

AUTOMIZER VERSA HAND™ OPERATOR MANUAL

1/21/09 PART **N**UMBER: #90375-01

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INTRODUCTION

LIABILITY

Labrie Environmental Group assumes no liability for any incidental, consequential or other liability from the use of this information. All risks and damages, incidental or otherwise, arising from use or misuse of the information contained herein are entirely the responsibility of the user. Although careful precaution has been taken in the preparation of this material, we assume no responsibility for errors or omissions.

INTRODUCING THE AUTOMIZER VERSA HAND TM

The AUTOMIZER VERSA HAND™ is a straight-frame side-loading vehicle, manufactured to the highest standards; designed to fully automate the collection of residential and commercial refuse and recycling materials in narrow streets and alleys.

PRODUCT OVERVIEW

This zero-grab and zero-swing out automated arm is the lifting mechanism for narrow streets and alleys. Its reach facilitates bin collection in areas where up until now automated collection was unthinkable.

Thanks to its unique tapered body, the AUTOMIZER VERSA HAND™ has the best compaction and load distribution available on today's market. The tapered body design also results in smoother, facilitated unloading at the landfill or transfer station. Less time spent at the landfill means more stops collected per day.

AWARNING

The AUTOMIZER™ units equipped with the VERSA HAND™ must be operated by only one person.

To contact Labrie Plus



Address 3630 Stearns Drive

Oshkosh, WI 54904

Toll free: 1-800-231-2771

Telephone: 1-920-233-2770

General Fax:1-920-232-2498

Sales Fax: 1-920-232-2498

Parts, service and warranty (during business hours, 7 am through 7 pm Central Standard Time)

Technical support service (24 hours)

Web Site: www.labriegroup.com

E-mail: sales@labriegroup.com

IMPORTANT

FOR TECHNICAL SUPPORT AND PARTS ORDERING, THE SERIAL NUMBER OF YOUR VEHICLE IS REQUIRED, THEREFORE, LABRIE ENVIRONMENTAL GROUP RECOMMENDS TO KEEP RECORD OF THE INFORMATION FOUND ON THE VIN PLATE WHICH IS LOCATED IN THE CAB.

SAFETY

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

SAFETY IS EVERYONE'S BUSINESS

Personnel are not to use the equipment if they are not well acquainted with the operations as well as all the safety precautions of such operations.

A DANGER

INDICATES AN IMMINENTLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN SERIOUS INJURY OR DEATH.

AWARNING

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN SERIOUS INJURY OR DEATH.

ACAUTION

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY.

CAUTION

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN PROPERTY DAMAGE.

EMPLOYER RESPONSIBILITY

- 1. Regularly unit inspection, including all safety equipment.
- 2. Repair any present or potential mechanical malfunction.
- 3. Keep records of unit inspections, maintenance, repairs and malfunctions.
- 4. Ensure the unit is equipped with appropriate lighting.
- 5. Provide adequate training to all operators.
- 6. Monitor the employees operation of equipment and take appropriate action to ensure proper and safe use of the equipment.

EMPLOYEE RESPONSIBILITY

- 1. Learn the safe operating procedures for the unit, and consult your supervisor if any procedure is unclear.
- 2. Use the unit as per manufacturer's guidelines only.
- 3. Perform routine daily unit inspections.
- 4. Report any malfunctions or concerns immediately to his supervisor.

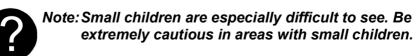
ACAUTION

DO NOT USE DAMAGED EQUIPMENT.

GENERAL SAFETY

Do

- 1. Inspect the body and all systems at the beginning of each day.
- 2. Check the area is clear of any people or possible instructions.



3. Wear gloves, safety glasses, safety boots and any other safety equipment when loading and packing refuse.

- 4. Check mirrors, windows, lights and monitor equipment to ensure they are clean and adjusted properly.
- 5. Check for explosive trash, for example, televisions, paint cans and fluorescent light tubes.
- 6. Be cautious while driving with an unevenly distributed load.
- 7. Inspect for overhead hazards, that is, power lines, prior to hoisting body, using arm or climbing on main body.
- 8. Use the body safety prop when servicing under the body.
- 9. Use the tailgate safety prop before entering the area between the main body and tailgate.
- 10. Obey all warning and operation decals.

Don't

- 1. Do not operate any unit while under the influence of alcohol, narcotics or other intoxicants.
- 2. Do not talk on a cell phone and/or listen to loud music while driving. Cell phones and a loud radio can be a distraction that can have fatal consequences.
- 3. Do not wear jewelry or loose clothing.
- 4. Do not leave the unit before it is brought to a complete stop and work brake or parking brake is applied.
- 5. 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. Refer to the lockout/tagout procedure.
- 6. Do not hoist the body on uneven ground.
- 7. Do not back up the truck when the body is raised.
- 8. Do not drive with the tailgate fully open other than to remove trash at the landfill.
- 9. Do not use body safety prop to prop a loaded body.

SAFETY PRECAUTIONS

1. Do not operate this vehicle before having read and completely understood this manual and the safety labels on the vehicle. Maintenance personnel must also read and understand the *Maintenance Manual* for this vehicle (and the maintenance related information in this manual). In case of any doubt, see your supervisor for clarification.

- 2. The Automizer[™] units equipped with the VERSA HAND[™] Lifting Arm must be <u>operated by only one person</u>.
- 3. The operator of the unit must have a clear view of the operation of the lifting arm at all times. The operator must be able to stop the motion of the arm at any time, in order to prevent injury to surrounding people, damage to property or to the lifting arm itself.
- 4. The operator of the VERSA HAND™ lifting arm shall make sure that any people or obstructions are far away from the arm before moving it. Failure to do so may result in unit and/or property damage, personal injury or even death.
- 5. At the beginning of every working day, inspect the body, the packing system and any system that might endanger the safety of the public and/or the operator.
- 6. Verify that the mirrors, brakes, accelerator pedal, steering wheel and turn signals are in good working order.
- 7. Do not operate this equipment if there are any signs of damage or incomplete repairs.
- 8. Report any doubts and any equipment safety service requirements to your supervisor.
- 9. Keep both hands on the steering wheel at all times for better control.
- 10. Do not leave the driving position until the vehicle is completely stopped and the parking brake applied.
- 11. When the vehicle is parked, the parking brake must be applied.
- 12. For any work, cleaning or inspecting being done between the body and the chassis, the body safety prop MUST be used. The vehicle must also be on level ground.
- 13. Watch and be sure that there are no people at the rear of the vehicle when opening and closing the tailgate(s) and/ or when raising the body.

