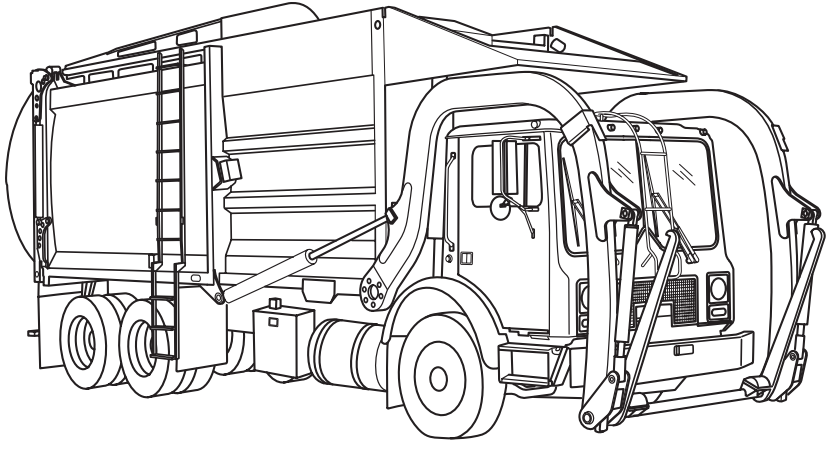
McNeilus®

An Oshkosh Corporation Company

OPERATOR'S MANUAL

Front Loader



Includes Information for the Following Front Loader Models:

- Atlantic Series®
- Pacific Series®

Publication No. 1274072
Rev. 0918

Disclaimer:

This manual must not be used to repair your vehicle. Repair information is available by calling McNeilus Customer Service at (888) 686-7278.

The information in this Operator's Manual will be your guide to operation and operator maintenance for this equipment.

All information, illustrations, and specifications in this manual are based on the information available at the time this manual was published. The illustrations used in this manual are intended as representative reference views only. Because of our continuous product improvement policy, we may modify information, illustrations, and/or specifications to explain and/or exemplify a product, service, or maintenance improvement. We reserve the right to make any change at any time without notice. Go to www.streetsmartparts.com for current information.

For assistance in ordering the Waste Collection Vehicle Safety Guide, contact:
National Waste and Recycling Association
1550 Crystal Drive • Suite 804
Arlington, VA 22202
Telephone: 800-424-2869 • Fax: 202-966-4824

For assistance in ordering OSHA Publications, contact:
U.S. Department of Labor/OSHA
OSHA Publications
P.O. Box 37535
Washington, D.C. 20210
Telephone: 202-693-1888 • Fax: 202-693-2498

1.0 Identification Plate

A McNeilus Truck and Manufacturing, Inc. identification plate (Figure 1) is located on the left front side of the refuse vehicle body. The identification plate contains the Model Number and Serial Number of your refuse vehicle system.

To serve you better, please fill out the following information and have it ready when calling McNeilus Truck and Manufacturing, Inc. for parts or product information:

Date of Purchase: _____

McNeilus Branch: _____

Model Number of refuse vehicle:_____

Serial Number of refuse vehicle:_____

VIN* _____

*Refer to chassis manufacturer literature for location.

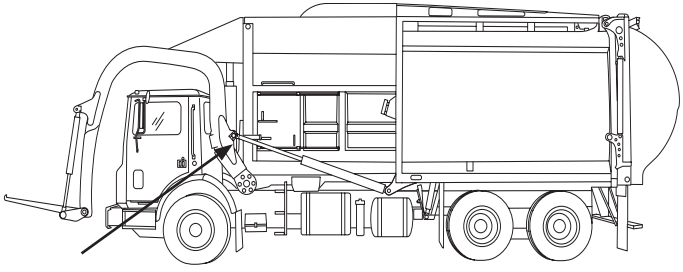


Figure 1

2.0 Complete Vehicle Decal

The complete vehicle decal (Figure 2) details the axle load and tire ratings as the vehicle left the McNeilus production line. This decal is located inside the cab and may be placed on the driver's door, doorjamb, or the seat riser.

The complete vehicle decal (Figure 2, Item 1) includes the following information:

This decal includes information such as the Maximum rated weight per axle (Item 2), Gross Vehicle Weight (Item 3), Chassis manufacturer (Item 4), Chassis build date (Item 5), Vehicle (chassis) ID number (Item 6), Tire and rim size and tire pressure specifications (Item 7), and the Refuse vehicle system build date (Item 8).

3.0 Purpose of Manual

This Operator Manual provides operation and operator maintenance instructions for the Atlantic Series Front Loader® or Pacific Series Front Loader® refuse collection system manufactured by McNeilus Truck and Manufacturing, Inc.

The information in this operator manual will be your guide to operation and operator maintenance for this equipment.

Keep this manual with the vehicle at all times.

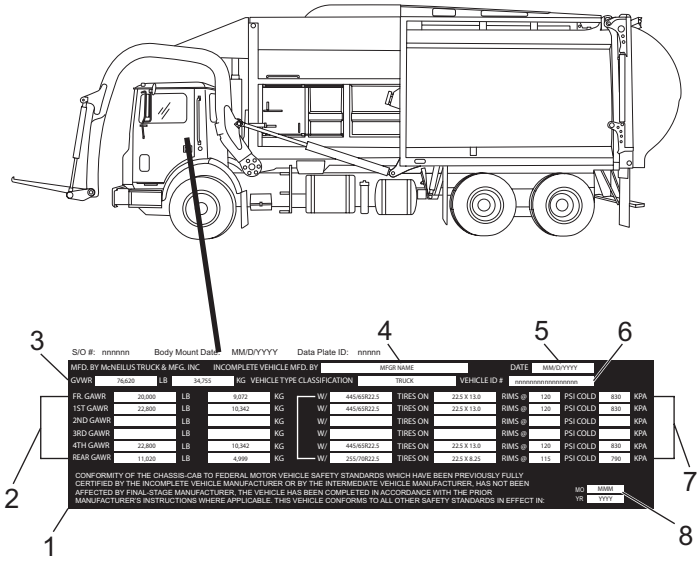


Figure 2

⚠ WARNING

The operator of this vehicle must be properly licensed and trained to operate this vehicle.

If you do not have the proper training and licensing to operate this vehicle, you are putting yourself and others at risk of serious injury or death.

If you are uncertain how to operate this Packer, inform your supervisor or contact McNeilus Truck and Manufacturing, Inc. at 888-686-7278.

NOTE

This manual is limited to the operation and light maintenance of the refuse collection system only.

This manual does not include the operation or maintenance of the chassis vehicle upon which the refuse collection system is mounted.

4.0 Scope

This manual provides information for use by the equipment operator under the following headings:

1. **Safety.** Includes important safety information.
2. **General.** Includes equipment identification.
3. **Operation.** Includes control functionality and normal equipment operation.
4. **Preventive Maintenance.** Includes basic preventive maintenance information for the operator.
5. **Troubleshooting.** Includes basic troubleshooting information for the operator.

To order a replacement manual or safety signs, call the McNeilus parts and service number listed in the Foreword of this manual.

5.0 Parts and Service

Contact your McNeilus Parts and Service branch locations to order parts, receive service information, or for other assistance.

Contact by phone or visit: www.streetsmartparts.com.
We have factory owned parts and service centers near you.

Phone Number **888-686-7278**

State	City	State	City
CA	Colton	OH	Cincinnati
CT	East Granby	OH	Columbus
FL	Tampa	PA	Morgantown
GA	Villa Rica	TX	Houston
IL	Sugar Grove	TX	Hutchins
IN	Fort Wayne	UT	West Valley City
MN	Dodge Center	WI	Oshkosh
NY	Bronx		

Canada

Ontario and Western Provinces	800-265-1089
Quebec and Maritime Provinces	800-996-4937

6.0 Corporate Headquarters

Contact McNeilus Truck and Manufacturing, Inc. directly at our corporate headquarters at the following address, phone number, and website.

McNeilus Truck and Manufacturing, Inc.
524 County Road 34 East
Dodge Center, MN 55927

Telephone: 507-374-6321

Corporate Website: www.mcneiluscompanies.com

Parts and Service Website: www.streetsmartparts.com

SAFETY

GENERAL INFORMATION

OPERATION

PREVENTIVE MAINTENANCE

TROUBLESHOOTING

INDEX

1.0 Important Safety Information

READ AND UNDERSTAND THIS ENTIRE MANUAL BEFORE OPERATING, REPAIRING, OR ADJUSTING YOUR MCNEILUS EQUIPMENT.

THOSE WHO USE AND MAINTAIN THIS EQUIPMENT MUST BE THOROUGHLY TRAINED AND FAMILIAR WITH THE PRODUCT.

IF INCORRECTLY USED OR MAINTAINED, THIS EQUIPMENT CAN CAUSE SEVERE INJURY.

Always keep this manual in a location where it is readily available for persons who operate or maintain the product. Additional copies of this manual are available from McNeilus Truck and Manufacturing, Inc. Please contact McNeilus Truck and Manufacturing, Inc. if you require additional manuals or if you have any questions about the information in this manual, this product, or safe operating procedures.

THESE SAFETY PROCEDURES ARE FOR YOUR OWN PROTECTION.

Do not operate this equipment until you have read its contents thoroughly. Read and understand the Waste Collection Vehicle Safety Guide that is placed in the vehicle's cab. Please contact McNeilus Truck and Manufacturing, Inc, if you require assistance.

Should operators of this equipment have a reading or learning disability, dyslexia, or other such condition, they must be assigned a mentor/trainer to read and explain to them the entire contents of this manual as well as the safety guidelines, danger, caution, and warning safety signs on this unit. Such individuals should not be allowed to operate this equipment until they thoroughly understand all of these materials. Failure to do so can result in serious injury or death.

Refer to your company's safety rules and procedures. Safety and safe working procedures must be followed at all times.

Perform your company's Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.

1.1 Battery Disconnect Switch

If your vehicle is equipped with a BATTERY DISCONNECT switch, it is located near the battery box. Use the battery disconnect switch when performing any maintenance so the vehicle cannot be accidentally started.

1. Turn the battery disconnect switch (Figure 1, Item 1) counterclockwise so the hole on the switch aligns with the hole in the bracket (Figure 1, Item 2).
2. Install the safety lockout device ring (Figure 2, Item 1) through the holes on the battery disconnect switch and the bracket.
3. Install a padlock (Figure 2, Item 2) onto the safety lockout device ring, lock it, and put the key in your pocket. If more than one person is working on the vehicle, each person must install their own padlock.

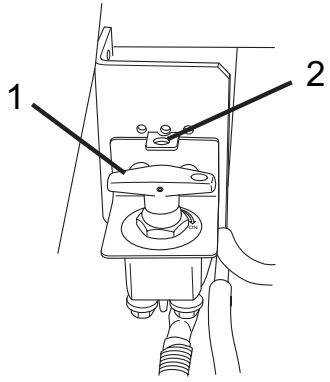


Figure 1

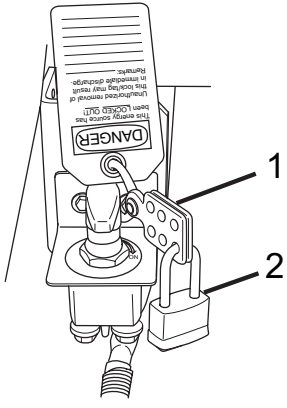


Figure 2

1.1.1 Battery Cable Disconnect

If the refuse vehicle is not equipped with a battery disconnect switch, disconnect the negative (black) battery cable first, then disconnect the positive (red) cable.

⚠ WARNING

For trucks without a battery disconnect switch, to prevent accidental vehicle start-up, which could cause death or serious injury, disconnect battery cables (negative cable first) before proceeding.

Disconnect negative (-) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury.

1.2 Safety Equipment

Some McNeilus Refuse Trucks come equipped with a five pound fire extinguisher, which has a rating of B:C, and a reflective warning triangle kit containing three triangles.

The fire extinguisher may already be mounted to the refuse vehicle, otherwise it is temporarily placed into the cab of your truck along with the reflective triangle kit.

If you are supplying your own fire extinguisher, it must comply with DOT FMCSA regulation 173.309 and 393.95 for rating and placement on the vehicle.

You are responsible for permanent mounting of this equipment. The fire extinguisher is required to be securely mounted to prevent sliding, rolling, or vertical movement. The placement and mounting location of the reflective triangles are at your discretion.

1.3 Reporting Safety Defects

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying McNeilus Truck and Manufacturing, Inc., and the chassis manufacturer.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, McNeilus Truck and Manufacturing, Inc., or the chassis manufacturer.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to: http://www.safercar.gov or write to: Administrator, NHTSA, 400 Seventh Street, SW., Washington, DC 20590. You can also obtain other information about motor vehicle safety from: http://www.safercar.gov.

2.0 Safety Notices

Safety notices are one of the primary ways to call your attention to potential hazards.

THIS SAFETY SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL.

WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS.

BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH.

The following safety notices are used throughout this manual.

⚠ DANGER

Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. Danger is used in the most extreme situations.

⚠ WARNING

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

⚠ CAUTION

Caution indicates a situation that might result in property damage.

SAFETY NOTICE

OPERATOR'S INSTRUCTION

The "signal words" of DANGER, WARNING, and CAUTION have specific meanings to alert you to the relative level of hazard.

Take the safety warnings seriously. If you do not understand them or have questions about them, call McNeilus Truck and Manufacturing, Inc.

3.0 Product Safety Information

Read, understand, and follow the safety guidelines and heed dangers and warnings listed below and contained in this manual as well as on the refuse vehicle itself to promote reliable operation and prevent serious personal injury.

Contact McNeilus Truck and Manufacturing, Inc. if you require assistance or have questions.

3.1 Safety

⚠ WARNING

Safety decals must be replaced anytime they are damaged, missing, or cannot be read clearly. Failure to have proper decals in place can result in serious injury or death. If you require safety decals, please contact McNeilus Truck and Manufacturing, Inc. at 888-686-7278.

⚠ WARNING

The Packer must not be modified in any way without authorization from McNeilus Truck and Manufacturing, Inc. Modifications may not comply with safety standards, including ANSI safety standards, and may result in serious personal injury. Please contact McNeilus Truck and Manufacturing, Inc. at 888-686-7278 if you require assistance.

⚠ WARNING

Wear Personal Protective Equipment (PPE) such as hard hats, safety glasses or goggles, sturdy gloves, hearing protection, steel toed boots, and snug fitting sturdy long-sleeve shirt and long pants when operating or maintaining the Packer. Reflective clothing is recommended for drivers and employees while packing during hours of darkness. Serious injury can result without proper PPE.

⚠ WARNING

Operating, servicing, and maintaining this vehicle or equipment can expose you to chemicals including exhaust, carbon monoxide, phthalates, and lead, which are known to the state of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle or equipment in a well ventilated area and wear gloves or wash hands frequently when servicing. For more information, go to www.p65warnings.ca.gov.

⚠ WARNING

Read, understand, and follow all aspects of OSHA 1910.146 Confined Space and Permit-Required Confined Space. Check your local and state regulations.

Information is found in the Safety section of this manual.

Failure to follow regulations may cause serious personal injury or death.

Overhead Clearance for Electric Cables		
Voltage of Electric Cables	**Minimum amount of clearance from the electric cables when the unit is working**	**Minimum amount of clearance from electric cables when you drive the unit between jobs**
50,000 volts or less	10 feet (3 m)	4 feet (1.2 m)
Over 50,000 volts	10 feet (3 m) plus 1/2 inch (10 mm) for every 1,000 volts over 50,000 volts	10 feet (3 m)
345,000 - 750,000 volts		16 feet (5 m)
NOTE: If local rules and laws require more clearances, you must follow them.		

3.2 Cab Operation

⚠ DANGER

If the Packer comes into contact or close proximity with a power line or there is any arcing, stay in the truck cab and keep away from the metal parts of the unit. Do not let anyone come close to the truck. Do not attempt to jump clear of the truck. Stay in the cab. The power company must disconnect the power before you can safely leave the cab.

Minimum clearance from power lines:

50,000 Volts or Less	**4 Feet**
50,000 + Volts	**10 Feet**
345,000 - 750,000 Volts	**16 Feet**

Know the clearance of overhead obstructions. Never drive the Packer under any overhead obstruction. Failure to do so may result in damage to the Packer body or truck, and may result in serious personal injury or death.

⚠ DANGER

If chassis is equipped with a stand-up drive position, use stand-up position only during refuse pick-up or collection activities for distances of less than 2/10 mile (0.32 km). Failure to heed this warning may result in serious personal injury or death.

⚠ DANGER

DO NOT operate vehicle in excess of 20 MPH from stand-up position. Failure to do so can result in serious personal injury or death.

⚠ DANGER

Always drive defensively. Never exceed posted speeds. Use lower speeds when going around curves, corners, or freeway on/off ramps. You are carrying a high center of gravity load. Failure to comply can lead to a roll over or other loss of control of the vehicle resulting in serious personal injury or death.

⚠ WARNING

Operators must comply with Employee Responsibilities as outlined in ANSI Z245 and state, federal, and other safety and transportation regulations (e.g. OSHA, DOT, Motor Carrier, and FMVSS) when operating this refuse vehicle. Failure to comply may result in serious personal injury or death.

⚠ WARNING

Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the Packer.
Serious personal injury or death may occur.

⚠ DANGER

Make sure the area above the vehicle is clear of objects and power lines before raising the arm.
Serious personal injury or death may occur.

⚠ WARNING

If equipped with optional camera or object detection system, do not rely exclusively on the camera or object detection system. Follow all other safe driving procedures. Failure to heed this warning may result in serious personal injury or death.

⚠ WARNING

No passenger is allowed in the cab unless a manufacturer's approved passenger seat and seat belt are provided. Serious injury or death can result.

⚠ WARNING

At the landfill or when operating off-road, use the lowest transmission gear and proceed at low speed (3 mph maximum). Failure to comply can cause serious injury.

⚠ WARNING

It is important that the pump ON indicator light is working. No damage will be done to the hydraulic system if the Packer is driven with the pump in the ON position. However, the controls will function if accidentally bumped. This can cause serious injury or death.

⚠ CAUTION

Always check indicator lights in the chassis cab or on the control panel at the front of the Packer. Replace bulbs or lights when required. (Note: All models may not have indicator lights.) Failure to inspect indicator lights may lead to more serious conditions.

⚠ CAUTION

Use caution when raising the arm assembly with a container.

⚠ CAUTION

Stow arms, forks, and container in hopper at the lowest height during transit. Be sure containers are stored at their lowest level in the hopper.

Failure to do so may result in a collision with bridges, overhead power lines, etc.

⚠ CAUTION

The tailgate must be completely open before raising the body or damage to the rear bumper may occur.

⚠ CAUTION

If you detect a problem with any control function, it must be repaired immediately.

DO NOT operate the Packer with malfunctioning controls.

Damage to property or equipment may occur.

3.3 Outside Operation

⚠ DANGER

Never attempt to clear a jammed Packer or container lift, enter a body or open an access door unless power is shut down, LOCKOUT/TAGOUT procedures have been complied with, and the employee is authorized, trained, and competent to perform such activities. Failure to comply may result in serious personal injury or death.

⚠ WARNING

Keep access door closed when in operation. Do not open access door unless:

1. Engine is stopped.

2. Key is removed from ignition

3. Hydraulic pressures are relieved.

4. OSHA LOCKOUT/TAGOUT Regulations are complied with.

Failure to heed these instructions/warnings may result in serious personal injury or death.

⚠ WARNING

Never walk or stand behind vehicle while it is backing up.
Failure to heed these instructions/warnings may result in serious personal injury or death.

⚠ WARNING

Be sure all non-operator personnel are clear of the area around the Packer before operating the Packer. Remain attentive at all times when operating the controls. Watch the mirrors for activity. Never back up the Packer unless and until you are completely sure it is safe. Use a spotter/observer and/or get out and check yourself, if necessary, to ensure it is safe to do so. Thoroughly understand the controls before operating the Packer. Failure to heed this warning may result in serious personal injury or death.

⚠ WARNING

IMPORTANT ALUMINUM AND STEEL WATER TANK INFORMATION.

1. Inspect water tank on a daily basis for any damage including, but not limited to, dents, gouges in metal, or leaks.
2. Do not weld on or repair water tank. Instead, replace water tank with a new OEM water tank.
3. Never pressure test an empty water tank. Only pressure test a full water tank.
4. Never remove pressure regulator or pressure safety valve from tank.
   - If regulator or safety valve is defective, it must be replaced before Packer is put into service.
5. Do not pressurize water tank beyond its working pressure.
   - If pressure exceeds the working pressure, immediately depressurize water tank and replace pressure regulator and pressure safety valve.

⚠ WARNING

CONTINUED

6. Never drive the truck with the water tank pressurized.
   - Depressurize water tank prior to transit to or from job site.
   - Water tank should be pressurized only when being used.
7. Never modify water tank in any way.
8. Immediately replace safety decals with McNeilus decals if decals are missing or difficult to read.
9. Refer to the McNeilus Operator's Manual or contact McNeilus at 1-888-686-7278 if you have questions or require assistance.

⚠ CAUTION

Be sure to drain the water tank, hoses, and pipes when operating in temperatures below freezing.

Failure to drain the system may cause damage to equipment.

⚠ WARNING

Never climb on windshield guard (if equipped). This is not a ladder. If equipped, use the ladder provided on the body to access the top of the vehicle.
Failure to comply may result in serious personal injury or death.

⚠ WARNING

If refuse is spilled on the cab shield, only use a extendable handled rake or broom to remove the refuse. Never climb on the cab shield.

A fall from the cab shield may cause serious personal injury or death.

⚠ WARNING

Before opening the tailgate, be sure you have adequate clearance above the tailgate to prevent contact with buildings, electrical lines, and any other overhead obstructions. Failure to comply can cause damage to the vehicle and serious personal injury.

⚠ WARNING

Always keep hands and feet and other parts of your body clear of revolving or moving parts. Failure to comply can cause serious injury.

⚠ WARNING

The Packer and chassis should never be overloaded. Do not exceed the manufacturer's recommended gross vehicle weight. Do not overload the Packer and chassis. Gross weights must meet federal, state, and local laws. Failure to comply can cause serious injury.

⚠ CAUTION

If chassis is equipped with a battery disconnect switch, it must be turned off anytime the equipment is parked overnight, in a shop, or out of service for any extended period of time.
Failure to do so may result in a fire and personal injury or property damage.

⚠ WARNING

The installation procedure found in this manual must be followed when installing a carry can.

Failure to follow all these steps may cause serious personal injury or equipment damage.

3.4 Maintenance

SAFETY NOTICE

Perform your company's Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.

⚠ WARNING

Packer must be disabled by the following steps before proceeding.

1. Place transmission in NEUTRAL.
2. Apply chassis parking brake.
3. Shut engine OFF.
4. Remove chassis ignition key and maintain in personal possession.
5. Turn chassis BATTERY switch OFF.

Failure to disable the Packer may result in serious personal injury or death.

⚠ DANGER

LOCKOUT/TAGOUT procedures must be followed when working on this equipment including, but not limited to, cylinders being changed or maintained. Failure to heed these instructions/warnings can result in serious personal injury or death.

⚠ CAUTION

Disconnect battery before welding on body. Failure to do so might result in personal injury or damage to property or equipment.

⚠ DANGER

Auxiliary pusher or tag axles must be supported with jack stands, blocks, or similar devices while being serviced or maintained to prevent serious personal injury or death if auxiliary axle drops unexpectedly. Failure to do so may result in serious personal injury or death.

⚠ WARNING

Use only the access door for entry to the Packer. Remember to follow the LOCKOUT/TAGOUT procedures when entering the Packer body. Only exit the Packer body through the access door.

⚠ WARNING

If a container is dropped in the hopper, call maintenance for assistance in removing the container from the hopper.

Failure to do so may result in serious personal injury or death.

⚠ DANGER

If the hydraulic or electrical system on the Packer fails to operate for any reason, call a competent technician to repair the problem. Never let any untrained or incompetent personnel attempt to fix any problems or malfunctions that may occur. If you are not trained or do not have the competence, never attempt to fix any problems or malfunctions that may occur. Never alter the original equipment manufacturer's design.

⚠ WARNING

Inspect ladder bolts every 30 days for wear and replace if necessary.

Failure to do so may result in serious personal injury or death.

