

INSPECTOR MODEL 925

OPERATIONS MANUAL



LITE-CHECK VEHICLE TESTER FOR AIR BRAKES, ELECTRICAL AND ABS

REV 1.0.1 – November 2, 2020

Revision History:

Name	Date	Changes	Version #
Paul Bertel	Late May, 2020	Initial Drafts	Drafts
Paul Bertel	Friday June 5, 2020	Final version	1.0.0
Amy Fraizer	Monday November 2, 2020	Additional Changes	1.0.1

CAUTION**ONLY USE DRY, OIL-FREE, FILTERED AIR**

Cautions

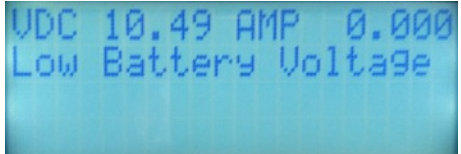
- Block vehicle wheels from movement before releasing brakes.
- The antenna must be fully exposed for a clear radio signal.
- Do not weld while the tester is connected to the trailer. **The tester is grounded to the chassis and will be damaged.**
- Do not hook up electrical devices on the same trailer that the tester is diagnosing. The tester needs a **clean** power supply.
- Do not lengthen existing power cord on the tester. Attach the tester power cord directly to a 12-volt battery or a regulated power supply. **There are two ways to view the cloud; list or card view.**
- Be aware of voltage spikes. The tester will only operate on regulated power. **Use a 12-volt battery or LITE-CHECK-325S Regulated Power Supply.**
- Using a battery charger as a power source will damage the tester. **Do not charge a battery while using the tester, except mobile installations using a vehicle alternator.**
- The tester will not operate efficiently below 11.0 volts and will indicate "LOW BATTERY VOLTAGE".
- The tester may shut down below 9.0 volts.
- If operating gasoline motors near the tester, be sure that they have static suppression on the engine. **Static can cause radio interference.**
- The emergency air must be applied before the service brakes will operate.

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Introduction

Summary

The LITE-CHECK INSPECTOR 925 Diagnostic Test system will perform vital diagnostics of electrical and air systems on both tractors and trailers. The INSPECTOR software puts trailer ABS inspection, fault identification, and troubleshooting support at the fingertips of inspectors and mechanics. The LITE-CHECK INSPECTOR 925 provides your facility with an efficient tool for safety assurance and maintenance of your heavy-duty fleet.

Key Features of the Inspector 925

- Remote control operation of electrical and air systems.
- Dynamic monitoring of electrical faults.
- Microprocessor-driven simultaneous monitoring of all 7-way circuits allows direct identification of circuit conditions including: shorts, opens, open grounds, and chassis shorts.
- Digital display provides fault information at the tester. Unique audible alarms assist in troubleshooting, and repair activities at various locations around the trailer and tractor.
- Regulated “Service Air” for consistent brake application and inspection.
- Performs one-step, air-systems leak test with built-in 60 second timer.
- Automatic cable test.
- “One-Button ABS” feature with direct access to faults present in ABS controllers.
- Built-in guidance for ABS fault resolution.

Overview

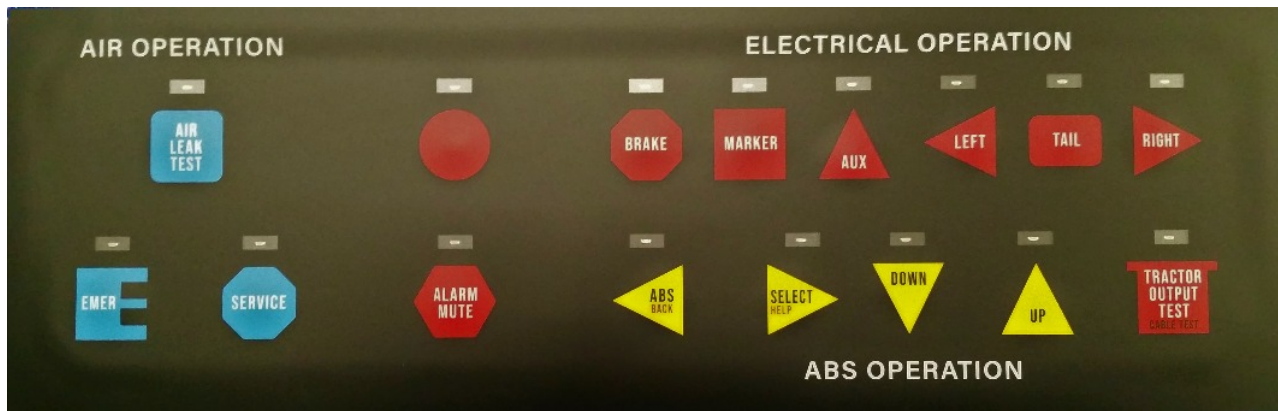


INSPECTOR 925 Component Identification

The LITE-CHECK INSPECTOR 925 has the following components:








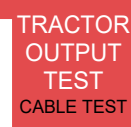
Item	Description
RC Antenna	Antenna for use with remote control.
Digital Display	Displays messages on tester status and results. (See next page.)
Service Air Pressure Gauge	Indicates service air pressure in PSI.
Emergency Air Pressure Gauge	Indicates emergency air pressure in PSI.
Keyboard	See section (on next page) on individual buttons.
Alarm Speaker	Speaker sounds different alarms for any test failure.
Emergency Air Connector	Port for connecting emergency air to the tester. 1/4" air line with glad hand on one end needed.
Service Air Connector	Port for connecting Service air to the tester. 1/4" air line with glad hand on one end needed.
7-Way Cable Socket	Cable socket for 7-Way cable
7-Way Cable Socket (for testing)	Cable socket for 7-way cable. (Used for cable testing.)

