AUTOMIZER HELPING-HAND™

Operator Manual

labrie | DRIVE EXCELLENCE

www.labriegroup.com

labrie*plus*

Thank you for your purchase of a new Labrie™, Leach™ or Wittke™ product. To ensure maximum reliability, insist on genuine **labrie*plus*** replacement parts. LabriePlus replacement parts are designed and manufactured to exacting standards. The use of counterfeit, will-fit or substitute parts may effect the operation and performance of the unit.

Visit our Website at usa.labrieplus.com or canada.labrieplus.com, or contact us at 1-800-231-2771 (in the U.S.) or 1-877-452-2743 (in Canada), twenty-four hours a day, seven days a week. We are available to help you with any questions or concerns.

LABRIE LEACH WITTKE

Liability

Labrie Enviroquip Group assumes no liabilty for any incidental, consequential, or other liability that might result from the use of the information contained in this document.

All risks and damages, incidental or otherwise, arising from the use or misuse of the information contained herein are entirely the responsability of the user.

Although careful precaution has been taken in the preparation of this document, Labrie Enviroquip Group assumes no responsiblity for errors or omissions.

January 2017

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Introduction

The purpose of this manual is to introduce operators to the procedures involved in properly operating the AUTOMIZER™ HELPING-HAND. For information regarding maintenance procedures, refer to the AUTOMIZER™ HELPING-HAND Maintenance Manual.

Pre-Operating Instructions

It is imperative that you carefully review this manual prior to operating and/or servicing your new AUTOMIZER™ HELPING-HAND.

Upon receipt of your new AUTOMIZER™ HELPING-HAND unit, perform a complete lubrication. Mechanisms must be properly lubricated. Factory lubrication is adequate for production and transport purposes only. In addition, the return filter element must be replaced after 50 hours of use.

A Note about Warranty

Do not forget to complete the owner's registration form and to send it to Labrie Enviroquip Group. Also, make sure you indicated the "In service" date on that form. This date will be used to start the warranty period. Otherwise, the date of delivery from the factory will be used instead.

Mission Statement

Labrie Enviroquip Group is dedicated to providing innovative designs, customized quality equipment and elite customer service.

Vision Statement

The Labrie Enviroquip Group Team will successfully lead the way the world views waste management. We will excel at enhancing our community and protecting the global environment. We are committed to being a profitable company for our customers, shareholders and employees.

Introducing the AUTOMIZER™ HELPING-HAND

IMPORTANT: Read and thoroughly understand this Operator's Manual before using the vehicle.

The AUTOMIZER™ HELPING-HAND is a straight-frame, side-loading vehicle, manufactured to the highest standards, and designed to collect residential and commercial refuse and recycling materials.

This vehicle is a modified version of the standard Labrie AUTOMIZER™. It has been modified to be equipped with a HELPING-HAND™ arm[1]. Thanks to carefully engineered hydraulics, the HELPING-HAND™ arm maneuvers smoothly with exacting precision, and is easy to operate in narrow space. Also, this arm is easier to maintain than the RIGHT-HAND™ arm which usually equips the AUTOMIZER™. Along with this modification, bigger clean-out traps have been added on both sides of the truck and a simplified and shortened hydraulic circuit has been installed under the body for best performance and efficiency.

AUTOMIZER™ HELPING-HAND vehicles are designed to allow *a single person* to collect waste in roller carts without exiting the cab. The HELPING-HAND™ arm can extend up to 10 ft. and lift up to 400 lbs when fully extended.

On the productivity side, the AUTOMIZER™ HELPING-HAND can make 180 pickups per hour on average thanks to its auto-packing functionality.

The AUTOMIZER™ HELPING-HAND also comes with the electronic multiplexed system designed to make the collection process more efficient and the troubleshooting process more orderly and manageable.

Once the body of the AUTOMIZER™ HELPING-HAND is full, all its content is unloaded at a waste management landfill or other appropriate site (e.g. transfer station, incinerator, recycling station).

Product Overview

The AUTOMIZER™ HELPING-HAND is equipped with an automated arm (Figure 1-5) controlled by the operator using the in-cab joystick.

Figure 1-1 The AUTOMIZER™ HELPING-HAND

1. **Some units may be equipped with an optional lifting bucket (Figure 1-2) in lieu of a HELPING-HAND™ arm.**

Another version of the AUTOMIZER™ comes with an optional lifting bucket instead of a HELPING-HAND™ gripper assembly. This bucket may be used for manual collection of residential waste, recyclables and organics. It is controlled using either the in-cab joystick or the packer control station located next to the right-hand side folding door.

Figure 1-2 AUTOMIZER™ equipped with the optional lifting bucket

Body's main components are the hopper (Figure 1-3), the packer (Figure 1-3), the 2 packer cylinders (Figure 1-4), the crusher panel (Figure 1-3) and the tailgate (Figure 1-5).

The hopper is the area of the body where the waste is dumped. The packer is the piece of equipment that pushes the waste into the body. Retraction and extension of the packer are made possible by 2 double-acting cylinders. The crusher panel is used to crush large pieces of waste materials. The tailgate is the rear door that prevents waste from exiting the body during collection. At landfill site, the tailgate is fully raised to enable the discharge of the waste.

Figure 1-3 Hopper (left); packer (right)

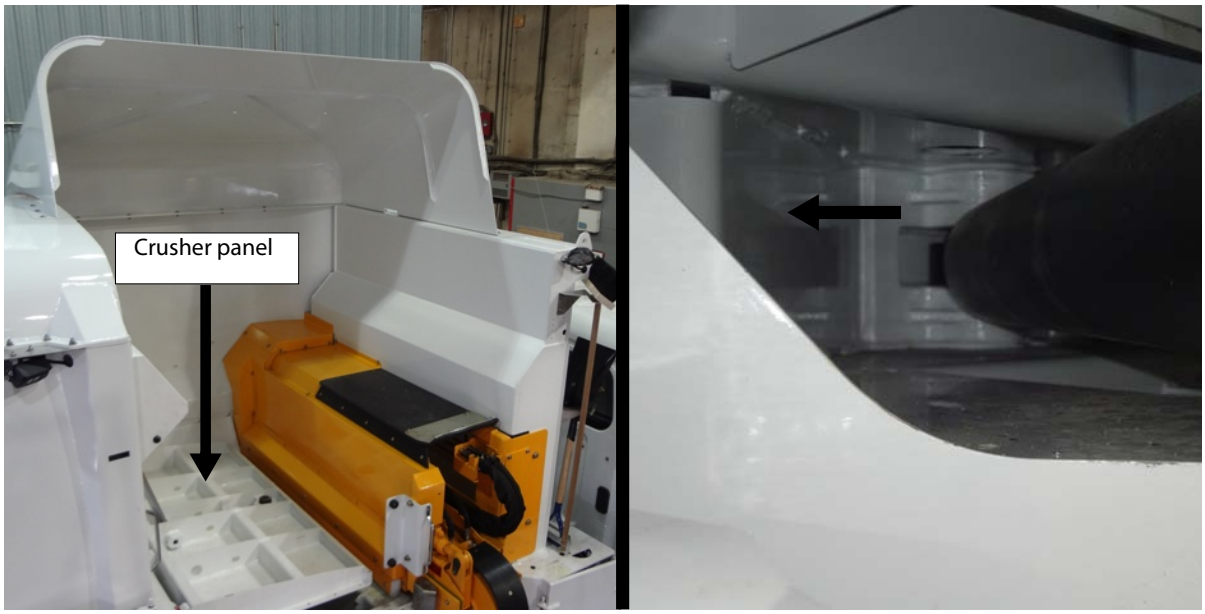


Figure 1-4 Packer cylinders

Figure 1-5 Automated arm (left); tailgate (right)

In the cab, you will find a control panel, a monitor, one or two joysticks, and all the switches that control most of the truck's functions (Figure 1-6).

Figure 1-6 Inside the AUTOMIZER™ HELPING-HAND cab

Key Features of the AUTOMIZER™ HELPING-HAND

The AUTOMIZER™ HELPING-HAND comes with a series of key features, such as:

- Body roof and sides made of A1011 GR80 steel, body floor and hopper section made of 100% Hardox 450 steel, delivering ultimate strength at the lowest possible body weight
- Hardox liners on floor and sides (optional)
- 10-foot arm extension
- Arm lifting capacity at full extension: 400 lbs
- Reinforced body walls
- Tapered body
- Oversized clean-out doors on both sides of the truck
- Multiplexed control system with on-board diagnostic tool

Multiplexed System

The AUTOMIZER™ HELPING-HAND is equipped with an electronic monitoring system called the *Multiplexed System*.

The Multiplexed system used by Labrie is a CAN-based system that integrates a monitor, a control panel and a number of electronic modules. This whole system has been designed to help you operate your unit in an efficient and easy way. See *Labrie's Multiplexed System* on page 49 for more details.

IMPORTANT: AUTOMIZER™ HELPING-HAND units must be operated *by only one person*.

Standard Limited Product Warranty

Subject to the other provisions hereof, LABRIE ENVIROQUIP GROUP, hereinafter called "Labrie" warrants that all new Labrie products (the "Product") shall be free of defects in material and workmanship under normal use and service for a period of ONE (1) YEAR after delivery to the first registered customer/end-user.

WITHOUT LIMITATION TO THE OTHER PROVISIONS HEREOF, THIS PRODUCT WARRANTY DOES NOT COVER:

- Any and all components or parts of the Product, including without limitation the vehicle chassis, which are not manufactured and installed by Labrie, whether or not they are covered by an original manufacturer's or supplier's warranty;
- Paint;
- Damages resulting from abuse, misuse of the Product or from negligence or accidents;
- Damages resulting from use of the Product other than for its intended purpose or in a manner other than its intended normal use and service;
- Damages caused by improper maintenance of the Product including, without limitation, failure to comply with the maintenance requirements set forth in the Product's Parts and Maintenance Manual;
- Damages caused by the operation of the Product with parts or components known by the customer/end-user to be defective or in need of maintenance;
- Parts, components or systems which have been modified without the express authorization of Labrie or of an authorized Labrie distributor;
- Repairs which are not completed or otherwise expressly authorized by Labrie or an authorized Labrie distributor;
- Repairs or modifications which have been authorized by Labrie or an authorized Labrie distributor that are performed by personnel which is not qualified to perform such repairs or modifications;
- Normal wear item parts including, without limitation, oils, fluids, filters, tracks, rollers, wear shoes, tailgate seals, chains, divider blades and normal wear of the steel structure;
- Any and all adjustments and maintenance resulting from normal use and service of the products.

For the purposes of this warranty, normal use and service means the operation of the new Product for fifty (50) hours per week for its intended purpose and in compliance with the operation and maintenance instructions which are provided by Labrie in the Product's operation and maintenance manuals. It is the customer/end-user's responsibility to make sure that all operators are familiar and comply with the operation manual and the warning decals on the Product.

In the event a part or component of the Product fails or becomes defective during the warranty period and, in the opinion of Labrie, such failure or defect results from Labrie's material or workmanship, the part or component shall be repaired or replaced by Labrie or an authorized distributor at no cost provided that the unit is brought to an authorized distributor's service facility. However, the aforementioned repair or replacement of parts or components may be performed by the customer/end-user as provided herein if specifically authorized by Labrie or an authorized Labrie distributor.

Because the Product is engineered to work only with genuine Labrie parts and components, this warranty shall be void and of no effect if i) the Product is modified other than by Labrie or by an authorized Labrie distributor or other than in accordance with a specific authorization and instructions from Labrie or from an authorized Labrie distributor or ii) if parts and components of any other manufacturer are used as substitutes for genuine Labrie parts and components.

LABRIE MAKES NO WARRANTY AS TO MERCHANTIBILITY, FITNESS FOR USE, LEGALITY OF OPERATION IN ANY JURISDICTION OR ANY IMPLIED WARRANTY OF ANY KIND OR NATURE. LABRIE SHALL NOT BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY KIND OR NATURE. NO OTHER PERSON, FIRM, CORPORATION, INCLUDING THE LABRIE DISTRIBUTOR, CAN BIND LABRIE TO ANY WARRANTY OTHER THAN THIS WARRANTY OR OTHERWISE MODIFY SAID WARRANTY.

Labrie reserves the right to redesign and/or discontinue the manufacture of parts, components, and Products.

This limited warranty may be transferred to subsequent end-users within fifteen (15) days of the Product transfer provided that Labrie is notified in writing within the said fifteen (15) day period.

To Contact Labrie Plus

In the U.S.

Address:	1198 Shattuck Industrial Blvd. LaFayette, GA 30728
Toll Free:	1-800-231-2771
Telephone:	1-920-233-2770
General Fax:	1-920-232-2496
Sales Fax:	1-920-232-2498
Parts and warranty:	During business hours, 8:00 AM to 6:00 PM Eastern Standard Time
Technical Support Service:	Available 24 hours

In Canada

Address:	175A Route Marie-Victorin Levis, QC G7A 2T3
Toll Free:	1-877-831-8250
Telephone:	1-418-831-8250
Service Fax:	1-418-831-1673
Parts Fax:	1-418-831-7561
Parts and warranty:	During business hours, 8:00 AM to 5:00 PM Eastern Standard Time
Technical Support Service:	Available 24 hours
Website:	www.labriegroup.com
E-mail (Sales Dept.):	sales@labriegroup.com
E-mail (Customer Service):	service@labriegroup.com

IMPORTANT: For technical support and parts ordering, the serial number of your vehicle is required. Therefore, Labrie Enviroquip Group recommends to keep record of the information found on the VIN plate, which is located in the cab.

2

Safety

Safety is always of prime importance when operating any type of equipment. All operators working with the 2R-III™ must be aware of the safety practices and features detailed in this section.

NOTE: This section also applies to AUTOMIZER™ units equipped with the optional bucket instead of the gripper assembly.

Conventions

Danger!

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

Warning!

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

Caution!

Indicates a hazardous situation which, if not avoided, may result in ***minor or moderate injury.***

Basic Safety Notions

The following safety notions are related to the use of the 2R-III™. It is important to point out that the safe use of the vehicle remains the user's responsibility. He must heed all safety notions described in this manual and on the decals affixed to the vehicle.

Danger!

Always be aware of the vehicle's surroundings to make sure that no pedestrians, passersby, bystanders, or other people or vehicles are in any way exposed to any danger caused by the use of the 2R-III™.

Danger!

Never get in the hopper area when the engine is running.
Only authorized personnel may do so following a lockout/tagout procedure (see *Locking Out and Tagging Out the Vehicle* on page 43).

Responsibilities

Safety is everybody's responsibility. Both employer and employee must play their part to ensure the safety of the operator, the vehicle, and its immediate surroundings.

Employer Responsibilities

It is the responsibility of the employer:

- To ensure that the 2R-III™ is operated in accordance with all safety requirements and codes, including all applicable regulations, the Occupational Safety and Health Act (OSHA), and the American National Standards Institute (ANSI).
- To ensure that employees are qualified for operating the vehicle and its equipment, and that they all take safety measures before using them.
- To properly maintain all mobile equipment to meet all provincial/state and federal safety standards.
- To provide all employees – both operators and maintenance personnel – with proper training that includes safe vehicle operation procedures and ensure that those procedures are monitored on a continuous basis.
- To keep the vehicle maintained and properly adjusted to meet the manufacturer's standards and recommendations. For help or for more information, please contact the manufacturer or any of its authorized representatives.
- To keep records of all vehicle breakdowns and malfunctions as well as any inspection and maintenance.
- To ensure that all failures or malfunctions that may be affecting the safe use of the vehicle are repaired before the vehicle is put back into service.
- To meet the appropriate lighting requirements for night shift work (if permitted).
- To regularly accompany the vehicle operator and take measures to ensure the smooth and safe operation of the vehicle.
- To make sure that the backup alarm works properly when the vehicle is in reverse.
- To take necessary measures in case of report of damage or malfunction made by an employee.

- To establish a "lockout/tagout" procedure and ensure its application any time inspection, repair or maintenance is performed on the vehicle, regardless of whether it takes place on the road or in the garage.
- To provide necessary safety equipment and apparel.
- To ensure that all vehicle safety features, such as tailgate props, are properly used by all personnel when operating or servicing the vehicle.

IMPORTANT: Do not allow operation of the 2R-III™ if damaged or malfunctioning. Have all repairs performed immediately.

Employee Responsibilities

It is the responsibility of the employee:

- To enforce all safety measures to meet the requirements established by the employer.
- To operate the 2R-III™ only after having received instruction and training.
- To carefully read this manual.
- To ensure, prior to and during operation of equipment, the following:
  - During all phases of dumping or packing process, area is clear of persons, including time when tailgate is open and/or closed. Operator is to instruct persons NOT to cross under an open tailgate.
  - Manufacturer's recommended operating and safety instructions are taken into account.
- To use the vehicle only as intended.
- To obey proper operating procedures, safety guidelines and warning decals.
- To perform a daily vehicle inspection that includes all operating systems, all vehicle safety equipment (parking brake, lights, back-up alarm, horns, tires, safety interlock switches, etc.) and safety decals.
- To immediately report any malfunction or damage to the vehicle to the employer or supervisor.

IMPORTANT: Under no circumstances should you operate damaged or malfunctioning equipment. Report all malfunctions to your supervisor immediately.

- To ensure that all mirrors, windows and lights are clean and properly adjusted prior to operating the vehicle.
- To ensure that all cameras and monitors, if installed, are properly adjusted and function correctly.
- To make sure that nobody is near the vehicle before activating any of the controls, and to be prepared to stop at any indication of possible danger.
- To use extreme caution when operating machine in dangerous areas such as: slopes, overhangs, high walls, ridges or ditches.
- To always utilize the vehicle's safety features, such as tailgate props.
- To wear all safety equipment prescribed by your employer.

IMPORTANT: Safety is always of prime importance when operating any type of equipment. All operators working with the 2R-III™ must be aware of the safety practices and features detailed in this section.

IMPORTANT: Do not use damaged equipment.

NOTE: This section also applies to AUTOMIZER™ units equipped with the optional bucket instead of the gripper assembly.

Things to Do

- Inspect the body and all systems at the beginning of each day.
- Make sure that the area is clear of people or obstructions.

IMPORTANT: Be extremely cautious in areas where small children may be present.

- Wear safety glasses and footwear, gloves, and any other safety equipment when loading and packing refuse.
- Check if mirrors, windows, lights, and monitor equipment are clean and properly adjusted.
- Check for explosive trash (e.g. television sets, paint cans, fluorescent light tubes, etc.).
- Use caution when driving with an unevenly distributed load.
- Inspect for overhead hazards (e.g. power lines) prior to hoisting the body or climbing on it.
- Always use the body safety prop when servicing under the body.
- Always use the tailgate safety prop before entering the area between the main body and the tailgate.
- Obey all warning and operation stickers.
- Make sure all safety interlock systems are functioning properly.
- Keep hands, floors, and controls free from water, grease, and mud to assure non-slip control.
- Listen for strange or above normal sounds when machine is being moved or operated. Shut down machine when safe to do and report problems to your supervisor.

Things to Avoid

- Do not operate any vehicle while under the influence of alcohol, narcotics or other intoxicants.
- Do not talk on a cell phone or listen to loud music while driving.
- Do not wear jewelry or loose clothing.
- Do not leave the vehicle before it is brought to a complete stop and work brake or parking brake is applied.
- Do not enter the hopper or main body unless the engine is shut off, the key is removed and there is an out-of-service tag on the steering wheel (see *Locking Out and Tagging Out the Vehicle* on page 43).
- Do not hoist the body on uneven ground.
- Do not back up the vehicle when the body is raised.
- Do not drive with the tailgate fully open unless it is to unload refuse at the landfill.

- Do not use the body safety prop to prop a *loaded* body.

Warning!

Prior to its first use, your 2R-III™ *must be completely lubricated*, as shown on the Lube Chart sticker located on the body curbside, near the hopper.
Initial lubrication carried out by Labrie Enviroquip Group is sufficient for production and transport purposes *only*.

General Precautions

Danger!

Operators must adhere to the following precautions *at all times*. Failure to do so may result in vehicle and/or property damage, personal injury, or even death.

It is the employer's responsibility to ensure that *only* qualified employees operate this vehicle.

- Read and make sure that you fully understand this manual and all safety decals before operating this vehicle. Maintenance personnel must also read and understand the Maintenance Manual for this vehicle. In case of doubt, ask a supervisor for clarifications.
- Before every work day, inspect the body, the packing system, and any system that might compromise public and/or operator safety.
- Verify that the accelerator pedal, the steering wheel, mirrors, brakes, and turn signals are in good working order.
- When driving the vehicle, keep both hands on the steering wheel at all times.
- Stop the vehicle completely and put on the parking brake before leaving the driving position.
- When the vehicle is parked, the parking brake *must* be applied.
- Before activating the **automated arm**, operators shall make sure that people and obstructions are far away from the vehicle. Operators must be able to stop the **arm** at all times.
- Before activating the **bucket** (on units equipped with the **optional bucket**), operators shall make sure that people and obstructions are far away from the vehicle. Operators must be able to stop the **bucket** at all times.
- 2R-III™ vehicles are primarily designed to be operated *by only one person*. However, if Labrie Enviroquip Group customers elect to operate the vehicle with more than one worker, additional safety items shall be installed *to protect the co-worker* from hazardous situations.

IMPORTANT: In such cases, Labrie Enviroquip Group *must be informed* of every and all units that will be operated by more than one worker. Labrie Enviroquip Group will then determine and supply, at the customer's expense, the required safety items. For additional information, please contact Labrie*Plus* at 1-877-831-8250 in Canada or 1-800-231-2771 in the U.S.

- Do not operate this vehicle if there are any signs of damage or incomplete repairs.
- Report any doubts that you might have and any safety service requirements regarding this vehicle to a supervisor.

- When removing nylon locknuts, *always* replace them by new ones.
- *Never* drive this vehicle with the tailgate unlocked.
- Once you have completed your collection route, park the gripper or the bucket inside the hopper. Generally speaking, when in transport mode, always park the gripper or the bucket inside the hopper.