⚠ DANGER

Use the three-point rule when climbing the ladder. Failure to heed may cause serious personal injury.

⚠ WARNING

Fall Hazard. Do not climb on ladder while body is raised. Serious personal injury or death can occur due to a fall.

⚠ DANGER

Verify that the body props are fully seated in the pockets on the frame.

Serious personal injury or death may occur.

⚠ CAUTION

Never attempt to prop a body or tailgate unless completely empty.
Never walk or work under a raised body or tailgate unless props are in place.
Failure to do so may result in serious personal injury or equipment damage.

⚠ DANGER

PACKER BODY MUST BE EMPTY and body props employed when servicing Packer body in the raised position. Body props are meant to support only the empty body.
Never overload.

Failure to empty body or employ body props may cause serious personal injury or death.

⚠ DANGER

Crush hazard. Verify that the body props are properly positioned around the rods of the cylinders.

Serious personal injury or death may occur.

DANGER

Stand clear when the tailgate is in motion and during the unloading cycle. Do not stand under or cross under the raised tailgate.

Serious personal injury or death may occur.

WARNING

Anytime a tailgate is raised in the shop or for maintenance, the tailgate must be supported to prevent the tailgate from coming down unexpectedly. Never allow anyone to work around or enter the tailgate area unless the tailgate is raised and supported! Failure to follow this procedure can result in serious injury or death.

DANGER

Whenever the tailgate is in a raised position, it must be securely propped or blocked so it cannot fall on anyone.

Serious personal injury or death may occur.

WARNING

Never place yourself between the tailgate and the body. Always engage both tailgate props when performing maintenance or inspections in or around the open tailgate area.

Failure to engage both tailgate props may result in serious personal injury or death.

DANGER

Never attempt to use extraneous sources of power or extraneous machines to overcome a malfunctioning system.

Never override with overhead cranes, forklifts, jacks, etc. or alter or modify systems or equipment that may be malfunctioning.

Failure to heed these instructions/warnings can result in serious personal injury or death.

⚠ WARNING

Daily inspections should be performed on the Packer. This includes proper operation of the controls, hydraulic systems, electrical systems, optional cameras are clean and working, camera lens is clean, lighting system including turn signals, back up alarm, brake lights, clearance lights, head lamps, tail lamps, safety equipment, and work lights are all operational. The Packer's air system must operate properly and have no leaks. Water and moisture should be drained from the Packer's air system daily. Failure to ensure all systems are operating properly can result in serious personal injury or death.

⚠ CAUTION

Correct all identified deficiencies BEFORE operating the Packer. Failure to correct deficiencies may cause damage to equipment.

⚠ WARNING

Do not wear watches, rings, and jewelry while working with electrical and mechanical equipment. These items can be hazardous and can cause serious and painful injuries if they come into contact with electrical wires, moving parts, or hydraulic equipment.

⚠ WARNING

If equipped with optional camera, camera lens must be kept clean at all times to help achieve good monitor pictures. Failure to heed this warning may result in serious personal injury or death.

⚠ WARNING

Electrical wiring, battery wiring, and electrical cable must be inspected on a daily basis for cuts, abrasions, damage, aging, improper clearance and along the frame for hidden damage. If you find electrical wiring or electrical cable with any such adverse conditions or damage, they must be replaced with electrical wiring or electrical cable of equivalent specifications before the Packer is returned to service. Failure to properly inspect and maintain your Packer may result in serious personal injury or death.

⚠ WARNING

Do not repair or weld steel or aluminum water tanks. Inspect the water tank for rust or corrosion every 30 days. Inspect the water tank under the straps, on the exterior, and on the interior by removing the flopper. If any rust or corrosion is found, replace the water tank with an OEM water tank from McNeilus. Failure to maintain water tanks may result in serious personal injury or death.

3.5 Hydraulics

Call McNeilus Truck and Manufacturing, Inc. at 888-686-7278 anytime you have questions concerning hydraulic hoses, tubes, or pipes.

⚠ DANGER

Hydraulic systems operate under very high pressure. Hydraulic fluid escaping from a pressurized system can penetrate unprotected body tissue. Never inspect for hydraulic leaks with bare hands or other exposed body parts. As a minimum, wear leather gloves and use cardboard or wood to inspect for leaks. If leaks are present, relieve pressure and allow system to cool prior to servicing. If injured by escaping hydraulic oil, contact a physician immediately. Serious complications may arise if not treated immediately.

⚠ WARNING

Hydraulic hoses and tubing must be inspected on a daily basis for leaks, cuts, abrasions, damage, aging, improper clearance, and along the frame for hidden damage. If you find hoses with any such adverse conditions or damage, they must be replaced before the vehicle is returned to service! Failure to properly inspect and maintain your vehicle may result in serious personal injury or death.

⚠ WARNING

Hydraulic systems are hot. DO NOT TOUCH! Serious personal injury or death may result from hot oil. When you have completed working on the hydraulic systems, thoroughly clean any spilled oil from the equipment. Do not spill any hydraulic fluid on the ground. Clean any hydraulic fluid from your skin as soon as you have completed your maintenance and repairs. Dispose of used oil and filters as required by law.

⚠ WARNING

The hydraulic cylinders can be holding a function in a certain position when the engine is OFF. An example of this would be a function being held in the lift or partial lift position by the cylinders. If a hydraulic line is removed or the hydraulic circuits or controls are being worked on, gravity may allow the function being held in position to drop. All workers and personnel must remain clear of these areas when working on or operating the McNeilus equipment. Block and secure all applicable devices and functions before beginning work or operation. Failure to comply with this can result in serious injury or death.

⚠ WARNING

All hydraulic pressure must be relieved from the hydraulic system prior to removing any components from the system. To relieve the hydraulic pressure from the hydraulic system, turn the chassis engine OFF and operate the Packer controls with the key in the ON position. This will allow the spools to shift and relieve the hydraulic pressure. Failure to comply can result in serious injury or death.

⚠ WARNING

Hydraulic hoses have the SAE ratings marked on the hose to assist in selecting the correct hose. Replacement hydraulic hose and fitting components must be supplied by the same manufacturer to prevent serious injury or death. An as example: Brand “A” hose and brand “B” fitting will not normally be compatible.

⚠ WARNING

Hydraulic systems operate under high pressure. Only qualified, experienced people properly trained in hydraulic system maintenance should attempt repairs or troubleshoot hydraulic systems. Use the proper tools and equipment when servicing the hydraulic system. Failure to comply can cause serious injury. Please contact McNeilus Truck and Manufacturing, Inc. at 888-686-7278 if you require assistance.

⚠ WARNING

Increasing hydraulic pressure beyond the recommendations may result in serious damage to the Packer or serious personal injury or death and may void the Packer Warranty.

⚠ WARNING

All hydraulic pressures must be relieved from the hydraulic system prior to removing any components from the system to prevent oil from spraying or functions or systems from falling. Failure to follow this procedure can result in serious personal injury or death.

⚠ WARNING

Do not steam clean or pressure wash the pump or hydraulic hose. Cleaning the pump with a high pressure washer or steam cleaning may damage the pump's seals and allow water to enter the hydraulic system. Cleaning the hydraulic hose with a high pressure washer or steam cleaning will damage the hose's outer covering and steel braid and lead to premature failure. The pump and hydraulic hose should be wiped with a clean lint-free cloth rather than washed.

⚠ WARNING

Do not heat hydraulic tubing. The carbon content of this steel tube is such that if heated for bending, and either water or air is quenched, the tubing may lose its ductility and thereby be subject to failure under high pressure or hydraulic shock conditions. Serious injury can result. Damaged or leaking tubing must be replaced before the Packer is returned to service. Please contact McNeilus Truck and Manufacturing, Inc. at 888-686-7278 if you require assistance or have questions.

⚠ WARNING

Hydraulic components can be heavy. Use caution while lifting these components. Serious personal injury can be avoided with proper handling of the components.

3.6 Electrical

⚠ WARNING

Proximity switches must remain functional for safe operation of the Packer. If a switch does not work, it must be replaced immediately with an OEM switch before the Packer returns to service. Failure to comply can result in serious injury or death. Contact McNeilusTruck and Manufacturing, Inc. at 888-686-7278 for assistance if required.

⚠ WARNING

If a prox switch does not work, it should be replaced with an OEM switch. Non-OEM switches may not be correct and may result in an accident.

Failure to follow regulations may cause serious personal injury or death.

4.0 Safety Signs

The following safety signs are found on your refuse vehicle and warn of hazards related to the use of this equipment. Read and understand all safety signs before operating this equipment.

NOTE

Depending on the Packer configuration and optional equipment, the actual location of decals and/or placards may vary slightly from the examples shown.

For the proper location and part numbers of safety signs for the refuse vehicle (see Section 4.1 Safety Sign Location). If you are unable to determine the proper safety sign or its placement on the refuse vehicle, call McNeilus Truck and Manufacturing, Inc. at 888-686-7278. If any safety signs on the equipment are not clearly readable, contact McNeilus Parts and Service at 888-686-7278 or www.streetsmartparts.com to order replacements. Use only McNeilus replacement safety signs.

For information on any of the chassis safety signs, please contact the chassis manufacturer.

The following table contains part numbers and quantities for individual safety signs.

NOTE

Specifications, appearance, and part numbers for safety decals are subject to change without notice.

No.	Part Number	Qty.	Comments
1	0614298	2	
2	1107479	1	
3	0614542	2	
4	0614430	2	
5	0614299	3	
6	0614302	1	
7	0614548	1	
8	0214618	1	
9	0614305	1	
10	1140908	1	
11	0614266	1	
12	0614269	1	
13	0214500	1	
14	0614541	1	
15	0614410	1	
16	0614306	1	

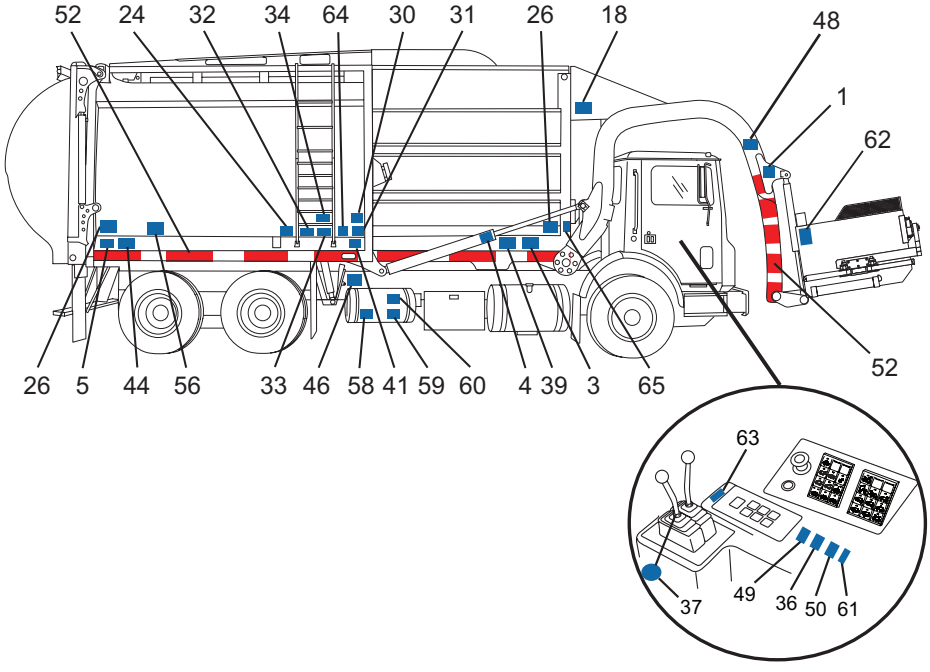
No.	Part Number	Qty.	Comments
17	0614526	1	
18	0614308	2	
19	0601933	1	
20	0614276	1	
21	0614277	1	
22	1326487	1	
23	0614296	1	
24	0614263	1	
25	0614261	1	
26	0614271	4	
27	0614274	1	
28	0614265	3	
29	0614583	1	If Equipped
30	1108358	2	
31	0614392	2	
32	1172954	1	
33	0614559	1	
34	0614285	1	
35	0614547	1	
36	0614284	1	
37	0612453	1	

No.	Part Number	Qty.	Comments
38	0614270	1	
39	1264178	2	
40	0614338	1	
41	1107478	3	
42	1108425	1	
43	1109764	1	
44	1225787	2	
45	1327934	1	
46	1329260	2	
47	1397069	1	
48	1404116	2	
49		1	
50	1101262	1	
51	1327487	1	
52	1260914	Varies	
53	1260913	Varies	
54	1265704	Varies	
55	1490253	1	If Equipped
56	1140666	1	If Equipped
57	1133532	1	If Equipped
58	1449162	1	If Equipped

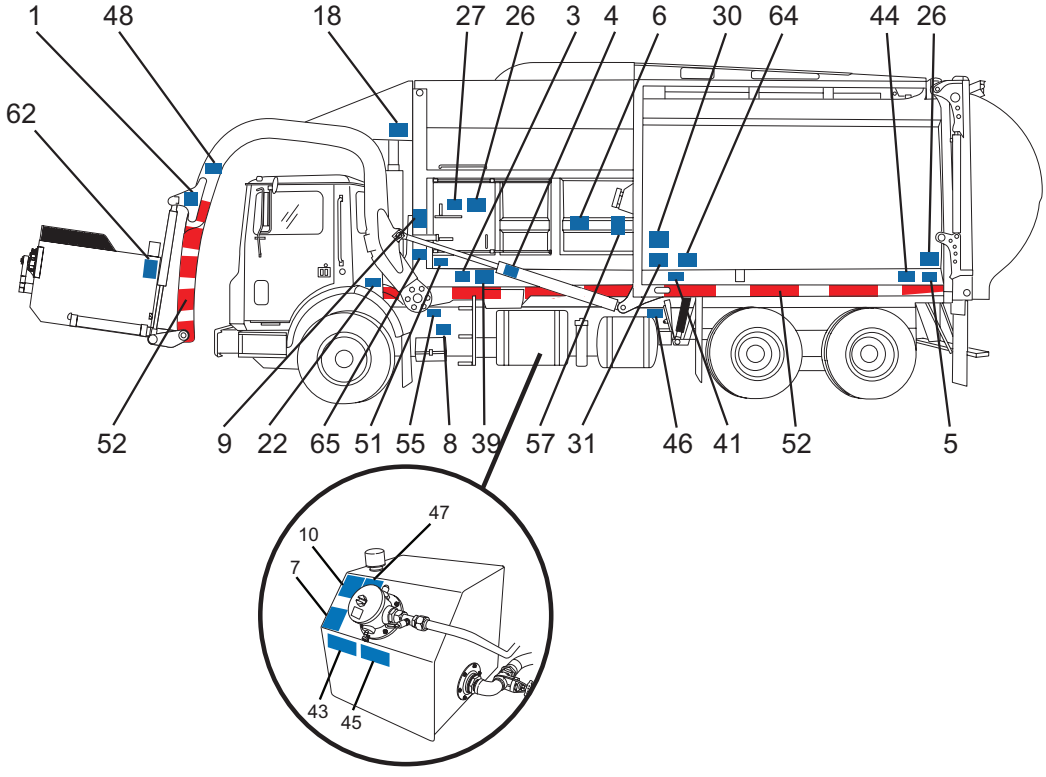
No.	Part Number	Qty.	Comments
59	1104395	1	If Equipped
60	1327939	1	If Equipped
61	1324145	1	If Equipped
62	1327929	2	If Equipped
63	1318804	1	
64	0614304	2	
65	0614301	2	
66	0614286	1	

4.1 Safety Sign Location

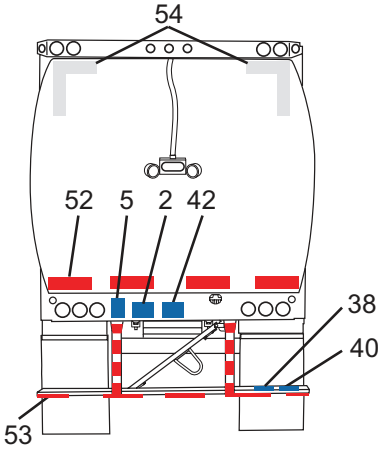
4.1.1 Curb Side Signs

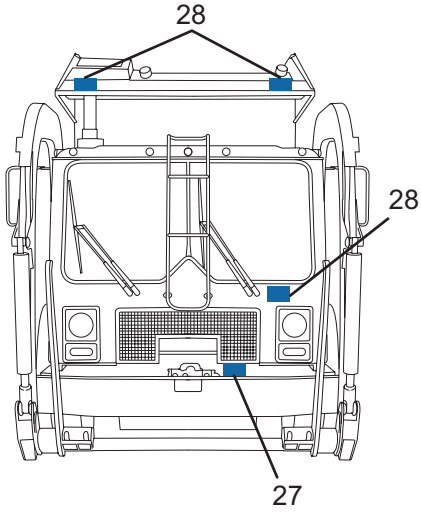


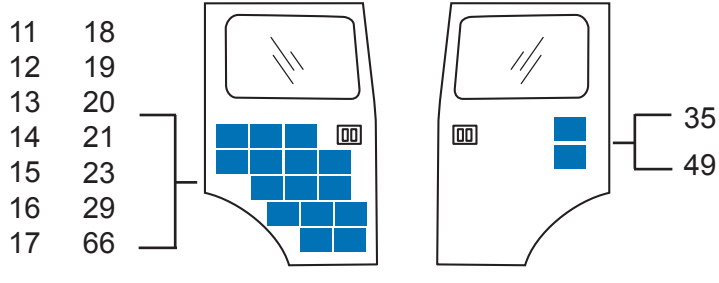
4.1.2 Street Side Signs



4.1.3 Front, Rear, and Door Signs







1.0 Exterior Systems Arrangement

1.1 Curb Side View

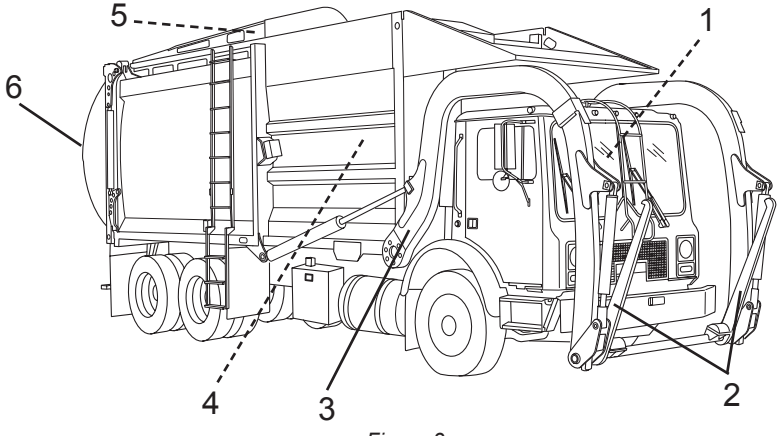


Figure 3

Ref. No	System Description
1	Cab Control Box and Joystick
2	Fork Assembly
3	Arm Assembly
4	Pack/Eject
5	Top Door
6	Tailgate

1.2 Street Side View

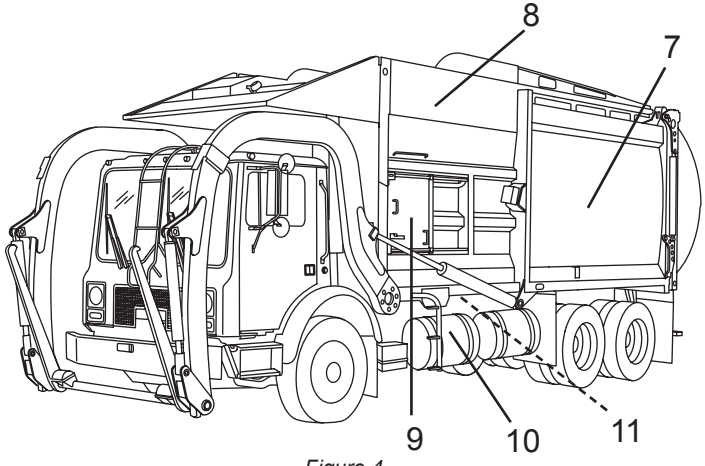


Figure 4

Ref. No	System Description
7	Body
8	Hopper
9	Side Access Door
10	Hydraulic Oil Reservoir
11	Service Lift Cylinders (OPTIONAL)

1.3 S-Type Container Specifications

Only lift containers that are compatible with ANSI Z245.60-2008, type S containers. Ensure that the container meets the dimensional requirements (Figure 5) before lifting.

Do not use non-compliant containers.

No.	Description	Specification
1	Width of the fork receiver area at the inside surface of the outboard pocket walls.	Min: 79 in. Max: 80 in.
2	Width at the top of the container, including all lids, hinges, and hinge rods.	Max: 78 in.
3	Width of the fork receiver area at the inside surface inboard pocket wall, including bump plates.	Max: 73-1/2 in.
4	Height of the pocket between the inside surfaces of the top and bottom wall.	Min 7.5” Max 9”
5	Extension of the bump plates below the inside surface of the bottom pocket wall.	Min: 4 in.
6	Height of the pocket above ground at the inside surface of the top wall.	Min: 25 in.
7	Height from inside top pocket wall to the leading edge of the container, over all lids and hinges.	Max: 48 in.

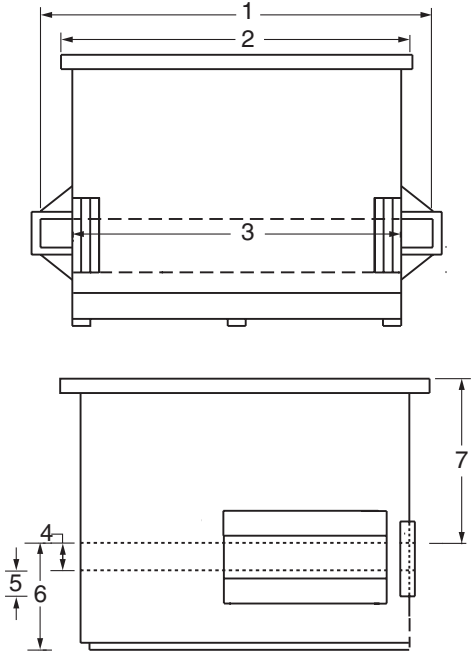


Figure 5

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1.0 Operating Procedures

⚠ WARNING

Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the Packer.
Serious personal injury or death may occur.

⚠ DANGER

Make sure the area above the vehicle is clear of objects and power lines before raising or opening the tailgate.
Serious personal injury or death may occur.

NOTE

Turn the pump ON and idle the truck for a minimum of five minutes before operating the hydraulic functions when the air temperature is 50° F (10° C) or below.

⚠ WARNING

Do not leave the truck unattended until the parking brake has been securely set and all reasonable precautions have been taken to prevent the movement of the truck. The operator must chock the truck wheels anytime he is away from the vehicle for an extended period of time. Wheel chocks are available for purchase from McNeilus Truck and Manufacturing, Inc. by calling 888-686-7278.

Failure to comply may result in serious personal injury or death or damage to equipment.

1.1 Start-Up Procedure

Before starting the vehicle, make certain that:

1. Battery switch is ON.
2. Daily checks have been completed and verified.

1.2 Warm-Up Procedure

At start-up of the equipment each morning, it is important to cycle through each of the main hydraulic circuits to be certain each circuit is functioning properly. Cycling through each operation also helps ensure that the hydraulic fluid is up to operating temperature and is present throughout the system.

⚠ CAUTION

If you detect a problem with any control function, it must be repaired immediately.

DO NOT operate the Packer with malfunctioning controls.

Damage to property or equipment may occur.

1. Cycle through each of the following operations:
   a. Pack/Eject Functions - Cycle three (3) times
   b. Tailgate Functions - Cycle one (1) time
   c. Top Door Functions - Cycle three (3) times
   d. Fork and Arm Functions - Cycle ten (10) times
2. After completing the cycle tests, inspect the refuse vehicle for any hydraulic leaks. If the leaks are detected, correct them BEFORE the refuse vehicle is placed into actual operation.

⚠ WARNING

Never disable neutral safety or interlocks. Failure to comply may result in serious injury or death or damage to equipment.

