



Automizer, Expert, MiniMax, Wittke™ Front Loaders

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Reward!

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If you find what you believe to be an error in any of our publications please complete the requested information and return the form to us by email.
If you are the first, you will receive a hat by return mail.

- I believe I found an error:
- In the _____ manual | Part No. _____ | Page(s) _____
- It should say: _____
- Name: _____ Address: _____



THANKS FOR YOUR HELP!

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Introduction

As technology continues to advance in both complexity and significance, the use of electrical and electronic systems has grown dramatically. Today's components are more reliable and efficient than ever before, helping to reduce operating costs, boost productivity, safeguard investments, enhance safety, and improve energy efficiency.

Recognizing the value of these innovations, Labrie Enviroquip Group—one of North America's leading manufacturers of solid waste equipment—has embraced cutting-edge technology by integrating the Multiplex System into many of its platforms. This strategic move enhances performance and operational efficiency across its product line.

The Labrie Multiplex System is a CAN-based electronic architecture that combines a monitor display, control panel, and multiple electronic modules. Designed for ease of use, the system streamlines unit operation and makes the waste collection process more user-friendly.

This system electronically monitors all key truck functions, including the automated arm, tailgate, waste body, and multicycle packing system. It also tracks hydraulic oil temperature and the number of carts emptied into the hopper. In addition, the system alerts operators to any issues and offers solutions to ensure smooth operation.

Equipped with an on-board diagnostic tool, the Multiplex System simplifies troubleshooting, making maintenance more organized and manageable.

This publication aims to provide a clear overview of the Multiplex System, along with troubleshooting guidance and maintenance instructions for service personnel and field technicians.

How the Multiplex System Works

The control modules within the Labrie Multiplex System are responsible for managing and monitoring all logical functions of the truck, including packing operations, tailgate and body movement, safety interlocks, lighting systems, and automated arm control.

By integrating these functions into a single system, the need for extensive wiring and harnesses has been significantly reduced—without altering the established procedures or operational principles of waste collection. The Multiplex System replaces older, more complex monitoring setups, eliminating the use of relays while maintaining full functionality.

One of the system's key advantages is its flexibility. New features can be added or existing ones modified simply through software reprogramming, allowing for quick adaptation to evolving operational requirements.

The control modules in the Labrie Multiplex System are equipped with advanced in-field diagnostic capabilities, allowing technicians to efficiently identify and resolve issues. These modules enable real-time monitoring of the status of all inputs and outputs, providing critical insights into the system's performance and functionality. Error codes displayed directly on the monitor help pinpoint specific problems, offering detailed information that simplifies troubleshooting and accelerates maintenance processes.

The Multiplex System operates as a network of interconnected modules, each assigned a unique node number. These modules communicate using a standardized protocol and transmitter/receiver chips, ensuring that data is accurately routed based on its origin, relevance, and destination. Transmitted data may include information such as tailgate or body position, or the number of packer cycles completed.

Benefits of the Multiplex System

- ◆ Simplified Wiring and Reduced Complexity:
 - Utilizes a Controller Area Network (CAN) bus architecture to minimize the need for extensive wiring harnesses.
 - Reduces potential points of failure and simplifies maintenance.
- ◆ Integrated Control and Monitoring:
 - Centralizes the management of all major body functions, including packing, tailgate movement, lighting systems, and automated arm operations.
 - The Labrie Multiplex System reduces reliance on relays, eliminating the need for most while retaining a few for specific functions. This streamlined design simplifies the electrical setup and enhances reliability.
- ◆ Adaptability and Customization:
 - Allows for easy addition of new functions or modification of existing ones through reprogramming.
 - Ensures the vehicle can meet changing operational needs without hardware changes.
- ◆ Advanced Diagnostic Capabilities:
 - Supports in-field diagnostics, enabling operators and technicians to monitor inputs and outputs in real time.

- Displays error codes on the monitor to assist in troubleshooting.
- ♦ Improved Safety Features:
 - Enforces safety interlocks to prevent unsafe operations.
 - Provides real-time feedback through warning and caution messages displayed on the monitor.

Benefits of the Multiplex System Cont.

- ♦ Enhanced Efficiency and Productivity:
 - Automates key functions to improve the speed and effectiveness of waste collection.
 - Reduces downtime through simplified troubleshooting and maintenance.
- ♦ Cost Savings:
 - Lowers maintenance costs and minimizes downtime due to reduced complexity and enhanced reliability.
 - Allows for feature implementation without expensive hardware upgrades.

Location of the Control Modules

The control modules in Labrie Multiplex System-equipped vehicles are strategically placed throughout the vehicle to optimize functionality, accessibility, and ease of maintenance. Each module, referred to as a node, is assigned a unique number and is responsible for specific operations, such as managing the packing system, tailgate movement, lighting, and automated arm functions. The placement of these modules varies depending on the unit type, such as MINIMAX, Expert, Automizer, and WITTKE™, to accommodate the unique configurations and operational requirements of each vehicle.

For example:

- ♦ Node 10 is typically located inside the cab to manage core operations.
- ♦ Node 50/60 is positioned near the body's front bulkhead to control packer and hopper door functions.

Due to the varying module locations across different units, operators and maintenance personnel should refer to [\(Module Locations on page 45\)](#) for detailed information on module placement specific to their vehicle.



Safety

Safety is the cornerstone of operating and maintaining waste collection vehicles equipped with the Labrie Multiplex System. Whether performing routine operations, troubleshooting issues, or conducting maintenance, adhering to safety protocols is essential to protect operators, technicians, and the surrounding environment. This section provides comprehensive guidelines to ensure safe practices are followed at all times, covering general precautions, unit-specific safety measures, and responsibilities for both employers and employees. By understanding and implementing these safety standards, personnel can minimize risks, prevent accidents, and maintain the reliability and efficiency of the vehicle.

Safety Labeling System

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 Instructions

NOTE: The safe operation of the vehicle is the responsibility of the user. All safety instructions provided in this manual, as well as those displayed on the decals affixed to the vehicle, must be carefully followed to ensure safe and proper use.

Danger!

Operators must remain vigilant of the vehicle's surroundings at all times to ensure the safety of pedestrians, bystanders, passersby, and nearby vehicles. Before starting or operating the vehicle, carefully inspect the area to confirm that no individuals or objects are positioned in a way that could be exposed to potential hazards caused by the vehicle's movements or operations.

Danger!

Never enter the hopper area while the engine is running. Entry is restricted to authorized personnel and must follow the lockout/tag-out procedure to ensure all systems are fully deactivated. For detailed instructions, refer to the Operator's Manual. Adhering to these guidelines is critical to prevent serious injury or accidents.

Warning!

Do not operate the automated arm until you have completed training and fully understood the Operator's and Maintenance Manuals. Proper preparation ensures safe operation, prevents accidents, and protects the equipment.

Warning!

Ensure the area around the automated arm is clear of people, objects, and obstructions before operation. Failure to do so can result in property damage, equipment harm, serious injury or death. Always inspect the surroundings thoroughly to maintain safety.

Warning!

Ensure adequate clearance between any raised container and overhead power lines. Neither the automated arm nor the container should make contact with electrical cables, as this can cause electricity to flow through the unit. **If contact with a power line occurs, remain inside the cab and avoid touching any metal surfaces.**

Danger!

Do not drive the vehicle unless the lifting arm is fully retracted to its home position. An unretracted arm makes the vehicle too wide for safe operation, increasing the risk of property damage, **severe injury, or death**. Flashing red warning lights on the dashboard indicate when the arm is not fully retracted. Always confirm the arm is properly stowed before driving.

Warning!

Control levers on the proportional valve must be removed during regular operation and used only for maintenance tasks. This prevents accidental activation and ensures safe vehicle operation. Reinstall the levers only when performing maintenance as outlined in the manuals.

Warning!

Always retract the forks and raise the lifting arms to their stowed positions before driving. Failure to do so can result in property damage, equipment harm, severe injury, or death. Verify these components are securely stowed to ensure safe vehicle operation.

Caution! Keep the clean-out door closed when operating the lifting arms to prevent damage to the hydraulic cylinder or trap door.



Caution! Make sure the hopper roof is fully open before lifting a container.



Warning! **Units with two driving positions: Before switching driving positions, bring the vehicle to a complete stop, apply the parking brake, press the emergency stop button, and shut off the engine.** Adjust all mirrors and set the driving control switches—including the arm control joystick, if applicable—to match the new driving position. Only then should you restart the engine. This procedure ensures the automated arm remains fully disabled during the transition.



IMPORTANT: Carefully read and fully understand this manual before making any adjustments to the vehicle. Additionally, a thorough understanding of the Operator's Manual is required prior to operating the vehicle to ensure safe and effective use.

Responsibilities

This section outlines the specific responsibilities of both employers and employees, emphasizing the importance of collaboration to prevent accidents, protect equipment, and ensure the reliability of the vehicle. By understanding and fulfilling these responsibilities, all personnel can contribute to a safer and more productive workplace.

NOTE: Please note this list is not exhaustive.

Employer Responsibilities

Ensure Compliance with Safety Standards:

- Adhere to all applicable safety regulations, including OSHA (Occupational Safety and Health Administration) and ANSI (American National Standards Institute) standards.
- Ensure vehicles and equipment meet provincial, state, and federal safety requirements.

Provide Adequate Training:

- Train employees on the safe operation and maintenance of the vehicle.
- Ensure employees understand the Operator's and Maintenance Manuals, as well as lockout/tag-out procedures.
- Conduct hands-on training sessions to familiarize operators with the vehicle's controls and functions.

Employer Responsibilities Cont.

Establish Safety Protocols:

- Develop and enforce lockout/tag-out procedures to prevent accidental activation of equipment during maintenance.
- Implement clear guidelines for reporting malfunctions and unsafe conditions.
- Ensure all employees follow safety measures and protocols during operation and maintenance.

Maintain the Vehicle:

- Regularly inspect and maintain vehicles to ensure they are in safe working condition.
- Keep detailed records of all inspections, repairs, and maintenance activities.
- Address and repair any malfunctions or damage reported by employees before returning the vehicle to service.

Provide Safety Equipment:

- Supply employees with necessary personal protective equipment (PPE).
- Ensure all safety decals and warning labels on the vehicle are visible and legible.

Monitor and Supervise Operations:

- Periodically accompany operators to observe vehicle operation and ensure adherence to safety protocols.
- Address unsafe practices immediately and provide corrective training as needed.

Ensure Proper Lighting for Night Operations:

- Meet appropriate lighting requirements for night shift operations, if applicable.
- Verify that all vehicle lights, including work lights, are functioning properly.

Verify Backup Alarm Functionality:

- Ensure the backup alarm is operational and audible when the vehicle is in reverse.

Correct Reported Issues:

- Take immediate action to address and resolve any damage or malfunctions reported by employees.

Protect the Vehicle During Maintenance:

- Establish procedures to protect sensitive components, such as the battery box, during welding or other maintenance tasks.
- Ensure that welding tools do not produce electrical spikes that could damage control modules.

Keep Records of Vehicle Usage:

- Maintain logs of vehicle breakdowns, malfunctions, inspections, and maintenance activities.
- Use these records to identify recurring issues and improve maintenance practices.

Enforce Safe Operation:

- Ensure that all failures or malfunctions affecting the safe use of the vehicle are repaired before the vehicle is put back into operation.
- Regularly review safety protocols with employees to reinforce safe practices.

Employer Responsibilities Cont.

Establish a Lockout/Tag-out Procedure:

- Ensure the lockout/tag-out procedure is applied during all inspections, repairs, or maintenance, whether performed on the road or in the garage.

Employee Responsibilities

NOTE: Employees are responsible for operating the vehicle only after receiving adequate training and fully understanding its controls and functions.

Proper Operation of Equipment

- **Automated Arm Operation:** Ensuring the area around the arm is clear of people and obstructions before activation.
- **Tailgate Movement:** Verifying the tailgate is fully lowered before operating the packer or driving the vehicle.
- **Lighting Systems:** Using work lights appropriately to maintain visibility during operations, especially in low-light conditions.

Reporting Malfunctions

- ♦ Employees must immediately report any damage, malfunction, or unsafe condition to the employer or supervisor.

This includes issues such as:

- Warning lights or error codes displayed on the monitor.
- Unusual noises or vibrations during operation.
- Visible damage to components such as the automated arm, tailgate, or hydraulic systems.

Use of Safety Equipment

- ♦ Employees must use all required personal protective equipment (PPE) provided by the employer.

Awareness of Surroundings

- ♦ Employees must remain vigilant of their surroundings during vehicle operation. This includes:
 - Checking for pedestrians, vehicles, and obstructions before starting operations.
 - Monitoring blind spots using mirrors and cameras (if equipped).
 - Always ensure there is sufficient clearance between raised containers, automated arms, lifting equipment, or the body of the vehicle and overhead power lines.

Employee Responsibilities Cont.

Proactive Safety Measures

- ♦ Employees are expected to take proactive steps to ensure safe operation, including:
 - Pre-Operation Inspections: Conducting a thorough inspection of the vehicle before starting operations. This includes checking the arm, hopper, tailgate, and hydraulic systems for visible damage or leaks.
 - Stowing Equipment: Ensuring the automated arm, forks, and tailgate are fully retracted to their home positions before driving the vehicle.
 - Obeying Warning Decals: Following all warning and operation decals affixed to the vehicle.

Protecting the Vehicle During Maintenance

- ♦ Employees must take precautions to protect sensitive components during maintenance tasks.
 - Battery Box Protection: Ensuring the battery box is shielded before performing welding on the chassis or body to prevent electrical spikes that could damage control modules.
 - Hydraulic System Safety: Following lockout/tag-out procedures before inspecting or repairing hydraulic components.

Emergency Response

- ♦ Employees must know how to respond to emergencies.
 - Power Line Contact: Remaining inside the cab and avoiding metal parts if the vehicle comes into contact with a power line. Emergency services should be notified immediately.
 - Equipment Malfunctions: Stopping operations immediately if a potential hazard arises, such as a malfunctioning arm or tailgate.

IMPORTANT: Using damaged equipment increases the risk of accidents, injuries, and further mechanical failures, compromising both safety and operational efficiency. Regular inspections and prompt repairs are essential to ensure the vehicle operates reliably and safely, preventing costly downtime and hazards.

Things to Do

Follow these guidelines to ensure safe and efficient operation of Labrie Multiplex System-equipped vehicles:

Pre-Operation Inspection

- Inspect the automated arm, tailgate, hopper, and hydraulic systems for damage or obstructions.
- Check tire pressure, suspension, lights, and alarms for proper functionality.

Ensure Surroundings Are Clear

- Verify the area is free of pedestrians, vehicles, and overhead hazards like power lines.
- Maintain at least 10 feet of clearance from power lines.

Follow Lockout/Tag-out Procedures

- Ensure the lockout/tag-out procedure is applied during all inspections, repairs, or maintenance, whether performed on the road or in the garage.

Things to Do Cont.

Use Personal Protective Equipment (PPE)

- Wear grounding bracelets when handling control modules.
- Use safety goggles and gloves during maintenance tasks.

Operate Safely

- Use the dead-man switch for controlled arm movements.
- Monitor warning lights and ensure all equipment is stowed before driving.

Respond to Emergencies

- Stay inside the cab and avoid metal parts if the vehicle contacts a power line.
- Stop operations immediately if equipment malfunctions and report the issue.

Things to Avoid

Recognizing unsafe practices is essential for the safe and efficient operation of Labrie Multiplex System-equipped vehicles. This section highlights actions to avoid, ensuring safety, protecting equipment, and maintaining reliable operations.

Operating the Vehicle Without Proper Training

- Never operate the vehicle or its automated systems, such as the arm, tailgate, or packer, without completing proper training.
- Lack of training can lead to unsafe operation, accidents, and damage to the vehicle or surrounding property.
- Always ensure you have thoroughly read and understood the Operator's and Maintenance Manuals before operating the vehicle.

Operating the Vehicle Under the Influence

- Do not operate the vehicle while under the influence of alcohol, narcotics, or any substances that impair judgment or reaction time.
- Impaired operation significantly increases the risk of accidents, injuries, and damage to the vehicle.

Bypassing Safety Interlocks

- Never disable or bypass safety interlocks designed to prevent unsafe operations.
- These interlocks ensure critical safety protocols are followed, such as preventing the packer from operating while the hopper door is open or stopping the vehicle if the automated arm is not fully retracted.
- Tampering with these systems can lead to severe injury, equipment damage, or legal consequences.

Leaving the Vehicle Unsecured

- Never leave the vehicle unattended without applying the parking brake and ensuring all equipment is stowed.
- Unsecured vehicles can move unexpectedly, causing accidents or injuries.

Things to Avoid Cont.

Entering the Hopper While the Engine is Running

- Do not enter the hopper area while the engine is running.
- The hopper contains moving mechanical components that pose significant safety risks.
- Entry is only permitted for authorized personnel following lockout/tag-out procedures to ensure all systems are deactivated.

Driving with Equipment Extended

- Never drive the vehicle with the automated arm, forks, or tailgate extended.
- Extended equipment increases the vehicle's width and height, making it unsafe to navigate and increasing the risk of collisions.
- Always verify that all equipment is fully retracted to its home position before driving.

Operating Near Overhead Hazards Without Clearance

- Do not operate the automated arm or raise containers near overhead power lines or other hazards without ensuring sufficient clearance.
- Maintain a minimum distance of 10 feet from power lines to prevent electrical arcing.
- If contact with a power line occurs, remain inside the cab, avoid touching metal parts, and notify emergency services immediately.

Ignoring Warning Lights or Error Codes

- Never ignore warning lights or error codes displayed on the monitor.
- These alerts indicate potential issues that require immediate attention to prevent further damage or unsafe conditions.
- Address the issue promptly by following the troubleshooting steps in the Operator's Manual or reporting it to a supervisor.

Operating Damaged Equipment

- Do not use the vehicle if any components, such as the automated arm, tailgate, or hydraulic systems, are damaged.
- Damaged equipment can lead to unpredictable behavior, increasing the risk of accidents and further mechanical failures.
- Report any damage immediately and ensure repairs are completed before resuming operation.

Hoisting the Body on Uneven Ground

- Never raise the body or tailgate on uneven or unstable ground.
- Uneven surfaces can compromise the vehicle's stability, increasing the risk of tipping or equipment damage.
- Always ensure the vehicle is on level ground before performing these operations.

Things to Avoid Cont.

Performing Maintenance Without Proper Procedures

- Do not perform maintenance tasks without following the proper procedures outlined in the Maintenance Manual.
- Always use lockout/tag-out procedures to ensure all systems are deactivated before beginning work.
- Failure to follow these procedures can result in accidental activation of equipment, leading to serious injury or death.

Overloading the Vehicle

- Do not exceed the vehicle's load capacity as specified in the Operator's Manual.
- Overloading can strain the hydraulic system, reduce stability, and increase the risk of mechanical failure.
- Always distribute the load evenly to maintain balance and prevent tipping.

Neglecting Pre-Operation Inspections

- Regular inspections are critical for identifying and addressing issues before they escalate.
- Failing to inspect the vehicle for damage, leaks, or malfunctioning components can lead to unsafe operation and costly downtime.

General Precautions

Understanding Manuals and Safety Decals

- Before operating the vehicle, thoroughly read and understand the Operator's Manual. It contains essential information about the vehicle's controls, functions, and safety protocols.
- Maintenance personnel must read and fully understand the Maintenance Manual to ensure proper servicing and care of the vehicle.
- Familiarize yourself with all safety decals affixed to the vehicle. These decals provide critical warnings and instructions specific to the unit.
- If you have any doubts or questions about the vehicle's operation or safety procedures, consult a supervisor for clarification.

Parking and Lifting Arm Operation

- Always apply the parking brake when the vehicle is parked to prevent unintended movement.
- Before activating the lifting arms, ensure the area around the vehicle is clear of people and obstructions. Operators must maintain control of the arms at all times and be prepared to stop their movement immediately if necessary.

Vehicle Condition and Reporting Issues

- Do not operate the vehicle if there are any signs of damage or incomplete repairs.
- Immediately report any doubts, safety concerns, or service requirements to a supervisor. Prompt reporting ensures that issues are addressed before they escalate into safety risks.

General Precautions Cont.

Tailgate Operation

- Never drive the vehicle with the tailgate unlocked.
- Before opening or closing the tailgate, ensure no one is standing behind the vehicle. This precaution prevents accidents caused by the tailgate's movement.

Hopper and Packer Safety

- Never enter the hopper compartment or attempt to repair anything behind the packer while it is moving or when the hydraulic pump is running.
- Authorized personnel entering the hopper must first lock out and tag out the vehicle to ensure all systems are deactivated. Refer to the lockout/tag-out procedure in the Operator's Manual for detailed instructions.

Body and Load Safety

- Never, under any circumstances, stand underneath a loaded body. This applies to both maintenance and operational scenarios, as the **risk of injury or death is significant**.

3

Controls and Indicators

The controls and indicators in Labrie Multiplex System-equipped vehicles are essential for managing the truck's critical functions and monitoring its operational status. Strategically placed within the cab and designed for ease of use, these systems provide operators with the tools needed to control components such as the automated arm, tailgate, packer, and lighting systems. By offering real-time feedback and intuitive controls, they ensure safe, efficient, and reliable operation during waste collection tasks. This section explains the location, purpose, and functionality of the controls and indicators across all units.

Labrie's Multiplex System

Labrie has equipped your vehicle with a CAN bus-based multiplexed system, designed to integrate and streamline the operation of critical vehicle functions. This advanced system combines a monitor, control panel, joystick, and a network of electronic controllers to provide operators with an efficient and user-friendly interface. By reducing the need for extensive wiring harnesses, the multiplex system simplifies the vehicle's design while maintaining reliability and safety.

The multiplex system continuously monitors the status of various vehicle functions and provides real-time feedback to the operator. Through its monitor ([See Figure 3-1](#)), the system displays warning and caution messages to alert the operator of any malfunctions or irregularities during operation.

Figure 3-1 Monitor



Each time the ignition key is turned on, the multiplex system performs a complete built-in test (BIT) to verify its functionality. This self-test, which takes approximately 5 seconds to complete, ensures that all components of the system are operating correctly before the vehicle is used. This feature enhances operational safety by identifying any issues before the vehicle is put into service.

NOTE: A steady green light blinking at 2Hz indicates normal system operation. A faster green blink or a flashing red light signals a monitor issue requiring immediate attention. Contact [LabriePlus](#) for technical support to resolve the problem.

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 display



NOTE: If the Welcome Screen with the Labrie logo remains displayed continuously, it may indicate a communication issue between the monitor and the master control module. Report this issue to maintenance personnel for prompt diagnosis and resolution.

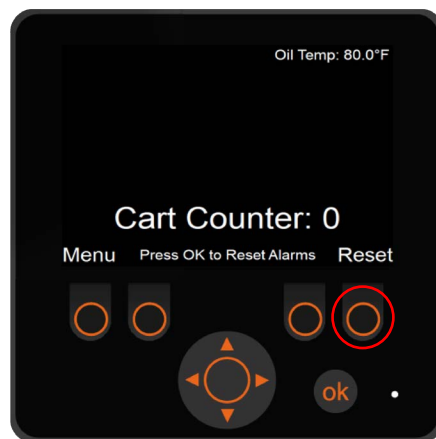
NOTE: The monitor operates as long as electrical power is supplied, even if the engine is off. When the engine is started, the monitor automatically reboots to update and reflect changes in the vehicle's status.

After the Welcome Screen, the monitor transitions to the Main Page (See Figure 3-3), which serves as the central interface for vehicle operation. It includes a link to the Main Menu for accessing advanced settings and diagnostics. Warning and error messages are displayed here to alert operators to potential issues. Optional indicators, such as the Cart Counter, Time and Date Indicator, and Hydraulic Oil Temperature Indicator, may also be featured, providing critical operational information.

Cart Counter (optional)

The cart counter indicator displays the total number of carts emptied during operation (See Figure 3-3). For vehicles equipped with dual arms, the monitor provides separate counters for each arm, showing the number of carts emptied by the right arm and the left arm independently. This feature allows operators to track the performance of each arm and monitor operational efficiency throughout the collection route.

Figure 3-3 Main Page



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

Time and Date indicator (optional)

Located in the upper left corner of the monitor, the Time and Date Indicator displays real-time clock information if supported by the chassis via the J1939 bus. To adjust the time and date, access the Main Menu and select “Time Adjust.”

Hydraulic Oil Temperature Indicator (optional)

The Hydraulic Oil Temperature Indicator, when available, displays the current temperature of the hydraulic oil. Located in the upper right corner of the monitor, it helps operators ensure the hydraulic system remains within safe operating temperatures.

Warning and Caution Messages

Yellow-highlighted messages on the monitor signal caution, advising the operator to proceed carefully. Red-highlighted messages indicate warnings that require immediate attention. (See Figure 3-4)

Figure 3-4 Warning and caution messages on monitor



See below sections for a list of warning and caution messages.

- ♦ Automizer (See Table 1)
- ♦ Expert (See Table 2)
- ♦ MINIMAX (See Table 3)
- ♦ WITTKE™ (See Table 4)
- ♦ Error Messages All Units (See Table 5)

NOTE: This list is not exhaustive.

Table 1 **Warning and Caution Messages Automizer (Sheet 1 of 5)**

Warning and Caution Messages Automizer	Solution
Arm Up: Chute Bad Position	Set Chute to Correct Position
Arm Up: Crusher Not Raised	Raise Crusher Panel
Arm: Aux Dead-man ON	Release Aux Dead-man
Arm: Body Raised	Lower Body
Arm: Hopper Door Not Closed	Close Hopper Door
Arm: Pump Not Started	Engage Pump
Arm: Tailgate Unlocked	Lock Tailgate
Auto-Dump: Cab EStop	Pull Out Cab EStop Button
Auto-Dump: Pump Not Started	Engage Pump
Body: Pump Not Started	Engage Pump
Buzzer: Arm Not Stowed	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 Position	Set Chute to Correct Position
Crusher: Hopper Door Not Closed	Close Hopper Door
Crusher: Packer Not Retracted	Retract Packer

Table 1 **Warning and Caution Messages Automizer (Continued) (Sheet 2 of 5)**

Warning and Caution Messages Automizer	Solution
Crusher: Pump Not Started	Engage Pump
EStop: Aux Cab EStop	Pull Out Aux Cab EStop Button
EStop: Cab EStop	Pull Out Cab EStop Button
Full Eject: Cab EStop	Pull Out Cab EStop Button
Full Eject: Packer Not Retracted	Retract Packer
Full Eject: Pump Not Started	Engage Pump
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 LabriePlus
Packer: Already Retracted	Refer to Maintenance Personnel or LabriePlus
Packer: Extend too Long	Check Extend Prox
Packer: Pump Not Started	Engage Pump
Packer: Retract too Long	Check Extend 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 to Required Pressure
Pump Not Started: RPM too High	Lower Engine Speed Below 900 RPM
Pump Stop: Main Air Pressure	Let Air Build to Required Pressure
Pump: Aux Auto-Dump Switch ON	Release Aux Auto-Dump Switch Prior to Engaging Pump
Pump: Aux Chute-to-Left Switch ON	Release Aux Chute-to-Left Switch Prior to Engaging Pump

Table 1 **Warning and Caution Messages Automizer (Continued) (Sheet 3 of 5)**

Warning and Caution Messages Automizer	Solution
Pump: Aux Chute-to-Right Switch ON	Release Aux Chute-to-Right Switch <u>Prior to Engaging Pump</u>
Pump: Aux Open-Gripper Switch ON	Release Aux Open-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: Aux Dead-man Switch ON	Release Aux Dead-man Switch <u>Prior to Engaging Pump</u>
Pump: Aux Open-Gripper Switch ON	Release Aux Open-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: Body-Lower Switch ON	Release Body-Lower Switch <u>Prior to Engaging Pump</u>
Pump: Body-Raise Switch ON	Release Body-Raise Switch <u>Prior to Engaging Pump</u>
Pump: Crusher-Down Switch ON	Release Crusher-Down Switch <u>Prior to Engaging Pump</u>
Pump: Crusher-Up Switch ON	Release Crusher-Up Switch <u>Prior to Engaging Pump</u>
Pump: Hopper Door Not Close	Close Open Door
Pump: J1 Auto-Dump Switch ON	Release J1 Auto-Dump Switch <u>Prior to Engaging Pump</u>
Pump: J1 Chute-to-Left Switch ON	Release J1 Chute-to-Left Switch <u>Prior to Engaging Pump</u>
Pump: J1 Chute-to-Right Switch ON	Release J1 Chute-to-Right Switch <u>Prior to Engaging Pump</u>
Pump: J1 Close-Gripper Switch ON	Release J1 Close-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: J1 Dead-man Switch ON	Release J1 Dead-man Switch <u>Prior to Engaging Pump</u>
Pump: J1 Open-Gripper Switch ON	Release J1 Open-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: J2 Auto-Dump Switch ON	Release J2 Auto-Dump Switch <u>Prior to Engaging Pump</u>
Pump: J2 Chute-to-Left Switch ON	Release J2 Chute-to-Left Switch <u>Prior to Engaging Pump</u>

Table 1 **Warning and Caution Messages Automizer (Continued) (Sheet 4 of 5)**

Warning and Caution Messages Automizer	Solution
Pump: J2 Chute-to-Right Switch ON	Release J2 Chute-to-Right Switch <u>Prior to Engaging Pump</u>
Pump: J2 Close-Gripper Switch ON	Release J2 Close-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: J2 Dead-man Switch ON	Release J2 Dead-man Switch <u>Prior to Engaging Pump</u>
Pump: J2 Open-Gripper Switch ON	Release J2 Open-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: Packer Extend Switch ON	Release Packer Extend Switch <u>Prior to Engaging Pump</u>
Pump: Packer Retract Switch ON	Release Packer Retract Switch <u>Prior to Engaging Pump</u>
Pump: PTO Not OK	Refer to Maintenance Personnel or LabriePlus
Pump: RPM Too High	Lower Engine Speed Below 900 RPM
Pump: Tailgate-Down Switch ON	Release Tailgate-Down Switch <u>Prior to Engaging Pump</u>
Pump: Tailgate-Up Switch ON	Release Tailgate-Up Switch <u>Prior to Engaging Pump</u>
Pump: Transmission. Not OK	Refer to Maintenance Personnel or LabriePlus
Raise Body: Air Suspension 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

Table 1 **Warning and Caution Messages Automizer (Continued) (Sheet 5 of 5)**

Warning and Caution Messages Automizer	Solution
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 **Warning and Caution Messages Expert (Sheet 1 of 4)**

Warning and Caution Messages Expert	Solution
Arm Up: Chute Bad Position	Set Chute to Correct Position
Arm Up: Crusher Not Raised	Raise Crusher Panel
Arm: Aux Dead-man ON	Release Aux Dead-man
Arm: Body Raised	Lower Body
Arm: Hopper Door Not Closed	Close Hopper Door
Arm: Pump Not Started	Engage pump
Arm: Tailgate unlocked	Lock Tailgate
Auto-Dump: Cab EStop	Pull Out Cab EStop Button
Auto-Dump: Pump Not Started	Engage Pump
Body: Pump Not Started	Engage Pump
Buzzer: Arm Not Stowed	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 Panel
Chute: Pump Not Started	Engage Pump
Crusher: Arm too High	Lower Arm
Crusher: Chute Bad Position	Set Chute to Correct Position
Crusher: Hopper Door Not Closed	Close Hopper Door
Crusher: Packer Not Retracted	Retract Packer

Table 2 Warning and Caution Messages Expert (Continued) (Sheet 2 of 4)

Warning and Caution Messages Expert	Solution
Crusher: Pump Not Started	Engage Pump
EStop: Aux Cab EStop	Pull Out Aux Cab EStop Button
EStop: Cab EStop	Pull Out Cab EStop Button
Full Eject: Cab EStop	Pull Out Cab EStop Button
Full Eject: Pump Not Started	Engage Pump
Gripper Open: Arm too High	Lower Arm
High Hydraulic Oil Temperature	Turn OFF Engine and Refer to your Maintenance Personnel
Low Hydraulic Oil	Add Hydraulic Oil
Miss 1 Scan with Master	Refer to Maintenance Personnel or LabriePlus
Packer Extend: Air Weigh Signal	Unload Body
Packer: Already Extended	Refer to Maintenance Personnel or LabriePlus
Packer: Already Retracted	Refer to Maintenance Personnel or LabriePlus
Packer: Pump Not Started	Engage Pump
Packer: Tailgate Not Open	Open Tailgate
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 Not Closed	Close Hopper Door
Pump Not Started: Main Air Pressure	Let the Air Build to Required Pressure
Pump Not Started: RPM too High	Lower Engine Speed Below 900 RPM
Pump: Aux Auto-Dump Switch ON	Release Aux Auto-Dump Switch <u>Prior to Engaging Pump</u>
Pump: Aux Chute-to-Left Switch ON	Release Aux Chute-to-Left Switch <u>Prior to Engaging Pump</u>
Pump: Aux Chute-to-Right Switch ON	Release Aux Chute-to-Right Switch <u>Prior to Engaging Pump</u>

Table 2 **Warning and Caution Messages Expert (Continued) (Sheet 3 of 4)**

Warning and Caution Messages Expert	Solution
Pump: Aux Close-Gripper Switch ON	Release Aux Close-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: Aux Dead-man Switch ON	Release Aux Dead-Man Switch <u>Prior to Engaging Pump</u>
Pump: Aux Open-Gripper Switch ON	Release Aux Open-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: Body-Lower Switch ON	Release Body-Lower Switch <u>Prior to Engaging Pump</u>
Pump: Body-Raise Switch ON	Release Body-Raise Switch <u>Prior to Engaging Pump</u>
Pump: Crusher-Down Switch ON	Release Crusher-Down Switch <u>Prior to Engaging Pump</u>
Pump: Crusher-Up Switch ON	Release Crusher-Up Switch <u>Prior to Engaging Pump</u>
Pump: Hopper Door Not Closed	Close Hopper Door
Pump: J1 Auto-Dump Switch ON	Release J1 Auto-Dump Switch <u>Prior to Engaging Pump</u>
Pump: J1 Chute-to-Left Switch ON	Release J1 Chute-to-Left Switch <u>Prior to Engaging Pump</u>
Pump: J1 Chute-to-Right Switch ON	Release J1 Chute-to-Right Switch <u>Prior to Engaging Pump</u>
Pump: J1 Close-Gripper Switch ON	Release J1 Close-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: J1 Dead-man Switch ON	Release J1 Dead-man Switch <u>Prior to Engaging Pump</u>
Pump: J1 Open-Gripper Switch ON	Release J1 Open-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: J2 Auto-Dump Switch ON	Release J2 Auto-Dump Switch <u>Prior to Engaging Pump</u>
Pump: J2 Chute-to-Left Switch ON	Release J2 Chute-to-Left Switch <u>Prior to Engaging Pump</u>
Pump: J2 Chute-to-Right Switch ON	Release J2 Chute-to-Right Switch <u>Prior to Engaging Pump</u>

Table 2 **Warning and Caution Messages Expert (Continued) (Sheet 4 of 4)**

Warning and Caution Messages Expert	Solution
Pump: J2 Close-Gripper Switch ON	Release J2 Close-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: J2 Dead-man Switch ON	Release J2 Dead-man Switch <u>Prior to Engaging Pump</u>
Pump: J2 Open-Gripper Switch ON	Release J2 Open-Gripper Switch Prior to Engaging Pump
Pump: Packer Extend Switch ON	Release Packer Extend Switch <u>Prior to Engaging Pump</u>
Pump: Packer Retract Switch ON	Release Packer Retract Switch <u>Prior to Engaging Pump</u>
Pump: PTO Not OK	Refer to Maintenance Personnel or LabriePlus
Pump: Transmission Not OK	Refer to Maintenance Personnel or LabriePlus
Pump: RPM too High	Lower Engine Speed Below 900 RPM
Pump: Tailgate-Down Switch ON	Release Tailgate-Down Switch <u>Prior to Engaging Pump</u>
Pump: Tailgate-Up Switch ON	Release Tailgate-Up Switch <u>Prior to Engaging Pump</u>
Raise Body: Arm Not Stowed	Retract Arm to Stowed Position
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
Tailgate Up: Truck Moving	Bring Truck to a Standstill
Tailgate: Packer Not Retracted	Retract Packer
Tailgate: Pump Not Started	Engage Pump
Wrong Driver Position	Change Driver Position Switch to Correct Position