▲ DANGER

- 14. Do not get into the hopper compartment or try to repair anything behind the packer when it is working or when the hydraulic pump is still running. Personnel authorized to get into the hopper MUST first complete the lockout/ tagout procedures required by the employer.
- 15. NEVER stand underneath a raised arm/grabber, since no arm cylinder is equipped with a holding valve. Should a

hydraulic component break, such as an hydraulic hose, failure to stay away from the arm may result in personal injury or even death.

AWARNING

DO NOT OPERATE OR SERVICE THE LIFTING ARM UNTIL YOU HAVE BEEN FULLY TRAINED, AND HAVE READ AND UNDERSTOOD THE OPERATOR AND MAINTENANCE MANUALS SUPPLIED WITH THIS UNIT.

AWARNING

MAKE SURE THAT ALL PEOPLE OR ANY 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.

AWARNING

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.

A DANGER

NEVER DRIVE THIS VEHICLE IF THE LIFTING ARM IS NOT FULLY RETRACTED ALONGSIDE THE TRUCK. THE UNIT WOULD BE TOO HIGH AND/OR TOO WIDE. FAILURE TO RETRACT THE ARM WILL RESULT IN UNIT AND/OR PROPERTY DAMAGE, SEVERE INJURY OR EVEN DEATH. FLASHING LIGHTS (RED) ON DASHBOARD TURN ON WHEN THE ARM IS EXTENDING.

AWARNING

REMOVE ALL CONTROL LEVERS FROM THE PROPORTIONAL VALVE. THESE CONTROL LEVERS SHOULD BE USED FOR MAINTENANCE PURPOSES ONLY.

AWARNING

PRIOR TO CHANGING DRIVING POSITION, STOP THE VEHICLE, APPLY PARKING BRAKE, PUSH EMERGENCY PUSH 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 EXTINGUISHER



The fire extinguisher provided is 5 lbs (minimum capacity). It must be checked regularly by qualified personnel.

It is suggested that one ABC type fire extinguisher be easily accessible outside of the truck just behind the cab area.

SAFETY KITS

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

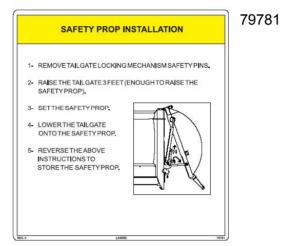
SAFETY LABELS LOCATION

Pay careful attention to all safety labels and warnings while working in and around the AUTOMIZER VERSA HAND™. Keep your labels clean and in good condition at all times. For replacement labels, please call Labrie Plus.

LABELS ON BODY



















47348 **WARNING**

Remove all control levers from automated arm valve. Use these control levers for maintenance purposes only. Even with pump switch off, or red button pushed in, automated arm remains operable.























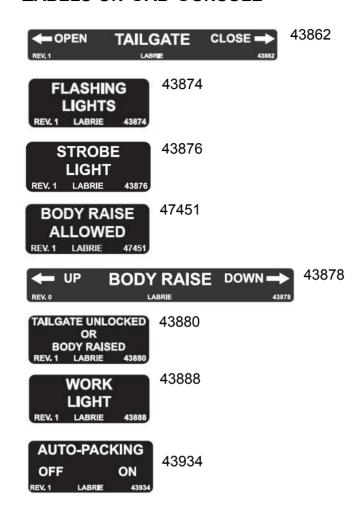
LABELS ON TAILGATE







LABELS ON CAB CONSOLE



Note: Labels on cab console may vary depending on the options and features installed on the unit.

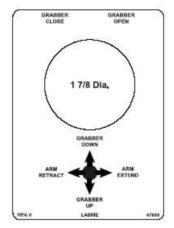
LABELS LOCATED INSIDE CAB



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BODY PROP INSTALLATION INSTRUCTIONS

- 1- RAISE THE BODY TO BE ABLE TO TILT THE SAFETY PROP UNDER THE BODY (8 FEET)
- 2- RELEASE THE SAFETY PROP USING THE HANDLE
- 3- SET THE SAFETY PROP INTO POSITION
- 4- LOWER THE BODY ON THE SAFETY PROP
- 5- REVERSE THE ABOVE INSTRUCTIONS TO STORE THE SAFETY PROP



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MARNING

Prior to changing driving position:

- Stop vehicle.
 Apply parking brake.
 Push emergency red button.
- Stop engine.
 Adjust mirrors and control switches to selected. driving position.

 If applicable, move arm control joystick into position.













SAFETY FEATURES

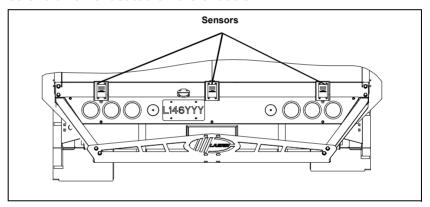
GLOBAL MOTION SENSORS (OPTIONAL)

This OPTIONAL safety system is used to detect objects located behind the truck. This system is turned on by placing the transmission in reverse.

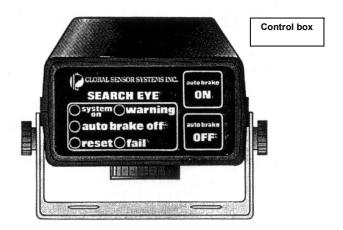
AWARNING

THE OPERATOR MUST READ THE INSTALLATION MANUAL OF THE SYSTEM MANUFACTURER BEFORE USING THE SYSTEM.

The main components of this system are a control box, located in the cab, sensors, located on the rear bumper and the solenoid valve located on the chassis.



When the system is on, a green light on the cab control box illuminates to indicate that the system is operating. When an object is detected, a yellow light comes on, an audible alarm is heard, and the vehicle brakes are automatically applied. The brakes can be disabled by pressing the AUTO BRAKE OFF switch on the control box. This will cause a red warning light to illuminate indicating the brakes will not automatically engage. The yellow light and audible alarm will still operate in this mode as a safety precaution.