1.3 Traveling Procedure - Standard

Before beginning travel to the next site, be sure that all hydraulic functions are in their HOME positions. This means that the:

1. Tailgate is fully closed.
2. The arms and forks must be positioned properly for travel.
3. The arms and forks can either be positioned with the arms lowered and forks raised (Figure 6, Item 1), with the forks raised and arms raised above the windshield (Figure 6, Item 2), or with the forks tucked and the arms fully raised (Figure 6, Item 3).
4. Turn PUMP button OFF to disable hydraulic functions.
5. Turn all warning and strobe lights ON.

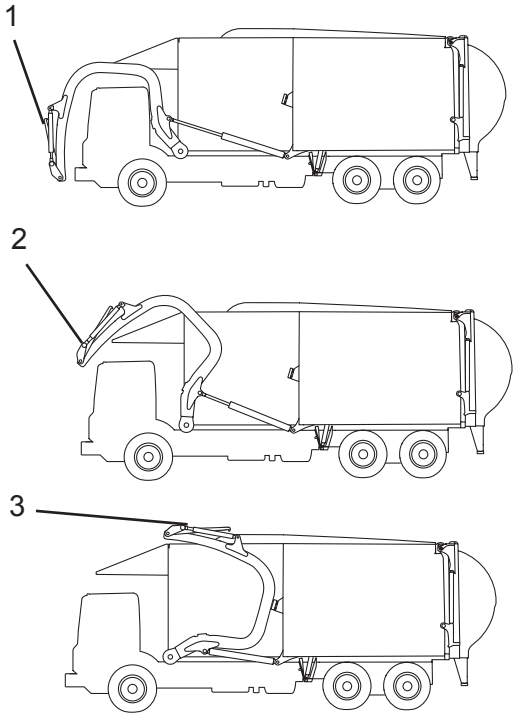

Figure 6

1.4 Traveling Procedure - Residential

Before beginning travel to the next site, be sure that all hydraulic functions are in their HOME positions. This means that the:

1. Tailgate is fully closed.
2. The arms and forks must be positioned properly for travel.
3. For a residential application equipped with a carry can, the arms must be fully raised with the carry can inserted into the hopper (Figure 7, Item 1). **Never travel to the next site with the can positioned low (Figure 7, Item 2). This position is for work only.**
4. Turn PUMP button OFF to disable hydraulic functions.
5. Turn all warning and strobe lights ON.

⚠ WARNING

Depending on what size carry can you use, verify the overall height of the truck with the carry can inserted into the hopper does not exceed the specified overall truck height listed on the height decal on the truck.

Failure to comply may cause serious injury or death or damage to equipment.

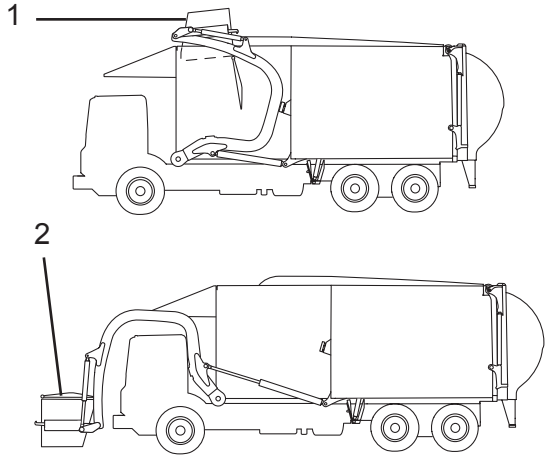

Figure 7

1.5 Refuse Loading Procedure

⚠ WARNING

Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the Packer.
Serious personal injury or death may occur.

⚠ WARNING

If refuse is spilled on the cab shield, only use a extendable handled rake or broom to remove the refuse. Never climb on the cab shield.

A fall from the cab shield may cause serious personal injury or death.

1. Make certain the top door is OPEN and the pack/eject is in the HOME position.
2. Lower the fork and arm assemblies into position to lift the container.
3. Position the vehicle in line with the container, and drive the vehicle forward until the forks are all the way through the container fork pockets (Figure 8, Item 1).
4. Adjust the fork assembly so the container is level.

⚠ CAUTION

Use caution when raising the arm assembly with a container.

⚠ DANGER

Make sure the area above the vehicle is clear of objects and power lines before raising the arm.
Serious personal injury or death may occur.

5. Raise the arm assembly until the fork assembly is visible at the top of the windshield (Figure 8, Item 2).
6. Lower the fork assembly to level the container.
7. Continue to raise the arm assembly until arm assembly reaches the arm stops.
8. Completely raise fork assembly to empty container (Figure 8, Item 3).
9. Lower the fork assembly until the container has cleared the hopper and the forks are vertical.
10. Lower the arm assembly to return the container to the ground.
11. Adjust the fork assembly as needed to allow the vehicle to back away from the container.
12. Place the fork and arm assemblies in the travel position.

⚠ CAUTION

Do not operate pack and sweep with container in hopper.

Serious damage may result to the Packer.

13. Execute an AutoPack Function.
14. Close the top door.
15. Travel to the next pickup site.

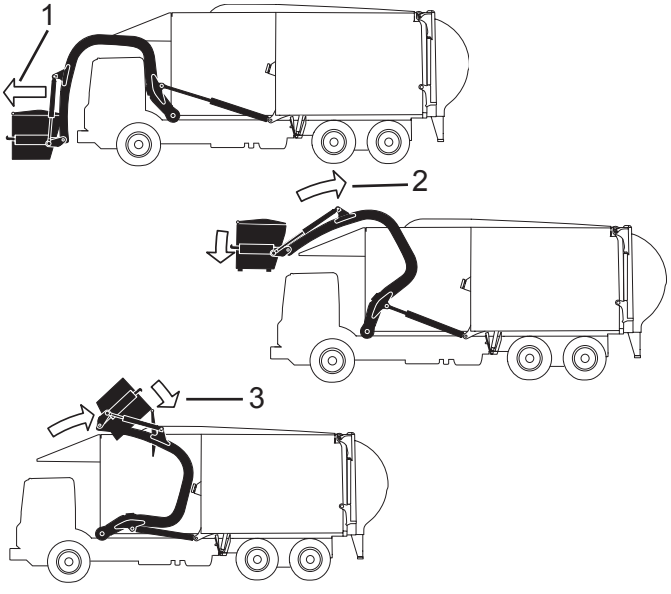

Figure 8

1.6 Refuse Empty Procedure

⚠ WARNING

Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the Packer.
Serious personal injury or death may occur.

⚠ DANGER

Make sure the area above the vehicle is clear of objects and power lines before raising the arm.
Serious personal injury or death may occur.

1. Position the rear of the refuse vehicle as appropriate.
2. Verify the top door is open, the fork and arm assemblies are in the travel position.
3. Open the tailgate fully (Figure 9, Item 1).

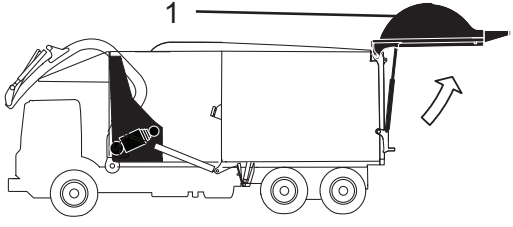

Figure 9

4. Extend the pack/eject to the rear (Figure 10, Item 1) of the body to eject the load.
5. Retract the pack/eject to the HOME position.
6. Lower the tailgate and prop for maintenance. (See Engaging the Standard Tailgate Prop.)

⚠ WARNING

Never place yourself between the tailgate and the body. Always engage both tailgate props when performing maintenance or inspections in or around the open tailgate area.

Failure to engage both tailgate props may result in serious personal injury or death.

7. Inspect and clean the tailgate seal and sealing areas of the body, including around the tailgate props, then fully close the tailgate.
8. Remove the prop from the tailgate. (See Disengaging the Standard Tailgate Prop.)

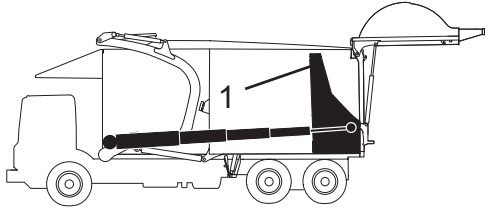

Figure 10

1.7 End of Day Checks

At the end of the day, make certain that:

1. Pack/Eject is fully retracted.
2. Fork and arm assemblies are fully raised.
3. Tailgate is fully closed.
4. Body (OPTIONAL) is fully lowered.
5. All equipment is properly shut down (see the chassis manual for more information on proper shut-down procedures for the engine).

2.0 Instruments and Controls

The following figures and tables identify and describe the controls used on the equipment. Not all of the instruments and controls shown here are on your equipment. Items covering various models and options are illustrated.

NOTE

Control configurations and locations may vary depending upon customer ordered options.

Your Packer may not have all the features or options covered in this manual. You should pay careful attention to the instructions that pertain to your vehicle. If your vehicle is equipped with special equipment or options not covered in this manual, please contact McNeilus Truck and Manufacturing, Inc. at 888-686-7278.

To make sure you understand proper operating procedures, read this section and carefully practice with the controls and instruments to learn how to safely operate the equipment.

2.1 Cab Controls

The in-cab controls consist of an in-dash control panel or a self contained control box (Figure 11, Item 1) and a joystick(s) (Figure 11, Item 2). There are several types of joystick options available. The dual-lever joystick option is shown.

No.	Position	Normal Use or Reading
1	Control Box	Controls refuse vehicle functions, lights, and options.
2	Joystick	Controls the arm and fork movements.

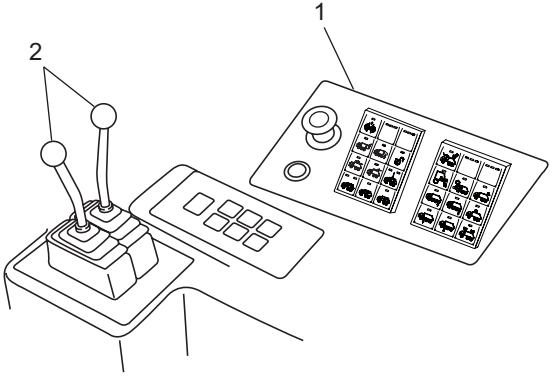

Figure 11

2.2 In-Cab Controls

The following figures and tables identify and describe the controls used on the in-cab control panel model. Not all of the instruments and controls shown here are on your equipment. Items covering various models and options are illustrated.

To make sure you understand proper operating procedures, read this section and carefully practice with the controls and instruments to learn how to safely operate the equipment.

No.	Position	Normal Use or Reading
1	E-STOP Button	Disables all hydraulic and electric refuse vehicle functions.
2	Buttons and LED Lights	Controls refuse vehicle functions, lights and options, and displays error codes and status of operations.
3	Red LED Warning Light	If light is on or flashing, it indicates an unsafe condition. Look at the LED lights on the control box to determine what the unsafe condition is. Under normal operating conditions, the light will be off.

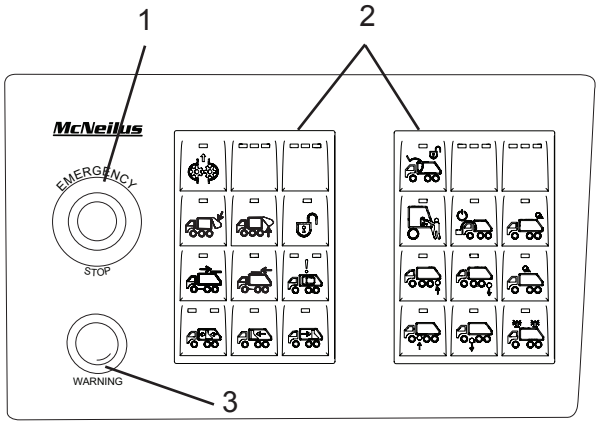

Figure 12

2.2.1 Refuse Vehicle Button Functions

Refuse vehicle functions, lights, some accessories, and options are operated by the buttons on the control box. Accessories and options vary depending on your model.

No.	Position	Normal Use or Reading
1	PUMP BUTTON	Press to activate hydraulic functions. The indicator light above the button will be green when the pump is on. Press again to disable hydraulic functions.
2	TAILGATE CLOSE BUTTON	Press and hold button to close the tailgate. You must also press and hold the ACTIVATE button while holding the TAILGATE CLOSE button. The indicator light above the button will be green when the tailgate is fully closed.
3	TAILGATE OPEN BUTTON	Press and hold button to open the tailgate. You must also press and hold the ACTIVATE button while holding the TAILGATE OPEN button.
4	ACTIVATE BUTTON	Press and hold the button to enable the tailgate functions.
5	TOP DOOR OPEN BUTTON	Press and hold the button to open the top door. The indicator light above the button is green when the top door is fully open.
6	TOP DOOR CLOSE BUTTON	Press and hold the button to close the top door. The indicator light above the button is red when the top door is fully closed.
7	AUTOPACK / EJECT (Sweep) BUTTON	Press this button to start the AutoPack cycle.
8	RETRACT BUTTON	Press this button to retract the pack/eject to the HOME position.
9	EXTEND BUTTON	Press this button to extend the pack/eject. Pressing the button stops the auto pack mode if active.
10	ARM OVER BODY OVERRIDE BUTTON	Press and hold to override the interlock to operate the pack/eject function when arms are above the body.

No.	Position	Normal Use or Reading
11	REMOTE BUTTON	Press the button to enable the outside control box. The indicator light above the button will be green. Press the button again to disable the outside control box. The indicator light above the button turns off.
12	RESIDENTIAL MODE BUTTON	Press the button to enable the auto dump and residential controls when using either the Dual Lever Joystick or the Electronic Joystick. Press the button again to disable the auto dump.
13	REAR WORK LIGHT BUTTON (OPTIONAL)	Press the button to turn on the rear work lights. Press the button again to turn off the rear work lights. The truck must be moving less than 10 mph for the rear work lights to come on.
14	TAG AXLE RAISE BUTTON (OPTIONAL)	Press the button to raise the pusher axle. (McNeilus Trucks and Manufacturing installed axle only.)
15	TAG AXLE LOWER BUTTON (OPTIONAL)	Press the button to lower the tag axle. (McNeilus Trucks and Manufacturing installed axle only.)
16	WORK LIGHT BUTTON (OPTIONAL)	Press the button to turn on the work lights. Press the button again to turn off the work lights.
17	PUSHER AXLE RAISE BUTTON (OPTIONAL)	Press the button to raise the pusher axle. (McNeilus Trucks and Manufacturing installed axle only.)
18	PUSHER AXLE LOWER BUTTON (OPTIONAL)	Press the button to lower the pusher axle. (McNeilus Trucks and Manufacturing installed axle only.)
19	STROBE LIGHT BUTTON (OPTIONAL)	Press the button to turn on the strobe lights. Press the button again to turn the strobe lights off. With the “strobes on with pump” option, the button will not turn the strobe lights off when the pump is on.

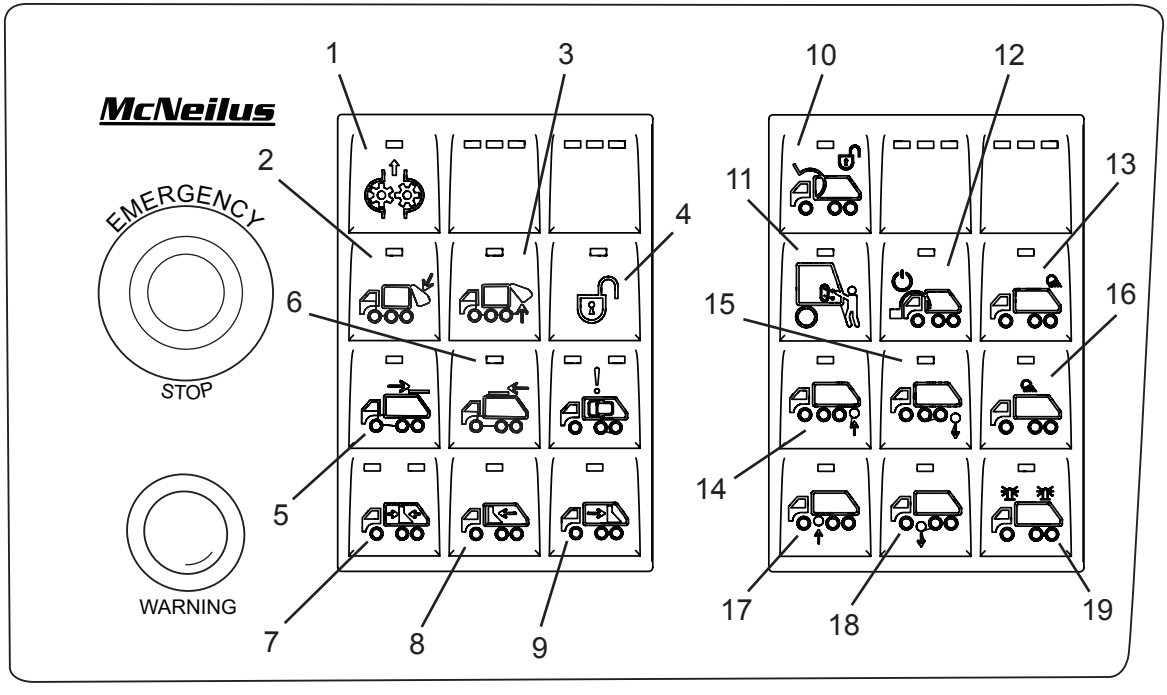
McNeilus
EMERGENCY
STOP
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Figure 13

2.2.2 LED Indicator Light Functions

The LED indicator lights are used to display the status of various functions and operations. When the ignition switch is first turned on, the lights perform a self-test, which enables all the lights for a few seconds.

No.	Position	Normal Use or Reading
1	Pump On LED	The LED will be green when the pump is on.
2	Error Code LED	There are six LEDs that will be on or off depending on the error code. If any of these LEDs are lighted, refer to the error code decal located on the cab center console. Note: To enter the diagnostic mode, press and hold both buttons for five seconds.
3	Tailgate Closed LED	The LED will be green when the tailgate is fully closed. The LED will flash red when the tailgate is in the process of being closed.
4	Tailgate Open LED	The LED will flash red if the tailgate is not fully closed.
5	Activate LED	If a button is pressed that requires the ACTIVATE button to be pressed, but the ACTIVATE button was not pressed, the amber LED will flash, indicating the ACTIVATE button must also be pressed.
6	Top Door LED	The LED will be green when the top door is fully open.
7	Top Door Close LED	The LED will flash red when the top door is in the fully closed position.
8	Side Door LED	When the side door is fully closed, the LED will be off. When the side door is opened, it activates the E-STOP, shuts off the hydraulic pump, and the red LED will flash. The hydraulic pump icon and the amber LED above it will also flash.
9	AutoPack/ Eject (Sweep) LEDs	The two red LEDs will flash when the pack/eject is in the AutoPack mode.
10	Pack/Eject Retract LED	The LED will be green when the pack/eject is retracted into the HOME position.

No.	Position	Normal Use or Reading
11	Pack/Eject Extend LED	The red LED will light when the pack/eject is extended. The pack/eject will not extend to the full eject mode unless the tailgate is fully open.
12	Arm Over Body Override LED	The LED will be green when the arm is in the over body override mode.
13	Remote Button LED	The LED will be green when the REMOTE button is activated. The outside control box is now operational.
14	Residential Controls Mode LED	The LED will be green when the arm is in the Residential Controls Mode.
15	Rear Work Light LED	The LED will be green when the rear work lights are on.
16	Tag Axle Up LED	The LED will be green when the tag axle is in the fully RAISED position.
17	Tag Axle Down LED	The LED will be green when the tag axle is in the fully DOWN position.
18	Work Light LED	The LED will be green when the work lights are on.
19	Pusher Axle Up LED	The LED will be green when the pusher axle is in the fully RAISED position.
20	Pusher Axle Down LED	The LED will be green when the pusher axle is in the fully DOWN position.
21	Strobe Light LED	The LED will be green when the strobe lights are on.

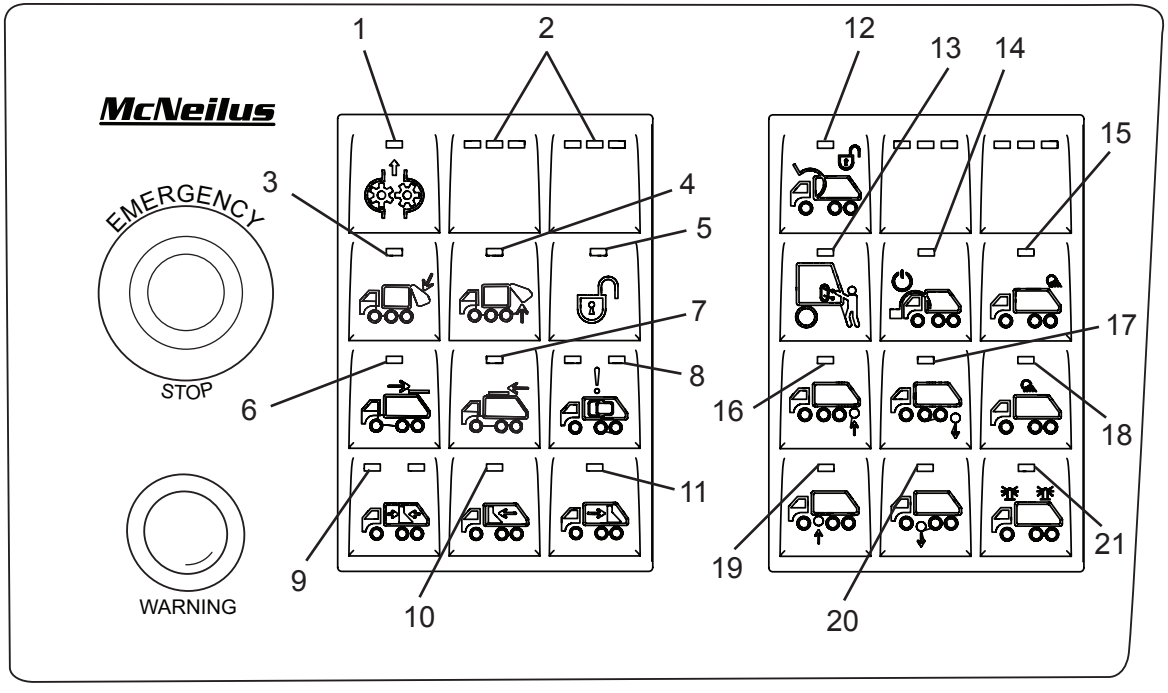


Figure 14

2.2.3 Fuse Block

The fuse block protects the in-dash controls from an overloaded condition. The fuse block is located on the refuse vehicle behind the cab. Open the cover (Figure 15, Item 1) to gain access to the fuses (Figure 16).