Table 3 **Warning and Caution Messages MINIMAX (Sheet 1 of 4)**

Warning and Caution Messages MINIMAX	Solution
Arm up: Crusher Not Raised	Raise Crusher Panel
Arm: Aux Dead-man ON	Release Aux Dead-man
Arm: External Control Selected	Deactivate External Control
Arm: Hopper Door Not Closed	Close Hopper Door
Arm: Pump Not Started	Engage Pump
Arm: Tailgate Unlocked	Lock Tailgate
Buzzer: Arm Not Stowed	Retract Arm to Stowed Position
Buzzer: Tailgate Unlocked	Lock Tailgate
Crusher: Arm too High	Lower Arm
Crusher: External Control	Deactivate External Control
Crusher: Hopper Door Not Closed	Close Hopper Door
Crusher: Packer Not Retracted	Retract Packer
Crusher: Pump Not Started	Engage Pump
EStop: Right EStop	Pull Out Aux Cab EStop Button
EStop: Aux Cab EStop	Pull Out Aux Cab EStop Button
EStop: Cab EStop	Pull Out Cab EStop Button
EStop: Left EStop	Pull Out Left EStop Button
EStop: Left Panic Bar	Release Left Panic Bar
EStop: Right Panic Bar	Release Right Panic Bar
Full Eject: Cab EStop	Pull Out Cab EStop Button
Full Eject: External Control Selected	Deactivate External Control
Full Eject: Packer Not Retracted	Retract Packer
Full Eject: Pump Not Started	Engage Pump
Gripper Open: Arm too High	Lower Arm
High Hydraulic Oil Temperature	Turn OFF Engine and Refer to your Maintenance Personnel
Low Hydraulic Oil	Add Hydraulic Oil

Table 3 **Warning and Caution Messages MINIMAX (Continued) (Sheet 2 of 4)**

Warning and Caution Messages MINIMAX	Solution
Packer Extend: Air Weigh Signal	Unload Body
Packer: Already Extended	Refer to Maintenance Personnel or LabriePlus
Packer: Already Retracted	Refer to Maintenance Personnel or LabriePlus
Packer: External Control	Deactivate External Control
Packer: Pump Not Started	Engage Pump
Packer: Tailgate Not Fully Open	Open Tailgate Completely
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: Left EStop	Pull Out Left EStop Button
Pump Not Started: Left Panic Bar	Release Left Panic Bar
Pump Not Started: Right EStop	Pull Out Right EStop Button
Pump Not Started: Right Panic Bar	Release Right Panic Bar
Pump Not Started: RPM too High	Lower Engine Speed Below 900 RPM
Pump: Aux Auto-Dump Switch ON	Release Aux AutoDump Switch <u>Prior to Engaging Pump</u>
Pump: Aux Close-Gripper Switch ON	Release Aux Close-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: Aux Dead-man Switch ON	Release Aux Dead-man Switch <u>Prior to Engaging Pump</u>
Pump: Aux Open-Gripper Switch ON	Release Aux Open-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: Crusher-Down Switch ON	Release Crusher-Down Switch <u>Prior to Engaging Pump</u>
Pump: Crusher-Up Switch ON	Release Crusher-Up Switch <u>Prior to Engaging Pump</u>
Pump: J1 Auto-Dump Switch ON	Release J1 Auto-Dump Switch <u>Prior to Engaging Pump</u>
Pump: J1 Close-Gripper Switch ON	Release J1 Close-Gripper Switch <u>Prior to Engaging Pump</u>

Table 3 **Warning and Caution Messages MINIMAX (Continued) (Sheet 3 of 4)**

Warning and Caution Messages MINIMAX	Solution
Pump: J1 Dead-man Switch ON	Release J1 Dead-man Switch <u>Prior to Engaging Pump</u>
Pump: J1 Open-Gripper Switch ON	Release J1 Open-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: J2 Auto-Dump Switch ON	Release J2 Auto-Dump Switch <u>Prior to Engaging Pump</u>
Pump: J2 Close-Gripper Switch ON	Release Close-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: J2 Dead-man Switch ON	Release J2 Dead-man Switch <u>Prior to Engaging Pump</u>
Pump: J2 Open-Gripper Switch ON	Release J2 Open-Gripper Switch <u>Prior to Engaging Pump</u>
Pump: Left EStop	Pull Out Left EStop Button
Pump: Left Panic Bar	Release Left Panic Bar
Pump: Packer Extend Switch ON	Release Packer Extend Switch <u>Prior to Engaging Pump</u>
Pump: Packer Retract Switch ON	Release Packer Retract Switch <u>Prior to Engaging Pump</u>
Pump: PTO Not OK	Refer to Maintenance Personnel or LabriePlus
Pump: Right EStop	Pull Out Right EStop Button
Pump: Right Panic Bar	Release Right Panic Bar <u>Prior to Engaging Pump</u>
Pump: RPM too High	Lower Engine Speed Below 900 RPM
Pump: Tailgate-Down Switch ON	Release Tailgate-Down Switch <u>Prior to Engaging the Pump</u>
Pump: Tailgate-Up Switch ON	Release Tailgate Up Switch <u>Prior to Engaging Pump</u>
Pump: Transmission Not OK	Refer to Maintenance Personnel or LabriePlus
Tailgate Up: Truck Moving	Bring Truck to a Standstill
Tailgate: External Control Selected	Deactivate External Control

Table 3 **Warning and Caution Messages MINIMAX (Continued) (Sheet 4 of 4)**

Warning and Caution Messages MINIMAX	Solution
Tailgate: Packer Not Retracted	Retract Packer
Tailgate: Pump Not Started	Engage pump
Wrong Driver Position	Change Driver Position Switch to Correct Position

Table 4 **Warning and Caution Messages WITTKE™ (Sheet 1 of 3)**

Warning and Caution Messages WITTKE™	Solution
Arm Raise: Air Weigh Signal	Unload Body
Arm Raise: Packer Not Retracted	Retract Packer
Arm Raise: Roof Not Opened	Open Roof (Top Door)
Auto-Dump: Wrong Driver Position	Change Driver Position Switch to Correct Position
Auto-Dump: Arm too High to Start	Lower Arms
Auto-Dump: Max Angle Reached	Operate Arms and Forks Manually
Auto-Dump: Pump Not Started	Engage Pump
Bar Stop Reached	First Push Bar Stop Override Switch, then Move Container out of Bar Stop
Buzzer: Body Raised	Lower body
Buzzer: Tailgate Unlocked	Lock Tailgate
Control is External	Disable External Control
EStop: Aux EStop	Pull Out Aux EStop Button
EStop: Cab EStop	Pull Out Cab EStop Button
EStop: External EStop	Pull Out External EStop Button
Fork: Arm Above Mid-Height	Lower Arms Below Mid-Height
Fork: Pump Not Started	Engage Pump
High Hydraulic Oil Temperature	Turn OFF Engine and Refer to Maintenance Personnel
Low Hydraulic Oil	Add Hydraulic Oil

Table 4 **Warning and Caution Messages WITTKE™ (Sheet 2 of 3)**

Warning and Caution Messages WITTKE™	Solution
Miss 1 Scan with Master	Refer to Maintenance Personnel or LabriePlus
Packer: Arm Above Mid-Height	Lower Arms Below Mid-Height
Packer: Pump Not Started	Engage Pump
Packer: Roof Not Opened	Open Roof (Top Door)
Pump Stop: Main Air Pressure	Let the Air Build to Required Pressure
Pump: Auto-Dump Button ON	Button <u>Must be OFF</u> to Engage Pump
Pump: Aux: EStop	Pull Out Aux EStop Button
Pump: Cab EStop	Pull Out Cab EStop Button
Pump: Dead-man Switch ON	Switch <u>Must be OFF</u> to Engage Pump
Pump: External EStop	Pull Out External EStop Button
Pump: Fork Width Decrease Switch ON	Switch <u>Must be OFF</u> to Engage Pump
Pump: Fork Width Increase Switch ON	Switch <u>Must be OFF</u> to Engage Pump
Pump: Hopper Door Not Closed	Close Hopper Door
Pump: Main Air Pressure	Let the Air Build to Required Pressure
Pump: Packer Extend Switch ON	Switch <u>Must be OFF</u> to Engage Pump
Pump: Packer Retract Switch ON	Switch <u>Must be OFF</u> to Engage Pump
Pump: PTO Not OK	Refer to Maintenance Personnel or LabriePlus
Pump: Roof-Open Switch ON	Switch <u>Must be OFF</u> to Engage Pump
Pump: Roof-Close Switch ON	Switch <u>Must Be OFF</u> to Engage Pump
Pump: RPM too High	Lower RPM to below 900 RPM
Pump: Speed-Up Auto Switch ON	Switch <u>Must Be OFF</u> to Engage Pump
Pump: Speed-Up On Switch ON	Switch <u>Must be OFF</u> to Engage Pump
Pump: Tag-Axle Down Switch ON	Switch Must Be OFF to Engage Pump

Table 4 Warning and Caution Messages WITTKE™ (Sheet 3 of 3)

Warning and Caution Messages WITTKE™	Solution
Pump: Tag-Axle Up Switch ON	Switch Must be OFF to Engage Pump
Pump: Tailgate-Down Switch ON	Switch Must be OFF to Engage Pump
Pump: Tailgate-Up Switch ON	Switch Must be OFF to Engage pump
Pump: Transmission Not OK	Refer to Maintenance Personnel or LabriePlus
Roof: Pump Not Started	Engage Pump
Service Oil Filter #1	Replace Oil Filter #1
Service Oil Filter #2	Replace Oil Filter #2
Tailgate: Packer Not Retracted	Retract Packer
Tailgate: Pump Not Started	Engage Pump
Wrong Driver Position	Mover Driver Position Switch to Correct Position.

Table 5 Error Messages All Units (Sheet 1 of 2)

Error Messages	Solution
Button Pack 12 is disconnected	Refer to Maintenance Personnel or LabriePlus
Button Pack 13 is disconnected	Refer to Maintenance Personnel or LabriePlus
Button Pack 14 is disconnected	Refer to Maintenance Personnel or LabriePlus
Button Pack 15 is disconnected	Refer to Maintenance Personnel or LabriePlus
CAN Error Level 1	Refer to LabriePlus
CAN Error Level 2	Refer to LabriePlus
CAN Error Level 3	Refer to LabriePlus
Communication Lost with Master	Refer to Maintenance Personnel or LabriePlus
Module 11 is disconnected	Refer to Maintenance Personnel or LabriePlus

Table 5 Error Messages All Units (Continued) (Sheet 2 of 2)

Error Messages	Solution
Module 11 Not Connected	Refer to Maintenance Personnel or LabriePlus
Module 20 is disconnected	Refer to Maintenance Personnel or LabriePlus
Module 20 Not Connected	Refer to Maintenance Personnel or LabriePlus
Module 30 is disconnected	Refer to Maintenance Personnel or LabriePlus
Module 30 Not Connected	Refer to Maintenance Personnel or LabriePlus
Module 50 is disconnected	Refer to Maintenance Personnel or LabriePlus
Module 50 Not Connected	Refer to Maintenance Personnel or LabriePlus
Module 60 is disconnected	Refer to Maintenance Personnel or LabriePlus
Module 60 Not Connected	Refer to Maintenance Personnel or LabriePlus

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

The multiplexed system is designed to assist operators by identifying potential causes of issues directly on the monitor. Active causes, which require immediate attention, are displayed in bold and large print at the top of the screen. Once the active cause is addressed, it will move to the lower part of the screen, where non-active causes are shown in smaller, lighter print. These non-active causes represent issues that have already been resolved or no longer require attention. By clearly distinguishing between active and non-active causes, the system helps operators prioritize actions and maintain safe and efficient vehicle operation. (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 have access to the following sections:

- ♦ Multicylce ([See page 34](#))
- ♦ I/O Status ([See page 35](#))
- ♦ Password (optional) ([See page 41](#))
- ♦ Program Version ([See page 43](#))
- ♦ Pump Usage (optional) ([See page 45](#))
- ♦ Time Adjust (available according to chassis) ([See page 45](#))

The Network Load indicator, displayed in the lower center of the screen, monitors and reflects traffic on the system's network.

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 in Labrie's multiplexed system is designed for ease of use, allowing operators to quickly adjust settings such as the multicycle function of the packer. To change the number of packer cycles, follow these steps:

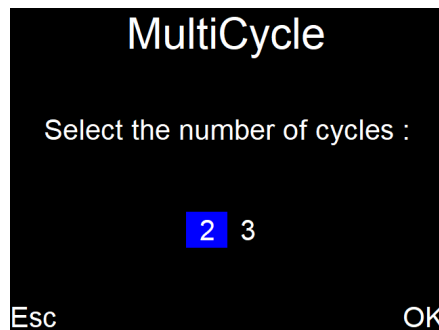
Change Multicycle setting:

1. Press the button located at the bottom left corner of the monitor to open the Main Menu.
2. From the menu, locate the option labeled "SELECT THE NUMBER OF CYCLES." If necessary, use the arrow keys to navigate to this option and press "OK."
3. The multicycle settings can be adjusted between two and three cycles. Use the arrow keys to select the desired number of cycles and press "OK" to confirm your choice. (See Figure 3-6)

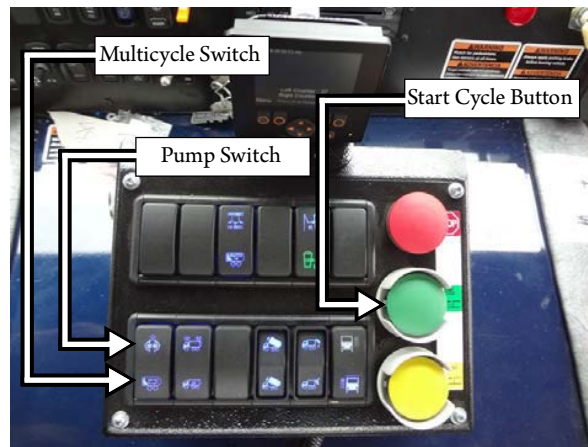
This straightforward process ensures operators can efficiently customize the packer's multicycle settings to meet operational needs.

NOTE: Labrie side loaders built prior to March 2018 had the ability to select between 2 to 8 packer cycles. It was found that multicycle settings greater than three (3) provide negligible increase in the payload density and cause the moving components of the pack system to wear at an accelerated rate. (See TSB 18-10)

Figure 3-6 Multicycle page



NOTE: When the Multicycle switch on the control panel is on and the packer is activated, the packer will move according to the number of cycles selected, that is two or three (or up to 8 cycles for units prior to 2018).

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 packer cycles should be adjusted based on the vehicle's collection route. In residential areas with closely spaced houses, increasing the number of cycles ensures the hopper is cleared efficiently for the next pickup.

Each time the packer completes a cycle, a proximity switch behind the packer sends a signal to the electronic controller. The controller tracks the cycles and stops the packer once the preset number is reached, optimizing waste compression and preventing unnecessary wear.

I/O Status

This section provides detailed guidance for troubleshooting body-related issues that may arise during daily operations. These issues can span various systems, including hydraulic, mechanical, electrical, or pneumatic components. Proper diagnosis and resolution of these problems are essential for maintaining the vehicle's performance and ensuring safe operation.

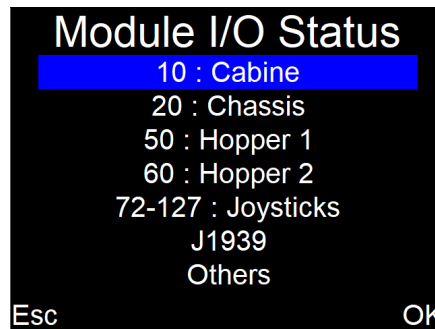
To begin troubleshooting, identify the control module associated with the specific part of the truck experiencing the issue. Each module corresponds to a particular area or function of the vehicle. For instance:

- ♦ Module #10: Handles all functions located in the cab.
- ♦ Module #20: Manages chassis-related functions.

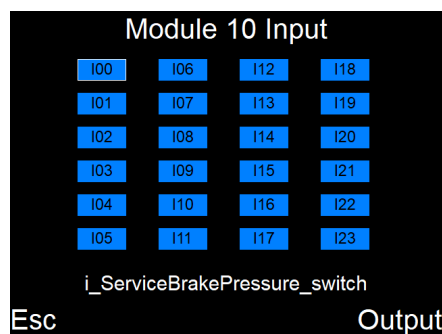
Once the appropriate module is identified, use the up and down arrows on the monitor to navigate to the desired module. Highlight the module and press "OK" to access its functions and diagnostic information. (See Figure 3-8) This process allows operators to efficiently pinpoint and address issues within the vehicle's systems.

NOTE: Pressing "OK" can be accomplished two ways: either press the far right button or the "OK" button.

Press "Esc" to return to the previous 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. 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.

Table 6 Colored Rectangles

Color	Function Status
Blue	Inactive
Green	Active
Red	Closed Short-Circuit
Yellow	Open Circuit

Output Status

The Output 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. 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.

Figure 3-10 Output Status Page

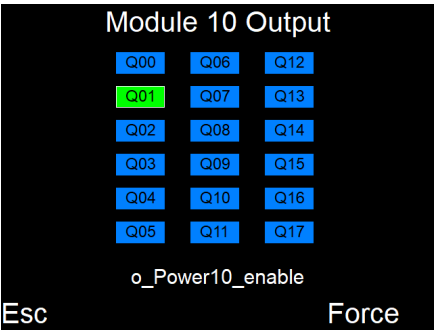


Table 7 Colored Rectangles

Color	Function Status
Blue	Inactive
Green	Active
Red	Closed Short-Circuit
Yellow	Open Circuit

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, Press “Esc” to return to the previous page.

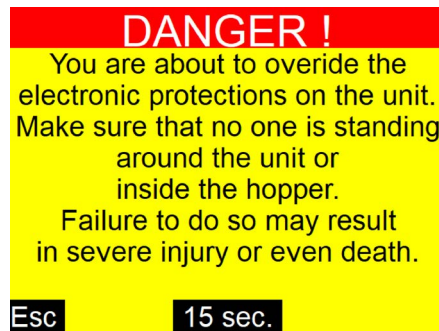
Press the “Force” button to display the Force page.

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 can be accessed directly from the Output Status page by pressing the corresponding button on the monitor. However, before the Force page is displayed, the monitor will show a warning message to alert the operator. (See Figure 3-11) This precaution ensures the operator is aware of the potential risks associated with forcing outputs and provides an opportunity to confirm the action before proceeding.

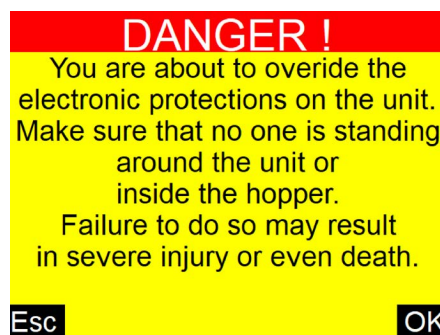
Figure 3-11 Warning Message



The message stays on for 15 seconds. Then an “OK” prompt appears on the lower right corner of the screen. (See [Figure 3-12](#))

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

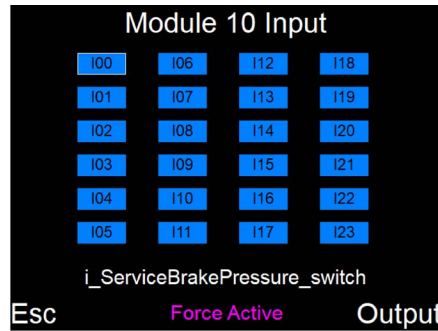
Figure 3-12 Warning message with “OK” prompt



Press “OK” to go to the Force page or “Esc” to return to the previous page.

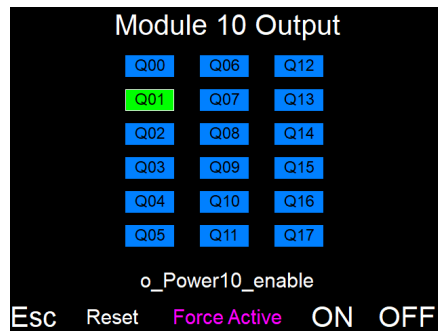
After Pressing “OK”, the Force page appears on the screen. (See [Figure 3-13](#))

Figure 3-13 Force page (Input)



NOTE: Since input functions cannot be manually activated or deactivated, the operator must press the “Output” button to proceed to the next page. (See Figure 3-14) This ensures that the system transitions to the Output Status page, where output functions can be monitored and adjusted as needed.

Figure 3-14 Force page (Output)



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
- ◆ 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 press the “RESET” button or cut power to the multiplexes system by turning the ignition key off.

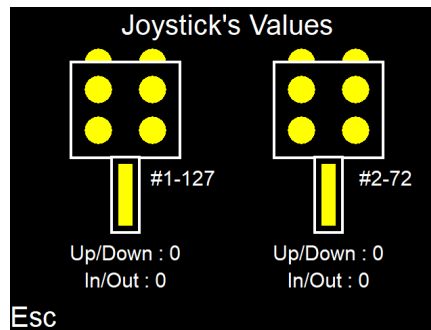
NOTE: To go from a module to another (e.g. from module 10 to 20), the operator has to go back to the Module I/O Status page (See Figure 3-8) and select module 20.

Press “Esc” to return to the previous 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



Joystick Page Overview

The Joystick page on the monitor allows operators to verify the functionality of the joystick(s) installed in the vehicle. For vehicles equipped with a single joystick, it will appear on the monitor as Joystick 127. If the vehicle has two joysticks, either Joystick 127 or Joystick 72 may represent one of the joysticks on the screen.

Checking Joystick Buttons

When a joystick button is pressed, the corresponding button on the monitor should turn green, indicating proper communication between the joystick and the master control module. If the button does not respond, it may signal a communication issue. In such cases, contact maintenance personnel or [LabriePlus](#) for assistance.

Testing Joystick Movement

Moving the joystick backward, forward, or sideways should cause the values displayed under the joystick illustration on the monitor to change, **ranging from 255 to -255**. If no changes occur, this may also indicate a communication problem between the joystick and the master control module. Report the issue to maintenance personnel or [LabriePlus](#) for diagnosis and repair.

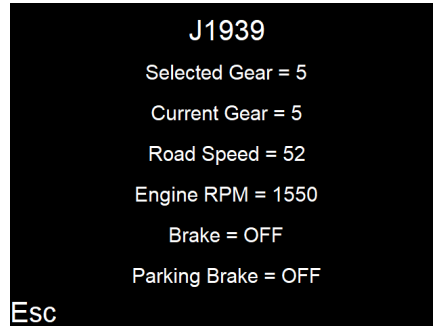
Returning to the Previous Page

To exit the Joystick page and return to the preceding screen, press the “Esc” button on the monitor.

J1939

The J1939 page (See Figure 3-16) is useful when you need some specific information (i.e. 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 CAN bus, which is used for the body.

These 2 CAN 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.

Managing Passwords (optional)

With this optional feature, data protection passwords can be added to the IFM Multiplexed System display. This feature can also be used to change or remove already saved passwords.

Data that can be protected by passwords relate to the following features: Output Force, Multicycle and J1939 baud rate.

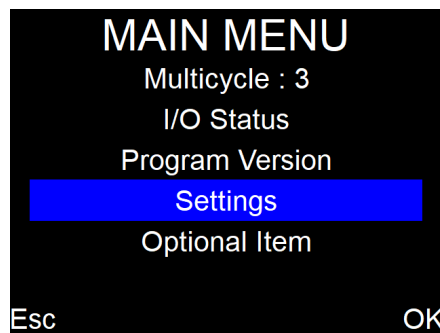
NOTE: Only adjustable data in Output Force, Multicycle and J1939 Baud rate can be protected by passwords.

The Password Menu is available through the Settings Menu. An associated menu, Locked Features, is also available, allowing you to choose among the features that can be "locked".

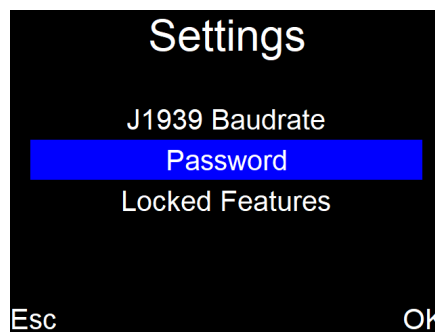
After creating a new password, write it down in a safe place for reference. You will be required to provide it to gain access to a locked adjustable feature when logging on anew (after the sign out and back on).

To create, change or remove a password.

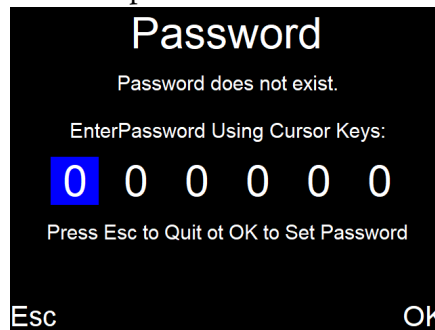
1. Go to the Main Menu.
2. Select “Settings”.



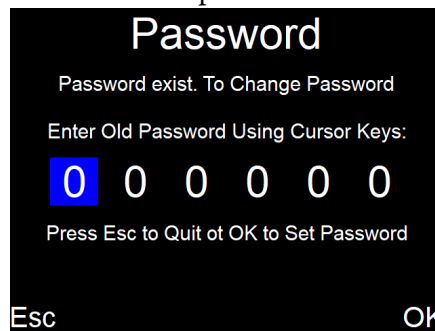
3. Select “Password”.



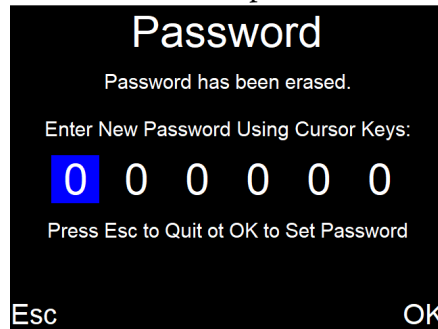
4. If no password has been created, enter a password using the arrow keys.
Press “Esc” to quit or “OK” to set password.



5. If a password already exists enter using the arrow keys.
Press “Esc” to quit or “OK” to erase the password.

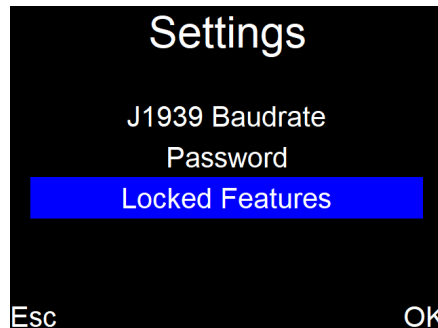


6. Enter a new password using the arrow keys.
Press “Esc” to quite or “OK” to create a new password.

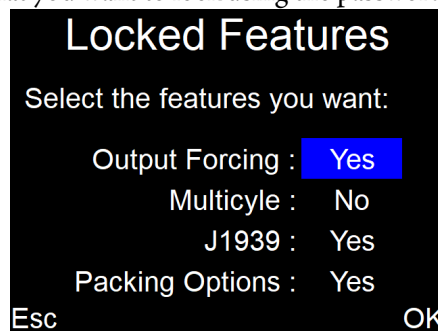


NOTE: Entering a new password with only zeros, “000000”, will result in deactivating the password function.

7. Go back to the Settings Menu by pressing “Esc”.
8. In the Settings Menu, select Locked Features.



9. Select the feature(s) that you want to lock using the password created or saved.



NOTE: If you have forgotten your password, please contact the [LabriePlus](#) Service Department.

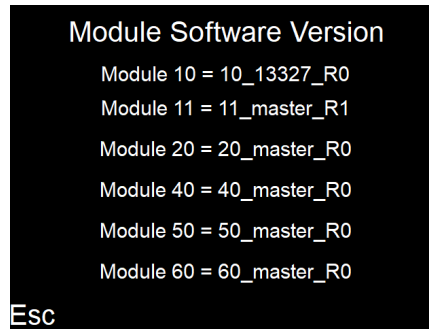
Module Software Version

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.

Determining the Electrical Schematic Number for Labrie Vehicles

The electrical schematic number for a specific Labrie vehicle can be determined using the information displayed on the Software Version Page. This process varies slightly depending on whether the vehicle has a 10-digit or 17-digit serial number. Below is a detailed explanation of how to locate and interpret the schematic number for both types of serial numbers.

Figure 3-17 Software Version page (10-Digit Serial Number)



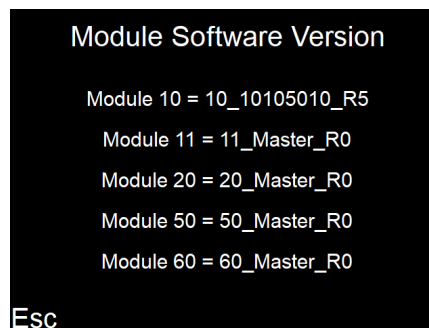
NOTE: For a 10-digit serial number, the number 8651 would result in the schematic number ZS008651, followed by the revision number R1 in this example.

For Vehicles with a 10-Digit Serial Number

On vehicles with a 10-digit serial number, based on year the electrical schematic number consists of four or five digits displayed on the Software Version Page. These five digits are added to the prefix ZS00, which is standard for all Labrie electrical schematics. For example, if the number displayed is 8651, the electrical schematic number is ZS008651. (See Figure 3-17)

NOTE: Additionally, the number is followed by the program revision number, such as R5, which indicates the specific revision of the schematic or program.

Figure 3-18 Software Version page (17-Digit Serial Number)



NOTE: For a 17-digit serial number, the number ZS10-105010 would be the schematic number in this example.

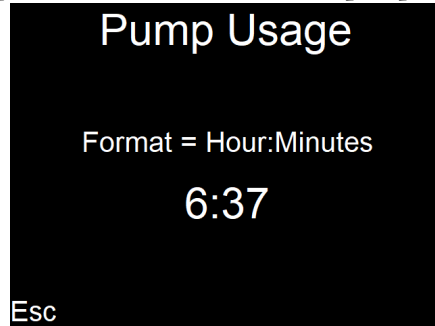
For Vehicles with a 17-Digit Serial Number

On vehicles with a 17-digit serial number, the electrical schematic number consists of eight digits displayed on the Software Version Page. For example, the number ZS10-105010 would be the schematic number from (See Figure 3-18).

Press “Esc” to return to the previous page.

Pump Usage

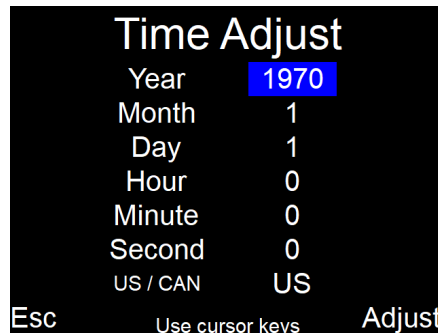
This section contains an optional hour meter that trucks pump usage for maintenance purposes.



Press “Esc” to return to the previous 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.

Module Locations

The Labrie Multiplex System is designed to manage and monitor the critical functions of waste collection vehicles through a network of interconnected control modules, referred to as nodes. These modules are strategically placed throughout the vehicle to optimize functionality, accessibility, and ease of maintenance.

NOTE: Please note that Autocar also use IFM modules for the chassis-based controls; ensure that the module in question is connected to the Labrie electrical system.

Node 10 Module: All Units

Node 10 serves as the central hub for managing core operations and facilitating communication between other nodes. It is located inside the cab, ensuring easy access for operators and technicians during diagnostics or maintenance. This module processes input signals from the control panel, joysticks, and other operator interfaces, relaying commands to the appropriate nodes to execute vehicle functions.

Figure 3-19 Node 10 Location Mack LEU Chassis

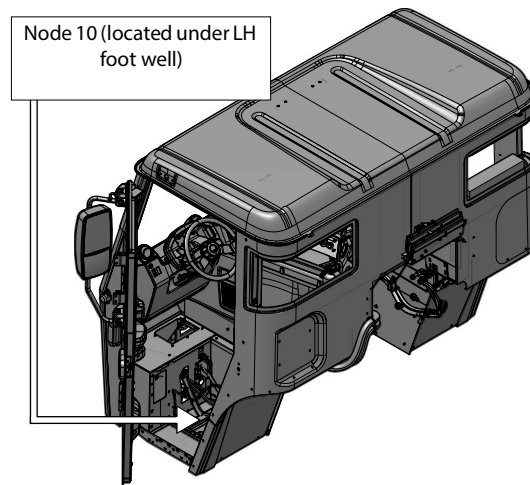


Figure 3-20 Node 10 Location Mack LR Chassis

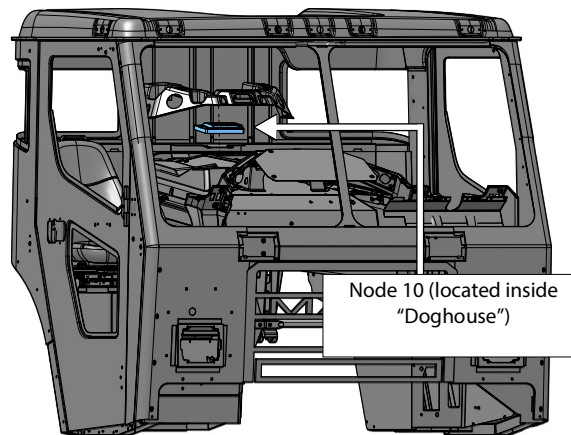


Figure 3-21 Node 10 Location Autocar and Peterbilt Chassis.

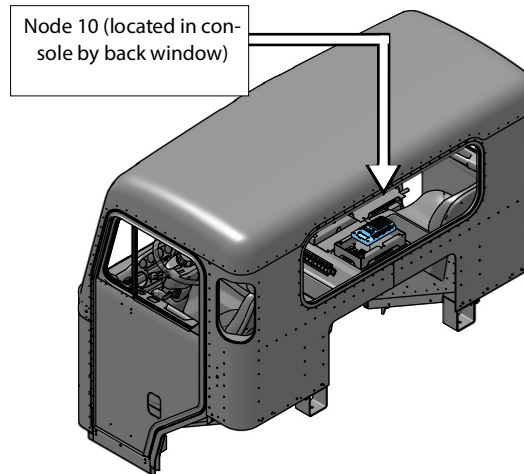
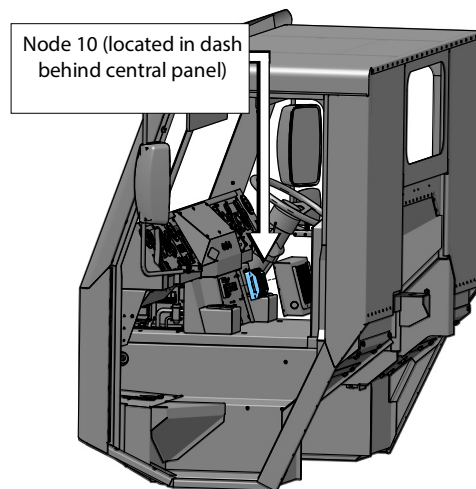


Figure 3-22 Node 10 Location Crane Carrier Company Chassis.



Nodes 12/13 and 14/15 Switch Bank: All Units

Nodes 12, 13, 14, and 15 are located in the cab's main control console and manage both primary and auxiliary vehicle functions. (See [Figure 3-23](#)) Nodes 12 and 14 process input signals from switches controlling the automated arm, packer, and tailgate, relaying commands to other nodes like Node 30 for execution. Nodes 13 and 15 handle optional features, such as advanced lighting systems or specialized hydraulic functions, providing additional control capacity for unique configurations. Together, these modules ensure efficient operation of both essential and auxiliary systems.

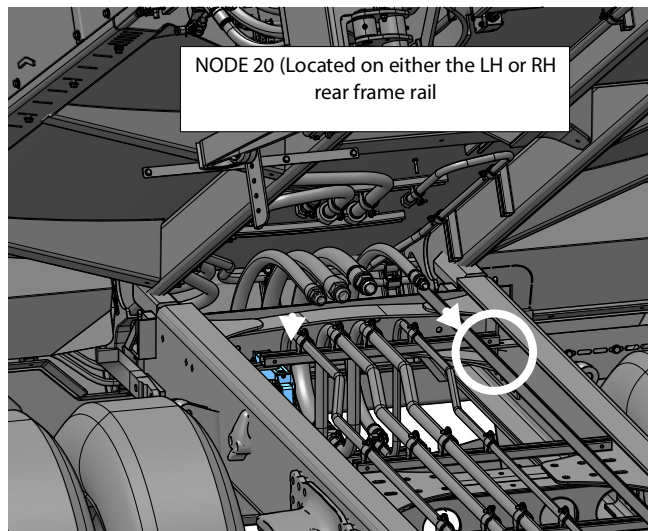
Figure 3-23 Node 12 and Node 13 location. Location will vary dependent on unit.