NOTE: The bucket must be in the DOWN position or parked alongside the body when:
(a) - the truck is parked in the garage or yard at the end of work day;
(b) - the truck is parked for the night or the weekend;
(c) - the truck is being repaired or serviced;
(d) - the truck is on a waste collecting route.
The bucket must be in the UP position or parked in the hopper when:
(a) - the truck is travelling on highways;
(b) - the truck is in transit between two collecting areas;
(c) - the truck is stopped for a lengthy period of time during worktime;
(d) - the truck is travelling and not collecting.

- For any work (including cleaning and inspection) that has to be done between the body and the chassis, *always* use the body safety prop. Also, the vehicle *must* be parked on level ground.
- Before opening and closing the tailgate and/or raising the body, make sure that there is no one behind the vehicle.
- Do not get into the hopper compartment or try to repair anything behind the packer when it is moving or when the hydraulic pump is still running. Personnel authorized to get into the hopper *must* first lock out and tag out the vehicle, as required by the employer. For more information, see *Locking Out and Tagging Out the Vehicle* on page 43.
- *Never* stand near or underneath a raised arm or gripper/bucket even if the arm cylinder is equipped with a holding valve.
- *Never, under any circumstances* (maintenance or otherwise), stand underneath a *loaded* body.

Warning!

Do not operate the automated arm until you have been fully trained, and have read and understood the Operator and Maintenance Manuals supplied with this unit.

Warning!

Make sure that all people and obstructions are sufficiently cleared from the automated arm before moving it. Failure to do so may result in unit and/or property damages, personal injury or death.

Warning!

Make sure there is enough clearance between raised container and overhead power lines. The automated arm or the container must not come in direct contact with the electrical cables for the power to go through the unit. If the unit comes in contact with a power line, stay in the cab and keep away from any metal parts.

Danger!

Never drive this vehicle if the lifting arm is not fully retracted to its home position. The unit would be simply too wide to be driven safely. Failure to fully retract the arm will result in unit and /or property damage, severe injury or even death. Warning red lights on dashboard flash when the arm is not completely retracted to its home position. NOTE: On units equipped with a bucket, the arm cannot be extended with the joystick. However, if for any reason, the arm is somewhat extended due to bumpy roads for example, just retract it tight against the bucket stopper by moving the joystick sideways to the left.

Warning!

Remove all control levers from the proportional valve. These control levers should be used for maintenance purposes only.

Warning!

Units with two driving positions: Prior to changing driving position, stop the vehicle, apply the parking brake, push the emergency button and stop the engine. Properly adjust mirrors and set driving control switches including arm control joystick (if applicable) to the new driving position before starting the engine. This will ensure that the automated arm is completely inoperative.

Fire

The employer must inform and train all personnel on the measures that must be taken in case of a vehicle and/or loaded body catching fire.

Anytime a loaded vehicle is *brought inside a garage,* fire extinguishers shall be close at hand.

The employer must also inform employees of an appropriate place to unload the body near the maintenance facility (preferably away from traffic, surface drains, and ditches).

2R-III™ vehicles are equipped with a 5-lb fire extinguisher, which is located inside the cab. A 20-lb fire extinguisher may also be installed as an option. Each fire extinguisher must be checked regularly by qualified personnel.

Figure 2-1 20-lb fire extinguisher (left); 5-lb fire extinguisher (right)

Safety Kits

A first aid kit and a triangle kit are provided with the truck.

Location of Safety and Informative Decals

Pay careful attention to all safety, warning and informative decals while working in and around the 2R-III™. Keep your decals clean and in good condition at all times. For replacement decals, please call Labrie*Plus*. Decals may vary from one unit to another depending on the options and features installed on the unit. The following is an illustrated list of decals, but not limited to.

Decals on Body

84459

84458 - English/French

47304

120989 - English/Spanish
79846 - English/French

47312

84011 - English/Spanish
84010 - English/French

47260

120977 - English/Spanish
79833 - English/French

84470

84469 - English/French

47262

120978 - English/Spanish
79834 - English/French

84468

84467 - English/French

47270

120981 - English/Spanish
79837 - English/French

47280

120982 - English/Spanish
79841 - English/French

47282

120983 - English/Spanish
79842 - English/French

47286

84054 - English/Spanish
79844 - English/French

47308

84059 - English/Spanish
79847 - English/French

47314

84060 - English/Spanish
79848 - English/French

47348

84015 - English/Spanish
84014 - English/French

47350

84072 - English/Spanish
79850 - English/French

47352

84073 - English/Spanish
79851 - English/French

47422

121033 - English/Spanish
79853 - English/French

47424

84077 - English/Spanish
79854 - English/French

47554

79768 - English/Spanish
79856 - English/French

47562

47795 - English/Spanish
79776 - English/French

79781

79782 - English/Spanish
84099 - English/French

84187

84485 - English/French/Spanish

84321

159775 - English/Spanish
84322 - French

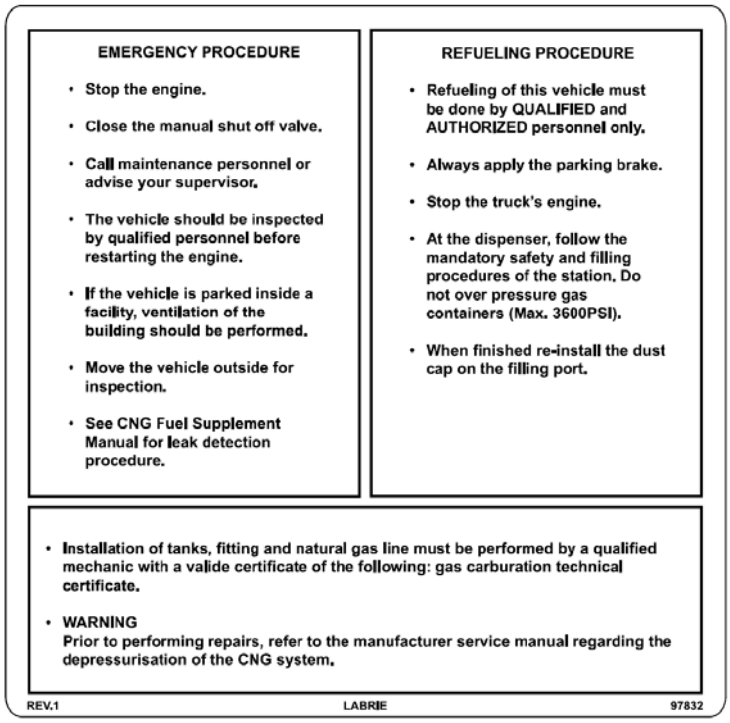
47564

32411
Optional

47256

84419 - Spanish
159761 - French

Optional



97832

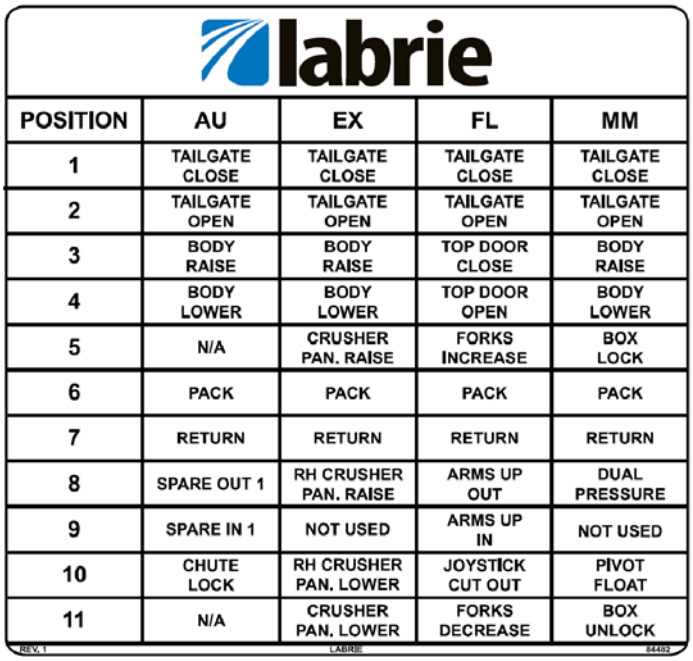
84447 - Spanish
159759 - French

Optional

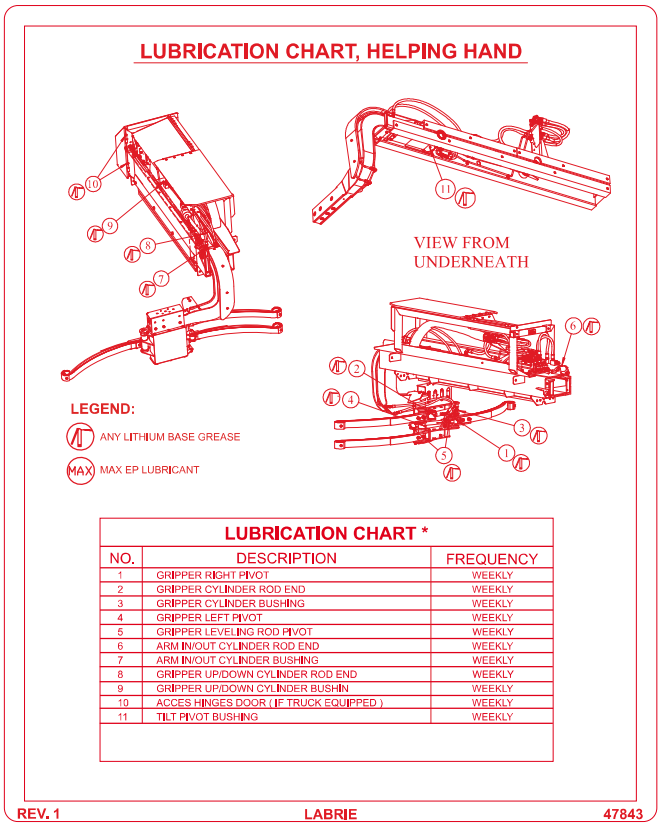
121349

121350 - French

84482

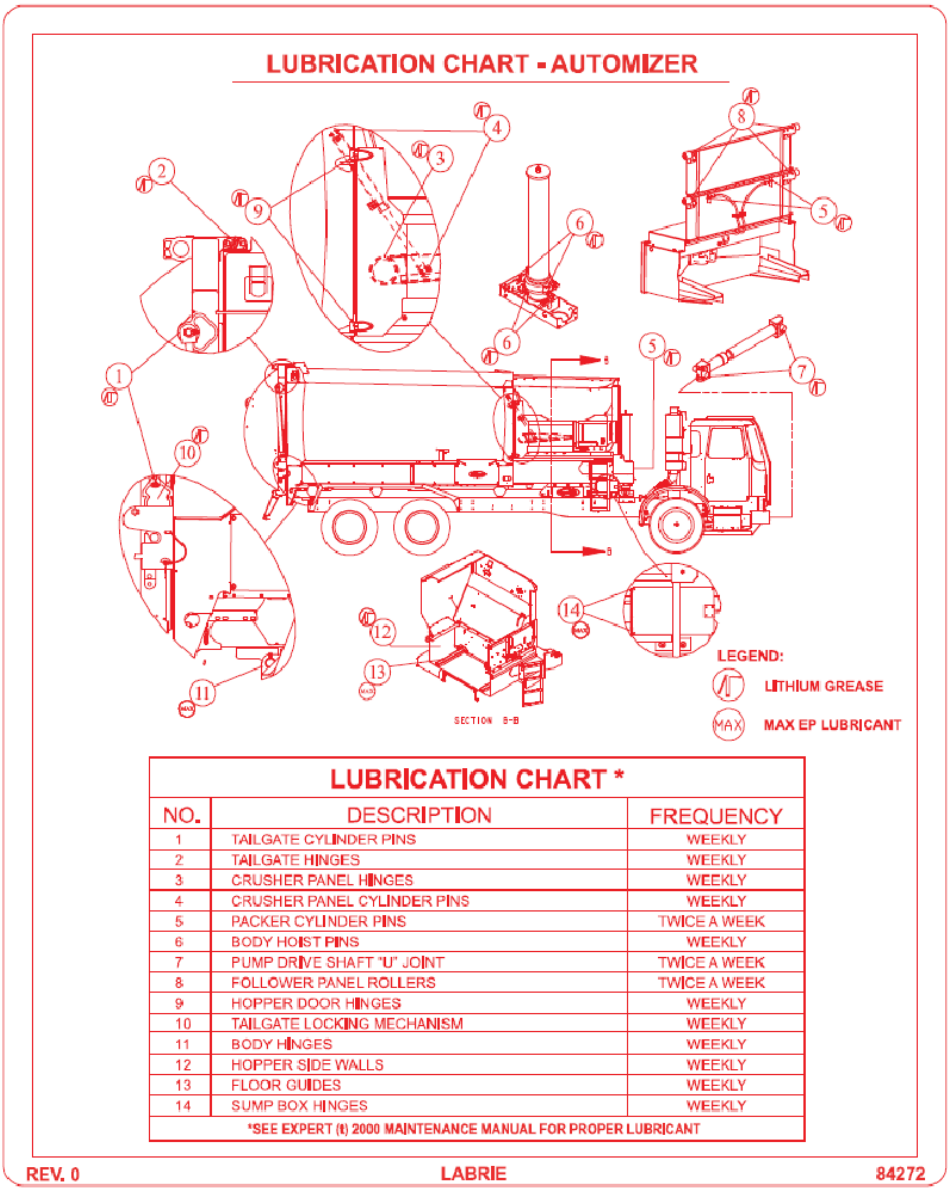


POSITION	AU	EX	FL	MM
1	TAILGATE CLOSE	TAILGATE CLOSE	TAILGATE CLOSE	TAILGATE CLOSE
2	TAILGATE OPEN	TAILGATE OPEN	TAILGATE OPEN	TAILGATE OPEN
3	BODY RAISE	BODY RAISE	TOP DOOR CLOSE	BODY RAISE
4	BODY LOWER	BODY LOWER	TOP DOOR OPEN	BODY LOWER
5	N/A	CRUSHER PAN. RAISE	FORKS INCREASE	BOX LOCK
6	PACK	PACK	PACK	PACK
7	RETURN	RETURN	RETURN	RETURN
8	SPARE OUT 1	RH CRUSHER PAN. RAISE	ARMS UP OUT	DUAL PRESSURE
9	SPARE IN 1	NOT USED	ARMS UP IN	NOT USED
10	CHUTE LOCK	RH CRUSHER PAN. LOWER	JOYSTICK CUT OUT	PIVOT FLOAT
11	N/A	CRUSHER PAN. LOWER	FORKS DECREASE	BOX UNLOCK



47843

47844 - French



LUBRICATION CHART *

NO.	DESCRIPTION	FREQUENCY
1	TAILGATE CYLINDER PINS	WEEKLY
2	TAILGATE HINGES	WEEKLY
3	CRUSHER PANEL HINGES	WEEKLY
4	CRUSHER PANEL CYLINDER PINS	WEEKLY
5	PACKER CYLINDER PINS	TWICE A WEEK
6	BODY HOIST PINS	WEEKLY
7	PUMP DRIVE SHAFT "U" JOINT	TWICE A WEEK
8	FOLLOWER PANEL ROLLERS	TWICE A WEEK
9	HOPPER DOOR HINGES	WEEKLY
10	TAILGATE LOCKING MECHANISM	WEEKLY
11	BODY HINGES	WEEKLY
12	HOPPER SIDE WALLS	WEEKLY
13	FLOOR GUIDES	WEEKLY
14	SUMP BOX HINGES	WEEKLY

*SEE EXPERT (t) 2000 MAINTENANCE MANUAL FOR PROPER LUBRICANT

84272

159782 - Spanish
84336 - French

Decals on Tailgate

32307

47266

120973 - English/Spanish
79835 - English/French

47268

120974 - English/Spanish
79836 - English/French

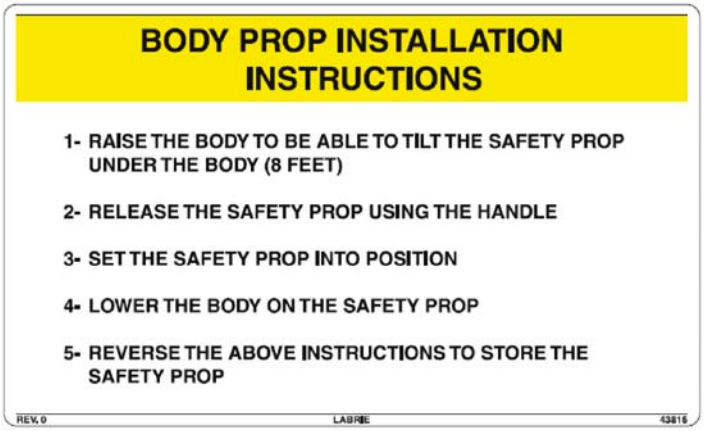
32414A 84418 - Spanish Optional
159760 - French

47274

47777 - English/Spanish
79839 - English/French

Optional

Decals outside Cab



43816

84040 - English/Spanish
79865 - English/French

47352

84073 - English/Spanish
79851 - English/French

47350

84072 - English/Spanish
79850 - English/French

47286

84054 - English/Spanish
79844 - English/French

Decals inside Cab

43874

159751 - English/Spanish
79826 - English/French

43880

47770 - English/Spanish
79828 - English/French

47451

84497 - English/Spanish
84026 - English/French

47312

84011 - English/Spanish
84010 - English/French

43790

84304 - English/Spanish
79818 - English/French

47276

84303 - English/Spanish
79840 - English/French

47440

84078 - English/Spanish
79855 - English/French

156066

159812 - English/French

156067

159813 - English/French

43882

84491 - English/Spanish
84009 - English/French

47877 Optional

159776 - English/Spanish
84030 - English/French

47878 Optional

159777 - English/Spanish
84029 - English/French

43764

84025 - English/Spanish
84024 - English/French

156068

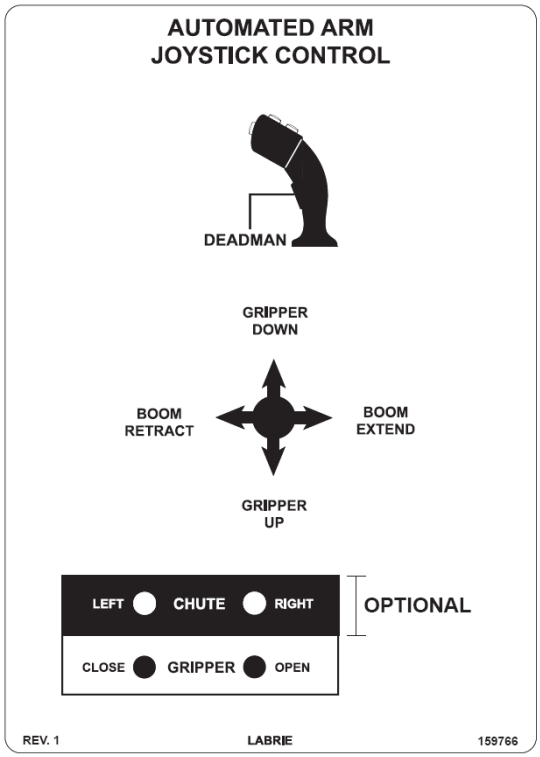
159814 - English/French

84189

84188 - English/French

47610

84021 - English/Spanish
84020 - English/French



159766

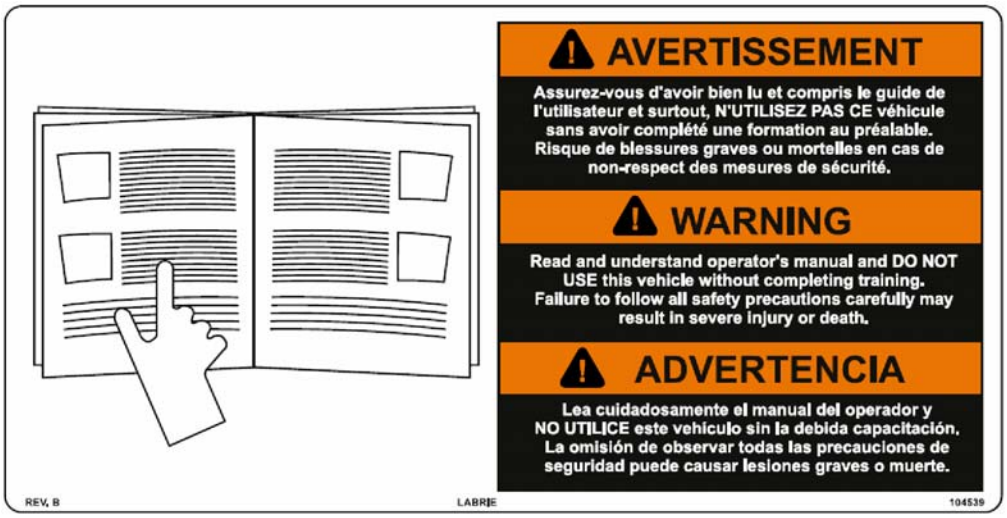
159767 - French
169407 - English/French

43850

84001 - English/Spanish
79822 - English/French

43910

84013 - English/Spanish
84012 - English/French



104539 84032 - English/Spanish
84031 - English/French

47284

120980 - English/Spanish
79843 - English/French

43972

84148 - English/Spanish
79831 - English/French

43764_R4

43794

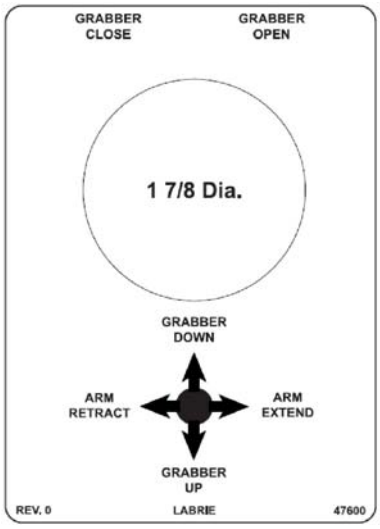
84147 - English/Spanish
79819 - English/French