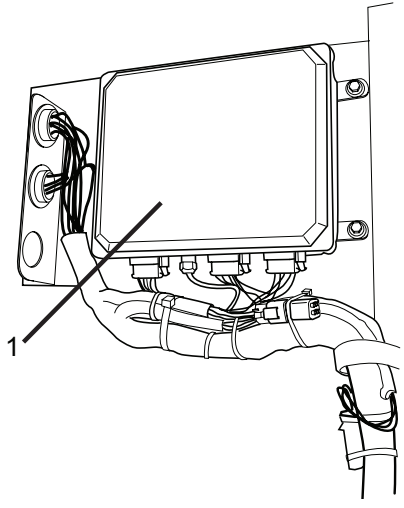


Figure 15

No.	Amp	Description
1	5	Proximity Switch Power Fuse
2	15	Front Lights Fuse
3	5	Control Power
4	10	Tag Axle/Reverse Alarm Fuse
5	5	Pusher Axle Fuse
6	10	3G Power Auxiliary Power Fuse
7	5	Module Power Fuse
8	15	Strobe Light Fuse
9	15	Rear Lights Fuse
10		Spare
11	10	Hydraulic Controls Fuse
12		E-STOP Power Relay
13	10	Hydraulic 1 Fuse
14	5	Top Door Fuse
15	5	Hydraulic 2 Fuse
16		Spare
17		Front Work Lights Relay
18		Rear Work Lights Relay
19		Strobe Lights Relay
20		Spare Relay
21		Ignition Relay 1
22	3	Module Memory Fuse
23		Ignition Relay 2

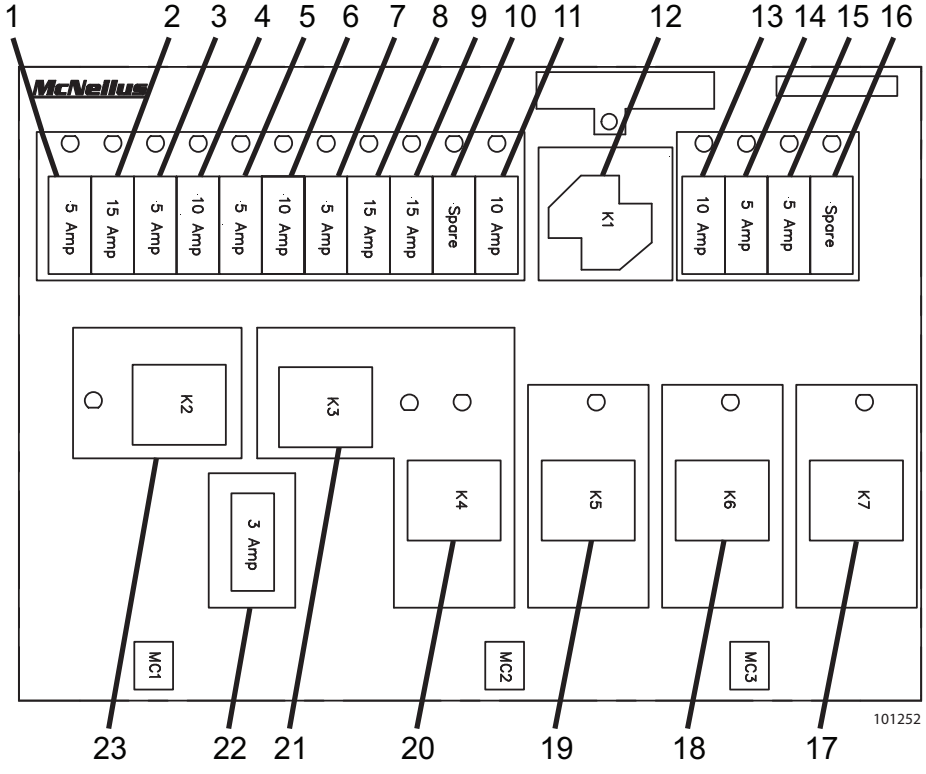


Figure 16

2.3 Arm and Fork Controls

There are three types of controls for the Arm and Fork Functions. There are two types of single lever joysticks available that enable the single joystick to operate both the Arm and Fork Functions. The second type of control is the dual lever in which one lever controls the Arm Functions and the other lever controls the Fork Functions.

⚠ WARNING

Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the Packer.
Serious personal injury or death may occur.

⚠ DANGER

Make sure the area above the vehicle is clear of objects and power lines before raising the arm.
Serious personal injury or death may occur.

⚠ CAUTION

Use caution when raising the arm assembly with a container.

⚠ CAUTION

Never operate the arms when the canopy is lifted. Failure to comply may cause damage to the canopy or arms.

2.3.1 Street Side/Curb Side Switch

When you have more than one joystick which can be operated from the Street Side or the Curb Side of the cab, the switch must be moved to the correct position.

When the toggle switch (Figure 17, Item 1) is in the middle, it is in the OFF position (Figure 17, Item 2). The joysticks will not function in the OFF position.

- Move the toggle switch to the Street Side Joystick position (Figure 17, Item 3) for Street Side Joystick operation.
- Move the toggle switch to the Curb Side Joystick position (Figure 17, Item 4) for Curb Side Joystick operation.

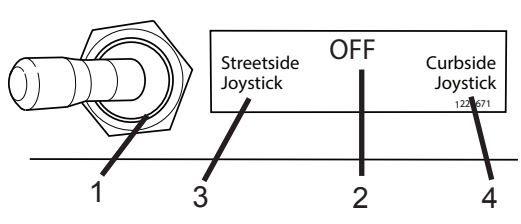


Figure 17

2.3.2 Commercial Dual Axis, Pneumatic, Single Lever Joystick

The single lever joystick (Figure 18) controls the movement of both the arm and fork assemblies.

The joystick is spring loaded and automatically returns to the middle (neutral) position when released.

1. Move the STREET SIDE/CURB SIDE switch to the position the controls will be operated from. (See Section 2.3.1 Street Side/Curb Side Switch, for details.)

- Pull the joystick BACK (Item 1) to raise the arm assembly.
- Push the joystick FORWARD (Item 2) to lower the arm assembly.
- Push the joystick AWAY from the operator (Item 3) to lower the fork assembly.
- Pull the joystick TOWARD the operator (Item 4) to raise the fork assembly.

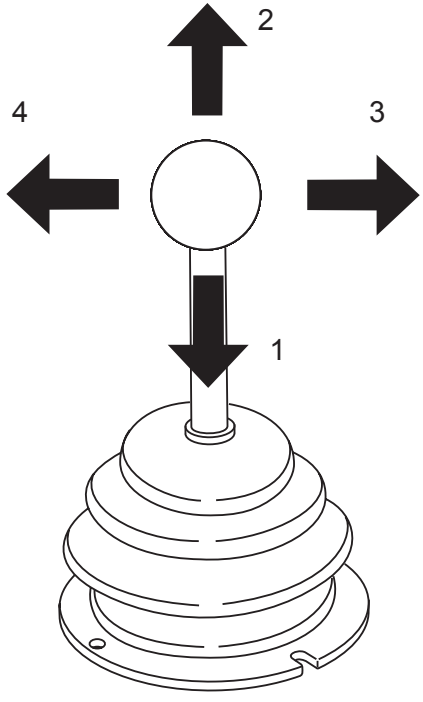


Figure represents view from street side in chassis cab.

Figure 18

3.0 Optional Equipment

3.1 Dual Lever Controls

The optional Dual Lever controls (Figure 19) consist of two separate levers:

- A lever that controls movement of the arm assembly.
- A lever that controls movement of the fork assembly.

1. Press the ARM MANUAL CONTROL button on the control box (See Section 2.2.1 Refuse Vehicle Button Functions, for details).
2. The control levers are spring loaded and automatically return to the middle (neutral) position when released.
3. Move the Street Side/Curb Side switch to the position the controls will be operated from.

- Pull the corresponding control lever BACK (Item 1) to raise the arm assembly.
- Push the corresponding control lever FORWARD (Item 2) to lower the arm assembly.
- Push the corresponding control lever FORWARD (Item 3) to lower the fork assembly.
- Pull the corresponding control lever BACK (Item 4) to raise the fork assembly.

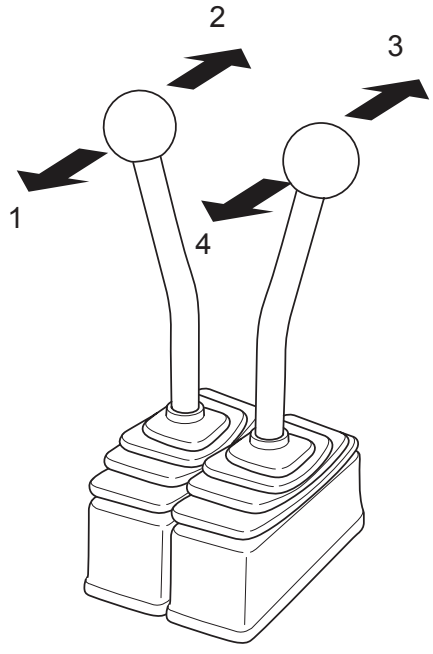


Figure represents view from Street Side in chassis cab.

Figure 19

3.2 Single Lever Joystick Control

This optional joystick is spring loaded and automatically returns to the middle (neutral) position when released.

The single lever joystick (Figure 20) controls the movement of both the arm and fork assemblies.

1. Move the Street Side/Curb Side switch to the position the controls will be operated from. (See Section 2.3.1 Street Side/Curb Side Switch, for details.)
2. Press and hold the CENTER (Operator Presence) switch (Item 5) to activate the joystick.

- Pull the joystick BACK (Item 2) to raise the arm assembly.
- Push the joystick FORWARD (Item 1) to lower the arm assembly.
- Push the forks LOWER button (Item 4) to lower the fork assembly.
- Push the forks RAISE button (Item 3) to raise the fork assembly.

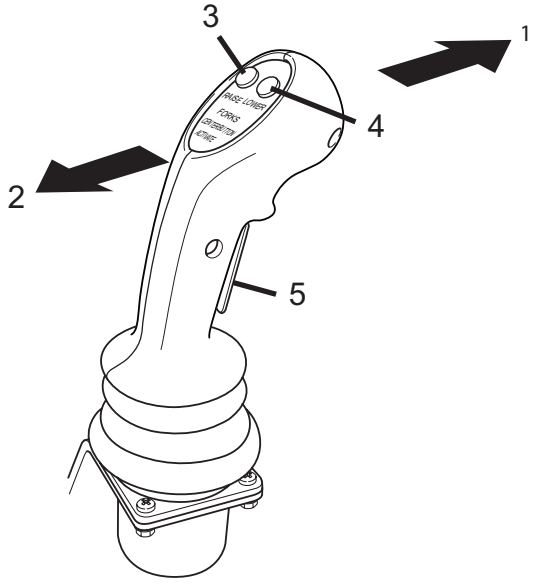


Figure 20

3.3 Auto Dump Using Single Lever

1. Press in and hold the CENTER (Operator Presence) button (Figure 21, Item 3) to activate the joystick.
2. Pull the joystick BACK (Figure 21, Item 2) and hold to begin the auto dump function.
3. To return the container to the ground, push the joystick FORWARD (Figure 21, Item 1) and hold.

3.3.1 Auto Dump Function

With the optional Auto-Dump Function, the fork assembly is automatically rotated in the appropriate direction when the arm assembly is raised or lowered. The fork assembly is rotated to avoid interference with the body canopy and to avoid dumping contents on the vehicle cab.

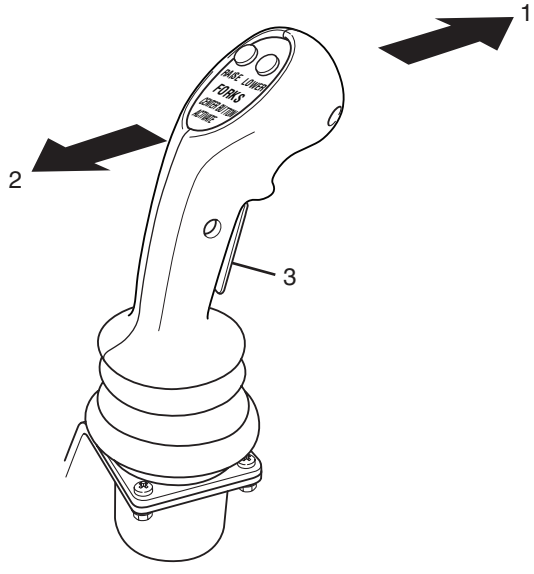


Figure 21

3.4 Auto Dump Using Dual Lever

1. Press the ARM AUTO DUMP button on the control box (see Section 2.2.1 Refuse Vehicle Button Functions, for details).
2. Pull the arm control lever (Figure 22, Item 1) back (Figure 22, Item 2) and hold. The forks will automatically level as the container is being raised.
3. To return the container to the ground, push the control lever (Figure 22, Item 1) forward (Figure 22, Item 3) and hold. The forks will automatically level as the container returns to the ground.

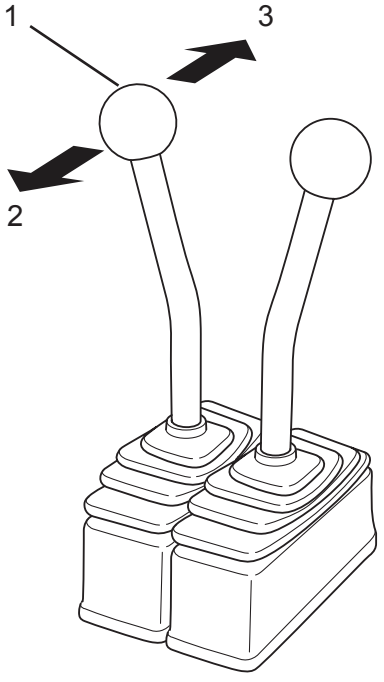


Figure represents view from Street Side in chassis cab.

Figure 22

3.5 Outside Control Box

The Arm, Fork, Pack/Eject, Throttle Advance, and E-STOP Functions can be operated from the optional outside control box (Figure 23). The REMOTE button on the in-dash control panel must be ON to enable the outside controls.

No.	Description	Normal Use or Reading
1	AUTO PACK and EJECT Switch	Press and hold the switch up to activate automatic cycling of Pack/Eject Function.
2	THROTTLE ADVANCE Switch	Press and hold the switch up to increase chassis engine RPM.
3	FORK Control Switch	Press and hold the switch to the left to raise fork assembly. Press and hold the switch to the right to lower fork assembly.
4	ARM Control Switch	Press and hold the switch to the left to raise arm assembly. Press and hold the switch to the right to lower arm assembly.
5	E-STOP Switch	Disables all hydraulic, pneumatic, electric functions.
6	Operator Presence Button	Press and hold this button to use any of the outside control switches.

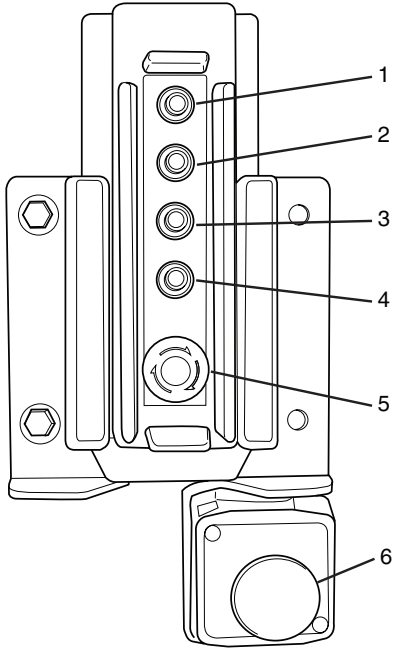


Figure 23

3.6 Residential Attachments

The optional residential application for a front loader requires the use of a carry can. The carry can is mounted and secured to the fork assembly. When the carry can is equipped with a cart tipper or automatic arm, the majority of the required hydraulic and electrical lines are routed down the street side arm assembly with the connections (Figure 24) mounted on the curb side fork assembly.

The routing of hydraulic and electrical lines from the connections to the carry can will vary with different models and manufacturers of carry cans.

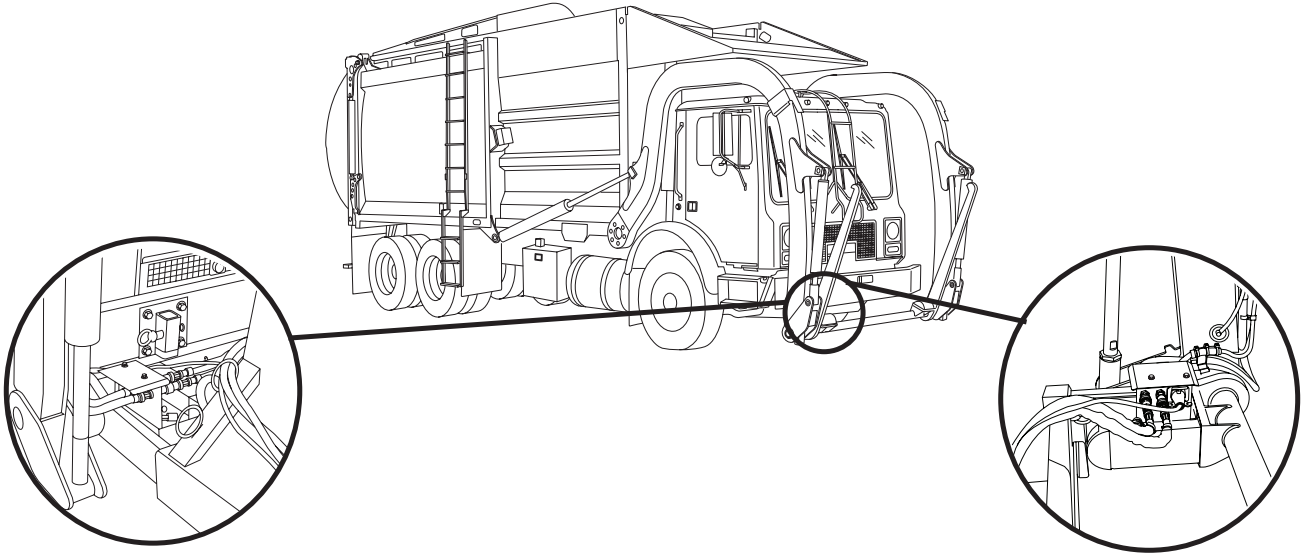


Figure 24

3.6.1 Installing a Carry Can

⚠ WARNING

The installation procedure found in this manual must be followed when installing a carry can.

Failure to follow all these steps may cause serious personal injury or equipment damage.

1. Always clear area around arm and fork area in front of the truck.
2. Fully raise arms to stow arms in hopper.
3. Remove truck key from ignition.
4. Install bumper arm rest pads and secure with nuts and bolts or pins and locks (Figure 25). Bumper arm rest pad style, mount point, bracketing and attachment method varies by chassis model.

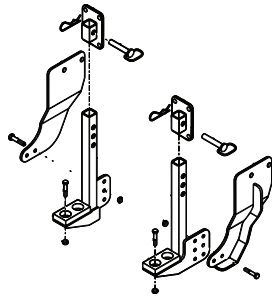


Figure 25

5. Clear the area, start truck, and lower arms.
6. Insert forks into carry can pockets.
7. Tip forks up slightly to correctly position carry can on forks.
8. Remove truck key from ignition.
9. Attach carry can safety chain or strap to or around fork tube.
10. Attach hydraulic quick disconnects and electrical connections (if carry can has hydraulic tipper).
11. Start truck, clear the area, and verify the tipper works properly.
12. Reverse the above process to remove carry can.
13. Call McNeilus Truck and Manufacturing, Inc. at 888-686-7278 if you require further assistance or have questions.

3.7 Pusher or Tag Axle

NOTE

The following information is for auxiliary axles installed by McNeilus Truck and Manufacturing, Inc. Refer to chassis manufacturer information for axle installed by the chassis manufacturer or a third party.

The auxiliary axle down force is controlled by regulated air pressure to the axle suspension air springs. The regulated air pressure is preset at the factory to a common pressure setting. Determine the actual regulated air pressure by driving the vehicle over a truck scale at the various weights the vehicle will be operated at up to the GVWR as shown on the Final Stage Manufacturer Label located on the driver's side cab doorjamb (see Section 2.0 Complete Vehicle Decal, for details). Adjust the regulated air pressure according to the auxiliary axle manufacturer's pressure/weight chart located in the cab information packet supplied with the vehicle. The air pressure gauge is located in the cab of the vehicle and may also be located outside of the cab.

Always follow your company's policies and procedures when adjusting the air pressure. If you have any questions, call McNeilus Parts and Service branches at 888-686-7278.

A pusher axle (Figure 26, Item 1) is mounted in front of the rear drive axle.

A tag axle (Figure 26, Item 2) is mounted in behind the rear drive axle.

They are considered auxiliary axles. The pusher or tag axle are raised and lowered by buttons located on the cab control box.

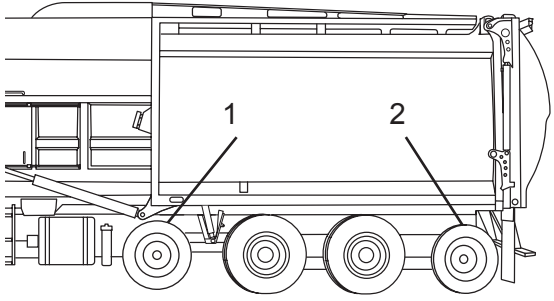


Figure 26

NOTE

Only lower the pusher or tag axle after you have started your route. Never lower the axles when the Packer is empty. When emptying the Packer the pusher axle must be in the RAISED position and the tag axle in LOWERED position.

3.7.1 Lowering the Pusher or Tag Axle

1. Bring the truck to a complete stop and apply the parking brake (refer to the chassis manufacturer's procedure).
2. Push the PUSHER AXLE or TAG AXLE LOWER button.
3. Resume normal operations.

NOTE

The tag axle is designed to lift automatically when the vehicle is put in reverse. The tag axle must be lowered again before beginning forward travel.

3.7.2 Raising the Pusher or Tag Axle

1. Bring the truck to a complete stop and apply the parking brake (refer to the chassis manufacturer's procedure).
2. Press the PUSHER AXLE or TAG AXLE RAISE button.
3. Resume normal operations.

3.8 Roof Access Ladder

Your waste collection vehicle may be equipped with a roof access ladder (Figure 27). Note that ladder styles may vary slightly. The lower ladder component must be up and secured to the upper ladder component during transit and storage. Use the roof access ladder only during maintenance.

To operate the ladder, follow these steps:

1. Locate the pull pin (Figure 27, Item 1) that secures the lower ladder to the upper ladder during storage and transit.
2. Pull the pull pin out to release the lower ladder.
3. Swing the lower ladder down, into position using the hand holds on the ladder.
4. When finished using the ladder, swing the lower ladder up to the upper ladder.
5. Pull the pull pin out and push the lower ladder to the upper ladder.
6. Push the pull pin in to secure the lower ladder to the upper ladder.

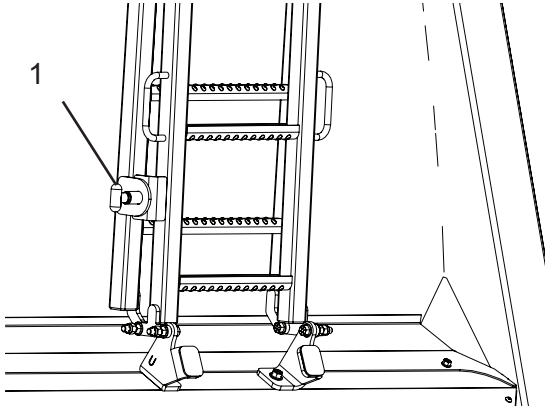


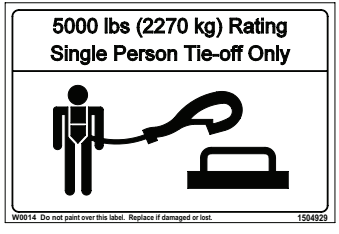
Figure 27

3.9 Fall Protection Equipment

Your refuse vehicle may be equipped with optional anchors, loops, holes, or other features where it is possible to attach ropes, chains, hooks, or straps. These features may be intended only for use with optional equipment not provided on your vehicle, or for use during the manufacturing process. Never use features on your waste collection vehicle to lift, tow, move, or otherwise manipulate your waste collection vehicle.

3.9.1 Fall Protection Roof Anchors

If your vehicle is equipped with anchors intended to be used for fall protection, they will be indicated as such with the following label.



These anchors are provided as specified by your company. Any use of these anchors must only be used as part of a fall protection system designed and certified by your employer. Never use these anchors in any other way than that prescribed by your employer's safety manager.

3.9.2 Fall Protection Systems

Your Waste Collection vehicle may be equipped with a tarpARMOR™ Bi-LINE™ fall protection system. This system must be used only with the belts, clips, harnesses, tethers, and other necessary accessories as approved by tarpARMOR™ and your employer's safety manager. Do not attempt to use this system unless you are trained, experienced, properly equipped, and authorized to do so. Understand and follow the limitations of the system as explained by your tarpARMOR™ supplied instructions and your safety manager's training.

3.9.3 Working on the Roof

If your employer's safety procedures direct you to work on the roof of your waste collection vehicle without a fall protection system, only do so while maintaining three points of contact at all times. Never step, stand, or walk on a surface that is not provided with a slip resistant feature.

⚠ WARNING

Fall Hazard - Railings NOT provided. Never step, stand, or walk on a surface that is not provided with a slip resistant feature. Use fall protection devices any time three points of contact cannot be maintained. Fall could injure or kill.

3.10 Lateral Protection Device

The lateral protection device (LPD) is designed to be removed for service or rotated up or tilted forward for access to components on the vehicle such as tool boxes, battery boxes, hydraulic oil tanks. **IMPORTANT:** The only time the LPD should be removed, rotated, or tilted is when the vehicle is stationary. Return the LPD to its original position before moving the vehicle or going on route.