Node 20 Module: Automizer and Expert

Node 20 is responsible for processing inputs from various chassis-related systems and components. These inputs include signals from the chassis lighting, PTO pressure switch, hydraulic oil level sensor, hydraulic oil temperature sensor, filter pressure switch, and tag axle functions.

Figure 3-24 Node 20 location.

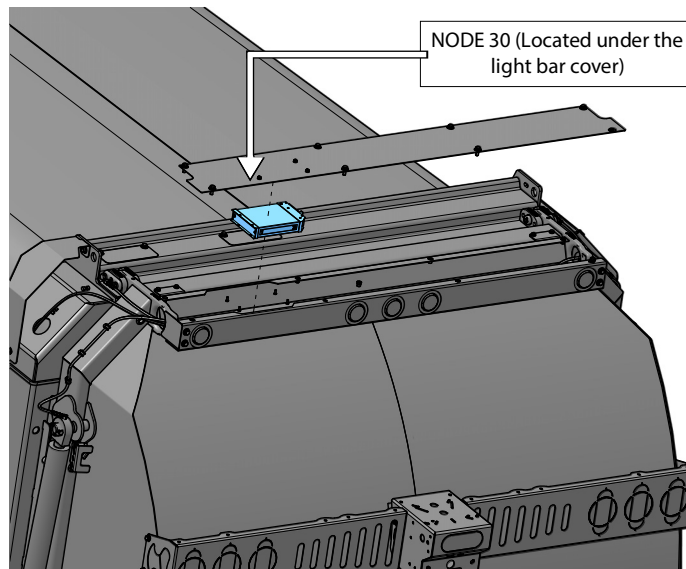


Node 30 Module

NOTE: Node 30 is currently used exclusively on WITTK™ Front Loaders. However, it was previously utilized on Labrie Automizer TTD and Expert bodies manufactured prior to 2017. For vehicles produced before this date, operators and maintenance personnel should consult the unit schematics to confirm if their vehicle is equipped with Node 30. (See TSB 17-17)

Node 30 is an essential module in the Labrie Multiplex System, specifically designed to manage tailgate operations and ensure safe and efficient functionality. This module plays a critical role in monitoring and controlling the tailgate, preventing accidents and equipment damage during operation.

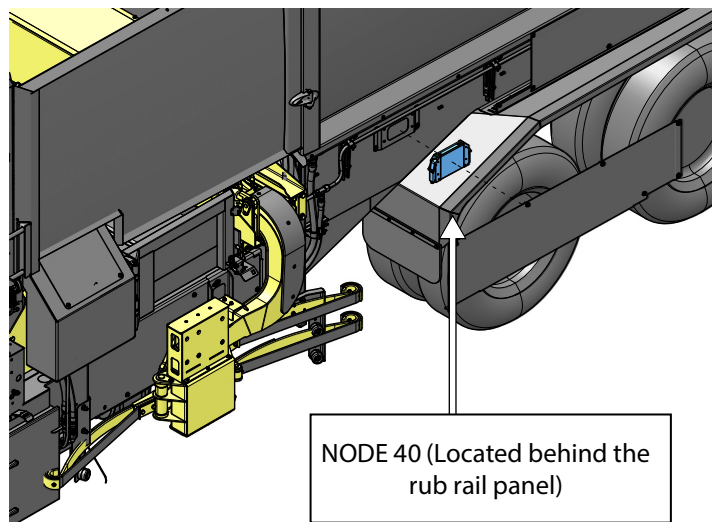
Figure 3-25 Node 30 location.



Node 40: Exclusive to Expert

Node 40 is exclusive to the Expert model and is located on the street side of the unit, behind the hopper area and concealed beneath the rub rail cover. This module plays a critical role in managing advanced functions including, hydraulic system monitoring, hydraulic body functions and enforcing safety interlocks.

Figure 3-26 Node 40 Location.



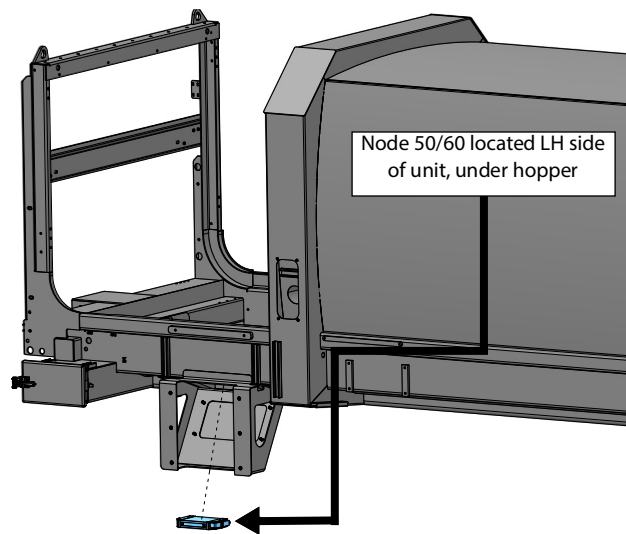
Node 50/60 Module: All Units

Node 50/60 is a dual module within the Labrie Multiplex System, designed to manage critical body-related operations, including the packer and hopper door. This single component contains two modules integrated into one unit, ensuring efficient control and monitoring of these essential functions. The location of Node 50/60 varies depending on the vehicle type and configuration, with specific placements tailored to the operational needs of each model.

MINIMAX (Side Loader)

Node 50/60 is positioned behind the first rub rail on the right-hand side of the body. This placement allows easy access for maintenance personnel while ensuring proximity to the packer and hopper door systems.

Figure 3-27 Node 50/60 Location Minimax.



AUTOMIZER

For Automizer units, Node 50/60 is typically located near the hopper structure, behind the rub rail panel. Automizers equipped with the Helping Hand arm will find the module on the left (street) side of the body, rearward of the arm valve. Accessing the module requires removing the forward rub rail panel.

Figure 3-28 Node 50/60 Location Automizer.

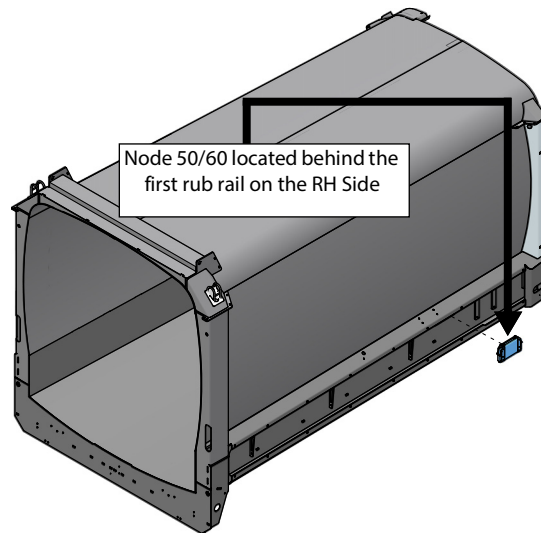
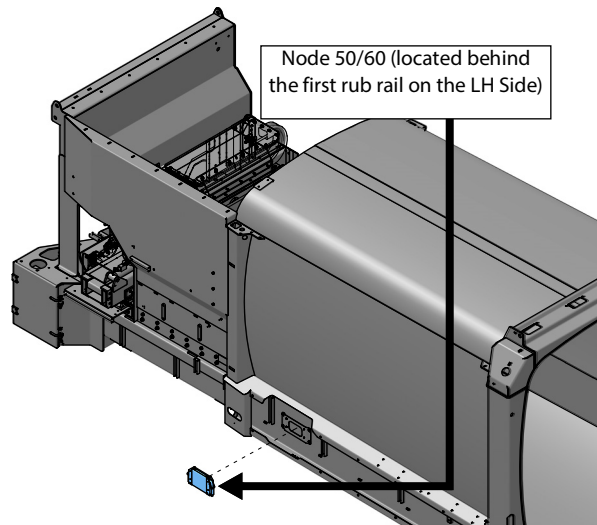


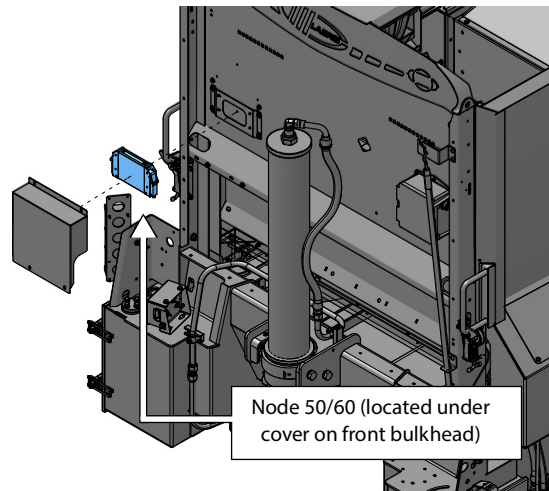
Figure 3-29 Node 50/60 Location Automizer Helping Hand Arm.



EXPERT

In Expert units, Node 50/60 is mounted on the curbside front bulkhead, approximately halfway up the structure, beneath a protective cover. This placement ensures the module is shielded from environmental exposure while remaining accessible for diagnostics and maintenance.

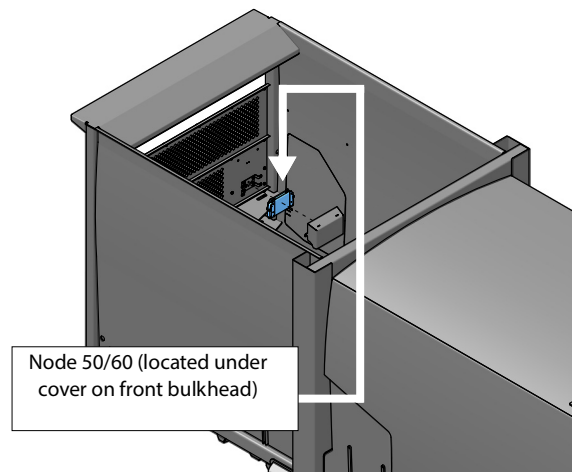
Figure 3-30 Node 50/60 Location Expert.



WITTKE™ (Front Loader)

Node 50/60 is positioned inside the hopper area, behind the packer blade. This location allows the module to directly interact with the packer and hopper systems, ensuring efficient operation

Figure 3-31 Node 50/60 Location Front-loader.



Connections and Module Condition

IMPORTANT: Turn OFF ignition power and the battery disconnect before removing module connections. Disconnecting connectors while power is supplied can damage the module. Always ensure the system is fully powered down to prevent electrical surges or component failure.

Maintaining good, reliable connections at the multiplex modules is essential for the proper functioning of the control system. Secure and stable connections ensure seamless communication between modules, preventing malfunctions and maintaining the efficiency of vehicle operations. The following pages offer detailed guidance on how to inspect connections and assess the condition of the modules to ensure optimal performance and system reliability.

When troubleshooting multiplex module connectivity problems, such as the fault message “Node XX Disconnected” displayed on the monitor, it is essential to perform basic checks to identify and resolve the issue.

Procedure for Diagnosing Module Input/Output and Connector Conditions

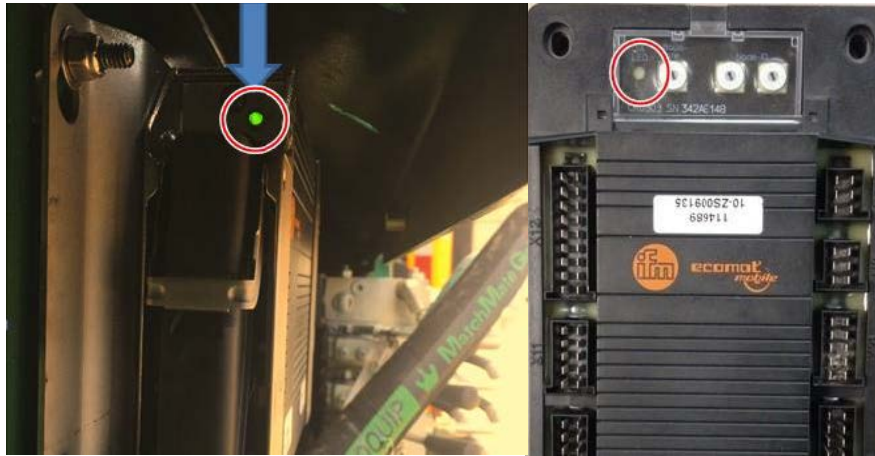
Proper diagnosis of multiplex module functionality and connector conditions is essential for ensuring reliable operation and communication within the system. Follow the steps below to verify the module’s status and address any connectivity issues.

Step 1: Verify Module LED Light Status

Locate the LED light near the wire connector on the module (commonly referred to as the “heartbeat”). (See Figure 3-32) The LED light provides critical information about the module’s operational status. For additional Information please (TSB 19-09).

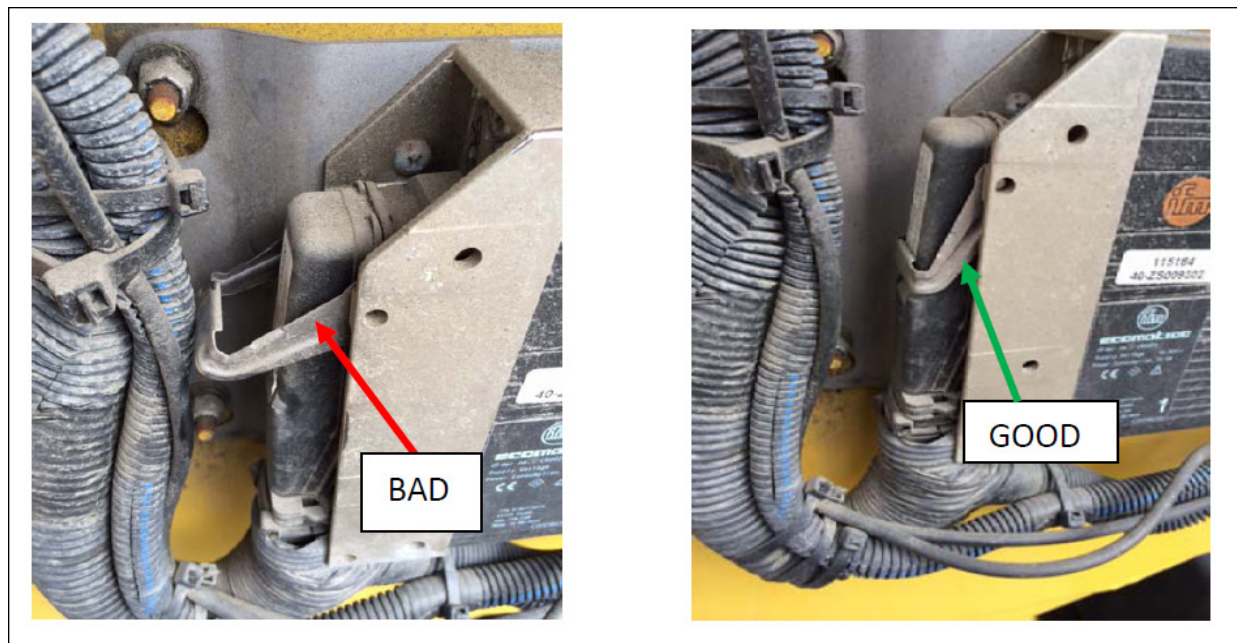
Table 8 LED Indicator Light Matrix

LED Color	Status	Description
-	Off	No operating voltage
Yellow	1 flash on	Initialization checks
Green	5 Hz flash (5 flashes per sec.)	No firmware loaded
Green	2 Hz flash (2 flashes per sec.)	Normal run mode
Green	Solid	Stop mode
Red	2 Hz flash (2 flashes per sec.)	Run with error
Red	Solid	Fatal error or Stop w/ error

Figure 3-32 LED Light on Module**Step 2: Inspect Connector Condition**

Once the module's LED light status has been verified, inspect the connector and module terminals for potential issues:

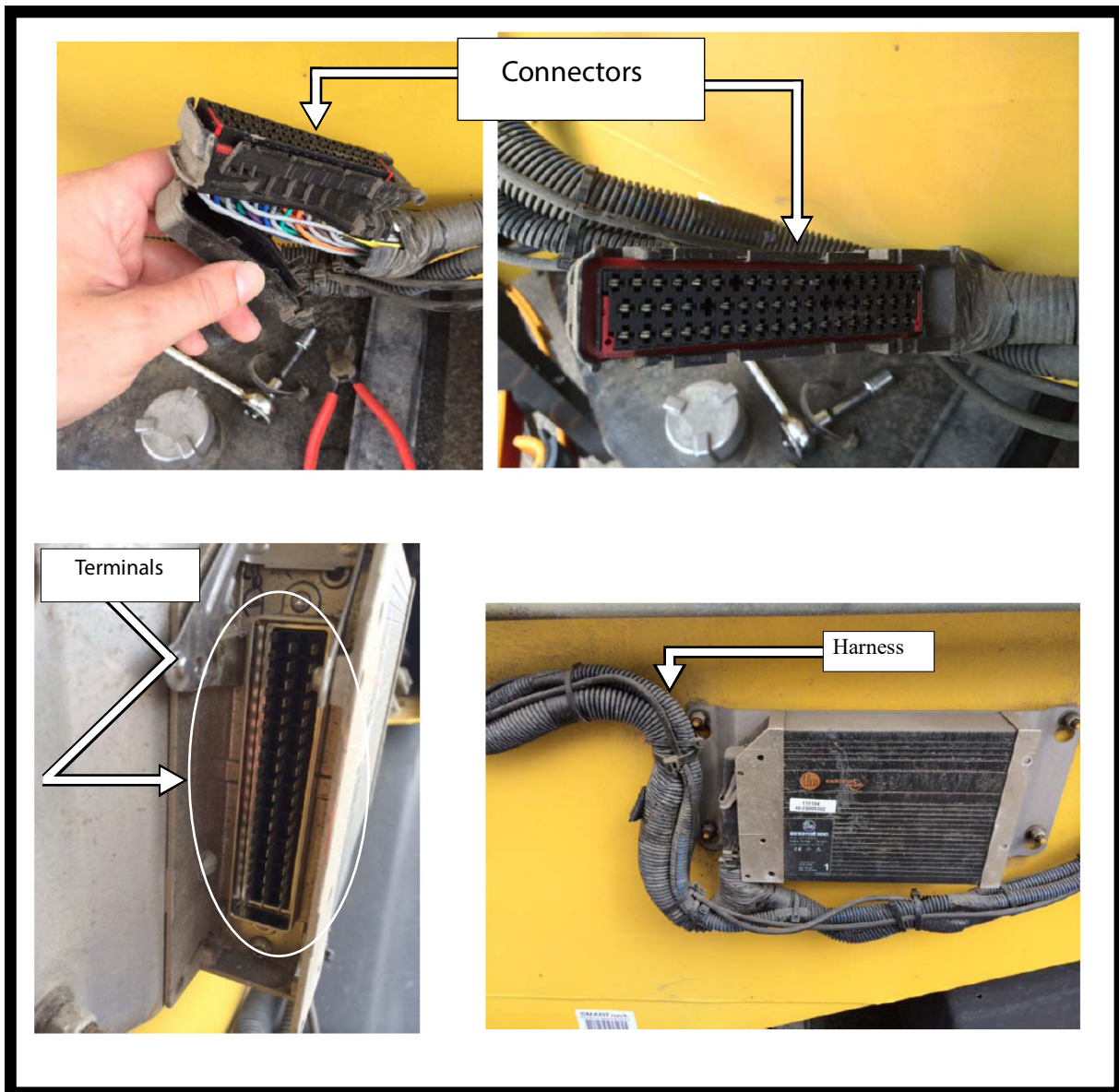
- ♦ Check Connection: Ensure the connector is properly attached to the module. (See Figure 3-33)

Figure 3-33 Connection Status

- ♦ Inspect for Moisture or Corrosion: Look for signs of moisture or corrosion on the connector or module terminals. If present, clean the affected areas thoroughly.
- ♦ Apply Dielectric Grease: To prevent future corrosion, apply dielectric grease to the connector conservatively.

- ♦ **Inspect Harness Condition:** Verify that the harness is not secured too tightly with tie-wraps, as this may pull wires back within the connector and cause connectivity issues. (See Figure 3-34)

Figure 3-34 Connectors, Terminals and Harness



Step 3: Verify Power and Communication Lines

Check all power supplies, grounds, and communication lines to ensure proper functionality:

- ♦ **Ignition Power (ign) and Battery Power (batt):**
 - Verify that the module is receiving consistent power.
 - If power is suspected to be intermittent, inspect the ignition relay located next to the battery box.

- ♦ Ground Connections:
 - Ensure all grounds are securely connected to the module.
 - Isolate and check the resistance of individual grounds to the negative post of the battery. Poor grounding can cause communication failures.
- ♦ CAN_H and CAN_L Wires:
 - Inspect the CAN_H and CAN_L communication lines for proper connectivity.
 - Verify that the resistance between CAN_H and CAN_L wires is 60 ohms. If the resistance is not 60 ohms, connectivity issues with the module will occur.

In-Cab Packer Control Station

Your unit has a packer control station located on the in-cab control panel. Here is a description of all three buttons that are found on the packer control station.

Stop Push Button (red)

The Emergency Stop button ([See Figure 3-35](#)) will stop all hydraulic functions on the truck (body, tailgate, packer, etc.). By pressing the red button, the packer will stop where it is. The red button must be manually pulled back to reactivate the hydraulic system.

Figure 3-35 Stop Push Button



Pack Push Button (green)

The packer start cycle button (See Figure 3-36) activates the packer for one complete cycle. A complete cycle takes about 12 seconds.

Front Loaders and Automizer Full Ejects

This push-button moves the packer blade to the rear of the hopper when you are packing a load or to the rear of the body when you are ejecting a load at the landfill.

- ◆ Press this button once to activate the packer blade (tailgate must be closed and locked). When the tailgate is closed and locked, the packer returns automatically to the “home” position.
- ◆ Press and hold this button to eject the load (tailgate must be fully open).
- ◆ Release this button to stop the packer blade during the ejection (full eject mode only).

Figure 3-36 Pack Push Button



Retract Push Button (yellow)

The packer retract button (See Figure 3-37) is used to return the packer to the starting point of its cycle. This control is particularly helpful when the body is full, and the material obstructs the packer from completing its cycle. Manual retraction ensures the packer is brought back to its initial position, allowing for continued operation and efficient waste management.

Front Loaders and Automizer Full Ejects

This push-button returns the packer blade to its “home” position when you are packing a load or you are ejecting the load at the landfill.

- ◆ Press this button once to bring the packer blade back to the front-end of the hopper (tailgate must be closed).
- ◆ Press and hold this button to bring the packer blade back to its “home” position during the ejection cycle (tailgate must be open).
- ◆ Release this button to stop the packer when it comes back to its “home” position (full eject mode only).

Figure 3-37 Retract Push Button



Control Panel

The control panel and cab console in Labrie Multiplex System-equipped vehicles are the central interface for managing critical functions, including the automated arm, packer, tailgate, and lighting systems. Their layout and functionality are tailored to the specific needs of each unit, such as Minimax, Expert, Automizer, and WITTKE™ Front Loaders. This section provides an overview of their features and unit-specific configurations to help operators understand and use these systems effectively.

Rotating Control Panel (Optional)

The control panel ([See Figure 3-38](#)) can pivot around a vertical axis to face either the left-hand or right-hand driving seat, depending on the chassis configuration.

To adjust:

- ♦ Pull and hold the spring-loaded locking pin.
- ♦ Rotate the panel to the desired position.
- ♦ Release the pin to lock it in place.

Figure 3-38 Spring-loaded locking pin



Multiplex Switch Actuators

The switches on Labrie Multiplex System-equipped vehicles control key functions like the automated arm, packer, tailgate, and lighting systems. Clearly labeled and easy to use, they are integrated into the control panel or cab console for quick access. Below is an illustration of the Multiplex Buttons, showing their layout and functionality.

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

Figure 3-39 Switch Actuators

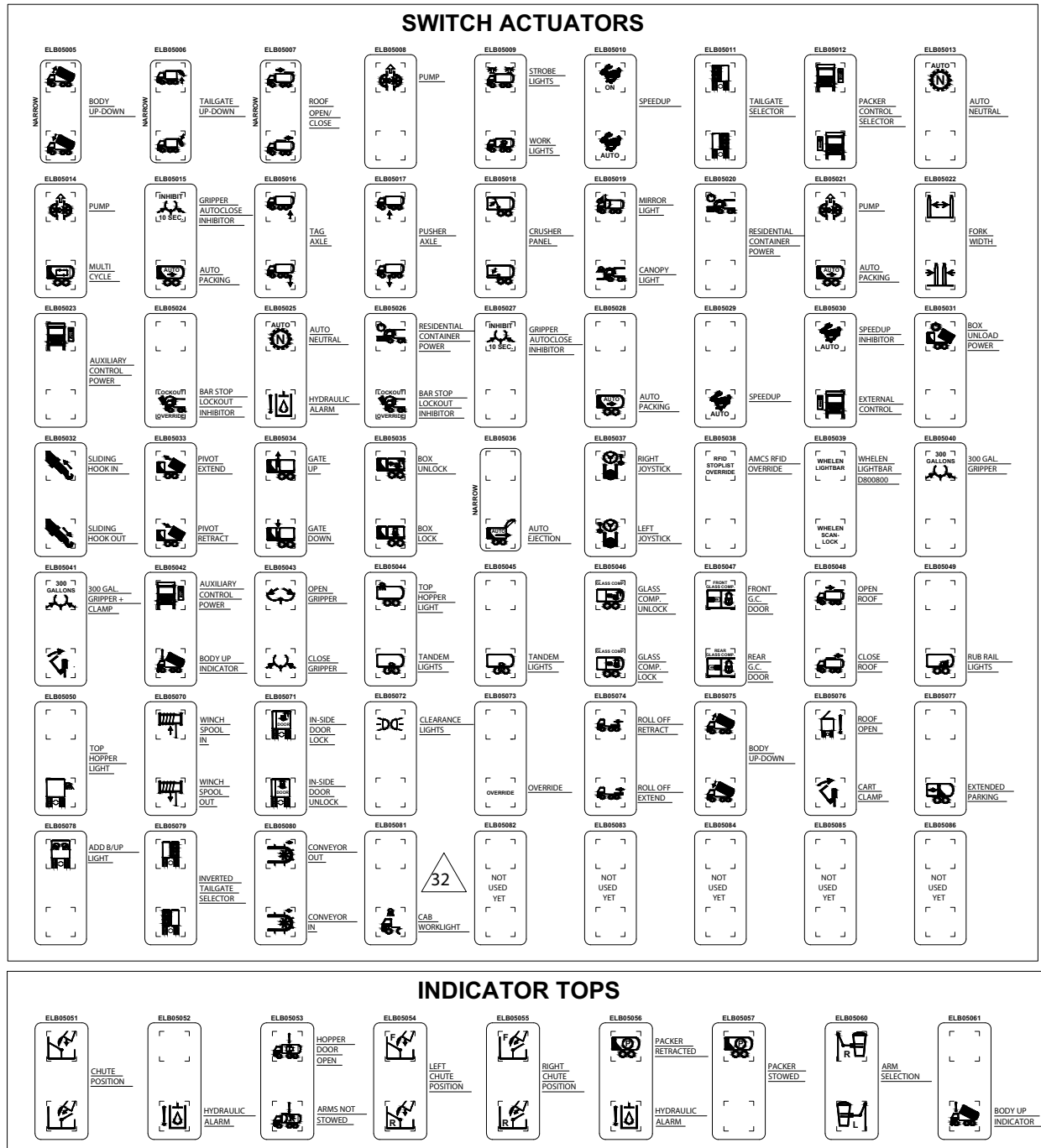
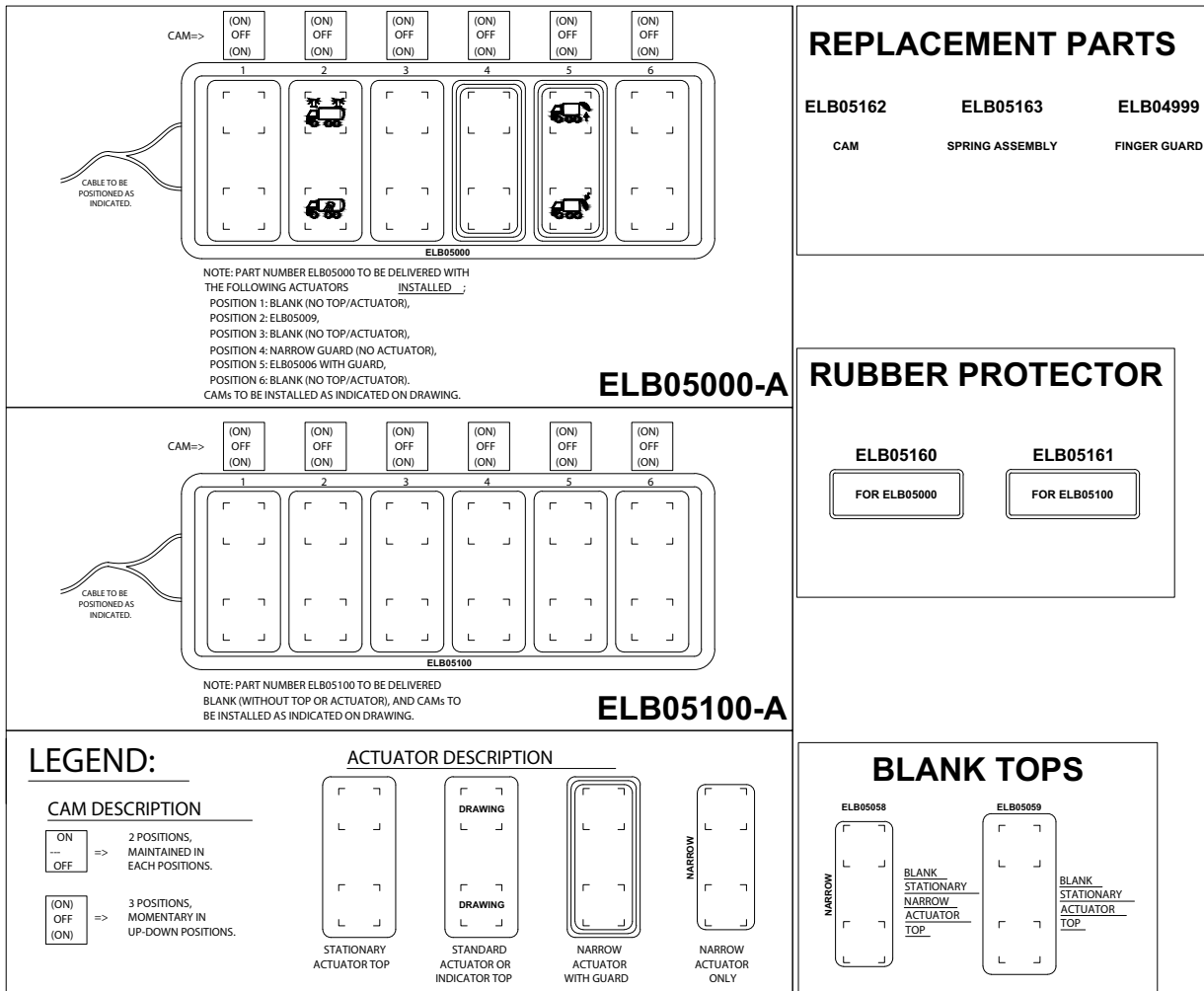


Figure 3-40 Replacement parts.



NOTE: This illustration and the preceding ones were taken from PDF file 159535.

NOTE: 1- All Symbols to be negative Lens.

2- Electronic file for the symbols available on request from Labrie Enviroquip Group only.

Control Panel Automizer

The control panel in the Automizer (See Figure 3-41) unit provides operators with direct access to buttons that control key functions, including the automated arm, packer, tailgate, and lighting systems. This section outlines the buttons and their specific functions, helping operators understand and use the controls effectively during waste collection tasks.

Figure 3-41 Control Panel Automizer



NOTE: The Switches and controls found on the panel vary according to the options installed on the vehicle.

Pump Switch Automizer

This switch (See Figure 3-42), also known as PTO switch, engages and disengages the hydraulic pump, all the body functions 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.

IMPORTANT: Do not close the main shut-off valve (See Figure 3-43) 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 3-42 Pump Switch Automizer

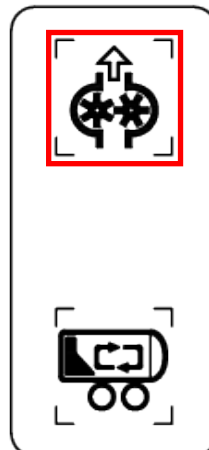


Figure 3-43 Main Shut-off valve Automizer



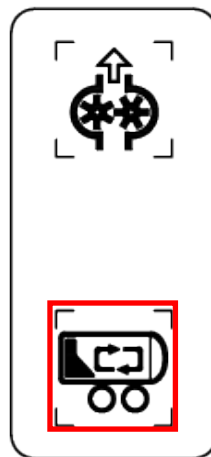
NOTE: In case of a leak in the hydraulic system, and if the vehicle has to be driven somewhere else, take off the drive shaft between the pump and the engine. Call maintenance facility and refer to the [Maintenance Manual](#).

Packer Multicycle Switch Automizer

This switch ([See Figure 3-44](#)) allows the packer to run a preset number of cycles.

- ♦ Press the green button ([See Figure 3-36](#)) once to begin cycle.
- ♦ Stop the cycle at anytime by pressing the red button ([See Figure 3-35](#)) or by turning off the multicycle control switch ([See Figure 3-44](#)).
- ♦ The packer completes, and returns to the fully retracted position, when the multicycle switch ([See Figure 3-44](#)) is turned OFF during an ongoing cycle.

Figure 3-44 Packer Multicycle Switch Automizer

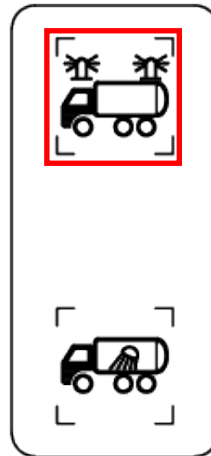


Strobe Light Switch Automizer

This switch (See Figure 3-45) activates and deactivates strobe lights and amber flashing lights.

- ◆ Press this switch once to turn on strobe lights and amber flashing lights (switch turns green).
- ◆ Press this switch again to turn off strobe lights and amber flashing lights (switch turns blue).

Figure 3-45 Right-Hand Side Work Light Switch Automizer

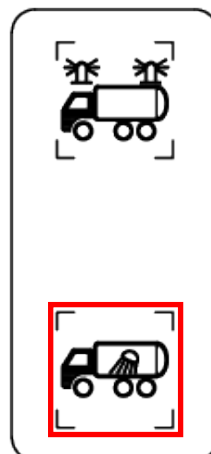


Hopper Work Light Switch Automizer

This switch (See Figure 3-46) activates and deactivates 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).

Figure 3-46 Hopper Work Light Switch Automizer



Crusher Panel Up Switch Automizer (optional)

This switch (See Figure 3-47) raises the crusher panel.

- ◆ Press and hold down this switch to raise the crusher panel to the desired position.

Figure 3-47 Crusher Panel Switch Automizer

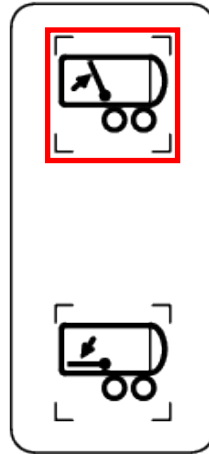


Figure 3-48 Crusher Panel Automizer



Crusher Panel Down Switch Automizer (optional)

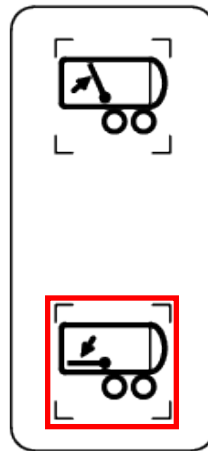
This switch (See Figure 3-49) lowers the crusher panel.

