

Service Bulletin

Mazda Motor of America, Inc.
7755 Irvine Center Drive
Irvine, California 92718
Telephone (714) 727-1990

MAZDA

Category 5	Applicable Model/s All Models	Subject MAINTENANCE FREE BATTERY CHARGING & TESTING PROCEDURES	Bulletin No. 020/88 Issued 11/29/88 Revised
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DESCRIPTION

There is a growing concern in the market regarding excessive battery claims as a result of insufficient charging and/or knowledge of the appropriate charging procedures.

The following information and procedures are provided to reduce the amount of unnecessary battery replacements. Listed in the warranty section of this bulletin is an operation number and appropriate labor hours for charging and inspection of MF type batteries.

NOTE:

Warranty procedures apply only if it is confirmed that the battery discharge was not the result of customer negligence. Vehicles that are in dealer inventory are the dealer's responsibility. Refer to the "Warranty Policies and Procedures Manual" concerning inventory vehicles.

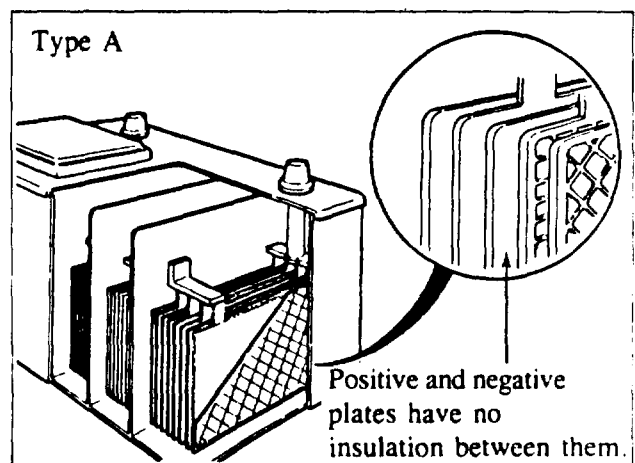
If you encounter a discharged Maintenance Free (MF) type calcium based battery from a customer complaint, follow the procedures described in this Service Bulletin for inspection, charging and testing operations.

NOTE:

- The MF type battery can recover its original performance by boost charging.
- The indicator located on the top surface of the battery does not turn from white to blue (indicating the necessity of recharge) until the battery has discharged 80% and the specific gravity drops to 1.150/20°C (68°F). (Refer to Service Bulletin, Category 5 no.013/88 for more details on MF type battery characteristics.)

GENERAL INFORMATION

Early battery construction (Type A) provided no safeguard in regards to batteries shorting out from one cell to another.



IMPORTANT Service and Parts Managers should read this bulletin carefully, sign and convey all information to those concerned

