

**WHILE FAN IS RUNNING, OR SWITCH IS IN “MANUAL” POSITION.** To safely remove clamps depress the FAN switch to “Automatic” and turn KNOB counter-clockwise as far as possible. Fan will automatically be OFF and then the clamps may safely be removed from battery.

## 6. DETERMINE STATE OF CHARGE OF BATTERY

- Adjust LOAD CONTROL knob clockwise (CW) to 100 amps for 3 seconds. Adjust LOAD CONTROL knob counter-clockwise until the meter reads zero. Fan will automatically be OFF and then the clamps may safely be removed from battery.
- Results:
  - Pointer in green zone - proceed to LOAD TESTER.
  - Pointer in red zone to left of green zone - battery is too low to test. Recharge & repeat procedure.
- Green band indicates a battery that is at least 75% charged.

## 7. LOAD TEST

- Figure the value of one-half of Cold Cranking Amps (CCA) rating of battery to be tested.
- Adjust “LOAD CONTROL” knob to the one-half of the battery’s cold cranking amperage (CCA) rating using AMPERES LOAD meter as a reference. Hold amperage will probably change due to resistance changes in the cables, carbons and the battery. Readjust the LOAD CONTROL during this 15 seconds interval of 15 seconds and with the load on, read the battery’s voltage on the volt scale. TURN THE LOAD CONTROL KNOB COUNTER-CLOCKWISE AS FAR AS POSSIBLE.
- The voltage reading obtained from a battery changes in relation to the temperature of the battery and also in relation to the amperage being drawn from the battery. The given here and on the face of the tester gives the minimum voltage that should be obtained for the test procedure given. i.e.: The outside temperature is 60 degrees F. A good battery is 9.5 at 60 degrees F. When at the end of the 15 second test you find that the battery’s voltage is equal to or greater than 9.5, the battery is good. If the voltage is less than 9.5, the battery is defective.

In some cases a six volt battery is to be tested. To do this simply divide the minimum volts of the chart by two to obtain the voltage reference to be used.

When smoke is emitted from any cell of the battery, the battery is defective regardless of the test indications

BATTERY TEMPERATURE COMPENSATION 15 SECOND LOAD TEST								
°C	21•	16	10	4	-1	-7	-12	-18
°F	70•	60	50	40	30	20	10	0
MIN. VOLTS	9.6	9.5	9.4	9.3	9.1	8.9	8.7	8.5

## 8. STRESS TEST:

- To determine if a battery is adequate for an application, a stress test may be applied to a battery. Determine the maximum current draw, minimum acceptable voltage, and the time the battery is to be installed.
- Run a load test at the determined current and time and check that the battery voltage is above the minimum voltage required.

## APPLICATION DATA:

**ALTERNATOR TEST:** Be sure that the battery in the car, test is good. Start engine with tester connected to the battery. The charging voltage of the alternator should be in the green zone. If the pointer is in the red zone to the left of the green zone, the voltage is too low to fully charge the battery. If the pointer is in the red zone to the right of the green zone, the voltage is too high. **NOTE:** In very cold weather, the alternator may read above 14.8 VDC. Check owner’s service manual.

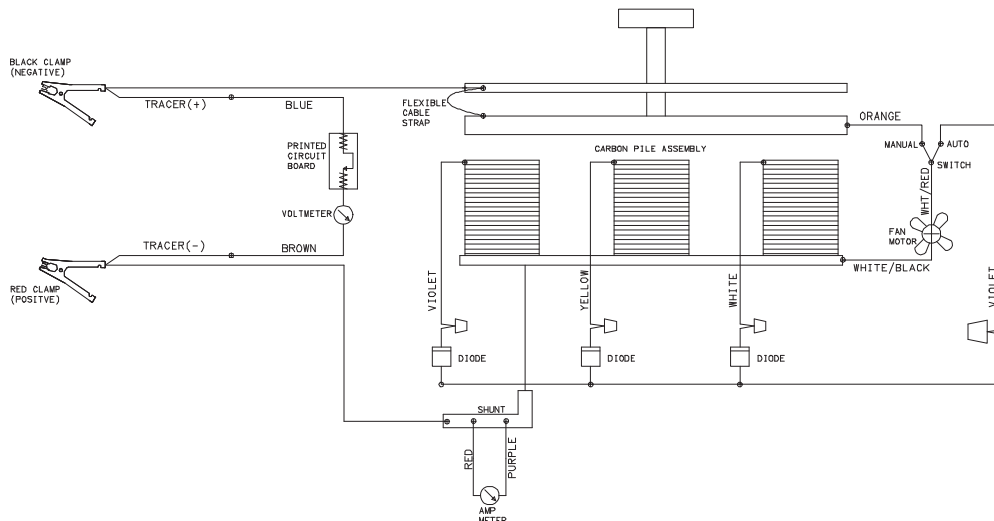
**STARTER CURRENT TEST:** Connect tester to battery. Be sure battery is fully charged. Ground the ignition, by removing the coil cable from the distributor cap wire to prevent arcing of high-voltage spark that could cause a fire, someone getting shocked, or damage to the ignition system. (On GM car with HEI ignition, disconnect the coil cable from the distributor.) Turn ignition switch on and allow starter to run for 5 seconds. Read the voltage on the VOLT scale while cranking. With car circuit closed, adjust LOAD CONTROL knob to give VOLTMETER reading the same as measured while cranking engine. Read Amps on ammeter and the reading is the starter current draw.

## VOLTMETER:

used as a voltmeter to troubleshoot problems on any 6 or 12 voltages on volt scale.

**NOTE:** A static charge may build-up on the meter face, be off zero. For the correct, this charge must be neutralized. Spray “Static Guard” meter or wipe with a soap and water.

## WIRING



The tester may be used to troubleshoot electrical problems on 12 volt vehicle. Read the voltage on the volt scale.

A static charge may build-up on the meter face, be off zero. For the correct, this charge must be neutralized. Spray “Static Guard” meter or wipe with a soap and water.

## DIAGRAM

## REPLACEMENT PARTS

AMMETER .....	610333
VOLTMETER .....	610334
SHUNT ASSEMBLY .....	610335
BRACKET & NUT ASSY. ....	610337
TOP PLATE ASSY. ....	610338
CARBON STACK W/CERAMIC TUBE .....	610871
CERAMIC TUBES .....	610872

Parts may be purchased from your local authorized service depot listed in the Service Procedure Manual supplied with your products.

If you elect to order parts from the factory, you may do so by mail or by phone. Minimum orders from the factory is \$25.00. Orders received that are under the minimum will not be processed. Taxes and freight are extra and are not considered to be part of the dollar value of the order. We **DO NOT** have a C.O.D. policy. Cashier checks, Money order, Master Card, or Visa are acceptable. If you use a Master or Visa Card, send only the number and the expiration date. **DO NOT SEND THE CARD.**

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FIG.	PLT. FILE NAME	DESCRIPTION
1	LOGO.EPS	LOGO
2	27293-2.PLT	LOCK-DOWN
3	27293-3.plt	assembly view of tester to cart
4	B2844.PLT	WIRING DIAGRAM