- ◆ Press and hold down this switch to lower the crusher panel to the desired position

The crusher panel is an optional feature that may be installed on an Automizer vehicle to assist with handling bulky items during waste collection and compaction. If your unit is equipped with this option, it is recommended to use the crusher panel specifically for bulky items, as unnecessary use can slow down operations. The crusher panel holds bulky items in place while the packer crushes them, preventing the material from popping up in front of the packing ram and enhancing the compaction effect during the load-breaking sequence.

During the unloading process at the landfill, it is beneficial to leave a sufficient amount of garbage in front of the packer and under the lowered crusher panel as you finish your collection route. Once the body is raised, the packing ram can be activated to clear any material that may be jammed in the hopper. This procedure can also be performed without the crusher panel, depending on the situation and the type of material being unloaded. Proper use of the crusher panel ensures efficient compaction and helps prevent operational delays during waste collection and disposal.

Figure 3-49 Crusher Panel Down Switch

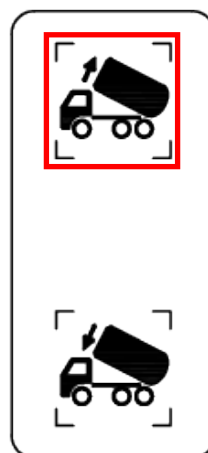


Body Up Switch Automizer

This control switch (See Figure 3-50) is used to raise the body.

- ♦ Press and hold down this switch to raise the body to the desired height.
- ♦ When the body is raised a buzzer sounds.

Figure 3-50 Body Up Switch Automizer



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

Danger! Always use body safety prop when performing maintenance under a raised body. Failure to do so may result in server injury or death.

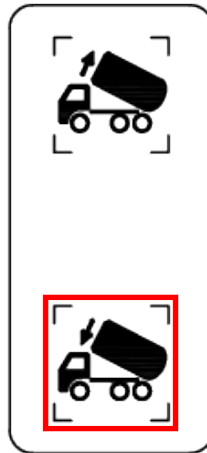


Body Down Switch Automizer

This control switch (See Figure 3-51) is used to lower the body.

- ♦ Press and hold down this switch to lower the body to the desired height.
- ♦ When the body touches the rod of the limit switch, the buzzer stops sounding.

Figure 3-51 Body Down Switch Automizer

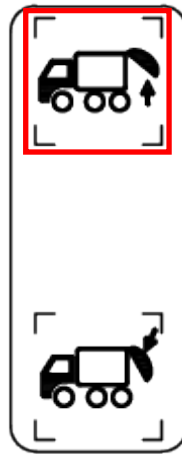


Tailgate Up Switch Automizer

This control switch (See Figure 3-52) is used to raise the tailgate.

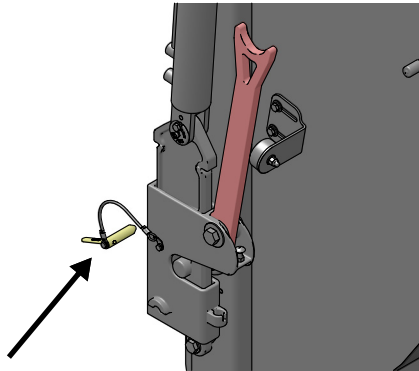
- ♦ Remove both tailgate-locking pins (See Figure 3-53).
- ♦ Press and hold down this switch to raise the tailgate to the desired height.
- ♦ Before using this switch, **make sure the truck is parked on safe level ground.**
- ♦ When the tailgate is unlocked, the **TAILGATE UNLOCKED** or **BODY RAISED** warning lamp turns on and a buzzer sounds.

Figure 3-52 Tailgate Up Switch Automizer



IMPORTANT: Before using this switch, make sure that the truck is parked on safe level ground and that both tailgate-locking pins are removed. (See Figure 3-53).

Figure 3-53 Tailgate-lock Pin Automizer



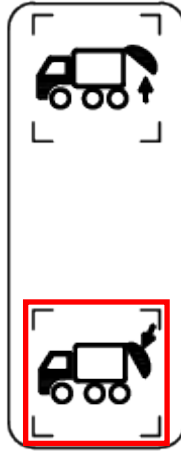
Warning! Do not drive the vehicle when the tailgate is not fully closed.



Tailgate Down Switch Automizer

This control Switch (See Figure 3-54) is used to lower the tailgate.

- ◆ Press and hold down this switch to completely close the tailgate until it rests on the tailgate safety prop.
- ◆ Reinsert the tailgate-locking pins (See Figure 3-53).

Figure 3-54 Tailgate Down Switch Automizer

IMPORTANT: When the tailgate is completely closed, put the tailgate-locking pins back into their place.

Danger!



Always use safety prop while performing maintenance under a raised tailgate. **Failure to do so may result in severe injury or death.**

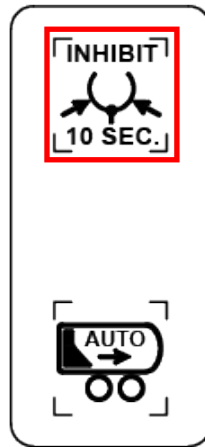
10-Second Inhibit Switch Automizer

This switch (See Figure 3-55), also known as Grabber Auto-Close Override, allows the operator to open the grabber to drop grabbed objects into the hopper. This also allows for the pickup of elevated carts.

To enable this feature.

- ♦ Press the Inhibit Switch, the switch will turn from blue to green.
- ♦ The grabber will open for 10 seconds then close automatically.
- ♦ A blue-lighted switch means that the corresponding feature is disabled.

Figure 3-55 10-Second Inhibit Switch Automizer



Caution!



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

Auto-Packing Switch Automizer

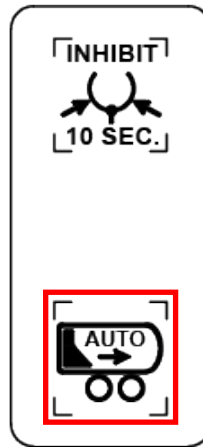
The auto-packing switch (See Figure 3-56) enables the packer to automatically start cycling 2 seconds after the grabber reaches the mid-height position on its way up. If the packer is cycling at the time the arm moves a container towards the hopper, the packer retracts immediately to its fully retracted 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 limit switch is not reached.

When the auto-packing feature is used simultaneously with the multicycle feature (See Figure 3-44), the packer will run the preset number of cycles until the arm lifts a new container towards the hopper. The multicycle 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 grabber reaches the mid-height position on its way up.

- ♦ A blue-lighted switch means that the corresponding feature is disabled.
- ♦ A green-lighted switch means that the corresponding feature is enabled.

Figure 3-56 Auto-Packing Switch Automizer

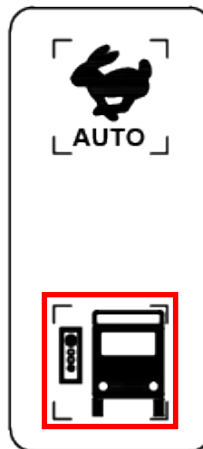


Right-Hand Side Body Control Station Switch Automizer (optional)

In order to use the optional right-hand side body control station, the operator must press this switch (See Figure 3-57).

- ♦ A green switch means this feature is active.
- ♦ A blue switch means this feature is not active.

Figure 3-57 Right-Hand Side Body Control Station Switch Automizer



Control Panel Expert

The control panel in the Expert unit (See Figure 3-58) provides operators with direct access to buttons that control key functions, including the automated arm, packer, tailgate, and lighting systems. This section outlines the buttons and their specific functions, helping operators understand and use the controls effectively during waste collection tasks.

Figure 3-58 Control Panel Expert



NOTE: The switches and controls found on the panel vary according to the options installed on the vehicle.

Rotating Control Panel (Optional)

The control panel (See Figure 3-59) can pivot around a vertical axis to face either the left-hand or right-hand driving seat, depending on the chassis configuration.

To adjust:

- ♦ Pull and hold the spring-loaded locking pin.
- ♦ Rotate the panel to the desired position.
- ♦ Release the pin to lock it in place.

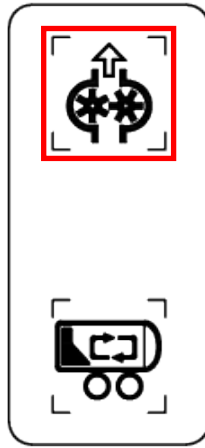
Figure 3-59 Spring-loaded locking pin



Pump Switch Expert

This switch (See Figure 3-60), also known as the PTO switch, engages and disengages the hydraulic pump, all the body functions 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.

Figure 3-60 Pump Switch Expert

IMPORTANT: Do not close the main shut-off valve (See Figure 3-61) 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 3-61 Main Shut-off Valve Expert

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](#).

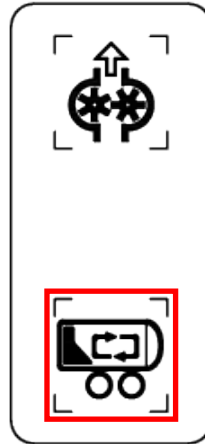
Packer Multicycle Switch Expert

This switch (See Figure 3-62) allows the packer to run a preset number of cycles.

- ◆ Press the green button (See Figure 3-36) once to begin cycle.
- ◆ Stop the cycle at anytime by pressing the red button (See Figure 3-35) or by turning off the multicycle control switch (See Figure 3-62).

- ♦ The packer completes, and returns to the fully retracted position, when the multicycle switch (See Figure 3-62) is turned OFF during an ongoing cycle.

Figure 3-62 Packer Multicycle Switch Expert

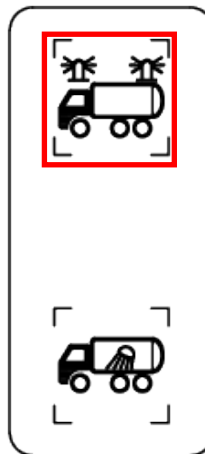


Strobe Light Switch Expert

This switch (See Figure 3-63) activates and deactivates strobe lights and amber flashing lights.

- ♦ Press this switch once to turn on strobe lights and amber flashing lights (switch turns green).
- ♦ Press this switch again to turn off strobe lights and amber flashing lights (switch turns blue).

Figure 3-63 Right-Hand Side Work Light Switch Expert

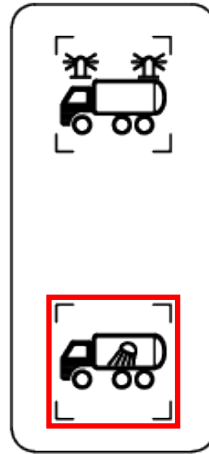


Hopper Work Light Switch Expert

This switch (See Figure 3-64) activates and deactivates the hopper work light.

- ♦ Press the switch once to turn on the hopper work light (the switch turns green).
- ♦ Press the switch again to turn off the hopper work light (the switch turns blue).

Figure 3-64 Hopper Work Light Switch Expert

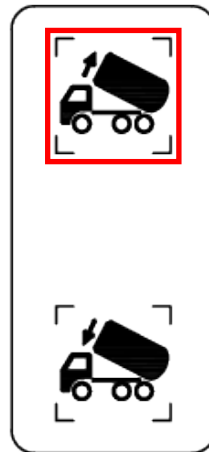


Body Up Switch Expert

This control switch (See Figure 3-65) is used to raise the body.

- ◆ Press and hold down this switch to raise the body to the desired height.
- ◆ When the body is raised a buzzer sounds.

Figure 3-65 Body Up Switch Expert



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

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

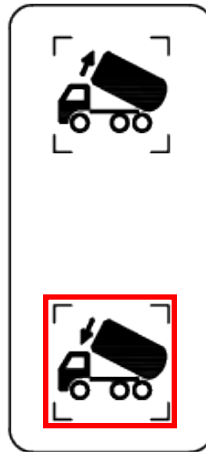


Body Down Switch Expert

This control switch (See Figure 3-66) is used to lower the body.

- ◆ Press and hold down this switch to lower the body to the desired height.
- ◆ When the body touches the rod of the limit switch, the buzzer stops sounding.

Figure 3-66 Body Down Switch Expert

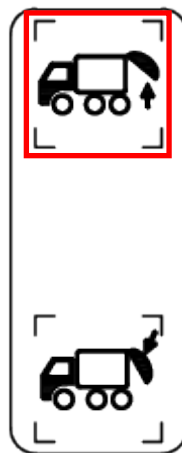


Tailgate Up Switch Expert

This control switch (See Figure 3-67) is used to raise the tailgate.

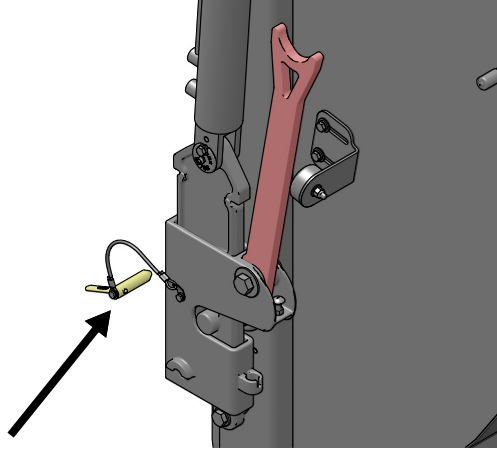
- ◆ Remove both tailgate-locking pins (See Figure 3-68).
- ◆ Press and hold down this switch to raise the tailgate to the desired height.
- ◆ Before using this switch, **make sure the truck is parked on safe level ground.**
- ◆ When the tailgate is unlocked, the **TAILGATE UNLOCKED** or **BODY RAISED** warning lamp turns on and a buzzer sounds.

Figure 3-67 Tailgate Up Switch Expert



IMPORTANT: Before using this switch, make sure that the truck is parked on safe level ground and that both tailgate-locking pins are removed (See Figure 3-68).

Figure 3-68 tailgate-lock Pin Expert



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

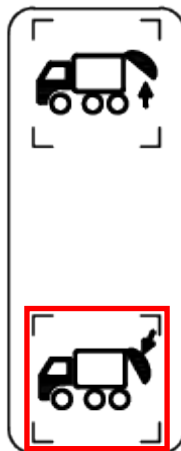


Tailgate Down Switch Expert

This control switch (See Figure 3-69) is used to lower the tailgate.

- ◆ Press and hold down this switch to completely close the tailgate or, until it rests on the tailgate safety prop.
- ◆ Reinsert the tailgate-lock pins. (See Figure 3-68)

Figure 3-69 Tailgate Down Switch Expert



IMPORTANT: When the tailgate is completely closed, put both tailgate-locking pins (See Figure 3-68) back into their place.

Danger!



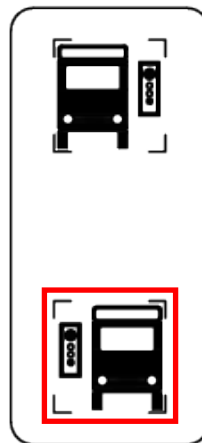
Always use safety prop while performing maintenance under a raised tailgate. **Failure to do so may result in severe injury or death.**

Right-Hand Side Packer Control Station Switch Expert

In order to use the optional right-hand side body control station, the operator must press the lower switch of the packer control selector (See Figure 3-70).

- ♦ A green switch means this feature is active.
- ♦ A blue switch means this feature is not active.

Figure 3-70 Right-Hand Side Packer Control Station Switch Expert

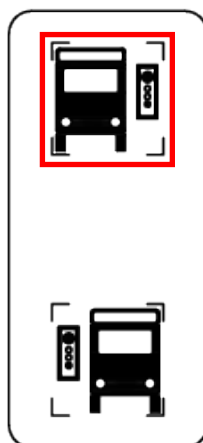


Left-Hand Side Packer Control Station Switch Expert (optional)

In order to use the optional left-hand side packer control station, the operator must press the upper switch of the packer control selector (See Figure 3-71).

- ♦ A green switch means this feature is active.
- ♦ A blue switch means this feature is not active.

Figure 3-71 Left-Hand Side Packer Control Station Switch Expert



Crusher Panel Up Switch Expert (optional)

This switch (See Figure 3-72) raises the crusher panel.

- ◆ Press and hold down this switch to raise the crusher panel to the desired position.

Figure 3-72 Crusher Panel Up Switch

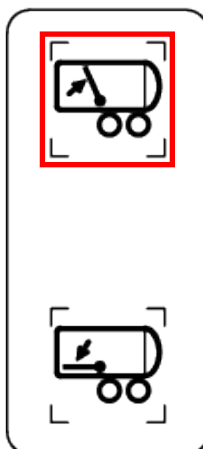
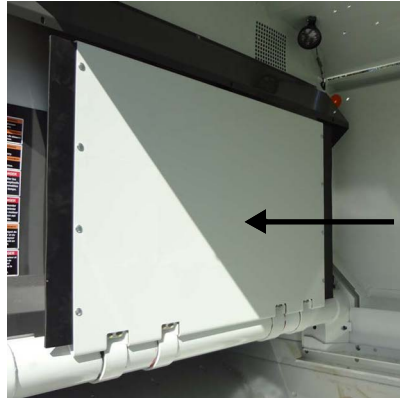


Figure 3-73 Crusher Panel Expert



Crusher Panel Down Switch Expert (optional)

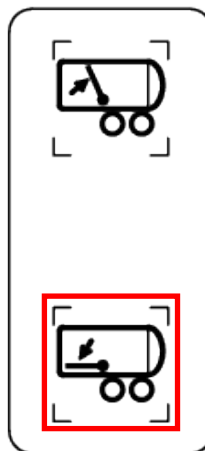
This switch (See Figure 3-74) lowers the crusher panel.

- ◆ Press and hold down this switch to lower the crusher panel to the desired position

The crusher panel is an optional feature that may be installed on an Expert vehicle to assist with handling bulky items during waste collection and compaction. If your unit is equipped with this option, it is recommended to use the crusher panel specifically for bulky items, as unnecessary use can slow down operations. The crusher panel holds bulky items in place while the packer crushes them, preventing the material from popping up in front of the packing ram and enhancing the compaction effect during the load-breaking sequence.

During the unloading process at the landfill, it is beneficial to leave a sufficient amount of garbage in front of the packer and under the lowered crusher panel as you finish your collection route. Once the body is raised, the packer can be activated to clear any material that may be jammed in the hopper. This procedure can also be performed without the crusher panel, depending on the situation and the type of material being unloaded. Proper use of the crusher panel ensures efficient compaction and helps prevent operational delays during waste collection and disposal.

Figure 3-74 Crusher Panel Down Switch



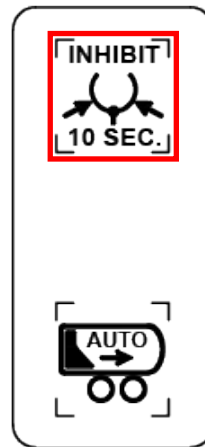
10-Second Inhibit Switch Expert

This switch (See Figure 3-75), also known as Grabber Auto-Close Override, allows the operator to open the grabber to drop grabbed objects into the hopper. This also allows for the pickup of elevated carts.

To enable this feature.

- ◆ Press the Inhibit Switch, the switch will turn from blue to green.
- ◆ The grabber will open for 10 seconds then close automatically.
- ◆ A blue-lighted switch means that the corresponding feature is disabled.

Figure 3-75 10-Second Inhibit Switch Expert



Caution!



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

Auto-Packing Switch Expert

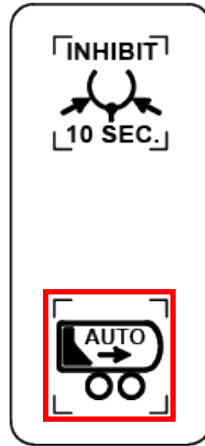
The auto-packing switch (See Figure 3-76) enables the packer to automatically start cycling 2 seconds after the grabber reaches the mid-height position on its way up. If the packer is cycling at the time the arm moves a container towards the hopper, the packer retracts immediately to its fully retracted 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 limit switch is not reached.

When the auto-packing feature is used simultaneously with the multicyle feature, the packer will run the preset number of cycles until the arm lifts a new container towards the hopper. The multicyle 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 grabber reaches the mid-height position on its way up.

- ♦ A blue-lighted switch means that the corresponding feature is disabled.
- ♦ A green-lighted switch means that the corresponding feature is enabled.

Figure 3-76 Auto-Packing Switch Expert



Left-Hand Side Automated Arm Switch Expert (optional)

In order to operate the optional left-hand side automated arm, the operator must press the lower switch of the arm selector (See Figure 3-77).

- ♦ A green switch means this feature is active.
- ♦ A blue switch means this feature is not active.

Figure 3-77 Left-Hand Side Automated Arm Switch Expert



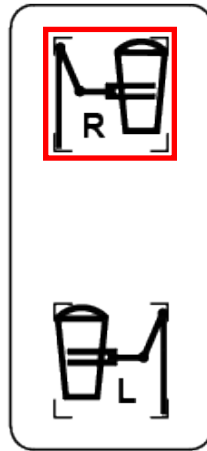
NOTE: In dual Helping-Hand™ arm units, the RHS automated arm must be in the “Home” position in order for the LHS automated arm to be operated.

Right-Hand Side Automated Arm Switch Expert (optional)

In order to operate the optional right-hand side automated arm, the operator must press the upper switch of the arm selector (See Figure 3-78).

- ♦ A green switch means this feature is active.
- ♦ A blue switch means this feature is not active.

Figure 3-78 Right-Hand Side Automated Arm Switch Expert



NOTE: In dual Helping-Hand™ arm units, the LHS automated arm must be in the “Home” position in order for the RHS automated arm to be operated

Cab Console MINIMAX

The control panel in the Expert unit (See Figure 3-79) provides operators with direct access to buttons that control key functions, including the automated arm, packer, tailgate, and lighting systems. This section outlines the buttons and their specific functions, helping operators understand and use the controls effectively during waste collection tasks.

Figure 3-79 Cab Console MINIMAX



NOTE: Switches and buttons found on the cab console may vary according to the options installed on the truck.

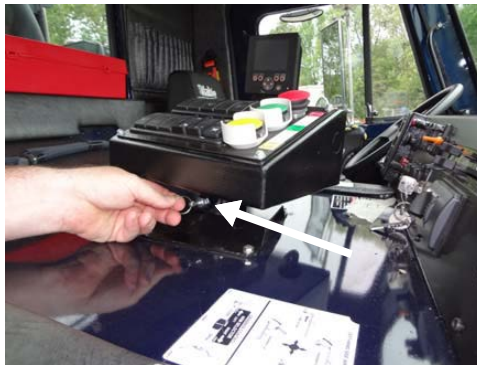
Rotating Control Panel (Optional)

The control panel (See Figure 3-80) can pivot around a vertical axis to face either the left-hand or right-hand driving seat, depending on the chassis configuration.

To adjust:

- ♦ Pull and hold the spring-loaded locking pin.
- ♦ Rotate the panel to the desired position.
- ♦ Release the pin to lock it in place.

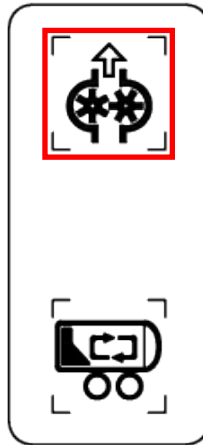
Figure 3-80 Spring-loaded locking pin



Pump Switch MINIMAX

This switch (See Figure 3-81), also known as the PTO switch, engages and disengages the hydraulic pump, all the body functions 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 (switch turns from blue to green).
- ♦ Press the same switch again to deactivate the hydraulic pump (switch turns from green to blue).

Figure 3-81 Pump Switch MINIMAX

NOTE: Do not close the main valve (ball valve) on the suction line 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 3-82 Main Shut-off Valve

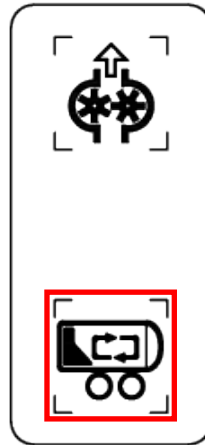
IMPORTANT: In case of a leak in the hydraulic system, call maintenance facility and refer to the [Maintenance Manual](#).

Packer Multicycle Control Switch MINIMAX

This switch ([See Figure 3-83](#)) allows the packer to run a preset number of cycles.

- ♦ Press the green button once to begin cycle ([See Figure 3-36](#)).
- ♦ Stop the cycle at anytime by pressing the red button ([See Figure 3-35](#)) or by turning off the multicycle control switch ([See Figure 3-83](#)).
- ♦ The packer completes, and returns to the fully retraced position, when the multicycle switch ([See Figure 3-83](#)) is turned OFF during an ongoing cycle.

Figure 3-83 Packer Multicycle Control Switch MINIMAX



Strobe Light Switch MINIMAX

This switch ([See Figure 3-84](#)) activates and deactivates strobe lights and amber flashing lights.

- ◆ Press this switch once to turn on strobe lights and amber flashing lights (switch turns green).
- ◆ Press this switch again to turn off strobe lights and amber flashing lights (switch turns blue).

Figure 3-84 Strobe Light Switch MINIMAX

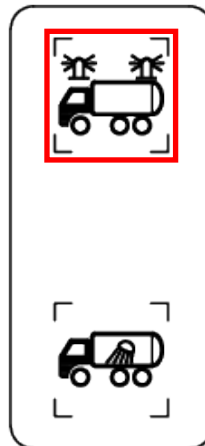
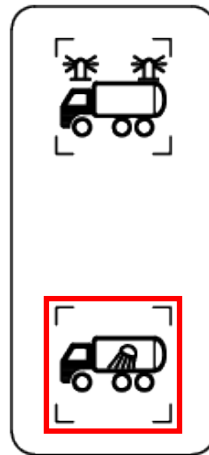


Figure 3-85 Strobe Light and Amber Flashing Lights

Work Light Switch MINIMAX

This switch (See Figure 3-86) activates and deactivates all work lights installed on the unit.

- ◆ Press this switch once to turn on all work lights (switch turns green).
- ◆ Press this switch again to turn off all work lights (switch turns blue).

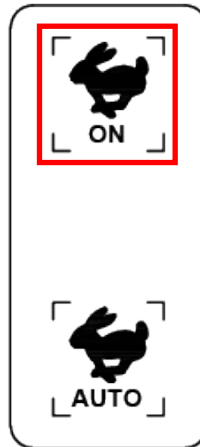
Figure 3-86 Work Light Switch MINIMAX**Figure 3-87 Work Lights MINIMAX**

Speed-Up “On” Control Switch MINIMAX

In auto-neutral mode, this switch (See Figure 3-88) enables the engine to run at a predetermined RPM. This can be useful when operating the full-eject feature.

- ♦ Press this switch to activate this function (switch turns green).
- ♦ Press this switch again to deactivate this function (switch turns blue).

Figure 3-88 Speed-Up “On” Control Switch MINIMAX

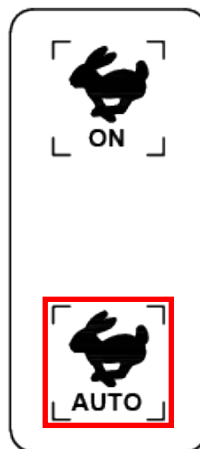


Speed-Up “Auto” Control Switch MINIMAX

In auto-neutral mode, this switch (See Figure 3-89) will allow the engine to run at a predetermined RPM when operating any function of the truck.

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

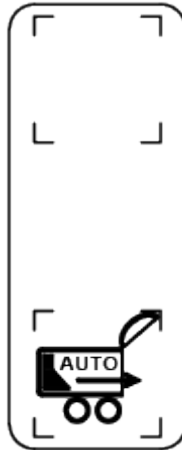
Figure 3-89 Speed-Up “Auto” Control Switch MINIMAX



Auto-Eject Switch MINIMAX

During the unloading process at landfill, this switch (See Figure 3-90) is used to open the tailgate and eject the load.

Figure 3-90 Auto-Eject Switch MINIMAX



Unloading Process Using the Eject Switch

To eject packed refuse from the body at the landfill, press and hold the eject switch (See Figure 3-90). Keeping the switch pressed is necessary for the unloading process to continue; releasing it will immediately stop the operation, regardless of the active function. When the eject switch is engaged, the tailgate opens first, followed by the ejection of the load. During this process, the **Tailgate Up** and **Tailgate Down** switches flash red continuously, and a buzzer sounds until the tailgate is fully closed.

The following conditions must be met to ensure the unloading process works correctly:

- ◆ Both safety pins (See Figure 3-93) must be removed and placed in their storage positions.
- ◆ The hydraulic pump must be engaged.
- ◆ All external packer control stations must be disengaged.
- ◆ The operator must remain inside the cab during the unloading process.
- ◆ The packer must be fully retracted to its home position.

Once the unloading process is complete, the operator must press the yellow push-button (See Figure 3-37) on the control station to retract the packer to its home position. After the packer is fully retracted, the operator must close the tailgate by pressing and holding the Tailgate Down switch (See Figure 3-94) on the control panel until the tailgate is completely closed.

NOTE: During the process of unloading packed refuse carried in the vehicle, the packer performs several short strokes before the complete and final stroke. This is done this way to prevent waste or refuse from piling up on the follower panels, which would ultimately fall behind the packer. The number of short strokes made by the packer during the unloading process is set at the factory.

IMPORTANT: Both tailgate safety pins (See Figure 3-93) must be placed back in locking position once the tailgate is closed.

Troubleshooting Unloading Issues

If the unloading process does not begin or is interrupted, check the multiplex monitor display located on the cab console (See Figure 3-91). The monitor provides instructions or solutions to address any issues preventing the operation. Following these steps ensures a smooth and efficient unloading process at the landfill.

Figure 3-91 Multiplex Monitor Display MINIMAX

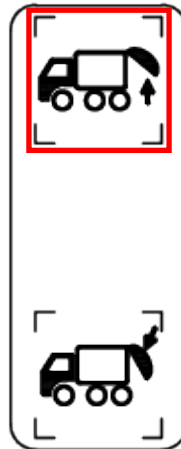


Tailgate Up Switch MINIMAX

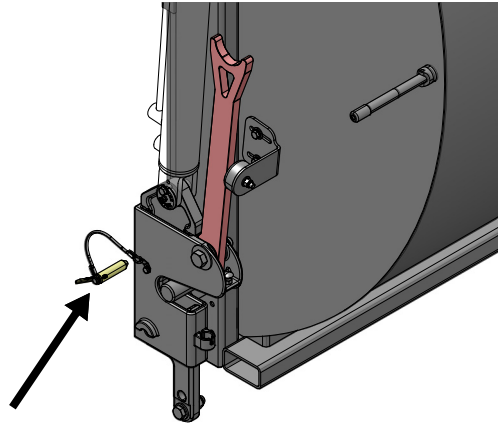
This control switch (See Figure 3-92) is used to raise the tailgate.

- ◆ Remove both tailgate-locking pins (See Figure 3-93).
- ◆ Press and hold down this switch to raise the tailgate to the desired height.
- ◆ Before using this switch, make sure that the truck is parked on safe level ground.
- ◆ When the tailgate is unlocked, both **Tailgate Up** and **Tailgate Down** switches flash red and a buzzer sounds.

Figure 3-92 Tailgate Up Switch MINIMAX



IMPORTANT: Before using this switch, make sure that the truck is parked on safe level ground and that both tailgate-locking pins are removed (See Figure 3-93).

Figure 3-93 Tailgate-lock Pins MINIMAX

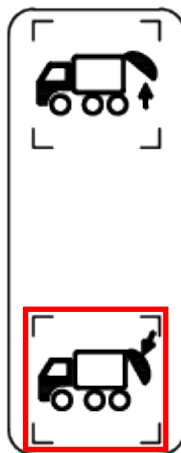
Warning! Do not drive the vehicle when the tailgate is not fully closed.



Tailgate Down Switch MINIMAX

This switch is used to lower the tailgate.

- ♦ Press and hold down this switch to completely close the tailgate or, until it rests on the tailgate safety prop.
- ♦ Reinsert the tailgate-lock pins (See Figure 3-93).
- ♦ When the tailgate is unlocked, both **Tailgate Up** and **Tailgate Down** switches flash red and a buzzer sounds.

Figure 3-94 Tailgate Down Switch MINIMAX

IMPORTANT: When the tailgate is completely closed, put the tailgate-locking pins back to their place (See Figure 3-93).

Danger!



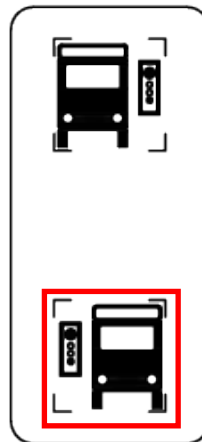
Always use safety prop while performing maintenance under a raised tailgate. **Failure to do so may result in severe injury or death.**

Packer Selector Switch MINIMAX (Optional)

This switch is divided into two sections: the lower section controlling the right-hand side packer control station, and the upper section controlling the left-hand side packer control station (if installed).

In order to use the right-hand side packer control station, the operator must press the lower section of this switch (See Figure 3-95).

Figure 3-95 Packer Selector Switch MINIMAX (Lower Section)

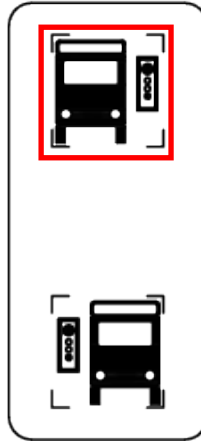


- ◆ Press the lower section of this switch in order to use the right-hand side packer control station. This section of the switch will turn green.
- ◆ Press the lower section of this switch again to deactivate this feature. This section of the switch will then turn blue.

NOTE: If this section of the switch is engaged (green-lighted), the in-cab packer control station and the left-hand side packer control station (if installed) are not operational.

NOTE: The in-cab joystick and packer control station are operational only when none of the sections of the packer selector switch is engaged.

In order to use the left-hand side packer control station (if installed), the operator must press the upper section of the packer selector switch (See Figure 3-96).

Figure 3-96 Packer Selector Switch MINIMAX (Upper Section)

- ◆ Press the upper section of this switch in order to use the left-hand side packer control station (if installed). This section of the switch will turn green.
- ◆ Press the upper section of this switch again to deactivate this feature. This section of the switch will then turn blue.

NOTE: If no left-hand side packer control station is installed on the truck, this section of the switch is not operative.

NOTE: If this section of the switch is engaged (green-lighted), the in-cab packer control station and the right-hand side packer control station are not operational.

NOTE: The in-cab joystick and packer control station are operational only when none of the sections of the packer selector switch is engaged.

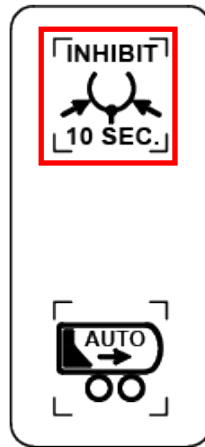
10-Second Inhibit Switch MINIMAX

This switch, also known as Grabber Auto-Close Override, allows the operator to open the grabber to dropped grab objects into the hopper. This also allows for the pickup of elevated carts.

To enable this feature.

- ◆ Press the Inhibit Switch, the switch will turn from blue to green.
- ◆ The grabber will open for 10 seconds then close automatically.
- ◆ A blue-lighted switch means that the corresponding feature is disabled.

Figure 3-97 10-Second Inhibit Switch MINIMAX



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.

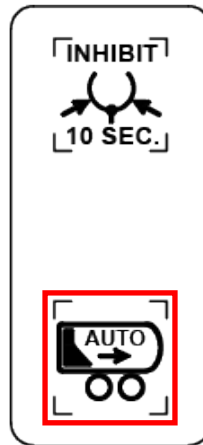
Auto-Packing Switch MINIMAX

The auto-packing switch (See Figure 3-98) enables the packer to automatically start cycling 2 seconds after the grabber 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, 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 limit switch is not reached.

When the auto-packing feature is used simultaneously with the multicycle feature, the packer will run the preset number of cycles until the arm lifts a new container towards the hopper. The multicycle 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 grabber reaches the mid-height position on its way up.

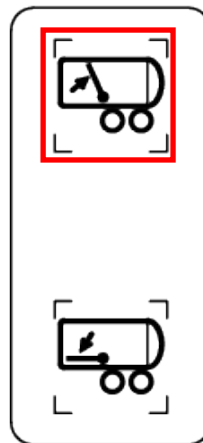
- ♦ A blue-lighted switch means that the corresponding feature is disabled.
- ♦ A green-lighted switch means that the corresponding feature is enabled.