43798

79821 - English/French

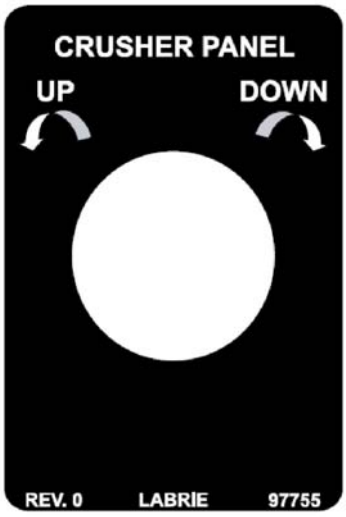
43856

79823 - English/French



47600

47601 - French



97755

159771 - English/Spanish

97777 - English/French

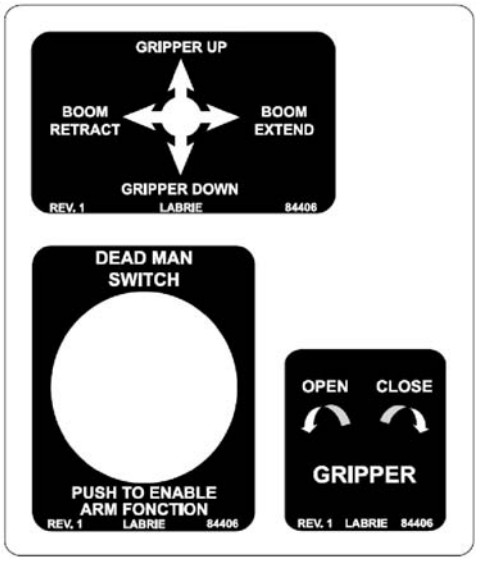
47981

159773 - English/Spanish

79914 - French

47998

84018 - English/French



84406

84407 - French

84373

84372 - English/French

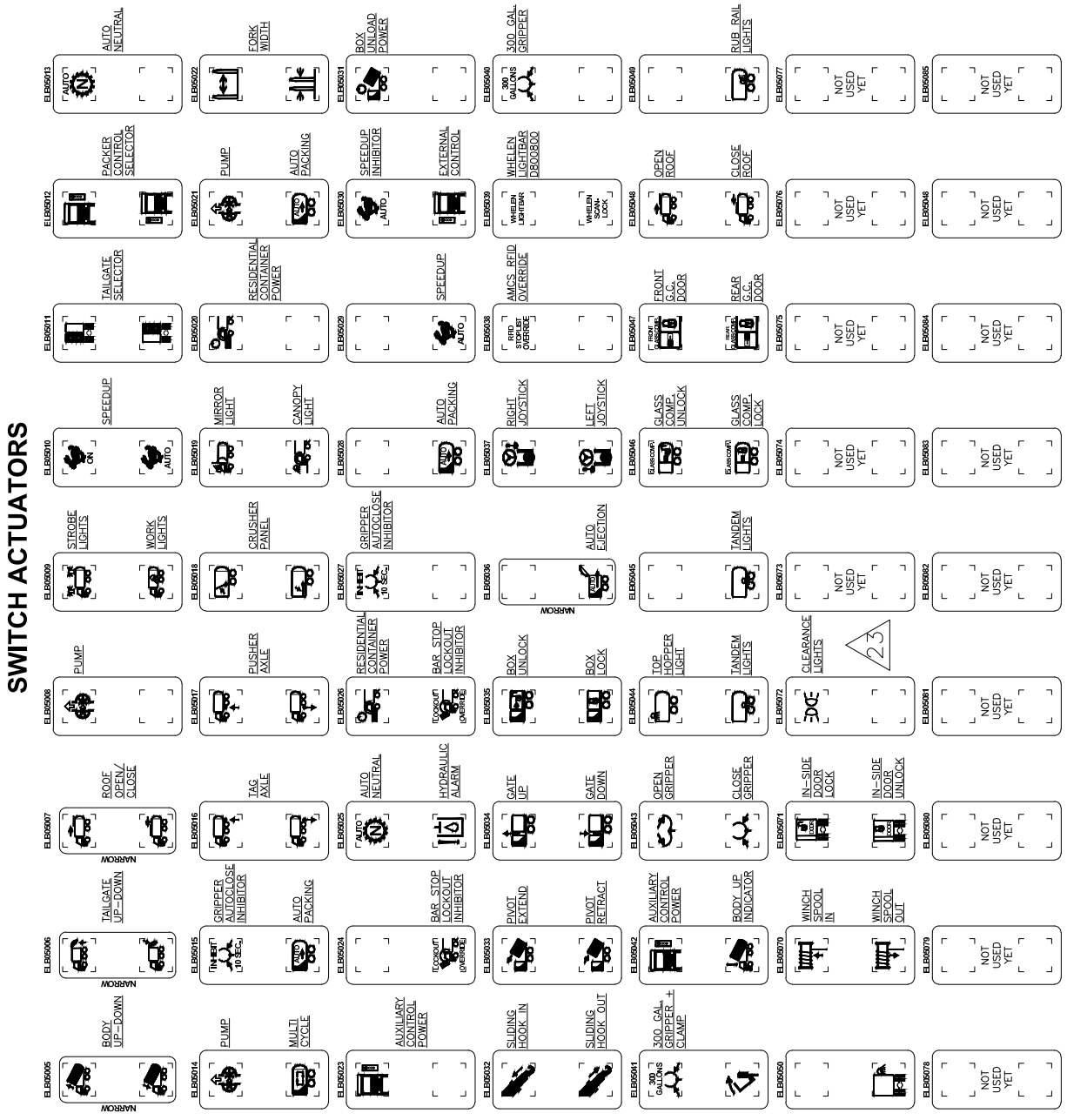
43792

84023 - English/Spanish

84022 - English/French

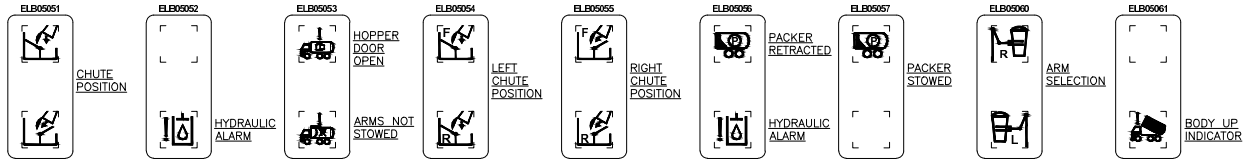
Multiplexed Switch Actuators

NOTE: Multiplexed switch actuators and their location on the control panel vary according to the options installed on the unit.



Multiplexed Indicator Tops

NOTE: This illustration and the preceding one were taken from the PDF file no 159535.



NOTE: 1- All symbols to be negative lens.
2- Electronic file for the symbols available on request from Labrie Enviroquip Group only.

Safety Features

Back Up Alarm

The back up alarm sounds when the truck is in reverse or when the tailgate is open.

Body Safety Prop

Safety props ensure that heavy body parts will not move inadvertently.

Setting the Body Safety Prop

The body safety prop ensures that an ***empty*** body will not lower when you are working underneath it.

Danger!

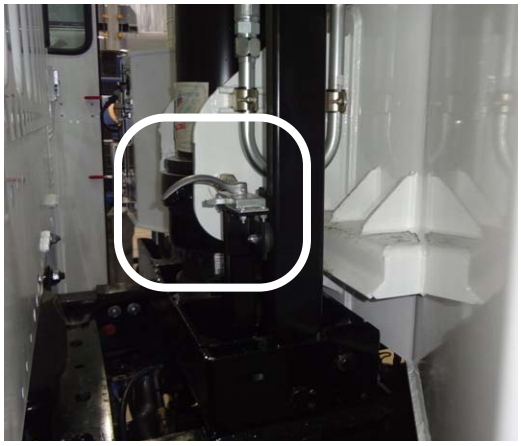
Always set the body safety prop when performing maintenance underneath a raised body. Failure to do so may result in severe injury, or even death.

Figure 2-2 Body safety prop

To set the body safety prop:

1. Make sure that there is enough clearance above the body to raise it safely.
2. Start the engine.
3. Raise the body until the safety prop is free to tilt under it.
4. Release the safety prop using the safety prop handle and position it adequately.

Figure 2-3 Safety prop handle



5. Lower the body until it rests on the safety prop.
6. Lock out and tag out the vehicle (see *Locking Out and Tagging Out the Vehicle* on page 43).

You can now work safely underneath the body.

Putting the Body Safety Prop Back in Place

To put the body safety prop back in place:

1. Make sure that there is enough clearance above the body to raise it safely.
2. Start the engine.
3. Raise the body until the safety prop can move freely.
4. Put the safety prop back in its place.
5. Lower the body.

Tailgate Safety Prop

The tailgate safety prop is used to support and keep the tailgate open during inspection or maintenance procedures. It is mandatory to set the safety prop every time the tailgate is open for such purposes.

IMPORTANT: Make sure that the body is empty before installing the safety prop.

Danger!

The tailgate safety prop shall be set each time the tailgate is open for inspection and maintenance purposes.

Setting the Tailgate Safety Prop

To set the tailgate safety prop:

1. Make sure that the body is empty.
2. Remove the safety pins.

Figure 2-4 Safety pin

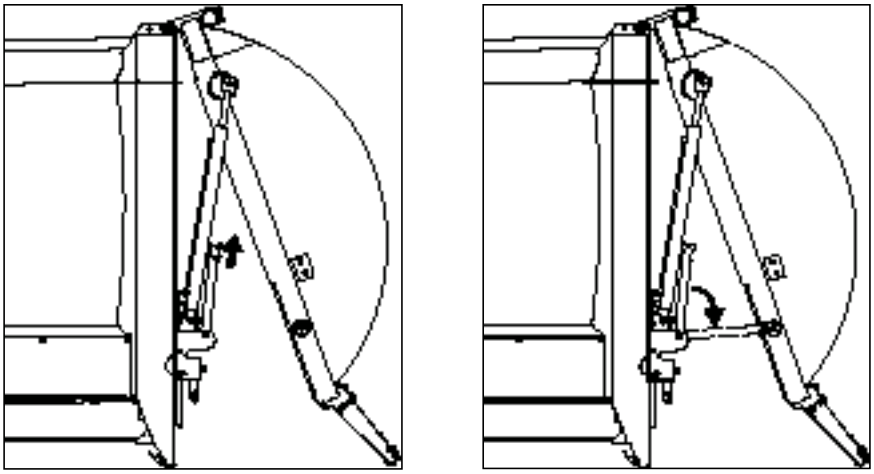
3. Start the engine.
4. Turn the pump ON (see *Hydraulic Pump Switch* on page 70).
5. With the Tailgate Up switch on the in-cab control panel (see *Tailgate Up Switch* on page 71), raise the tailgate about 3 feet (enough to raise the safety prop).

Danger!

Prior to raising the tailgate, make sure that no one is standing behind the vehicle and that the body is empty.

6. Pull the safety prop upward and set it down (see Figure 2-5).

Figure 2-5 Pulling the safety prop upward (left) and setting it down (right)



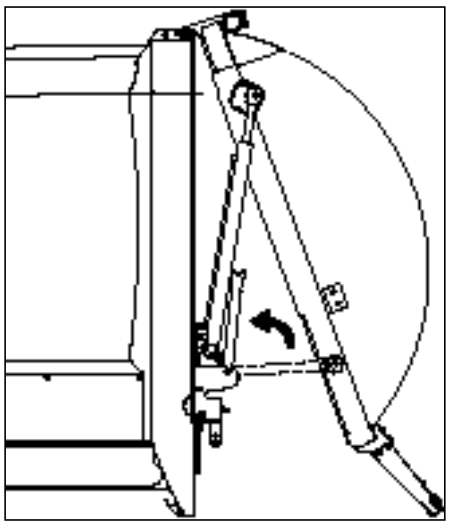
7. Lower the tailgate onto the safety prop using the Tailgate Down switch (see *Tailgate Down Switch* on page 71).

Putting the Tailgate Safety Prop Back in Place

To put the tailgate safety prop back in its home position:

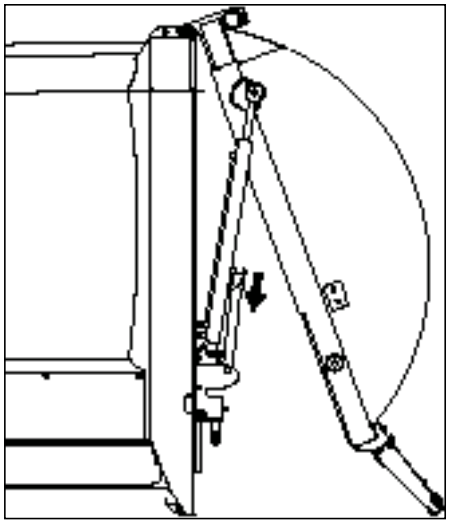
1. Start the engine.
2. Turn the pump ON (see *Hydraulic Pump Switch* on page 70).
3. Raise the tailgate by about 3 feet (see *Tailgate Up Switch* on page 71).
4. Raise the tailgate safety prop (see Figure 2-6).

Figure 2-6 Raising the tailgate safety prop



5. Release your grip on the safety prop to set it in its home position.

Figure 2-7 Setting the safety prop in its home position



6. With the Tailgate Down switch on the in-cab control panel (see *Tailgate Down Switch* on page 71), fully close and lock the tailgate.

   The TAILGATE OPEN message on the monitor should disappear.

7. Put the safety pins back in place.

Camera System (optional)

2R-III™ units can be equipped with up to four (4) cameras. The following are examples of location where they can be installed on the truck: inside the hopper (Figure 2-8, left), on the central right-hand side post (Figure 2-9), on the tailgate (Figure 2-8, right), and on the left-hand side mirror.

Figure 2-8 Camera inside hopper (left) and on tailgate (right)

Figure 2-9 Camera on central RHS post

The operator can switch from one camera to the other using a selector switch located on the 7" LCD color monitor installed in the cab.

Refer to the camera manufacturer's manual for more information.

NOTE: On some units, the right-hand side camera may be installed on the right-hand side rail instead of on the central right-hand side post at the rear of the hopper.

Tailgate Holding Valve

Located behind the left rubrail panel near the tailgate, this holding valve ensures that the tailgate will not open during the packing cycle.

Safety Lockout Tests

The safety lockout tests are part of your daily inspection. Successful completion of these tests ensures that your unit is safe to operate. If any of these tests fail, do not operate your unit until the appropriate adjustment or service has been completed.

IMPORTANT: Your 2R-III™ unit may be equipped with other safety lockout options not mentioned herein. Consult your supervisor and/or maintenance department if you have questions or you are in doubt.

Hopper Door Proximity Switch Test

Successful completion of this test ensures that the Hopper Door proximity switch is working properly (see Figure 2-10). If the hopper door is open, all hydraulic functions should become inoperative.

Warning! Injury or death may occur if you attempt to enter the body while the packer blade or arm is working.

Figure 2-10 Hopper Door proximity switch

For this test, proceed as follows:

1. Open the hopper door.
   To do so, just slide the spring-loaded latch to the left and pull open the door (see Figure 2-11).

Figure 2-11 Spring-loaded latch

2. Ensure that the warning message "Pump: Hopper Door Not Closed" appears on the multiplexed monitor screen (see Figure 3-1) and that both Pump button and Hopper Door Open indicator on the control panel are flashing red.
3. Verify that the hydraulic system has been rendered inoperative by activating one of the control buttons, such as the Tailgate Up button on the control panel.

4. If the hydraulic system is still operative, the Hopper Door proximity switch may need to be adjusted or replaced. Refer to the *Limit and Proximity Switches* section in the *Maintenance Manual* for proper procedure.

Arm Fully Retracted Limit Switch Test

Successful completion of this test ensures that the Arm Extended warning lights on the dashboard flash red when the arm is moved away from its parked position.

Warning!

Never drive the vehicle if the automated arm is not parked alongside the truck. The vehicle would be too high and/or too wide to be driven safely. Failure to fully retract the arm could result in unit and/or property damage, personal injury or even death. Warning lights on the dashboard flash red when the arm is extended. NOTE: On units equipped with a bucket, the arm cannot be extended with the joystick. However, if for any reason, the arm is somewhat extended due to bumpy roads for example, just retract it tight against the bucket stopper by moving the joystick sideways to the left.

For this test, proceed as follows:

1. Park the vehicle on safe, level ground.

   You should have sufficient room to drive approximately 100 yards (92 m) forward.
2. Extend the arm a few inches.
3. Check that the Arm Extended warning lights on the dashboard (see Figure 3-30) flash red.
4. Drive the vehicle forward and increase engine speed to over 1,000 RPM.
5. Check that the buzzer sounds and the warning message "Arm not Stowed" appears on the monitor screen.
6. Stop the vehicle and retract the arm to its "home" position. The "Arm Not Stowed" message on the monitor screen should disappear and the warning lights should turn off.

   The buzzer should also stop sounding.
7. If the Arm Extended warning lights on the dashboard do not flash red or the "Arm Not Stowed" message does not appear on the monitor screen when the arm is extended and the vehicle engine exceeds 1,000 RPM, the Arm Fully Retracted limit switch (see Figure 2-12) may need to be adjusted or replaced. Refer to the *Limit and Proximity Switches* section in the *Maintenance Manual*.

IMPORTANT: Do not operate the 2R-III™ with an inoperative or malfunctioning arm limit switch. Injury or death may occur.

NOTE: On units with a bucket, the arm cannot be extended. If the bucket is down against the bucket stopper and the truck is rolling faster than 25 km/h, the in-cab buzzer will sound. In such a situation, the operator has to pull over in a safe and convenient location and raise the bucket until it is safely parked inside the hopper.

Figure 2-12 Arm Fully Retracted limit switch

Packer Fully Retracted Proximity Switch Test

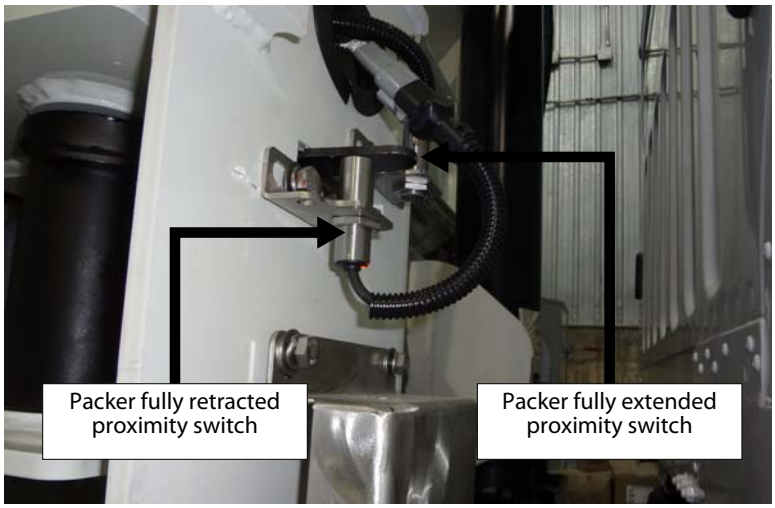
Successful completion of this test ensures that the packer reaches its "home" position or the packer cylinder does not remain pressured up or abruptly bottom out at the "home" position.

For this test, proceed as follows:

1. Empty all refuse from the body.
2. Start a pack cycle.
3. Observe the "home" position of the packer when the cycle is complete.
4. If the packer stops before reaching the "home" position or the packer cylinder remains pressured up or abruptly bottoms out at the "home" position, the Packer Fully Retracted proximity switch (see Figure 2-13) may need to be adjusted or replaced. Refer to the *Limit and Proximity Switches* section in the *Maintenance Manual*.

NOTE: Packer must reach its home position for the crusher panel to be operative (if equipped).

Figure 2-13 Packer proximity switches



Crusher Panel Up Proximity Switch Test (if equipped)

NOTE: This test only applies to units equipped with a lifting bucket.

Successful completion of this test ensures that the bucket operation is disabled when the crusher panel is not in its stowed position.

For this test, proceed as follows:

1. Start the truck.
2. Engage the hydraulic pump (see *Hydraulic Pump Switch* on page 70).
3. If it is not already done, fully lower the bucket.
4. Lower the crusher panel using the auxiliary packer control station (see *Auxiliary Packer Control Station* on page 75).
5. Try to raise the bucket with the bucket control button on the auxiliary packer control station.

NOTE: If you use the joystick to raise the bucket, the simple press on the deadman switch (see Figure 3-27) will cause the crusher panel to rise.

6. If the bucket tilts beyond 45° against its stowed position while the crusher panel is down, the Crusher Panel Up proximity switch (see Figure 2-14) may need to be adjusted or replaced. Refer to the *Limit and Proximity Switches* section in the *Maintenance Manual*.

Figure 2-14 Crusher panel up proximity switch

Arm Parked Limit Switch Test

Successful completion of this test ensures that the crusher panel (if equipped) will not move when the gripper/bucket is parked in the hopper.

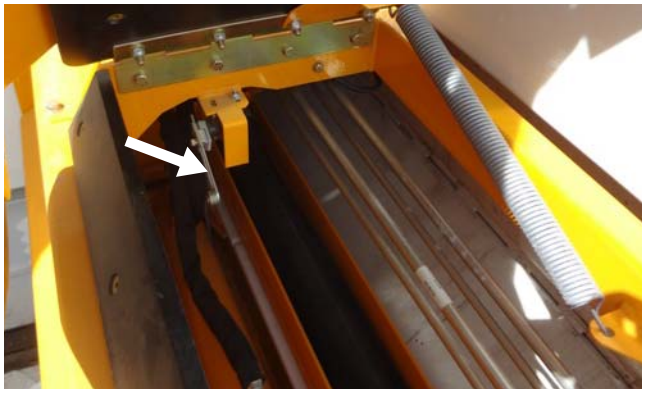
For this test, proceed as follows:

1. Start the truck.

2. Engage the hydraulic pump (see *Hydraulic Pump Switch* on page 70).
3. With the crusher panel in the up position and the gripper/bucket in the parked position inside the hopper, try to lower the crusher panel.

   The crusher panel should not move.
4. If it does move while the gripper/bucket is in parked position inside the hopper, the arm parked limit switch (see Figure 2-15) may need to be adjusted or replaced. Refer to the *Limit and Proximity Switches* section in the *Maintenance Manual*.