Keyboard Layout



The chart below provides a brief description of each button on the keyboard panel and on the remote control.

Graphic	Panel Button	Remote Button	Function
	EMER.	EMER.	Operates emergency air
	SERVICE	SERVICE	Operates service air (if emergency is pressurized)
	AIR LEAK TEST	AIR LEAK TEST	Blocks air source for vehicle air leak test
	BRAKE	BRAKE	Operates brake electrical circuit
	MARKER	MARKER	Operates marker (clearance) circuit
	AUXIL	AUXIL	Operates auxiliary circuit (ABS power)
	LEFT	LEFT	Operates left turn circuit
	TAIL	TAIL	Operates tail circuit

Graphic	Panel Button	Remote Button	Function
	RIGHT	RIGHT	Operates right turn circuit
	ABS BACK	ABS BACK	ABS Test – Initiates the ABS test routine (30 to 45 seconds). Pressing the ABS (BACK) button at other times will display the previous screen.
	SELECT* HELP	SELECT* HELP	ABS select – Enter on selected option, or view on screen
	DOWN	DOWN	Move display cursor down
	UP	UP	Move display cursor up
	(No text)	N/A	No longer supported. Has no function.
	ALARM MUTE	N/A	Turns alarm off during electrical test
	TRACTOR OUTPUT/ CABLE TEST	N/A	Tractor output test /Cable Test

SELECT details: Diagnostic testers such as the INSPECTOR 925 and other members of the LITE-CHECK family of automatic testers activate a single circuit at a time and monitor the activity on all of the circuits to provide computer assisted fault identification. Multiple circuits can be activated at the same time by using the “SELECT” button on the tester or the remote control unit. In this mode, multiple circuits can be switched on and off, with the tester’s computer display indicating the total current draw of all of the circuits. Press the “SELECT” button to leave this mode.

Equipment and Setup

The LITE-CHECK Inspector 925 diagnostic tester is designed for easy operation and setup. Some additional items are required to fully utilize all of the 925's functions.

What is included with the LITE-CHECK INSPECTOR 925?

The INSPECTOR 925 ships with the following items:

- 1 – LITE-CHECK INSPECTOR 925
- 1 – This Operations Manual
- 1 – Quick Reference Guide
- 1 – Antenna
- 1 – Remote Control
- 1 – Plastic Cover
- 1 – Orange Neck Pouch

Please inspect the shipment when it arrives for any missing or damaged items.

Required Materials

The following additional materials are required to operate the INSPECTOR 925:

- 1 – 7-way cable with 7-way plugs on both ends
- 2 – 1/4" air lines with glad-hands on one end
- 2 – Quick disconnect air connectors (male and female for tester and air lines)
- 1 – Filtered air regulator to provide clean 110-120psi air pressure

Note: The above Items are available in the LITE-CHECK 302A Shop Accessory Kit. (See LITE-CHECK INSPECTOR 925 Accessories below.)

- 1 – Power supply (Either a charged 12-volt battery OR a regulated power supply (such as the LITE-CHECK 325S 12VDC Regulated Power Supply).)

Warning: Power to the tester must be regulated to protect the trailer's ABS electronics and ensure consistent tester performance.

- Mounting location or plate to secure the tester.

Warning: The LITE-CHECK INSPECTOR 925 is a "diagnostic" tester that monitors the current flow through the ground circuit to aid in identifying various fault conditions. Care should be taken to insure that the tester's case is not grounded to the trailer or tractor under test. The 925 **should not** be supplied with power from the tractor under test when testing and inspecting tractor/trailer combinations.

LITE-CHECK INSPECTOR 925 Accessories

Besides the items above, the following LITE-CHECK items are available to enhance the INSPECTOR 925:

- LITE-CHECK 325S 12VDC Regulated Power Supply
- 330A Pedal Actuator
- 301m Service Truck Kit
 - Kit Includes
 - 2 – 20ft Air Lines
 - 1 – 20ft 7-Way cable with 7-Way plugs on both ends
- Air filter regulator for the service truck
- 302A Shop Accessory Kit
 - Kit Includes:
 - 2 – 8ft Air Lines
 - 1 – 8ft 7-Way cable with 7-Way plugs on both ends
 - 1 – Filtered Air Regulator
- Model 300P Shop Kit –
 - Kit Includes:
 - 1 – Knock Down 4-wheeled cart with Air Lines
 - 1 – 8ft 7-Way cable with 7-Way plugs on both ends
 - 2 – 8ft Air Lines
 - 1 – Filtered Air Regulator
 - Necessary hardware for an easy set-up for the shop.

Set-Up Procedures

The following steps should be taken to ensure proper setup of the INSPECTOR 925:

1. Review the Operations Manual (this manual) and the Quick Reference Guide.
2. Mount the Tester securely.
3. Connect the INSPECTOR 925 Tester to a 12 Volt, 20 AMP capability power supply.

Warning: A 12 volt battery charger cannot be used, applied power must be clean (filtered and regulated) and capable of generating 20amp.

4. Connect the air supply through a filtered regulator to the tester on the side panel. (110 to 120 psi is recommended.)
5. Connect red battery clamp or ring terminal to the positive output.
6. Connect black battery clamp or ring terminal to the negative output.