Figure 3-98 Auto-Packing Switch MINIMAX

Crusher Panel Up Switch MINIMAX (optional)

This switch (See Figure 3-99) raises the crusher panel.

- ◆ Press and hold down this switch to raise the crusher panel to desired position.

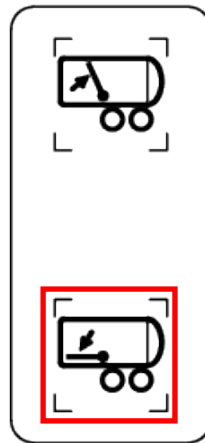
Figure 3-99 Crusher Panel Up Switch MINIMAX

Crusher Panel Down Switch MINIMAX (optional)

This switch (See Figure 3-100) lowers the crusher panel.

- ◆ Press and hold down this switch to lower the crusher panel to the desired position.

Figure 3-100 Crusher Panel Down Switch MINIMAX (optional)



The crusher panel is an optional feature that may be installed on an Expert vehicle to assist with handling bulky items during waste collection and compaction. If your unit is equipped with this option, it is recommended to use the crusher panel specifically for bulky items, as unnecessary use can slow down operations. The crusher panel holds bulky items in place while the packer crushes them, preventing the material from popping up in front of the packing ram and enhancing the compaction effect during the load-breaking sequence.

Figure 3-101 Crusher Panel MINIMAX



Control Panel WITTKE™

The control panel in the WITTKE™ Front Loader (See [Figure 3-102](#)) is the main interface for operating key vehicle functions, including the forks, packer, tailgate, and lighting systems. Designed for front-loading operations, it provides easy access to controls, ensuring efficient and safe performance during waste collection tasks. This section explains the buttons, switches, and their functions to help operators use the control panel effectively.

Figure 3-102 Control Panel WITTKE™



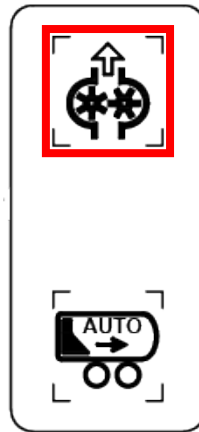
NOTE: The switches and control that are on the control panel vary according to the options installed on the vehicle.

Pump Switch WITTKE™

This switch (See Figure 3-103) also known as PTO switch, engages and disengages the hydraulic pump, all the body functions and the joystick that controls the arms.

- ◆ Press the switch to activate the hydraulic pump (switch turns green).
- ◆ Press the same switch again to deactivate the hydraulic pump (switch turns blue).

Figure 3-103 Pump Switch WITTKE™



NOTE: If a safety interlock (e.g. due to access door not closed) stops the hydraulic system from running, the pump switch flashes red and the message “Pump: Hopper Door Not Closed” appears on the monitor display.

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 3-104 Main Shut-Off Valve WITTKE™



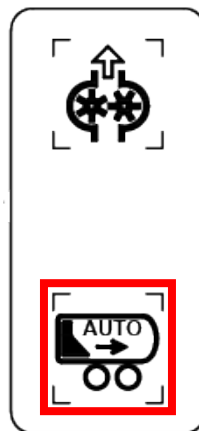
IMPORTANT: In case of a leak in the hydraulic system, and if the vehicle has to be driven somewhere else, take off the drive shaft between the pump and the engine. Call maintenance facility and refer to the [Maintenance Manual](#).

Auto-Packing Switch WITTKE™ (optional)

The auto-packing switch ([See Figure 3-105](#)) enables the packer to automatically start cycling when the arms pass the canopy on their way down.

- ♦ Press the switch to initiate the automatic packing cycle (switch turns green).
- ♦ Press the switch again to disable this feature (switch turns blue).

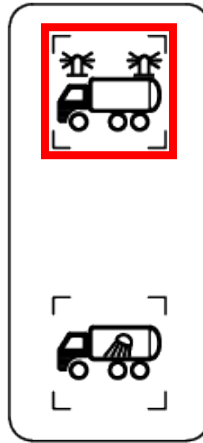
Figure 3-105 Auto-Packing Switch WITTKE™



Strobe Light Switch WITTKE™ (optional)

This switch ([See Figure 3-106](#)) activates and deactivates strobe lights and amber flashing lights.

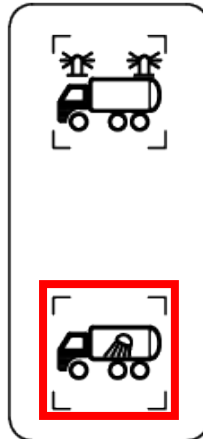
- ♦ Press this switch once to turn on strobe lights and amber flashing lights (switch turns green).
- ♦ Press this switch again to turn off strobe lights and amber flashing lights (switch turns blue).

Figure 3-106 Strobe Light Switch WITTKE™

Work Light Switch WITTKE™ (optional)

This switch ([See Figure 3-107](#)) turns on/off work lights if installed on your vehicle.

- ♦ Press the switch once to turn on work lights (switch turns green).
- ♦ Press the switch again to turn off work lights (switch turns blue).

Figure 3-107 Work Light Switch WITTKE™

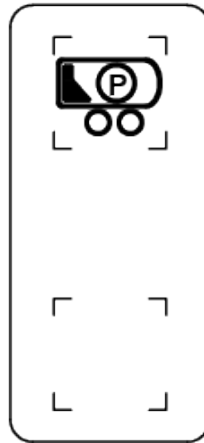
Packer Retracted Indicator Light WITTKE™

This indicator light is located on the in-cab control panel ([See Figure 3-108](#)).

- ♦ If this indicator light is green, this indicates that the packer is completely retracted.
- ♦ If this indicator light is red, this indicates that the packer is not completely retracted.

NOTE: The packer must be completely retracted to allow dumping into the hopper.

Figure 3-108 Packer Retracted Indicator Light WITTKE™



Top Door Switches WITTKE™ (Roof Open/Roof Close)

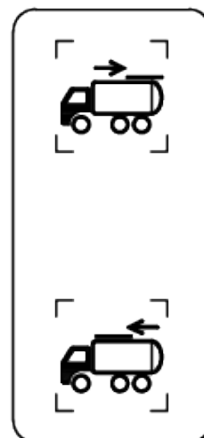
Located on the control panel, these switches (See Figure 3-109) are used to open/close the top door.

NOTE: The top door must be fully open to dump refuse into the hopper.

- ♦ The upper switch is used to open the top door.
 - Press this switch and keep it pressed until the top door is completely open. Once the top door is fully open, the switch turns green. Refuse can now be dumped into the hopper.
- ♦ The lower switch is used to close the top door.
 - Press this switch and keep it pressed until the top door is completely closed. When the top door is fully/partially closed, both Top Door switches are blue.

IMPORTANT: Dumping refuse into the hopper with the arms and forks can only be done when the upper switch is green-lit.

Figure 3-109 Top Door Switch WITTKE™



Tailgate Up Switch WITTKE™

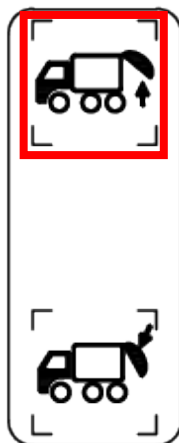
This control switch (See Figure 3-111) is used to raise the tailgate.

- ◆ Remove both tailgate-locking pins (See Figure 3-112).
- ◆ Press and hold down this switch to raise the tailgate to the desired height.
- ◆ Before using this switch, **make sure the truck is parked on safe level ground.**
- ◆ When the tailgate is unlocked both the in-cab buzzer and the backup alarm will start sounding off. A **red warning light**, located at the center of the buzzer, will also blink.

Figure 3-110 Buzzer with Red Warning Light

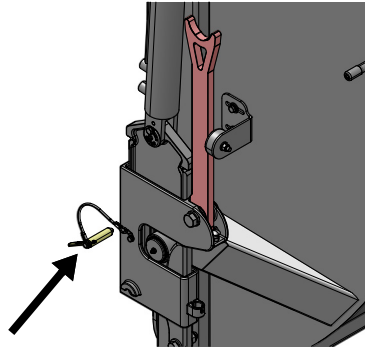


Figure 3-111 Tailgate Up Switch WITTKE™



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

Figure 3-112 Tailgate-Locking Pins WITTKE™



NOTE: Each time the tailgate is unlocked, the message “Tailgate Unlocked” appears on the monitor display.

NOTE: If the upward movement of the tailgate is stopped at any position except the fully open position, both Tailgate Up and Tailgate Down switches will flash red.

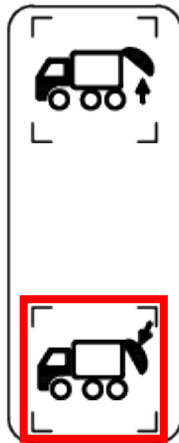
NOTE: When the tailgate reaches the fully open position, the Tailgate Up switch will turn green while the Tailgate Down switch will turn blue.

Tailgate Down Switch WITTKE™

This control switch (See Figure 3-113) is used to lower the tailgate.

- ◆ Press and hold down this switch to completely close the tailgate or, until it rests on the tailgate safety prop.
- ◆ Reinsert the tailgate lock pins (See Figure 3-112).
- ◆ When the tailgate is locked back, both the in-cab buzzer (See Figure 3-110) and the backup alarm will stop sounding off. The red warning light, located at the center of the buzzer, will also stop blinking.

Figure 3-113 Tailgate Down Switch WITTKE™



IMPORTANT: When the tailgate is completely closed and locked, put both tailgate-locking pins (See Figure 3-112) back into their place.

NOTE: If the downward movement of the tailgate is stopped at any position except the fully closed and locked position, both Tailgate Up and Tailgate Down switches will flash red.

NOTE: Each time the tailgate is unlocked, the message “Tailgate Unlocked” appears on the display monitor (See Figure 3-102).

NOTE: When the tailgate is completely closed and locked, the Tailgate Down switch will turn green while the Tailgate Up switch will turn blue.

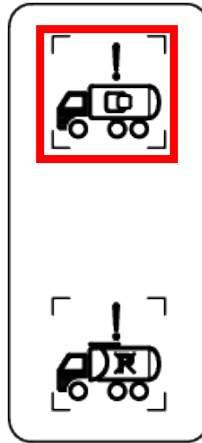
Hopper Door Open Indicator Light WITTKE™

This indicator light is located on the in-cab control panel (See Figure 3-114).

- ♦ If this indicator light is green, this indicates that the hopper door is closed.
- ♦ If this indicator light flashes red, this indicates that the hopper door is not closed.

NOTE: No hydraulic function is possible when the hopper door is not closed. In such a situation, the pump switch on the control panel (See Figure 3-103) also flashes red.

Figure 3-114 Hopper Door Open Indicator Light WITTKE™



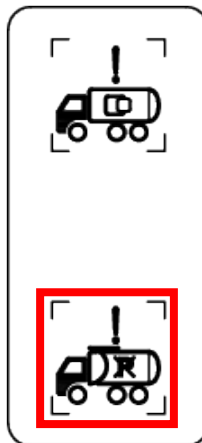
Arms Not Stowed Indicator Light WITTKE™

This indicator light (See [Figure 3-115](#)) is located on the in-cab control panel.

- ♦ If this indicator light is green, this indicates that the arms and forks are adequately stowed.
- ♦ If this indicator light is red, this indicates that the arms and forks are not adequately stowed.

IMPORTANT: Never drive this vehicle when this indicator light is red-lit

Figure 3-115 Arms Not Stowed Indicator Light WITTKE™



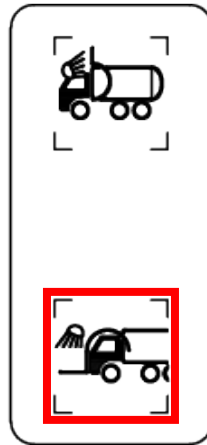
IMPORTANT: Never drive this vehicle when this indicator light is red-lit.

Canopy Light Switch WITTKE™ (optional)

This switch (See Figure 3-116) turns on/off the canopy light if installed on your vehicle.

- ◆ Press the switch once to turn on the canopy light (switch turns green).
- ◆ Press the switch again to turn off the canopy light (switch turns blue).

Figure 3-116 Canopy Light Switch WITTKE™



Auxiliary Controls Switch WITTKE™ (optional)

Auxiliary controls, if installed on your unit, are located outside directly behind the cab on the street side (See Figure 3-117). For these controls to be enabled, the operator must press the Auxiliary Controls switch on the control panel (See Figure 3-118).

- ◆ A green switch means these controls are enabled.
- ◆ A blue switch means these controls are disabled.

Auxiliary controls include a dual handle joystick (See Figure 3-117) to operate both the forks and the arms and a packer control station to operate the packer (See Figure 3-117). A **throttle advance switch (or speed-up)** is also provided to speed up the packing process and the raising/lowering of the arms (See Figure 3-117).

Figure 3-117 Auxiliary Controls WITTKE™

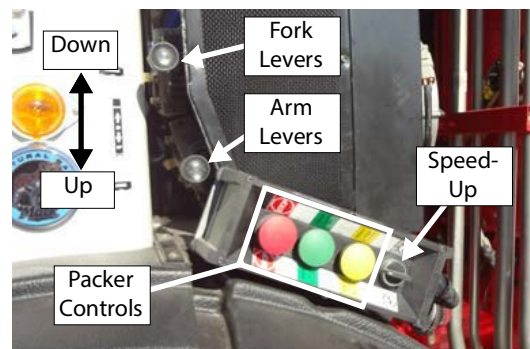
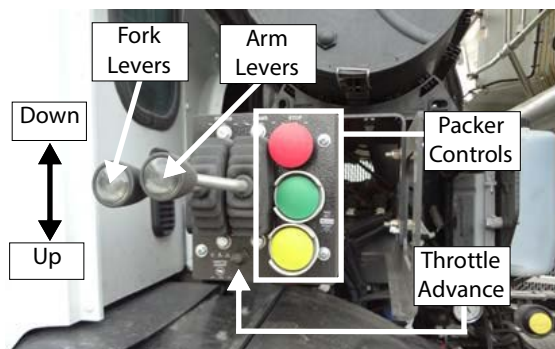
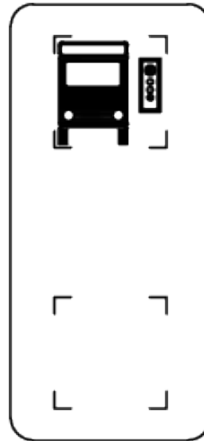


Figure 3-118 Auxiliary Control Switch WITTKE™

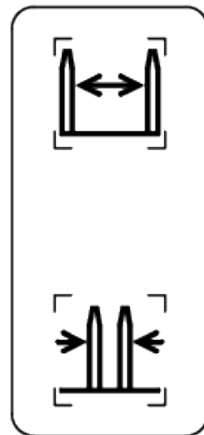


Forks Width Switches WITTKE™ (optional)

These optional switches (See [Figure 3-119](#)) allow the operator to either increase or decrease the width between both forks.

- ♦ The upper switch is used to increase the width between both forks. Press this switch and keep it pressed until the desired width is reached.
- ♦ The lower switch is used to decrease the width between both forks. Press this switch and keep it pressed until the desired width is reached.

Figure 3-119 Forks Width Switch WITTKE™



NOTE: If this optional feature is available on your unit, these switches are located on the control panel.

Speed-Up Switches WITTKE™ (optional)

These switches (See Figure 3-120) engage/disengage the optional speed-up feature, which is used to increase the engine speed up to 1500 RPM when a packer function is demanded.

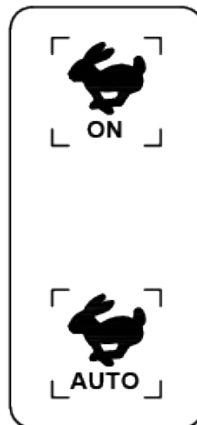
- ♦ The upper switch is used to engage the speed-up function, which increases the engine speed to 1500 RPM until disengaged.
 - Press this switch to engage the speed-up function (switch turns green).
 - Press this switch again to disengage the speed-up function (switch turns blue).

NOTE: The unit transmission must be in neutral before this speed-up switch can be turned on.

- ♦ The lower switch is used to activate the auto setting for the speed-up function and increase the engine speed up to 1500 RPM during packing and auto-packing cycles.
 - Press this switch to engage the “AUTO” speed-up function (switch turns green).
 - Press this switch again to disengage the “AUTO” speed-up function (switch turns blue).

NOTE: The unit transmission must be in neutral before this speed-up switch can be turned on.

Figure 3-120 Speed-Up Switch WITTKE™



Joystick Controls

Joysticks are a vital control feature in Labrie Multiplex System-equipped vehicles, providing operators with precise and intuitive control over essential functions such as the automated arm, forks, chute, and other specialized equipment. These controls are designed to meet the unique operational needs of each unit, including MINIMAX, EXPERT, AUTOMIZER, and WITTKE™ Front Loaders. Depending on the unit configuration, joysticks may be pneumatic or electronic, offering reliable performance and responsiveness in various waste collection environments. This section provides an overview of joystick controls, their functions, and unit-specific configurations, helping operators understand and utilize these controls effectively for optimal performance during waste collection and disposal operations.

Joystick Controls Automizer, Expert and MINIMAX

The joystick is used to control the arm of the Automizer and Expert as well as the grabber. 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.**

NOTE: On units equipped with a chute, the same joystick is used to position it correctly.

The controls on the joystick are the handle, the buttons on the front, top and backside of the handle, and the dead-man switch (See Figure 3-121).

- ♦ The handle is used to control the horizontal and vertical movements of the arm's two main components.
- ♦ The backside buttons are used to control the opening and closing of the grabber: the right button is used to open the grabber, the left button to close it.
- ♦ The top buttons are used to control the positioning of the optional chute. The right button is used to position the chute to the right; the left button to position it to the left.

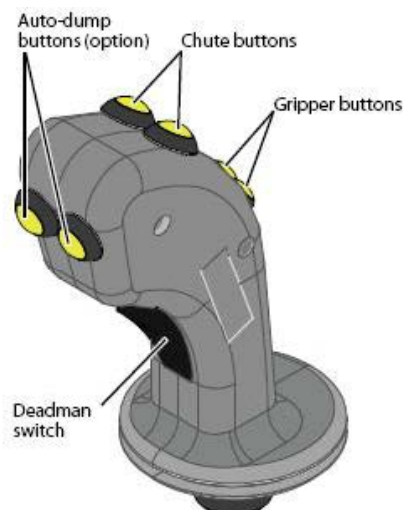
NOTE: The chute is an optional piece of equipment that may come with a commingle type body.

- ♦ The buttons on the front are optional or customized buttons.

The dead-man 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 dead-man 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.

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 grabber simultaneously.

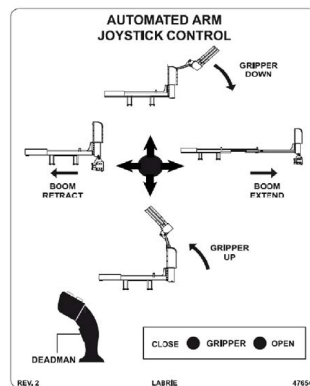
Figure 3-121 Automated Arm Joystick Automizer and Expert



IMPORTANT: The dead-man switch must be depressed to activate IN/OUT and UP/DOWN commands.

- ◆ Shift the joystick forward at 90° toward the grabber down lettering (See Figure 3-122) 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 toward the street-side 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 toward the curbside at 90° to the arm extend lettering to extend the arm only.

Figure 3-122 Automated Arm Joystick Control Decal Automizer



If the unit is equipped with an automated arm and a chute but the chute is not fully tilted to either side of the hopper, **the automated arm will stop half-way up.**

Auxiliary Arm Controls

Some trucks are equipped with auxiliary arm controls under the right-hand side seat. These arm controls may vary according to truck model.

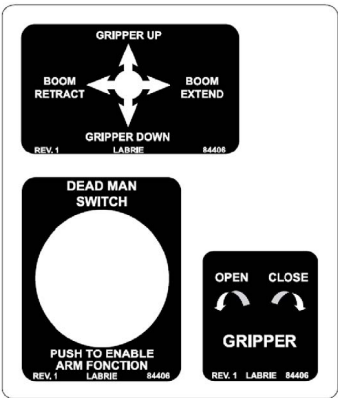
Figure 3-123 Auxiliary Arm Controls MINIMAX



Auxiliary arm controls have the same functions as does the joystick. They allow the operator to control the arm and the grabber from outside the cab. To use these auxiliary arm controls, simply press and hold the dead-man switch (See Figure 3-123).

Below are decals that show the functions of each of these controls.

Figure 3-124 Auxiliary Arm Control Decal MINIMAX



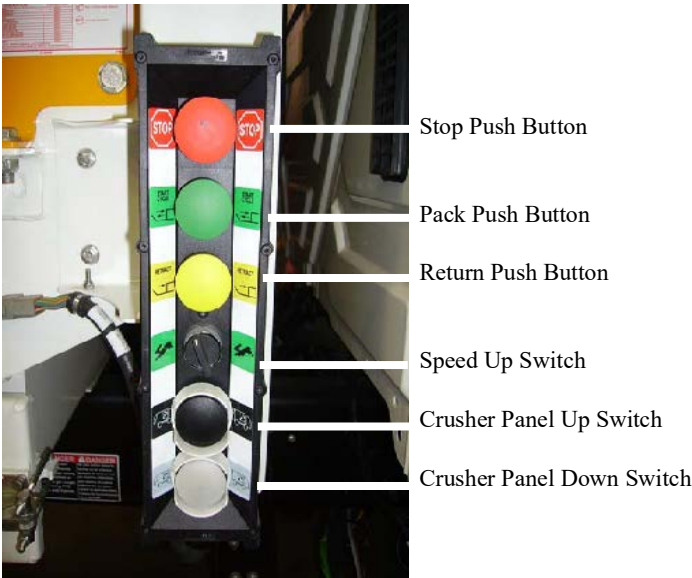
Right-Hand Side Control Station Expert and MINIMAX (Optional)

The MINIMAX has another control station besides the one in the cab. It is located on the right-hand side of the truck near the hydraulic tank. This control station not only has the red, green and yellow buttons for the packer, it also has a speed-up switch and both crusher panel up/down switches.

To use the right-hand side control station, the operator must press the multiplex right-hand side control station switch on the cab console (See Figure 3-95). This switch turns from blue to green after being pressed. The packer, the crusher panel and the speed-up feature can now be operated from the outside.

To deactivate the right-hand side control station, just press the multiplex right-hand side control station switch again (See Figure 3-96). This switch will then turn from green to blue, indicating that the outside control station is deactivated.

Figure 3-125 Right-hand Side Control Station MINIMAX



Cab Dashboard

The cab dashboard in Labrie Multiplex System-equipped vehicles is the central interface for monitoring system status, warning messages, and performance indicators. It also houses essential controls for vehicle functions, ensuring operators can access critical information and controls efficiently. This section highlights the dashboard's key features and functionality across all unit types.

Cab Dashboard All Units

Danger!



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

Arm Extended Warning Lights Automizer, Expert, WITTKE™ and MINIMAX

There are two Arm Extended warning lights on the dashboard. 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. Completely retract the arm until these lights stop flashing before moving the vehicle.

Figure 3-126 Arm Extended Warning Lights Automizer and Expert



Figure 3-127 Arm Extended Warning Light MINIMAX



Arm Over Height Warning Lights WITTKE™ (Optional)

The Arm Over Height warning lights on the dashboard flash when the arm is raised above the safe height limit. Do not move the vehicle while the lights are flashing. Lower the arm to the correct height until the lights stop flashing to ensure safe operation and prevent damage.

Figure 3-128 Arm Extend Warning Lights WITTKE™



4

Multiplex Diagnostic Guide

The Multiplex Diagnostic Guide is designed to assist in resolving issues with Labrie's Multiplex System, whether encountered in the field or at a repair facility. This guide provides detailed troubleshooting methods for diagnostic codes that may appear on the monitor display (See Figure 3-1 on page 15).

Each diagnostic code corresponds to a specific warning or caution message issued by the Multiplex System. By referencing this guide, operators and maintenance personnel can identify the cause of the message and follow the outlined procedures to address and resolve the issue. The step-by-step instructions ensure a systematic approach to diagnosing and correcting problems, helping to restore the system to proper working order efficiently.

While some diagnostic procedures for Labrie Multiplex System-equipped vehicles may not require the use of a matrix, many issues are best addressed by referencing the matrix specific to the unit being serviced. These matrices are tailored to the unique configurations and error messages of each unit, including Minimax, Expert, Automizer, and WITTKE™ Front Loaders. They provide detailed information on node and wire numbers

Abbreviation	Unit Type
AU TTD	Automizer Tip to Dump
AU FE	Automizer Full Eject
EX	Expert
MX	MINIMAX
FL	WITTKE™ Front Loader

Node XX Disconnected - No Matrix

This code is generated when a module (Node) XX on the Labrie system is failing to communicate with module (Node) XX over the CAN (Communication Area Network).

NOTE: For Node Not Connected ([See Node XX Not Connected - No Matrix](#)).

Use the appropriate NODE ID below to follow correct module diagnostic steps. Modules (Nodes) which can be affected by either above listed issue on the WITTKE™ front loader are:

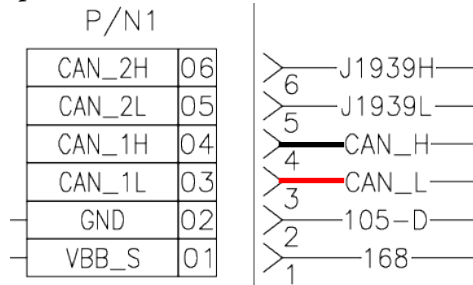
STANDARD

- 10 (Cabine) ([See Node 10 Module: All Units on page 46](#)).
- 11 (Display) ([See Figure 3-1 on page 15](#)).
- 12 (Switch bank *primary*) ([See Nodes 12/13 and 14/15 Switch Bank: All Units on page 47](#)).
- 13 (Switch bank *secondary*) ([See Nodes 12/13 and 14/15 Switch Bank: All Units on page 47](#)).
- 20 (Chassis) ([See Node 20 Module: Automizer and Expert on page 48](#)).
- 30 (Tailgate controller) ([See Node 30 Module on page 48](#)).
- 50/60 (Body front) ([See Node 50/60 Module: All Units on page 50](#)).

Node 10 Disconnected - No Matrix

Diagnostic Procedure:

1. Step 1. With the ignition and battery disconnect turned off, use a digital multimeter set to the Ohms scale and measure as follows at Node 10's P/N1 connector located inside the cab:
 - a) Red lead on pin 3 wire CAN H.
 - b) Black lead on pin 4 wire CAN L.



Do you have 60 Ohms resistance?

- 1 a. YES, contact [LabriePlus](#).
- 1 b. NO, reference ([See General CAN Bus Troubleshooting - No Matrix on page 122](#)).

Node 11 Disconnected - No Matrix

Power to Display

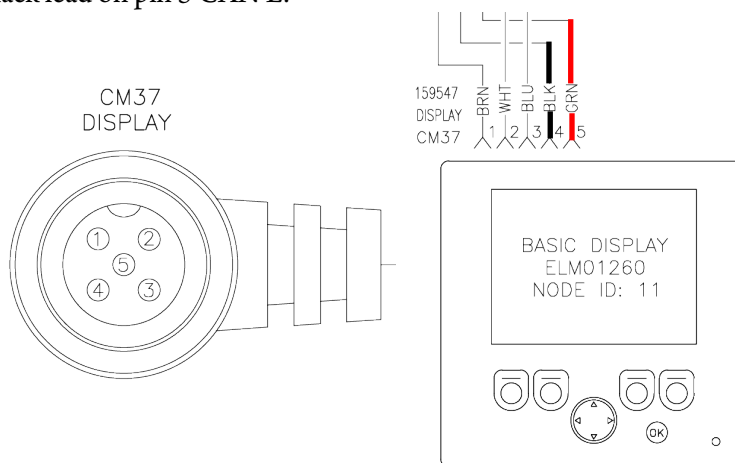
If the display screen turns on and only shows the Labrie logo, we know the display screen has power and ground. Proceed with Can Bus troubleshooting below.

Diagnostic Procedure:

1. With the ignition and battery disconnect turned off, use a digital multimeter set to the Ohms scale, locate connector at back of module (Node) 11.

Follow the outlined steps using a digital multimeter:

- a) Disconnect connector
- b) Measure resistance (Ohms) placing the leads as follows:
- c) Red lead on pin 4 CAN H.
- d) Black lead on pin 5 CAN L.



Do you have 60 Ohms?

- 1 a. YES, contact [LabriePlus](#).
- 1 b. NO, reference ([See General CAN Bus Troubleshooting - No Matrix on page 122](#))

No Power to Display

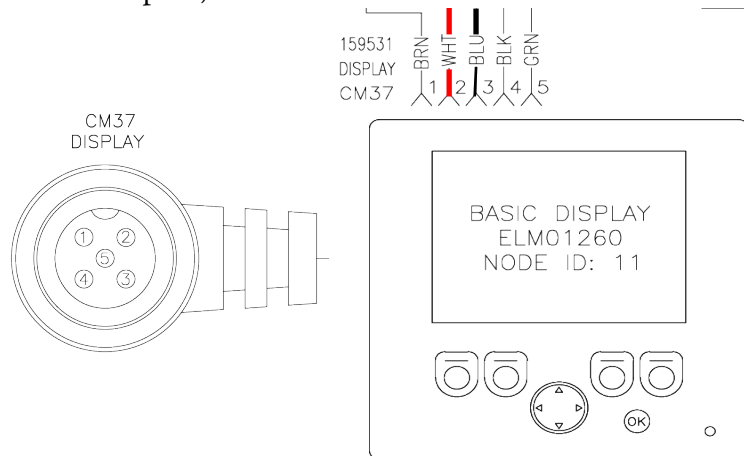
If the display does not power on and show the Labrie logo, follow the troubleshooting below.

Diagnostic Procedure:

1. With battery disconnect and ignition turned on, are the button packs lighting up?
 - 1 a. Yes, proceed to STEP 2.
 - 1 b. No, proceed to Step 3.

2. Using a digital multimeter, set to the (DC) scale, perform the following checks at the specified location:

- a) Disconnect connector
- b) Measure voltage (DCV) by placing the leads as follows:
- c) Red lead on pin 2, wire IGN-10o
- d) Black lead on pin 3, wire 105-D



Do you have 12VDC?

- 2 a. Yes, repair connector if damaged. If module is damaged, contact [LabriePlus](#) to replace.
- 2 b. No, proceed with Step 3.
3. Using a digital multimeter, set to the (DCV) scale, perform the following checks at the X21 connector on Node 10:

- a) Red lead on pin 02, wire IGN-10o
- b) Black lead on designated battery ground

Do you have 12VDC?

- 3 a. Yes, repair open circuit between connector at Node 10 and Connector at Display screen.
- 3 b. No, repair connector if damaged. If module is damaged, contact [LabriePlus](#) to replace.

Node 12/13 Disconnected - No Matrix

Diagnostic Procedure:

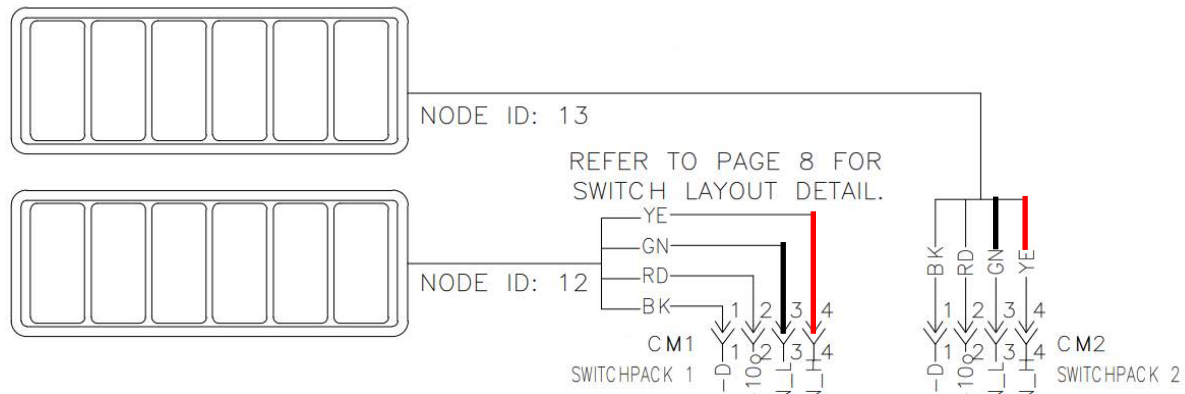
1. With the ignition and battery disconnect turned off, use a digital multimeter set to the Ohms scale and measure the specified connector located inside the cab on the console:

Locate module (Node) 12/13 or 14/15 and locate the following connector:

- (Node 12) CM1
- (Node 13) CM2
- (Node 14) CM94
- (Node 15) CM95

Follow the outlined steps using a digital multimeter:

- a) Disconnect connector from appropriate Node.
- b) Measure resistance (Ohms) placing the leads as follows:
- c) Black lead on pin 3 Wire CAN L
- d) Red lead on pin 4 Wire CAN H



Do you have 60 Ohms?

- 1 a. YES, proceed to step 2.
- 1 b. NO, reference [\(See General CAN Bus Troubleshooting - No Matrix on page 122\)](#)
2. Using a digital multimeter, set to the (DC) scale, perform the following checks at the specified location:
 - a) Disconnect connector from appropriate Node.
 - b) Turn on battery disconnect and ignition power.
 - c) Measure voltage (DCV) by placing the leads as follows:
 - d) Red lead on pin 2, wire IGN-10o.
 - e) Black lead on pin 1, wire 105-D.

Do you have 12VDC?

- 2 a. Yes, repair connector if damaged. If module is damaged, contact [LabriePlus](#) to replace.
- 2 b. No, proceed with Step 3.

3. Using the Labrie multiplex display, verify you have the following output:

- a) Module (Node) 10.
- b) Q01 Wire IGN-10o (o_Power10_Enable).

Is the output highlighted in green?

3 a. YES, proceed to STEP 4.

3 b. NO, contact [LabriePlus](#).

4. Using a digital multimeter, set to the (DCV) scale, perform the following checks at the X21 connector on Node 10:

- a) Red lead on pin 02, wire IGN-10o.
- b) Black lead on designated battery ground.

Do you have 12VDC?

4 a. Yes, repair open circuit between connector at Node 10 and connector at button pack.

4 b. No, repair connector if damaged. If module is damaged, contact [LabriePlus](#) to replace.

Node 20, 30 (ELM01210-CR0020), 40, 50, 60 Disconnected - No Matrix

Confirm LED status light on module, above the 55-pin connector, to ensure module has power and ground. Reference [TSB 19-09](#) if light is not flashing green roughly 1 beat per second. If light is not on proceed with confirming power and ground to module.



Diagnostic Procedure:

1. Using a digital multimeter, set to the (DCV) scale, perform the following checks at the 55-pin connector at Node:

- a) Red lead on pins 5, 23, 24, and wire IGN-A or BATT.
- b) Black lead on pins 1, 12, and 15 wire 105-C.

Do you have 12VDC at every pin?

1 a. Yes, proceed to step 2.

1 b. No, none of the pins have power-proceed to Step 3.

1 c. No, some of the pins do not have power. Repair open circuit in harness where wires splice to pin/pins without power.

2. With the ignition and battery disconnect turned off, use a digital multimeter set to the Ohms scale and measure as follows at 55-pin connector at Node:

- a) Red lead on pins 1 and 20, wires 105-C.
- b) Black lead on designated battery ground.

Do you have 0.1-0.3ohms of resistance?

- 2 a. Yes, Proceed with Step 4.
- 2 b. No, repair damaged ground circuit.



3. Using a digital multimeter, set to the (DCV) scale, perform the following checks at the ignition relay:

- a) With battery disconnect and ignition on.
- b) Black lead on battery ground.
- c) Red lead on stud with wire IGN-A, B, or C for Nodes 20, 40, 50 and 60. Or wire BATT for Node 30.

Do you have 12VDC?