Figure 2-15 Arm parked limit switch



Quick Reference Lockout Chart

Hopper door open	Pump circuit cut out - all controls inoperative
Arm not fully retracted	Arm Extended warning lights flash
Packer not in “home” position	Crusher panel (if equipped) disabled
Crusher panel (if equipped) not in “home” position	Arm controls disabled; bucket stops at mid-stroke position
Gripper/bucket parked in hopper	Crusher panel (if equipped) disabled

Cleanliness

Cleanliness is part of safety. Ensure that the equipment works properly by removing any compacted garbage in the packer area after each body unloading.

Clean all the lights and safety decals so you and the surrounding pedestrians and drivers will be aware of the truck at all times. Use the hoe to rake dirt out of clean-out traps on each side of the vehicle.

Figure 2-16 Clean-out trap

Locking Out and Tagging Out the Vehicle

For any inspection, repair or general maintenance being done on the vehicle, whether on the road or at the shop, it is the employer's responsibility to establish and see to the application of a proper lockout and tagout procedure.

To lock out and tag out an 2R-III™ vehicle:

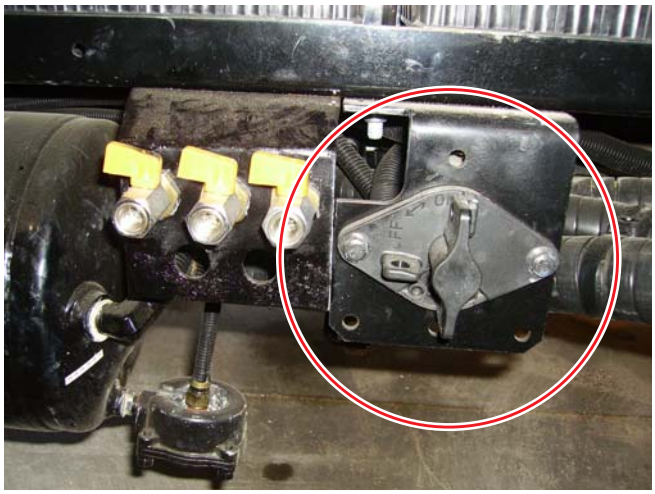
1. Park the vehicle on safe level ground, and apply the parking brake (see Figure 2-17).

Figure 2-17 Parking brake sign

2. Make sure that the body is completely unloaded.
3. Switch off the hydraulic pump.
4. Turn off the engine, remove the key from the ignition, store it in a safe and controlled area (preferably on yourself), and tape over the ignition switch.
5. Turn off and lock the master switch.
6. Chock all wheels.

IMPORTANT: The battery set of the 2R-III™ is equipped with a master switch (see Figure 2-18) that must be turned off.

Figure 2-18 Master switch



7. Put an "OFF SERVICE" tag on the driver's wheel and on the front windshield.
8. Use safety props to block any system that could move by gravity (open tailgate, raised body, etc.).
9. Drain all air tanks.
10. Verify and inspect any security device and/or mechanism to make sure that there is no bypass and that they are all functional.

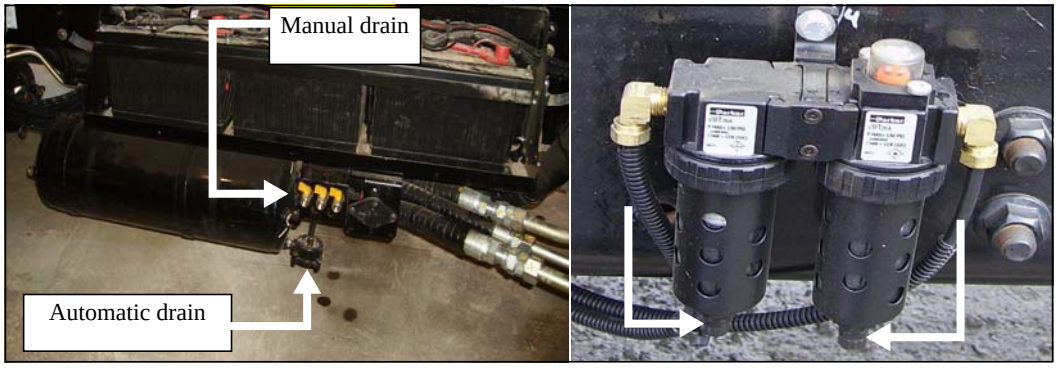
Shutting Down the Vehicle

If the vehicle has to be stored for an extended period of time, follow the chassis manufacturer's shutdown and maintenance requirements.

Also:

1. Park the vehicle on a hard level surface, and apply the parking brake (see Figure 2-17).
2. Make sure that all moving parts are in their home position (tailgate, arm, hopper, packer, etc.).
3. Turn off, in sequence, the hydraulic pump (see Figure 2-21), the electrical system, the engine and the master switch (see Figure 2-18).
4. Drain all air tanks (see Figure 2-19).

Figure 2-19 Drain valves on air tank (left) and water trap (right)



Starting Up the Vehicle

Apply this procedure to start up your vehicle:

1. Make sure no system will engage and/or start to operate as you start the engine.
2. Make sure the shut-off valve on the hydraulic tank is fully open before starting the vehicle (see Figure 2-20).

Figure 2-20 Suction line shut-off valve

NOTE: The hydraulic tank model may vary according to the options installed.

Warning!

Failure to fully open the main valve will cause immediate damage to the pump, even if the pump is turned off.

3. Start the engine according to the chassis manufacturer's recommendations.
4. Once the engine is started, wait for air pressure to build up to *at least* 70 PSI.
5. Engage the hydraulic system by pressing the pump switch (see Figure 2-21).
   The pump switch turns from blue to green.

Figure 2-21 Hydraulic pump switch

IMPORTANT: Do not operate or move the vehicle until air pressure has reached 70 PSI.

6. Turn ON all light switches.
7. If needed, report any defective system to the maintenance personnel.

Driving the Vehicle

The 2R-III™ may be equipped with two (2) steering wheels, one on the left and one on the right. The right-hand side steering wheel makes waste collection easier by a single person. It is provided along with an accelerator pedal, a foot brake pedal, a turn signal control and a horn. Before using the right-hand side driving position make sure that all controls are properly set.

Driving Speed

If the cab of the vehicle has been modified by Labrie Enviroquip Group (right-hand side driving position) for door-to-door waste collection, the maximum speed limit while driving at the right-hand side is, if permitted, 20 mph (32 km/h). Therefore, it is recommended to drive on the left-hand side for any long distance driving (if the truck is equipped with a left-hand side driving position).

Figure 2-22 Cab modified by Labrie

NOTE: If the cab has been modified by the chassis manufacturer, the operator MUST follow the chassis manufacturer's recommendations.

Warning!

If the vehicle has to be parked for an extended period of time, always apply the parking brake (see Figure 2-22).

Right-Hand Side Driving Position

The following procedure applies **ONLY** to cabs that had been modified by Labrie Enviroquip Group. It must be followed at the beginning, but also at the end of the collection route in order to revert to the left-hand side driving position.

NOTE: This procedure applies only to vehicles that had been modified by Labrie Enviroquip Group and that are equipped with dual driving position. Some units are designed only with a single driving position.

If the cab has been modified by the chassis manufacturer, the operator **MUST** ignore the following procedure and rather follow the chassis manufacturer's recommendations.

Before using the right-hand side driving position, do the following:

1. Drive the vehicle to the beginning of the collection route with the left-hand side steering wheel.
2. Stop the vehicle and apply the parking brake.
3. Press the emergency stop button on the packer control station.
4. Turn off the engine.
5. Move to the right-hand side driving position.
6. Shift the driving position switch to the right (see Figure 2-23).

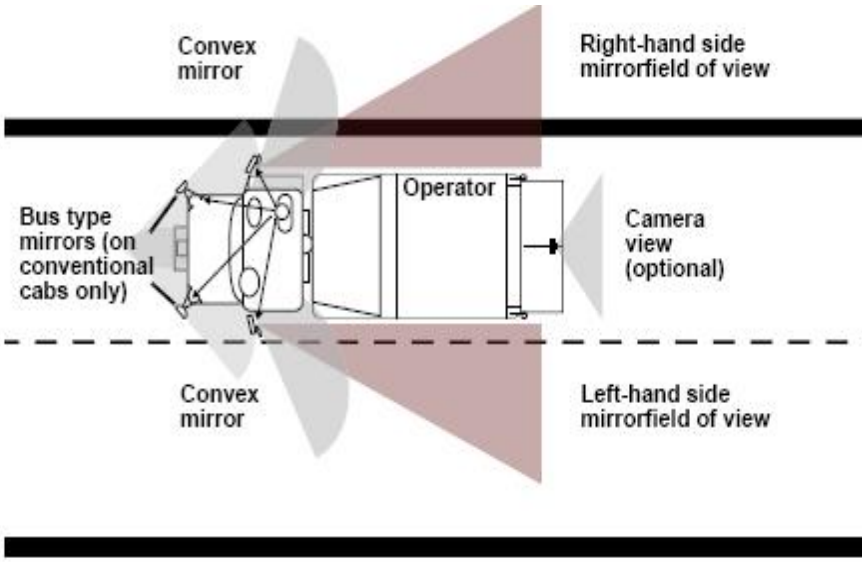
   All the electrical accessories of the right-hand side driving position are then enabled.

Figure 2-23 Driving position switch

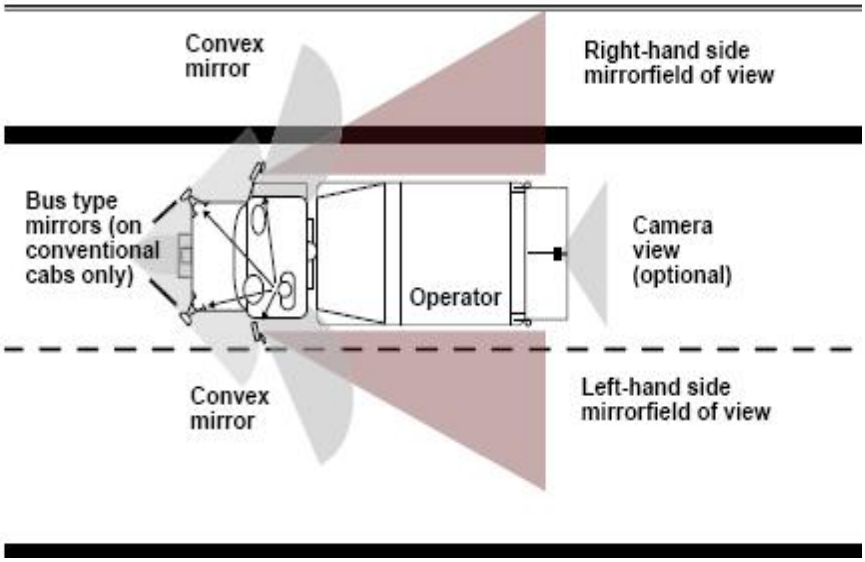
7. Enable the right-hand side joystick by moving the joystick selector switch to the right (if installed).
8. Adjust mirrors properly (see Figure 2-24).

Figure 2-24 Adjusting mirrors

Right-hand side driving position



Left-hand side driving position



3

Controls and Indicators

The AUTOMIZER ™ HELPING-HAND has a series of controls and indicators that allow easier operation of the different functions that come with the vehicle. These controls and indicators are mainly located on the in-cab control panel and on the dashboard.

Labrie's Multiplexed System

Labrie has equipped your AUTOMIZER ™ HELPING-HAND unit with a CAN bus-based multiplexed system, which integrates a monitor, a control panel, a joystick, and a set of electronic modules. This whole system has been designed to help you operate your unit in an efficient and easy way. Labrie's multiplexed system is reliable and safe, and it requires less wiring harnesses to operate. It can also monitor various function status of the body and display warning and caution messages.

Through its monitor (see Figure 3-1), Labrie's multiplexed system informs you of any malfunctions that may occur during the operation of the truck. Various caution and warning messages can be displayed on the monitor, depending on the seriousness of the situation. Yellow-highlighted messages indicate that caution should be used while red-highlighted messages indicate a warning situation that must be dealt with quickly.

Figure 3-1 Monitor

Each time the operator turns the ignition key on, a complete bit test of the multiplexed system is conducted. This test takes about 5 seconds to complete.

NOTE: A flashing green light on the monitor indicates that the power is on. This light should be blinking steadily at 2 Hz during normal operation. If it blinks at a faster rate, it is a sign of a problem with the monitor. A flashing red light on the monitor is also a sign of a problem. Call Labrie*Plus* for support.

The logo of Labrie Enviroquip Group appears momentarily on the monitor screen at the start of the system (see Figure 3-2).

Figure 3-2 Labrie logo on the monitor screen

NOTE: If the Welcome Screen with the Labrie logo stays on continuously, there may be a communication problem between the monitor and the master control module. Report this problem to the maintenance personnel.

NOTE: The monitor screen works even if the engine is not started. All it needs is electrical power. However, if you start the engine, the monitor will reboot to reflect the changes caused by the starting of the truck.

Main Page

The next page that comes up after the Welcome Screen is the Main Page (see Figure 3-3). Here you will find a link that will give you access to the Main Menu (see *Main Menu* on page 57). Any warning or error messages that may occur while the truck is being operated are also displayed on this page. The following optional indicators, when provided, are also found on the Main Page : Cart Counter, Time and Date Indicator and Hydraulic Oil Temperature Indicator.

Cart Counter (optional)

This indicator tells you how many carts have been emptied so far. If your vehicle is equipped with two arms, the number of carts emptied is shown for each of these arms (right and left counters).

Figure 3-3 Cart counter

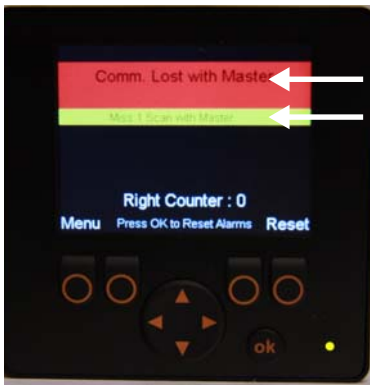
Press the far right button to reset the counter display to zero.

Time and Date Indicator (optional)
A time and date indicator may be found on the upper left-hand side corner of the screen. The availability of this indicator is based on the chassis on which the body is mounted. If the chassis provides real-time clock information through J1939 bus, time and date will appear on the screen. To set the Time and Date indicator, go to the Main Menu and choose Time Adjust.

Hydraulic Oil Temperature Indicator (optional)
This optional indicator, when provided, shows you the current hydraulic oil temperature. This indicator is found on the upper right-hand side corner of the screen.

Warning and Caution Messages
On the monitor screen, yellow-highlighted messages indicate that caution should be used and red-highlighted messages indicate a warning situation that must be dealt with quickly.

Figure 3-4 Warning and caution messages on monitor



See Table 1 for a list of warning and caution messages. Please note that this list is not exhaustive.

Table 1 Warning messages

Warning and Caution Messages	Solution
Arm Up:Chute Bad Pos.	Place Chute in Correct Position
Arm Up:Crusher Not Raised	Raise Crusher Panel
Arm:Auxiliary Deadman ON	Release Auxiliary Deadman
Arm:Body Raised	Lower Body
Arm:Hopper Door Not Close	Close Hopper Door
Arm:Pump Not Started	Engage Pump
Arm:Tailgate Unlocked	Lock Tailgate
AutoDump:Cab EStop	Pull Out Cab EStop Button
AutoDump:Pump Not Started	Engage Pump
Body:Pump Not Started	Engage Pump
Buzzer:Arm Not Stow	Retract Arm to Stowed Position
Buzzer:Body Raised	Lower Body
Buzzer:TailGate Unlocked	Lock Tailgate
Chute:Arm Too High	Lower Arm
Chute:Crusher Not Up	Raise Crusher
Chute:Pump Not Started	Engage Pump
Crusher:Arm Too High	Lower Arm
Crusher:Chute Bad Pos.	Move Chute to Correct Position
Crusher:Hopper Door Not Closed	Close Hopper Door
Crusher:Packer Not Retracted	Retract Packer
Crusher:Pump Not Started	Engage Pump
ESTOP:Aux. Cab EStop	Pull Out Aux. Cab EStop Button
ESTOP:Cab Emergency Stop	Pull Out Cab EStop Button
FullEject:Cab EStop	Pull Out Cab EStop Button
FullEject:Packer Not Retracted	Retract Packer
FullEject:Pump Not Started	Engage Pump

Table 1 Warning messages (cont'd)

Warning and Caution Messages	Solution
Gripper Open:Arm Too High	Lower Arm
High Hydraulic Oil Temp.	Turn Off Engine and Refer to your Maintenance Personnel
Low Hydraulic Oil	Add Hydraulic Oil
Packer Extend:Air Weigh Signal	Unload Body
Packer:Already Extended	Refer to Maintenance Personnel or Labrie*Plus*
Packer:Already Retracted	Refer to Maintenance Personnel or Labrie*Plus*
Packer:Extend Too Long	Check Extend Prox
Packer:Pump Not Started	Engage Pump
Packer:Retract Too Long	Check Retract Prox
Pump Not Started:Aux. Cab EStop	Pull Out Aux. Cab EStop Button
Pump Not Started:Cab EStop	Pull Out Cab EStop Button
Pump Not Started:Hopper Door Open	Close Hopper Door
Pump Not Started:Main Air Pressure	Let the Air Build Up to Required Pressure
Pump Not Started:RPM Too High	Lower Engine Speed Below 900 RPM
Pump Stop:Main Air Pressure	Let Air Build Up to Req'd Pressure
Pump:Aux. AutoDump Switch ON	Release Aux. AutoDump Switch prior to Engaging Pump
Pump:Aux. ChuteToLeft Switch ON	Release Aux. ChuteToLeft Switch prior to Engaging Pump
Pump:Aux. ChuteToRight Switch ON	Release Aux. ChuteToRight Switch prior to Engaging Pump
Pump:Aux. CloseGripper Switch ON	Release Aux. CloseGripper Switch prior to Engaging Pump
Pump:Aux. Deadman Switch ON	Release Aux. Deadman Switch prior to Engaging Pump
Pump:Aux. OpenGripper Switch ON	Release Aux. OpenGripper Switch prior to Engaging Pump

Table 1 Warning messages (cont'd)

Warning and Caution Messages	Solution
Pump:BodyLower Switch ON	Release BodyLower Switch prior to Engaging Pump
Pump:BodyRaise Switch ON	Release BodyRaiseSwitch prior to Engaging Pump
Pump:CrusherDown Switch ON	Release CrusherDown Switch prior to Engaging Pump
Pump:CrusherUp Switch ON	Release CrusherUp Switch prior to Engaging Pump
Pump:Hopper Door Not Close	Close Open Door
Pump:J1 AutoDump Switch ON	Release J1 AutoDump Switch prior to Engaging Pump
Pump:J1 ChuteToLeft Switch ON	Release J1 ChuteToLeft Switch prior to Engaging Pump
Pump:J1 ChuteToRight Switch ON	Release J1 ChuteToRight Switch prior to Engaging Pump
Pump:J1 CloseGripper Switch ON	Release J1 CloseGripper Switch prior to Engaging Pump
Pump:J1 Deadman Switch ON	Release J1 Deadman Switch prior to Engaging Pump
Pump:J1 OpenGripper Switch ON	Release J1 OpenGripper Switch prior to Engaging Pump
Pump:J2 AutoDump Switch ON	Release J2 AutoDump Switch prior to Engaging Pump
Pump:J2 ChuteToLeft Switch ON	Release J2 ChuteToLeft Switch prior to Engaging Pump
Pump:J2 ChuteToRight Switch ON	Release J2 ChuteToRight Switch prior to Engaging Pump
Pump:J2 CloseGripper Switch ON	Release J2 CloseGripper Switch prior to Engaging Pump
Pump:J2 Deadman Switch ON	Release J2 Deadman Switch prior to Engaging Pump
Pump:J2 OpenGripper Switch ON	Release J2 OpenGripper Switch prior to Engaging Pump

Table 1 Warning messages (cont'd)

Warning and Caution Messages	Solution
Pump:Packer Extend Switch ON	Release Packer Extend Switch prior to Engaging Pump
Pump:Packer Retract Switch ON	Release Packer Retract Switch prior to Engaging Pump
Pump:PTO Not OK	Refer to Maintenance Personnel or Labrie*Plus*
Pump:RPM Too High	Lower Engine Speed Below 900 RPM
Pump:TailgateDown Switch ON	Release TailgateDown Switch prior to Engaging Pump
Pump:TailgateUp Switch ON	Release TailgateUp Switch prior to Engaging Pump
Pump:Trans. Not OK	Refer to Maintenance Personnel or Labrie*Plus*
Raise Body:Air Susp. Not Down	Lower Air Suspension
Raise Body:Arm Not Stow	Retract Arm to Stowed Position
Raise Body:Tag Not Down	Lower Tag
Raise Body:Tailgate Not Open	Open Tailgate
Raise Body:Truck Moving	Bring Truck to a Standstill
Service Oil Filter #1	Replace Oil Filter #1
Service Oil Filter #2	Replace Oil Filter #2
Tag:Move Tag switch to Tag Up	Raise Tag
Tailgate Up:Truck Moving	Bring Truck to a Standstill
Tailgate:Pump Not Started	Engage Pump
Wrong Driver Position	Change Driver Position Switch to Correct Position

Table 2 Error messages (

Error Messages	Solution
Button Pack 12 is disconnected	Refer to Maintenance Personnel or Labrie*Plus*
Button Pack 13 is disconnected	Refer to Maintenance Personnel or Labrie*Plus*
Button Pack 14 is disconnected	Refer to Maintenance Personnel or Labrie*Plus*
Button Pack 15 is disconnected	Refer to Maintenance Personnel or Labrie*Plus*
CAN Error Level 1	Refer to Labrie*Plus*
CAN Error Level 2	Refer to Labrie*Plus*
CAN Error Level 3	Refer to Labrie*Plus*
Comm. Lost with Master	Refer to Maintenance Personnel or Labrie*Plus*
Module 11 is disconnected	Refer to Maintenance Personnel or Labrie*Plus*
Module 11 not Connected	Refer to Maintenance Personnel or Labrie*Plus*
Module 20 is disconnected	Refer to Maintenance Personnel or Labrie*Plus*
Module 20 not Connected	Refer to Maintenance Personnel or Labrie*Plus*
Module 30 is disconnected	Refer to Maintenance Personnel or Labrie*Plus*
Module 30 not Connected	Refer to Maintenance Personnel or Labrie*Plus*
Module 50 is disconnected	Refer to Maintenance Personnel or Labrie*Plus*

Table 2 Error messages (cont'd)

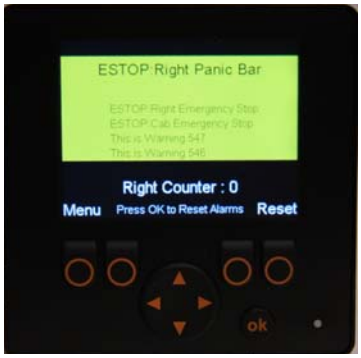
Error Messages	Solution
Module 50 not Connected	Refer to Maintenance Personnel or Labrie*Plus*
Module 60 is disconnected	Refer to Maintenance Personnel or Labrie*Plus*
Module 60 not Connected	Refer to Maintenance Personnel or Labrie*Plus*

Should the system issue a warning or caution message, it will appear on the Main Page.