AWARNING

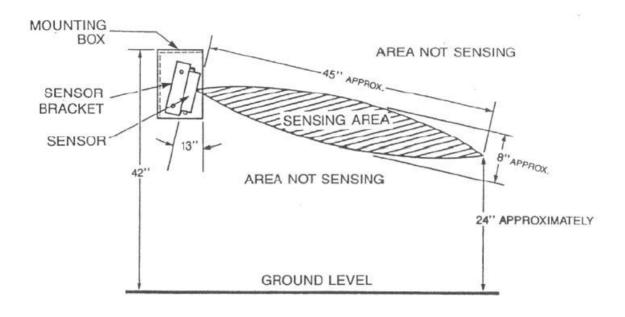
SENSORS LENSES MUST BE KEPT CLEAN TO ENSURE PROPER OPERATION OF THE SYSTEM. IF THE LENSES ARE ALLOWED TO BECOME DIRTY, SYSTEM RANGE WILL BE DECREASED.

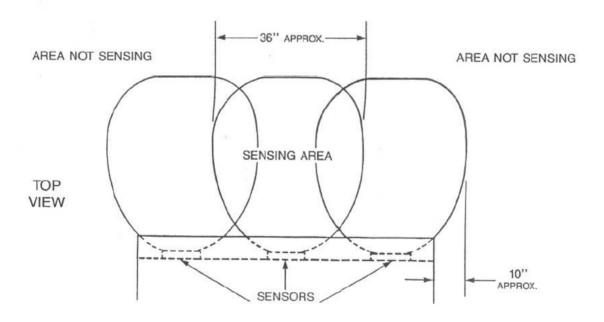
The sensors are installed on the rear bumper and adjusted in order to obtain low coverage to ground.

To adjust the sensors, refer to the *Installation Manual* of the manufacturer.

Troubleshooting and Maintenance

Refer to the *Troubleshooting Guide* of Gobal Sensor Systems Inc.





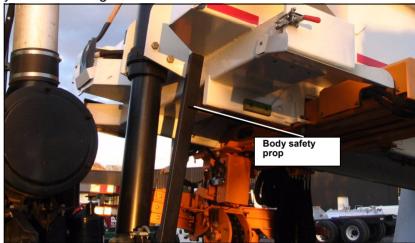
Note: Illustrations taken from the Installation Manual of Global Sensor Systems Inc.

BACK UP ALARM

The back up alarm sounds when the transmission is put into reverse or when the tailgate opens.

BODY SAFETY PROP

The body safety prop ensures that the body will not lower when you are working beneath it.



Setting the Body Safety Prop

A DANGER

ALWAYS USE THE BODY SAFETY PROP WHEN PERFORMING MAINTENANCE UNDER A RAISED BODY. FAILURE TO DO SO MAY RESULT IN SEVERE INJURY OR EVEN DEATH.

- 1. Start the engine.
- 2. Make sure there is enough clearance before raising the body.
- 3. Raise the body until the safety prop is free to tilt under the body.
- 4. Release the safety prop using the safety prop handle.
- 5. Place the body safety prop properly.
- 6. Lower the body until it rests on the safety prop.
- 7. Apply the lockout/tagout procedure before performing maintenance under the body.

TAILGATE SAFETY PROP

Setting the Tailgate Safety Prop

To set the tailgate safety prop, apply the following procedure:

- 1. Make sure there is no garbage inside the body.
- 2. Remove the tailgate locking mechanism safety pins.

A DANGER

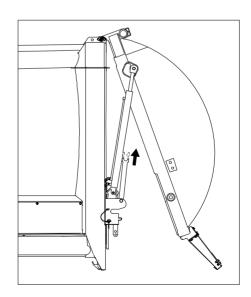
MAKE SURE THAT NO ONE IS STANDING BEHIND THE TRUCK AND THAT THERE IS NO WASTE MATERIAL IN THE BODY PRIOR TO RAISING THE TAILGATE.

- 3. Start the engine.
- 4. Turn the pump switch ON.

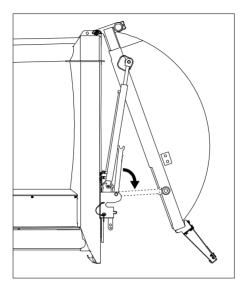
▲ DANGER

MAKE SURE NO ONE IS STANDING BEHIND THE TRUCK PRIOR TO RAISING THE TAILGATE.

- 5. Open the tailgate and raise it about 3 feet high (enough to raise the safety prop) by using the tailgate control lever in the cab console.
- 6. Pull the safety prop upward.



7. Set the safety prop.

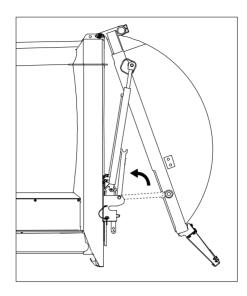


8. Lower the tailgate onto the safety prop.

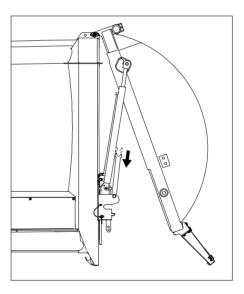
Putting the Tailgate Safety Prop Back in Place

To put the tailgate safety prop in its home position, apply the following procedure:

- 1. Start the engine.
- 2. Turn the pump switch $\mathbf{O}\mathbf{N}$ and raise the tailgate about 3 feet high.
- 3. Raise the tailgate safety prop.



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



- 5. Completely close the tailgate by using the tailgate control lever in the cab console. The **TAILGATE OPEN** light indicator shall turn off.
- 6. Put the safety pins back in place.



CAMERA SYSTEM (OPTIONAL)

Optional monitor and cameras can be installed inside the cab and throughout the vehicle. The AUTOMIZER VERSA HAND™ can be equipped with up to three (3) cameras.





The operator can choose between the camera on the tailgate, the one inside the hopper and the one aimed at the arm. The monitor controls each of these cameras using a camera selector switch. There's also an automatic mode (when the truck is equipped with 3 cameras) that allows the cameras to switch automatically (rear camera when the truck is in reverse, camera in the hopper when the arm is lifting, camera aimed at the arm when he arm is going down). Since many types of monitors and cameras can be installed on the vehicle, refer to the camera manufacturer manual provided with the vehicle.



TAILGATE LOCK VALVE

This lock valve ensures that the tailgate will not open during the packing cycle. It is located under the rear section of the body.



PRIOR TO START UP

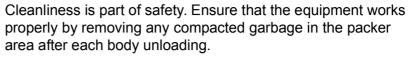
Before starting the vehicle, ensure that no system will engage and start to operate as you are starting the engine. All electrical controls should be turned off and the hydraulic pump disengaged.

The main valve on the hydraulic tank should be open.