Remove the LPD for Service

1. To remove the entire device to perform service work on the vehicle, remove all four (4) hinge pins and move the device out of the way.
2. Reinstall the device and all four (4) hinge pins to return the LPD to its original position before moving the vehicle or going on route.

Rotate the LPD Up

1. To rotate the lateral protection device up for access to components, holding onto the rail assembly, remove the **lower hinge pin** from both LPD mount supports.
2. Rotate the rail assembly up until the open holes on the LPD mount support and the chassis mount align.
3. Install each lower hinge pin through the open holes in the top hole of each LPD mount supports and mount weldments (Figure 28).

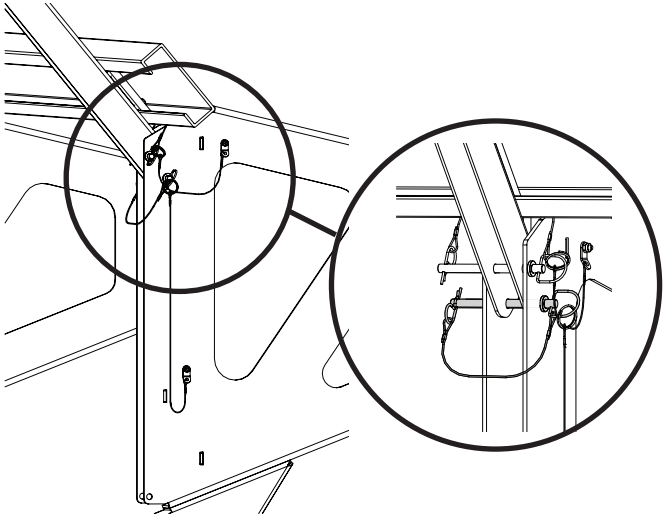


Figure 28

4. Reverse all steps to return the LPD to its original position before moving the vehicle or going on route.

Tilt the LPD Down

1. To tilt the lateral protection device down for top side access to frame mounted components, holding onto the rail assembly, remove the top hinge pin from both LPD rail supports.
2. Tilt the LPD down, keeping it hinged to the mount weldments by the lower hinge pins (Figure 29).

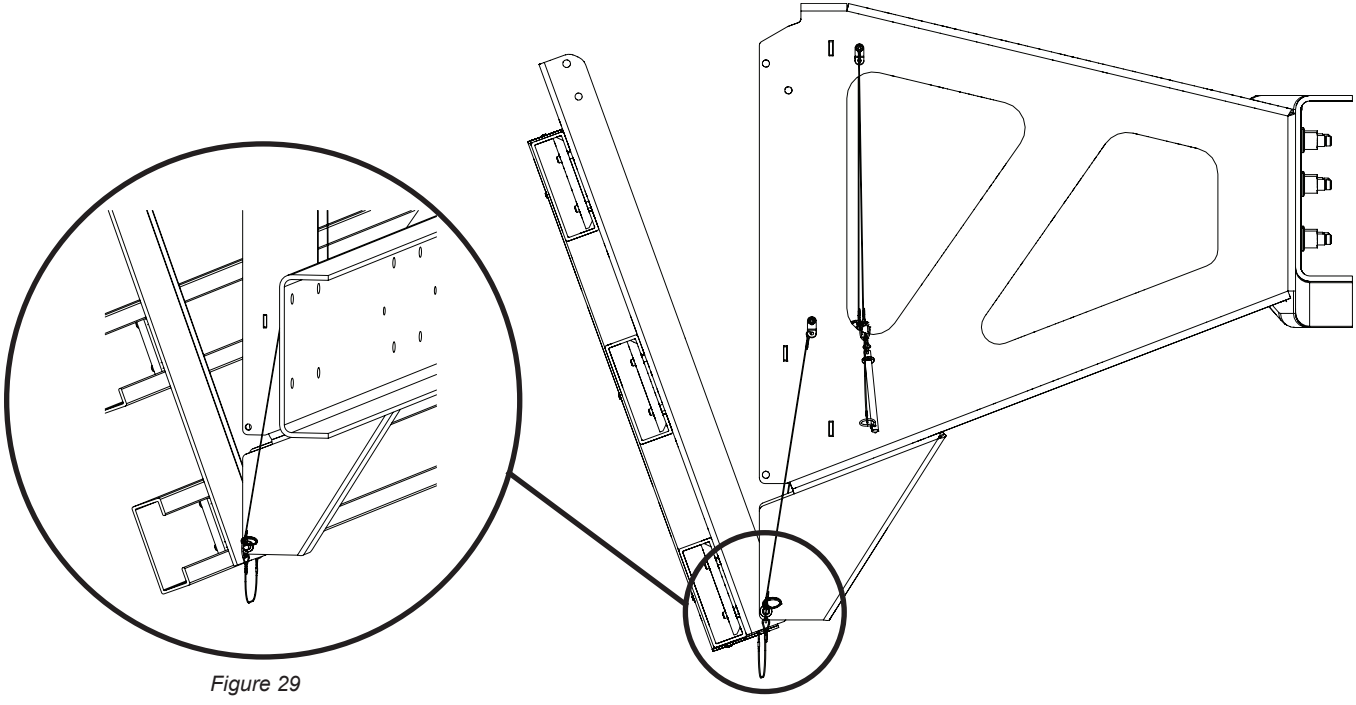


Figure 29

3. Reverse the step to return the LPD to its original position before moving the vehicle or going on route.

3.11 Water Tank

3.11.1 Water Tank Safety

⚠ WARNING

IMPORTANT ALUMINUM AND STEEL WATER TANK INFORMATION.

1. Inspect water tank on a daily basis for any damage including, but not limited to, dents, gouges in metal, or leaks.

2. Do not weld on or repair water tank. Instead, replace water tank with a new OEM water tank.

3. Never pressure test an empty water tank. Only pressure test a full water tank.

4. Never remove pressure regulator or pressure safety valve from tank.

- **If regulator or safety valve is defective, it must be replaced before Packer is put into service.**

5. Do not pressurize water tank beyond its working pressure.

- **If pressure exceeds the working pressure, immediately depressurize water tank and replace pressure regulator and pressure safety valve.**

⚠ WARNING

CONTINUED

6. Never drive the truck with the water tank pressurized.

- **Depressurize water tank prior to transit to or from job site.**
- **Water tank should be pressurized only when being used.**

7. Never modify water tank in any way.

8. Immediately replace safety decals with McNeilus decals if decals are missing or difficult to read.

9. Refer to the McNeilus Operator's Manual or contact McNeilus at 1-888-686-7278 if you have questions or require assistance.

3.11.2 Water Tank Purpose

Your refuse vehicle may be equipped with a pressurized water tank. This tank is used to rinse debris off the refuse vehicle. Air pressure from the truck's brake system is used to provide pressure to the tank. Use these instructions for the safe operation and inspection of all McNeilus, Oshkosh, and London pressurized water tanks.

If your refuse vehicle is equipped with a non-pressurized water tank (a system that uses a water pump to provide pressure), refer to the instructions provided with the refuse vehicle.

3.11.3 Daily Inspection

- Inspect tank daily for damage or leaks.
- Replace (do not repair) damaged or leaking tank.
- Drain pressure before driving.
- Do not weld or repair tank.
- Never exceed stated PSI in tank.
- Bursting tank may injure or kill.

3.11.3.1 Tank Integrity

At the start of each shift:

- **Inspect Interior:** Drain the tank of water and use a flashlight to look into the tank through the fill opening. Look for signs of corrosion on the inside of the tank which may indicate that the tank has been weakened and is in need of replacement.
- **Inspect Exterior without Pressure:** If the interior inspection indicates that the tank is in good condition, fill the tank with water and inspect the exterior of the tank thoroughly for signs of leaks. Inspect the filler neck and fill opening. Look for signs of damage. Look for cracks in the weld joints or seams. Check that all fastening hardware is tight and undamaged. Inspect fittings for signs of damage, cracks, or looseness.
- **Inspect Exterior with Pressure:** If there are no signs or exterior leakage, pressurize the tank and repeat the inspection.
- **Depressurize Tank:** Release the pressure in the tank as soon as you are finished inspecting and before moving the truck.
- **Replace Defective Tank:** Water tanks with any leak or significant signs of internal or external damage or corrosion should be replaced. DO NOT ATTEMPT TO REPAIR.

3.11.3.2 Pressure Regulator Valve

Inspect Pressure Regulator: The pressure regulator is used to reduce the air brake system pressure to a pressure that is safe to be used in the water tank. It must be undamaged and in proper working order. Look and listen for signs of leaking. Ensure that the valve and associated hoses and fittings are undamaged.

Adjust Pressure to Correct Setting: Many pressure regulators are set at the factory and cannot be adjusted. If your water tank has an adjustable regulator, set it to 50 psi. When setting the regulator, always begin by turning the adjusting knob counterclockwise first to reduce the pressure slightly. Then turn it clockwise slowly to bring the pressure up to the correct setting. Never continue to turn the valve past the correct setting.

Replace Defective Regulator Valve: Any water tank with a damaged or missing pressure regulator valve must be removed from service immediately. Do not pressurize the tank until a functioning pressure regulator valve has been installed.

3.11.3.3 Pressure Relief Valve

Inspect the Relief Valve: The pressure relief valve is a safety device that will release air or water from the tank if it is inadvertently pressurized over the relief setting. The relief setting on most water tanks is set at the factory and cannot be adjusted. Identify the pressure relief valve and ensure that it has not been damaged or tampered with.

Replace Defective Relief Valve: Any water tank with a damaged or missing pressure relief valve must be removed from service immediately. Do not pressurize the tank until a functioning pressure relief valve has been installed.

3.11.4 Daily Operation

The water tank is designed to be used during stationary operation at the yard or the landfill site only. It is not necessary or beneficial for the tank to be pressurized while driving and a pressurized tank is an added hazard in the event of a crash or a rollover.

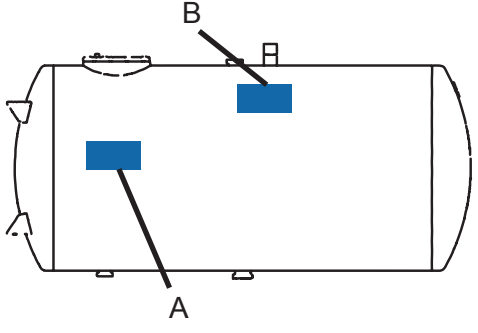
3.11.5 Vehicle Handling Characteristics

Safe operation of any vehicle is the responsibility of the driver. The water tank is a fluid load that can increase the rollover tendency if the truck is driven with the water tank partially full. To reduce the risk of rollover, only drive the truck with the water tank either completely full or completely empty. Avoid making sharp turns at excessive speeds and other abrupt maneuvers.

In the event of a rollover or crash, an unbelted person is significantly more likely to become injured or die than a person wearing a seat belt. ALWAYS WEAR YOUR SEAT BELT.

3.11.6 Water Tank Decal Identification

Item	Part Number	Qty.	Comments
A	1449162	1	Use if equipped with 55 PSI tank.
A	1449165	1	Use if equipped with 95 PSI tank.
A	1503949	1	Use if equipped with 120 PSI tank.
B	1449164	1	Used on all tanks.



(Side Tank Mount)

3.11.7 Water Tank Operation

The water tank (Figure 30, Item 1) can be mounted in any one of several locations, depending on the options your refuse vehicle is equipped with. The system will be equipped with a pressure gauge (Figure 30, Item 2), an air pressure control valve (Figure 30, Item 3), and a drain valve (Figure 30, Item 4).

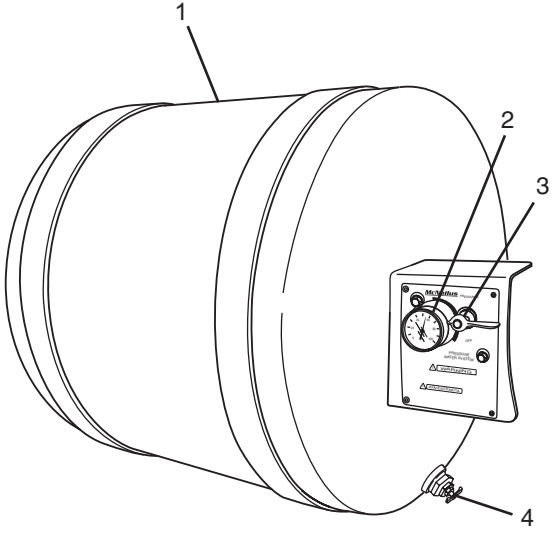


Figure 30

3.11.7.1 Filling the Tank

The tank can be filled through the flopper valve (Figure 31, Item 1) or through the optional gate valve (Figure 31, Item 2).

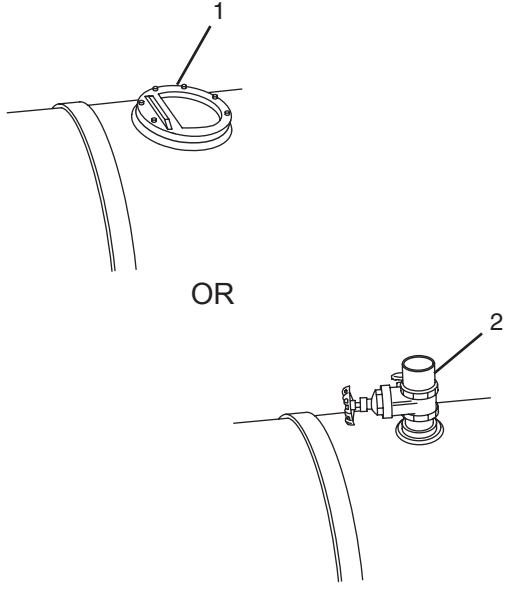


Figure 31

3.11.7.2 Pressurizing the Water Tank

⚠ WARNING

Never drive the truck with the water tank pressurized.

Serious personal injury or death may occur.

⚠ WARNING

Never pressurize an empty water tank.

Serious personal injury or death may occur.

1. Fill the tank to the desired level.

⚠ WARNING

Never pressurize water tank in excess of 55 psi (380 kPa). If pressure exceeds 55 psi (380 kPa), depressurize the water tank immediately and adjust or replace the air regulator valve.

Serious personal injury or death may occur.

2. Turn the air pressure control valve to the PRESSURIZE position (Figure 32, Item 1). The water tank will be pressurized from the chassis air system.
3. The air gauge (Figure 32, Item 2) will read the pressure in the water tank. The pressure must not exceed 55 psi.

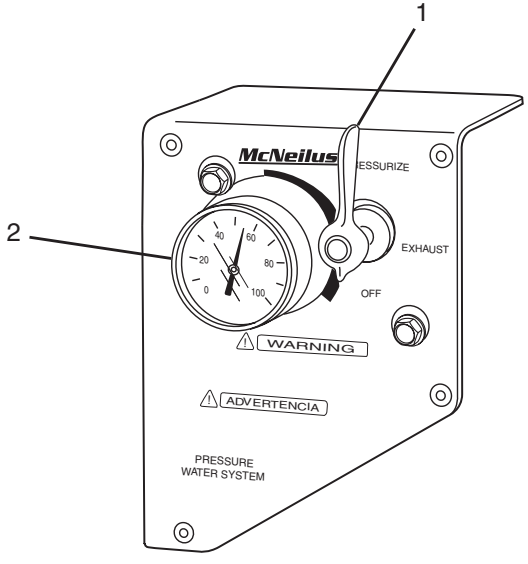


Figure 32

4. Connect a hose to the fitting (Figure 33, Item 1).

⚠ WARNING

Do not drink the water.

Serious internal injury may result.

5. Open the valve (Figure 33, Item 2).

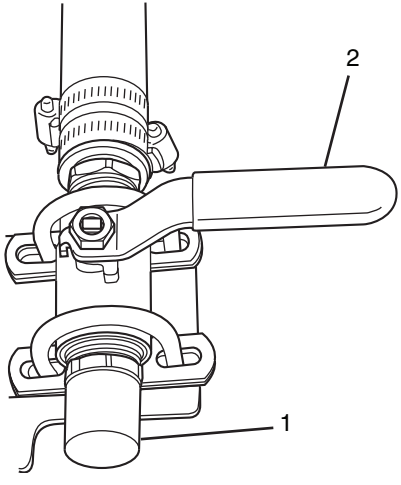


Figure 33

3.11.7.3 Depressurizing the Water Tank

1. Turn air pressure control valve to the EXHAUST position (Figure 34, Item 1). Make sure the gauges (Figure 34, Item 2) read 0 psi.

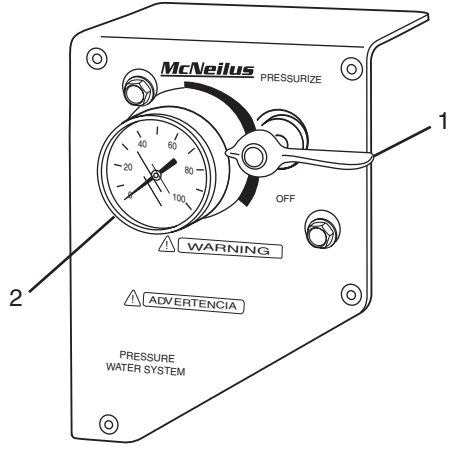


Figure 34

2. After pressure in the water tank has been completely exhausted, turn the air pressure control valve to the OFF position (Figure 35, Item 1).

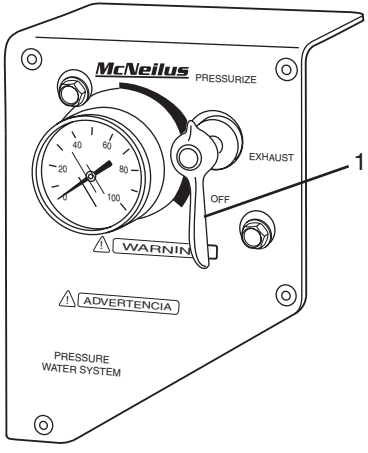


Figure 35

3.11.7.4 Draining the Water Tank

⚠ WARNING

Never allow the water from the tank to drain onto a public sidewalk or roadway. Water may cause the sidewalk or roadway to become slippery. Always drain the water system at a location designated by the job site manager or in compliance with your company policy.

Failure to comply may result in serious personal injury or death.

⚠ WARNING

Do not drink the water.

Serious internal injury may result.

⚠ CAUTION

Be sure to drain the water tank, hoses, and pipes when operating in temperatures below freezing.

Failure to drain the system may cause damage to equipment.

When operating in temperatures below freezing, the water system must be drained after every use.

1. Depressurize the water tank.
2. Open the tank drain valve (Figure 36, Item 1) and allow the water to drain. When water is drained, close the drain valve.

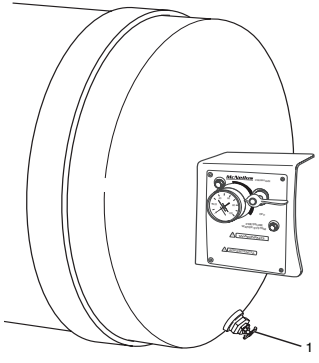


Figure 36

1. Open gate valve(s) (Figure 37, Item 1), operate hose and drain all hose(s) and pipe(s).

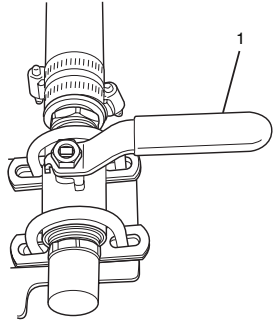


Figure 37

4.0 Control Functions

4.1 E-STOP (Emergency Stop) Function

Press any of the E-STOP buttons (Figure 38) to IMMEDIATELY DISABLE refuse vehicle and Hydraulic functions.

The E-STOP button is a safety function.

Pressing the red E-STOP button disables all refuse vehicle Electrical, Pneumatic, and Hydraulic functions.

NOTE

The E-STOP button remains in a locked DOWN position until it is manually released.

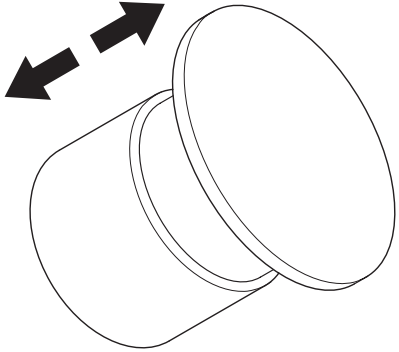


Figure 38

4.1.1 In-Cab Control Panel E-STOP Button

Pull up on the button to release the in-cab control panel E-STOP panel (Figure 39, Item 1).

NOTE

All E-STOP buttons must be in the UP position before the refuse vehicle functions can be restored.

4.1.2 Outside Control Box E-STOP Button

Pull up on the button to release the outside control box E-STOP button (Figure 39, Item 2).

NOTE

If Packer functions are not operational, reset the controls by pulling up ALL of the E-STOP buttons and turning the pump back on.

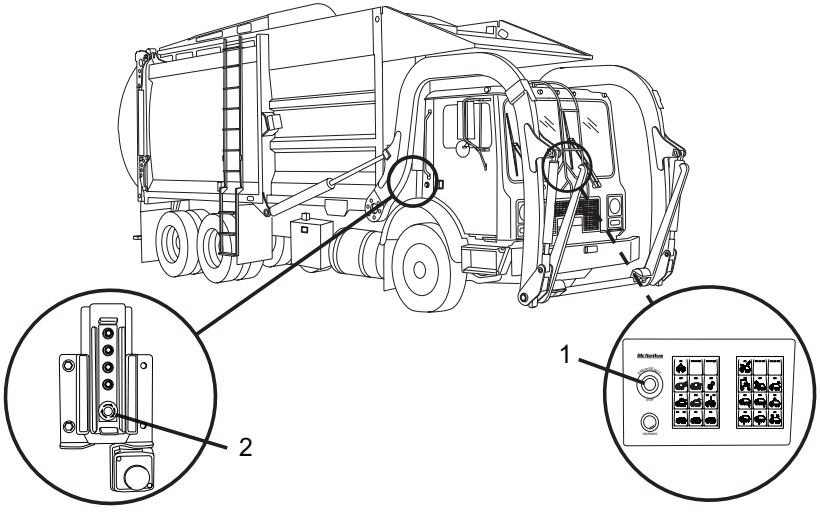


Figure 39

4.2 Pack/Eject Functions

The Pack/Eject Functions are controlled by two buttons located on the in-dash control panel. Automatic cycling of the Pack/Eject Functions is controlled by the AUTOPACK and SWEEP button. Manual cycling of the Pack/Eject Functions is controlled by the EXTEND button or the RETRACT button.

⚠ WARNING

Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the Packer.
Serious personal injury or death may occur.

NOTE

The automatic packing cycle can be interrupted by pressing any of the E-STOP buttons.

4.2.1 Automatic Cycling of Pack/Eject

Conditions

- Tailgate OPEN indicator light must be OFF
- Arms ABOVE BODY indicator light must be OFF
- Top Door CLOSE indicator light must be OFF
- Engine speed must be below 1600 rpm

Press and hold the PACK and SWEEP button (for one second) to activate automatic cycling of the Pack/Eject Functions. When activated, the pack/eject extends from the HOME position (Figure 40, Item 1) into the hopper until it reaches the EXTEND position (Figure 40, Item 2). The pack/eject then reverses direction and retracts until it returns to the HOME position.

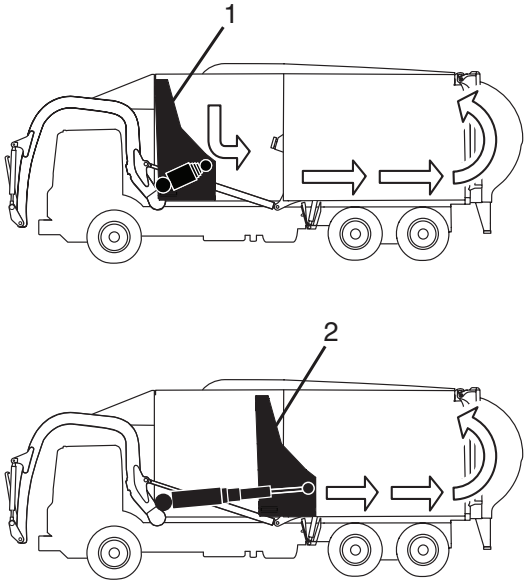


Figure 40

4.2.2 Manual Cycling of Pack/Eject

Conditions

(Applies to Extend Function Only)

- Tailgate OPEN indicator light must be OFF
- Arms ABOVE BODY indicator light must be OFF
- Top Door CLOSED indicator light must be OFF
- Engine speed must be below 1600 rpm

Manual cycling of the Pack/Eject Functions is controlled by the EXTEND button or the RETRACT button located on the cab control panel. With the tailgate CLOSED, the pack/eject can only travel to the EXTEND position (Figure 41, Item 2).

