9. Put the transmission in neutral and turn the engine OFF.
10. Put the unit in the Lock-Out/Tag-Out mode. 45
11. Open the air tank's drain valve.
12. Turn the battery disconnect switch to OFF.
13. Follow the company policy for locking the cab doors.

Reports to Employer/Supervisor

Complete any reports required by your employer/supervisor. If you found any problems during the final inspection, prepare the necessary report for the employer/supervisor.

Ignition Keys

Put the ignition keys in a secure storage area designated by your employer/supervisor.

PT 1000A

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SECTION 11
PREVENTIVE MAINTENANCE CHART

BODY PREVENTIVE MAINTENANCE CHART

Preventive maintenance must be performed to ensure the safe and reliable operation of your unit. Use the chart below as a guideline for when essential items should be checked and serviced.

	*HOURS OF OPERATION					
COMPONENT/SYSTEM	**8**	**40**	**200**	**1000**	**2000**	**CHECK/SERVICE**
Hydraulic System	☑					Check oil level – add if necessary
		☑				Check cylinders, pump, hoses, tubes, fittings, and adapters for leaks. Check hoses for cracks, crushes, and cover blisters. Repair or replace if necessary with genuine Heil parts. Any replacement hose should be the same size and pressure rating as listed on the original OEM hose.
		☑				Check Control valve seals for leaks. Repair or replace if necessary.
				☑		Replace filter after first 30 days of operation, then every 6 months or 1000 hours of operation OR when filter bypass light is ON.
				☑		Replace tank/breather/filter every time you replace filter element.
					☑	Drain, flush, and refill. Change filter element.
Electrical, Battery Cables	☑					Check for proper operation.
		☑				Check battery cables from battery to starter for loose cables, rubbing or damage and abrasions to cables. Replace if necessary.

PT 1000A

*HOURS OF OPERATION						
COMPONENT/SYSTEM	**8**	**40**	**200**	**1000**	**2000**	**CHECK/SERVICE**
Operator Controls	☑					
Front Mount Pump or Power Take-Off (PTO)		☑				Check seals for leaks and operation. Replace if necessary
		☑				Check drive line for smooth operation. Replace as necessary.
		☑				Check set screws for tightness. Tighten as necessary.
		☑				Make sure keys are in place. Replace if necessary.
			☑			Remove the pump's 4 bolt flange about 2 inches from the PTO and apply grease to female pilot of PTO pump flange. Failure to lubricate female pilot of PTO as given may cause damage to the pump shaft.
					☑	Drain, flush and refill. Change filter element.
Grease Fittings		☑				Lubricate as shown on Body Lube Chart.
Body Undercoating					☑	Inspect body undercoating and repair as necessary.
*** Daily = 8 hrs. Weekly = 40 hrs. Monthly = 200 hrs. 6 Months = 1000 hrs. Yearly = 2000 hrs.**						

PT 1000A

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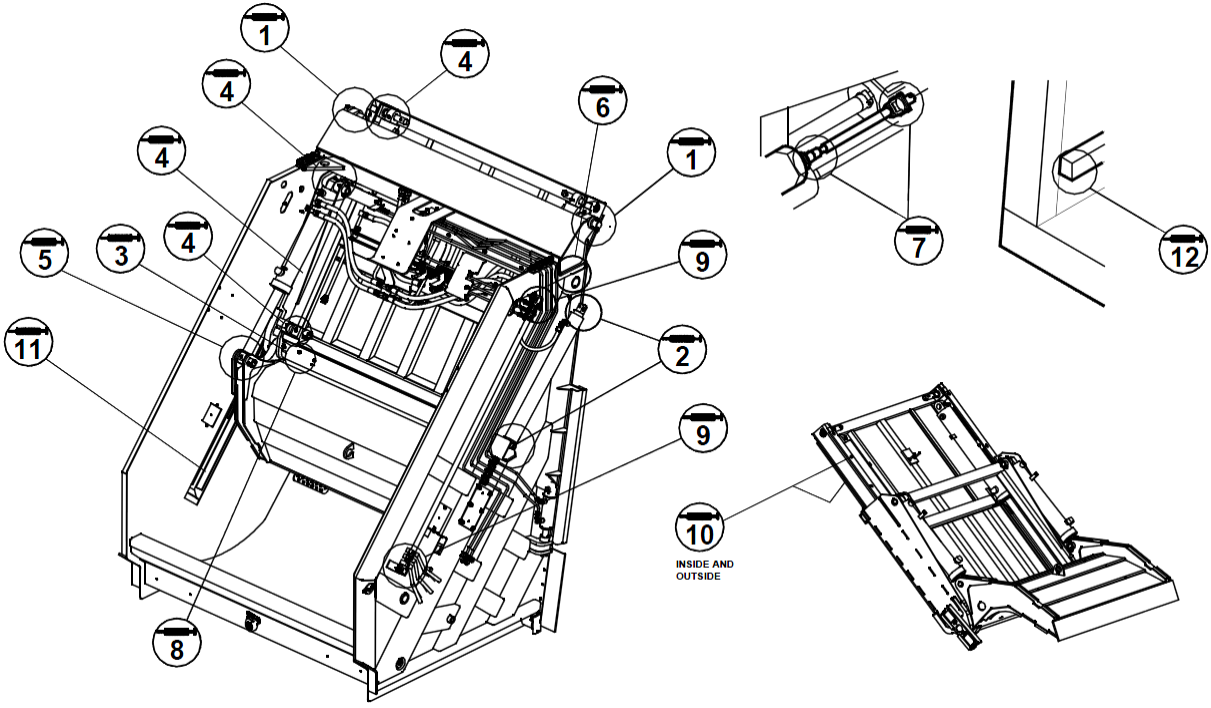
SECTION 12
LUBRICATION GUIDE