Once the engine is started, wait until the air pressure is **above** 70 PSI; the audible alarm will stop as the air pressure reaches 70 PSI. You can then operate the equipment.

CLEANLINESS





Clean all the truck's lights and safety stickers, so you and the surrounding pedestrians and vehicles will be aware of the truck at all times. Use the hoe to rake dirt out of cleaning traps on each side of the vehicle.

See "End of the Day Cleaning and Inspection" on page 55.

If the truck is equipped with cameras without lens protector, make sure that all lenses are clean.

LOCKOUT/TAGOUT PROCEDURE

This recommended lockout/tagout procedure should be followed whenever you are inspecting, cleaning or repairing the AUTOMIZER VERSA HAND™.

ACAUTION

FAILURE TO FOLLOW THE LOCKOUT/TAGOUT PROCEDURE MAY RESULT IN SERIOUS INJURY OR DEATH.





- 1. Apply the parking brake.
- 2. Switch OFF the hydraulic pump.
- 3. Move any of the hydraulic or pneumatic controls to relieve any residual pressure in the system.
- 4. Shut off the engine, remove keys from ignition and store keys in a safe controlled area (preferably on your person).
- 5. Turn off and lock the battery switch.
- 6. Chock all the wheels.



Note: If the Automizer Versa Hand™ is equipped with a master switch on the battery set, you must turn it off.



- 7. Put an OFF SERVICE tag on the driver's wheel.
- 8. Put an OFF SERVICE sign on the front windshield.
- 9. Use a safety prop to block any system that could move by gravity. (Open tailgate, etc.)
- 10. Drain all air tanks.

SHUT DOWN PROCEDURE

If the truck is parked for an extended period of time, follow the chassis manufacturer's shutdown procedure as well as maintenance requirements and ensure the following procedure:

- 1. Park on a hard and level ground.
- 2. Apply the parking brake.
- 3. Make sure that all moving parts are in their "home "position (tailgate, arm, body, packer, etc.).
- 4. Turn off the hydraulic pump.
- 5. Turn off the electrical systems.
- 6. Turn off the engine.
- 7. Turn off the battery master switch (if equipped).

DRIVING THE VEHICLE

The Automizer™ side loader 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 Environmental 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).

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

AWARNING

IF THE VEHICLE HAS TO BE PARKED FOR AN EXTENDED PERIOD OF TIME, ALWAYS APPLY THE PARKING BRAKE.



RIGHT-HAND SIDE DRIVING POSITION

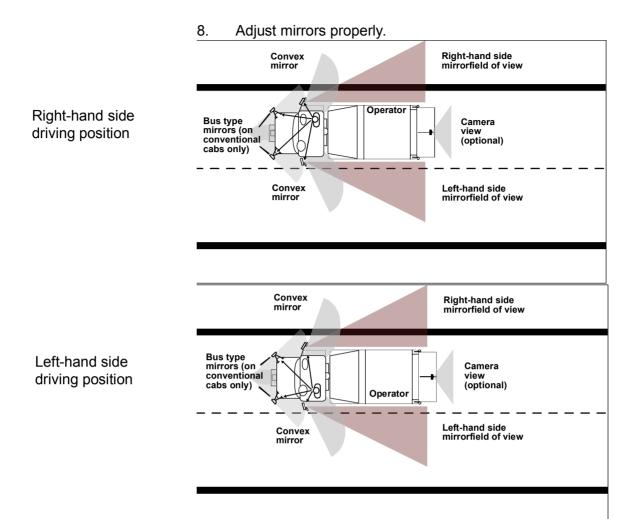
The following procedure applies **ONLY** to cabs that had been modified by Labrie Environmental Group. It must be followed at the beginning, but also at the end of the collection route in order to revert to the left-hand side driving position.

Note: This procedure applies only to vehicles that had been modified by Labrie Environmental 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** forget the following procedure and follow chassis manufacturer's recommandations.

Before using the right-hand side driving position:

- 1. Drive the vehicle to the beginning of the collection route.
- 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 Shift mode control switch to the right-hand side. This switch enables all the electrical accessories of the selected driving position.
- 7. Switch the arm control joystick on the right-hand side of the cab.



CONTROLS AND INDICATORS

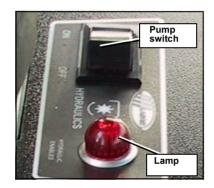
The AUTOMIZER VERSA HAND™ has a series of controls and indicators that allow the user to operate the different functions installed on the vehicle more easily. Such controls and indicators are mainly located in the cab and the following is a description of each one of them.

PARKING BRAKE



The parking brake located in the cab, usually in the center of the dashboard, must be used every time the AUTOMIZER VERSA HAND TM is stopped on idle position other than the regular traffic stops.

PUMP SWITCH



This switch, which is also called PTO switch, engages and disengages the hydraulic pump as well as the joystick that controls the arm. A lamp next to the switch illuminates when the pump is active.

- Press the left-hand side of the switch to activate the hydraulic pump.
- Press the right-hand side of the switch to deactivate the hydraulic pump.



Note: Even if the PTO switch is turned off, the pump is always turning whatever the engine's 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.

WARNING



Cylindrical tank shown

DO NOT CLOSE THE MAIN VALVE ON THE HYDRAULIC TANK EVEN IF THE PTO SWITCH IS TURNED OFF. THE PUMP IS ALWAYS TURNING WHATEVER THE ENGINE'S RPM. FAILURE TO DO SO MAY SERIOUSLY DAMAGE OR EVEN DESTROY THE PUMP.

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

CAB CONSOLE

The cab console is located in the middle of the cab for easy access during waste collection and operation.

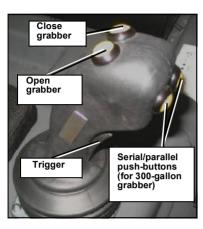
The following sections provide an overview of the console controls with some optional features. The layout of the console may change depending on features installed on the vehicle.

The Automizer[™] has a single packer control station located **on the cab console**. Here is the description of all the controls and buttons found on the packer control station.