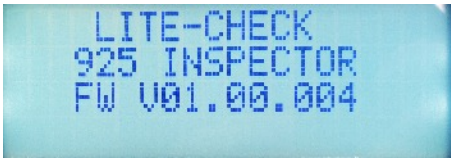


Reminders

- Do not use battery chargers as a power supply – Battery Chargers are non-regulated and may cause damage to the ABS ECU, or the tester.
- Do not charge a battery while using the tester, except mobile installations using a vehicle alternator.
- The tester will not operate reliably below 11.0 volts and will indicate a “Low Battery Voltage” condition” (LOW BAT).
 - If the tester will not operate, check if the 12 volt power line polarity is reversed.
- The tester will completely shut down if the voltage drops below 9.0 volts.
- Be sure the air pressure supply is above 90 psi if the tester is used for air brake inspections. (110 to 120 psi input air with regulator is recommended.)

Operations

Reading the Digital Display

The digital display on the INSPECTOR 925 includes a variety of error messages. The following are examples only. The full list of messages is shown with the appropriate test procedure.

Display	Details
	This first screen appears on the display for several seconds.
	When the tester is ready, this screen will display. The tester automatically begins in “Trailer mode.”
	<ul style="list-style-type: none"> • VDC is the voltage at the tester. • AMP is the circuit amperage the tester is reading. • AUX, BLUE, PIN 7 indicates 7-Way PIN number and circuits are currently being tested. (See Pin Numbers and Circuits below.) • Electrical circuits will display “GOOD” if greater than .005 Amp and less than 20 Amps and no other faults are found.



UDC 13.80 AMP 0.998
MARKER, BLACK, PIN 2
CKT SHORT-M T

“SHORT” – Shorted circuit fault

Fault with multiple circuits involved when a single circuit is under test. The tester has identified electrical activity on more than one circuit.

The panel circuit indicator lights illuminate for all shorted circuits, and the **“SHORT”** fault alarm sounds. The digital display indicates the circuit under test, current draw, voltage and a **SHORTED** circuit fault. Amperage shows the total circuit load on the digital display.

This screen is identifying a short between the MARKER and the TAIL circuits. The shorted circuit on the MARKER will be illuminated on the tester panel.



UDC 12.00 AMP 29.999
BRAKE, RED, PIN 4
CHASSIS SHORT

“CHASSIS SHORT” – Ground Fault

Fault with circuit supply wire in contact with the chassis or ground circuit.

The panel circuit indicator light is on and the “CHASSIS” fault alarm sounds. Current to the trailer is restricted, and the digital display shows 29.99 amperage.

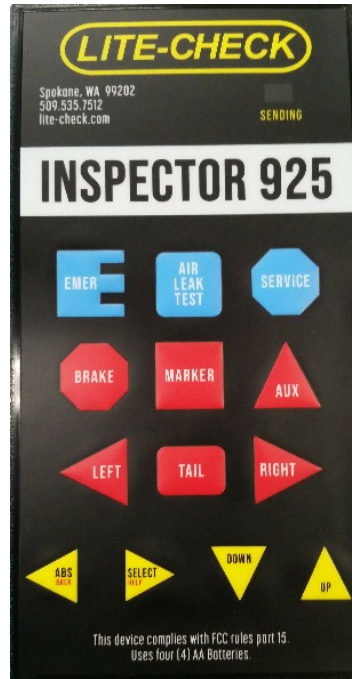
This screen shows the BRAKE circuit wire is shorted. The 925 software protects the vehicle harness by pulsing the power every one second.

7-Way Pin Numbers and Circuits

7-Way Pin Number	Wire Color	Circuit
1	white	GROUND
2	black	MARKER
3	yellow	LEFT TURN
4	red	BRAKE
5	green	RIGHT TURN
6	brown	TAIL
7	blue	AUXILIARY

Remote Control

The remote control allows the vehicle inspector to operate air and electrical functions around the vehicle and observe the responses.



———— Air Testing

———— Electrical Testing

———— ABS Testing

Operation

- Press and release the designated button.
- Inspect. One light circuit will be activated at a time.
- The Remote Control is keyed to operate with one unique tester at a time.
- Remote Control operations are parallel to the panel keyboard.
- Range with AA batteries in good condition is over 100 feet.
- The sending lamp will light up when the button on the remote control is pressed.



Notes:

- Replace (4) AA batteries if the sending lamp does not illuminate.
- Remove the batteries using the pull strap inside the case. Do not pry them out
- If remote controls need to be keyed to different testers, contact LITE-CHECK for assistance.
- The tester antenna must be fully exposed for good test reception.

Power Supply



Power Supply Set Up:

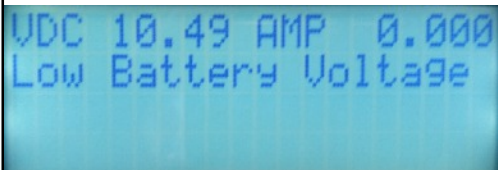
Attach the battery cable clamps (or ring terminals) to a 12Vdc automotive battery, or a regulated power supply (such as the LITE-CHECK 325S).

- Black battery cable to negative –
- Red battery cable to positive +

Turn the power switch on (located on the back panel of the tester) for operation.

Low Battery Messages

Note: The tester will not work properly if the battery is not charged to a full 12+volts. The tester will not operate and will possibly lock up if the power is below 11.0 volts, and will turn off it's power if it's below 9.0 volts.

Display	Details
	<p>The tester message "LOW BATTERY VOLTAGE" indicates that the 12-volt battery powering the tester needs to be recharged. The tester will display the voltage</p>

7-Way Cable Test

This automatically tests the 7-Way 7-pin vehicle cable.