- 3 a. Yes, repair open circuit between ignition relay and 55-pin connector at Node.
 - 3 b. No, ([See Ignition Relay General Troubleshooting - No Matrix on page 121](#)).
4. With the ignition and battery disconnect turned off (where applicable), use a digital multimeter set to the Ohms scale and measure as follows at 55-pin connector at Node:
- a) Red lead on pin 14 Wire CAN H
 - b) Black lead on pin 32 Wire CAN L

Do you have 60 Ohms?

- 4 a. YES, repair 55-pin connector at Node if damaged. If module is damaged, contact [LabriePlus](#) to replace.
- 4 b. NO, ([See General CAN Bus Troubleshooting - No Matrix on page 122](#))

Node 30 Disconnected (ELM01271-CR9017) - No Matrix

IMPORTANT: Automizer TTD and Experts prior to 2017 reference [\(TSB 17-17\)](#).

IMPORTANT: WITTKE™ units without SKMU00010 Retrofit reference [\(TSB 24-05\)](#).

Confirm LED status light on module, above the 55-pin connector, to ensure module has power and ground. Reference [\(TSB 19-09\)](#) if light is not flashing green roughly 1 beat per second. If light is not on proceed with confirming power and ground to module.



Diagnostic Procedure:

1. Using a digital multimeter, set to the (DCV) scale, perform the following checks at the 55-pin connector at Node 30:
 - a) Red lead on pins 3, 6, 10, 15, 22, 26, 30, 34, and 38 wires BATT.
 - b) Black lead on pins 1 and 20, wires 105-C.

Do you have 12VDC at every pin?

 - 1 a. Yes, proceed to step 2.
 - 1 b. No, none of the pins have power-proceed to Step 3.
 - 1 c. No, some of the pins do not have power- repair open circuit in harness where wires splice to pin/s without power.
2. With the ignition and battery disconnect turned off, use a digital multimeter set to the Ohms scale and measure as follows at 55-pin connector at Node:
 - a) Red lead on pins 1 and 20, wires 105-C.
 - b) Black lead on designated battery ground.

Do you have 0.1-0.3ohms of resistance?

 - 2 a. Yes, proceed with step 4.
 - 2 b. No, repair damaged ground circuit.

3. Using a digital multimeter, set to the (DCV) scale, perform the following checks at the ignition relay:

- a) Red test lead on stud with wire BATT.
- b) Black lead on designated battery ground.

Do you have 12VDC?

3 a. Yes, repair open circuit between ignition relay and 55-pin connector at Node.

3 b. No, ([See Ignition Relay General Troubleshooting - No Matrix on page 121](#))



4. With the ignition and battery disconnect turned off, use a digital multimeter set to the Ohms scale and measure as follows at 55-pin connector at Node

- a) Red lead on pin 14 Wire CAN H.
- b) Black lead on pin 32 Wire CAN L.

Do you have 60 Ohms?

4 a. YES, repair 55-pin connector at Node if damaged. If module is damaged, contact [LabriePlus](#) to replace.

4 b. NO, ([See General CAN Bus Troubleshooting - No Matrix on page 122](#)).

Ignition Relay General Troubleshooting - No Matrix

NOTE: With battery disconnect on and ignition power keyed ON.

Diagnostic Procedure:

1. Using a digital multimeter, set to the (DCV) scale, perform the following checks at the ignition relay:

- a) Red lead on single post on ignition relay.
- b) Black lead on designated battery ground.

Do you have 12VDC?

1 a. Yes, proceed to step 2.

1 b. No, repair power cable from battery disconnect or battery disconnect itself.

2. Using a digital multimeter, set to the (DCV) scale, perform the following checks at the ignition relay:
 - a) Red lead on post of ignition relay with red wires labeled BATT.
 - b) Black lead on designated battery ground.

Do you have 12VDC?

 - 2 a. Yes, proceed to step 3.
 - 2 b. No, replace ignition relay.
3. Using a digital multimeter, set to the (DCV) scale, perform the following checks at the ignition relay:
 - a) Red lead on post of ignition relay with wires red wires labeled IGN-A, B, and C.
 - b) Black lead on designated battery ground.

Do you have 12VDC?

 - 3 a. Yes, ignition relay is working correctly. Fix open circuit between relay and Node.
 - 3 b. No, proceed to step 4.
4. Using a digital multimeter, set to the (DCV) scale, unplug 2-pin connector from the ignition relay and perform the following checks:
 - a) Red lead on pin A wire IGN.
 - b) Black lead on pin B, wire 105.

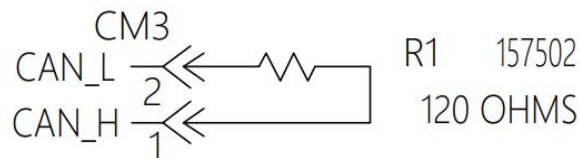
Do you have 12VDC?

 - 4 a. Yes, replace ignition relay.
 - 4 b. No, repair ignition power originating from chassis interface connector.

General CAN Bus Troubleshooting - No Matrix

Diagnostic Procedure:

1. With the battery disconnect turned off use a digital multimeter set to the Ohms scale, perform the following checks:
 - a) Locate terminating resistor connector, located behind the button pack. Disconnect the end line resistor and measure the resistance between pins 1 and 2 of the end line resistor using the Ohms scale of your multimeter.



NOTE: This is not polarity sensitive.

Do you have 120 Ohms?

- 1 a. YES, continue to STEP 2.
- 1 b. NO, replace terminating end line resistor.

2. Using a digital multimeter set to the Ohms scale, measure the resistance between pins 1 and 2 of the harness at connector.

NOTE: End line resistor from STEP 1 should still be disconnected.

Do you have 120 Ohms?

- 2 a. YES, contact [LabriePlus](#).
- 2 b. NO, reconnect end line resistor and proceed to STEP 3.
3. Locate module (Node) 50 *dual module*, **Node 30 for WITTKE™**. Find terminating resistor connector (roughly 18" from the module), and disconnect.
 - a) Using a digital multimeter set to the Ohms scale, measure the resistance between pins 1 and 2 of the end line resistor:

Do you have 120 Ohms?

 - 3 a. YES, repair open connection in harness.
 - 3 b. NO, replace terminating end line resistor and retest.

Node XX Not Connected - No Matrix

This code is generated when a module (Node) XX on the Labrie system is failing to communicate with module (Node) 10 over the CAN (Communication Area Network) on the first 10 seconds of power up.

NOTE: For Node disconnected, ([See Packer: Already Extended](#)).

Use the appropriate NODE ID below to follow correct module diagnostic steps.

Modules (Nodes) which can be affected by either above listed issue on the Automizer are:

STANDARD

10 (Cabine) - Located inside the cab.

11 (Display) - Located inside the cab next to main console.

12 (Switch bank *primary*) - Located inside the cab as part of the main console.

13 (Switch bank *secondary*) - Located inside the cab as part of the main console.

20 (Chassis) Located on the inside rear of the chassis frame rail.

30 (Tailgate controller) - Located inside upper light bar on tailgate.

50/60 (Body front) - This is a dual module and is located behind rub rail on curbside, near hopper.

Use this one-step diagnostic procedure listed for any and all modules displaying this code.

Diagnostic Procedure:

1. 10 seconds after power up, use the Labrie multiplex display to depress the “OK” button.



Code should disappear at this time.

Did all active codes clear from the display?

- 1 a. YES, issue resolved.
- 1 b. NO, contact [LabriePlus](#).

Pump Not Started: Cab EStop - No Matrix

This code indicates that the input voltage (DC) from the emergency stop switch is not returning back to Node 10 via wire 125i.

NOTE: Prior to troubleshooting steps below, ensure the cab EStop is pulled up.

Diagnostic Procedure:

1. Using the Labrie Multiplex Display, verify you have the following input:
 - a) Module Node 10.
 - b) I03 Wire 125i (i_EStop_Switch)

Is the input highlighted in green?

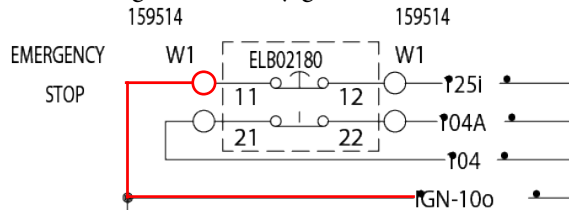
- 1 a. YES, go to STEP 5.
- 1 b. NO, go to STEP 2.

2. Using the Labrie multiplex display, verify you have the following output:
 - a) Module (Node) 10
 - b) Q01 Wire IGN-10o (o_Power10_Enable)

Is the output highlighted in green?

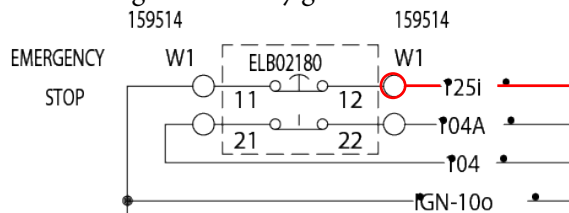
- 2 a. YES, go to STEP 3.
- 2 b. NO, contact [LabriePlus](#).

3. Using a digital multimeter, set to the (DC) scale, perform the following checks at the specified location.
 - a) Red lead on terminal 11 wire IGN-10o of the cab EStop switch.
 - b) Black lead on a designated battery ground.



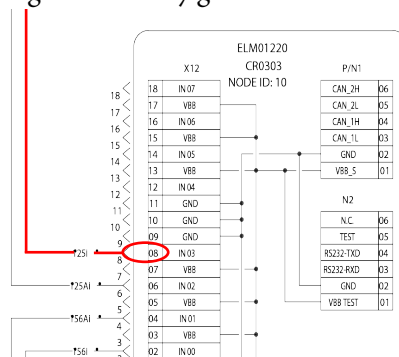
Do you have 12(VDC) present?

- 3 a. YES, go to STEP 4.
 - 3 b. NO, using Labrie wiring diagram, repair open circuit between Node 10 output wire IGN-10o and the cab emergency stop switch.
4. Using a digital multimeter, set to the (DC) scale, perform the following checks at the specified location.
 - a) Red lead on terminal 12 wire IGN-10o of the cab EStop switch.
 - b) Black lead on a designated battery ground.



Do you have 12(VDC) present?

- 4 a. YES, go to STEP 5.
 - 4 b. NO, replace defective EStop switch.
5. Using a digital multimeter, set to the (DC) scale, perform the following checks at the specified location:
 - a) Red lead back probed into Node10, I03, Wire 125i, Connector.
 - b) Black lead on designated battery ground.



Do you have 12VDC present?

- 5 a. YES, repair connector if damaged. If module is damaged, contact [LabriePlus](#) to replace.
- 5 b. No, using the Labrie wiring diagram, repair open circuit in wire 125Ai between the cab EStop and Node 10.

Pump Not Started: Aux Cab EStop - No Matrix

This code indicates that the input voltage (DC) from the auxiliary emergency stop switch is not returning back to Node 10 via wire 125Ai.

NOTE: Prior to troubleshooting steps below, ensure the auxiliary cab EStop is pulled up.

Diagnostic Procedure:

1. Using the Labrie multiplex display, verify you have the following input:

- a) Module (Node) 10
- b) I02 Wire 125Ai (i_AuxEStop_Switch)

Is the input highlighted in green?

- 1 a. YES, go to STEP 5.
- 1 b. NO, go to STEP 2.

2. Using the Labrie multiplex display, verify you have the following output:

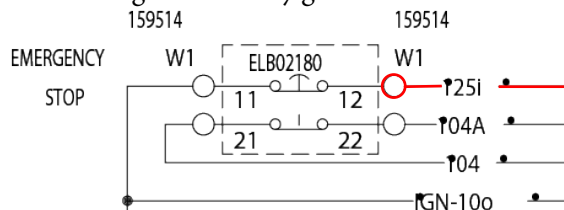
- a) Module (Node) 10
- b) Q01 Wire IGN-10o (o_Power10_Enable)

Is the output highlighted in green?

- 2 a. YES, go to STEP 3.
- 2 b. NO, contact [LabriePlus](#).

3. Using a digital multimeter, set to the (DC) scale, perform the following checks at the specified location.

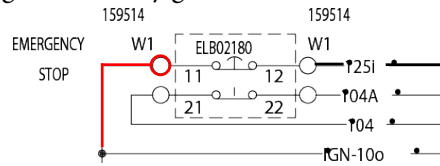
- a) Red lead on terminal 11 wire IGN-10o of the auxiliary cab EStop switch.
- b) Black lead on a designated battery ground.



Do you have 12(VDC) present?

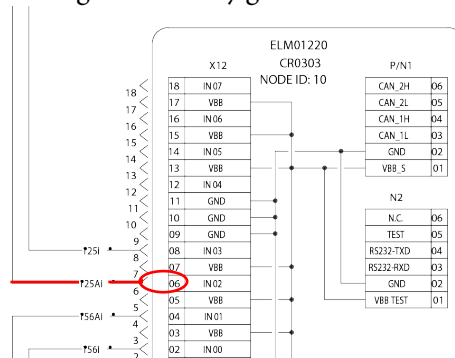
- 3 a. YES, go to STEP 4.
- 3 b. NO, using Labrie wiring diagram, repair open circuit between Node 10 output wire IGN-10o and the cab emergency stop switch.

4. Using a digital multimeter, set to the (DC) scale, perform the following checks at the specified location.
 - a) Red lead on terminal 12 wire 12SAi of the auxiliary cab EStop switch.
 - b) Black lead on a designated battery ground.



Do you have 12(VDC) present?

- 4 a. YES, go to STEP 5.
 - 4 b. NO, replace defective EStop switch.
5. Using a digital multimeter, set to the (DC) scale, perform the following checks at the specified location:
 - a) Red lead pack-probed into Node10, I02, Wire 12SAi, Connector.
 - b) Black lead on designated battery ground.



Do you have 12VDC present?

- 5 a. YES, repair connector if damaged. If module is damaged, contact [LabriePlus](#) to replace.
- 5 b. No, using the Labrie wiring diagram, repair open circuit in wire 12SAi between the cab auxiliary EStop and Node 10.

Pump Not Started: RPM Too High - No Matrix

This code is generated when the engine is sending an RPM signal to the Labrie system via J1939 at too high a value.

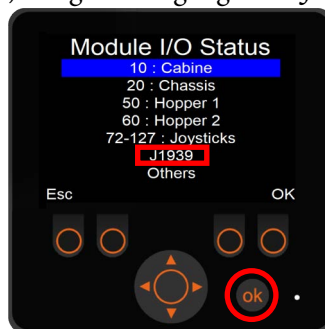
Using Node 11, we can view J1939 data incoming from the chassis to the Labrie multiplex system using the I/O screen.

Diagnostic Procedure:

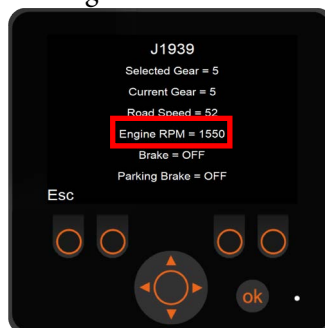
1. Using the Labrie multiplex display, verify which value you have coming in.
 - a) Go to I/O Status Screen of Multiplex display.



- b) Using the directional pad, navigate to highlight the J1939 screen option and depress OK.



- c) Verify engine RPM value coming in from the chassis to the Labrie multiplex system.



Is the value below 900 RPM?

- 1 a. YES, contact [LabriePlus](#).
- 1 b. NO, lower RPM to correct speed OR contact [LabriePlus](#).

Arm Raise: Packer Not Retracted - No Matrix WITTKE™ only

This code indicates that the arms have been requested to raise to the dump position, but the packer blade fully retracted feedback signal has not been received by module (Node) 60 via wire 334i, (i_packerfullyretracted_sensor).

NOTE: Prior to starting the diagnostic tree, ensure the packer panel is in the fully retracted position and proximity switch connections are correct with a known good ground at wire 105.

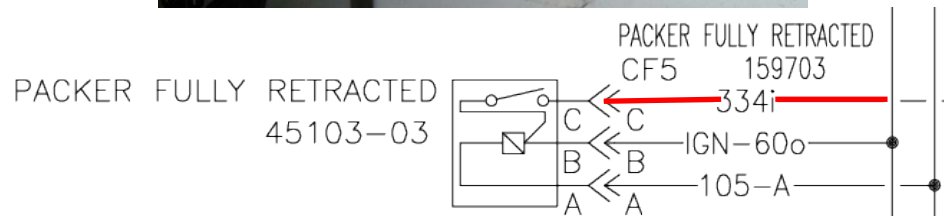
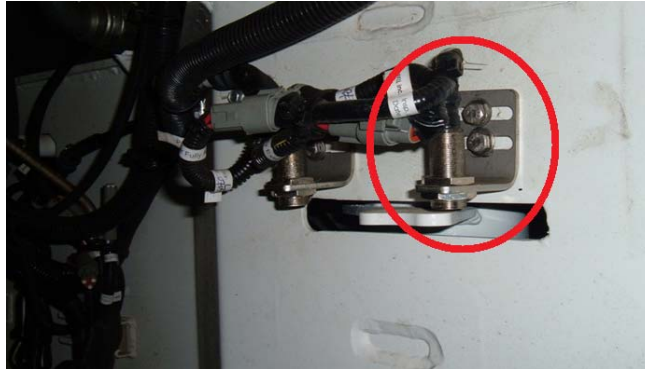
Diagnostic Procedure:

1. Using the Labrie multiplex display verify you have the following input:
Module (Node) 60
I15 wire 334i (i_packerfullyretracted_sensor)
Is the input highlighted in green?
 - 1 a. YES, go to STEP 5.
 - 1 b. NO, go to STEP 2.
2. Using the Labrie multiplex display, verify you have the following output:
Module (Node) 60
I33 Wire IGN-60o
Is the output highlighted in green?
 - 2 a. YES, go to STEP 3.
 - 2 b. NO, go to STEP 6.

3. Using a digital multimeter set to the voltage (DC) scale, perform the following test as instructed at the packer fully retracted sensor with packer in retract position:

Red lead on connector, pin C, wire 334i.

Black lead on designated battery ground.



Do you have 12VDC?

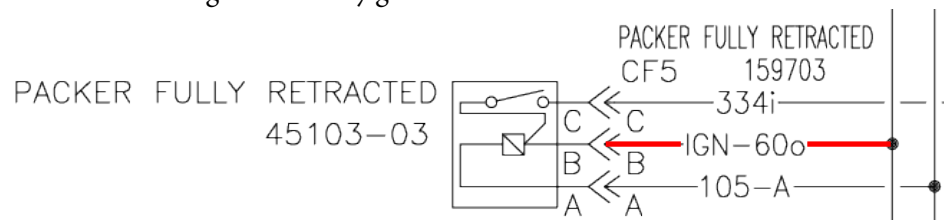
3 a. YES, go to STEP 5.

3 b. NO, go to STEP 4.

4. Using a digital multimeter set to the voltage (DC) scale, perform the following test as instructed at the packer fully retracted sensor:

Red lead on connector, pin B, wire IGN-60o.

Black lead on designated battery ground.



Do you have 12VDC?

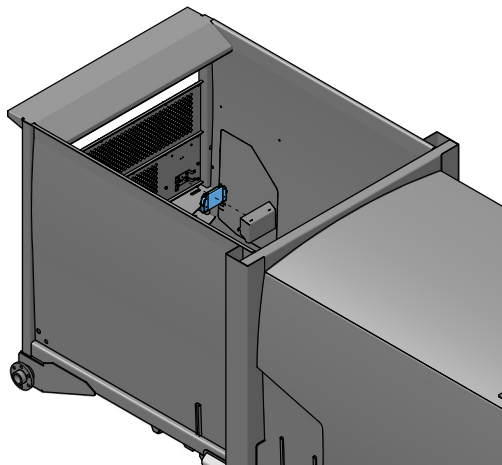
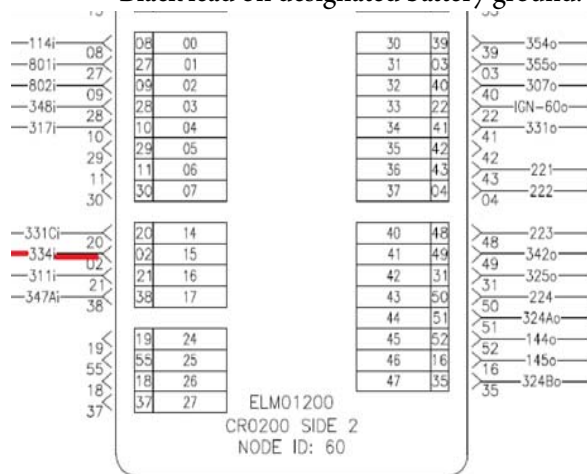
4 a. YES, repair/replace defective packer fully retracted sensor.

4 b. NO, go to STEP 6.

5. Locate module (Node) 60 inside the hopper access door and remove protective module cover and connector back shell.

Red lead on connector, pin 02, wire 334i.

Black lead on designated battery ground.



Do you have 12VDC?

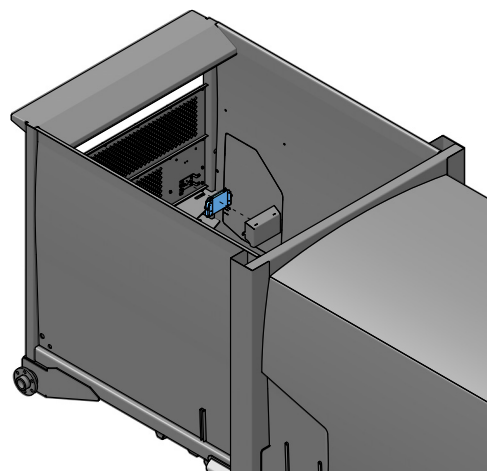
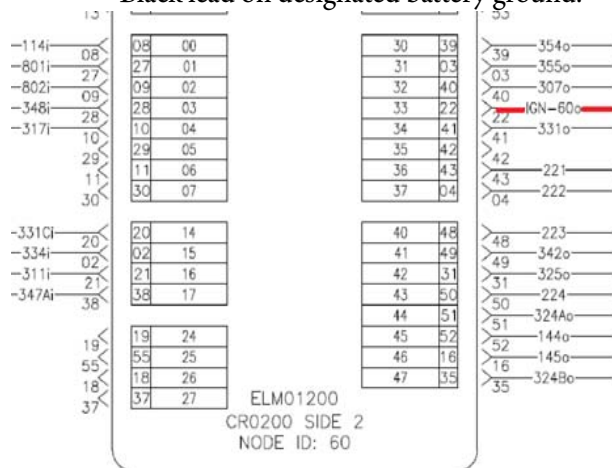
5 a. YES, contact [LabriePlus](#).

5 b. NO, using Labrie wiring diagram, repair open circuit between Node 60 and packer fully retracted sensor wire 334i.

6. Locate module (Node) 60 inside the hopper access door and remove protective module cover and connector back shell.

Red lead on connector, pin 22, wire IGN60-o.

Black lead on designated battery ground.



Do you have 12VDC?

6 a. YES, repair open circuit between Node 60 and packer fully retracted sensor wire IGN60-o.

6 b. NO, contact [LabriePlus](#).

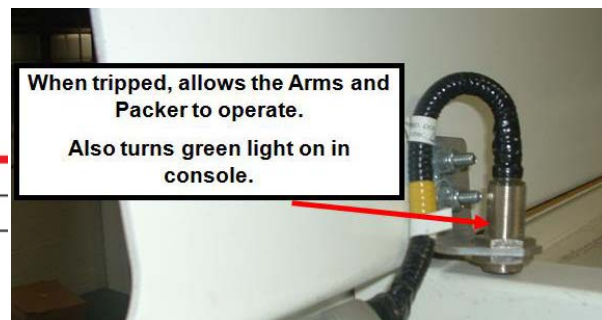
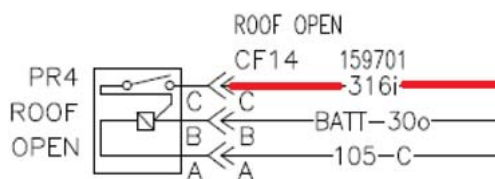
Arm Raise: Roof Not Opened - No Matrix WITTKE™ only

This code is identified by the Labrie multiplex system when the arms are commanded in the raised position (towards the hopper) and module (Node) 30 is not receiving a feedback signal on wire 316i (i_RoofOpened_sensor).

NOTE: Prior to beginning the below troubleshooting steps, please verify the following. The roof is opening all the way with no mechanical or hydraulic obstruction or failure and the ground wire 105-C has 0.1-0.3ohms of resistance to battery ground.

Diagnostic Procedure:

1. Using the Labrie multiplex display, verify you have the following input:
Module (Node) 30
I02 Wire 316i
Is the input highlighted in green?
 - 1 a. YES, go to STEP 4.
 - 1 b. NO, go to STEP 2.
2. Using the Labrie multiplex display, verify you have the following output:
Module (Node) 30
Q14, Wire BATT_30o
Is the input highlighted in green?
 - 2 a. YES, go to STEP 3.
 - 2 b. NO, go to STEP 6.
3. Using a digital multimeter set to the voltage (DC) scale, perform the following tests at the roof open switch located on top of the body:
Red lead on connector, pin C, wire 316i.
Black lead on designated battery ground.



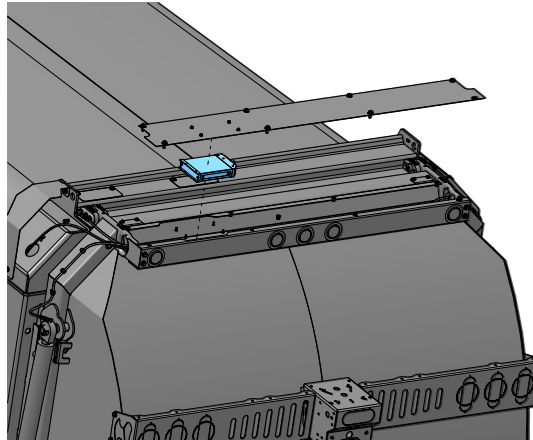
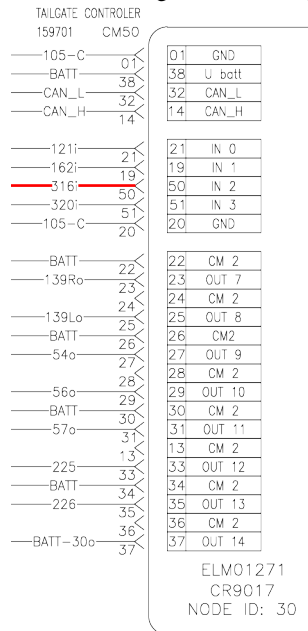
Do you have 12VDC?

- 3 a. YES, go to STEP 4.
- 3 b. NO, go to STEP 5.

4. Using a digital multimeter set to the voltage (DC) scale, locate Node 30, remove the main connector back shell and perform the following tests as outlined below:

Red lead on connector, pin 50, wire 316i.

Black lead on designated battery ground.



Do you have 12VDC?

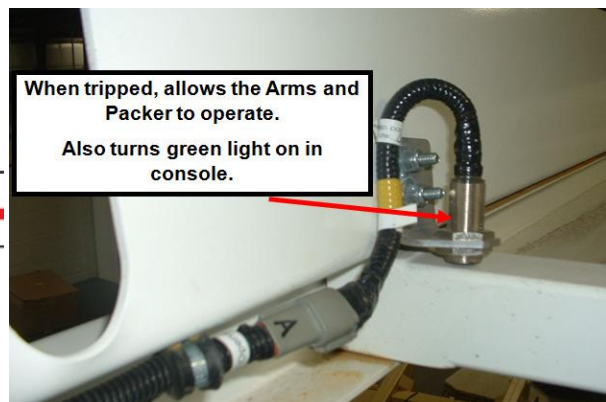
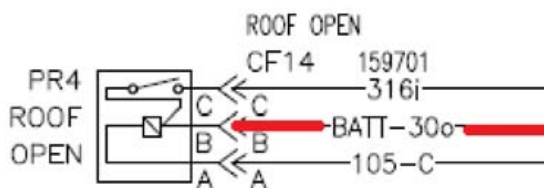
4 a. YES, contact [LabriePlus](#).

4 b. NO, using Labrie wiring diagram, repair open circuit between Node 30 and roof open switch.

5. Using a digital multimeter set to the voltage (DC) scale, perform the following tests at the roof open switch located on top of the body:

Red lead on connector, pin B, wire BATT-30o.

Black lead on designated battery ground.

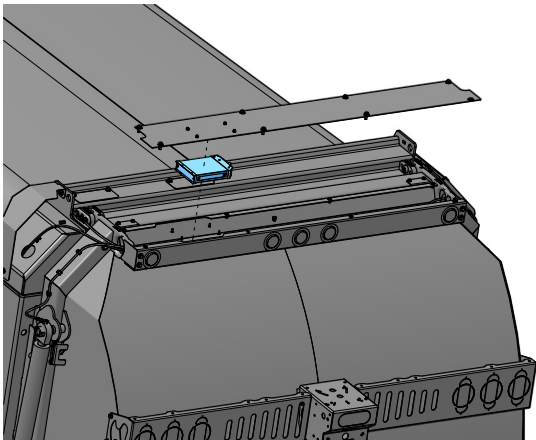
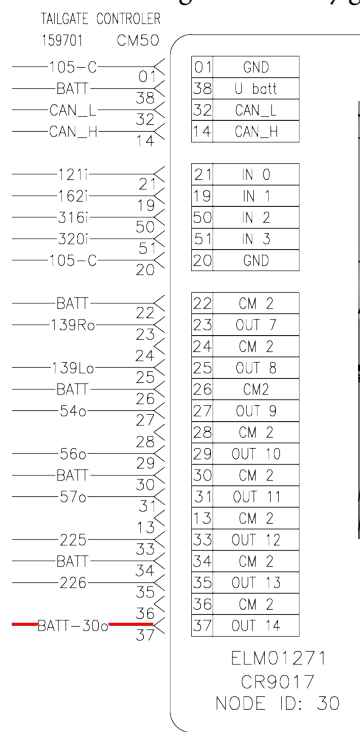


Do you have 12VDC?

5 a. YES, repair/replace defective roof open sensor.

5 b. NO, go to STEP 6.

6. Using a digital multimeter set to the voltage (DC) scale, locate Node 30, remove the main connector back shell and perform the following tests as outlined below:
- Red lead on connector, pin37,wire BATT-30o.
- Black lead on designated battery ground.



- Do you have 12VDC?
- 6 a. YES, using Labrie wiring diagram, repair open circuit between Node 30 and roof open switch wire BATT-30o.
- 6 b. NO, contact [LabriePlus](#).

Packer: Arm Above Mid Height - No Matrix WITTKE™ only

This code is identified by the Labrie multiplex system when the packer extend or retract input is commanded to Node 10 and the arms are partially raised.

NOTE: Prior to attempting to diagnose this issue, please verify the following. Arms are lowered as far as possible and the ground wire at proximity switch has 0.1-0.3ohms of resistance to battery ground.



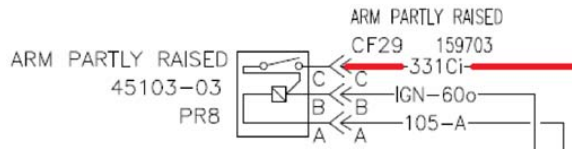
Diagnostic Procedure:

1. Using the Labrie multiplex display, verify you have the following input:
Module (Node) 60
I114 Wire 331Ci
Is the input highlighted in green?
 - 1 a. YES, go to STEP 4.
 - 1 b. NO, go to STEP 2.
2. Using the Labrie multiplex display, verify you have the following output:
Module (Node) 60
Q33 Wire IGN-60o
Is the input highlighted in green?
 - 2 a. YES, go to STEP 3.
 - 2 b. NO, go to STEP 6.

3. Using a digital multimeter set to the voltage (DC) scale, perform the following tests at the roof open switch located on top of the body:

Red lead on connector, pin C, wire 331Ci.

Black lead on designated battery ground.



Do you have 12VDC?

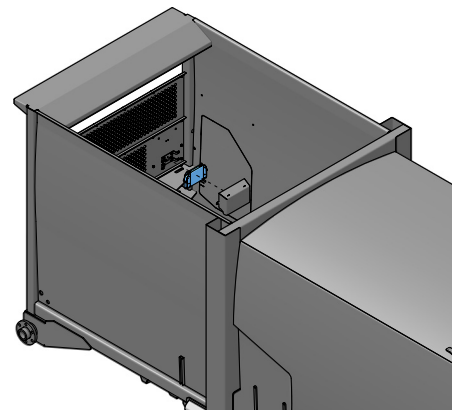
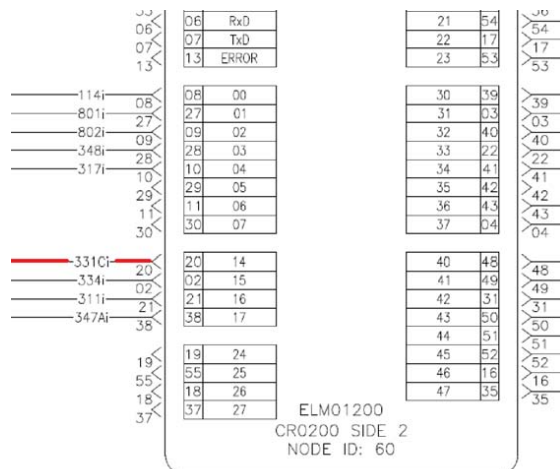
3 a. YES, go to STEP 4.

3 b. NO, go to STEP 5.

4. Using a digital multimeter set to the voltage (DC) scale, locate Node 60, remove the main connector back shell and perform the following tests as outlined below:

Red lead on connector, pin 20, wire 331Ci.

Black lead on designated battery ground.



Do you have 12VDC?

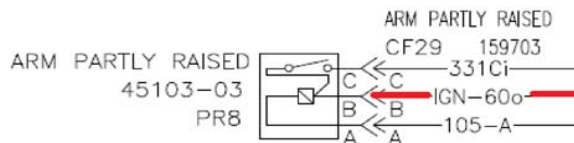
4 a. YES, contact [LabriePlus](#).

4 b. NO, using Labrie wiring diagram, repair open circuit between Node 60 and arm mid height sensor.

5. Using a digital multimeter set to the voltage (DC) scale, perform the following tests at the arm mid height sensor.

Red lead on connector, pin B, wire IGN-60o.

Black lead on designated battery ground.



Do you have 12VDC?

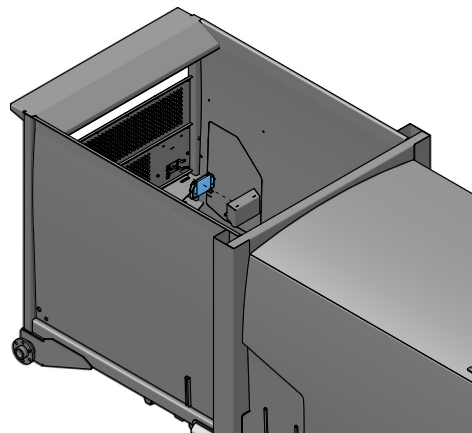
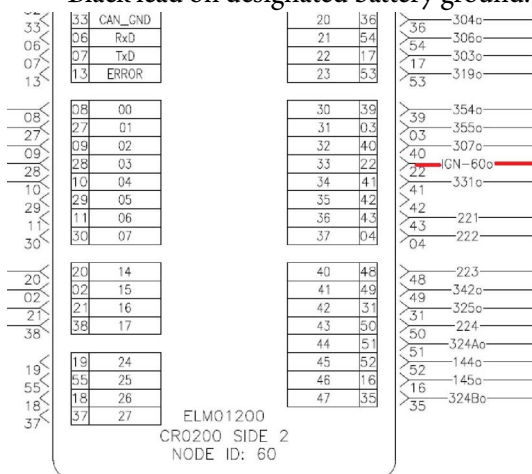
5 a. YES, repair/replace defective arm partially raised sensor.

5 b. NO, go to STEP 6.

6. Using a digital multimeter set to the voltage (DC) scale, locate Node 60, remove the main connector back shell and perform the following tests as outlined below:

Red lead on connector, pin 22, wire IGN-60o.

Black lead on designated battery ground.



Do you have 12VDC?

6 a. YES, using Labrie wiring diagram, repair open circuit between Node 60 and arm partially raised sensor wire IGN-60o.

6 b. NO, contact [LabriePlus](#).