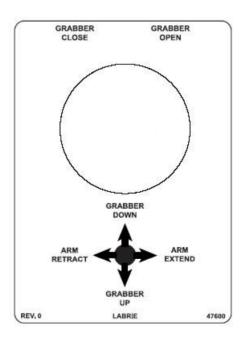
JOYSTICK CONTROLS



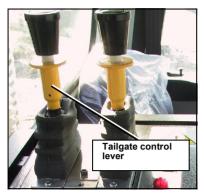


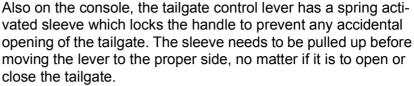
This joystick controls the arm. The joystick operates on 90° and 45° angles. As a result, you can perform two functions at the same time, for example, you can move the arm and the grabber simulateously.

- Shift the joystick forward at 90° towards the grabber down lettering (see sticker below) to lower the grabber.
- Shift the joystick forward at 45° between the grabber down and arm extend lettering to lower the grabber and extend the arm.
- Shift the joystick towards the streetside at 90° to the arm retract lettering to retract the arm only.
- Shift the joystick backward at 45° between the grabber up and arm retract lettering to raise the grabber and retract the arm at the same time.
- Shift the joystick backward at 90° to the grabber up lettering to raise the grabber only
- Shift the joystick torwards the curbside at 90° to the arm extend lettering to extend the arm only.

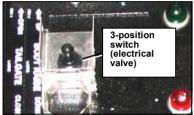


Tailgate Control





If the main valve of the truck is electrical, a 3-position switch (instead of a lever) allows the operator to control the tailgate. The switch is covered with a plastic cap in order to prevent any accidental opening of the tailgate.



ACAUTION

REMOVE TAILGATE LOCKING PINS BEFORE USING THIS CONTROL.

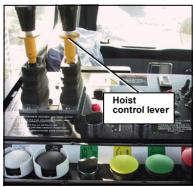


AWARNING

DO NOT DRIVE THE VEHICLE WHEN THE TAILGATE IS NOT FULLY CLOSED.

When the tailgate is unlocked, the Tailgate unlocked or body raised warning lamp turns on and a buzzer sounds.





The body hoist control lever is located on the cab console. The lever has a spring activated sleeve which locks the handle to prevent any accidental body hoist. This lever has to be pulled towards left or right in order to raise or to lower the body.

If the main valve of the truck is electrical, a 3-position switch (instead of a joystick) allows the operator to control the body. The switch is covered with a plastic cap in order to prevent any accidental body hoist.



When the body is raised, the Tailgate unlocked or body raised warning lamp turns on and a buzzer sounds.

▲ DANGER

ALWAYS USE BODY SAFETY PROP WHEN PERFORMING MAINTENANCE UNDER A RAISED BODY. FAILURE TO DO SO MAY RESULT IN SEVERE INJURY OR EVEN DEATH.

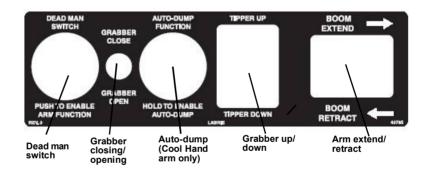
AUXILIARY ARM CONTROLS



Some trucks are equipped with an auxiliary control under the right-hand side seat, which allows the operator to control the arm from outside the cab.

This auxiliary control has the same functions as the joystick. It contains buttons and switches that allows the operator to control the arm, the grabber and the Auto-Dump function (if equipped). To use this auxiliary control, the operator has to select it (on the console).

Below is the sticker of the auxiliary control, which presents the position of all it's buttons and switches.



IN-CAB CONSOLE CONTROLS

Three buttons located on the console control the different packer functions.

Stop Push Button (red)



The Emergency Stop button (red) will stop all hydraulic functions on the truck (tailgate, arm etc.). By pressing the red button, the packer and the arm will stop where they stand. The red button has to be manually pulled back to reactivate the hydraulic system.

PROPERTY OF THE PROPERTY OF TH

Pack Push Button (green)

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



Return Push Button (yellow)

The packer retract button (yellow) will retract the packer 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.





This optional function allows the packer to cycle a preset number of cycles (from 2 to 8, 3 being the standard) by pressing the green button once. Cycles can be stopped anytime by pressing the red button or if the multi-cycle control button is turned off.

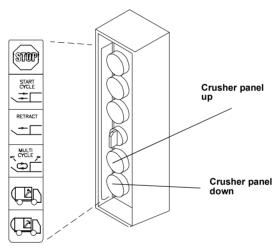
Crusher Panel Control (optional)

The control for the crusher panel is fully manual (standard unit) and is located inside the cab on the packer control station. One button lowers the crusher panel and another one moves it up.

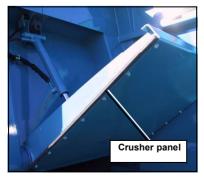
IMPORTANT

THE PACKER MUST BE FULLY RETRACTED TO ALLOW THE CRUSHER PANEL TO MOVE DOWN. THE CRUSHER PANEL NEEDS TO BE IN THE PARKED POSITION TO LET THE ARM DUMP A CART.

The following figure presents the control buttons of the crusher panel. The model of the control station varies according to the options installed.



The crusher panel is an option that may be installed on the vehicle. If it is installed, we suggest you to use it only for bulky items and breaking the load. 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 the refuse from popping up in front of the packing ram, increasing the compaction at any time and also during the load breaking sequence.

To help during the unloading sequence, you should leave a good amount of garbage in front of the packer and under the lowered crusher panel, as you finish your route. Once you are at the landfill and the body is raised, 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.





The grab pack switch enables the packer to automatically start cycling about 4 seconds after the grabber is closed. This gives the arm enough time to reach the hopper and dump the cart before the packer starts to pack.

If the unit is equipped with the multi-cycle function (refer to "Multi-Cycle Control" on page 36), the packer will complete the preset number of cycles until the operator closes the grabber. When the operator closes the grabber, the multi-cycle function is reset.

If the grabber is being closed in the middle of a cycle, the packer interrupts the current cycle, returns to its fully retracted position, and then restarts the next cycle. When a cycle is interrupted and the packer has returned to the home position, there is no delay before the packer restarts the next cycle. The four-second reset applies only when the packer has completed all its cycles (2 to 8) and when it has returned to the home position.

Interrupting a cycle prevents dumping carts directly over the packer. Piled material over the packer could damage the follower panel.

Gripper Auto-Close Override



The Gripper (or grabber) Auto-Close Override function (standard) allows the operator to open the grabber in the hopper in order to throw away the grabbed object directly in it. It also allows to pick up elevated carts.

To enable the Gripper Auto-Close Override function, push on the Gripper Auto-Close Override button on the cab console.

