



Automotive components since 1963

211083

ELECTRICAL TESTER



When you connect your Cargo 211083 to the car battery you will have a multitude of testers at your finger tips. With the press of a switch you'll have an instant hot lead or ground lead. Use the hot and ground lead simultaneously to activate componenets right in your hand. Instantly check components for continuity as well as identify positive, negative and open circuits without re-polarizing hook-up clips. Follow and locate shorts without wasting fuses. The 19ft lead will allow you to test bumper to bumper without jumper leads.

New features:

- New louder, easier to hear audio signal.
- Audio tone indicates positives by a higher pitched tone and negative by a lower pitched tone.
- Cargo 211083 now has 2 bright white headlights instead of one.
- The new headlights are long life LEDS assuring years of replacement free service.



User Manual



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IMPORTANT TIP:

When powering-up components, you can increase the life of your Cargo 211083 switch, if you first press the switch, then contact the tip to the component. The arcing will take place at the tip instead of the contacts of the switch.

INTRODUCTION

The Cargo 211083 is the best professional electrical tester for reducing diagnostic time in 6 to 24 Volt automotive electrical systems. After a simple hook-up of the tester to the vehicle's battery, the automotive technician can determine at a glance at the red/green LED indicator, if a circuit is positive, negative or open without reconnecting hook-up clips from one battery pole to the other. The Cargo 211083 switch allows the automotive technician to conduct a positive or negative battery current to the tip for testing the function of electrical components without the use of jumper wires. And yes, it is short-circuit protected. It tests for bad ground contacts instantly without performing voltage drop tests. It allows you to follow and locate short circuits without wasting precious fuses. The Cargo 211083 can also test for continuity with the assistance of its auxiliary ground lead. With a flip of the power switch, you will know at a glance that your tester is functioning without running to the battery as

you would otherwise have to do with simple test lights. The Cargo 211083's long cable allows you to test along the entire length of the vehicle without constantly searching for ground hook-ups. Before using the tester please read the instruction book carefully.

WARNING

When the testers switch is depressed battery current is conducted directly to the tip which may cause sparks when contacting ground or certain circuits. Therefore the tester should NOT be used around flammables such as gasoline or its vapors. The spark of an energized Cargo 211083 could ignite these vapors. Use the same caution as you would when using an arc welder.

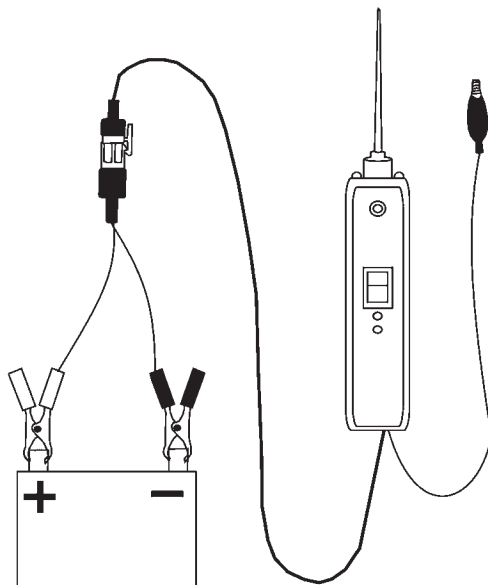
Cargo 211083 is only for use with 6-24 Volt systems.

HOOK-UP

Unroll the cable.
Clamp the RED battery hook-up clip to the POSITIVE (+) terminal of the vehicle's battery.
Clamp the BLACK battery hook-up clip to the NEGATIVE (-) terminal of the vehicle's battery.

QUICK SELF-TEST

Rock the power switch forward (+), the LED indicator should light RED.
Rock the power switch rearward (-), the LED indicator should light GREEN.
The Tester is now ready to use.
If the indicator did not light, depress the reset button of the circuit breaker on the right side of the housing and try the self test again.