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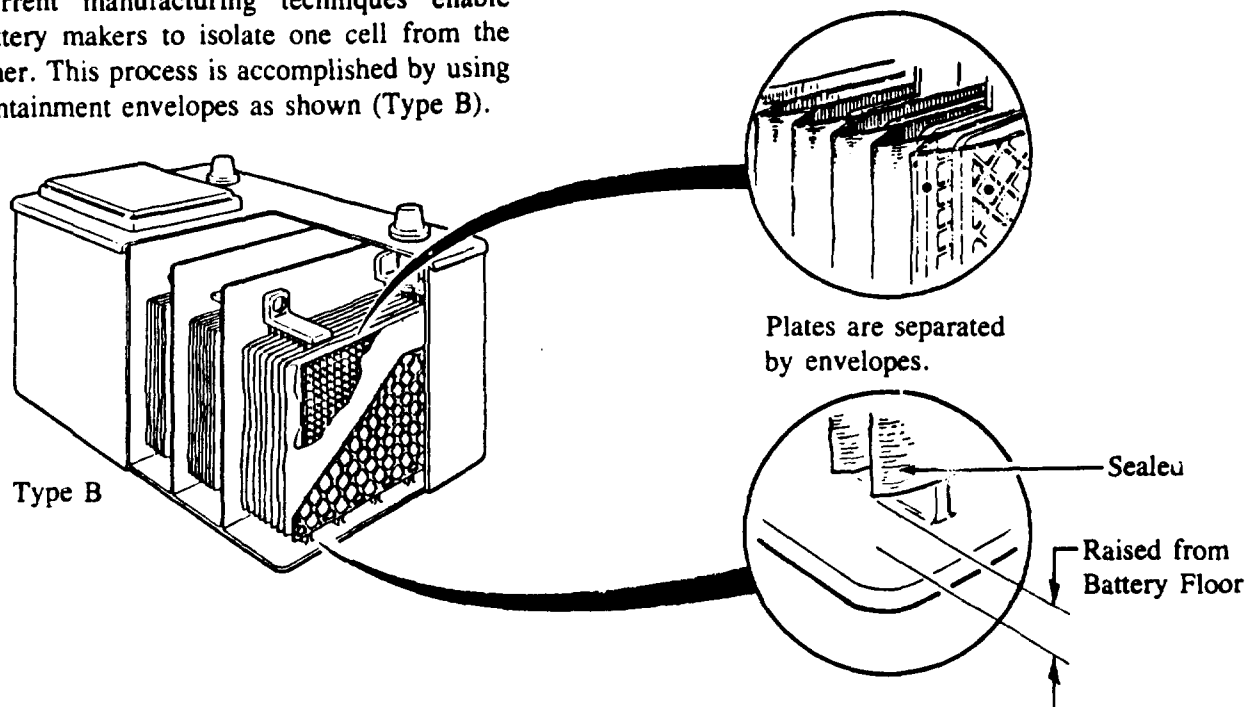
Signature _____

Service Manager

Signature _____

Parts Manager

Current manufacturing techniques enable battery makers to isolate one cell from the other. This process is accomplished by using containment envelopes as shown (Type B).



INSPECTION PROCEDURE

1. Inspect the battery terminals and cable ends for white crystal deposits. Clean if necessary.
2. Inspect vent surface for acid deposits. If deposits are found, clean the surface. If excessive amounts are found and cannot be properly removed, replace the battery.

CAUTION:

- Battery electrolyte is a sulfuric acid solution. If spilled on painted surfaces, clothing or skin, rinse off immediately with water.
- Always wear safety goggles or face shield when servicing a battery.

CHARGING PROCEDURE

Recharge an MF type battery at a rate of 20-30A for two (2) hours.

NOTE:

Most battery chargers require a boost range setting to obtain a sufficient amperage.
[20-30A × 2 hrs = 40-60 A/H]

CAUTION:

- The battery must be removed from the vehicle and put in a well ventilated area.
- Do not expose battery to fire, sparks, cigarettes, etc.
- During charging, make sure cells do not begin gassing (boiling) violently. If so, reduce charging rate.
- Wear safety glasses while checking battery conditions during charging.
- When charge is complete, disconnect in the order described below.
 1. Turn off battery charger main switch.
 2. Unhook negative clamp from negative terminal.
 3. Unhook positive clamp from positive terminal.

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TESTING PROCEDURE

NOTE:

Use Sun made equipment (VAT 40) or equivalent.

1. Apply a load three (3) times higher than battery capacity.

Results	Action
Voltage stays above 9.6 V	Battery OK
Voltage drops below 9.6 V	Replace Battery

2. Check current draw from battery as described in Service Bulletin, Category 5 no.017/88.
3. Check charging system as per Workshop Manual.

WARRANTY INFORMATION

Customer Comment Code: 5A
Damage Code: 62
Part No. of Main Cause: Part No. of Applicable Battery
Operation No: G0501X-C-X Inspection, Charging & Testing of Battery
Labor Hour: 0.3 Hr.

NOTE:

In ALL circumstances, record the results of the load test onto the repair order.