For example, if the following caution message "Pump Not Started: Main Air Pressure" is issued by the system, it will appear on the Main Page of the monitor. An action that could be taken by the operator, when faced with such a situation, would be to wait until the required main air pressure level is reached.

For a specific problem or condition that requires special attention, the multiplexed system can alert the operator to a possible cause, which appears in bold and large print on the monitor screen (active cause). The operator should check if the problem stems from the highlighted or active cause. One possible cause is highlighted at a time. What is shown in light and small print in the lower part of the screen are causes that have already been dealt with (non active causes) [see Figure 3-5].

Figure 3-5 Example of a possible cause



NOTE: If the system detects a problem, a beep will sound and a message will appear on the monitor screen.

NOTE: To go back to the Main Page or Main Menu, press "Esc" as needed until the desired page is displayed.

Main Menu

To access the Main Menu, press the far left button when the Main Page is displayed.

When the Main Menu is displayed, you can have access to the following sections:

- Multicycle
- I/O Status
- Program Version
- Pump Usage (optional)
- Time Adjust (available according to chassis)

Displayed in the lower center of the screen is an indicator that monitors traffic on the network. This indicator is called Network Load, and it shows values that reflect such traffic.

NOTE: The higher the network load value is, the heavier the traffic is on the network.

To exit this page and return to the Main Page, press "Esc". To choose a section from the Main Menu, highlight the desired section using the up/down arrows and press the "OK" button.

Multicycle

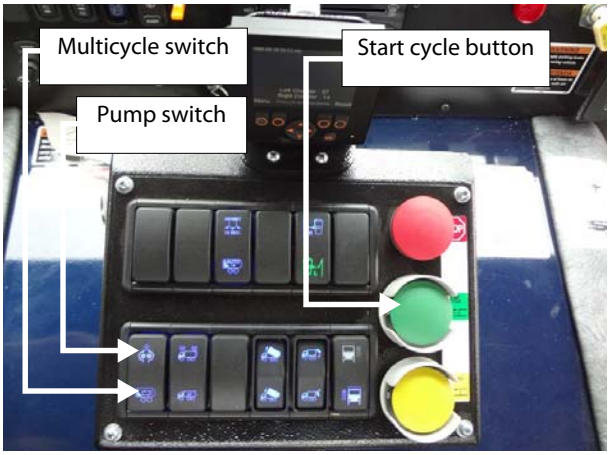
The monitor used in Labrie's multiplexed system is user-friendly. Say you want to change the multicycle settings of the packer. All you have to do is select MAIN MENU by pressing the corresponding button at the bottom left corner of the monitor. From the displayed menu, choose the option SELECT THE NUMBER OF CYCLES. If need be, use the arrow to choose that option and press "OK". The multicycle settings can be changed from two to eight cycles. Choose the desired number of cycles and press "OK". It could not be easier!

Figure 3-6 Multicycle page

NOTE: The packer multicycle function has been preset at the factory to carry out three cycles.

When the MULTICYCLE switch on the control panel is on and the packer is activated, the packer will move according to the default number of cycles (that is 3) or to the number of cycles you chose (up to 8 cycles).

Figure 3-7 Control panel



To test the new settings of the packer:

1. On the control panel press the MULTICYCLE switch and the green START CYCLE button.
2. Once the packer has completed its cycles and come to a stop, switch OFF the hydraulic pump and turn OFF the engine.

The number of cycles needs to be adjusted depending on the type of collection route used by the vehicle. For example, in a residential area, if the houses are numerous and close one to another, it may be required to increase the number of cycles. This will allow the hopper to be clear for the next house pickup.

Each time the packer completes a full cycle, the proximity switch located on the right-hand side, behind the packer, sends a signal to the electronic controller. The controller then counts the amount of cycles that the packer does, and will stop the packer after the preset amount of cycles has been reached.

I/O Status

In this section, you will find helpful information to troubleshoot body-related problems that you may face during your day-to-day tasks. These problems can be of any nature, from hydraulic to mechanical, electrical or pneumatic.

Select the control module corresponding to the part of the truck that needs to be checked.

For example, if you want to check all functions that are found in the cab, choose module #10. For all functions that pertain to the chassis, choose module #20, etc.

To choose a particular module, use the up/down arrows to select it and press “OK”.

NOTE: Pressing “OK” can be done two ways: either press the far right button or the “OK” button.

Press “Esc” to return to the preceding page.

Figure 3-8 Module I/O Status page

Input Status

The Input Status page is accessible from the Module I/O Status page. After selecting the desired module and pressing "OK", the Input Status page of the selected module is displayed (see Figure 3-9).

Figure 3-9 Input Status page

The Input Status page contains a set of rectangles. Each of these rectangles represents input elements, which in turn correspond to a particular function of the truck. For example, if you select rectangle I00, a short description appears in the lower part of the screen, which indicates that this rectangle relates to the input element coming from the service brake pressure switch.

NOTE: Each rectangle is numbered and relates to a specific function of the truck. However, for a given number, the related function may vary from truck to truck.

Table 3 Colored rectangles

Rectangles (inputs)	Function Status
Blue	Inactive
Green	Active

Press “Esc” to return to the preceding page.

Press the “Output” button to display the Output Status page.

Output Status

The Output Status page (Figure 3-10) is accessible from the Input Status page.

Figure 3-10 Output Status page

The rectangles on this page are used to check the status of different outputs.

NOTE: Each rectangle is numbered and relates to a specific function of the truck. However, for a given number, the related function may vary from truck to truck.

Table 4 Colored rectangles

Rectangles (outputs)	Function Status
Blue	Inactive
Green	Active
Red	Closed short-circuit
Yellow	Open circuit

Press “Esc” to return to the preceding page.

Press the “Force” button to display the Force page.

NOTE: To go back to the Main Page or Main Menu, press “Esc” as needed until the desired page is displayed.

Force

The Force page is accessible from the Output Status page. Just press the corresponding button to access the Force page.

But before the Force page is displayed, a warning message appears on the monitor screen (see Figure 3-11).

Figure 3-11 Warning message

This message stays on for 15 seconds. Then an "OK" prompt appears on the lower right-end corner of the screen.

IMPORTANT: It is very important to read this message entirely before accessing the next page.

Figure 3-12 Warning message w/ "OK" prompt

Press "OK" to go to the Force page or "Esc" to return to the preceding page.

After pressing "OK", the Force page appears on the screen.

Figure 3-13 Force page (input)

As no input function can be forced to be active or inactive, the operator must press the "Output" button to go to the following page (see Figure 3-14).

Figure 3-14 Force page (output)

The Force page allows the operator to force a function to be overridden, that is, to make an inactive function active and an active function inactive.

This page contains a set of rectangles. Each of these rectangles is numbered and corresponds to a specific function of the truck.

Colors are used to indicate whether the corresponding function is active or not:

- a blue rectangle means the corresponding function is inactive
- a green rectangle means the corresponding function is active

Also:

- a red rectangle means there is a closed short-circuit
- a yellow rectangle means there is an open circuit

A white-bordered rectangle means that this rectangle is selected. Use the directional arrows to select a specific rectangle or function. When a rectangle is selected, a short description of the corresponding function appears at the bottom of the screen.

After selecting a rectangle:

- press "ON" to activate the corresponding function (rectangle turns from blue to green)

- press “OFF” to deactivate the corresponding function (rectangle turns from green to blue)
- press “RESET” to have the software control the status of the corresponding function

NOTE: To cancel changes made in this page and restore the default values, all you have to do is cut power to the multiplexed system by turning the ignition key off.

NOTE: To go from a module to another (e.g. from module 10 to 20), the operator has to go back to the Module I/O Status page (see Figure 3-8) and select module 20.

Press “Esc” to return to the preceding page.

Joystick

The Joystick page is accessible from the Module I/O Status page (see Figure 3-8). From that page select “Joystick” using up/down arrows and press “OK”. The Joystick page opens (see Figure 3-15).

Figure 3-15 Joystick page

The Joystick page allows the operator to check if all functions of the joystick are working correctly. If one joystick is installed on your vehicle, it will be represented on the monitor screen by joystick 127. However, if two joysticks are installed on your vehicle, any of the two joystick numbers (127 and 72) can represent either joystick on the screen.

If you press a joystick button, the corresponding button on the monitor will turn green. If nothing happens, there may be a communication problem between the joystick and the master control module. Refer to the maintenance personnel or Labrie*Plus*.

Also, if you move the joystick backwards, forwards or sideways, you should see the values under the illustration changing. If no change occurs when moving the joystick, a communication problem between the joystick and the master control module may be the cause. Refer to the maintenance personnel or Labrie*Plus*.

Press “Esc” to return to the preceding page.

J1939

The J1939 page is useful when you need some specific information (e.g. current gear, road speed, brake status).

Figure 3-16 J1939 page

Your vehicle is equipped with 2 different CAN-based communication buses:

- the **J1939 bus**, which is used for the chassis equipment; and
- the **CANopen bus**, which is used for the body.

These 2 communication buses are completely independent of one another, except for some specific data that are transferred from the chassis J1939 bus to Labrie's multiplexed system, where they are used. These specific data are the following:

- selected gear
- current gear
- road speed
- engine RPM
- brake
- parking brake

Press "Esc" to return to the preceding page.

Module Software Version

On the Module Software Version page, you will find the software version currently used by each of the modules installed on the truck and by the master control module.

Figure 3-17 Program Version page

With the information on this page it is possible for the operator or maintenance personnel to determine the electrical schematic number pertaining to a specific vehicle. Looking at Figure 3-17 above you will notice the following digit string 8-6-5-1 between, for example, 10 and R1. As all Labrie electrical schematics begin with ZS00, you simply add those digits to that base number to get the corresponding electrical schematic number. So, in this case, the electrical schematic number is ZS008651.

Press "Esc" to return to the preceding page.

Pump Usage
This section contains an optional hour meter that tracks pump usage for maintenance purposes.

Press "Esc" to return to the preceding page.

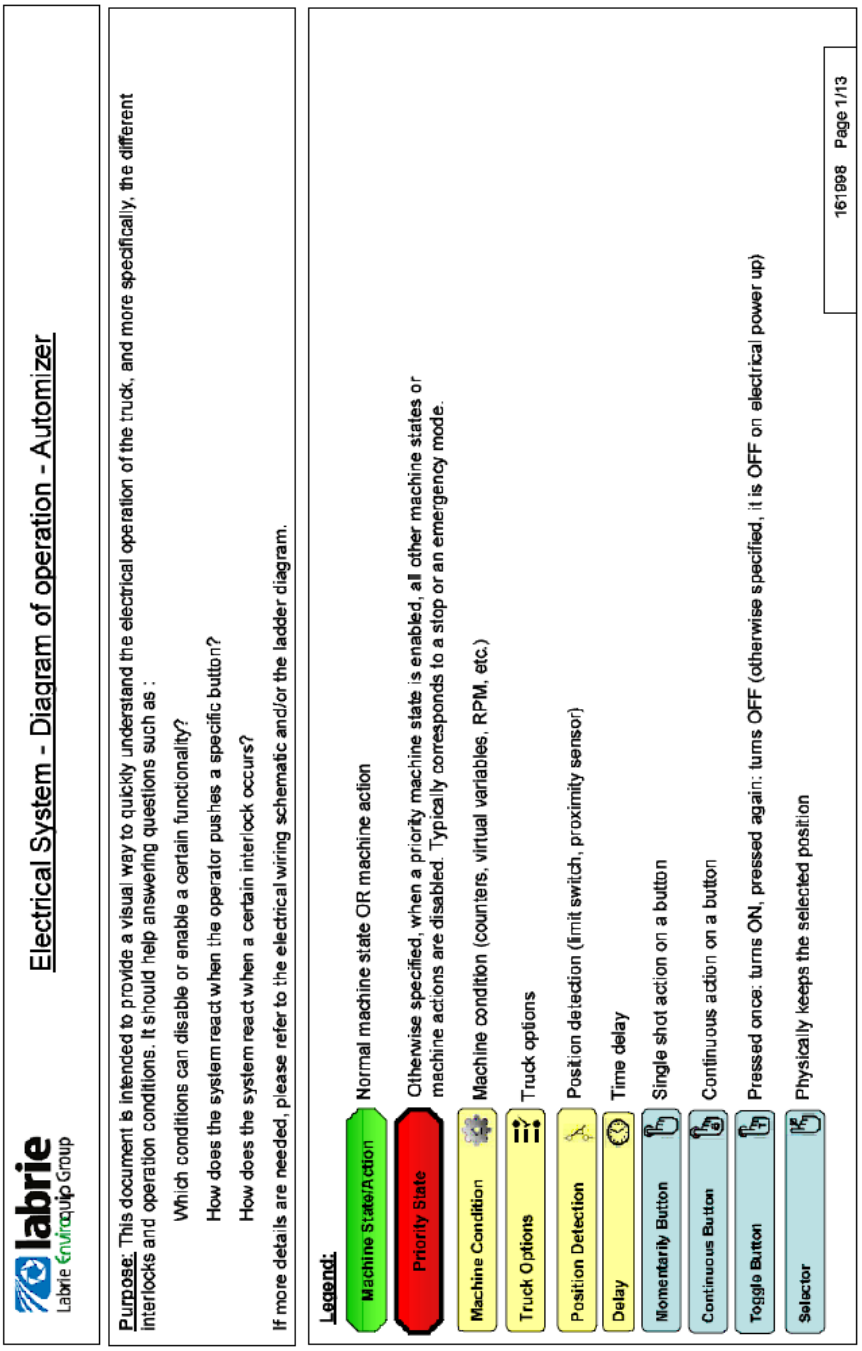
Time Adjust
This section allows you to set the Time and Date indicator.

Press "Esc" to return to the preceding page.

NOTE: To go back to the Main Page or Main Menu, press "Esc" as needed until the desired page is displayed.

Operational Diagram of the Multiplexed System

Labrie Enviroquip Group has elaborated a document that illustrates the way the multiplexed system works. Particularly, it visually shows how this system reacts to different situations and how it manages the various lockouts that are on the AUTOMIZER ™ HELPING-HAND. It also makes reading and understanding related ladder logic diagrams much easier. The following are the first two pages of this document. If you are interested in receiving the entire document, call Labrie*Plus* (see *To Contact Labrie Plus* on page 8).



labrie
Labrie Enviroquip Group

Electrical System - Diagram of operation - Automizer

Purpose: This document is intended to provide a visual way to quickly understand the electrical operation of the truck, and more specifically, the different interlocks and operation conditions. It should help answering questions such as :

- Which conditions can disable or enable a certain functionality?
- How does the system react when the operator pushes a specific button?
- How does the system react when a certain interlock occurs?

If more details are needed, please refer to the electrical wiring schematic and/or the ladder diagram.

Legend:

- Machine State/Action — Normal machine state OR machine action
- Priority State — Otherwise specified, when a priority machine state is enabled, all other machine states or machine actions are disabled. Typically corresponds to a stop or an emergency mode.
- Machine Condition — Machine condition (counters, virtual variables, RPM, etc.)
- Truck Options — Truck options
- Position Detection — Position detection (limit switch, proximity sensor)
- Delay — Time delay
- Momentarily Button — Single shot action on a button
- Continuous Button — Continuous action on a button
- Toggle Button — Pressed once: turns ON, pressed again: turns OFF (otherwise specified, it is OFF on electrical power up)
- Selector — Physically keeps the selected position

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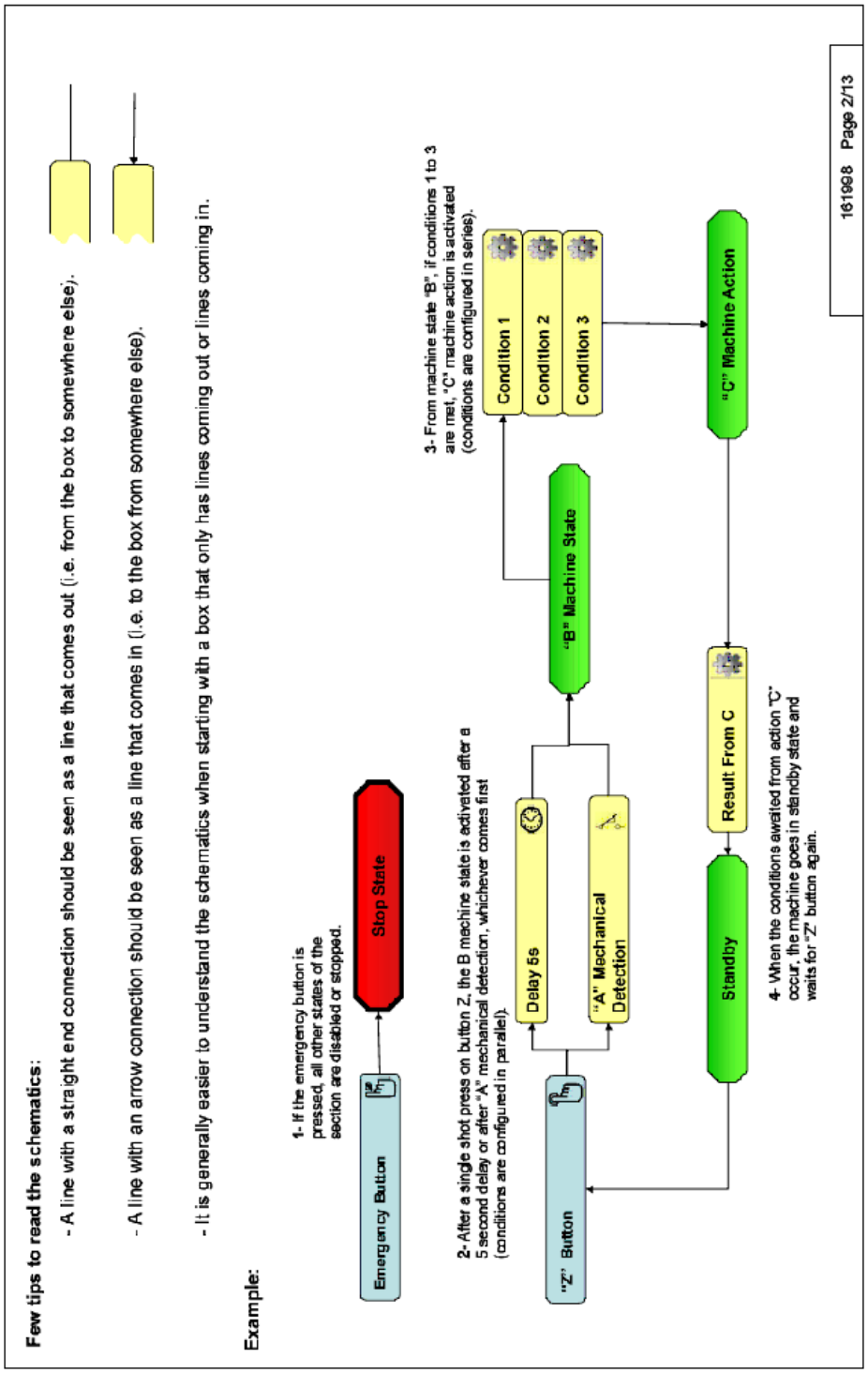
Few tips to read the schematics:
- A line with a straight end connection should be seen as a line that comes out (i.e. from the box to somewhere else).
- A line with an arrow connection should be seen as a line that comes in (i.e. to the box from somewhere else).
- It is generally easier to understand the schematics when starting with a box that only has lines coming out or lines coming in.
Example:
1- If the emergency button is pressed, all other states of the section are disabled or stopped.
Emergency Button
Stop State
2- After a single shot press on button Z, the B machine state is activated after a 5 second delay or after "A" mechanical detection, whichever comes first (conditions are configured in parallel).
"Z" Button
Delay 5s
"A" Mechanical Detection
"B" Machine State
3- From machine state "B", if conditions 1 to 3 are met, "C" machine action is activated (conditions are configured in series).
Condition 1
Condition 2
Condition 3
"C" Machine Action
Result From C
Standby
4- When the conditions awaited from action "C" occur, the machine goes in standby state and waits for "Z" button again.
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Control Panel

The control panel is located at the center of the cab for easy access during collection and operation.

On a truck with two driving positions, this control panel is mounted on a pivotal support which can be turned by hand.

The following is a description of the control switches and indicators that are on the control panel.