Place tester in tractor mode. (Push **TRACTOR OUTPUT TEST** button on the tester panel.)

1. Plug in the cable in the front 7-way socket and the 7-way socket on the right side of the tester.
2. The tester will automatically read the pins and display either "**PASS**" or "**FAIL**" for each pin in the socket.
3. If there is a "**FAIL**" message on the digital display, the following will be indicated:
 - a. A blank second line in the pin sequence indicates an **OPEN** circuit.
 - b. "**MIS-WIRE**" indicates a reversed pin.
 - c. The same pin number on the second line indicates a "**SHORT**".

Trailer Test Procedures

NOTE: Before beginning testing, connect a 7-way cable and two 1/4" glad hands airlines from the tester to the trailer. (Be careful to connect "service" to service and "emergency" to emergency.)

1. Ensure voltage from power source is above 11.0 Vdc. (Anything lower may cause faulty readings.)
2. Use either the tester panel buttons or the remote control buttons.
3. The tester's panel circuit indicator lights will illuminate when the tester is operating.
4. The digital display will show the electrical status.
5. The air gauges will show the air application pressure.

Air Brake Testing

Once the INSPECTOR 925 is connected to air and power, and to the tester, the air and brake system testing can begin. The Emergency Air and Service Air Gauges are similar to the ones shown below.



1. Press the “**EMER**” button to apply air to the trailer and release the parking brakes. (Source air at 110 to 120 psi)
2. Press the “**SERVICE**” button to set service brakes. (Regulated at 90 to 95psi.)
3. Identify and record the current air pressure shown on the gauges.
4. Press the “**AIR LEAK TEST**” button to perform the air leak test. Observe the air gauges for changes.
5. A timer will start on the digital display at 00:00 and count up to 59:59 (minutes and seconds).
6. Watch for any movement on either gauge.
 - a. If one gauge falls, there is an external air leak.
 - b. If the gauges equalize, there is an internal air leak.
7. The Emergency Gauge is allowed 3 pounds of air loss in one minute.
8. The Service Gauge is allowed 2 pounds of air loss in one minute.
 - a. **Note:** If the gauge needles move more than one increment in one minute, the trailer will fail DOT inspection.
 - b. **Note:** ABS operation takes about 45 seconds to reach the main menu. The air leak test can be performed while the ABS test is initiating. Once at the main menu, check the gauges to see if any movement of the gauge needles has occurred.
9. Press the “**EMER**” button to release the emergency air.



Note: Emergency air must be applied before service brakes will operate. This prevents the brakes from compounding

Inspecting for Trailer Electrical Faults

Overview

- Always begin the inspection operation with a properly setup INSPECTOR 925. Adequate air and 12-volt power should be verified before starting the test.
Note: Air and air connections are not required when performing electrical inspections only
- LITE-CHECK automatic testers are programmed to concurrently monitor all of the wires on the 7-way cable connecting the tester to the trailer. This provides immediate feedback on the conditions of each electrical circuit under test.
- Electrical faults are signaled by the tester.
- Electrical circuits that have burned-out, or have damaged lamps may still have properly operating lamps AND the circuit will not indicate a fault. The tester's digital display can be used to observe the current drawn by each circuit and to look for unusual variances from the expected values.

Note: If more than one fault is detected, the tester will identify the faults in the order of the "Fault Detection Hierarchy" list on page 22. Once the first fault is corrected, the tester will go to the next fault and so on until all the faults have been cleared.

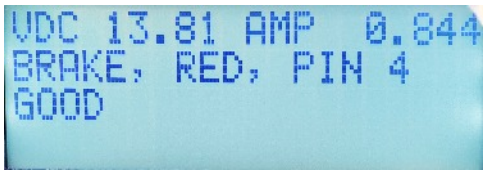



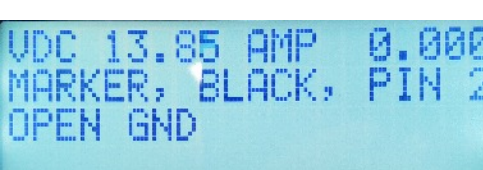
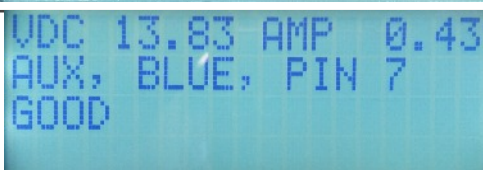
Electrical Testing

In normal operating mode only **ONE** electrical circuit will operate at a time. The digital display will show amperage, voltage and circuit condition. The corresponding electrical indicator LED will be lit.

1. Start at the front corner of the trailer and observe the lights. Press the button for the circuit being tested. Each light must be visually inspected to ensure it is good.
2. Move to the next corner of the trailer and continue the light inspection.

Circuit Condition Messages

Note: LITE-CHECK automatic testers are “live” in that any changes in circuit conditions are immediately detected and displayed by the tester.

