

## LIMITED WARRANTY

Associated Equipment Corporation, 5043 Farlin Ave., St. Louis, Missouri 63115, USA, makes this limited warranty to the original purchaser at retail of the Battery Tester Model 6030.

The Company hereby warrants to the Purchaser that if the Product, or any part thereof, shall prove to be defective due to improper workmanship or materials at any time up to and including one (1) year from the date of Product's purchase at retail, then the Company shall repair or replace the Product, or any part thereof, as the case may be, at the Company's option, without charge to the Purchaser for parts and labor, provided that Purchaser follows the procedures set forth herein.

This limited warranty does not and shall not apply: (1) to any Product parts subject to normal wear and tear, including, but not limited to, clamps and cables, (2) if the Product, or any part thereof, is subject to accident, misuse, abuse, or operated contrary to the Company's instructions pertaining to the Product, or (3) to the Product, or any part thereof, damaged by alteration, or by improper repair or service not rendered by the Company.

To obtain warranty repairs, the Purchaser must take the following steps:

(1) Carefully and securely pack the Product for shipping. The Company is not and shall not be responsible nor liable for damage to the Product caused by or during shipping.

(2) ENCLOSE PROOF OF PURCHASE AT RETAIL BY PURCHASER.

(3) Send the Product, with all postage, transportation and delivery charges prepaid, to Associated Equipment Corporation, 5110 Brown, St. Louis, Missouri 63115.

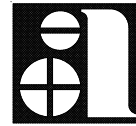
(4) Request "Warranty Service" in writing. If the Purchaser does not request "Warranty Service" in writing, the Product will be returned to the Purchaser at the Purchaser's sole cost and expense with the Purchaser being charged for repairs or replacement. The Company assumes no responsibility for cost or damages incurred by the Purchaser resulting from the Purchaser's improper request for Warranty Service.

(5) Include a brief description of the problem.

If the problem is within the coverage of this limited warranty, the replaced or repaired Product will be returned to the Purchaser at the Company's sole cost and expense. If the problem is not within the coverage of this limited warranty, the product will be returned to the Purchaser after receipt of his Bank Card information and a charge may be imposed for a repair cost estimate.

THIS IS THE ONLY EXPRESS LIMITED WARRANTY ASSOCIATED WITH THE PRODUCT AND THE COMPANY NEITHER ASSUMES NOR AUTHORIZES ANYONE TO ASSUME OR MAKE ANY OTHER EXPRESS WARRANTY WITH RESPECT TO THE PRODUCT OTHER THAN THIS EXPRESS LIMITED WARRANTY. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THIS PRODUCT IS LIMITED TO A PERIOD OF ONE (1) YEAR FROM THE DATE OF THE PRODUCT'S PURCHASE AT RETAIL BY THE PURCHASER. SOME STATES DO NOT ALLOW LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

ASSOCIATED EQUIPMENT CORPORATION  
5043 Farlin Avenue  
St. Louis, MO 63115



# ASSOCIATED

MODEL 6030  
BATTERY AND  
CHARGING SYSTEM  
TESTER

## OPERATOR'S MANUAL

### SAFETY INFORMATION

Working in the vicinity of lead-acid battery is DANGEROUS due to EXPLOSIVE GASES generated by the battery which can be ignited by a spark, cigarette or flame and blow the battery apart, forcefully showering the area with battery pieces and acid.

To reduce the chance of exploding batteries follow instructions by manufacturers of batteries as well as these instructions.

IN CASE OF ACCIDENT RINSE EYES WITH CLEAN WATER AT LEAST 5 MINUTES AND SEE A DOCTOR IMMEDIATELY. NEVER USE EYE DROPS OR OTHER MEDICATION UNLESS DIRECTED BY A DOCTOR.

When around lead-acid batteries wear eye protection and avoid touching or rubbing the battery as well as clothing, skin and eyes. NEVER smoke, have an open flame or sparks near battery. Have plenty of ventilation and keep your face as far as possible from the battery. Undercharged lead-acid batteries will freeze during cold weather. Never test or charge a frozen battery. Do not allow tools to drop onto a battery. Do not lay tester on battery.