Figure 3-18 Control panel (part 1)

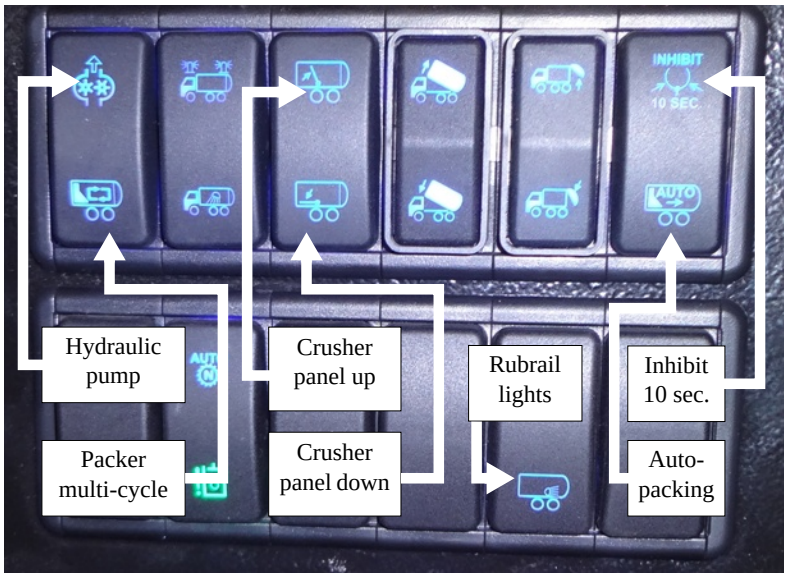
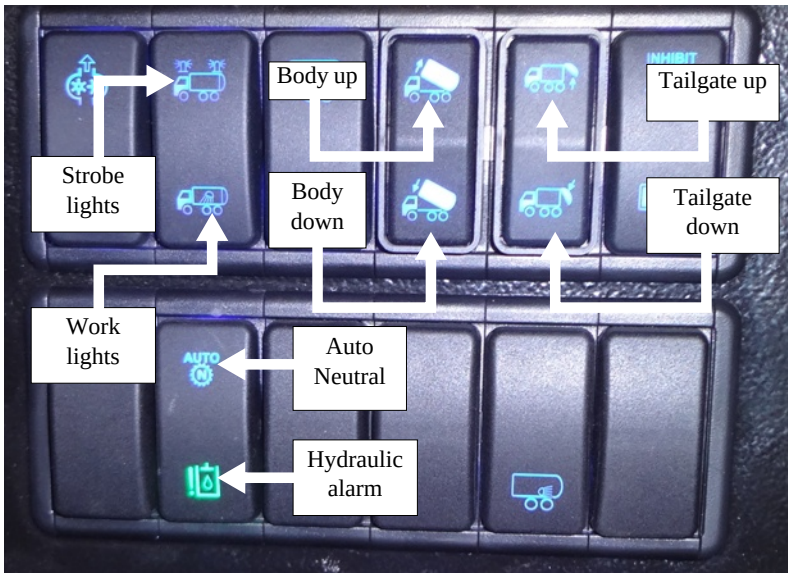


Figure 3-19 Control panel (part 2)



NOTE: The switches and indicators on the control panel vary according to the options installed on the vehicle.

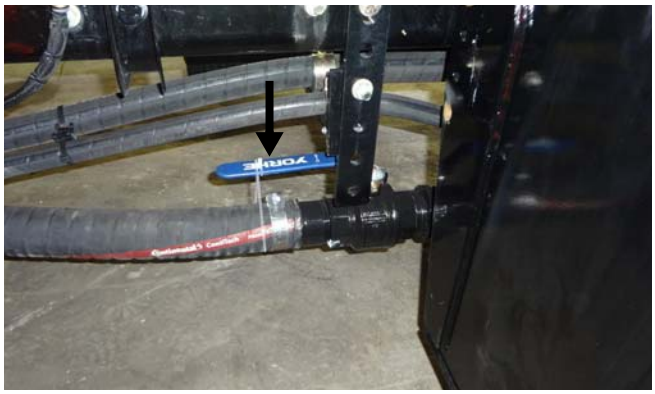
Hydraulic Pump Switch

This switch (see Figure 3-18), also known as PTO switch, engages and disengages the hydraulic pump, all the body functions (packing, body up/down, tailgate up/down) and the joystick that controls the arm. Note that the switch turns green when the pump is engaged.

- Press the switch to activate the hydraulic pump.
- Press the same switch again to deactivate the hydraulic pump.

NOTE: Do not close the main shut-off valve on the hydraulic tank even if the PTO switch is turned off. The pump is always turning whatever the engine RPM. It is very important not to let the pump run dry or without oil. Otherwise, the pump will be seriously damaged or even destroyed.

Figure 3-20 Main shut-off valve



IMPORTANT: In case of a leak in the hydraulic system, and if the vehicle has to be driven somewhere else, take off the drive shaft between the pump and the engine. Call maintenance facility and refer to the Maintenance Manual.

Body Up Switch

This control switch (see Figure 3-19) is used to raise the body. Press and keep down this switch to raise the body to the desired height.

IMPORTANT: Before using this switch, make sure that the truck is parked on safe level ground and inspect for overhead hazards, such as power lines.

When the body is off the frame a buzzer starts sounding.

Danger!

Always use the provided body safety prop when performing maintenance under a raised body. Failure to do so may result in severe injury or even death.

Body Down Switch

This control switch (see Figure 3-19) is used to lower the body. Press and keep down this switch to lower the body to the desired height. When the body touches the rod of the limit switch fixed to the frame, the buzzer stops sounding.

Tailgate Up Switch

This control switch is used to raise the tailgate. Press and keep down this switch to raise the tailgate to the desired height.

IMPORTANT: Before using this switch, make sure that the truck is parked on safe level ground.

NOTE: Remove both tailgate-locking pins before using this control switch.

Warning! Do not drive the vehicle when the tailgate is not fully closed.

When the tailgate is unlocked, both Tailgate Up and Tailgate Down switches flash red and a buzzer sounds. Also, the message "Buzzer: Tailgate Unlocked appears on the monitor screen.

Tailgate Down Switch

This control switch is used to lower the tailgate. Press and keep down this switch to completely close the tailgate or to lower it until it rests on the tailgate safety prop.

NOTE: When the tailgate is completely closed, put both tailgate-locking pins back to their place.

When the tailgate is unlocked, both Tailgate Up and Tailgate Down switches flash red and a buzzer sounds. Also, the message "Buzzer: Tailgate Unlocked appears on the monitor screen.

Packer Multi-Cycle Switch

This switch (see Figure 3-18) allows the packer to run a preset number of cycles (from 2 to 8, 3 being the default setting) with just a push of the green button (see Figure 3-23). Cycles can be stopped anytime by pressing the red button (see Figure 3-22) or by turning OFF the multi-cycle control switch. When turning OFF this switch, the packer completes the ongoing cycle, gets back to the fully retracted position and then stops.

Rubrail Lights Switch

This switch (see Figure 3-18) turns ON/OFF the rubrail lights.

- Press the switch once to turn ON the rubrail lights (switch turns green).

- Press the switch again to turn OFF the rubrail lights (switch turns blue).

Hopper Work Light Switch

This switch (see Figure 3-19) turns ON/OFF the hopper work light.

- Press the switch once to turn ON the hopper work light (switch turns green).
- Press the switch again to turn OFF the hopper work light (switch turns blue).

Strobe Light Switch

This switch (see Figure 3-19) turns ON/OFF the strobe lights and the amber flashing lights.

- Press the switch once to turn ON the strobe lights and the amber flashing lights (switch turns green).
- Press the switch again to turn OFF the strobe lights and the amber flashing lights (switch turns blue).

Crusher Panel Down Switch (optional)

Press and keep down this switch (see Figure 3-18) to lower the crusher panel (see Figure 3-21) to the desired position.

The crusher panel is an option that may be installed on an AUTOMIZER ™ HELPING-HAND vehicle. If your unit is equipped with this option, we suggest you to use it only for bulky items. In many cases, unnecessary use will slow down the operation. Bulky items can be maintained in place with the crusher panel while the packer crushes them.

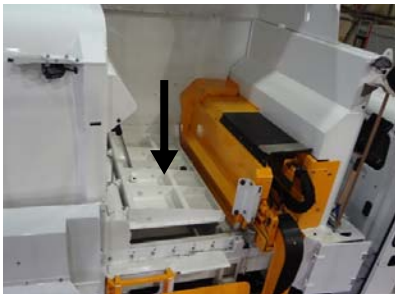
The crusher panel can be lowered upon the refuse to prevent it from popping up in front of the packing ram, thus increasing the compaction effect during the load breaking sequence.

To help during the unloading process, a good amount of garbage should be left in front of the packer and under the lowered crusher panel as you finish your collection route. Once the body is raised at landfill, you can activate the packing ram to help clear whatever could be jammed in the hopper. This procedure can also be done without the crusher panel.

Crusher Panel Up Switch (optional)

Press and keep down this switch (see Figure 3-18) to raise the crusher panel to the desired position.

Figure 3-21 Crusher panel



10-Second Inhibit Switch

This switch (see Figure 3-18), also known as gripper auto-close override, allows the operator to momentarily open the gripper in the hopper to let the object that it holds fall into the hopper. It also allows the operator to pick up elevated carts.

To enable this feature, press the Inhibit switch. This switch will then turn from blue to green.

Then press the Gripper Open button on the joystick (see Figure 3-27). The gripper will open for 10 seconds, then close automatically.

To deactivate this feature, press the Inhibit switch again. This switch will then turn from green to blue.

Caution!

The inhibit feature overrides all safety features. The operator must be aware of all applicable safety instructions and all potential consequences related to its misuse. Major equipment damage and/or injury may occur in case of misuse of this feature.

Auto-Packing Switch

The auto-packing switch (see Figure 3-18) enables the packer to automatically start cycling 2 seconds after the gripper or bucket reaches the mid-height position on its way up. If the packer is cycling at the time the arm moves a container towards the hopper (or the bucket with its contents moves towards the hopper), the packer retracts immediately to its fully retracted position no matter where it was in the hopper. This is to prevent waste from being dumped onto the packer. The only exception is that the packer will not retract if, for 3 consecutive packer cycles, the fully extended proximity switch is not reached.

When the auto-packing feature is used simultaneously with the multi-cycle feature (see *Packer Multi-Cycle Switch* on page 71), the packer will run the preset number of cycles until the arm lifts a new container towards the hopper (or the bucket brings another load towards the hopper). The multi-cycle feature is then reset.

When a cycle has been interrupted and the packer has returned to its home position, cycling resumes 2 seconds after the gripper or bucket reaches the mid-height position on its way up.

Auto-Neutral Switch (optional)

The auto-neutral system is available on units equipped with an Allison electronic transmission. The auto-neutral allows the operator to shift from “drive” to “neutral” automatically without touching the shifter lever. For more information on this, refer to the chassis manufacturer’s manual.

The optional auto-neutral switch is located on the in-cab control panel (see Figure 3-19).

- Press this switch once to activate this feature (switch turns green).
- Press this switch again to deactivate this feature (switch turns blue).

Hydraulic Alarm Switch (optional)

When provided, the hydraulic alarm switch is located on the in-cab control panel (see Figure 3-19).

This feature is used to monitor the temperature inside the hydraulic system as well as the level of hydraulic oil inside the tank. If the oil temperature gets too high or the level of hydraulic oil gets too low, the hydraulic alarm switch LED will blink red at 1Hz, meaning that a correction must be applied quickly. On the multiplexed monitor, either warning message “High Hydraulic Oil Temp” or “Low Hydraulic Oil” will appear.

- A green switch means this feature is engaged.
- A blue switch means this feature is not engaged.

NOTE: This switch should always be engaged.

In-Cab Packer Control Station

The AUTOMIZER ™ HELPING-HAND is equipped with a packer control station located on the cab console. This control station is used to operate the packer and has three big colored push-buttons on it. The operator can use these buttons to extend or retract the packer or to immediately stop packer extension/retraction when needed. The following is a short description of those three push-buttons:

Stop Push-Button (red)

The Emergency Stop button (see Figure 3-22) will stop all hydraulic functions on the truck (body up/down, tailgate up/down, packing, etc.). Pressing the red button will make the packer and the automated arm stop where they are. The red button has to be manually pulled out and the pump switch pressed again to reactivate the hydraulic system.

Figure 3-22 Stop push-button

Pack Push-Button (green)

The packer start cycle button (see Figure 3-23) activates the packer for one complete cycle. A complete cycle takes about 12 seconds.

Figure 3-23 Pack push-button

Retract Push-Button (yellow)

The packer retract button (see Figure 3-24) will retract the packer to its "home" position, that is where it was at the beginning of its stroke. This control is useful when the body is full and the material prevents the packer from reaching the end of its stroke. Manual retraction of the packer is necessary to bring back the packer.

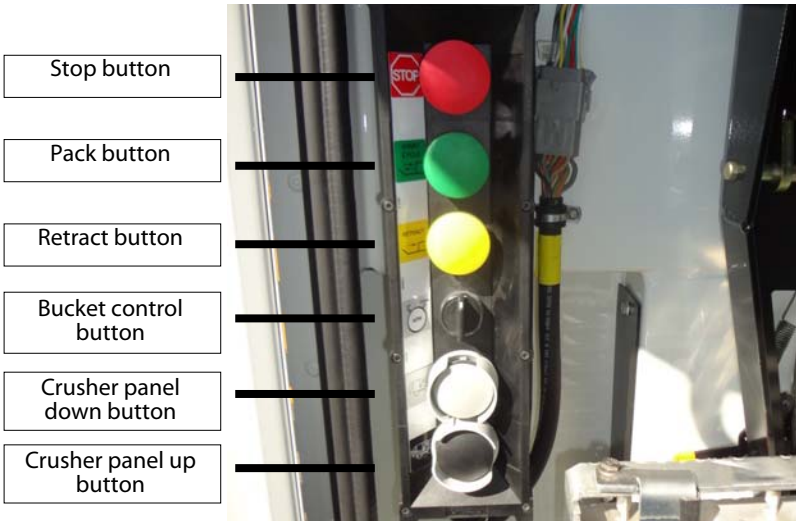
Figure 3-24 Retract push-button

Auxiliary Packer Control Station

NOTE: This control station is only found on AUTOMIZER ™ units equipped with a bucket.

The auxiliary packer control station is located next to the right-hand side folding door (Figure 3-25).

Figure 3-25 Auxiliary packer control station



Stop Button

The Emergency Stop button will stop all hydraulic functions on the truck. Pressing the red button will make the packer and the bucket stop where they are. The red button has to be manually pulled out and the pump switch pressed again to reactivate the hydraulic system.

Pack Button

The packer start cycle button activates the packer for one complete cycle. A complete cycle takes about 12 seconds.

Retract Button

The packer retract button will retract the packer to its “home” position, that is where it was at the beginning of its stroke.

Bucket Control Button

This button controls the up and down movements of the bucket. Turn it to the left to raise the bucket, to the right to bring it down.

NOTE: The bucket will stop at mid-height on its way up if you turn this button to the left when the crusher panel is down.

Crusher Panel Down Switch

Use this button to lower the crusher panel. Button must be kept pressed to activate panel movement.

NOTE: This button is inoperative if the bucket is not in its "home" position, that is right against the bucket stopper.

Crusher Panel Up switch

Use this button to raise the crusher panel. Button must be kept pressed to activate panel movement.

Joystick Controls

Arm Joystick

The joystick is used to control the Helping-Hand™ arm of the Automizer™. It can be located either on the console at the center of the cab or near the right-hand side door. In some units, two joysticks are installed in the cab: one on the console, the other near the right-hand side door.

Figure 3-26 Arm joysticks

The controls on the joystick are the handle, the deadman switch and the buttons on the device's front and back (see Figure 3-27).

- The handle is used to control the horizontal and vertical movements of the arm's two main components.
- The lower front buttons allow the operator to control the opening and closing movement of the gripper: the right button is used to open the gripper; the left button to close the gripper.

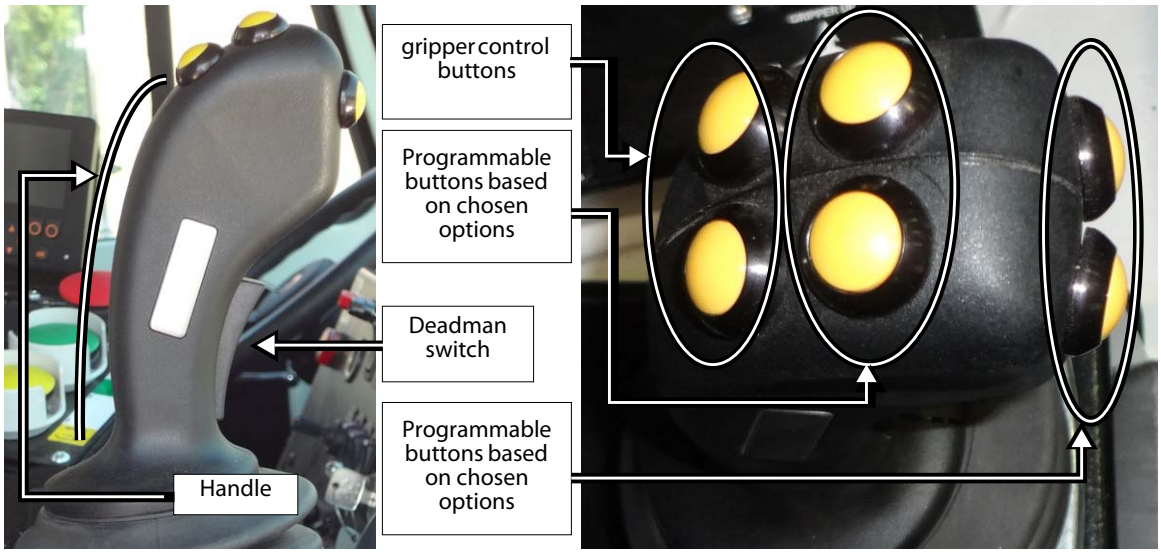
- The upper front buttons are used to control the chute (standard setup) if such a device is installed on the vehicle. The left button moves the chute to the left side of the hopper while the right button moves it to the right side. If no chute is installed on the vehicle, other functions can be controlled by these buttons based on the type of setup that is installed (crusher panel, packer, etc.).

NOTE: The chute is a piece of equipment that is optional. It can only be installed on a "co-mingle" type vehicle.

- The buttons on the back of the joystick can be used to control the crusher panel (standard setup): the left button used to raise it, the right button to lower it. If the crusher panel is controlled using the control panel instead of the joystick, other functions can be operated by these buttons based on the type of setup that is installed on the truck (packer, work lights, Auto-Dump™, etc.).
- The deadman switch is used as a safety device to ensure that every movement of the arm is absolutely wanted and controlled by the operator. That is, if the operator is not pressing the deadman switch while trying to move the arm with the joystick, no movement will occur. With such a safety feature, an accidental movement of the joystick will not be transmitted to the arm. So an operator who wants to move the automated arm with the joystick must therefore press the deadman switch.

Joysticks operate at 45° and 90° angles. As a result, you can perform two functions at the same time; for example, you can move the arm and the gripper simultaneously.

Figure 3-27 Automated arm joystick



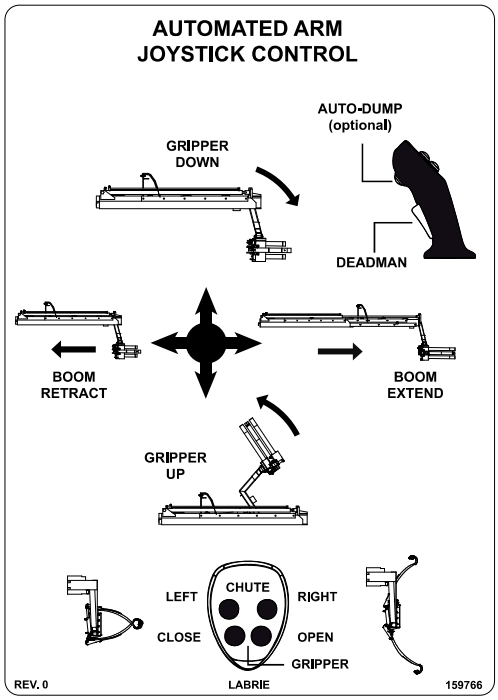
IMPORTANT: Deadman switch must be depressed to activate in/out and up/down commands.

- Shift the joystick forward at 90° toward the gripper down lettering (see Figure 3-28) to lower the gripper.
- Shift the joystick forward at 45° between the gripper down and arm extend lettering to lower the gripper and extend the arm.
- Shift the joystick toward the streetside at 90° to the arm retract lettering to retract the arm only.

- Shift the joystick backward at 45° between the gripper up and arm retract lettering to raise the gripper and retract the arm at the same time.
- Shift the joystick backward at 90° to the gripper up lettering to raise the gripper only.
- Shift the joystick toward the curbside at 90° to the arm extend lettering to extend the arm only.

NOTE: The joystick can also control the up and down movements of the bucket. Move the joystick forward to lower the bucket, backward to raise it.

Figure 3-28 Automated arm joystick control



Cab Dashboard

The following is a short description of the dashboard buttons and warning indicator lights.

Parking Brake

The parking brake must be used every time the AUTOMIZER ™ HELPING-HAND is stopped on idle position other than at regular traffic stops (see Figure 3-29).

Figure 3-29 Parking brake button

Arm Extended Warning Lights

There are 2 Arm Extended warning lights on the dashboard (see Figure 3-30). When they are flashing, they indicate that the arm is not completely retracted alongside the hopper. Do not move the vehicle in such a situation. Retract the arm until these lights stop flashing before moving the vehicle.

Figure 3-30 Arm Extended warning lights

NOTE: The above picture shows a cab setup that may be different from the one installed on your truck. This picture is for illustration purpose only.

Warning!

Never drive this vehicle if the automated arm is not parked alongside the truck or inside the hopper. Failure to retract the arm completely could result in unit and/or property damage, personal injury or even death. Both Arm Extended warning lights (see Figure 3-30) flash when the arm is extended and stop flashing when it is retracted completely.

4

Operating the AUTOMIZER™ HELPING-HAND

The different methods, procedures and necessary actions to operate the AUTOMIZER™ HELPING-HAND are presented in this section.

Warning!

You must read and understand the Operator's Manual before operating the vehicle and its equipment.

Before operating the AUTOMIZER™ HELPING-HAND, the operator must be completely familiar with all safety procedures and the location, operation and functions of all controls and indicators related to the operation of the unit.

You must complete the daily inspection before starting the vehicle. It is your responsibility to report any malfunctions or concerns to your supervisor and maintenance personnel.

Consult with your supervisor for specific rules of driving the AUTOMIZER™ HELPING-HAND.

Obey all speed restrictions and regulations.

Daily Inspection

Approaching the Vehicle

As you approach the vehicle, look for any object under or against the vehicle and check the surroundings for people, other vehicles, as well as ground and overhead obstructions. Ensure that the truck is parked at the most convenient place where you will have all the clearance required to perform a complete start-of-the-day inspection. While doing the daily inspection, look for any structural damage, inspect tires and check the hydraulic tank for air leaks.