PT 1000A

BODY LUBRICATION GUIDE

Use No. 1 pressure gun grease. Clean fittings before applying grease and always pump enough grease into joint to remove the old grease. Wipe off excess grease. For slide surfaces, use cloth or brush to coat. Lubricate moveable mechanical parts without fittings every 60 days with non-detergent engine oil. Refer to the image below and the table on the next page.



BODY LUBRICATION GUIDE (CONTINUED)

Use No. 1 pressure gun grease. Clean fittings before applying grease and always pump enough grease into joint to remove the old grease. Wipe off excess grease. For slide surfaces, use cloth or brush to coat. Lubricate moveable mechanical parts without fittings every 60 days with non-detergent engine oil. Refer to the image on the previous page and the table below.

REF. NO.	LOCATION	QTY.	INTERVAL
1	Tailgate Hinge	2	Weekly / 40 Hours
2	Tailgate Cylinders (2/Cyl.)	4	Weekly / 40 Hours
3	Blade Shoe/Slide	2	Weekly / 40 Hours
4	Slide Cylinders (2/Cyl.)	2	Weekly / 40 Hours
5	Blade Cylinders (2/Cyl.)	4	Weekly / 40 Hours
6	Inner Slide Pivot	2	Weekly / 40 Hours
7	PTO Drive Shaft	4	Weekly / 40 Hours
8	Blade to Slide Bearing	2	Weekly / 40 Hours
9	Tailgate Control Levers	2	Weekly / 40 Hours
10	Inner/Outer Slide Bearing	2	Weekly / 40 Hours
11	Slide Track	2	Weekly / 40 Hours
12	Ejector Panel Tracks	4	Grease Monthly / Every 200 hours
-	Ejector Cylinder (Not Shown)	2	Weekly / 40 Hours

PT 1000A

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HEIL ENVIRONMENTAL INTERNATIONAL WARRANTY STATEMENT

Heil Environmental Industries ("Heil") warrants its solid waste collection equipment to be free from defects in material and workmanship under normal use for a period of six (6) months (1000 hours of operation) from the date of equipment In-Service or during the period of coverage offered by an extended warranty program, when proper service and maintenance as described in its Service Bulletins and Operation Manuals are performed. Heil warranty is not transferable.

This warranty is expressly limited to the repair or replacement of any component or part thereof, of any such unit manufactured by Heil that is proven to Heil's satisfaction to have been defective in material or workmanship. Such components or parts shall be repaired or replaced at Heil's option without cost to the original equipment owner for parts and labor provided such unit is returned to an authorized Heil Distributor for replacement or repair. The repair or replacement must be made during the standard or extended warranty coverage period.

Before any warranty can be allowed on new equipment, a warranty registration form must be on file with Heil's warranty department. Wear items are excluded from warranty coverage.

All OEM service parts sold by Heil have a six (6) month warranty from the date of purchase. The parts warranty covers parts only, providing that factory inspection reveals a defect in material or workmanship. Labor, inbound/Outbound Freight, troubleshooting, etc. is not covered under the parts warranty policy.

HEIL MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND MAKES NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE. HEIL DOES NOT ASSUME ANY LIABILITY FOR LOSS OF PROFITS, PRODUCT, TIME OR ANY OTHER DIRECT, INCIDENTAL, OR INDIRECT CONSEQUENTIAL LOSSES, DAMAGES OR DELAYS. ANY IMPROPER USE, OPERATION BEYOND RATED EQUIPMENT/COMPONENT CAPACITY, SUBSTITUTION OF PARTS THAT ARE NOT HEIL APPROVED, OR ANY ALTERATION OR REPAIR BY OTHERS IN SUCH A MANNER AS IN HEIL'S SOLE JUDGMENT AFFECTS THE PRODUCT OPERATION OR INTEGRITY SHALL VOID THE WARRANTY.

Other than the extension of the standard warranty period purchased under a supplemental Heil Extended Warranty Program or specific contract terms & conditions, no employee or representative is authorized to modify this warranty in any way nor shall any other warranties be granted. However, Heil retains the right to modify its warranty program prospectively at any time.

The above warranty supersedes and is in lieu of all other warranties expressed or implied.

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