

Battery

Test

NOTE: To get accurate results, the temperature of the electrolyte must be between 15 and 38°C (59 and 100°F) before testing.

Test Equipment Required :

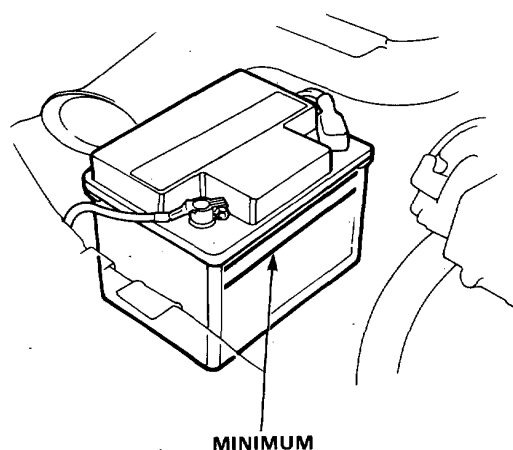
- Battery tester with :
Voltmeter with 0-18 V scale, Ammeter with 0-100 A and 0-500 A scales, and a carbon pile with 0-300 W.
- 12 V Battery Charger :
Fast charge capability of 50 A and slow charge capability of 5 A.

Test Procedure :

WARNING Keep sparks, flames and cigarettes away while charging battery.

CAUTION : Battery electrolyte is a sulfuric acid solution.

- If it spills on painted surfaces, clothing, or skin, rinse it off with water immediately to minimize the damage.
 - Always wear safety goggles or a face shield when servicing a battery.
1. Check for damage : If the case is cracked or the posts are loose, replace the battery.
 2. Check the battery electrolyte level :
Check the electrolyte level in each cell.



3. Test battery load capacity by connecting a battery tester, and applying a load of 3 times the battery ampere hour rating.
When the load has been applied for exactly 15 seconds, the battery voltage reading should stay above 9.6 V.

- If the reading stays above 9.6V, the battery is OK ; clean its terminals and case, and reinstall it.
- If the reading is between 6.5 and 9.6 V, fast charge the battery by connecting a battery charger, for 3 minutes at an initial rate of 40 amps.

CAUTION : Amperage will drop as voltage increases ; do not increase the amperage to compensate or you may damage the battery.

Watch the battery voltage during the entire 3 minutes ; the highest reading should stay below 15.5V.

- If the reading stays below 15.5 V, the battery is OK ; clean its terminals and case, and reinstall it.
 - If the reading exceeds 15.5 V any time during the 3 minutes of fast charge, the battery is no good ; replace it.
- If the reading drops below 6.5 V, slow charge the battery by connecting a battery and charge, at 5 amps for no more than 24 hours, (or until the indicator shows full charge, or the specific gravity of the electrolyte is at least 1.250) .
Then test load capacity again.
 - If the voltage stays above 9.6 V, the battery is OK ; clean its terminals and case, and reinstall it.
 - If the voltage still drops below 6.5 V, the battery is no good ; replace it.