Display	Details
	<p>“GOOD” – Circuit Passes</p> <p>The circuit indicator light is on. The digital display indicates the circuit under test, current draw, voltage and a GOOD circuit.</p>
	<p>“OPEN” – Open wire and no amperage load</p> <p>The panel circuit indicator light is on and the “OPEN” fault alarm sounds. The digital display indicates the circuit under test, current draw, voltage, and an OPEN circuit fault.</p>
	<p>“SHORT” – Circuit wires are in contact</p> <p>The panel circuit indicator “MARKER” light illuminates, and the “SHORT” fault alarm Sounds. The digital display indicates the circuit under test, current draw, voltage and a SHORTED circuit fault between the MARKER and the TAIL.</p>
	<p>“CHASSIS SHORT” – Circuit wire is in contact with chassis, frame, return or ground check.The panel circuit indicator light is on and the “CHASSIS” fault alarm sounds. The digital display indicates the circuit under test, current draw, voltage and a CHASSIS circuit fault. The 925 retries the circuit once per second.</p>
	<p>“OPEN GROUND” – Ground wire is open</p> <p>All panel circuit indicator lights are on and the “OPEN GROUND” fault alarm sounds. The digital display indicates the circuit under test, current draw, voltage and an open ground circuit fault.</p>
	<p>“GOOD” – Faults repaired</p> <p>The circuit indicator light is on and the digital display indicates the circuit under test, current draw, voltage and a GOOD circuit</p>

ABS Test Procedures

Initial Setup and Configuration

Before beginning ABS testing, be sure these steps are followed:

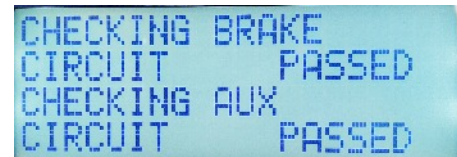
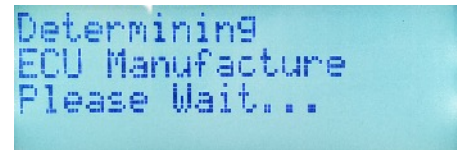
Trailer ABS Power Supply Requirements

Determine the trailer total running electrical load.



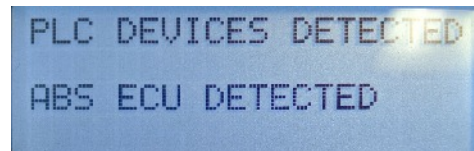
See TMC Recommended Practice 141 – The purpose of the Recommended Practice is to recommend a minimum voltage of 9.5 VDC at the ECU. If the ECU voltage is lower, it may indicate wire corrosion. New trailers must provide the correct voltage to their antilock braking system (ABS) electronic control unit (ECU) through both the stop lamp circuit and the continuous power circuit. The specified value of 9.5 volts for minimum voltage includes a safety margin of 1.0 volt.

1. Connect the tester to the trailer with the 7-Way vehicle cable.
2. Press **“SELECT”** button. (This will allow the tester to test multiple added loads.)
3. Record tester voltage and amperage. (It should be 00.00 at this step.)
4. Press the following buttons in order
 - a. **“MARKER”**
 - b. **“LEFT”**
 - c. **“TAIL”**
 - d. **“RIGHT”**
 - e. **“BRAKE”**
 - f. **“AUXIL”**
5. Record circuit voltage and amperage.
6. Press **“SELECT”** button to cancel the test.



NOTE: A similar feature is available in the **SPECIAL FUNCTIONS** tab under **ABS**.

ABS Operation



Warning: If the trailer being tested has multiple ECUs, before beginning the ABS test procedure, disconnect all but one ECU. Run the ABS test procedure using the steps below. When completed, disconnect the first ECU and reconnect the next one. Now repeat the test procedure with the next ECU.

NOTE: All ABS notes are for the Meritor Wabco Easy Stop, other ECUs may vary.

The INSPECTOR 925 automatically checks the brake and auxiliary circuits.



Press the yellow **ABS** button on either the keyboard or the remote. The tester will display the brake and auxiliary circuits' status for a moment.

```
HalDEX PLC4Trucks
ECU Detected
Retrieving ECU Data
Please wait*****
```

NOTE: If the brake circuit test fails, the operator will be given the option of continuing or exiting the test. If the auxiliary circuit test fails the display will indicate an error.

Next the tester will search for the PLC Signal and will attempt to determine the ECU Manufacturer. This process may take up to a minute to complete. Once the PLC is detected, the ECU will be identified. The ECU manufacturer name will display along with other information, including any active faults present in the system.

```
HALDEX PLC4TRUCKS
CAB LIGHT ON
(6)Active Faults
PRESS SEL FOR MENU
```

```
->VIEW ACTIVE FAULT
VIEW STORED FAULT
CLEAR FAULTS
MILEAGE (more)
```

NOTE: Each star indicates a stage in the ECU information retrieval. If the tester is unable to complete Identification, note the number of stars and contact LITE-CHECK customer support.

Main Menu

```
->ECU VOLTAGE
MFG/CONFIGURATION
SERIAL NUMBER
SPECIAL FUNCTIONS
```

- Pressing the **SELECT** button displays the **ABS** menu. Use the **UP** and **DOWN** buttons to navigate the menu.
- The **cursor ->** on the display will move up and down, indicating which option is selected.
- Press the **SELECT** button to choose a menu option.
- Move the **cursor ->** to the bottom of the digital display. Pressing the **DOWN** button once more will display additional menu options.

Viewing Active Faults

View active faults by using the **DOWN** button to get to the “**VIEW ACTIVE FAULT**” option. Then press **SELECT**. The digital display will show the active faults.

Pressing the **DOWN** button will display the first active fault. In this case, an “Open/Short Circuit” is indicated. Press the **DOWN** button again to display the next active fault. Press the **UP** button to return to the previous fault.

```
VIEW ACTIVE FAULTS
NUMBER FOUND (6)
Press up down keys
to see faults.
```

```
ACTIVE FAULT No. 1
SID:7 FMI:5 CT:108
EXT MOD VALVE RED
OPEN CIRCUIT
```

When the fault is displayed, press the **SELECT** key to view the manufacturers repair notes.