Press and hold the EXTEND button to manually control the extend movement of the pack/eject. When the button is released, the pack/eject will stop at its current position.

Press and hold the RETRACT button located on the cab control panel to retract the pack/eject. The pack/eject will retract to the HOME position (Figure 41, Item 1). When the RETRACT button is released, the pack/eject will stop at its current position.

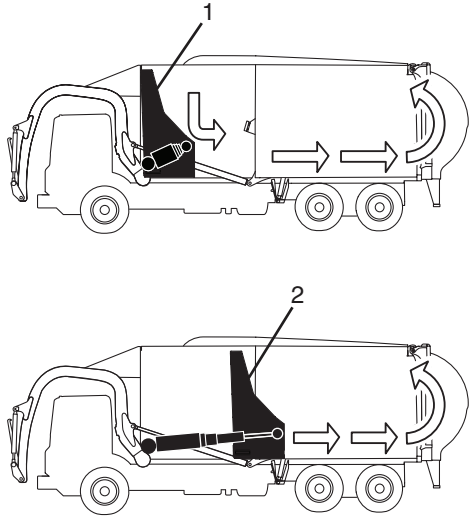


Figure 41

4.2.3 Manual Cycling with Tailgate Open

Conditions

(Applies to Extend Function Only)

- Arms ABOVE BODY indicator light must be OFF
- Top Door CLOSED indicator light must be OFF
- Tailgate must be fully open
- Engine speed must be below 1600 rpm

When the tailgate is OPEN, the EXTEND button or the RETRACT button controls the Pack/Eject Functions in the same way with exception that the pack/eject can travel into the body.

With the tailgate fully OPEN, the pack/eject will extend past the EXTEND position. The distance that the pack/eject extends into the body is determined by holding the EXTEND button.

While holding the EXTEND button, the pack/eject (Figure 42, Item 1) will extend to the rear of the body to eject the load.

Press and hold the RETRACT button to retract the pack/eject to the HOME position.

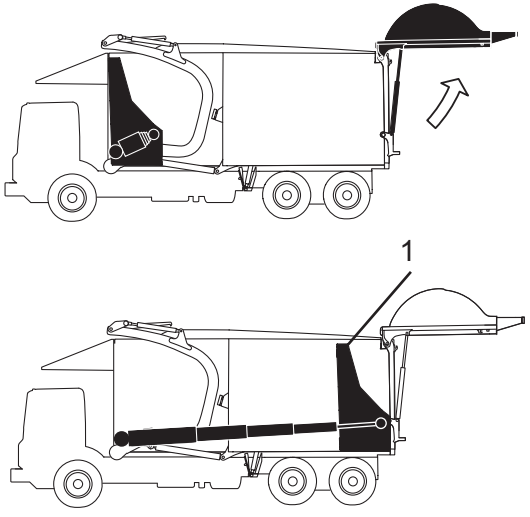


Figure 42

4.3 Arm Functions

The Arm Functions are controlled from the chassis cab or outside control box.

⚠ WARNING

Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the Packer.
Serious personal injury or death may occur.

⚠ DANGER

Make sure the area above the vehicle is clear of objects and power lines before raising the arm.
Serious personal injury or death may occur.

⚠ CAUTION

Use caution when raising the arm assembly with a container.

Conditions

- Top Door CLOSED indicator light must be OFF
- Pack/Eject RETRACT indicator light must be ON
- Engine speed must be below 1600 rpm

Use the arm controls to raise the arm assembly (Figure 43, Item 1). The ARM ABOVE BODY indicator light will turn on once the arm assembly is above the body (cab).

Use the arm controls to lower the arm assembly (Figure 43, Item 2).

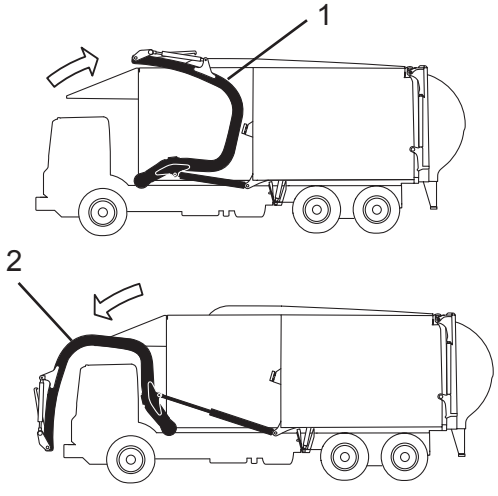


Figure 43

4.4 Fork Functions

The Fork Functions are controlled from the chassis cab or outside control box.

⚠ WARNING

Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the Packer.
Serious personal injury or death may occur.

⚠ DANGER

Make sure the area above the vehicle is clear of objects and power lines before raising the arm.
Serious personal injury or death may occur.

Condition

- Engine speed must be below 1600 rpm

Use the fork controls to raise the fork assembly (Figure 44, Item 1).

Use the fork controls to lower the fork assembly (Figure 44, Item 2).

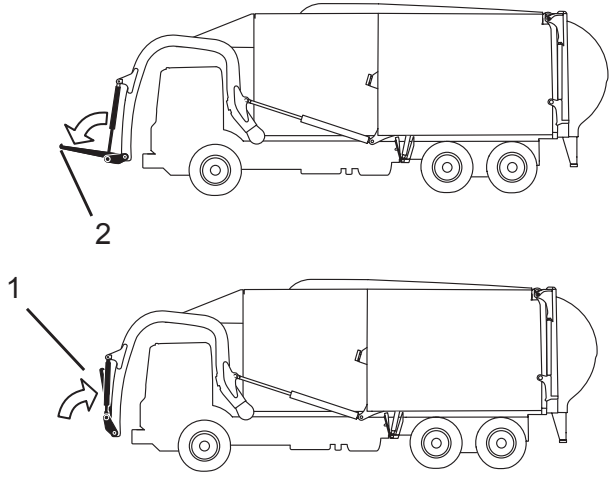


Figure 44

4.5 Auto-Level Functions

With the optional Auto-Level Function, the fork assembly is automatically rotated when the arm assembly is raised or lowered. The fork assembly is rotated to avoid interference with the body canopy.

⚠ WARNING

Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the Packer.
Serious personal injury or death may occur.

⚠ DANGER

Make sure the area above the vehicle is clear of objects and power lines before raising the arm.
Serious personal injury or death may occur.

Conditions

- Top Door CLOSED indicator light must be OFF
- Pack/Eject RETRACT indicator light must be ON
- Engine speed must be below 1600 rpm

⚠ CAUTION

Use caution when raising the arm assembly with a container.

After the forks are positioned in the container, follow the procedure for Auto-Level controls on your refuse vehicle (see Section 3.3 Auto Dump Using Single Lever, for details).

1. The arm assembly will begin to raise with the container (Figure 45, Item 1).
2. As the arm assembly raises above the body (cab), the fork assembly will automatically lower to a level position (Figure 45, Item 2). The ARM ABOVE BODY indicator light will turn ON.
3. The arm assembly will continue to raise until the arm assembly reaches the arm stops.
4. The fork assembly will start to raise until the fork assembly is fully raised and the container is in the DUMP position (Figure 45, Item 3).
5. After the container is emptied, the fork assembly will begin to lower until the container is out of the hopper.
6. After the fork assembly stops, the arm assembly will begin to lower and place the container on the ground.

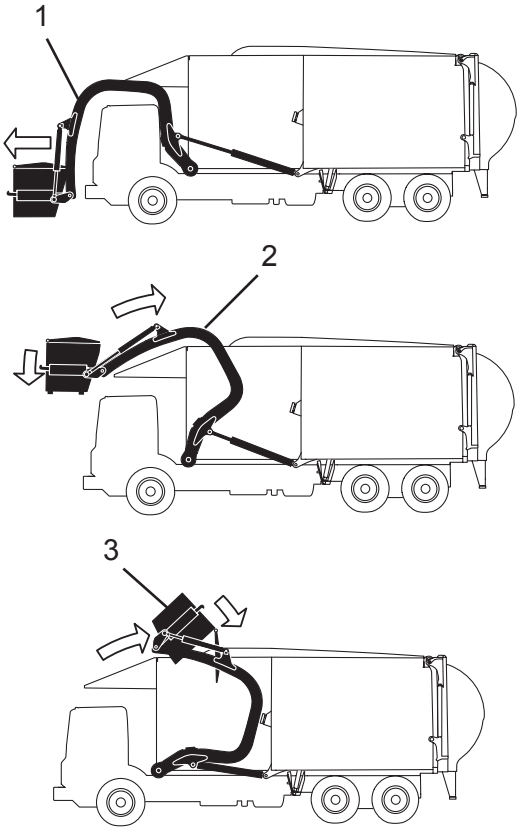


Figure 45

4.6 Tailgate Functions

The Tailgate Functions are controlled by the TAILGATE OPEN and CLOSE button and the ACTIVATE button located on the cab control box.

⚠ WARNING

Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the Packer.
Serious personal injury or death may occur.

⚠ DANGER

Make sure the area above the vehicle is clear of objects and power lines before raising the arm.
Serious personal injury or death may occur.

NOTE

The warble alarm sounds when the tailgate is opening and remains on until the tailgate is closed.
The alarm does not sound if the ignition switch is OFF or any of the E-STOP buttons are pressed down.

Condition

- Engine speed must be below 1600 rpm

4.6.1 Open Tailgate

Press and hold the ACTIVATE and the OPEN TAILGATE buttons at the same time to open the tailgate (Figure 46, Item 1).

4.6.2 Close Tailgate

Press and hold the ACTIVATE and the CLOSE TAILGATE buttons at the same time to close the tailgate (Figure 46, Item 2).

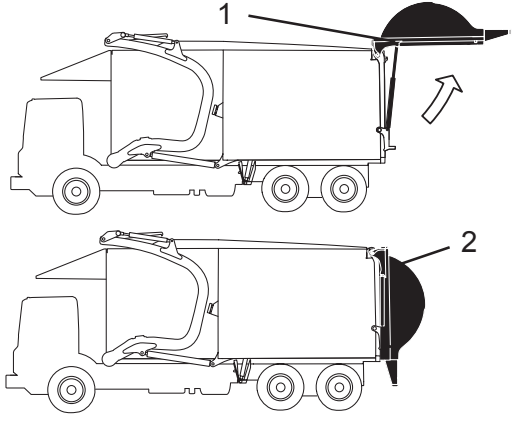


Figure 46

4.7 Top Door Functions

The Top Door functions are used to close off the refuse hopper during travel to keep trash from blowing out of the hopper. The Top Door functions are controlled by the TOP DOOR OPEN and CLOSE buttons on the cab control panel.

⚠ WARNING

Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the Packer.
Serious personal injury or death may occur.

⚠ CAUTION

Use the top door only to seal off the hopper area when traveling. The top door should not be used as a pack assist panel when using the Pack and Sweep function.
Damage to the top door may result.

Condition

- Side door indicator light must be off
- Engine speed must be below 1600 rpm

4.7.1 Open Top Door

Press and hold the ACTIVATE button and the TOP DOOR OPEN button at the same time to open the top door (Figure 47, Item 1).

4.7.2 Close Top Door

Press and hold the ACTIVATE button and the TOP DOOR CLOSE button at the same time to close the top door (Figure 47, Item 2).

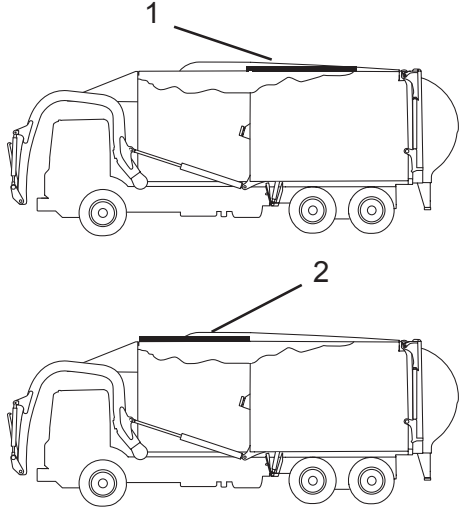


Figure 47

4.8 Preparation Before Starting Route

1. Turn battery disconnect ON.
2. If necessary, turn rear and side lights ON to enhance vision.
3. Turn pump button ON.
4. Activate all E-STOP buttons.

4.9 Body Raise Functions - Dump Model

The Body Raise Functions are controlled by the BODY button located on the cab control box.

⚠ WARNING

Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the Packer.
Serious personal injury or death may occur.

⚠ DANGER

Make sure the area above the vehicle is clear of objects and power lines before raising the body or opening the tailgate.

Serious personel injury or death may occur.

⚠ CAUTION

The tailgate must be completely open before raising the body or damage to the rear bumper may occur.

Condition

- Engine speed must be below 1600 rpm

4.9.1 Raise Body

1. Open the tailgate.
2. Press and hold the ACTIVATE button and BODY button at the same time to raise the body (Figure 48, Item 1). Both the BODY UP indicator light and tailgate alarm will be ON whenever the body is not in the HOME position.

4.9.2 Lower Body

1. Press and hold the ACTIVATE button and BODY button at the same time to lower the body. The BODY UP light will be OFF when the body is in the HOME position.
2. Close the tailgate.

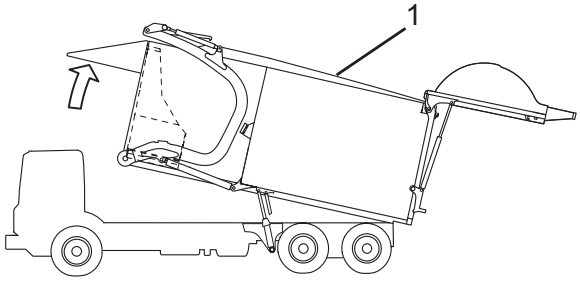


Figure 48

1.0 Preventive Maintenance

The unit must be checked or inspected each day or before each new shift of operation. Report any deficiencies to your Maintenance Department for correction by skilled service personnel.

⚠ CAUTION

Correct all identified deficiencies BEFORE operating the Packer. Failure to correct deficiencies may cause damage to equipment.

1.1 DOT Pre-Trip

Perform pre-trip inspection of entire refuse vehicle according to all federal, state, and local laws.

2.0 Preventive Maintenance Intervals

Performing preventive maintenance on your refuse vehicle will prolong the life of its equipment, help prevent expensive downtime, and minimize the potential for problems arising on the route.

The following Preventive Maintenance Chart summarizes the requirements to properly maintain your refuse vehicle.

The chart specifies the recommended interval when each item should be performed.

Intervals are listed in calendar and hours-of-use increments. Maintenance should be performed at the increment that occurs first.

The preventive maintenance intervals listed under the **Service** group heading are the maximum days or hours allowed for each maintenance procedure. Continue to repeat the maintenance procedures at the listed intervals.

NOTE

If the Packer is operated more hours per day or double-shifted, the maintenance interval must be adjusted accordingly.

The Preventive Maintenance Chart identifies the responsibilities to be performed by both the operator and service personnel.

Some maintenance procedures are listed under both the **Operator** group heading and **Service** group heading.

The Daily Checks under the **Operator** group heading identify procedures that can be performed by either the operator or skilled service personnel.

All intervals listed under the **Service** group heading must be performed by skilled personnel. Refer to the product Service Manual for descriptions of maintenance procedures.

Maintenance procedures are listed under the appropriate affected refuse vehicle system.

LEGEND

R Replace
P Perform
I Inspect
L Lubricate
T Torque
C Clean

	Operator			Service			
	Daily Checks	Daily (10 Hours)	Weekly (50 Hours)	Scheduled PM (150 Hours)	Semi-Annual (1250 Hours)	Annually (2500 Hours)	Bi-Annual (5000 Hours)
Hydraulic System							
Hydraulic Oil Level	I			I			
Hydraulic System and Components	I			I			
Hydraulic Hoses	I			I			
Hydraulic Tubes and Pipes	I			I			
Breather Filter				I	R		
Return Line Filter					R		
Hydraulic Oil Test					P		
HOC Operation Test					P		
Test Main Relief Valve Setting					P		
Change Hydraulic Oil (Standard Fill System)					P		
Change Hydraulic Oil (Clean Fill System)						P	
Reservoir Drain Plug					I		
Reservoir Drain Plug (Clean Fill System)						I	
Suction Line Strainer					R		
Suction Line Strainer (Clean Fill System)						R	

LEGEND

R Replace
I Inspect
T Torque
P Perform
L Lubricate
C Clean

	Operator			Service			
	Daily Checks	Daily (10 Hours)	Weekly (50 Hours)	Scheduled PM (150 Hours)	Semi-Annual (1250 Hours)	Annually (2500 Hours)	Bi-Annual (5000 Hours)
Electrical System							
Lighting System	I			I			
Wire Harness	I			I			
Audible Back Up Alarm	I			I			
Pneumatic Systems							
Drain and Inspect Coalescing Filter	I			I			
Air Hoses and Fittings	I			I			
Coalescing Filter				R	R		
Mechanical System							
Refuse Vehicle Components	I			I			
Tailgate Seal Condition	I			I			
Tailgate Seal Replaced						R	
Tailgate Lock Clearance				I			
Top Door				I			
Ladder Bolts			I				
Pack/Eject Assembly				I			

LEGEND

R Replace **P** Perform
I Inspect **L** Lubricate
T Torque **C** Clean

	Operator			Service			
	Daily Checks	Daily (10 Hours)	Weekly (50 Hours)	Scheduled PM (150 Hours)	Semi-Annual (1250 Hours)	Annually (2500 Hours)	Bi-Annual (5000 Hours)
Pack/Eject Track Clearance				I			
Arm Assembly				I			
Fork Assembly				I			
Pusher Axle Lug Nuts			T				
Tag Axle Lug Nuts			T				
Body Tie Down Components • Missing nuts or pins • Broken or damaged springs or brackets		I					
Operation							
Refuse Vehicle Controls	I			I			
Remove Trash Behind Pack/Eject	C			C			
Safety Signs	I						
Lubrication							
Daily		P					
Scheduled PM				P			

Complete all prior maintenance items before proceeding to this hourly service interval.

3.0 Daily Preventive Maintenance Checks

3.1 Hydraulic System

SAFETY NOTICE

Perform your company's Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.

3.1.1 Hydraulic Oil Level

- **Daily Checks -** The oil level is checked by the operator or skilled service personnel.

NOTE

Check hydraulic oil level during start-up when the oil temperature is still cold.

- Check the hydraulic oil level with all hydraulic cylinders in their fully RETRACTED position.

3.1.1.1 Temperature/Level Sight Gauge

The gauge contains a thermometer which indicates the temperature of the hydraulic oil in the reservoir. The reservoir could have one of two gauges. The first type (Figure 49) is distinguished by the word "LOW" below the sight glass. The second type (Figure 50) does not have the word "LOW" on the gauge.

The hydraulic oil must be checked with all the hydraulic cylinders in the fully RETRACTED position.

On a reservoir with a temperature/level sight gauge option (Figure 49), oil level at 60 - 70°F should be at the black line in the center of the green zone (Item 1). Oil should not be above the "Max Fill Hot" line (Figure 49, Item 2) when the system is at operating temperature. If there is too much oil in the reservoir (above the "Max Fill Hot" line), there is a possibility of the oil coming out of the breather at the top of the hydraulic reservoir. Do not operate the system with oil below the "low" line (Figure 49, Item 3) or damage to the system may result.

⚠ CAUTION

Do not operate the hydraulic system with oil below the "low" line on the temperature/level sight gauge.

Damage to the system may result.

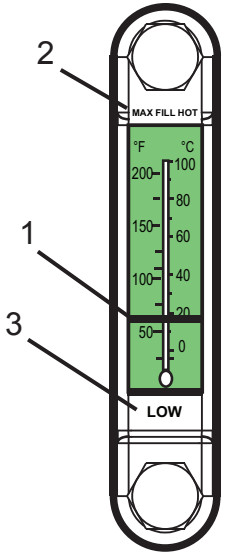


Figure 49

The second type of temperature/level sight gauge (Figure 50, Item 1) will not have the word “LOW”. Keep the oil level to the top of the black line (Full) (Figure 50, Item 2), but don’t over fill. If the oil level gets to the red line (Figure 50, Item 3), oil must be added.

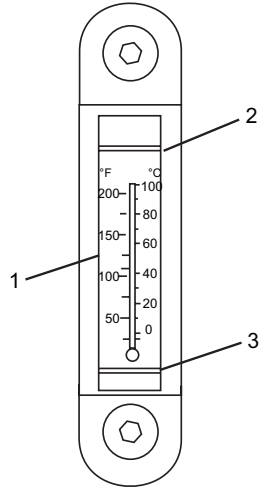


Figure 50

3.2 Electrical System

SAFETY NOTICE

Perform your company's Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.

3.2.1 Lighting System

- **Daily Checks -** The lighting system is inspected by the operator or skilled service personnel.

Check to ensure that all exterior lights on the refuse vehicle and chassis are functioning correctly. Replace any burned-out bulbs with the same type.

3.3 Pneumatic System

SAFETY NOTICE

Perform your company's Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.

3.3.1 Pneumatic Lines and Fittings

- **Daily Checks -** The pneumatic lines and fittings are inspected by the operator or skilled service personnel.

Check the pneumatic lines and fittings for leaks, wear, abrasion, damage, and proper clearance. Ensure that all fittings are secure.

3.3.2 Coalescing Filter

- **Daily Checks -** The coalescing filter is drained by the operator or skilled service personnel.

Locate the drain fitting (Figure 51, Item 1) on the bottom of the coalescing filter.

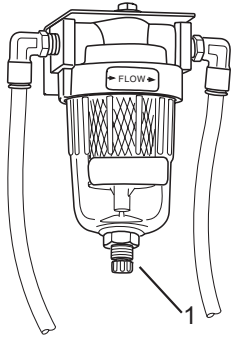


Figure 51

Drain the filter by turning the drain fitting counterclockwise. Turn the drain fitting clockwise after all moisture and contaminants have drained from the canister.

3.4 Mechanical System

SAFETY NOTICE

Perform your company's Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.

3.4.1 Refuse Vehicle Body and Components

- **Daily Checks -** The refuse vehicle body and components are inspected by the operator or skilled service personnel.

Inspect the body and all components for binding, damage, loose or missing parts.

3.4.2 Tailgate Seal

- **Daily Checks -** The tailgate seal is inspected by the operator or skilled service personnel.

The tailgate should be open and correctly propped for seal inspections. See Section 3.7 Propping the Tailgate.

Inspect the tailgate seal for tears, damage, or excessive wear. Ensure that the seal is fully seated in the tailgate channel.

Clean the tailgate seal as needed.

Inspect the mounting straps to ensure they are secure.

3.4.3 Ladder Components

During weekly checks, inspect ladder components such as bolts, hinges, and latches for loosening, damage, and wear.

Inspect the points as circled in Figure 52 on the standard ladder and Figure 53 on the legacy ladder.