POLARITY TESTING

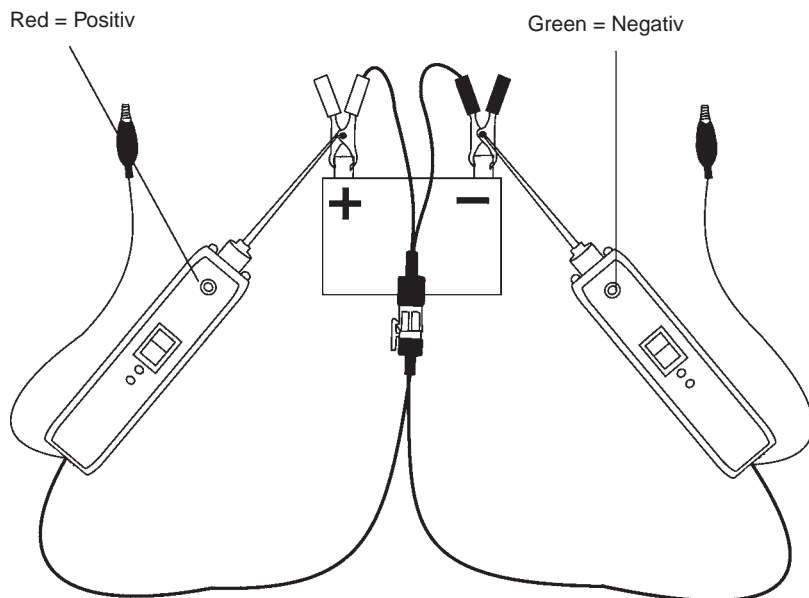
Contacting the tip to a POSITIVE (+) circuit will light the LED indicator RED.

(The Cargo 211083 audio feature will sound a high pitched tone when contacting positive).

Contacting the tip to a NEGATIVE (-) circuit will light the LED indicator GREEN.

(The Cargo 211083 audio feature will sound a low pitched tone when contacting negative).

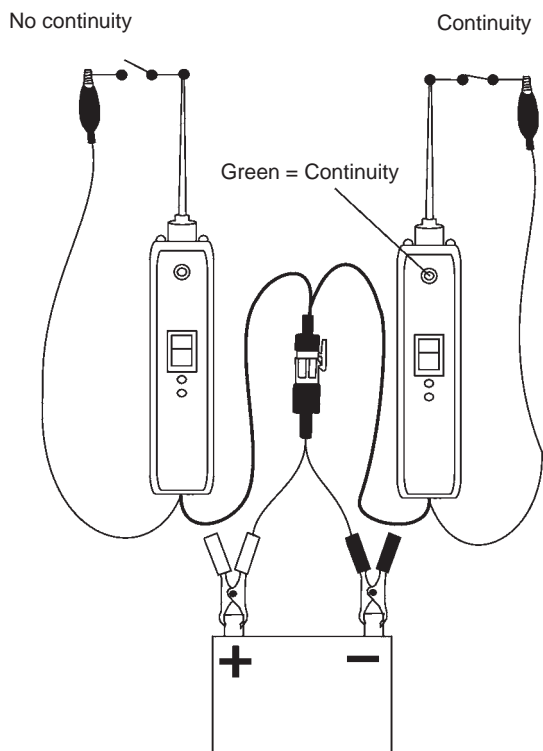
Contacting the tip to an OPEN circuit will be indicated by the LED indicator not lighting.



CONTINUITY TESTING

By using the tip together with the auxiliary ground test lead, continuity can be tested on wires and components that are disconnected from the vehicle's electrical system.

When continuity is present, the LED indicator will light GREEN.



ACTIVATING COMPONENTS OUT OF THE VEHICLE'S ELECTRICAL SYSTEM

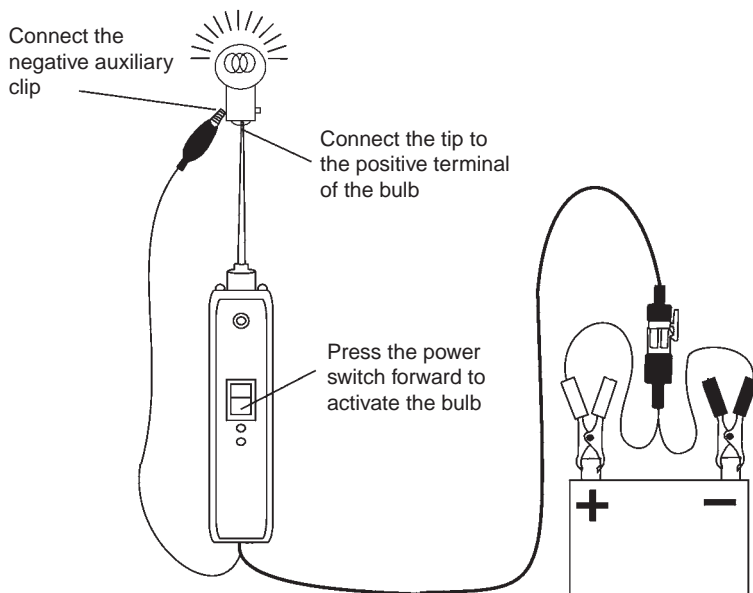
By using the tip together with the auxiliary ground lead, components can be activated, thereby testing their function.