Viewing Stored Faults

View a stored fault by moving the cursor to the “**VIEW STORED FAULT**” option and pressing **SELECT**. The digital display will show previously discovered faults for this trailer.

Pressing the **DOWN** button will display the first stored fault. In this case, an “Open Circuit” is indicated. Press the **DOWN** button again to display the next stored fault. Press the **UP** button to return to the previous fault.



```
VIEW STORED FAULTS
NUMBER FOUND (3)
Press up down keys
to see faults.
```



```
STORED FAULT No. 1
SID:6 FMI:5 CT:31
YELLOW 2 SENSOR
OPEN CIRCUIT
```

Clearing Active and Stored Faults

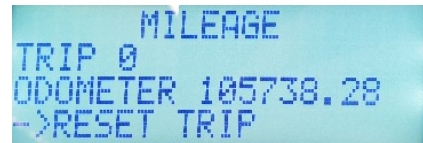
Move the cursor → **UP** or **DOWN** to select “**ACTIVE FAULTS**” or “**STORED FAULTS**,” press the **SELECT** button to clear the faults from the ECU’s memory.



```
CLEAR:
->ACTIVE FAULTS
STORED FAULTS
```

Mileage


This option displays the odometer mileage and trip mileage for the trailer if the ECU manufacturer supports it. Press the **SELECT** button to reset the trip mileage.



```
MILEAGE
TRIP 0
ODOMETER 105738.28
->RESET TRIP
```

ECU Voltage

This option displays the power supply and **ECU** voltage.



```
VOLTAGE
SUPPLY: 13.82 Volts
ECU: 13.70 Volts
```

Manufacturer’s Configuration

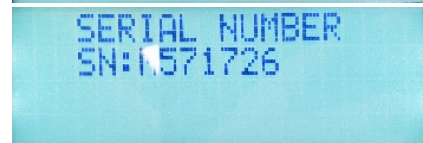
Selecting this option provides the ECU configuration information and VIN number, if it exists.



```
HALDEX PLC4TRUCKS
Configuration:
VIN:LCF59876543210
```

Serial Number

Selecting this option displays the ECU serial number.



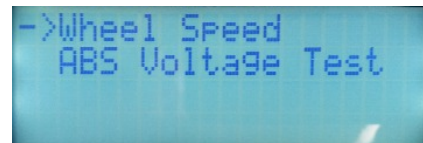
```
SERIAL NUMBER
SN:1571726
```

Special Functions

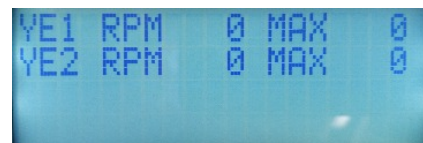
These are additional features the 925 is capable of. Wheel Speed is shown when an axle is jacked-up and the tire is spun.

(Selecting Wheel Speed will allow you to view RPM values on the next screen.) Voltage Test” instead,

But if you select “DOWN” to select “ABS Voltage Test” instead, different options are available.



```
->Wheel Speed
ABS Voltage Test
```




```
VE1 RPM 0 MAX 0
VE2 RPM 0 MAX 0
```

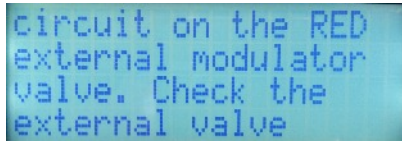
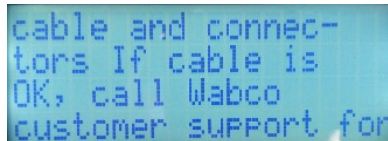
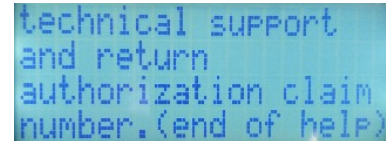
Note: Some ECUs do not support this voltage test.

Getting Help

Pressing the **SELECT (HELP)** button while the screen is displaying information on a fault will open the Help file for that type of fault.



The help screens will provide you with more information on how to trace and correct the Fault. Use UP and DOWN arrow buttons to move through the help screens like these.

NOTE: Press the **ABS (BACK)** button to return to the fault display.

ABS Fault Identification and Troubleshooting

The following table shows manufacturers and types of ABS supported by the LITE-CHECK INSPECTOR 925.

Manufacturer	Display Active Faults	Display Stored Faults	Clear Active Faults	Clear Stored Faults
Wabco Easy Stop	Yes	Yes	Yes ¹	Yes
Wabco Rss	Yes	Yes	Yes	Yes
Wabash MBS	Yes	Yes	No	Yes
Haldex ITCM	Yes	Yes	No	Yes
Haldex PLC4 Trucks	Yes	Yes	No	Yes
Haldex TRS	Yes	Yes	No	Yes
GEN2	Yes	Yes	No	Yes
Bendex MC-30	Yes	Yes	Yes	Yes
Bendex TABS 6 Standard	Yes	Yes	Yes	Yes
Bendex TABS 6 Single Channel	Yes	Yes	Yes	Yes
Bendex TABS 6 Multi-Channel	Yes	Yes	Yes	Yes

¹ Exit ABS mode to cycle power and clear faults


All information and directions were obtained directly from each of the above ABS OEMs. The LITE-CHECK process conforms to each OEM's procedure.

NOTE: If the INSPECTOR 925 tester does not support a particular ECU, such as an Eaton unit, the tester display will read "NOT SUPPORTED AT THIS TIME" or "UNABLE TO DETERMINE ECU TYPE."