The Gripper Auto-Close Override function allows the gripper to be open for 10 seconds. After 10 seconds, the gripper closes automatically.

ACAUTION

THE GRIPPER AUTO-CLOSE OVERRIDE FUNCTION 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.

Work Lights Switch (optional)



When installed, this switch activates and deactivates the work lights.

- Shift the switch up to illuminate the work lights.
- Shift the switch down to turn off the work lights.

Flashing Lights Switch (optional)

This switch activates and deactivates the flashing lights.

- Shift the switch up to illuminate the flashing lights.
- Shift the switch down to turn off the flashing lights.

Strobe Light Switch (optional)



This switch activates and deactivates the strobe light mounted on the tailgate.

- Shift the switch up to illuminate the strobe light.
- Shift the switch down to extinguish the strobe light.

Important: Always switch on the strobe light when the vehicle is in working mode.



Light Bar Switch (optional)



This switch activates and deactivates the strobe light mounted on the tailgate.

- Shift the switch up to illuminate the light bar.
- Shift the switch down to extinguish the light bar.

Arm Extend Warning Lights



Two warning lights on the dashboard indicate to the operator when the arm is out. Do not move the vehicle until these lights stop flashing.

A DANGER

NEVER DRIVE THIS VEHICLE IF THE AUTOMATED ARM IS NOT PARKED ALONGSIDE THE TRUCK. THE UNIT WOULD BE TOO HIGH AND/OR TOO WIDE. FAILURE TO RETRACT THE ARM WILL RESULT IN UNIT AND/OR PROPERTY DAMAGE, PERSONNAL INJURY OR EVEN DEATH. FLASHING LIGHTS ON THE DASHBOARD COME ON AS THE ARM IS EXTENDING.

Cart Counter (optional)



Some units are equipped with a cart counter, which counts the number of carts dumped. The counter (if equipped) is located on the cab console.

OPERATING THE AUTOMIZER VERSA HANDTM

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

▲WARNING

ALWAYS READ AND UNDERSTAND THE OPERATOR MANUAL BEFORE OPERATING THE EQUIPMENT.

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

Please note that some of these are options and may not be installed on your AUTOMIZER VERSA HAND™.

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 department.

Consult with your supervisor for specific rules of driving the AUTOMIZER VERSA HAND™ in your location.

Obey all speed restrictions and regulations.

DAILY INSPECTION

Approaching the Vehicle

As you approach, look for any object under or against the vehicle and check the surroundings for people, other vehicles, under 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. During the daily inspection, look for any structural damage. Inspect tires and check the hydraulic tank for air leaks (when the hydraulic tank is under the pump level).

Visual inspection

Before starting the vehicle, the operator MUST perform a visual inspection of the truck.

- 1. Ensure the engine is not running and the parking brake is set
- 2. Ensure the cleanliness of lamps, safety labels, camera lenses, mirors, windows, and the vehicle in general.
- 3. Ensure that safety equipment is present (i.e. fire extinguisher, first aid kit).
- 4. Ensure there is no structural damage.
- 5. Ensure that body mounts to chassis are tight and there are no cracks on it or on the structure around it.
- 6. Ensure that there is no unusual wear, distortion, cracking, leaning, leaking on the vehicle.
- 7. Ensure that hydraulic oil level (sight gauge on tank) is as recommended (cylinders must be collapsed).
- 8. Ensure that the hydraulic cylinders do not leak, and ensure mounting pins are secure.
- 9. Ensure the hydraulic tank shut off valve is fully open.
- 10. Ensure there is no mechanical problems: structure, rollers, hinges, door locks, wear items, etc. Report any defective system to maintenance personnel.
- 11. 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.
- 12. Ensure the tailgate is fully closed, BOTH tailgate safety pins are in place and rollers are on main locking pins.
- 13. 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 VERSA HAND™:

- 1. Before starting the engine, check the following items:
 - Transmission shifter is on neutral.

- Parking brake is on. See "Parking Brake" on page 31.
- Hydraulic system is off. See "Pump Switch" on page 31.
- 2. Open the chassis manufacturer manual and start the vehicle as stated therein
- 3. Switch **ON** the pump (switch on the control console) to engage the hydraulic system (the air pressure has to be at a minimum of 70 PSI). See "Pump Switch" on page 31.
- 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 lens, etc. See for mechanical problems: rollers, hinges, door lock mechanisms, wear items, etc. Report any defective system to the maintenance personnel.

Body inpection procedure:

- 1. Activate the packer for a full cycle.
- 2. Check the automated arm operation.
- 3. Check if the tailgate safety pins are in place. Put them in place to lock the tailgate properly.
- 4. As you walk along the side, clean all safety labels.
- 5. Check the frame area, fuel tank and air tanks (air tanks must be drained every day), cleaning traps and wheels for leaks, cracks or other type of problems.
- 6. At the front end, check lights, mirrors and pump.
- 7. Go around and check lights, clean camera, labels, lights, etc.
- 8. Check for hydraulic leaks.

Arm Inspection Procedure

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

▲ DANGER

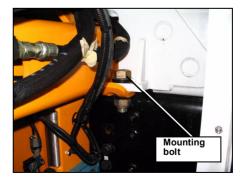
DO NOT STAND DIRECTLY IN THE PATH OF THE ARM WHILE PERFORMING THE INSPECTION.

▲ DANGER

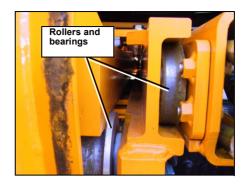
APPLY THE LOCKOUT/TAGOUT PROCEDURE AT ALL TIMES.

Apply the following inspection procedure:

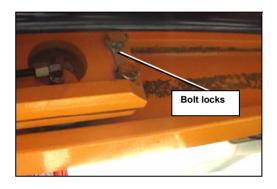
- 1. Make sure to park the vehicle on a safe and level ground.
- 2. Ensure that the parking brake is applied and the vehicle is tagged out for maintenance purposes (refer to "Lockout/ Tagout Procedure" on page 26).
- 3. Start the engine and engage the hydraulic pump (PTO ON).
- 4. Fully extend the arm.
- 5. Turn off the hydraulic pump and the engine.
- 6. Perform a visual inspection of the following items:
 - Mounting bolts;



Rollers and bearings;



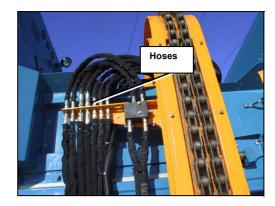
Bolt locks;



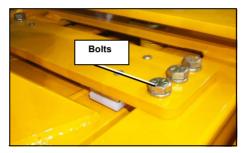
- Pivots;
- Chains and sprockets;



- Grabber;
- Hoses and connections;



- Cylinders;
- 7. Check for loose nuts and bolts.