Connect the negative auxiliary clip to the negative terminal of the component being tested. Contact the probe to the positive terminal of the component, the LED indicator should light GREEN indicating continuity through the component.

While keeping an eye on the green LED indicator, quickly depress and release the power switch forward (+). If the green indicator changed instantly from GREEN to RED you may proceed

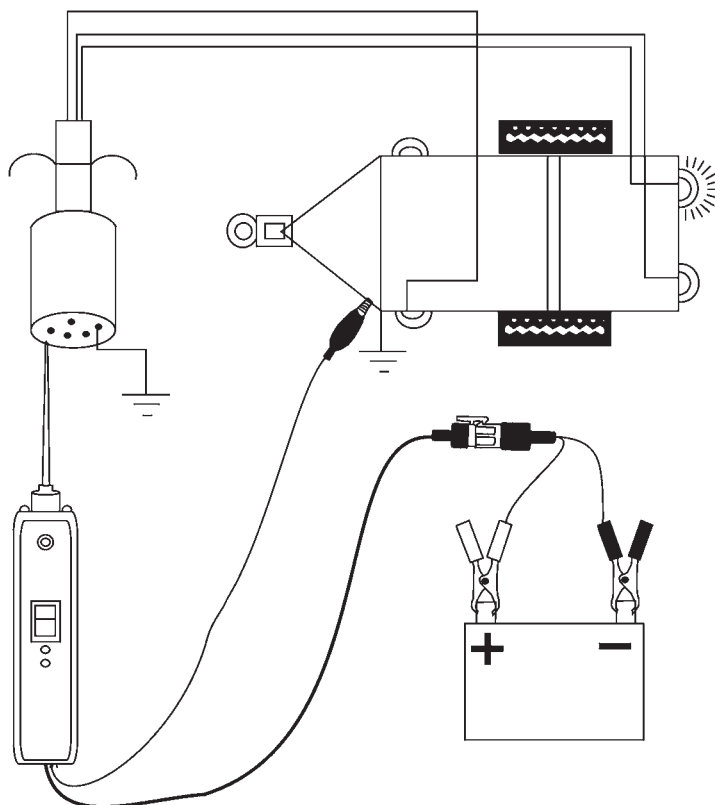
with further activation. If the green indicator went off at that instant or if the circuit breaker tripped, the Cargo 211083 has been overloaded. This could happen for the following reasons:

- The contact is a direct ground or negative voltage.
- The component is short-circuited.
- The component is a high amperage component (i.e., starter motor).



TESTING TRAILER LIGHTS AND CONNECTIONS

1. Connect the tester to a good battery.
2. Clip the auxiliary ground clip to the trailer ground.
3. Probe the contacts at the jack and apply voltage to them. This lets you check the function and orientation of the trailer lights. If the circuit breaker tripped, reset it by depressing the reset button.