Visual Inspection

Before starting the vehicle, the operator MUST perform a visual inspection of the truck. Ensure the engine is not running and the parking brake is set.

NOTE: Some of the items mentioned in this manual are optional and may not be found on your AUTOMIZER™ HELPING-HAND.

As part of the visual inspection, you must:

- Ensure the cleanliness of lamps, safety decals, camera lenses, mirrors, windows, and the vehicle in general.
- Ensure that safety equipment is available on board (i.e. fire extinguisher, first-aid kit).
- Ensure there is no structural damage.
- Ensure that there is no unusual wear, distortion, cracking, leaning, leaking on the vehicle.
- Ensure that the hydraulic oil level (sight gauge on tank) is as recommended (cylinders must be collapsed).
- Ensure that the hydraulic cylinders do not leak and mounting pins are secure.
- Ensure that the hydraulic tank shut-off valve is fully open.
- Ensure there is no mechanical problem: structure, rollers, hinges, door locks, wear items, etc. Report any defective system to maintenance personnel.
- Ensure there are no leaks, cracks or other types of problems on the frame area, fuel tank, hydraulic tank, air tanks (air tanks must be drained every day), cleaning trap and wheels.
- Ensure that the tailgate is fully closed and BOTH tailgate safety pins are in place.

Once the visual inspection is over, you must start the engine to check if the systems are working properly.

Starting the Vehicle

To start the AUTOMIZER™ HELPING-HAND:

1. Before starting the engine, check the following items:
   - **1 a.** Transmission shifter is on neutral.
   - **1 b.** Parking brake is on (see *Parking Brake* on page 79).
   - **1 c.** Hydraulic system is off (see *Hydraulic Pump Switch* on page 70).
2. Start the vehicle as stated in the chassis manufacturer's manual.
3. Switch ON the pump to engage the hydraulic system (see *Hydraulic Pump Switch* on page 70).

   Air pressure has to be at a minimum of 70 PSI.
4. Turn ON all light switches.
5. If required, move the truck to an appropriate area to perform the daily inspection.
6. Report any defective system to the maintenance personnel.

Body Inspection Procedure

Exit the cab to continue your inspection. Bring a rag along to clean all accessible lights, stickers, camera lenses, etc. Check for mechanical problems: rollers, hinges, door-locking mechanisms, wear items, etc. Report any defective system to the maintenance personnel.

NOTE: Some of the items mentioned in this manual are optional and may not be found on your AUTOMIZER™ HELPING-HAND.

As part of the body inspection procedure, do the following:

1. Activate the packer for a full cycle.
2. Check the automated arm operation.

Danger! Do not stand directly in the path of the arm while performing the inspection.

NOTE: If your unit is equipped with a bucket, check that it works properly by using both the in-cab joystick and the bucket operating button on the packer control station next to the folding door. Use them to raise and lower the bucket to verify good functioning. While testing, stay away from the bucket and make sure no one stands near or in the path of this equipment.

3. Check if both tailgate safety pins are in place.

   If need be, put them back in place to lock the tailgate properly.
4. As you walk along the side of the truck, clean all safety decals.
5. Check the frame area, fuel tank and air tanks (air tanks must be drained every day), cleaning traps and wheels for leaks, cracks and other types of problems.
6. At the front end, check lights and mirrors.
7. Go around and check lights, clean camera lenses, stickers, lights, etc.
8. Check for hydraulic leaks.

Arm Inspection Procedure

On a daily basis, perform a visual inspection of the automated arm looking for leaks, cracks or premature wear of the moving parts. Refer to the Lubrication section in the *Maintenance Manual* for detailed greasing points.

Figure 4-1 Automated arm

Danger!

Do not stand directly in the path of the arm while performing the inspection.

Warning!

Apply the lockout/tagout procedure at all times. See *Locking Out and Tagging Out the Vehicle* on page 43

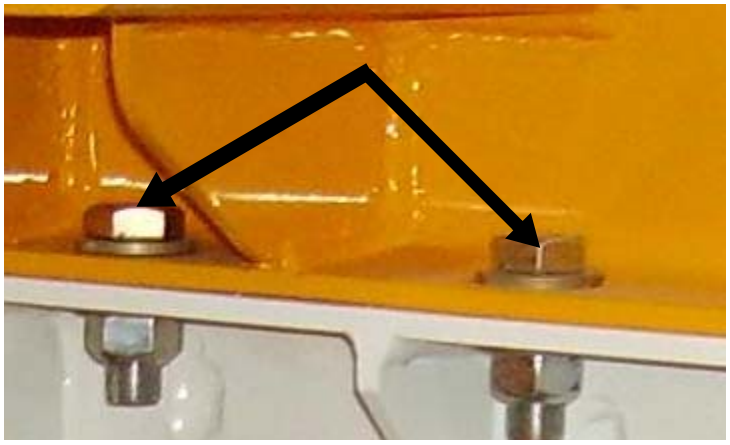
Apply the following inspection procedure:

1. Make sure to park the vehicle on safe, level ground.
2. Ensure that the parking brake is set.
3. Start the engine and engage the hydraulic pump (See *Hydraulic Pump Switch* on page 70).
4. Fully extend the arm.

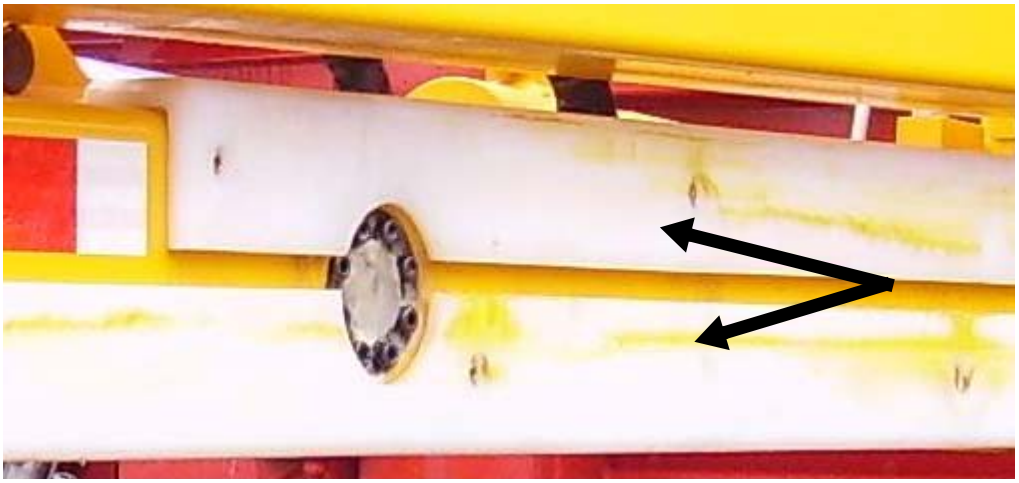
NOTE: If your unit is equipped with a bucket, extension of the arm is not possible.

5. Turn OFF the hydraulic pump and the engine.
6. Lock out and tag out the vehicle (See *Locking Out and Tagging Out the Vehicle* on page 43).
7. Perform a visual inspection of the following items:

- Mounting bolts;



- Plastic gliders;



- Gripper (left); bucket (right)

- Hoses and connections;

- Cylinders.

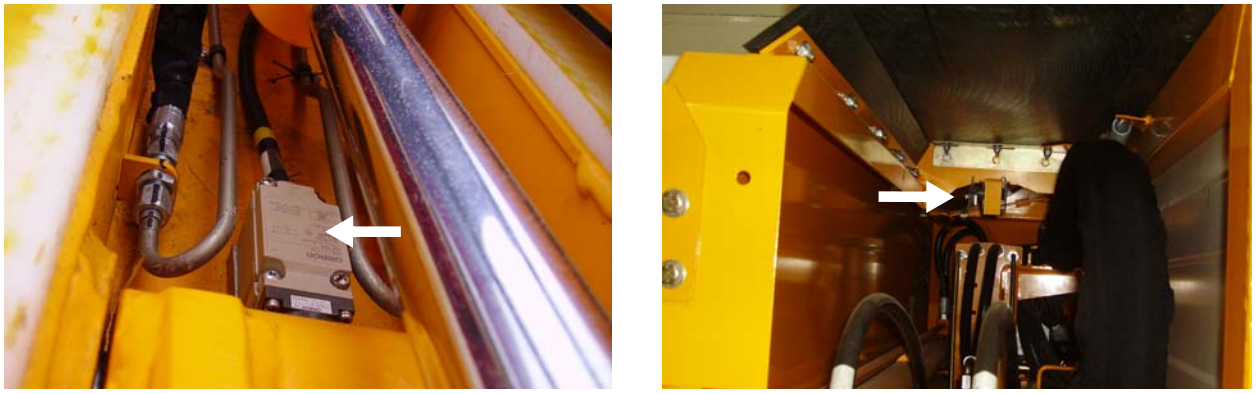
8. Check for loose nuts and bolts.
9. Check gripper rubber stripes (std.) or pads (opt.) for cracks, wear, or damage.

Figure 4-2 Optional rubber pads

10. Check limit switches. Refer to the *Maintenance Manual* for more details.

Figure 4-3 Gripper/bucket limit switch

Figure 4-4 Mid-height limit switch (left), parked limit switch (right)



Inspecting Right-Hand Side Driving Controls

NOTE: This section applies *only* to cabs modified by Labrie Enviroquip Group. If your cab has not been modified by Labrie Enviroquip Group, please refer to your cab manufacturer's recommendations.

Enter the right-hand side cab extension and operate the corresponding driving controls. Report any defective system to the maintenance personnel.

To inspect the right-hand side driving controls:

1. Turn the steering wheel to the left then to the right as you slowly move the vehicle forward.
2. Stop the vehicle by applying the foot brake.
3. Engage the parking brake and try to get the vehicle moving by throttling up with the right-hand side accelerator pedal.
4. Throttle down to idle, step on the foot brake and disengage the parking brake.
5. Apply the temporary handbrake (if equipped) and try to get the vehicle moving by throttling up with the right-hand side accelerator pedal.
6. Apply the parking brake.

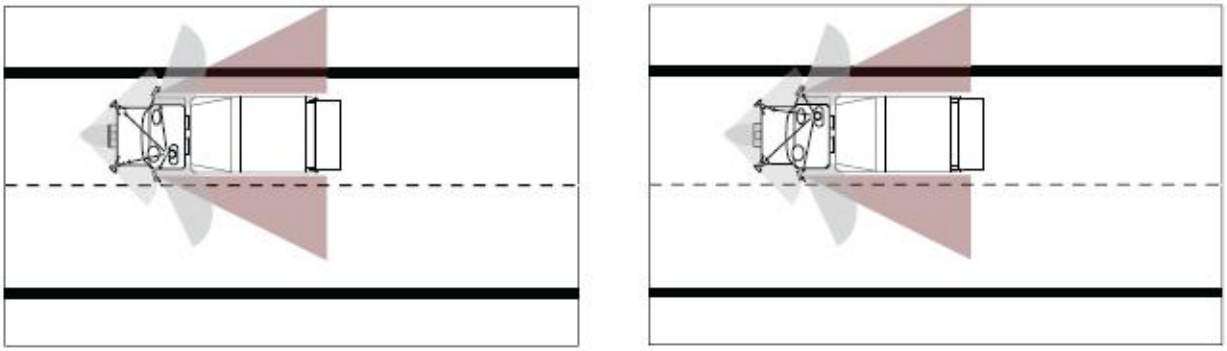
You *must* follow the inspection sheet provided by your employer. If your employer does not have any, ask his permission to use the inspection sheet on page 92.

Adjusting Mirrors

Every time you use the AUTOMIZER™ HELPING-HAND, you must adjust the mirrors to make sure that you have all-around visibility from either driving position.

The following diagrams show the ideal mirror adjustments for both driving positions.

Figure 4-5 Mirror adjustment from left and right driving positions



Setting the Floor Riser

NOTE: This section applies only to cabs modified by Labrie Enviroquip Group. If your cab has not been modified by Labrie Enviroquip Group, please refer to your cab manufacturer's recommendations.

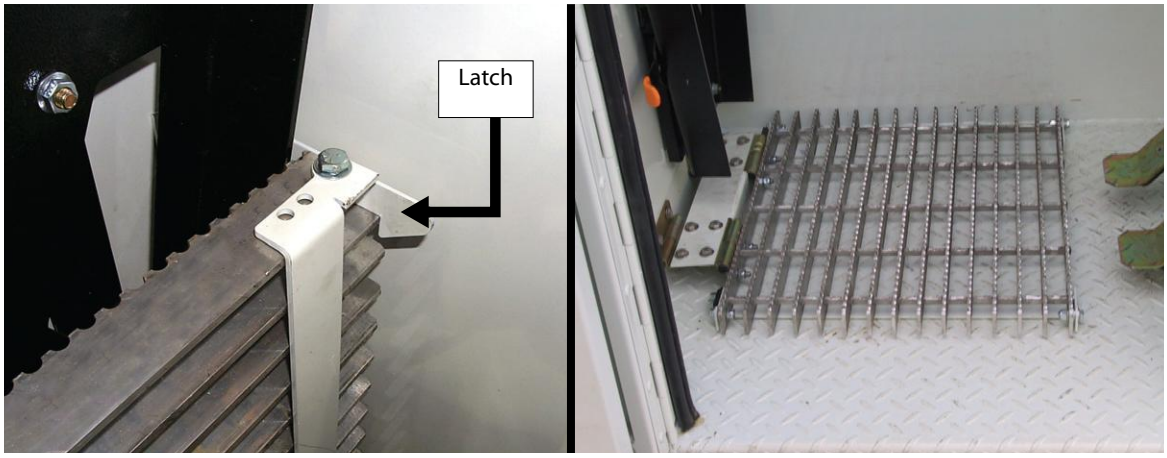
In the AUTOMIZER™ HELPING-HAND, the right-hand side driving position can be equipped with a height-adjustable floor riser. This riser makes your stand-up driving more efficient by giving you a better field of view, a more comfortable driving position, and a safer non-slippery surface to stand on. Also, its grid pattern allows drainage of any type of mud or snow that can be stuck under your boots.

Labrie recommends the use of this aluminum platform in its horizontal position at all times when driving from the right-hand side.

To set the floor riser:

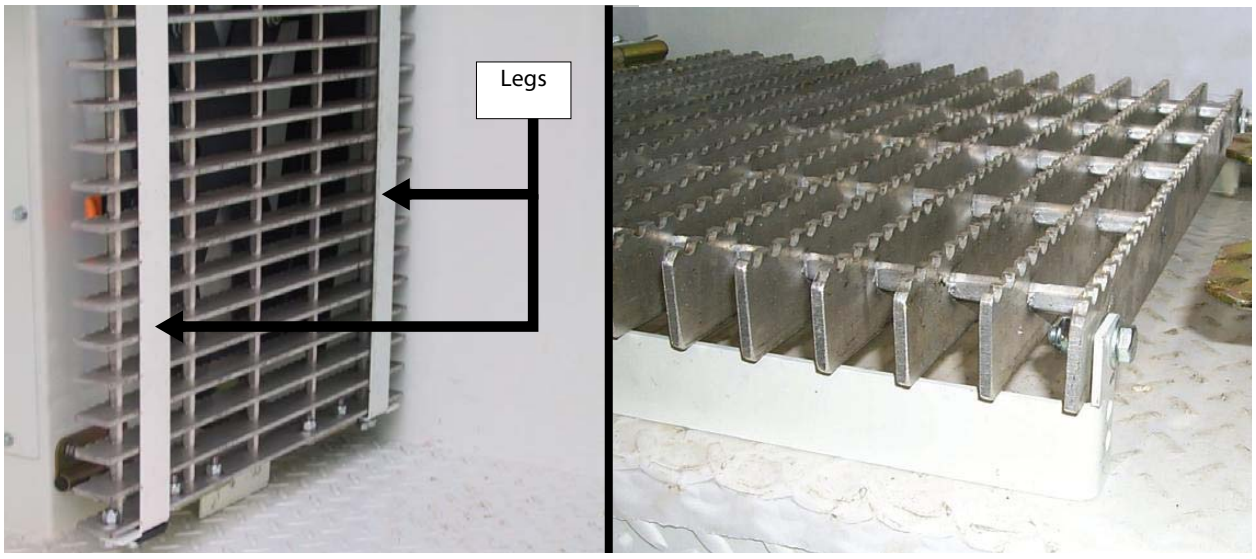
1. With the floor riser in vertical position, release the latch and pull down the floor riser to its horizontal position (see Figure 4-6).

Figure 4-6 Floor riser in vertical position (left), in horizontal position (right)



2. *If you need extra height,* hold the riser with one hand before pulling it down and, with the other hand, extend the legs.

Figure 4-7 Floor riser legs in collapsed position (left) and in extended position (right)



To put the floor riser back in its vertical position, simply reverse the procedure.

Inspection Sheet

The following is an example of an inspection sheet. The operator MUST follow the inspection sheet provided by his employer. If the employer does not have any, ask for his permission before using this example sheet.

VEHICLE CONDITION REPORT

Date: _____ Unit: _____
Driver: _____ Demo: _____
Engine Hrs in: _____ Engine Hrs out: _____
Mileage in: _____ Mileage out: _____
Start Time: _____ Finish Time: _____

FLUID LEVELS

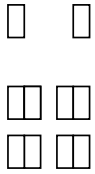
PRE	POST		Amount Added	PRE	POST		Amount Added
☐	☐	Engine Oil	Qt. _____	☐	☐	Fuel	Gal. _____
☐	☐	Hydraulic Oil	Qt. _____	☐	☐	Transmission	Qt. _____
☐	☐	Coolant	Qt. _____	☐	☐	Water	Qt. _____

CAB INSPECTIONS

If items need repair, check below and describe.

PRE	POST		PRE	POST	
☐	☐	All gages/gage lights	☐	☐	Cab horn
☐	☐	Low oil pressure	☐	☐	Exterior back-up horn
☐	☐	Low oil warning light/buzzer	☐	☐	Windshield cracks
☐	☐	Seat and seat belt	☐	☐	Windshield wipers
☐	☐	Clutch free play (Juggler)	☐	☐	Heat/Defrost
☐	☐	License/registration papers	☐	☐	Reflective triangles
☐	☐	Service brakes adjusted	☐	☐	Steering play
☐	☐	Parking brakes operational	☐	☐	Radio
☐	☐	Low air warning light/buzzer	☐	☐	Camera
☐	☐	Air compressor adequate			

TIRES
Indicate any defects.



VISUAL BODY WALK-AROUND

PRE	POST		PRE	POST		PRE	POST	
☐	☐	Battery disconnect	☐	☐	Electrical wiring	☐	☐	Compactor working
☐	☐	Body damage	☐	☐	Fire Extinguisher	☐	☐	Hydraulic leaks
☐	☐	Cab damage	☐	☐	Fuel tank/lines	☐	☐	Hydraulic pressure
☐	☐	Air lines	☐	☐	Exhaust	☐	☐	Hydraulic hoses
☐	☐	Air compressor	☐	☐	Engine	☐	☐	Wheel/Rims
☐	☐	Air dryer	☐	☐	Starter	☐	☐	Seals
☐	☐	Head lights	☐	☐	Turn signal	☐	☐	Transmission
☐	☐	Marker lights	☐	☐	Camera	☐	☐	Mirrors
☐	☐	Brake lights	☐	☐	Cable/Hooks	☐	☐	Radiator
☐	☐	Suspension	☐	☐	Arm	☐	☐	Safety devices
☐	☐	Hopper clean	☐	☐	Body clean	☐	☐	Safety decals
☐	☐	Tailgate	☐	☐	Packer	☐	☐	Cart tipper
☐	☐	Safety Interlock switches						

PRE	POST	
☐	☐	No Defects – Vehicle Condition Satisfactory

DEFECT DESCRIPTION

_____
_____
_____
_____

☐ Above defects corrected
☐ Above defects need not be corrected for the safe operation of vehicule.

		Mechanic's Comments :
DRIVER'S SIGNATURE	**DATE**	
DISTRIBUTOR SIGNATURE	**DATE**	
DRIVER'S REVIEW SIGNATURE	**DATE**	

Loading and Packing

Once you have finished the start-of-the-day inspection and made sure that your AUTOMIZER™ HELPING-HAND is ready for a work day, you can drive to the loading area to start collecting refuse.

IMPORTANT: Ensure that all malfunctions or concerns are reported to your supervisor and/or maintenance department.

IMPORTANT: Prior to commencing and subsequent to completing your collection route, the lifting arm or bucket should be parked in the hopper. Also, see NOTE on page 14.

Planning your Route

It is important to plan your route in order to be efficient. Planning your route will shorten your collection time and prevent from being caught in a traffic jam. Remember that the AUTOMIZER™ HELPING-HAND was designed exclusively to pick up roller carts.

NOTE: If your vehicle is equipped with a lifting bucket, collecting refuse is exclusively done manually.

Prior to starting your route, consult with your supervisor for specific driving rules.

IMPORTANT: Remember to obey all speed restrictions and road regulations.

NOTE: All persons operating the AUTOMIZER™ HELPING-HAND must have the proper state/province issued license to drive the chassis that the AUTOMIZER™ HELPING-HAND body is mounted to, which includes certification to operate vehicles equipped with air brakes.

Safety while Using the Packing System

Warning!

Always keep the warning lights and/or four-way flashers on when collecting refuse.

Danger!

Never attempt to reach inside the hopper area when the packer blade, the arm or the bucket is in motion. Severe injury or death may occur.

Warning!

Wear protective safety equipment (e.g. safety glasses and gloves) when you are working close to the hopper area.

Warning!

Always apply the lockout/tagout procedure before entering the hopper area. See *Locking Out and Tagging Out the Vehicle* on page 43

Loading Refuse

IMPORTANT: Before undertaking the loading process with your AUTOMIZER™ HELPING-HAND unit, ensure that you have been provided with the proper training related to the safe operation of the vehicle. As an operator, you must be familiar with the location, operation and function of all controls and warning indicators provided and adhere to all safety rules and procedures.

Using the arm to load the hopper, fill up the garbage as high as the packer and then press the green button to get a complete cycle. Be careful of explosive projectile objects and watch for overspills. See "Pack on the Go" on page 99.