### BATTERY LOAD TEST

1. Turn off engine and all accessories.
2. Connect negative (black) clamp to the negative (NEG, N, - ) battery post. Connect positive (red) clamp to positive (POS, P + ) battery post. "Rock" clamps back and forth to insure a good electrical connection. For batteries with side terminals, use the adapters in clamps.
3. With the clamps connected, the tester's display will indicate the battery's STATE OF CHARGE by displaying the battery open terminal voltage. If the voltage is less than 12.4 volts, the battery should be recharged before testing. When the battery voltage is below 12.4, the tester display will alternately read the battery voltage and the message CH, instructing the battery must be charged. If recharging does not bring the voltage above 12.4, than the battery is defective.

## NOTES:

- a) The 6030 tester uses the battery under test for power. If the battery voltage is less than 7.5 volts, the display will not come on. If when connecting the tester, the display does not light up, check for correct polarity hookup. If correct, charge the battery and try again.
- b) Batteries that have an open circuit voltage above 13 volts will cause the tester to enter the CHARGING SYSTEM TEST program and display LO within 4 seconds of connection. To correct this error, depress the tester button for 10 seconds (disregarding any display messages) to draw off the battery's surface charge. Wait a minimum of one minute before retesting the battery so the testers' duty cycle is not exceeded.
4. Depress the load switch and hold for ten seconds. The tester will read the battery voltage and begin a 10 second timer. At the end of the 10 second period, the display will blink and read **8888**. At this time release the load switch.
5. When the load switch is released after the 10 second load test, the tester will alternately display the voltage under load at the end of test and the message PASS or FAIL.
6. If the initial battery voltage was below 12.4, the message will be CH because the battery was too discharged to make a valid test. However, if the voltage under load reached a fixed value and did not continue to drop, the battery is probably good and should be recharged and the test repeated.

## CHARGING SYSTEM TEST

This test measures the output voltage of the alternator and checks for under or over charging which leads to poor battery performance and short life.

1. Turn off all lights and accessories. Operate engine at fast idle (approximately 1500 RPM).
2. Connect tester clamps as described in step 2 under Battery Test.

NOTE: If the tester is still connected to the battery from a previous test, it is necessary to disconnect one of the clamps to reset the computer before performing another test.

3. Do not operate tester's load switch.
4. Four seconds after connecting the clamps, the tester display will indicate one of the following messages:

good = Alternator output is normal.  
LO = Alternator output is too low.  
HI = Alternator output is too high.

5. Disconnect one tester clamp from the battery. Turn on high beam lights and put blower on high.
6. Connect the tester clamp to the battery. Four seconds after connecting the clamp, the tester will display one of the three messages described in step 4.

## STARTER MOTOR TEST

This test identifies excessive starter current draw, which makes starting difficult and shortens battery life.

1. Perform Battery Load Test. Proceed if result is "PASS".
2. Disconnect tester clamp to reset tester computer.
3. Reconnect tester clamp.
4. Start engine.  
NOTE: If engine does not start in 5 seconds, release start switch.
5. Two seconds after releasing starter switch the tester will alternately display the lowest voltage measured during engine start and one of the two following messages:

S – gd = Good Starter Test  
S – bd = Bad Starter. Test

A message of "S – bd" is an indication of excessive current draw. This may be due to bad connections, a failing starter motor or the battery is too small for the vehicle's requirements.

NOTE: TOP AND REAR OF TESTER WILL HEAT UP DUE TO LOAD CURRENT. ALLOW TESTER TO COOL ONE MINUTE BETWEEN LOAD TESTS – MAXIMUM OF 3 LOAD TESTS IN A 5 MINUTE PERIOD. EXCEEDING DUTY CYCLE MAY CAUSE INCORRECT READING AND DAMAGE THE UNIT.

## TEMPERATURE COMPENSATION FOR BATTERY LOAD TEST

Low temperature has a degrading effect on batteries and will effect test results. When load testing a battery below 32 F, add 0.3 volts to the voltage displayed after test. If the total number, volts + 0.3 = 10.0 or greater, then the battery is good.