Tractor Testing

In addition to the trailer testing, some test may be performed on the tractor as well. These tests are the Electrical Output Test, the Battery/Alternator Test, and the Air Output Test

Electrical Output Test

1. Press the “**TRACTOR OUTPUT TEST**”  button.
2. Plug the 7-way cable from the tractor into the front port on the INSPECTOR 925.
3. Operate the tractor's electrical functions. The corresponding LED on the INSPECTOR 925 will light and the output voltage will appear on the digital display.

Battery/Alternator Test

1. Press the “**TRACTOR OUTPUT TEST**”  button.
2. Plug the 7-way cable from the tractor into the front port on the INSPECTOR 925.
3. Turn the tractor ignition button to the **ON** position. The **AUXIL** circuit LED will light and the battery voltage will appear on the digital display.
4. Start the tractor's engine and the alternator voltage will be appear on the digital display. Erratic voltage may indicate a faulty alternator.

Air Output Test

NOTE: The INSPECTOR 925 may be powered ON or OFF for this test.

1. Connect the tractor's air line glad hands to the INSPECTOR 925's glad hands.
2. Activate the tractor's emergency air and view the PSI reading on the EMERGENCY air gauge.
3. Press the tractors brake pedal to view the PSI reading on the SERVICE air gauge.

Appendix

ABS Button Codes

The following ABS Button Codes provide additional help with finding and correcting faults. The four yellow buttons on the panel, and the remote, will select menu items and display fault information and the on-line help.



ABS/BACK – Moves back one display screen



SELECT/HELP – Enter selected option



DOWN – Move display cursor -> down



UP – Move display cursor -> up

The menu items are explained below:

- **View Active Faults**

- Press SELECT to view active faults.
- Press the DOWN button to see detailed fault information.
- Press the SELECT to display the help screen for this fault – this displays the factory solution for this fault. Use the DOWN/UP buttons to scroll through the Help Information.
- Press ABS/BACK to return to the fault.
- Press ABS/BACK again to return to the menu.

```
->VIEW ACTIVE FAULT
VIEW STORED FAULT
CLEAR FAULTS
MILEAGE (more)
```

```
VIEW ACTIVE FAULTS
NUMBER FOUND (6)
Press up down keys
to see faults.
```

```
ACTIVE FAULT No. 1
SID:7 FMI:5 CT:108
EXT MOD VALVE RED
OPEN CIRCUIT
```

View Stored Faults

- Press SELECT to view the stored faults.
- Display – Number found (#).
- Press the DOWN button to see detailed stored fault information.
- Press SELECT to display the help screen for this fault – this displays the factory solution for this fault. Use the DOWN/UP buttons to scroll through the Help Information.
- Press ABS/BACK to return to the fault.
- Press ABS/BACK again to return to the menu.



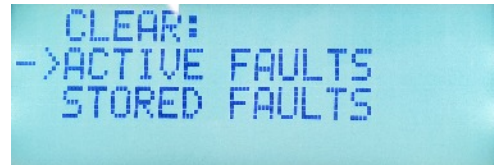
VIEW STORED FAULTS
NUMBER FOUND (3)
Press up down keys
to see faults.



STORED FAULT No. 1
SID:6 FMI:5 CT:31
YELLOW 2 SENSOR
OPEN CIRCUIT

Clear Faults

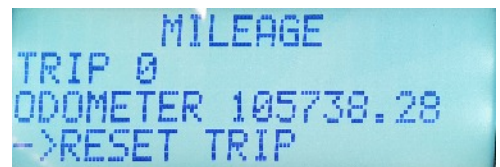
- Press SELECT to clear faults.
- Use the UP/DOWN buttons to choose active or stored faults.
- Press SELECT to clear either Active or stored faults.



CLEAR:
->ACTIVE FAULTS
STORED FAULTS

Mileage

- Press SELECT to display trip and total mileage.
- Press SELECT to reset the trip odometer.
- Press ABS/BACK to return to the menu.

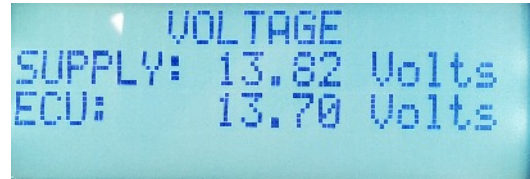


MILEAGE
TRIP 0
ODOMETER 105738.28
->RESET TRIP

Note: Use the DOWN button to move to the second menu screen.

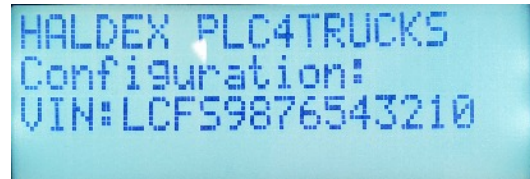
ECU Voltage

- Press SELECT to display the ECU and supply voltages.
- The digital display will show both supply (AUX voltage at the nose plug) and ECU voltage.
- Press ABS/BACK to return to the menu.



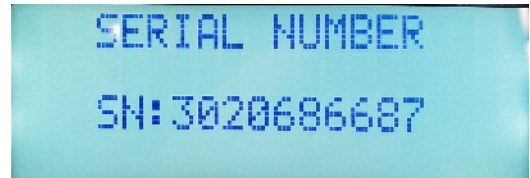
MFG/Configuration

- Press SELECT to display the ECU manufacturer, configuration and Vin #.
- Press ABS/BACK to return to the menu.