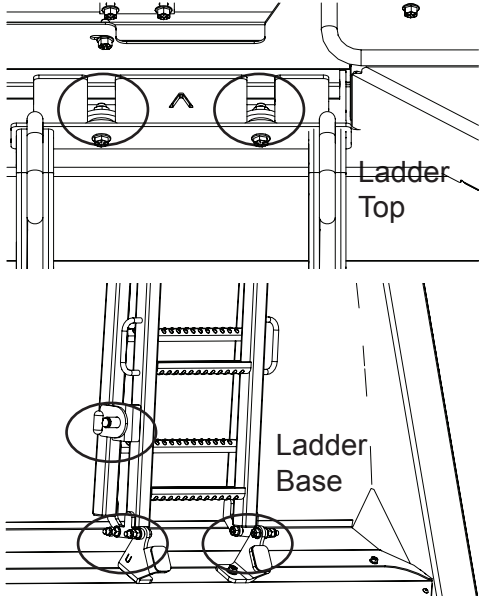


Figure 52

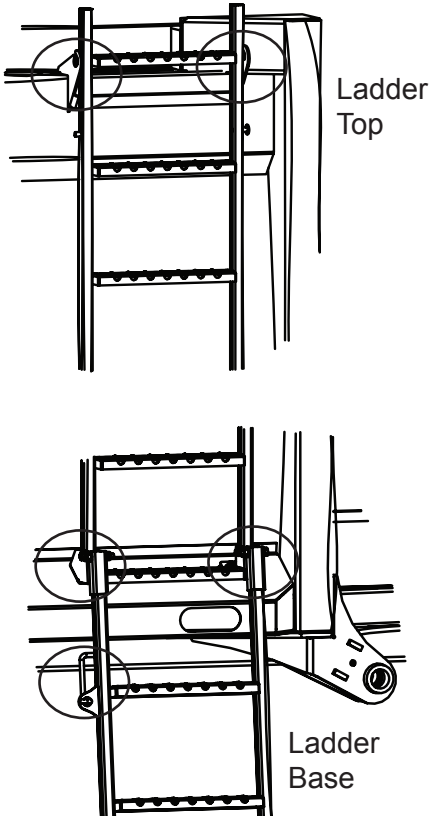


Figure 53

3.5 Operation

⚠ WARNING

Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the Packer.
Serious personal injury or death may occur.

⚠ DANGER

Make sure the area above the vehicle is clear of objects and power lines before raising the arm.
Serious personal injury or death may occur.

3.5.1 Refuse Vehicle Controls

- **Daily Checks -** The refuse vehicle controls are checked for proper operation by the operator or skilled service personnel.

Operate all functions to validate they are operational. Verify that all indicator lights and alarms are operational.

3.6 Propping the Body Overview

If the body needs to be raised, the following procedure must be followed to raise and prop the body. The body lift stand assembly weight rating: 24,000 lbs. Make sure to release the body tie-downs before attempting to raise the body.

⚠ WARNING

Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the Packer.
Serious personal injury or death may occur.

⚠ DANGER

Make sure the area above the vehicle is clear of objects and power lines before raising the arm.
Serious personal injury or death may occur.

SAFETY NOTICE

Perform your company's Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.

⚠ DANGER

PACKER BODY MUST BE EMPTY and body props employed when servicing Packer body in the raised position. Body props are meant to support only the empty body. Never overload.

Failure to empty body or employ body props may cause serious personal injury or death.

3.6.1 Unlatching the Body Overview

1. Ensure the body is unloaded. NEVER lift a loaded body.
2. Place the fork and arm assemblies in the fully RAISED position.
3. Shut off the engine and put the ignition key in your pocket.
4. Perform your company's Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.
5. For vehicles with single spring tie down, see Section 3.6.1.1 Unlatching the Body (Single Spring Tie Down).
6. For vehicles with dual spring tie down, see Section 3.6.1.2 Unlatching the Body (Dual Spring Tie Down).

NOTE

Tailgate alarm will sound whenever the body is raised.

⚠ WARNING

Fall Hazard. Do not climb on ladder while body is raised. Serious personal injury or death can occur due to a fall.

3.6.1.1 Unlatching the Body (Single Spring Tie Down)

1. Remove the snapper pin (Figure 54, Item 1).
2. Loosen the nut (Figure 54, Item 2) until the spring (Figure 54, Item 4) is no longer compressed tightly against the washers (Figure 54, Item 3).
3. Slide the eye bolt (Figure 54, Item 5) out of the slot in the frame.
4. Repeat this process on the other side of the frame.
5. Turn BATTERY DISCONNECT switch to the ON position.
6. Continue to Section 3.6.2 Raising the Body Overview.

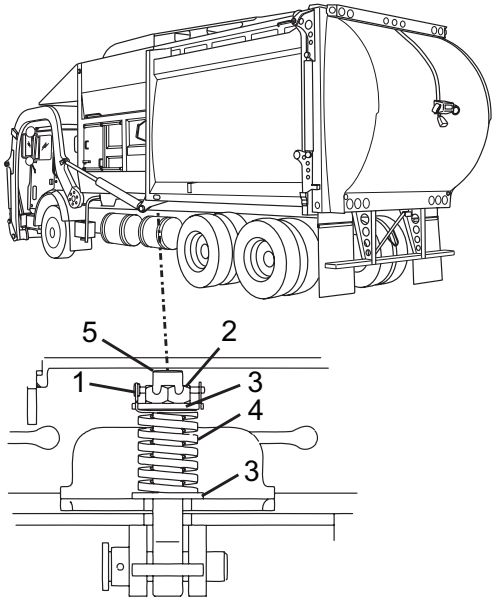


Figure 54

3.6.1.2 Unlatching the Body (Dual Spring Tie Down)

1. On vehicles with dual spring tie down, loosen the two top spring nuts (do not remove) (Figure 55, Item 1) from the body tie-downs.
2. Slide the retainer plate from under the spring nuts (Figure 55, Item 2). (The plate is connected to the lower weldment by a lanyard.)

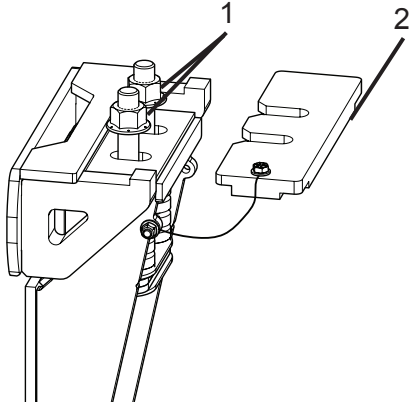


Figure 55

3. Repeat this process on the other side of the frame.
4. Turn BATTERY DISCONNECT switch to the ON position.
5. Continue to Section 3.6.2 Raising the Body Overview.

3.6.2 Raising the Body Overview

After ensuring the body is empty and after loosening the body tie downs, raise the body using the appropriate method depending on how your vehicle is equipped.

3.6.2.1 Raising the Body (Joystick Style Lift)

1. To raise the body with the joystick style, pull the lever (Figure 56, Item 1) away from the frame to activate the electric pump.

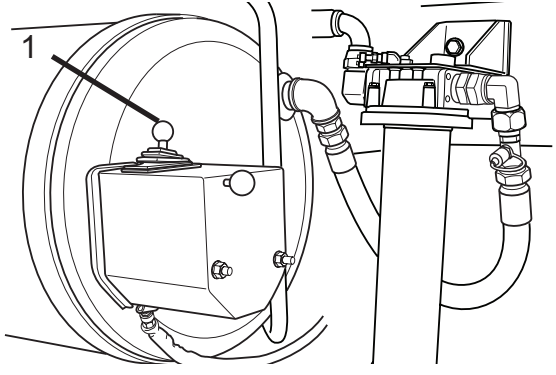


Figure 56

2. Raise the body all the way until the cylinders are at the end of their travel.
3. Continue to Section 3.7.1 Engaging the Standard Tailgate Prop.

3.6.2.2 Raising the Body (Button Style Lift)

1. To raise the body with the button style lift, (Figure 57) Push the ACTIVATE toggle switch (Figure 57, Item 2) to the right and hold.
2. While holding the ACTIVATE toggle switch, push the RAISE button (Figure 57, Item 1).

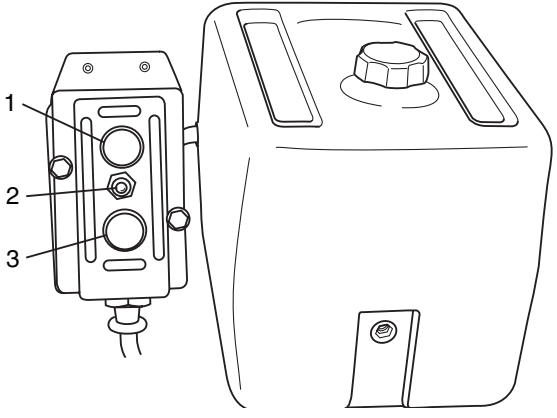


Figure 57

3. Raise the body all the way until the cylinders are at the end of their travel.
4. Continue to Section 3.6.3 Engaging the Body Props.

3.6.3 Engaging the Body Props

1. Remove the pins (Figure 58, Item 1) from each prop. Pivot the props (Figure 58, Item 2) around the cylinder rods (Figure 58, Item 3).

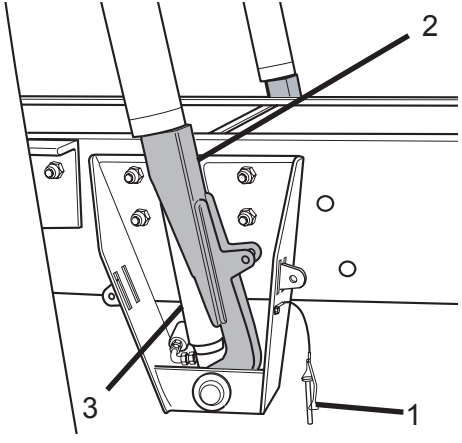


Figure 58

⚠ DANGER

Crush hazard. Verify that the body props are properly positioned around the rods of the cylinders.

Serious personal injury or death may occur.

3.6.3.1 Lowering the Body to the Props (Joystick Style Lift)

1. To lower the body with the joystick style lift, pull the rod (Figure 59, Item 1) towards the rear of the chassis and hold it.
2. Push the lever (Figure 59, Item 2) towards the chassis frame and slowly lower the body onto the props (Figure 58, Item 2).

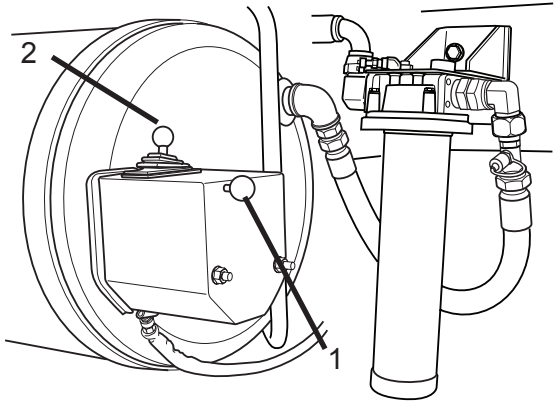


Figure 59

3.6.3.2 Lowering the Body to the Props (Button Style Lift)

1. To lower the body with the button style lift, (Figure 60) Push the ACTIVATE toggle switch (Figure 60, Item 2) to the right and hold.
2. While holding the ACTIVATE toggle switch, push the LOWER button (Figure 60, Item 3) to lower the body.

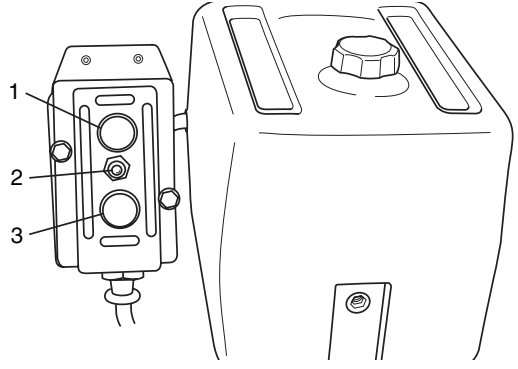


Figure 60

3.6.4 Disengaging the Body Props

When the refuse body is ready to be lowered, use the following procedure to disengage the props, lower the body, and then secure the body to the chassis.

1. Raise the body enough to provide the necessary clearance to remove the props from around the cylinder rods.
2. Rotate each prop to the stored position and install the retaining pin (Figure 61, Item 1).

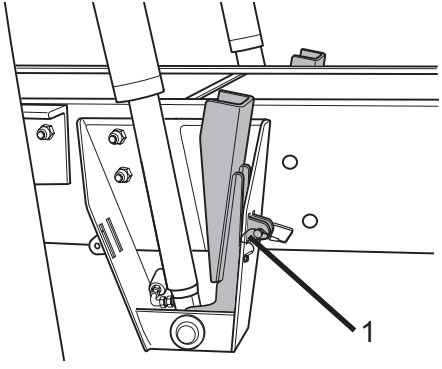


Figure 61

3.6.4.1 Lowering the Body to the Frame (Joystick Style Lift)

1. To lower the body completely to the frame with the joystick style lift, pull the rod (Figure 62, Item 1) towards the rear of the chassis and hold it.
2. Push the lever (Figure 62, Item 2) towards the chassis frame and slowly lower the body onto the props (Figure 58, Item 2).

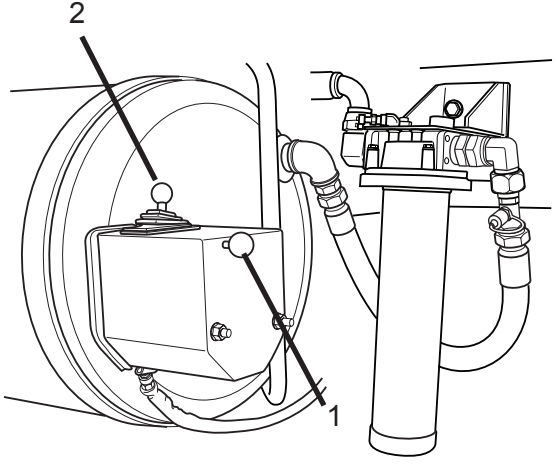


Figure 62

3.6.4.2 Lowering the Body to the Frame (Button Style Lift)

3. To lower the body completely to the frame with the button style lift, (Figure 63) Push the ACTIVATE toggle switch (Figure 63, Item 2) to the right and hold.
4. While holding the ACTIVATE toggle switch, push the LOWER button (Figure 63, Item 3) to lower the body.

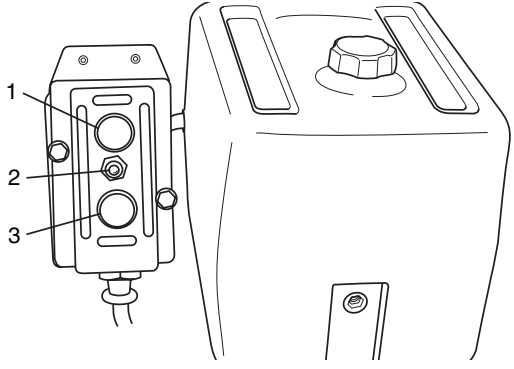


Figure 63

5. Proceed to Section 3.6.4.3 Latching the Body (Single Spring Tie Down) or Section 3.6.4.4 Latching the Body (Dual Spring Tie Down).

3.6.4.3 Latching the Body (Single Spring Tie Down)

1. On vehicles with single spring tie down, install the eye bolt (Figure 64, Item 5) into the slot. Make sure the washers (Figure 64, Item 3) are on each side of the spring (Figure 64, Item 4) as shown.
2. Install the nut (Figure 64, Item 2) on the eye bolt and tighten until there is clearance to insert the snapper pin.
3. Install the snapper pin (Figure 64, Item 1) and lock it into place.
4. Repeat this process on the other side of the frame.

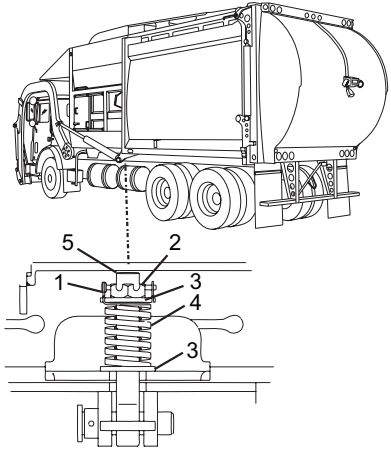


Figure 64

3.6.4.4 Latching the Body (Dual Spring Tie Down)

1. On vehicles with dual spring tie down, slide retainer plate (Figure 65, Item 1) into position under spring bolts.
2. Tighten top spring nuts (Figure 65, Item 2) until top plate (Figure 65, Item 3) is flush with the preload notches to the correct preload (Figure 65, Item 4).
3. Repeat this process on the other side of the frame.

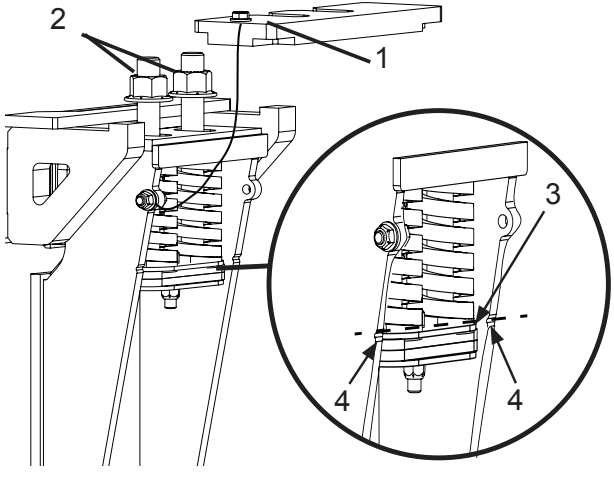


Figure 65

3.7 Propping the Tailgate

If the tailgate needs to be opened, use the appropriate procedure for your type of tailgate to open and prop the tailgate.

⚠ DANGER

Whenever the tailgate is in a raised position, it must be securely propped or blocked so it cannot fall on anyone.

Serious personal injury or death may occur.

⚠ WARNING

Be sure all non-operator personnel are at least 20 feet (6 meters) away from all areas of the Packer.
Serious personal injury or death may occur.

⚠ DANGER

Stand clear when the tailgate is in motion and during the unloading cycle. Do not stand under or cross under the raised tailgate.

Serious personal injury or death may occur.

Condition

- Arms and forks must be in the HOME position

3.7.1 Engaging the Standard Tailgate Prop

1. Standing behind the tailgate, release the pin (Figure 66, Item 2) and swing the prop (Figure 66, Item 1) towards the truck frame.
2. Start the engine and raise the tailgate.

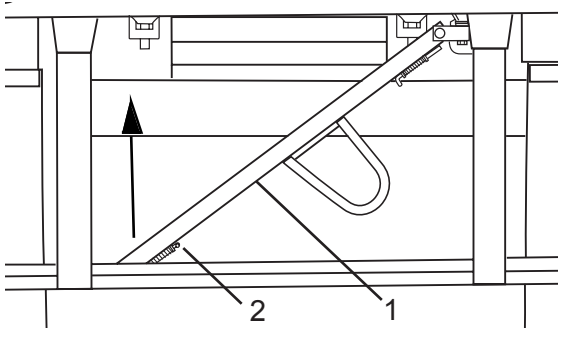


Figure 66

3. Disable the refuse vehicle and shut the chassis engine off.
4. Perform your company's Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.
5. Position the end of the prop (Figure 67, Item 1) over the pocket (Figure 67, Item 2).

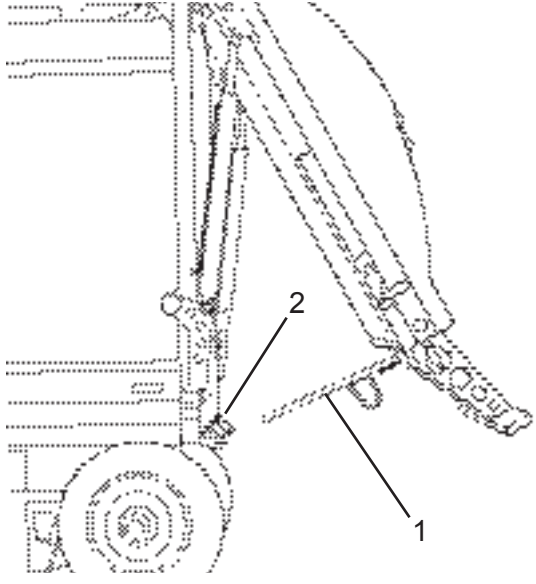


Figure 67

⚠ CAUTION

Do not POWER DOWN the tailgate against the props.
Damage may occur to the props.

6. Turn ignition switch to the ON position. Do not start engine. Lower the tailgate until the prop (Figure 68, Item 1) is fully seated in the pocket (Figure 68, Item 2).

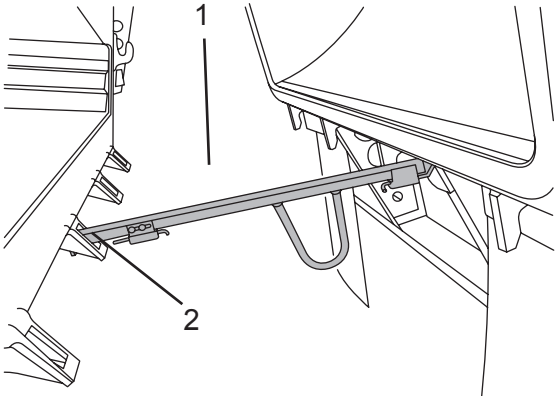


Figure 68

⚠ DANGER

Verify that the tailgate props are properly seated in the pockets off the body compartment.

Serious personal injury or death may occur.

7. Turn ignition switch to the OFF position.

3.7.1 Disengaging the Standard Tailgate Prop

When ready to lower the tailgate, use the following procedure to disengage the prop and close the tailgate.

1. Remove your company's Lockout/Tagout per your company's procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.
2. Start the engine and open the tailgate as needed to provide the necessary clearance to disengage the prop from the pocket in the body compartment.
3. Shut the engine OFF and put the key in your pocket.
4. Standing behind the tailgate remove the prop from the pocket and swing the prop (Figure 69, Item 2) away to the stored position and install retaining pin (Figure 69, Item 1).

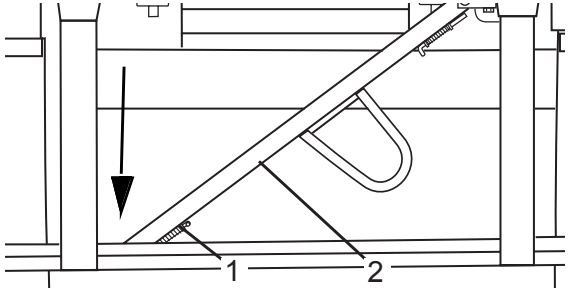


Figure 69

5. Start the chassis engine and close the tailgate

3.8 Canopy Lift Procedure (Manual Canopy)

Use two people to conduct the steps at the same time.

NOTE

The canopy may have only one wing nut located on the street side instead of two.

Wing nut location and other details may vary slightly by vehicle.

3.8.1 Lifting the Canopy

1. Place unit on a flat surface, block truck tires.
2. Raise the arms into the hopper.
3. Place a ladder on either side of the truck, one next to the street side cab door and one next to the curb side cab door so you can reach under the canopy.
4. Locate the wing nuts under the canopy. Loosening the wing nuts will allow the canopy to rotate (Figure 70).

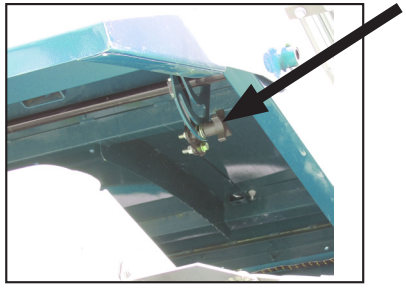


Figure 70

5. Loosen the wing nuts only until the canopy begins to move. (Figure 71).

Figure 71

6. Push up on the canopy until it can no longer go up. Hold it in place during the next step (Figure 72).
7. Tighten the wing nuts.

Figure 72

8. The canopy is now held in the UP position.
9. The cab can now be tilted up.

3.8.2 Lowering the Canopy

1. Lower the cab.
2. Place the ladders, one next to the street side cab door and one next to the curb side cab door to reach under the canopy.
3. Locate the wing nuts again. (Figure 70).
4. Loosen the wing nuts only until the canopy begins to move.
5. Lower the canopy all the way down.
6. Tighten the wing nuts.
7. Procedure is complete. Return truck to service.

3.9 Pneumatic Canopy Lift Procedure (Optional)

An optional pneumatic cylinder is available to lift and lower the canopy.

3.9.1 Lifting the Canopy

Figure 73 shows the location of the pneumatic cylinder under the canopy.