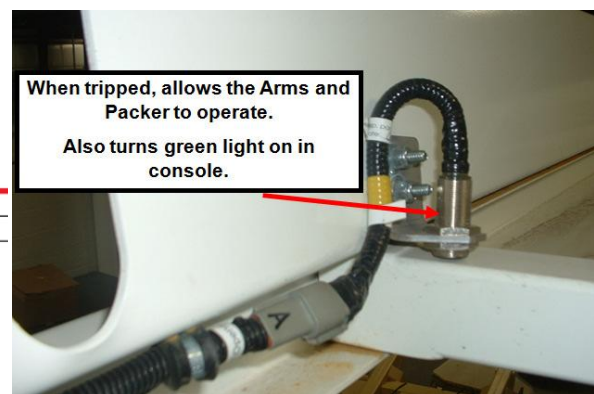
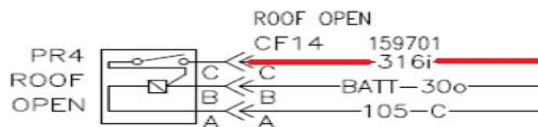
Packer: Roof Not Opened - No Matrix WITTKE™ only

This code is identified by the Labrie multiplex system when the arms are commanded in the raised position (towards the hopper) and module (Node) 30 is not receiving a feedback signal on wire 316i (i_RoofOpened_sensor).

NOTE: Prior to beginning the below troubleshooting steps, please verify the following. The roof is opening all the way with no mechanical or hydraulic obstruction or failure and the ground wire 105-C has 0.1-0.3ohms of resistance to battery ground.

Diagnostic Procedure:

1. Using the Labrie multiplex display, verify you have the following input:
Module (Node) 30
I02 Wire 316i
Is the input highlighted in green?
 - 1 a. YES, go to STEP 4.
 - 1 b. NO, go to STEP 2.
2. Using the Labrie multiplex display, verify you have the following output:
Module (Node) 30
Q14, Wire BATT_30o
Is the input highlighted in green?
 - 2 a. YES, go to STEP 3.
 - 2 b. NO, go to STEP 6.
3. Using a digital multimeter set to the voltage (DC) scale, perform the following tests at the roof open switch located on top of the body:
Red lead on connector, pin C, wire 316i.
Black lead on designated battery ground.



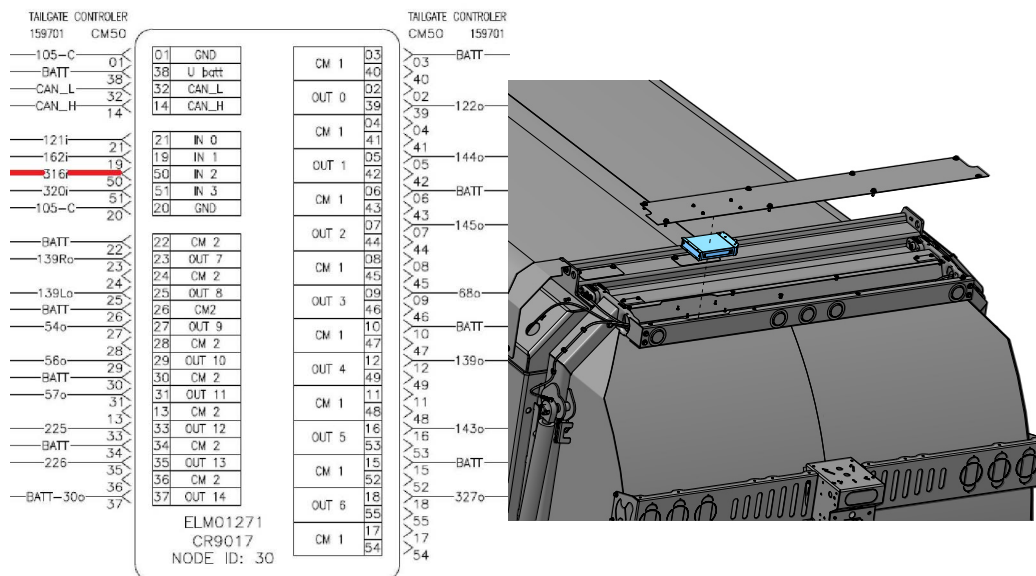
Do you have 12VDC?

- 3 a. YES, go to STEP 4.
- 3 b. NO, go to STEP 5.

4. Using a digital multimeter set to the voltage (DC) scale, locate Node 30, remove the main connector back shell and perform the following tests as outlined below:

Red lead on connector, pin 50, wire BATT-30o.

Black lead on designated battery ground.

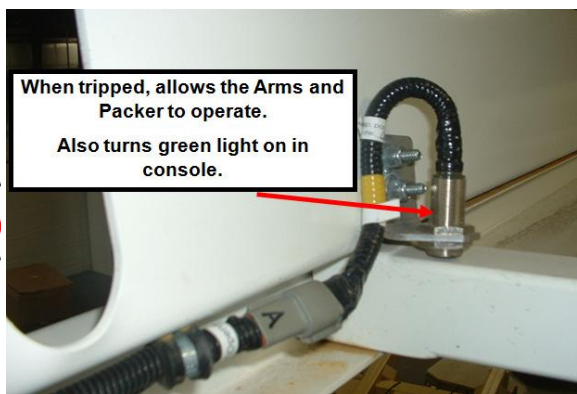
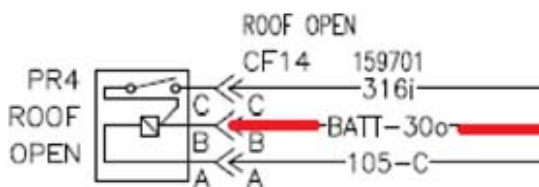


Do you have 12VDC?

- 4 a. YES, contact [LabriePlus](#).
- 4 b. NO, using Labrie wiring diagram, repair open circuit between Node 30 and roof open switch.
5. Using a digital multimeter set to the voltage (DC) scale, perform the following tests at the roof open switch located on top of the body:

Red lead on connector, pin B, wire BATT-30o.

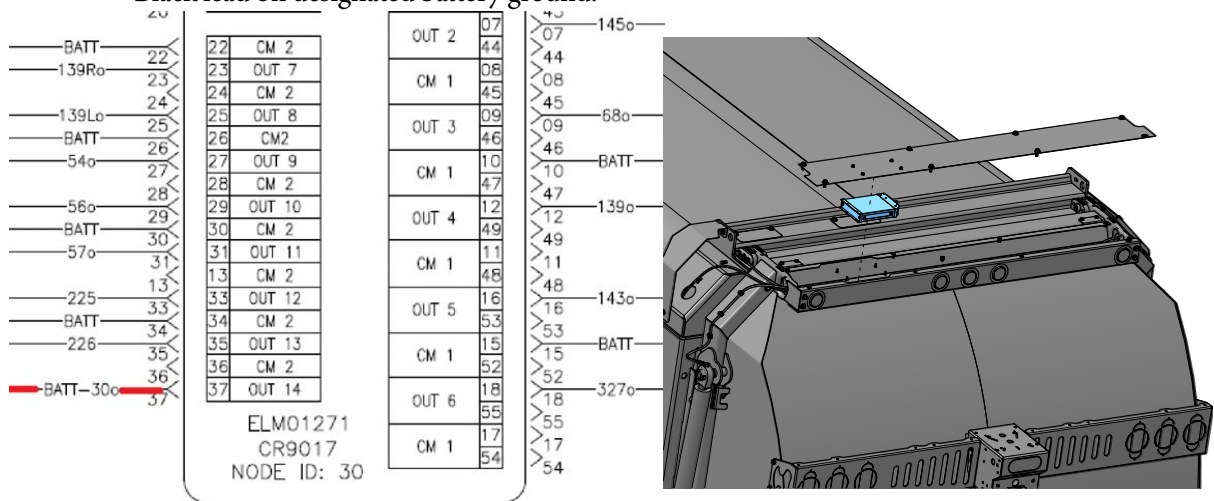
Black lead on designated battery ground.



Do you have 12VDC?

- 5 a. YES, repair/replace defective roof open sensor.
- 5 b. NO, go to STEP 6.

6. Using a digital multimeter set to the voltage (DC) scale, locate Node 30, remove the main connector back shell and perform the following tests as outlined below:
- Red lead on connector, pin37, wire BATT-30o.
- Black lead on designated battery ground.



- Do you have 12VDC?
- 6 a. YES, using Labrie wiring diagram, repair open circuit between Node 30 and roof open switch wire BATT-30o.
- 6 b. NO, contact [LabriePlus](#).

Buzzer: Tailgate Unlocked

This code is used as a warning on the Labrie multiplex display Node 11 to inform the operator that the tailgate is unlocked. This does not indicate the tailgate is fully open but rather the latches to release the tailgate have lowered into the unlatched position and therefore, packer operation is disabled until the tailgate closed prox input is seen by Node 11.

NOTE: Prior to starting the diagnostic process outlined below, perform the following checks. The tailgate is in fact closed and has not drifted down due to a hydraulic related issue and ground wire 105 has between 0.1-0.3ohm of resistance to the negative post of the battery

Diagnostic Procedure:

1. Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
AU TTD	Node 20, I03, wire 162Li
AU FE	Node 50, I16, wire 162i
EX	Node 20, I03, wire 162Li
MX	Node 60, I35, wire 162i
FL	Node 30, I01, wire 162i

Is the input highlighted in green?

- 1 a. YES, go to STEP 4.
- 1 b. NO, go to STEP 2.
2. Using the Labrie multiplex display, verify you have the following output:

Unit	Node/Pin/Wire
AU TTD	Node 20, Q43, wire BATT-20o
AU FE	Node 50, Q44, wire BATT-30o
EX	Node 20, Q43, wire BATT-20o
MX	Node 50, Q22, wire BATT-50Ao
FL	Node 30, Q14, wire BATT-30o

Is the input highlighted in green?

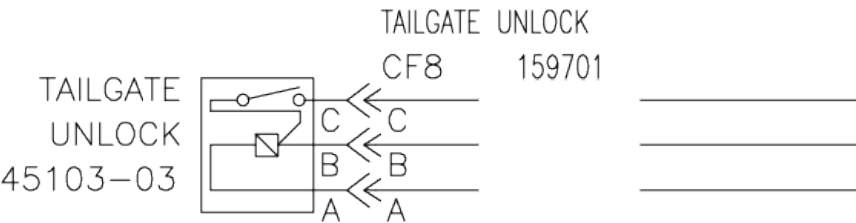
- 2 a. YES, go to STEP 3.
- 2 b. NO, go to STEP 6.

3. Using a digital multimeter set to the voltage (DC) scale, perform the following tests at the tailgate unlock switch located at the rear of the body:
- a) Red lead on

Unit	Pin/Wire
AU TTD	pin C, wire 162Li
AU FE	pin C, wire 162i
EX	pin C, wire 162Li
MX	pin C, wire 121i
FL	pin C, wire 162i

b) Black lead on designated battery ground.

Figure 4-1 Tailgate Unlocked connector example.

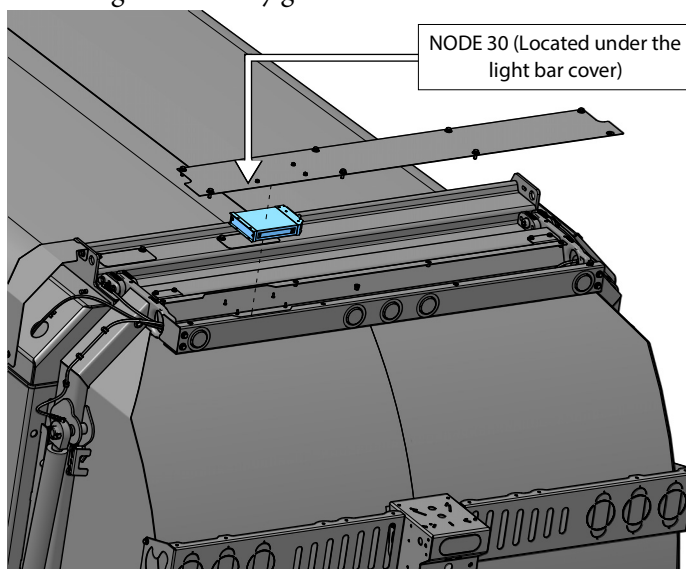


- Do you have 12VDC?
- 3 a. YES, go to STEP 4.
- 3 b. NO, go to STEP 5.

4. Using a digital multimeter set to the voltage (DC) scale, locate the module, remove the main connector back shell and perform the following tests as outlined below:
- a) Red lead on

Unit	Node/Pin/Wire
AU TTD	Node 20, pin 28, wire 162Li
AU FE	Node 50, pin 21 wire 162i
EX	Node 20, pin 28, wire 162Li
MX	Node 50, pin 42, wire 1251i
FL	Node 30, pin 19, wire 162i

- b) Black lead on designated battery ground.



Do you have 12VDC?

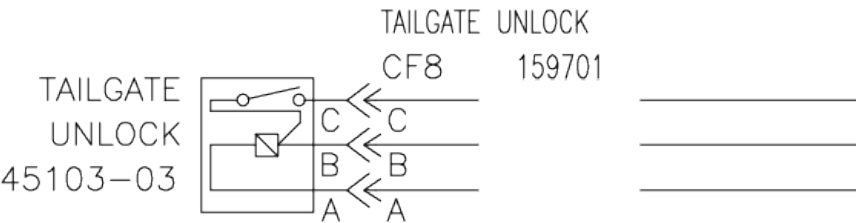
- 4 a.** YES, using Labrie wiring diagram, repair open circuit between the module and tailgate locked switch wire.
- 4 b.** NO, contact [LabriePlus](#).

5. Using a digital multimeter set to the voltage (DC) scale, perform the following tests at the tailgate unlock sensor:
- a) Red lead on

Unit	Node/Pin/Wire
AU TTD	pin B, wire 118
AU FE	pin B, wire BATT
EX	pin B, wire 118
MX	pin B, wire BATT-50Ao
FL	pin B, wire BATT-30o

b) Black lead on designated battery ground.

Figure 4-2 Tailgate Unlocked connector example.



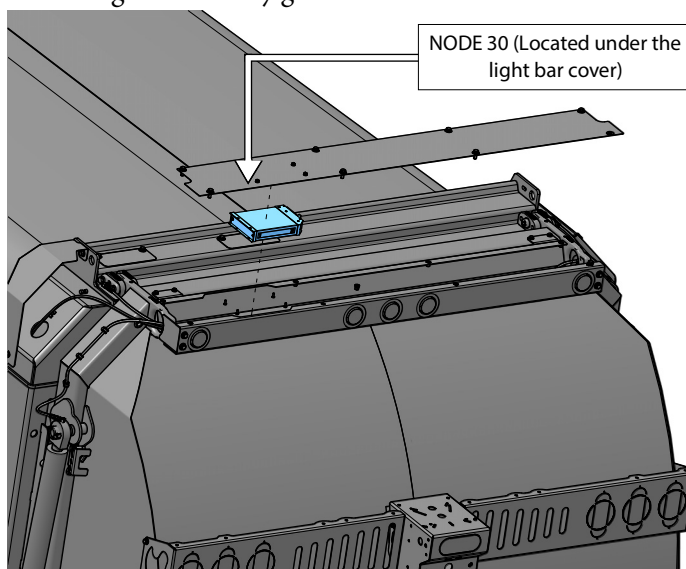
Do you have 12VDC?

- 5 a. YES, repair/replace defective roof open sensor.
- 5 b. NO, go to STEP 6.

6. Using a digital multimeter set to the voltage (DC) scale, locate the module, remove the main connector back shell and perform the following tests as outlined below:
- a) Red lead on

Unit	Node/Pin/Wire
AU TTD	Node 20, pin 50, wire BATT-20o
AU FE	Node 50, pin 51, wire BATT-50o
EX	Node 20, pin 50, wire BATT-20o
MX	Node 50, pin 17, wire BATT-50Ao
FL	Node 30, pin 37, wire BATT-30o

- b) Black lead on designated battery ground.



Do you have 12VDC?

- 6 a.** YES, using Labrie wiring diagram, repair open circuit between the module and tailgate locked switch wire.
- 6 b.** NO, contact [LabriePlus](#).

Packer: Already Extended

This error code occurs when the Labrie Multiplex System detects that the packer is already fully extended while a packer extend command is triggered.

NOTE: Ensure the packer is not fully extended during this procedure.

Diagnostic Procedure:

1. Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
AU TTD	Node 60, I02, wire 116i
AU FE	Node 60, I02, wire 116i
EX	Node 50, I02, wire 311i
MX	Node 60, I02, wire 116i
FL	Node 60, I16, wire 311i

Is the input highlighted in green?

- 1 a.

YES, go to STEP 2.
- 1 b.

NO, contact [LabriePlus](#).
2. Using a digital multimeter set to voltage (DC) scale, perform the following test at the packer fully extended sensor.
- a)

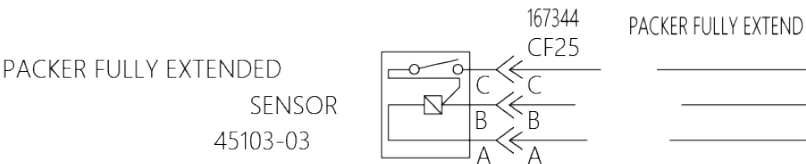
Red lead on

Unit	Node/Pin/Wire
AU TTD	pin C, wire 116i at connector
AU FE	pin C, wire 116i at connector
EX	pin C, wire 116i at connector
MX	pin C, wire 116i at connector
FL	pin C, wire 311i, at connector

- b)

Black lead on designated battery ground.

Figure 4-3 Packer Fully Extended Sensor Example



Do you have 12VDC?

- 2 a. YES, ensure nothing foreign of metallic nature is causing the switch to close, or replace proximity switch.
- 2 b. NO, repair short to power between Node and packer fully extended sensor wire.

Packer: Already Retracted

This error code occurs when the Labrie Multiplex System detects that the packer is already fully retracted while a packer retract command is triggered.

NOTE: Ensure the packer is not fully extended during this procedure.

Diagnostic Procedure:

1. Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
AU TTD	Node 60, I00, wire 137i
AU FE	Node 60, I00, wire 137i
EX	Node 50, I00, wire 137i
MX	Node 50, I02, wire 137i
FL	Node 60, I15, wire 334i

Is the input highlighted in green?

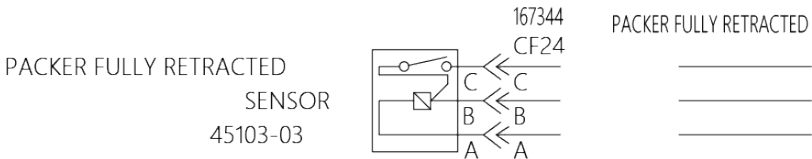
- 1 a. YES, go to STEP 2.
- 1 b. NO, contact [LabriePlus](#).

2. Using a digital multimeter set to voltage (DC) scale, perform the following test at the packer fully retracted sensor.
- a) Red lead on

Unit	Node/Pin/Wire
AU TTD	pin C, wire 137i at connector
AU FE	pin C, wire 137i at connector
EX	pin C, wire 137i at connector
MX	pin C, wire 137i at connector
FL	pin C, wire 334i at connector

b) Black lead on designated battery ground.

Figure 4-4 Packer Fully Retraced Sensor Example



Do you have 12VDC?

- 2 a. YES, ensure nothing foreign of metallic nature is causing the switch to close, or replace proximity switch.
- 2 b. NO, repair short to power between Node and packer fully retracted sensor wire.

Packer: Retract Too Long

This code identifies that the packer panel has been retracting for too long to complete the cycle and the Labrie multiplex system has turned off the output to the packer retract coil. This code typically occurs when the packer fully retracted switch is not met or a mechanical bind or obstruction is present within the hopper preventing the panel from reaching the retracted switch.

Diagnostic Procedure:

1. Operate the packer system by sending the packer to full extend position allowing it to return on its own. When packer stops travel, engage EStop and turn vehicle off.
- Verify location of packer panel.
- Is the packer panel fully retracted?
- 1 a. YES, go to STEP 2.
- 1 b. NO, consult the Labrie [Automizer Maintenance Manual](#) to diagnose or repair the cause of mechanical bind.

2. Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
AU TTD	Node 60, I00, wire 137i
AU FE	Node 60, I00, wire 137i
EX	Node 50, I00, wire 137i
MX	Node 50, I02, wire 137i
FL	Node 60, I15, wire 334i

Is the input highlighted in green?

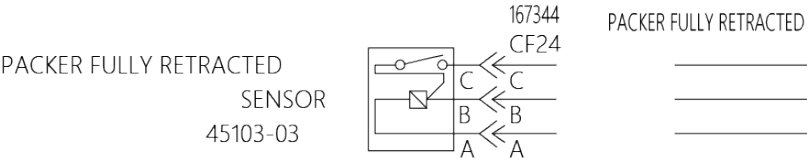
- 2 a. YES, contact LabriePlus.
- 2 b. NO, go to STEP 3.
3. Using a digital multimeter set to voltage (DC) scale, perform checks at the packer fully retracted proximity switch as outlined below:

a) Place red lead on

Unit	Node/Pin/Wire
AU TTD	pin C, wire 137i at connector
AU FE	pin C, wire 137i at connector
EX	pin C, wire 137i at connector
MX	pin C, wire 137i at connector
FL	pin C, wire 334i at connector

- b) Place black lead on pin A of connector.
- c) Measure voltage (DC).

Figure 4-5 Packer Fully Retraced Sensor Example



Do you have 12VDC?

- 3 a. YES, go to STEP 4.
- 3 b. NO, go to STEP 5.

4. Using a digital multimeter, set to the voltage (DC) scale measure for power at the following location:
- a) Place red lead on the below listed terminal by safely back-probing the module.

Unit	Node/Pin/Wire
AU TTD	Node 60, pin 8, wire 137i
AU FE	Node 60, pin 8, wire 137i
EX	Node 50, pin 8, wire 137i
MX	Node 50, pin 9, wire 137i
FL	Node 60, pin 2, wire 334i

b) Place the black lead on a designated battery ground.

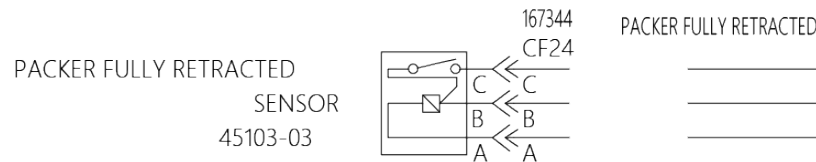
Do you have 12VDC?

4 a. YES, contact [LabriePlus](#).

4 b. NO, using Labrie wiring schematic, repair broken/open circuit from Node to packer fully retracted switch wire.

5. Using a digital multimeter set to the voltage (DC) scale, perform the following check as indicated at packer fully retracted proximity switch.

Figure 4-6 Packer Fully Retraced Sensor Example



a) Place red lead on

Unit	Node/Pin/Wire
AU TTD	pin B, wire IGN-60o, connector
AU FE	pin B, wire IGN-60o, connector
EX	pin B, wire IGN-50o, connector
MX	pin B, wire IGN-50o, connector
FL	Pin B, wire IGN-60o, connector

b) Place Black lead on designated battery ground.

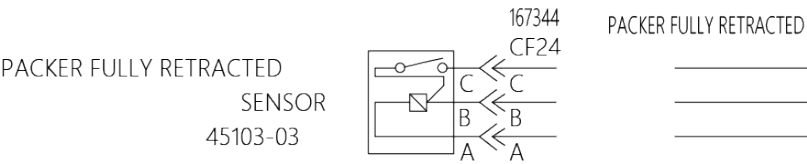
Do you have 12VDC?

5 a. YES, proceed to Step 6

5 b. NO, proceed to Step 7

6. Using a digital multimeter set to the OHMS scale, perform the following resistance check as indicated at packer fully retracted proximity switch.

Figure 4-7 Packer Fully Retraced Sensor Example



NOTE: Battery disconnect needs to be OFF

a) Place red lead on

Unit	Node/Pin/Wire
AU TTD	Pin A, wire 105, connector
AU FE	N/A
EX	Pin A, wire 105, connector
MX	N/A
FL	Pin A, wire 105, connector

b) Place black lead on a designated battery ground.

Do you have below 0.1-0.3 Ohms?

- 6 a. YES, replace the defective packer fully extended sensor.
- 6 b. NO, repair the defective ground circuit from wire and battery ground.

7. Using a digital multimeter set to the voltage (DC) scale, locate the module, remove the main connector back shell and perform the following tests as outlined below.
 - a) Place the red lead on

Unit	Node/Pin/Wire
AU TTD	Node 60, pin 31, wire IGN-60o
AU FE	Node 60, pin 31, wire IGN-60o
EX	Node 50, pin 31, wire IGN-50o
MX	Node 50, pin 53, wire IGN-50o
FL	Node 60, pin 22, wire IGN-60o

- b) Place the black lead on a dedicated battery ground.

Do you have 12VDC?

- 7 a. YES, repair open circuit between module and switch
- 7 b. NO, repair connector. If module damaged, contact [LabriePlus](#) to replace.

Pump: PTO Not OK

Pump: PTO Not OK is an error message resulting from not receiving a ground signal from the PTO pressure switch into Node acknowledging there's enough line pressure from the transmission to safely engage the clutches within the PTO. If this is a front mount, or continuous drive PTO, pump configuration there will be a jumper wire to simulate the ground operated pressure switch.

NOTE: This is not to be confused with the sister code **PUMP: TRANS NOT OK**.

Figure 4-8 Front Mounted/Continuous Drive w/ Jumper Wire

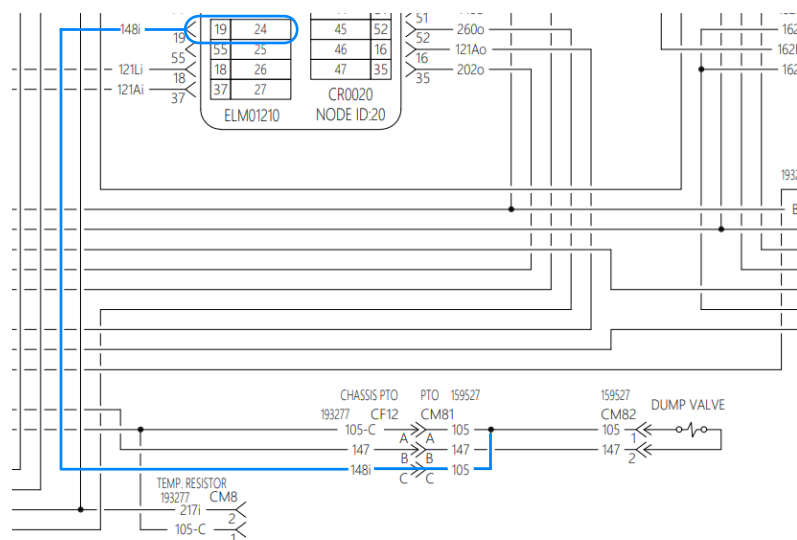
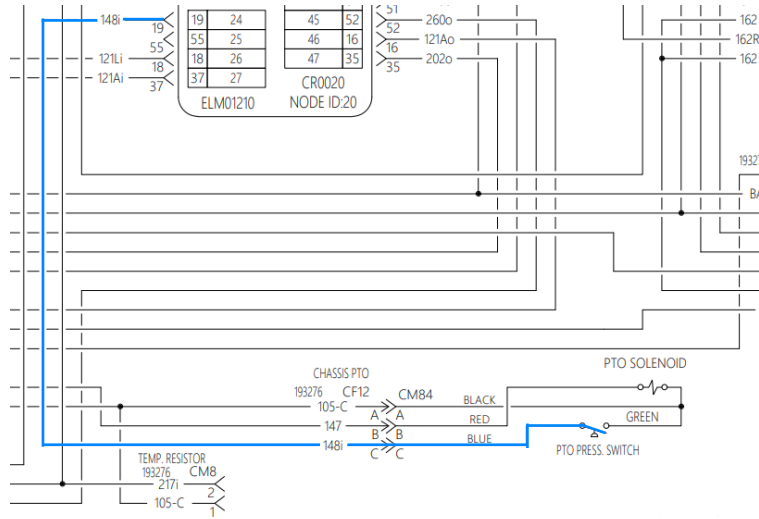


Figure 4-9 PTO Pressure Switch



Diagnostic Procedure:

1. Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
AU TTD	Node 20, I24, wire 148i
AU FE	Node 50, I15, wire 148i
EX	Node 20, I24, wire 148i
MX	Node 60, I33, wire 148i
FL	Node 50, I24, wire 148i

Is the input highlighted in green?

- 1 a.** YES, proceed to Step 2
1 b. NO, contact [LabriePlus](#).

2. Using safe practices, with the truck running and outputs Q12 and Q16 of Node 10 forced, ([See I/O Status on page 35](#)), using a digital multimeter, set to the (VDC) scale, locate the module, remove main connector back shell and perform the following tests as outlined below.
 - a) Red lead on designated battery power.
 - b) Black lead back probed in

Unit	Node/Pin/Wire
AU TTD	Node 20, pin 19, wire 148i
AU FE	Node 50, pin 02, wire 148i
EX	Node 20, pin 19, wire 148i
MX	Node 60, pin 22, wire 148i
FL	Node 50, pin 19, wire 148i

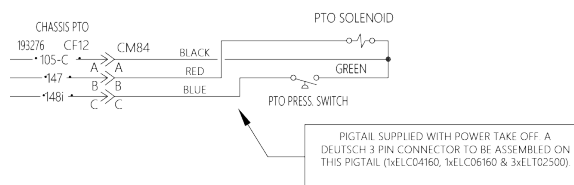
Do you have 12VDC

- 2 a. YES, repair 55-pin connector at Node if damaged. If module is damaged, contact [LabriePlus](#) to replace.
- 2 b. NO, proceed to Step 3.
3. Using a digital multimeter, set to the (VDC) scale, perform the following checks at the specified location.

NOTE: Conditions from Step 2 should be retained for Steps 3 and 4.

- a) Red lead on designated battery power.
- b) Black lead on wire 148i at PTO pressure switch

Figure 4-10 PTO Pressure Switch Example

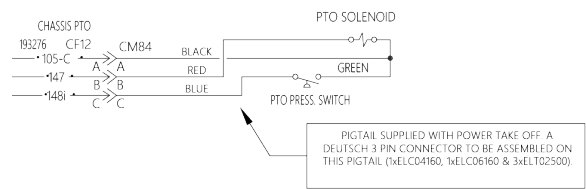


Do you have 12VDC?

- a) YES, repair open circuit between pressure switch and Node.
- b) NO, Proceed to Step 4.

4. Using a digital multimeter, set to the (VDC) scale, perform the following checks at the specified location.
- a) Red lead on designated battery power.
- b) Black lead on wire 105 at PTO pressure switch

Figure 4-11 PTO Pressure Switch Example



Do you have 12VDC?

- 4 a. YES, replace pressure switch and retest.
- 4 b. NO, repair open circuit in wire 105 to PTO pressure switch
- 4 c. YES and pressure switch was already replaced. Contact transmission manufacturer for troubleshooting steps to confirm line pressure from transmission to PTO.

Arm Up: Crusher Not Raised

This code indicates that the operator is attempting to raise the arm inside the hopper while the crusher panel feedback wire 215i.

NOTE: This wire may also be designated 215iL or 215iR.

Diagnostic Procedure:

1. Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
AU TTD	Node 50, I00, wire 215i
AU FE	Node 60, I06, wire 215Ri
EX	Node 40, I03, wire 215i
MX	Node 60, I41wire 215i

Is the input highlighted in green?

- 1 a. YES, go to STEP 4.
- 1 b. NO, go to STEP 2.

2. Using the Labrie multiplex display, verify you have the following output:

Unit	Node/Pin/Wire
AU TTD	Node 50, I44, wire IGN-50o
AU FE	Node 60, I42, wire IGN-60o
EX	Node 40, Q42, wire IGN-40o
MX	Node 50, I22, IGN-50Ao

Is the output highlighted in green?

- 2 a.

YES, go to STEP 3.
- 2 b.

NO, contact [LabriePlus](#).
3.

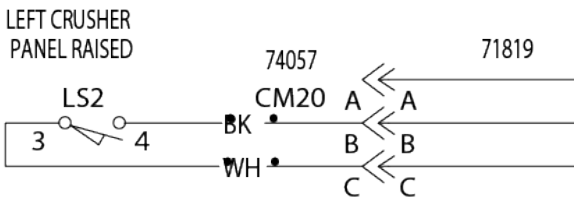
Using a digital multimeter set to the voltage (DC) scale, perform the following test at crusher sensor connector as outlined below:
- a)

Red lead on

Unit	Node/Pin/Wire
AU TTD	connector, pin C, wire 215i
AU FE	connector, pin C, wire 215Ri
EX	connector, pin C, wire 215i
MX	connector, pin C, wire 215i

b) Black lead on designated battery ground.

Figure 4-12 Crusher Panel Connector Example



With the panel in the full retracted (raised) position, do you have 12VDC?

- 3 a.

YES, go to STEP 4.
- 3 b.

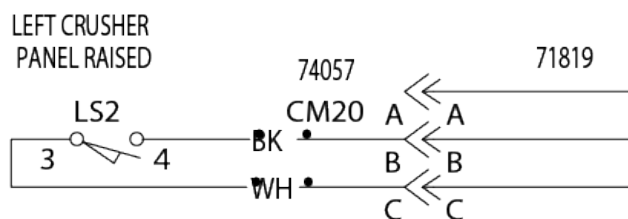
NO, go to STEP 5.

4. Using a digital multimeter set to the voltage (DC) scale, locate the module, remove the main connector back shell and perform the following tests as outlined below:
- a) Red lead on

Unit	Node/Pin/Wire
AU TTD	connector, pin B, wire IGN-50o
AU FE	connector, pin B, wire IGN-60o
EX	connector, pin C, wire IGN-40o
MX	connector, pin B, wire IGN-50Ao

- b) Black lead on designated battery ground.
- c) With the crusher panel in the fully open (raised) position, verify whether or not you have 12VDC.

Figure 4-13 Crusher Panel Connector Example



Do you have 12VDC?

- 4 a. YES, proceed to step 5
- 4 b. NO, proceed to step 6
5. Using a digital multimeter set to the voltage (DC) scale, perform the following test as outlined in the steps below:
- a) Locate Node and test as follows.
- b) Red lead back probed on

Unit	Node/Pin/Wire
AU TTD	Node 50, pin 8, wire 215i
AU FE	Node 60, pin 11, wire 215Ri
EX	Node 40, pin 28, wire 215i
MX	Node 60, pin 49, wire 215i

c) Black lead on designated battery ground.

NOTE: With the crusher panel in the fully open (raised) position, verify whether or not you have 12VDC

Do you have 12VDC?

5 a. YES, If damaged, contact [LabriePlus](#) to replace module.

5 b. NO, repair open on switch feedback wire from switch to Node.

- 6.** Using a digital multimeter set to the voltage (DC) scale, perform the following test as outlined in the steps below:

Locate Node and test as follows.

a) Red lead back probed on

Unit	Node/Pin/Wire
AU TTD	Node 50, pin 31, wire IGN-50o
AU FE	Node 60, pin 31, wire IGN-60o
EX	Node 40, pin 31, wire IGN-40o
MX	Node 50, pin 17, IGN-50Ao

b) Black lead on designated battery ground.

Do you have 12VDC?

6 a. YES, replace defective crusher panel switch.

6 b. NO, repair 55-pin connector at Node if damaged. If module is damaged, contact [LabriePlus](#) to replace.

Arm: Pump Not Started

This code indicates that the dead-man or arm aux controls are being commanded prior to the pump circuit being engaged or activated. When this warning is present, attempt to engage the pump by depressing the pump button on switch pack (Node) 12 and note if any of the accompanying warnings are present which would prevent the pump from being activated.



Additional failure modes which could prevent the pump from activating are:

- ♦ PUMP NOT STARTED: LEFT ESTOP ([See Pump Not Started: Left EStop/Pump: Left EStop on page 177](#))
- ♦ PUMP NOT STARTED: LEFT PANIC BAR ([See Pump Not Started: Left Panic / Pump: Left Panic Bar on page 181](#))
- ♦ PUMP NOT STARTED: RIGHT ESTOP ([See Pump Not Started: Right EStop / Pump: Right EStop on page 179](#))
- ♦ PUMP NOT STARTED: RIGHT PANIC BAR ([See Pump Not Started: Right Panic / Pump: Right Panic on page 183](#))
- ♦ PUMP NOT STARTED: CAB ESTOP ([See Pump: PTO Not OK on page 152](#))
- ♦ PUMP NOT STARTED: AUX CAB ESTOP ([See Pump Not Started: Aux Cab EStop - No Matrix on page 126](#))
- ♦ PUMP NOT STARTED: RPM TOO HIGH ([See Pump Not Started: RPM Too High - No Matrix on page 128](#))
- ♦ PUMP: PTO NOT OK ([See Pump: PTO Not OK on page 152](#))
- ♦ PUMP: TRANSMISSION NOT OK ([See Arm Up: Crusher Not Raised on page 155](#))

Consult the appropriate page of this chapter to diagnose each above item.

