

# VOLTAGE REQUIREMENTS

LITE-CHECK testers are software driven electronic devices requiring a reliable 12-volt power source, matching the vehicle's standard electrical operation.

- Excessive voltage applied to vehicle will shorten vehicle component life
- Non-filtered unregulated power may damage vehicle electronics (ECU's)
- Low voltage is unreliable for accurate testing

## PRO-CHECK MODELS

**720AC** requires 110-volt AC power

**720DC** requires filtered regulated 12-volt DC power

- Power Source should be a 12-volt battery
- Maintain battery with trickle charger when tester is not in use
- 12-volt DC power supplies are available from **LITE-CHECK**
- **DO NOT USE BATTERY CHARGER**

Operation of the two models is identical. In both cases, if the operating voltage to the vehicle falls below 11 volts, the message "low power" will appear on the display and the tester will shut down.

*LITE-CHECK manufactures a wide range of test and inspections solutions. Visit **LITE-CHECK** today at <http://www.lite-check.com> for the latest information on your new tester, and access to high-quality accessories to ensure you gain the maximum benefit from your investment.*

## **CAUTION: DO NOT WELD WITH TESTER CONNECTED TO TRAILER**

## LITE-CHECK WARRANTY AND SERVICE

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. Customer is responsible for shipping costs. Warranty does not cover abuse, neglect or damage caused by air, electrical, or other outside sources as specified in owner's manual. Some parts may be subject to OEM warranties. Any modifications made to equipment without prior written approval voids this warranty.

Any software upgrades released within one year from date of shipment will be provided at no additional cost. Extended, enhanced and/or expedited warranties are available. Testers have a serial number attached for tracking.

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

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**LITE-CHECK**



## PRO-CHECK 720 & 720AC

# OPERATIONS MANUAL

MODEL 720 – (12VDC) and MODEL 720AC – (110VAC)

**AUTOMATED TRAILER TESTER  
FOR 12 Volt, 7-PIN  
LIGHTING & ELECTRICAL SYSTEMS**

- ✓ Direct readout of electrical faults
  - **Open Circuit**
  - **Open Ground**
  - **Short w/all circuits identified**
  - **Chassis Ground**
- 10-Second automated test of all circuits with audible alarms and direct fault identification
- Amperage measurements for each circuit
- Perform TMC RP 141 ABS Power Supply Requirements Test
- Automatic current management when chassis grounds are identified prevents damage to trailer electrical systems
- Direct control of each circuit from tester's control panel and the remote control
- Unique and easy to hear audible alarms for each type of electrical fault
- Auxiliary circuit button on remote simplifies ABS self-test inspections
- 7-pin 'round' connector

# OPERATING INSTRUCTIONS

1. Connect tester to a power source: a 12 volt battery for the PC720, and a 120v AC supply (wall socket) for the PC720AC
2. Connect tester to trailer with 7-way electrical cable
3. Turn on tester - Initial display screen will identify tester, and the second screen will show the voltage available to the trailer (*a minimum of 11 volts is required*)

## **NORMAL OPERATION:** Active diagnostics for all circuits

- Only **one** electrical circuit can be activated at a time. Digital Display will show the circuit, voltage, amperage, and circuit condition.
- The **PRO-CHECK** will automatically identify circuit faults and sound an alarm.
- If the circuit fault is corrected, the alarm will cease and display message will change.
- **FAULT MESSAGES**- The specific fault and all of the circuits involved are identified
- **ALARMS** - Distinct sound for each type of fault. Alarm will automatically cease or change as the electrical condition of the trailer changes.

## **ALL CIRCUIT TEST:** Automated diagnostic test of all circuits

- Top display row identifies circuit(s): **Brake, Tail, Auxiliary, Left, Marker, Right**
- Bottom row shows circuit conditions: **Pass, Open, Short, Chassis, Ground Open**

## **ALL CIRCUIT LOAD:** *All circuits are made active*

- Total current draw is displayed
- Individual circuits may be turned on and off

## **CIRCUIT CONDITION DESCRIPTIONS:**

- **PASS** - (CIRCUIT PASSES): Digital display will show the current draw (amperage) on the active circuit
- **GROUND OPEN** - (OPEN GROUND WIRE AND NO CURRENT DRAW): Digital display shows active/defective circuits and the fault alarm is sounding.
- **SHORT** - (CIRCUIT WIRES ARE IN CONTACT): Digital display shows primary circuit with connected circuit and the fault alarm is sounding. Amperage shows the total circuit load on the Digital Display.
- **CHASSIS GROUND** - (CIRCUIT WIRE IS IN CONTACT WITH CHASSIS): Digital display shows primary circuit with fault message and the fault alarm is sounding.

## **Remote Control Operation:**

1. Press selected key - momentarily
2. Only one light/electrical circuit will be activated at a time
3. Each remote control is keyed to a specific tester. (Set to serial number)
4. Remote and tester panel buttons have the same operation
5. Range with good AA batteries is over 100 feet
6. Sending lamp will light up when button is pressed on remote control

Note: Replace (4) AA batteries if lamp does not illuminate or if range is short.

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## **ABS Test Process**

The **LITE-CHECK PRO-CHECK 720** is designed to simplify the identification of ABS related issues. ABS manufacturers have discovered that more than 70% of the ECU's returned under warranty actually function properly.

- The majority of ABS malfunctions are sensor related
- A significant number of non-operating ECU's result from power issues

The **PRO-CHECK** method is a *3-step process*:

- Test Brake Circuit
- Test Auxiliary Circuit
- Read BLINK code for ABS faults.

The brake & auxiliary circuit test will automatically identify circuit faults such as opens, shorts, open ground, and chassis ground.

1. Test brake and auxiliary circuits
  - a. Circuit faults must be corrected
2. Observe the trailer ABS warning light operation
  - a. Repair if lamp does not turn on
  - b. ABS lamp stays on indicating an ABS fault
3. ECU valves will chatter during the power up phase
4. No chatter may suggest non-functioning valves
5. If all above is functioning with the ABS warning lamp on, proceed with the blink code process

## **ABS Blink Code Diagnostics for trailer ABS**

To read blink codes, press the panel LOAD key followed by the ABS type process.

- The blink code process is very time sensitive exciting the circuits.
- Exciting the ABS by pressing the AUX and BRAKE keys can be done with the remote control.

### Bendix - MC-30 and TAB-6

1. Provide constant power to the ignition (AUX) circuit.
2. Toggle the brake light circuit (3) times

\*\*Wait until after the modulator chuff test before activating the brake light power

\*\*Toggling of brake circuit must be shorter than 5 second intervals

### Meritor Wabco

1. Turn the ignition (AUX) switch ON for no longer than 5 seconds. \*The ABS indicator lamp will be on
2. Turn the ignition (AUX) switch OFF. \*ABS indicator lamp will go OFF
3. Turn the ignition (AUX) ON. \*ABS indicator lamp will turn ON, then OFF
4. The blink code will be displayed three times by the ABS lamp.

### HALDEX

1. Provide constant power to the BRAKE circuit
2. Provide power to the AUX circuit ON, OFF, ON in 1 second intervals
3. Blink code will be displayed on ABS lamp.