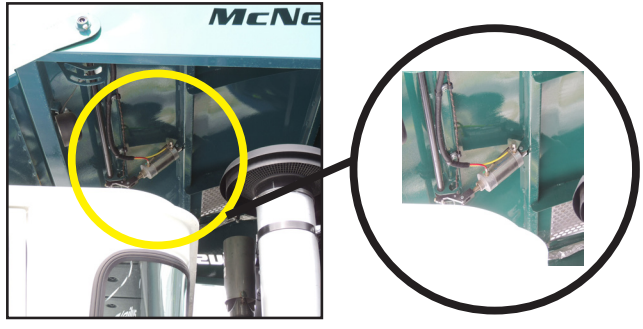


Figure 73

1. Place unit on a flat surface, block truck tires.
2. Make sure the truck has enough air.
3. Raise the arms into the hopper.
4. Locate the pneumatic canopy knob which will be outside between the cab and the body (Figure 74).

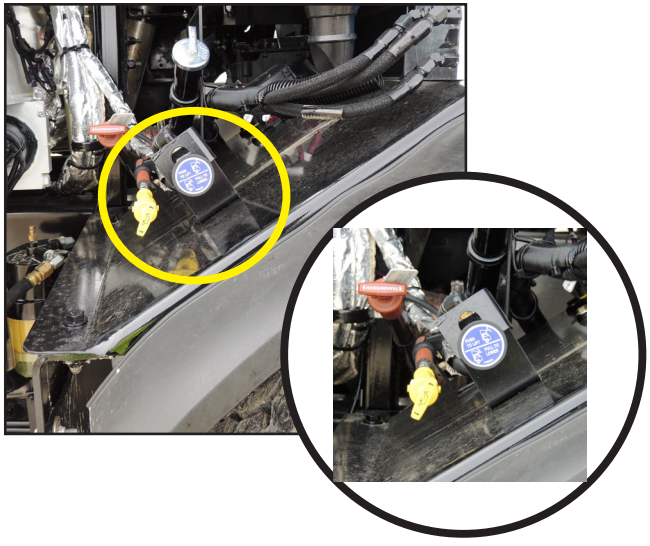


Figure 74

5. Push the knob in to lift the canopy.
6. The canopy is now held in the UP position.
7. The cab can now be tilted up.

3.9.2 Lowering the Canopy

1. Lower the cab.
2. Pull the knob out to lower the canopy all the way down.
3. Procedure is complete. Return truck to service.

3.10 Trash Behind the Pack/Eject

- **Daily Checks -** The refuse vehicle is inspected for trash behind the pack/eject by the operator or skilled service personnel.

When the refuse vehicle is operated on the route, trash can pass-by the pack/eject. If the trash is not cleaned from behind the pack/eject, the refuse vehicle can be damaged.

NOTE

Packer body must be empty when performing this procedure.

1. Raise the fork assembly fully.
2. Raise the arm to the home position.
3. While pressing the ARM OVERBODY OVERRIDE button, extend the pack/eject.
4. Perform your company's Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.

5. Unlatch the side door handle (Figure 75, Item 1) and open the side door.

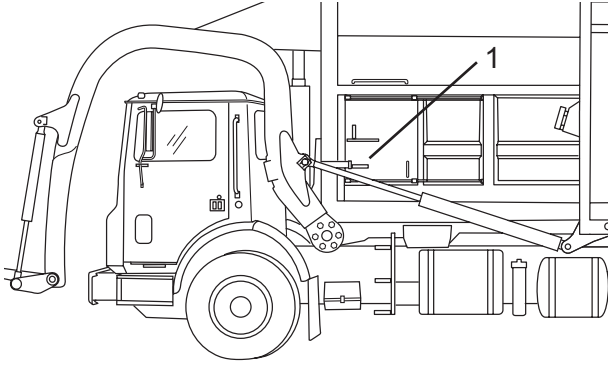


Figure 75

6. Inspect behind the pack/eject for accumulation of trash.

⚠ CAUTION

Do not damage the pack and sweep cylinder rods when cleaning out trash.

Never use metal objects or tools to clean out trash from around the pack and sweep cylinders.

Failure to comply may cause damage to equipment.

7. Remove the trash from behind the pack/eject using a clean out tool or a plastic shovel.
8. After the trash is removed, close and secure the side door and fold up the ladder.
9. Remove your company's Lockout/Tagout per your company's procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.
10. Retract the Pack/Eject.

3.11 Safety Signs

- **Daily Checks -** A complete walk around of the vehicle to inspect the safety signs should be performed every day before operation. If any of the safety signs are damaged, illegible, or missing, they must be replaced before operation.

For the proper location and part numbers of the safety signs for the refuse vehicle, see Section 4.1 Safety Sign Location. If you are unable to determine the proper safety sign or its placement on the refuse vehicle, call McNeilus Truck and Manufacturing, Inc. at 888-686-7278. If any safety signs on the equipment are not clearly readable, contact McNeilus Parts and Service at 888-686-7278 or visit www.streetsmartparts.com to order replacements. Use only McNeilus replacement signs.

For information on any of the chassis safety signs, please contact the chassis manufacturer.

3.12 Adding Hydraulic Oil

Check the oil level with all hydraulic cylinders in their fully RETRACTED positions (see Hydraulic Oil Level).

- Ejector in HOME or RETRACTED position
- Tailgate in DOWN position
- Forks in RAISED position
- Arm in RAISED position
- Top Door in OPEN position
- Body in the LOWERED position

NOTE

When adding hydraulic oil, take every precaution to prevent contaminants from entering the hydraulic system. Cleanliness is extremely important when working with hydraulics.

NOTE

If it is necessary to add hydraulic oil often or in large quantites, inspect the hydraulic system for leaks and repair before operating the refuse vehicle.

3.12.1 Standard Hydraulic System

To add hydraulic oil, open the filler cap (Figure 76, Item 1) or remove the breather/strainer filter (Figure 76, Item 2) and add oil as necessary.

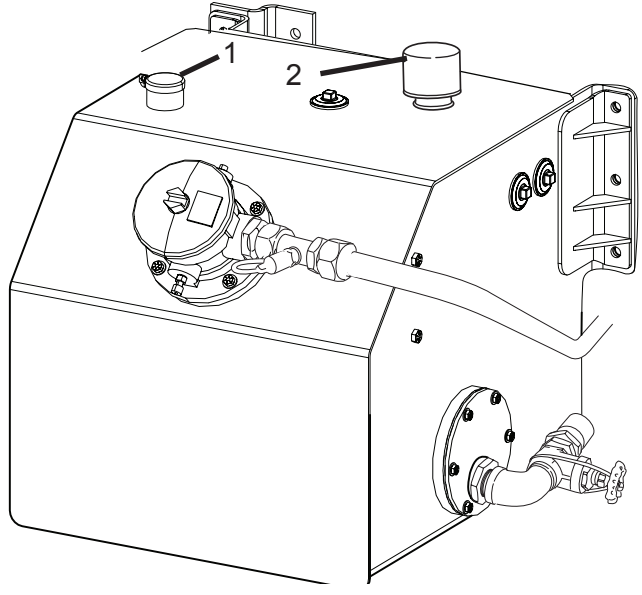


Figure 76

3.12.2 Clean Fill Hydraulic System (Optional)

Some units are equipped with a clean fill option. The fill cap is replaced by two quick disconnects. To add oil, a mobile filtration system is required. The quick disconnects (Figure 77, Items 1 and 2) are provided to connect the mobile filtration system.

NOTE

When adding hydraulic oil, take every precaution to prevent contaminants from entering the hydraulic system. Cleanliness is extremely important when working with hydraulics.

NOTE

If it is necessary to add hydraulic oil often or in large quantites, inspect the hydraulic system for leaks and repair before operating the refuse vehicle.

To add hydraulic oil, connect the mobile filtration system to the quick disconnects. The oil you add is filtered through the hydraulic return filter (Figure 77, Item 3).

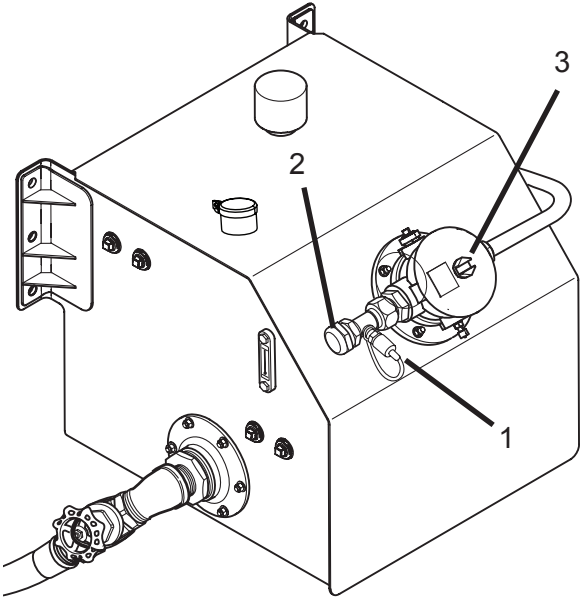


Figure 77

4.0 Lubrication

4.1 Daily Lubrication

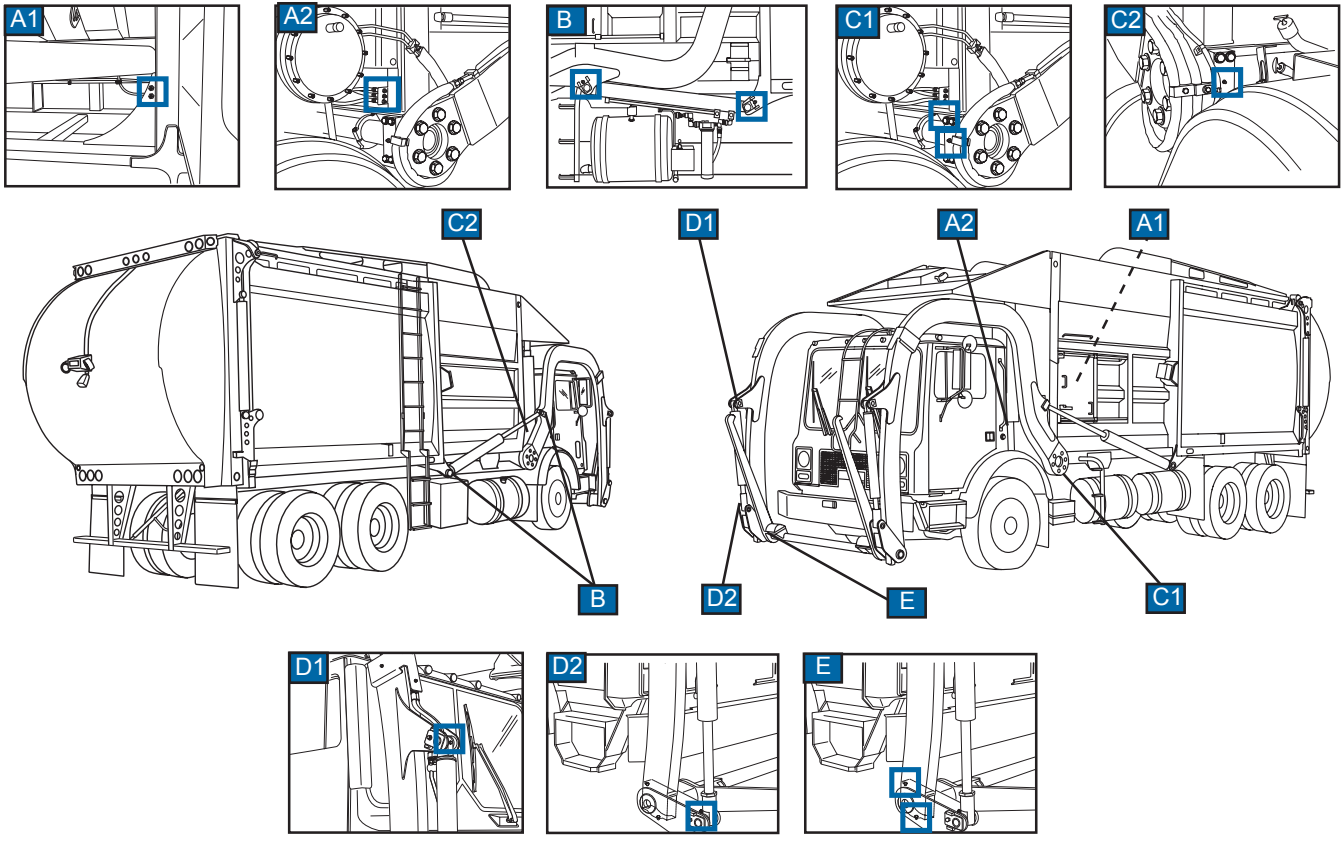
Lubricate all the following points with a high quality EP No. 2 lithium grease.

Daily lubrication intervals are based on a 10-hour day. If refuse vehicle is operated more hours per day or double shifted, the maintenance interval must be adjusted accordingly.

SAFETY NOTICE

Perform your company's Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.

Daily Lubrication Points		Lubricate Daily or Every 10 Hours	
Ref.	**Description**	**No. of Fittings**	**Comments**
A1	Pack/Eject Cylinders - Base End	2	Two Cylinders - One Per Side
A2	Pack/Eject Cylinders - Rod End	2	Two Cylinders - One Per Side
B	Arm Cylinders - Base End	2	Two Cylinders - One Per Side
B	Arm Cylinders - Rod End	2	Two Cylinders - One Per Side
C1	Arm Pillow Blocks	2	Street Side and Center
C2	Arm Pillow Blocks	1	Curb Side
D1	Fork Cylinders - Base End	2	Two Cylinders - One Per Side
D2	Fork Cylinders - Rod End	2	Two Cylinders - One Per Side
E	Fork Assembly Pivot	4	Two Pivots - Two Fittings Per Side



4.2 Weekly Lubrication

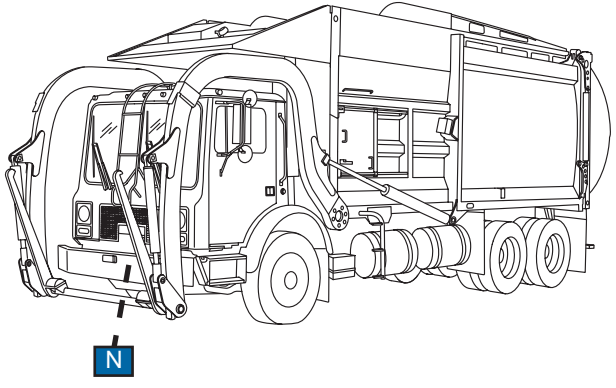
Lubricate all the following points with a high quality EP No. 2 lithium grease.

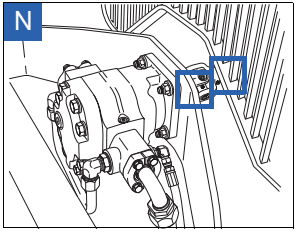
Weekly lubrication intervals are based on every 50 hours. If the refuse vehicle is operated more hours or double shifted, the maintenance interval must be adjusted accordingly.

SAFETY NOTICE

Perform your company's Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.

Weekly Lubrication Points		Lubricate Weekly or Every 50 Hours	
Ref.	**Description**	**No. of Fittings**	**Comments**
N	PTO Shaft U-Joints	3	





4.3 Scheduled PM Lubrication

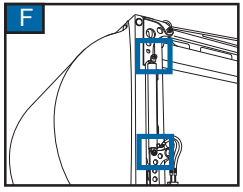
Lubricate all the following points with a high quality EP No. 2 lithium grease.

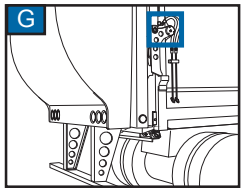
Scheduled PM lubrication intervals are based on three weeks or 150 hours. If the refuse vehicle is operated more hours or double shifted, the maintenance interval must be adjusted accordingly.

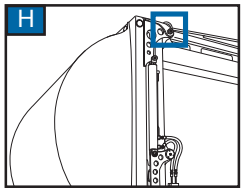
SAFETY NOTICE

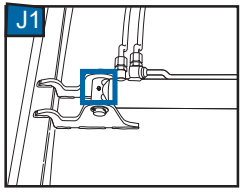
Perform your company's Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.

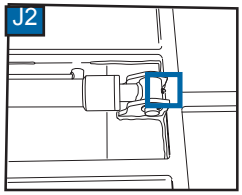
Lubrication Points		Lubricate Every 3 Weeks or Every 150 Hours	
Ref.	**Description**	**No. of Fittings**	**Comments**
F	Tailgate Cylinder - Base End	2	Two Cylinders - One Per Side
F	Tailgate Cylinder - Rod End	2	Two Cylinders - One Per Side
G	Tailgate Latch Pin	2	Two Latch Pins - One Per Side (Non-CNG Tailgate)
H	Tailgate Hinge Pin	2	Two Hinge Pins - One Per Side (Atlantic Model Only)
J1	Top Door - Base End	1	
J2	Top Door - Rod End	1	
K	Body Pivot Pin	2	Two Pivot Pins - One Per Side
L	Service Lift Cylinder - Base End (Optional Equipment)	2	Two Cylinders - One Per Side
L	Service Lift Cylinder - Rod End (Optional Equipment)	2	Two Cylinders - One Per Side
M	Tailgate Prop Pivot (Optional Equipment)	2	Two Pivot Pins - One Per Side (Non-CNG Tailgate)
O	Ladder Pivot	1	
P	Tailgate Latch Pin	2	Two Latch Pins - One Per Side - Location Under Floor (CNG Tailgate Only)

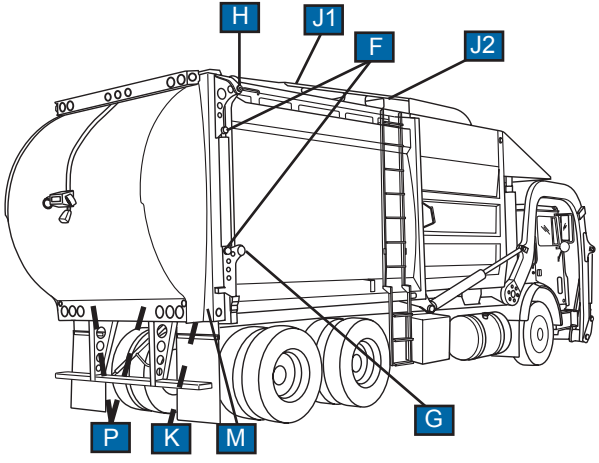


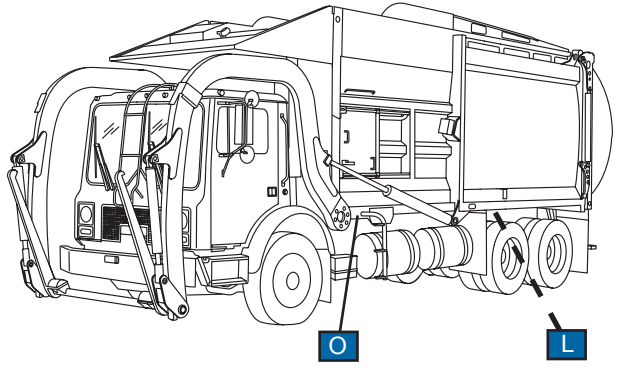


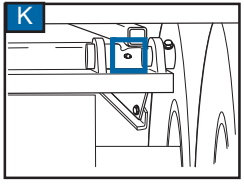


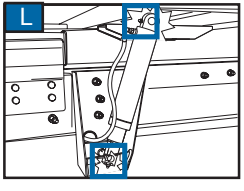


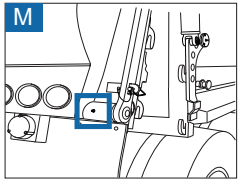


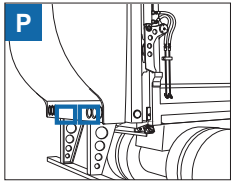


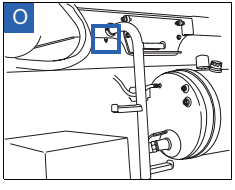












NOTES

1.0 Troubleshooting

When a problem or malfunction occurs, follow these steps. The sequence below will help isolate the problem and often permit a quick repair. If further assistance is required, refer to the applicable section of this manual or please call McNeilus Parts and Service at 888-686-7278.

NOTE

Isolate the problem before taking any remedial actions.

1. Unless further damage will occur, repeat the steps that caused the problem. Refer to the Operation section of this manual to be sure that the correct operating procedures have been followed. Often a step in the standard operating procedure has been forgotten.
2. Refer to the troubleshooting chart. It is designed to help you troubleshoot problems at your location, and is organized in a logical sequence. Look under the appropriate equipment section, and for the specific problem within the chart.
3. Perform the checkout procedure and remedial actions listed within the chart to isolate the problem.
4. If your particular problem is not listed, or the remedial actions provided do not resolve the problem, we suggest that you take the vehicle to a service shop, refer to the appropriate service manual, or please call McNeilus Parts and Service at 888-686-7278.
5. If you have questions or need help, please call McNeilus Parts and Service at 888-686-7278.

SAFETY NOTICE

Perform your company's Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.

1.1 Troubleshooting Chart

Problem	Probable Cause	Action
ALL functions not working and the control panel warning light is NOT flashing.	1. BATTERY switch is OFF. 2. IGNITION switch is OFF. 3. One or more E-STOP buttons is DOWN. 4. PUMP switch is OFF. 5. System air pressure is too low. 6. System problem.	1. Turn BATTERY switch ON. 2. Turn IGNITION switch ON. 3. Release all E-STOP buttons. 4. Turn PUMP switch ON. 5. Wait for chassis air system to build pressure above 80 PSI. 6. Requires shop service and repair.
ALL functions not working and the control panel warning light IS flashing.	1. Body is up. 2. Side Door Open. 3. System problem.	1. Lower and secure the body. 2. Close the side door. 3. Requires shop service and repair.
All HYDRAULIC functions not working and the control panel warning light is NOT flashing.	1. PUMP switch is OFF. 2. No air at coalescing filter. 3. System problem.	1. Turn PUMP switch on. 2. Check proper operation of holdback valve. 3. Requires shop service and repair.
Joystick Function not working	1. Engine RPM is too HIGH. 2. System air pressure is too LOW. 3. System problem.	1. REDUCE engine speed to below 1600 RPM. 2. Wait for chassis air system to build pressure above 80 PSI and check proper operation of holdback valve. 3. Requires shop service and repair.

Problem	Probable Cause	Action
Arms stop at the top of the cab.	1. Cart Tipper Proximity Switch. 2. Pack/eject is not in HOME position. 3. Top door is not fully OPEN. 4. Missing signal from cart tipper proximity switch. 5. System problem.	1. Check Diagnostic Display. 2. Make sure the ejector is fully retracted. 3. Ensure the top door is completely open. 4. Ensure jumper is inserted in the Cart Tipper proximity harness. Harness located in street side arm. 5. Requires shop service and repair.
Automatic Pack/Eject functions not working	1. Engine RPM is too HIGH. 2. Tailgate is OPEN. 3. Top door is not fully OPEN. 4. Arms are ABOVE the body. 5. Check pack/eject proximity switches for proper operation. 6. Inclination switch. 7. System problem.	1. REDUCE engine speed to below 1600 RPM. 2. CLOSE tailgate. 3. Fully OPEN top door. 4. LOWER arms below body. 5. Requires shop service and repair. 6. Check Diagnostic Display. 7. Requires shop service and repair.
Manual Pack/Eject functions not working	1. Engine RPM is too HIGH. 2. Top door is not fully OPEN. 3. Arms are ABOVE the body. 4. System problem.	1. REDUCE engine speed to below 1600 RPM. 2. Fully OPEN top door. 3. LOWER arms below body. 4. Requires shop service and repair.
Tailgate functions not working	1. Engine RPM is too HIGH. 2. ACTIVATE switch not pressed. 3. System problem.	1. REDUCE engine speed to below 1600 RPM. 2. Press ACTIVATE switch while pressing TAILGATE switch. 3. Requires shop service and repair.

Problem	Probable Cause	Action
Top Door function not working	1. Engine RPM is too HIGH. 2. ACTIVATE switch not pressed. 3. System problem.	1. REDUCE engine speed to below 1600 RPM. 2. Press ACTIVATE switch while pressing TOP DOOR switch. 3. Requires shop service and repair.
Cannot eject load.	1. Tailgate not fully open. 2. System problem.	1. Completely open tailgate. Check Diagnostic Display. 2. Requires shop service and repair.

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