

BATTERY TESTER MODEL 520103  
For 36 Volt Battery Packs

Principle of Operation

The Model 520103 Tester consists of a 75 Ampere load, a voltage sensing system, and a means of electrically timing the discharge. This unit will give the true ampere hour capability of a battery by discharging at a rate similar to that of actual service conditions. The results of the test are given in terms of the number of minutes of discharge available at a voltage above 1.75 volts per cell. In the past, battery manufacturers have agreed that the 20-hour rating system is misleading in the motive power applications. It will be found with this tester that the 75 ampere rate test will show a lower ampere hour output than shown for the 20-hour rate. This does not mean that the battery is low on output because it does not produce 175 to 220 ampere hours. Batteries will usually produce 75 to 120 minutes at the 75 ampere rate, depending on size, temperature and condition.

As the battery ages this output time will gradually reduce. Since there is no definite standard as yet developed as to rejection or failure level, the battery manufacturers are tentatively considering the point of failure at 50% of the time found on the new battery. That is, if a new battery will produce 120 minutes, the failure point will be 60 minutes.

Operation

1. The unit is shipped from the factory set for 75 ampere discharge.
2. Plug the A.C. line cord into 115 Volt, A.C., 60 cycle power outlet. This will start the cooling fan.\*

Operation (continued)

3. Connect red (+) battery clamp on the positive post and the black (-) battery clamp on the negative post.

4. With the timer set at zero, press the "Start" button which will initiate the timing cycle and turn on the load.

5. The test will continue until the total battery voltage fails to 31.5 volts (1.75v/cell). At this point the transistorized trigger will terminate the test, stop the timer and turn off the discharging light.

\* Should the A.C. line plug be accidentally disconnected or not plugged in the test will be ended.

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