TO ACTIVATE COMPONENTS WITH POSITIVE (+) VOLTAGE

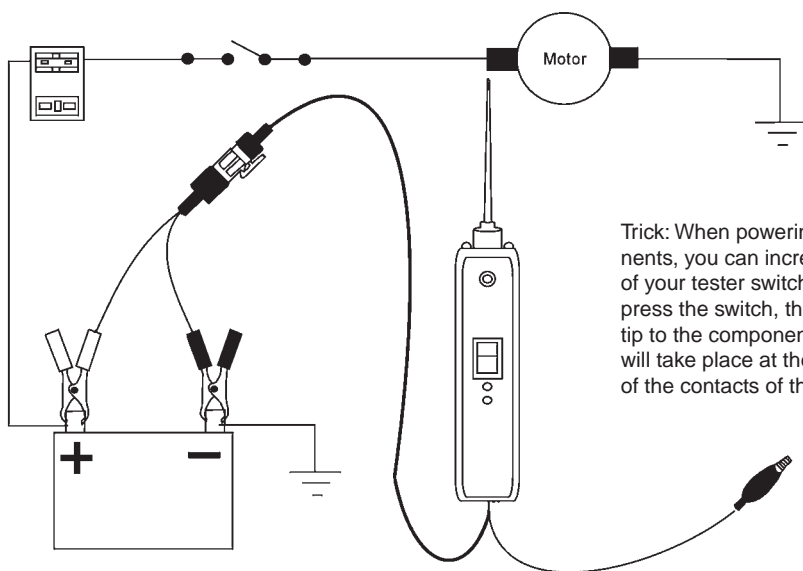
Contact the probe tip to the positive terminal of the component, the LED indicator should light GREEN.

While keeping an eye on the green indicator, quickly depress and release the power switch forward (+). If the green indicator changed instantly from GREEN to RED you may proceed with further activation. If the green indicator went off at that instant or if the circuit breaker tripped, the tester has been overloaded. This could happen for the following reasons:

- The contact is a direct ground.
- The component is short-circuited.
- The component is a high current component (i.e., starter motor).

If the circuit breaker tripped, reset it by depressing the reset button.

WARNING: Haphazardly applying voltage to certain circuits can cause damage to a vehicle's electronic components. Therefore, it is strongly advised to use the correct schematic and diagnosing procedure while testing.



Trick: When powering-up components, you can increase the life of your tester switch if you first press the switch, then contact the tip to the component. The arcing will take place at the tip instead of the contacts of the switch.

ACTIVATING ELECTRICAL COMPONENTS WITH NEGATIVE (-) VOLTAGE

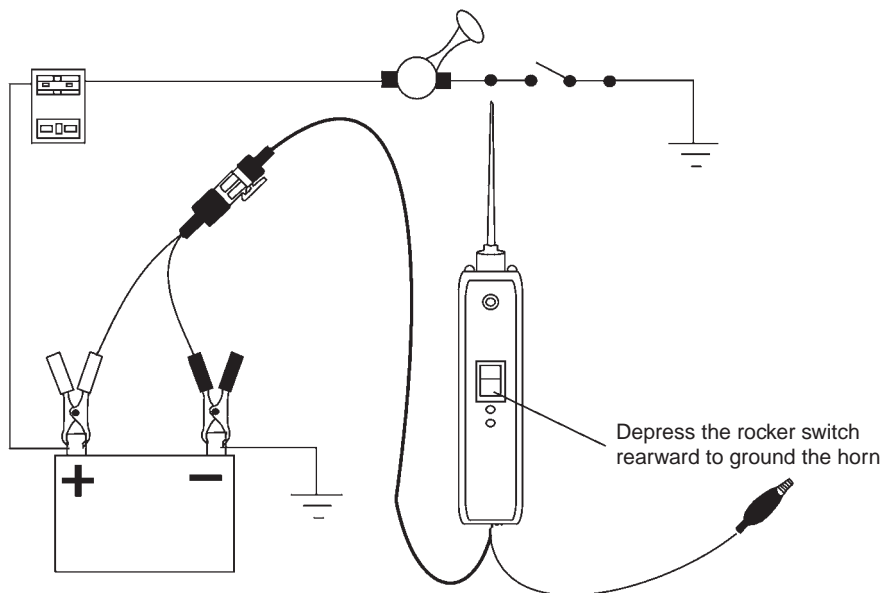
Contact the probe tip to the negative terminal of the component, the LED indicator should light RED.

While keeping an eye on the red LED indicator, quickly depress and release the power switch rearward (-). If the red indicator changed instantly from RED to GREEN you may proceed with further activation. If the green indicator went off at that instant or if the circuit breaker tripped, the tester has been overloaded. This could have happened for the following reasons:

- The contact is a direct positive voltage.
- The component is short-circuited.
- The component is a high amperage component (i.e., starter motor).

If the circuit breaker tripped, reset it by depressing the reset button.