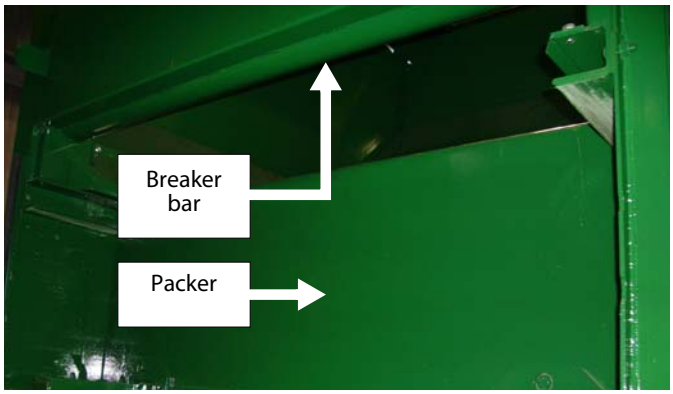
While collecting roller carts, you should start the packer cycle every time a cart has been emptied into the hopper. See *Loading Procedure* on page 95.

NOTE: If your unit is equipped with a lifting bucket, you can put in this bucket several garbage bags before activating the bucket raise button. After emptying the contents of the bucket into the hopper, start a packing cycle to push the garbage inside the waste body. See "B. To load refuse into the hopper with the optional lifting bucket:" on page 97.

Packer Description

The packer, made of high strength steel, travels the hopper to push refuse into the body. If any piece of garbage exceeds above the packer, it will be crushed or bent against the rear breaker bar, located just above the exit opening of the hopper.

Figure 4-8 Packer



Whatever debris that is not pushed inside the body on a given stroke of the packer will fall back in the hopper when the packer retracts. As another cycle is activated by the operator, what was left in the hopper in the previous stroke of the packer will be pushed into the body.

If the packer does not cycle:

- Check the multiplexed monitor screen (see Figure 3-1) for an error/warning message (see Table 1 on page 52 for a solution to that error/warning message if displayed).
- Ensure the hydraulic system is engaged.

  The Pump switch on the control panel must be green-lighted.
- Check the Emergency red button on the control panel.

  If pushed down, pull it out then press the Pump switch to reengage the hydraulic system.
- Press the yellow button to ensure the packer is completely retracted.
- Check around the packer for any obstruction preventing it from moving freely.
- Check fuses and breakers in the console.
- Report your findings to the maintenance personnel.

Loading Procedure

Warning! Improper use of the truck, including the packer and the lifting arm or bucket, can result in serious injury.

A. To load refuse into the hopper with the **lifting arm**:

1. Bring the truck to the roller cart to be dumped.

2. Slow down when near the cart.
3. Align the lifting arm on the vehicle with the roller cart that you intend to pick up.
4. With the arm parked alongside the truck, use the joystick to reach the cart (extension of the arm may be needed to reach the cart).

NOTE: See page 77 for proper operation of the lifting arm with the joystick.

If need be, close the gripper just enough to avoid slamming on adjacent carts. To do so, apply short presses on the close gripper button on the joystick (see Figure 4-9).

NOTE: The operator *must* push on the deadman switch in order to enable joystick functions (see Figure 4-9).

Warning!

Never by-pass the deadman switch with tape, tie-wrap, or anything else in order to operate the arm.

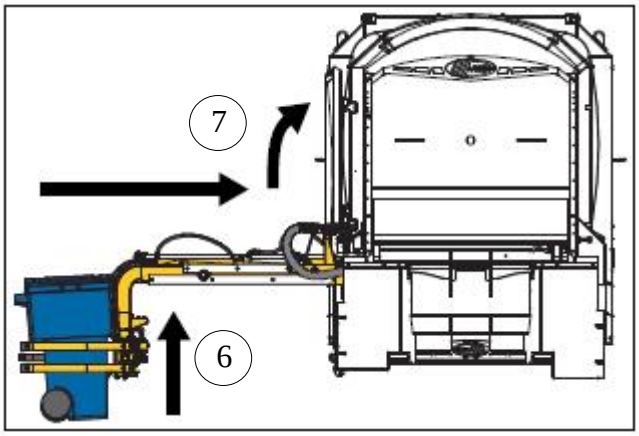
5. When the arm has reached the cart, close the gripper by pressing the close gripper button on the joystick (see Figure 4-9).
6. Raise the cart about two feet from the ground (see Figure 4-10).
7. Fully retract the lifting arm and raise it until the cart tips into the hopper, emptying all its content (see Figure 4-10).

NOTE: Full retraction of the arm is only needed when the arm is not already alongside the hopper.

NOTE: Retracting the arm and lifting the gripper can be done simultaneously. See page 77 for details on how to proceed.

Figure 4-9 Joystick

Figure 4-10 AUTOMIZER™ HELPING-HAND automated collection



8. Lower back the cart to about 2 feet above the ground.
   Ensure that the cart is empty before lowering the gripper.
9. Extend and lower the lifting arm to place the cart back to where it was.
10. Open the gripper to release the cart using the open gripper button on the joystick.
11. Fully retract the lifting arm to park it alongside the vehicle with the gripper wide open.

Danger!

Never drive the AUTOMIZER™ HELPING-HAND with the lifting arm extended and/or the gripper closed and popping out.

Warning!

Do not open the gripper while lifting up a roller cart because the cart will fall down. This may result in equipment damage and/or injury.

B. To load refuse into the hopper with the **optional lifting bucket**:

NOTE: The following procedure relates to the use of the Auto-Neutral feature and the temporary handbrake. This applies only to cabs modified by Labrie Enviroquip Group. If your cab has not been modified by Labrie Enviroquip Group, please refer to your cab manufacturer's recommendations.

1. On the control panel, turn on the Auto-Neutral switch (see *Multiplexed Switch Actuators* on page 31).

The switch should turn from blue to green.

NOTE: The Auto-Neutral feature comes with a Labrie modified cab. If your unit has this feature installed, you will see an Auto-Neutral switch mounted on the in-cab control panel (see Figure 3-19).

2. Step on the foot brake pedal to fully stop the AUTOMIZER™ near the refuse bags that you want to collect.

Figure 4-11 Foot brake pedal

3. Put the TEMPORARY HANDBRAKE switch to **ON.**

   The transmission shifts to Neutral.

Figure 4-12 TEMPORARY HANDBRAKE switch

Danger!

If you do not put the TEMPORARY HANDBRAKE switch to **ON,** the transmission remains in Drive and the AUTOMIZER™ HELPING-HAND will drive away on its own as soon as you release the brake pedal to get off the vehicle. This will result in serious injury or death.

4. Get out of the cab, collect the refuse bags and put them inside the bucket.

   You can put several refuse bags inside the bucket before emptying the bucket of all its contents into the hopper.

5. Get back in the cab and raise the bucket to dump its contents into the hopper. To do so:

   5 a. On the auxiliary packer control station (see Figure 3-25), turn the bucket control button to the left to raise the bucket. Hold the button in this position until the bucket reaches the end of its stroke on its way up.

   5 b. Once all refuse bags have been dumped into the hopper, bring the bucket back down by turning the bucket control button to the right. Hold the button in this position until the bucket touches the stopper (see Figure 4-13).

Figure 4-13 Bucket stopper

NOTE: Alternatively, you can use the joystick to operate the bucket. Pushing the joystick forward will cause the bucket to lower; pulling it backward will cause the bucket to rise.

6. Step on the foot brake pedal, and put the TEMPORARY HANDBRAKE switch to **OFF.**

   The transmission shifts to Drive; you can now safely move to the next pick-up location.

Danger!

While operating the bucket, always keep a safe distance from it and make sure no one stands near or underneath the bucket.

Pack on the Go

It may be useful to expedite the collection process and be more efficient. The AUTOMIZER™ HELPING-HAND gives you the possibility to pack on the go or allow the packer to cycle while you drive.

As you are finished loading the hopper, you can activate the Multi-Cycle switch (see *Packer Multi-Cycle Switch* on page 71) and press the start cycle button (green button). This will allow the packer to cycle, even if you are moving the vehicle to the next pickup. When moving the vehicle, the hydraulic pump will turn at engine RPM, which depends on truck speed.

The multi-cycle function allows the packer to perform up to 8 cycles when pressing the start cycle button (green button). Standard factory preset of the module is 3 cycles.

Unloading

Unloading Procedure

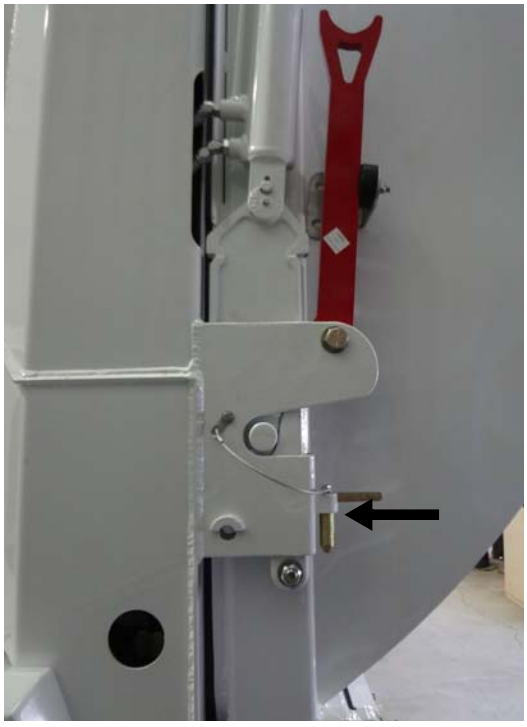
Once you have completed your collection route, park the lifting arm or the bucket inside the hopper (the crusher panel [if installed] must be in the up position). Keep some garbage not packed in front of the packer in order to facilitate the unloading process.

Warning! Ensure the overhead is clear before raising the body.

The following is the standard unloading procedure:

1. Drive the vehicle to the landfill.
2. Ensure the vehicle is on safe, stable and level ground.
3. Check the overhead clearance before opening the tailgate and raising the body.
   Make sure the air suspension is dropped or the tag axle is down (if equipped).
4. Remove both tailgate safety pins.

Figure 4-14 Safety pin



5. Open the tailgate completely by pressing and holding down the Tailgate Up switch on the in-cab control panel (see Figure 3-19).
6. Once the tailgate is completely open, raise the body by pressing and holding down the Body Up switch on the in-cab control panel (see Figure 3-19).

   Garbage should slide out.
7. Slowly move the vehicle forward to prevent the garbage from piling up under the tailgate.

IMPORTANT: This is the only time you can move the truck with the body raised. Do it very cautiously and cover the shortest distance possible. Always be aware of the overhead clearance.

8. Cycle the packer to help eject the garbage.

NOTE: It may be helpful to have some garbage left in the hopper to enhance the effect of the packer cycle on the garbage.

9. When unloading is completed, lower the body by pressing and holding down the Body Down switch on the in-cab control panel (see Figure 3-19).
10. Close the tailgate completely by pressing and holding down the Tailgate Down switch (see Figure 3-19).
11. Apply the parking brake.
12. Put both safety pins back in place.
13. Drive away from the unloading site.
14. Perform the end-of-the-day inspection (see *End-of-the-Day Cleaning and Inspection* on page 104).

Warning!

Never move the truck backwards with the body in raised position.

Never raise the body if the tailgate is not fully open.

Danger!

Always use the tailgate safety prop while working under a raised tailgate. The safety prop should be used even if the tailgate is in fully raised position.

Unloading Corrective Actions

As you are unloading the body, some garbage may fall or be blown away between the chassis and the body.

Apply the following procedure for the remaining garbage stuck on or between the chassis and the body:

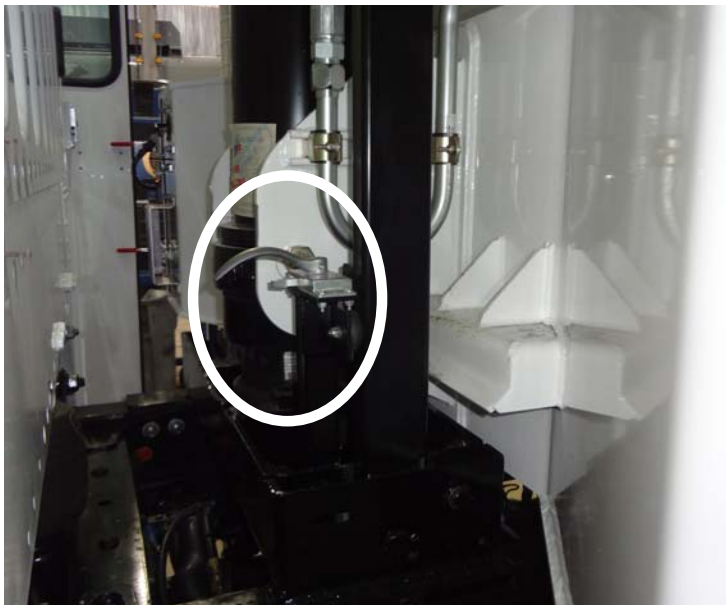
1. Lift the body until the safety prop is clear to tilt under the body (see Figure 4-15).
2. Release the safety prop by pulling the handle (see Figure 4-16).

3. Pull down the safety prop towards the body.

Figure 4-15 Body safety prop

4. Slowly lower the body until it rests on the prop.
5. Proceed with the necessary cleaning of the chassis.
6. Once finished, slightly raise the body and put the safety prop back to its vertical position.
7. Lock the safety prop.
8. Lower the body onto the chassis before moving the vehicle.

Figure 4-16 Safety prop release handle



Unloading Emergency Actions

If the truck starts to sink on one side as you unload:

Danger!

UNLOADING EMERGENCY ACTIONS

1. Stop all movement of the equipment.
2. Start or continue lowering the body.
3. If the equipment does not stop sinking, stay inside and protect yourself.

Danger!

Do not use safety prop with a loaded body. Never stand under a raised loaded body.

If the body does not raise:

- Check the multiplexed monitor screen (see Figure 3-1) for an error/warning message (see Table 1 on page 52 for a solution to that error/warning message if displayed).
- Ensure the hydraulic system is engaged.

  The Pump switch on the control panel must be green-lighted.
- Make sure the air pressure is above 70 PSI.
- Check all fuses in the console.
- Contact the maintenance facility if the problem persists.
- Air suspension needs to be dropped (if equipped).
- Tag axle must be lowered (if equipped).

Emergency Actions

Hydraulic Oil Spill

In the event of a hydraulic spill, do the following:

1. Press the Emergency red button on the packer control station.
2. Turn OFF the truck engine.
3. Close the shut-off valve on the hydraulic tank (see Figure 2-20).
4. Carefully inspect and find the cause of the leak.
5. Call the maintenance facility and report your findings.
6. If the leak cannot be repaired on site and the vehicle cannot be towed, remove the pump drive shaft before restarting the engine.
7. When it is time to restart the pump after repair, ensure that the shut-off valve on the hydraulic tank is fully open and that there is sufficient oil in the hydraulic tank.

End-of-the-Day Cleaning and Inspection

Daily Hopper Cleaning

Cleanliness is a key part of safety and critical to the vehicle maintenance.

Daily cleaning of the hopper and chassis is crucial because it will minimize breakdowns and maintenance expenses. Daily cleaning of lights, reflectors, warning indicators and safety stickers makes your vehicle more visible and safer for surrounding pedestrians and vehicles.

IMPORTANT: Before performing any cleaning on the vehicle, always make sure that it is parked on level ground and that the parking brake is applied.

The procedures described in this section are necessary for the vehicle to be well maintained and for the operator to be safe while cleaning the vehicle.

Hopper cleaning procedure:

1. Park the vehicle on level ground and apply the parking brake.
2. Fully extend the arm and the packer.

   If your unit is rather equipped with a lifting bucket, lower it until it rests against the bucket stopper.
3. Lower the crusher panel (if installed) and clean all accumulated dirt. Then, raise the crusher panel completely.
4. Perform the lockout/tagout procedure (see *Locking Out and Tagging Out the Vehicle* on page 43).
5. Open the clean-out traps located on each side of the truck (see Figure 4-17).
6. Clean all accumulated dirt under cylinder brackets and inside the side tracks using the hoe and pressurized water if necessary. Be careful with proximity switches to prevent misalignment.
7. Perform a visual inspection for leaks or wear in this area.
8. Rake small pieces of garbage out of the clean-out doors using the hoe.

Figure 4-17 Clean-out door (left) and hoe (right)

9. Finish cleaning the area with pressurized water.

Daily Chassis Cleaning

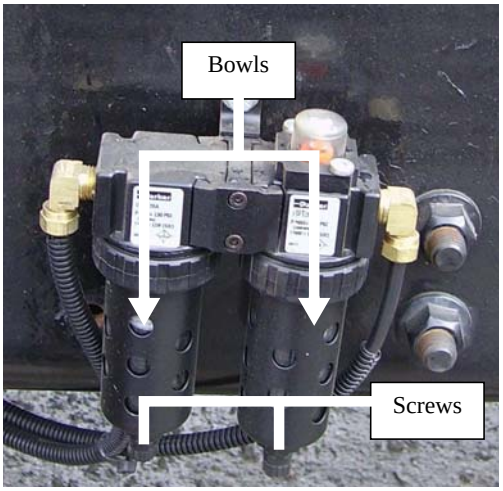
The following is the daily chassis cleaning procedure:

1. Start the engine.
2. Engage the hydraulic pump by pressing the Pump switch on the control panel.
   The switch turns green.
3. Using the Body Up switch on the control panel, raise the body until the safety prop is free to tilt under the body.
4. Release the safety prop using the prop release handle (see Figure 4-16).
5. Pull down the safety prop towards the body.
6. Slowly lower the body until it rests on the prop using the Body Down switch on the control panel.
7. Turn OFF the pump and the truck engine.
8. Apply the lockout/tagout procedure (see *Locking Out and Tagging Out the Vehicle* on page 43).
9. Clean with pressurized water between the body and the frame.
10. Clean the rear of the cab.
11. Perform a visual inspection for leaks or wear in this area.
12. When finished, start the engine and reengage the hydraulic pump.
13. Raise the body just enough to bring the safety prop back to its vertical position, then lower the body until it rests on the frame.
14. Turn OFF the pump and the truck engine.
15. Clean the body all around with water and soap.
16. Rinse.

Water Trap Bleeding

Usually located on the right-hand side truck frame, near mid-section, the water trap must be drained at the end of every working day. Just slacken off both water trap bleed screws under the bowls and catch the water and oil that flow out with a rag. The water trap helps keep moisture out of the air system.

Figure 4-18 Water trap



Troubleshooting Quick Reference

If an electrical failure occurs and prevents the operator from retracting the arm, the following procedure can be applied:

1. Set the parking brake and put the transmission to neutral.
2. Install a control lever on the arm extend/retract section of the proportional valve (see Figure 4-19 and Figure 4-20) located on the left-hand side of the vehicle. With this lever retract the arm slowly until it reaches its home position.

Danger!

Stay clear of the path of the arm at all times and do not open the gripper in mid-air when performing this procedure.

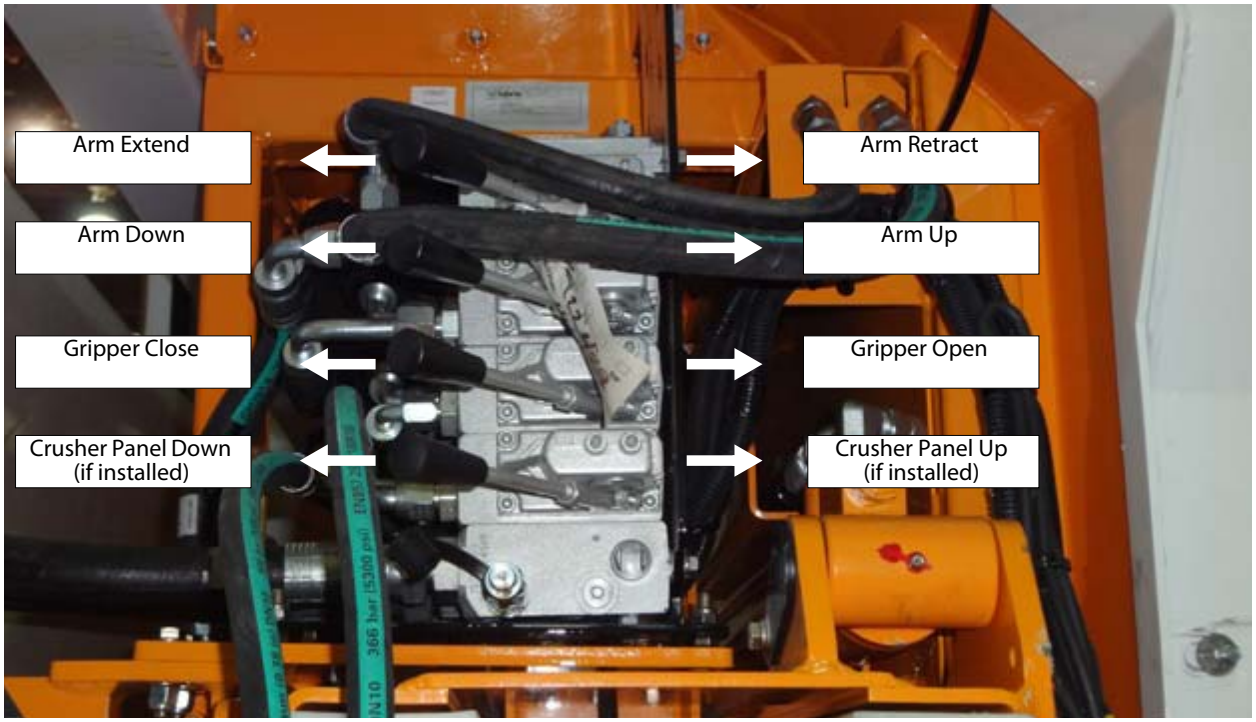
Figure 4-19 Arm proportional valve

3. Contact your Service Center and refer to the Troubleshooting section of the *Maintenance Manual*.

Danger!

Never drive this vehicle if the automated arm is not retracted to its home position. The vehicle would be too high and/or too wide to be driven safely. Failure to completely retract the arm will result in unit and/or property damage, personal injury or death. Warning red lights on the dashboard start flashing as soon as the arm begins to extend.

Figure 4-20 4-section proportional valve



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