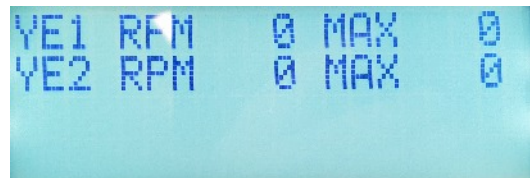
Serial Number

- Press SELECT to display the ECU serial number.
- Press ABS/BACK to return to the menu.



Special Functions

- Press SELECT to display the Special Functions menu.
- Note: Manufacturers may have other special functions.
- Press SELECT to display the Trailer's wheel speed.
- The wheels must be manually spun to view actual speeds.
- Press ABS/BACK to return to the menu.



Definition of Terms

Glossary and Definition of Terms

ALARM – Distinct sound for each fault type. Alarm will cease automatically or change when a fault is corrected.

TRACTOR – Power unit, prime mover with self-contained power and air.

TRAILER – Depends on outside power source and air to operate light and brake systems.

VEHICLE – Tractor, trailer, or dolly.

VEHICLE CABLE – 7-pin wiring cable connecting between vehicles.

FAULT MESSAGES – Messages that appear on the tester's digital display along with active circuits and alarms.

Electrical Circuit Definitions

GOOD CIRCUIT – Complete circuit with amperage load. (Some components may not work.)

OPEN CIRCUIT – Incomplete circuit without an amperage load. A fault message will appear with the circuit indicators flashing and the alarm sounding.

SHORT CIRCUIT – Circuit wires are in contact, showing a combined amperage load. The fault message will display with all the circuit indicator lights flashing and the alarm sounding.

OPEN GROUND – The ground wire is not connected, showing an incomplete circuit. A fault message will appear with the circuit indicators flashing and the alarm sounding.

CHASSIS – Shorted circuit wire is in contact with the chassis. A fault message will appear with the circuit indicators flashing and the alarm sounding.

ABS Glossary

ABS – Anti-lock Brake System (is now required on all new trailers and tractors).

BLINK CODE – An ABS indicator lamp located on the trailer can indicate current and stored faults with a blink sequence.

1. Upon start-up, the ABS lamp will light up and turn off if the ABS has no active faults.
2. Upon start-up, the ABS lamp will light up and stay on if the ABS has active faults.
3. Faults are identified by counting the number of blinks of the ABS indicator lamp.

CONFIGURATION – The number of sensors and modulator valves on the system.
2S/1M – 2 sensors and 1 modulator valve 4S/2M – 4 sensors and 2 modulator valves

ECU – Electronic Control Unit

1. Regulates braking according to input from the wheel sensors.
2. Stores faults in memory.

PLC – “Power Line Carrier” (also known as PLC4TRUCKS) is a method to communicate

ABS operation and other information to the tractor over the Auxiliary circuit. Tractors and Trailers manufactured after March 1, 2001 are required to have PLC capability.

MODULATOR VALVE – Controls brake application with a signal from the ECU.

SENSOR – A wheel sensor for measuring wheel revolutions.

FAULTS –

1. Current – a fault which currently exists.
2. Stored – a fault which occurred previously, but does not presently exist.
3. Intermittent – a fault which comes and goes, usually with certain driving conditions.

Accessories

- **LITE-CHECK-325S 12VDC Regulated Power Supply**
- **330A Pedal Actuator**
- **301m Service Truck Kit**
 - Kit Includes
 - 2 – 20ft Air Lines
 - 1 – 20ft 7-Way Cable with 7-Way plugs on both ends
 - Air filter regulator for the service truck
- **302A Shop Accessory Kit**
 - Kit Includes:
 - 2 – 8ft Air Lines
 - 1 – 8ft 7-Way Cable with 7-Way plugs on both ends
 - 1 – Filtered Air Regulator
- **Model 300P Shop Kit** –
 - Kit Includes:
 - 1 – Knock Down 4-Wheeled Cart with Air Lines
 - 1 – 20ft 7-Way Cable with 7-Way plugs on both ends
 - 2 – 8ft Air Lines
 - 1 – Filtered Air Regulator
 - Necessary hardware for an easy set-up for the shop.

Warranty, Contact and Service Information

LITE-CHECK products have a one-year limited warranty on parts and labor against manufacturing defects. All warranty service to be performed at LITE-CHECK, Spokane, Washington. The Customer is responsible for shipping costs. The warranty does not cover abuse, neglect, or damage caused by air, electrical, or other outside sources as specified in the owner's manual. Some parts may be subject to OEM warranties. Any modifications made to the equipment without prior written approval, voids this warranty. Any software upgrades released within one year from the date of shipment will be provided at no additional cost. Extended, enhanced and/or expedited warranties are available.

Testers and power supplies have a serial number attached to the device for tracking purposes.

Questions concerning operation and service may be addressed to LITE-CHECK by calling 1-800-343-8579 during normal business hours (Pacific Time Zone).

Shipping LITE-CHECK Products

Please follow these instructions for shipping LITE-CHECK testers and products to minimize damage.

1. **Remove** all air connections from the tester.
2. Include the **remote control** and **antenna** with the tester.
3. Select a sturdy box that exceeds the tester's size by at least 2 inches in all three dimensions.
4. Pack tester in an **upright position** with the shipping label on top of the box.
5. Place dunnage on bottom and all surfaces to **prevent movement** inside box.
6. Enclose return shipping instructions.
7. **Include a brief explanation of equipment problems and history.**

Ship to the following address:

**LITE-CHECK LLC
301 N Havana
Spokane, WA 99252**