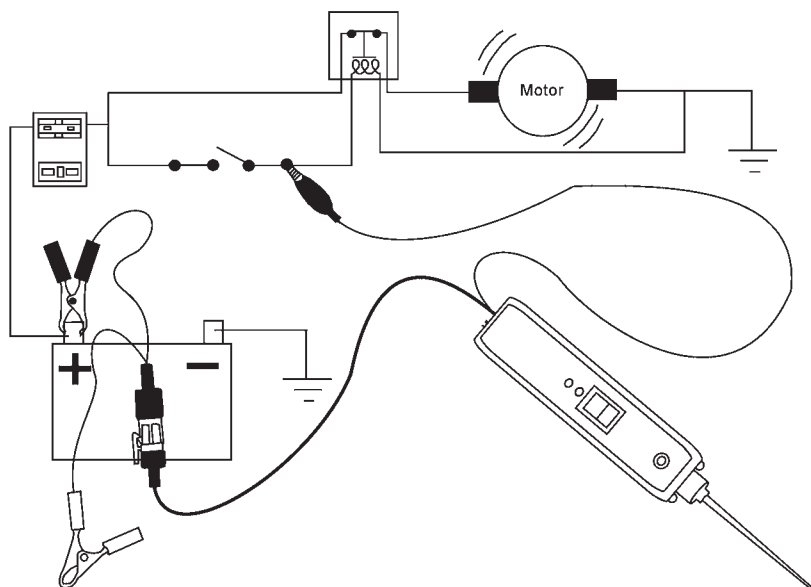
WARNING: With this function a vehicle's fuse can be blown or tripped if grounding the contact in series with it.



JUMPER LEAD FEATURE

The testers positive battery hook-up lead and auxiliary ground lead are connected directly through the tester. By leaving the negative hook-up disconnected from the vehicle's battery, the tester can be used as a long jumper lead.

Be careful to avoid short circuits and overloading when using this jumper function. The leads, in this configuration, are **NOT** protected by the testers circuit breaker.



Positive current is now flowing directly through the lead and is activating the relay. Negative hook-up clip hangs loose.



HECKING FOR BAD GROUND CONTACTS

Probe the suspected ground wire or contact with the probe tip.

Observe the green LED indicator.

Depress the power switch forward then release.

If the LED indicator changed from GREEN to

RED, this is not a true ground.

If the circuit breaker tripped, this circuit is more than likely a direct ground. Keep in mind that high current components such as starter motors will also trip the circuit breaker.

FOLLOWING AND LOCATING SHORT CIRCUITS

In most cases a short circuit will appear by a fuse or a fusible link blowing or a protection device tripping (i.e., a circuit breaker). Here is the best place to begin the search.

Remove the blown fuse from the fuse box. Use the testers tip to energize each of both contacts in the fuse box. The side which trips the tester

circuit breaker is the shorted circuit. Take note of this wire's identification code or color. Follow the wire as far as you can along the wiring harness, for instance if you are following a short in the brake light circuit you may know that the wire must pass through the wiring harness at the door sill. Locate the color-coded wire in the harness and expose it. Probe through the insulation of the wire with the tester tip and depress the power switch forward to energize the wire. If the tester circuit breaker tripped you have verified the shorted wire.

Cut the wire and energize each end with the tester tip. The wire which trips the tester circuit breaker again will lead you to the shorted area.

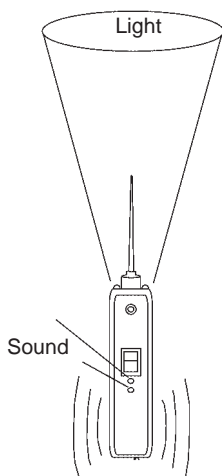
Follow the wire in the shorted direction and repeat this process until the short is located.

USING THE LIGHT AND TONE

The Cargo 211083 has the option of a light and tone. Once connected to a good battery, the light and the tone will be activated.

The light illuminates the area you are testing and is a great asset for seeing in dark areas.

The tone feature enhances the polarity signal. When the tip is contacted to a positive circuit, a high pitch tone will sound off. When the tip is contacted to a negative circuit, a low pitch tone will sound off. The tone can be toggled on or off by pressing the audio tone On/Off button.



ACCESSORIES



CARGO 181488
Adapter for cigarette lighter.



CARGO 192775
6 mtr. Extion lead.