8. Check limit switches. Refer to Maintenance Manual.

Cab Driving Controls Inspection Procedure

Enter the right-hand side extension (if equipped) and operate the right-hand side driving controls. Report any defective system to maintenance personnel.

Right-hand side driving position inspection procedure:

- 1. Test the steering wheel by turning it left and right as you are slowly moving the truck forward.
- 2. Move forward and stop the vehicle by applying the foot brake.
- 3. Apply the parking brake, engage the transmission to Drive and try to get the vehicle moving by throttling up with the right-hand side accelerator pedal.
- 4. Throttle down to idle, apply foot brake and remove parking brake.
- 5. Reapply the parking brake.

Inspection Sheet Example

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

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| | Coolant | Qt. | _ | | 1 | Water | | Qt. |
| | | C. | AB INS | PECTIO | NS | | | |
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| | License/registration | • • | | | | e triangle | S | |
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| 100 000 000 | | VISUAL | | WALK- | AROU | | | |
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| 4 11 1 | Body damage | | | e Extingu | | i H | | Hydraulic leaks |
| | Cab damage | | * | el tank/lin | ies | | | Hydraulic pressure |
| | Air lines | | | naust | | Щ | | Hydraulic hoses |
| | Air compressor | | | gine | | | | Wheel/Rims |
| | Air dryer | | • 5 | rter | | \perp | | Seals |
| | Head lights | | | m signal | | | | Transmission |
| | Marker lights | | 100 200210 | mera | | H | | Mirrors |
| 4 4 | Brake lights | | | ole/Hooks | 3 | Ш. | | Radiator |
| <u> </u> | Suspension | | An | | | | | Safety devices |
| 4 4 | Hopper clean | | | dy clean | | | | Safety decals |
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| | Safety Interlock swi | tches | | | | | | |
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LOADING, PACKING AND UNLOADING

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 VERSA HAND™ was designed exclusively to pick up roller carts.

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 EITHER THE PACKER BLADE OR THE ARM IS IN MOTION. SEVERE INJURY OR DEATH MAY OCCUR.

AWARNING

WEAR PROTECTIVE SAFETY EQUIPMENT, LIKE SAFETY GLASSES AND GLOVES, AT ALL TIMES WHEN YOU ARE WORKING CLOSE TO THE HOPPER AREA.

AWARNING

ALWAYS COMPLETE THE LOCKOUT/TAGOUT PROCEDURE BEFORE ENTERING THE HOPPER AREA.

Hopper Description and Loading

The AUTOMIZER VERSA HAND™ has a packer swept volume of 1.75 cubic yards. The packer swept volume is reached by using a 24-inch height packer blade with a 52-inch stroke.

Using the arm to load the hopper, fill up 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 over spill. See "Pack on the Go" on page 51.

While collecting roller carts, you should start the packer cycle every time you have finished emptying one cart in the hopper. See "Loading Procedure" on page 49.

Packer Description

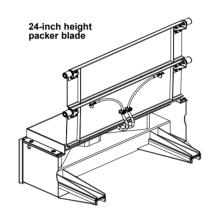
The packer, made of high strength steel, travels the hopper to push the refuse into the body. If any piece of garbage exceeds above the packer, it will be crushed or bent against the crusher bar, located just above the opening of the body.

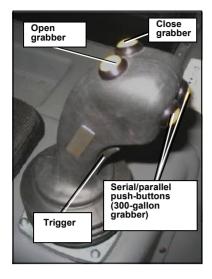
Whatever debris is not pushed inside the body on a given stroke of the packer, refuse material will fall back in the hopper as the packer will retract. As another cycle is activated by the operator, what was left in the hopper in the previous stroke of the packer will be pushed into the body.



Loading Procedure

1. Stop the vehicle so that the arm is lined up with the roller cart.





 With the arm parked along the truck, use the joystick to open the grabber and pick up the cart. The operator MUST push on the trigger in order to enable the joystick functions.

AWARNING

NEVER TAPE THE TRIGGER IN ORDER TO OPERATE THE ARM.

- 3. Close the grabber by pressing on the push-button switch.
- Raise the roller cart.
- 5. Pull the joystick to raise the grabber inside the hopper. The garbage should then fall down.
- 6. Ensure that the roller cart is empty before returning it back to the ground.
- 7. Retract the arm (if extended) and open the grabber near the vehicle.

AWARNING

DO NOT OPEN THE GRABBER WHILE LIFTING UP THE ROLLER CART; IT WILL FALL DOWN. THIS MAY RESULT EQUIPMENT DAMAGE AND/OR INJURY.

Loading Corrective Actions

AWARNING

DO NOT MOVE THE VEHICLE IF THE ARM IS NOT FULLY RETRACTED ALONG THE HOPPER.

If the packer does not cycle:

- 1. Ensure the hydraulic system is engaged.
- 2. Check the emergency red button.
- 3. Press the yellow button to ensure the packer is completely retracted.
- 4. Check around the packer for any obstruction preventing it to move freely.
- 5. Check fuses and breakers in the console.

6. Report your findings to the maintenance personnel.

Emergency Actions

Hydraulic Oil Spill

- 1. Press the emergency red button.
- 2. Turn off the pump switch and stop the truck's engine.
- 3. Close the main valve on the hydraulic tank.
- 4. Carefully inspect and find the cause of the leak.
- 5. Call the maintenance facility and report your findings.
- 6. If the leak can not be repaired on site, and the vehicle can not be towed, remove the pump drive shaft before restarting the engine.
- 7. When the time has come to restart the pump, ensure that the valve on the hydraulic tank is fully open and that there is sufficient oil in the hydraulic tank.

Someone is Trapped in Packer System

- 1. Hit the emergency stop button (red).
- 2. Call for help then proceed with first aid.

Pack on the Go

It may be useful to expedite your work and be more efficient: pack on the go or allow the packer to cycle when driving.