Arm: Tailgate Unlocked

This code indicates the Labrie multiplex system has identified a command to move the arm while the tailgate is unlocked. This prevent the operator from being able to dump into the hopper while the tailgate is not secured.

NOTE: Prior to performing the below diagnostics, ensure the tailgate is in fact in the locked position and that no obstruction could be allowing the switch to close. Also, verify the ground wire to the proximity switch has 0.1-0.3 ohms of resistance to battery ground.

Diagnostic Procedure:

1. Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
AU TTD 2019+	Node 20, I03, wire 162Li
AU FE	Node 50, I15, wire 162i
EX	Node 20, I03, wire 162Li
MX	Node 60, I46, wire 162i

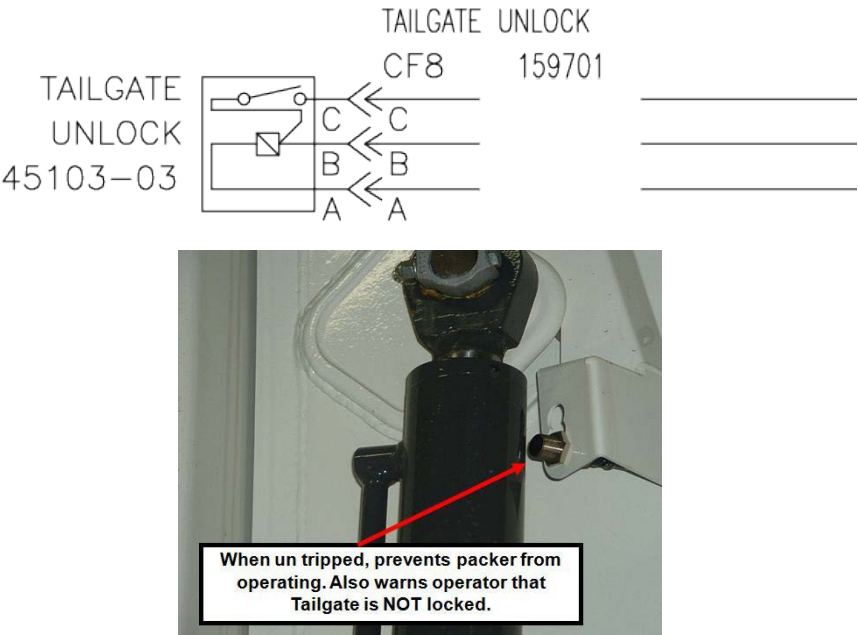
Is the input highlighted in green?

- 1 a. YES, go to STEP 4.
- 1 b. NO, go to STEP 2.
2. Using a digital multimeter set to the voltage (DC) scale, perform the test as outlined at the tailgate unlocked proximity switch.

Red lead on

Unit	Node/Pin/Wire
AU TTD 2019+	connector, pin B, wire 118
AU FE	connector, pin B, wire IGN-50o
EX	connector, pin B, wire 118
MX	connector, pin B, wire IGN-50Ao

Figure 4-14 Tailgate Unlocked connector example.



Black lead on designated battery ground.

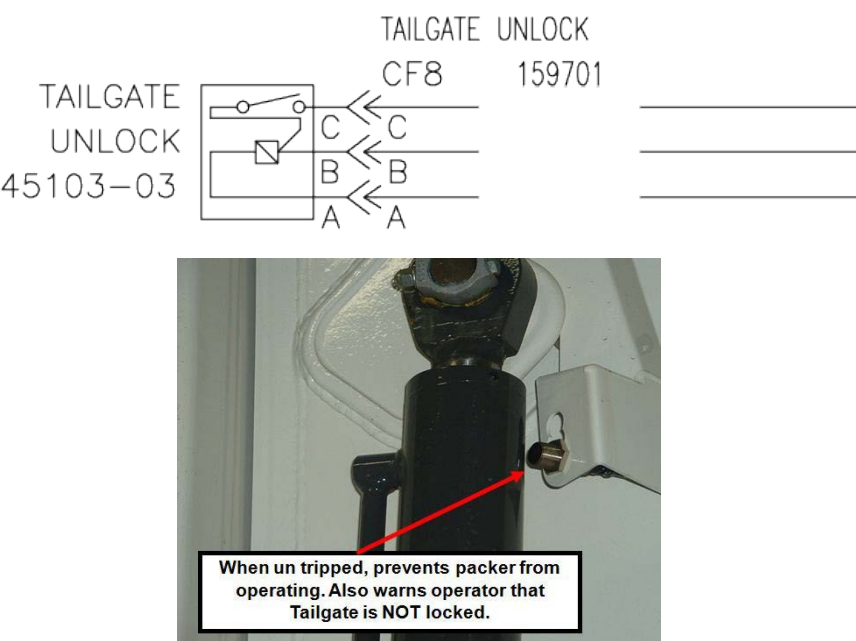
Do you have 12VDC?

- 2 a. YES, go to STEP 3.
- 2 b. NO, go to STEP 4.
3. Using a digital multimeter set to the voltage (DC) scale, perform the test as outlined at the tailgate unlocked proximity switch.

Red lead on

Unit	Node/Pin/Wire
AU TTD 2019+	connector, pin C, wire 162Li
AU FE	connector, pin C, wire 162i
EX	connector, pin C, wire 162Li
MX	connector, pin C, wire 162i

Figure 4-15 Tailgate Unlocked connector example.



Black lead on designated battery ground.

Do you have 12VDC?

- 3 a. YES, go to STEP 5.
- 3 b. NO, repair/replace defective tailgate unlock sensor.

4. Using a digital multimeter set to the voltage (DC) scale, perform the test as outlined at the following Node.

Remove connector back shell.

Red lead on

Unit	Node/Pin/Wire
AU TTD 2019+	Node 20, pin 50, wire BATT-20o
AU FE	Node 50, pin 51, wire IGN-50o
EX	Node 20, pin 50, wire BATT-20o
MX	Node 50, pin 53, wire IGN-50o

Black lead on designated battery ground.

Do you have 12VDC?

- 4 a. YES, using Labrie wiring diagram, repair open/damaged circuit between Node and tailgate unlocked sensor.
- 4 b. NO, contact [LabriePlus](#).

5. Using a digital multimeter set to the voltage (DC) scale, perform the test as outlined below at the following Node.

Remove connector back shell.

Red lead on

Unit	Node/Pin/Wire
AU TTD 2019+	Node 20, pin 28, wire 162Li
AU FE	Node 50, pin 21, wire 162i
EX	Node 20, pin 28, wire 162Li
MX	Node 50, pin 16, wire 162i

Black lead on designated battery ground.

Do you have 12VDC?

5 a. YES, contact [LabriePlus](#).

5 b. NO, using Labrie wiring diagram repair open/damaged circuit between Node and tailgate unlocked sensor wire.

Crusher: Arm Too High

This failure code indicates that the crusher panel digital command input from Node 12/13/72/127 is being commanded to lower atop the packer. However, Node 60 believes the arm is too high preventing the crusher from possibly contacting the arm.

Wire 235i sends a voltage (DC) input signal to Node 60 when the arm is in the lowered or parked position. When the arm raises, input voltage (DC) from 235i is cut turning the input off, therefore telling the computer the arm is raised.

Diagnostic Procedure:

1. Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
AU TTD	Node 60, I26, wire 235i
AU FE	Node 60, I26, wire 235i
EX	Node 60, I00, wire 814i
MX	Node 50, I01, wire 814i

Is the input highlighted in green?

1 a. YES, go to STEP 4.

1 b. NO, go to STEP 2.

2. Using the Labrie multiplex display, verify you have the following output:

Unit	Node/Pin/Wire
AU TTD	Node 60, I42, wire IGN-60
AU FE	Node 60, I42, wire IGN-60
EX	Node 60, Q20, wire IGN-60o
MX	Node 50, Q23, wire IGN-60o

Is the output highlighted in green?

- 2 a.** YES, go to STEP 3.
- 2 b.** NO, module is damaged contact [LabriePlus](#) to replace.
- 3.** Using a digital multimeter set to the voltage (DC) scale, perform the following test at arm sensor harness as outlined below:
- a) Red lead on

Unit	Node/Pin/Wire
AU TTD	connector, pin 3, wire 235i
AU FE	connector, pin 3, wire 235i
EX	connector, pin 4, wire 814i
MX	connector, pin 4, wire 814i

b) Black lead on a designated battery ground

With the arm in the fully lowered position, do you have 12VDC?

- 3 a.** YES, go to step 4.
- 3 b.** NO, go to step 5.

4. Using a digital multimeter set to the voltage (DC) scale, perform the following test at arm sensor harness as indicated below:
- a) Red lead on

Unit	Node/Pin/Wire
AU TTD	Node 60, pin 18, wire 235i
AU FE	Node 60, pin 18, wire 235i
EX	Node 60, pin 8, wire 814i
MX	Node 50, pin 27, wire 814i

- b) Black lead on designated battery ground.
- c) With the crusher panel in the fully open (raised) position, verify whether or not you have 12VDC.

Do you have 12VDC?

- 4 a.** YES, repair 55-pin connector at Node if damaged. If module is damaged, contact [LabriePlus](#) to replace.
- 4 b.** NO, repair open on switch feedback wire from switch to Node.
5. Using a digital multimeter set to the voltage (DC) scale, perform the following test as outlined in the steps below.
- a) Locate Node and test as follows:
- b) Red lead on

Unit	Node/Pin/Wire
AU TTD	Node 60, pin 31, wire IGN-60o
AU FE	Node 60, pin 31, wire IGN-60o
EX	Node 60, pin 36, wire IGN-60o
MX	Node 50, pin 53, wire IGN-50o

- c) Black lead on designated battery ground

Do you have 12VDC?

- 5 a.** YES, replace defective arm mid-height switch.
- 5 b.** NO, repair 55-pin connector at Node if damaged. If module is damaged, contact [LabriePlus](#) to replace.

Crusher: Packer Not Retracted

This code indicates the Labrie multiplex system has identified a command to move the crusher to the lower position while the packer panel is not in the home position. This prevents the operator from being able to damage the crusher panel if refuse is atop the packer.

NOTE: Prior to performing the below diagnostics, ensure the packer is in the fully retracted position and that no obstruction could be allowing the switch to function.

Diagnostic Procedure:

1. Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
AU TTD	Node 60, I00, wire 137i
AU FE	Node 60, I00, wire 137i
EX	Node 50, I00, wire 137i
MX	Node 50, I02, wire 137i

Is the input highlighted in green?

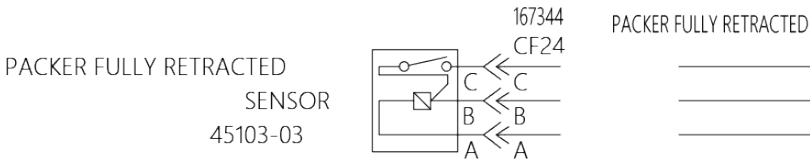
- 1 a. YES, go to STEP 4.
1 b. NO, go to STEP 2.
2. Using a digital multimeter set to the voltage (DC) scale, perform the following test at packer fully retracted sensor as outlined in the following:

Red lead on

Unit	Node/Pin/Wire
AU TTD	connector, pin B, wire IGN-60o
AU FE	connector, pin B, wire IGN-60o
EX	connector, pin B, wire IGN-50o
MX	connector, pin B, wire IGN-50o

Black lead on designated battery ground.

Figure 4-16 Packer Fully Retraced Sensor Example



Do you have 12VDC?

2 a. YES, go to STEP 3.

2 b. NO, go to STEP 4.

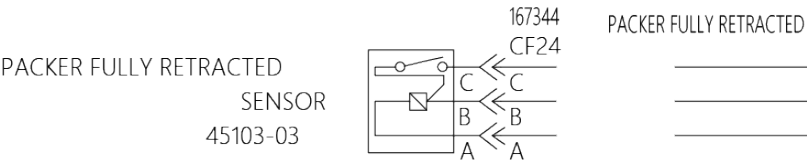
3. Using digital multimeter set to the voltage (DC) scale, perform the test at packer fully retracted sensor as outlined in the following:

Red lead on

Unit	Node/Pin/Wire
AU TTD	connector, pin C, wire 137i
AU FE	connector, pin C, wire 137i
EX	connector, pin C, wire 137i
MX	connector, pin C, wire 137i

Black lead on designated battery ground.

Figure 4-17 Packer Fully Retraced Sensor Example



Do you have 12VDC?

3 a. YES, go to STEP 5.

3 b. NO, repair/replace defective packer fully retracted switch.

4. Using a digital multimeter set to the voltage (DC) scale, perform the test as outlined at the following Node:

Remove connector back shell from connector.

Red lead on

Unit	Node/Pin/Wire
AU TTD	Node 60, pin 31, wire IGN-60o
AU FE	Node 60, pin 31, wire IGN-60o
EX	Node 50, pin 31, wire IGN-50o
MX	Node 50, pin 53, wire IGN-50o

Black lead on designated battery ground.

Do you have 12VDC?

4 a. YES, using Labrie wiring diagram, repair open/damaged circuit between Node and the arm mid-height sensor connector.

4 b. NO, contact [LabriePlus](#).

5. Using a digital multimeter set to the voltage (DC) scale, perform the test as outlined below at the following Node:

Remove connector back shell from connector.

Red lead on

Unit	Node/Pin/Wire
AU TTD	Node 50, pin 8, wire 137i
AU FE	Node 60, pin 8, wire 137i
EX	Node 50, pin 8, wire 137i
MX	Node 50, pin 9, wire 137i

Black lead on designated battery ground.

Do you have 12VDC?

5 a. YES, contact [LabriePlus](#).

5 b. NO, using Labrie wiring diagram, repair open/damaged circuit between Node and packer fully retracted sensor wire.

Pump Not Started: Hopper Door Open

This code indicates that Node 60 has lost its feedback via voltage input on wire (i_RHDoorClose_sensor) from the hopper door proximity switch. When this code sets, it causes module (Node) 10 to cut power to the TCM (wire 104o) as well as output 123o which latches the pump relay.

The first step a technician must verify is whether or not the hopper door is closed and the switch is present and/or not damaged. He must also verify the ground wire 105 has good 0.1-0.3ohms of resistance to battery ground.

Diagnostic procedure:

1. Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
AU TTD	Node 60, I01, wire 121Ci
AU FE	Node 60, I01, wire 121Ci
FL	Node 60, I04, wire 317i

Is the input highlighted in green?

1 a. YES, go to STEP 4.

1 b. NO, go to STEP 2.

2. Using the Labrie multiplex display, verify you have the following output:

Unit	Node/Pin/Wire
AU TTD	Node 60, I42, wire IGN-60
AU FE	Node 60, I42, wire IGN-60
FL	Node 60, I33, wire IGN-60

Is the output highlighted in green?

2 a. YES, go to STEP 3.

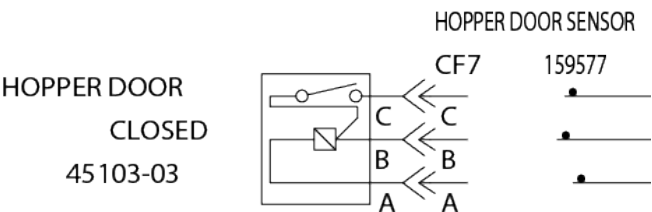
2 b. NO, contact [LabriePlus](#).

3. Using a digital multimeter set to the voltage (DC) scale, perform the following measurement as outlined below:
- a) At the hopper door sensor connector, connect your meter as follows:
 - b) Red lead on

Unit	Node/Pin/Wire
AU TTD	pin C, wire 121Ci
AU FE	pin C, wire 121Ci
FL	pin C, wire 317i

- c) Black lead on pin A, wire 105-B.

Figure 4-18 Hopper Door Sensor Example



Do you have 12VDC?

- 3 a. YES, go to STEP 4.
- 3 b. NO, go to STEP 5.
- 4. Using a digital multimeter set to the voltage (DC) scale, perform the following tests as outlined below:

NOTE: This test is performed at Node 60.

- a) At connector with back shell removed, place red lead on

Unit	Node/Pin/Wire
AU TTD	connector, pin 27, wire 121Ci
AU FE	connector, pin 31, wire 121Ci
FL	connector, pin 10, wire 317i

- b) Black lead on designated battery ground.

Do you have 12VDC?

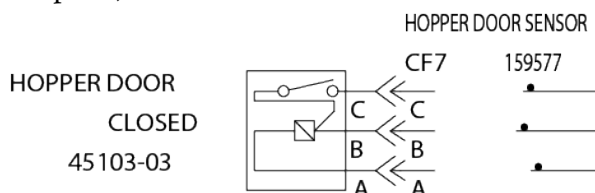
- 4 a. YES, repair connector if damaged. If module is damaged, contact LabriePlus to replace.
- 4 b. NO, go to STEP 5.

5. Using a digital multimeter set to the voltage (DC) scale, perform the following measurement as outlined below:

- a) At the hopper door sensor connector, connect your meter as follows:
- b) Red lead on

Unit	Node/Pin/Wire
AU TTD	Pin B, wire IGN-60o
AU FE	Pin B, wire IGN-60o
FL	Pin B, wire IGN-60o

- c) Black lead on pin A, wire 105-B.



Do you have 12VDC?

- 5 a. YES, replace/repair defective hopper door sensor.
- 5 b. NO, using Labrie wiring diagram, repair open/damaged wire IGN-o from module (Node) 60 to the hopper door proximity switch.

Pump Not Started: Main Air Pressure

This code indicates a loss of the input for the main air pressure switch located inside the MAC valve box. Failure to receive this input will prevent the unit from enabling 123o to allow the pump relay to latch.

NOTE: Ensure there is at least 90psi in air tanks prior to the below testing procedure.

Diagnostic Procedure:

1. Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
AU TTD	Node 50, I02, wire 208i
EX	Node 40, I14, wire 208i
FL	Node 60, I00, wire 114i

Is the input highlighted in green?

- 1 a.

YES, go to STEP 6.
- 1 b.

NO, go to STEP 2.
2.

Using the Labrie multiplex display, verify you have the following output:

Unit	Node/Pin/Wire
AU TTD	Node 50, I44, wire IGN-50o
EX	Node 50, I42, wire IGN-40o
FL	Node 60, I33, wire IGN-60o

Is the output highlighted in green?

- 2 a.

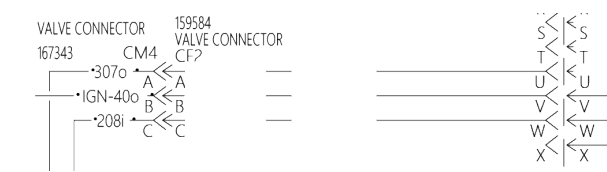
YES, go to STEP 3.
- 2 b.

NO, go to STEP 4.
3.

Using a digital multimeter, measure voltage (DC) at the MAC valve box, at the following pin location and a designated battery ground.

Unit	Node/Pin/Wire
AU TTD	Connector, pin V, wire IGN-40o
EX	Connector, pin V, wire IGN-40o
FL	Connector, pin V, wire IGN-60o

Figure 4-19 MAC Valve Box Connector Example



Do you have 12VDC at pin V of the MAC valve box?

- 3 a.

Yes, go to STEP 5.
- 3 b.

NO, go to STEP 4.

4. Locate Node and remove the connector back shell cover.

Using a digital multimeter set to the voltage (DC) scale, measure at the following location:

- a) Red lead on

Unit	Node/Pin/Wire
AU TTD	Node 50, pin 51, wire IGN-50o
EX	Node 40, pin 31, wire IGN-50o
FL	Node 60, pin 22, wire IGN-60o

- b) Black lead on pin designated battery ground.

Do you have 12 volts DC?

- 4 a. Yes, using the Labrie wiring schematic, repair open wire from Node to the MAC valve box.

- 4 b. If damaged, contact [LabriePlus](#) to replace module.

5. Using a digital multimeter set to the voltage (DC) scale, measure at the following location:

- a) Main air pressure switch at MAC valve box.

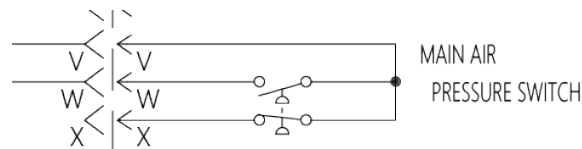
- b) Connector must stay connected.

- c) Red lead back probed on

Unit	Node/Pin/Wire
AU TTD	connector, pin W, wire 208i
EX	connector, pin W, wire 208i
FL	connector, pin W, wire 114i

- d) Black lead back probed on pin F (105a).

Figure 4-20 Main Air Pressure Switch Example



Do you have 12 volts DC?

- 5 a. YES, go to STEP 6.

- 5 b. NO, replace pressure switch.

6. Using a digital multimeter set to the voltage (DC) scale, measure at the following location:
- Node main harness connection (connector).
 - Red lead back probed on

Unit	Node/Pin/Wire
AU TTD	Node 50, pin 9, wire 208i
EX	Node 40, pin 20, wire 208i
FL	Node 60, pin 8, wire 114i

- Black lead on designated battery ground.

Do you have 12 volts DC?

- YES, repair connector if damaged. If module is damaged, contact [LabriePlus](#) to replace.
- NO, using the Labrie wiring schematic, repair open circuit between pressure switch and Node for wire.

Arm: Hopper Door Not Opened

This code indicates the Labrie multiplex system has identified a command to move the arm while the hopper door is closed. This prevents the operator from being able to dump into the hopper while the door is closed.

NOTE: Prior to performing the below diagnostics, ensure the hopper door is in fact in the open position and that no obstruction could be allowing the switch to close.

Diagnostic Procedure:

- Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
EX	Node 50, I06, wire 211i
MX	Node 60, I03, wire 211i

Is the input highlighted in green?

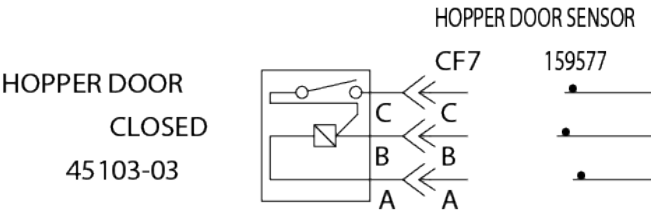
- YES, go to STEP 4.
- NO, go to STEP 2.

2. Using a digital multimeter set to the voltage (DC) scale, perform the following test at hopper door sensor as outlined in the following:
- Red lead on

Unit	Node/Pin/Wire
EX	connector, pin B, wire IGN-50o
MX	connector, B, wire IGN-50Ao

Black lead on designated battery ground.

Figure 4-21 Hopper Door Sensor Example



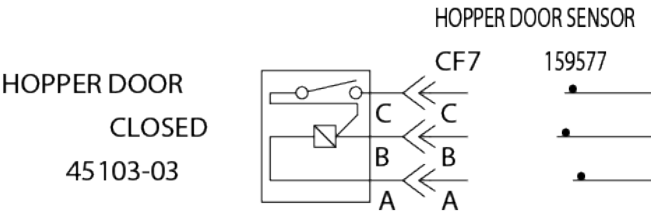
Do you have 12VDC?

- 2 a. YES, go to STEP 3.
- 2 b. NO, go to STEP 4.
3. Using digital multimeter set to the voltage (DC) scale, perform the test at hopper door sensor as outlined in the following:
- Red lead on

Unit	Node/Pin/Wire
EX	connector, pin C, wire 211i
MX	connector, pin C, wire 211i

Black lead on designated battery ground.

Figure 4-22 Hopper Door Sensor Example



Do you have 12VDC?

3 a. YES, go to STEP 5.

3 b. NO, repair/replace defective hopper door open switch.

- 4.** Using a digital multimeter set to the voltage (DC) scale, perform the test as outlined at the following Node.

Remove connector back shell.

Red lead on

Unit	Node/Pin/Wire
EX	Node 50, pin 31, wire IGN-50o
MX	Node 50, pin 17, wire IGN-50Ao

Black lead on designated battery ground.

Do you have 12VDC?

4 a. YES, using Labrie wiring diagram, repair open/damaged circuit between Node 50 and hopper door open switch.

4 b. NO, contact [LabriePlus](#).

- 5.** Using a digital multimeter set to the voltage (DC) scale, perform the test as outlined below at the following Node:

Remove connector back shell.

Red lead on

Unit	Node/Pin/Wire
EX	Node 50, pin 11, wire 211i
MX	Node 60, pin 28, wire 211

Black lead on designated battery ground.

Do you have 12VDC?

5 a. YES, contact [LabriePlus](#).

5 b. NO, using Labrie wiring diagram, repair open/damaged circuit between Node and hopper door open switch.

Pump Not Started: Left EStop/Pump: Left EStop

This code indicates a situation where the input signal for Node is not being received from the external EStop.

The first code, PUMP NOT STARTED:LEFT ESTOP will trigger when the pump is requested to engage when the outside emergency stop is pushed in or disengaged.

PUMP:LEFT ESTOP will trigger when the pump was previously engaged and the emergency stop was pushed in or disengaged.

IMPORTANT: Prior to beginning this troubleshooting tree, please verify emergency stop at outside location is not pushed in or depressed.

Diagnostic Procedure:

- Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
EX	Node 40, I25, wire 220Li
MX	Node 50, I14, wire 220Li

Is the input highlighted in green?

- YES, go to STEP 5.
 - NO, go to STEP 2.
- Using the Labrie multiplex display, verify you have the following output:

Unit	Node/Pin/Wire
EX	Node 40, I42, wire IGN-40o
MX	Node 50, Q23, wire IGN-50o

Is the output highlighted in green?

- YES, go to STEP 3.
- NO, contact [LabriePlus](#).

- 3.** Using a digital multimeter set to voltage (DC), perform the following test as described:
Place your red lead on packer outside control connector.

Unit	Node/Pin/Wire
EX	connector, pin 1, BLK wire
MX	connector, pin 1, BLK wire

Place your black lead on a designated battery ground.

Do you have 12VDC?

3 a. YES, go to step 4.

3 b. NO, using Labrie wiring diagram, correct open/broken wire between the Node output wire and the external emergency stop switch.

- 4.** Using a digital multimeter set to voltage (DC), perform the following test as described:
Place your red lead on packer outside control connector

Unit	Node/Pin/Wire
EX	connector, pin 7, WHT/BLK wire
MX	connector, pin 7, wire WHT/BLK

Place your black lead on a designated battery ground.

Do you have 12VDC?

4 a. YES, go to STEP 5.

4 b. NO, replace defective external emergency stop switch.

- 5.** Using a digital multimeter set to the voltage (DC) scale, perform the following measurements at the following location:

Place red lead on

Unit	Node/Pin/Wire
EX	Node 40, pin 31, wire IGN-40o
MX	Node 50, pin 53, wire IGN-50o

Place the Black lead on designated battery ground.

Do you have 12VDC?

5 a. YES, contact [LabriePlus](#).

5 b. NO, using Labrie wiring diagram, repair open/broken connection between Node wire and the external emergency stop switch.

Pump Not Started: Right EStop / Pump: Right EStop

This code indicates a situation where the input signal for Node is not being received from the external EStop.

The first code, PUMP NOT STARTED:RIGHT ESTOP will trigger when the pump is requested to engage when the outside emergency stop is pushed in or disengaged.

PUMP:RIGHT ESTOP will trigger when the pump was previously engaged and the emergency stop was pushed in or disengaged.

IMPORTANT: Prior to beginning this troubleshooting tree, please verify emergency stop at outside location is not pushed in or depressed.

Diagnostic Procedure:

1. Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
EX	Node 50, I24, wire 220Ri
MX	Node 60, I15, wire 220Ri

Is the input highlighted in green?

- 1 a. YES, go to STEP 5.
- 1 b. NO, go to STEP 2.
2. Using the Labrie multiplex display, verify you have the following output:

Unit	Node/Pin/Wire
EX	Node 50 I42, wire IGN-50o
MX	Node 50, Q22, wire IGN-50Ao

Is the output highlighted in green?

- 2 a. YES, go to STEP 3.
- 2 b. NO, contact [LabriePlus](#).

- 3.** Using a digital multimeter set to voltage (DC), perform the following test as described:
Place red lead on packer outside control connector.

Unit	Node/Pin/Wire
EX	connector, pin1, BLK wire
MX	connector, pin 1, BLK wire

Place your black lead on a designed battery ground.

Do you have 12VDC?

- 3 a.** YES, go to step 4.
3 b. NO, using Labrie wiring diagram, correct open/broken wire between the Node output wire and the external emergency stop switch.
- 4.** Using a digital multimeter set to voltage (DC), perform the following test as described:
Place red lead on packer outside control connector.

Unit	Node/Pin/Wire
EX	connector, pin 7, WHT/BLK wire
MX	connector, pin 7, WHT/BLK wire

Place your black lead on a designed battery ground.

Do you have 12VDC?

- 4 a.** YES, go to STEP 5.
4 b. NO, replace defective external emergency stop switch.
- 5.** Using a digital multimeter set to the voltage (DC) scale, perform the following measurements at the module, place red lead on.

Unit	Node/Pin/Wire
EX	Node 50, pin 19, wire 220Ri
MX	Node 60, pin 2, wire 220Ri

Place the Black lead on designated battery ground.

Do you have 12VDC?

- 5 a.** YES, contact [LabriePlus](#).
5 b. NO, using Labrie wiring diagram repair open/broken connection between Node wire and the external emergency stop switch.

Pump Not Started: Left Panic / Pump: Left Panic Bar

This code indicates a situation where the input signal for Node is not being received from the panic bar switch or jumper via wire 104 on the curb side.

The first code, PUMP NOT STARTED:LEFT PANIC will trigger when the pump is requested to engage when the panic bar is activated or jumper is missing.

PUMP:LEFT PANIC BAR will trigger when the pump was previously engaged and the emergency stop was pushed in or disengaged.

IMPORTANT: Prior to beginning this troubleshooting tree, please verify the panic bars are not depressed or activated, or the presence of the panic bar jumper.

Diagnostic Procedure:

- Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
EX	Node 40, I15, wire 117i
MX	Node 60, I40, wire 117i

Is the input highlighted in green?

- YES, contact [LabriePlus](#).
 - NO, go to STEP 2.
- Using the Labrie multiplex display, verify you have the following output:

Unit	Node/Pin/Wire
EX	Node 40, I42, wire IGN-40o
MX	Node 50, Q22, wire IGN-50Ao

Is the output highlighted in green?

- YES, go to STEP 3.
- NO, contact [LabriePlus](#).

- 3.** Using a digital multimeter set to voltage (DC), perform the following test as described:
Place red lead on the following at panic bar interlocks connector.

Unit	Node/Pin/Wire
EX	connector, pin 1, wire IGN-40o
MX	connector, pin 2, wire IGN-50Ao

Place your black lead on a designed battery ground.

Do you have 12VDC?

- 3 a.** YES, go to step 4.
3 b. NO, using Labrie wiring diagram, correct open/broken wire between the Node output wire and the panic bar switch or the panic bar jumper.
- 4.** Using a digital multimeter set to voltage (DC), perform the following test as described:
Place red lead on the following at panic bar interlocks connector.

Unit	Node/Pin/Wire
EX	connector, pin 2, wire 117i
MX	connector, pin 3, wire 117i

Place your black lead on a designed battery ground.

Do you have 12VDC?

- 4 a.** YES, go to step 5.
4 b. NO, replace the defective panic bar switch or panic bar jumper.
- 5.** Using a digital multimeter set to the voltage (DC) scale, perform the following measurements at the following location.
Place Red lead on

Unit	Node/Pin/Wire
EX	Node 40, pin 2, wire 117i
MX	Node 60, pin 48 wire 117i

Place the Black lead on designated battery ground.

Do you have 12VDC?

- 5 a.** YES, contact [LabriePlus](#).
5 b. NO, using Labrie wiring diagram, repair open/broken connection between Node and the panic bar switch or the panic bar jumper.

Pump Not Started: Right Panic / Pump: Right Panic

This code indicates a situation where the input signal for Node is not being received from the panic bar switch or jumper via wire 114 on the curb side.

The first code, PUMP NOT STARTED:RIGHT PANIC will trigger when the pump is requested to engage when the panic bar is activated or jumper is missing.

PUMP:RIGHT PANIC BAR will trigger when the pump was previously engaged and the emergency stop was pushed in or disengaged.

IMPORTANT: Prior to beginning this troubleshooting tree, please verify the panic bars are not depressed or activated, or the presence of the panic bar jumper.

Diagnostic Procedure:

- Using the Labrie multiplex display, verify you have the following input:

Unit	Node/Pin/Wire
EX	Node 50, I14, wire 114i
MX	Node 60, I27, wire 114i

Is the input highlighted in green?

- YES, contact [LabriePlus](#).
 - NO, go to STEP 2.
- Using the Labrie multiplex display, verify you have the following output:

Unit	Node/Pin/Wire
EX	Node 50, I42, wire IGN-50o
MX	Node 50, Q22, wire IGN-50Ao

Is the output highlighted in green?

- YES, go to STEP 3.
 - NO, contact [LabriePlus](#).
- Using a digital multimeter set to voltage (DC), perform the following test as described:
Place red lead on the following at panic bar interlocks connector.

Unit	Node/Pin/Wire
EX	connector, pin 1, wire IGN-50o
MX	connector, pin 2, wire IGN-50Ao

Place your black lead on a designed battery ground.

Do you have 12VDC?

3 a. YES, go to step 4.

3 b. NO, using Labrie wiring diagram, correct open/broken wire between the Node 50 output wire (o_Power50_Enable) and the panic bar switch or the panic bar jumper.

- 4.** Using a digital multimeter set to voltage (DC), perform the following test as described:

Place red lead on the following at panic bar interlocks connector.

Unit	Node/Pin/Wire
EX	connector, pin 2, wire 114i
MX	connector, pin 3, wire 114i

Place your black lead on a designed battery ground.

Do you have 12VDC?

4 a. YES, go to step 5.

4 b. NO, replace the defective panic bar switch or panic bar jumper.

- 5.** Using a digital multimeter set to the voltage (DC) scale, perform the following measurements at the module in the following location.

Place red lead on:

Unit	Node/Pin/Wire
EX	Node 50 connector, pin 20, wire 114i
MX	Node 60 connector, pin 37, wire 114i

- 6.** Using a digital multimeter set to the voltage (DC) scale, perform the following measurements at the module in the following location.

Place red lead on

Place the Black lead on designated battery ground.

Do you have 12VDC?

6 a. YES, contact [LabriePlus](#).

6 b. NO, using Labrie wiring diagram, repair open/broken connection between Node wire and the panic bar switch or the panic bar jumper.

6 c.



OUR OFFICE IN THE U.S.

1198 Shattuck Industrial Blvd.
LaFayette, GA 30728

Toll Free: 1-800-231-2771
Telephone: 1-706-591-8764

MAILING ADDRESS

P.O. Box 530
LaFayette, GA 30728

PARTS AND WARRANTY

During Business Hours:
8:00 am - 6:00 pm Eastern Standard Time

TECHNICAL SUPPORT SERVICE

Toll Free: 1-800-231-2771
(24-hour Emergency Support)

EMAIL

USA Parts: partscenter@labriegroup.com
Canada Parts: labriepplusQC@labriegroup.com
LabriePlus Service: labriepplusservice@labriegroup.com
LabriePlus Warranty: labrieppluswarranty@labriegroup.com

OUR OFFICE IN CANADA

455 1st Avenue
Levis, QC G6W 5M6

Toll Free: 1-877-452-2743
Customer Service: 1-877-452-2743

MAILING ADDRESS

455 1st Avenue
Levis, QC G6W 5M6

PARTS AND WARRANTY

During Business Hours:
8:00 am - 5:00 pm Eastern Standard Time

TECHNICAL SUPPORT SERVICE

Toll Free: 1-877-831-8250
(24-hour Emergency Support)

