

# SECTION 14-01 Battery

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## VEHICLE APPLICATION

Taurus/Sable.

## TESTING

Before attempting to test a battery, it is important to give it a thorough examination to determine if it has been damaged.

Tests are made on a battery to determine the state of charge and also its capacity or ability to crank an engine. The ultimate result of these tests is to show that the battery is good, needs recharging, or must be replaced.

**WARNING: BATTERIES NORMALLY PRODUCE EXPLOSIVE GASES WHICH CAN CAUSE PERSONAL INJURY. THEREFORE, DO NOT ALLOW FLAMES, SPARKS OR LIGHTED SUBSTANCES TO COME NEAR THE BATTERY. WHEN CHARGING OR WORKING NEAR A BATTERY, ALWAYS SHIELD YOUR FACE AND PROTECT YOUR EYES. ALWAYS PROVIDE VENTILATION.**

**WHEN LIFTING A PLASTIC-CASED BATTERY, EXCESSIVE PRESSURE ON THE END WALLS COULD CAUSE ACID TO SPEW THROUGH THE VENT CAPS, RESULTING IN PERSONAL INJURY. LIFT WITH A BATTERY CARRIER OR WITH YOUR HANDS ON OPPOSITE CORNERS.**

**WARNING: KEEP OUT OF REACH OF CHILDREN. BATTERIES CONTAIN SULFURIC ACID. AVOID CONTACT WITH SKIN, EYES, OR CLOTHING. ALSO, SHIELD YOUR EYES WHEN WORKING NEAR THE BATTERY TO PROTECT AGAINST POSSIBLE SPLASHING OF THE ACID SOLUTION. IN CASE OF ACID CONTACT WITH SKIN OR EYES, FLUSH IMMEDIATELY WITH WATER FOR A MINIMUM OF 15 MINUTES AND GET PROMPT MEDICAL ATTENTION. IF ACID IS SWALLOWED, CALL A PHYSICIAN IMMEDIATELY.**

### Battery State of Charge

#### Maintenance-Free Batteries

Read the battery open circuit terminal voltage with a digital voltmeter such as Rotunda Digital Volt-Ohmmeter 007-00001 or equivalent, capable of reading 1/100 of a volt. If open circuit voltage of battery is below 12.4 volts and the battery has passed the capacity test, charge the battery.

#### Low-Maintenance Batteries

Use a hydrometer such as Rotunda Battery and Anti-Freeze Tester 021-00046 or equivalent to check the specific gravities of all cells.

In order to obtain an accurate specific gravity reading, it must be corrected to the standard temperature of 26°C (78°F). The correction factor of four points (0.004) is used for each 6°C (10°F) change in temperature. Four points (0.004) are added to the indicated reading for each 6°C (10°F) increment above 26°C (78°F) and four points (0.004) are subtracted for each 6°C (10°F) increment below 26°C (78°F).

If the difference between cells is 50 points (0.050) or more, the battery is not satisfactory for service and should be replaced.

If the difference between cells is less than 50 points (0.050) and one or more cells are less than 1.225, charge the battery for 20 minutes at 35 amps and conduct the capacity test. If the battery fails, replace the battery. If it passes, add water if necessary and charge the battery.