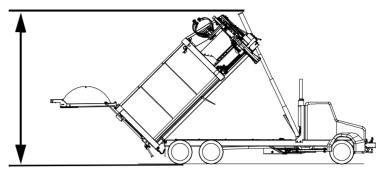
As you are finished loading the hopper, you can activate the multi-cycle button and press the start cycle button (green). This will allow the packer to cycle, even if you are moving the vehicle to the next pick up. When moving the vehicle, the hydraulic pump will turn at engine's RPM, which depends on truck speed.

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

Standard Unloading Procedure

Once you have finished your route, make sure that the arm is parked along the truck and that the crusher panel is lowered (if equipped). Keep some garbage not packed in front of the packer in order to help during the unloading procedure.

264 inches (22 feet or 6.7 meters)



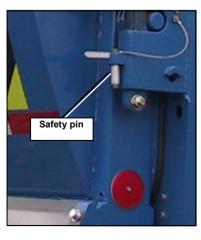
DUMPING HEIGHT

AWARNING

ENSURE THE OVERHEAD IS CLEAR BEFORE OPENING THE TAILGATE AND RAISING THE BODY.

Standard unloading procedure:

- 1. Drive the vehicle to the landfill.
- 2. Ensure the vehicle is on a safe, stable and level ground.
- 3. Check the overhead clearance (22 feet) before opening the tailgate and raising the body. Make sure that the air suspension is dropped or the tag axle is down (if equipped).
- 4. Remove tailgate safety pins.
- 5. Fully open the tailgate.
- 6. Raise the body. The material should slide out.
- 7. Slowly move the vehicle forward to prevent the garbage from piling up under the tailgate. This is the only time you can move the truck with 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. It may be helpful to have some garbage left in the hopper to enhance the effect of the packer cycle on the garbage.
- 9. Lower the body and close the tailgate.
- 10. Put safety pins back in place.



- 11. Drive away from the unloading site.
- 12. Perform the end of the day inspection. See "End of the Day Cleaning and Inspection" on page 55.

AWARNING

NEVER MOVE THE TRUCK BACKWARDS WITH THE BODY IN THE RAISED POSITION.

NEVER RAISE THE BODY IF THE TAILGATE IS NOT FULLY OPEN

▲ DANGER

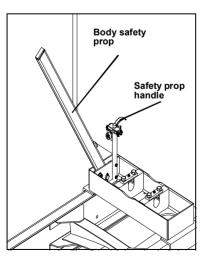
ALWAYS USE THE SAFETY PROP WHILE WORKING UNDER A RAISED TAILGATE. THE SAFETY PROP SHOULD BE INSTALLED EVEN IF THE TAILGATE IS IN THE FULLY RAISED POSITION.

Unloading Corrective Actions

As you are unloading the refuse unit, 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.

Garbage Between Chassis and Body:

- 1. Lift the body until the safety prop is clear to tilt under the body.
- 2. Release the safety prop by pulling the handle.
- 3. Then pull down the safety prop towards the body.
- 4. Slowly lower the body so it rests on the prop.
- 5. Proceed with the necessary cleaning of the chassis.
- 6. Once finished, slightly raise the body; return the safety prop to its vertical position.
- 7. Lock the safety prop.
- 8. Lower the body onto the chassis before moving the vehicle.



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.

ACAUTION

THE BODY DOES NOT RAISE

- 1. Ensure the hydraulic system is engaged.
- 2. Make sure the tailgate is fully open.
- 3. Make sure the air pressure is above 70 psi.
- 4. Check all fuses in the console.
- 5. Contact the maintenance facility if there is no change.
- 6. If equipped with air suspension, it needs to be lowered.
- 7. If equipped with a tag axle, it must be dropped.

A DANGER

DO NOT USE SAFETY PROP WITH A LOADED BODY. NEVER STAND UNDER A RAISED LOADED BODY.

END OF THE DAY CLEANING AND INSPECTION

Hopper Daily Cleaning

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



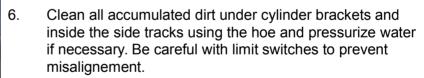
Daily cleaning of the hopper and chassis is crucial because it will minimize breakdowns and maintenance expenses. Daily wiping down of all truck lights, warning lights and safety stickers will make your vehicle more visible so that surrounding pedestrians and vehicles will be safer around the vehicle.

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 a level ground and apply the parking brake.
- 2. Fully extend the arm and the packer.
- 3. Lower the crusher panel and clean all accumulated dirt. Then, raise the crusher panel all way (if equipped).
- 4. Perform the lockout/tagout procedure.







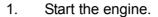
- 8. Rake small pieces of garbage out of the cleaning traps using the hoe.
- 9. Finish cleaning the area with pressurized water.

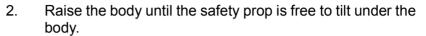




Chassis Daily Cleaning

Chassis daily cleaning procedure:





- 3. Release the safety prop using the prop handle.
- 4. Apply the lockout/tagout procedure.
- 5. Clean with pressurized water between the body and the frame.
- 6. Clean the rear of cab.
- 7. Perform a visual inspection for leaks or wear in this area.
- 8. When finished, start the engine, lift the body and bring the safety prop back to its vertical position, then lower the body.
- 9. Clean the body all around with water and soap.
- 10. Rinse.

Water Trap Bleed



Safety prop handle

Body safety prop

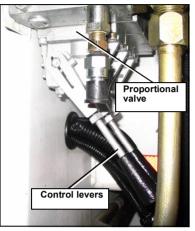
Located in front of the console, the water trap bleed must be drained at the end of every working day. Using a rag, unscrew the tip to collect the water that will come out. This water trap helps to keep moisture out of the air system.

Note: If the truck is equipped with an electrical valve, there is no water trap.

TROUBLESHOOTING QUICK REFERENCE

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

- Apply the parking brake and put the transmission to neutral.
- 2. Install the control lever on the proportional valve located on the right-hand side of the vehicle, on the arm extend/retract section. Using the manual control, retract the arm slowly in order to bring it back to its rest position.



▲ DANGER

STAY CLEAR OF THE PATH OF THE ARM AT ALL TIMES AND DO NOT OPEN THE GRABBER IN MIDAIR WHEN PERFORMING THIS PROCEDURE.

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 PARKED ALONGSIDE THE TRUCK. THE UNIT WOULD BE TOO HIGH AND/OR TOO WIDE. FAILURE TO RETRACT THE ARM WILL RESULT IN UNIT AND/OR PROPERTY DAMAGE, PERSONAL INJURY OR DEATH. FLASHING LIGHTS (RED) ON DASHBOARD WILL COME ON AS THE ARM IS EXTENDING.

