**PRE-DELIVERY INSPECTION** 

# M: BATTERY FLUID LEVEL AND BAT-TERY INSTALLATION

## **CHECK POINTS**

- 1. External parts
- 2. Electrolyte level
- 3. Specific gravity

### WARNING:

• Electrolyte has toxicity; be careful about handling the fluid.

• Avoid contact with skin, eyes or clothing. Especially in case of contact with eyes, flush with water for 15 minutes and get prompt medical attention.

• Batteries produce explosive gases. Keep sparks, flame, cigarettes away.

• Ventilate when charging or using in enclosed space.

## **1. CHECK THE EXTERNAL PARTS**

Check for the existence of dirt or cracks on the battery case, top cover, vent plugs, and terminal posts. If necessary, clean with water and wipe with a dry cloth. Apply a thin coat of grease on the terminal posts to prevent corrosion.

## 2. CHECK THE ELECTROLYTE LEVEL

Check the electrolyte level in each cell. If the level is below MIN LEVEL, bring the level to MAX LEVEL by pouring distilled water into the battery cell. Do not fill beyond MAX LEVEL.



## 3. CHECK THE SPECIFIC GRAVITY

The specific gravity of electrolyte can be measured with a hydrometer. Holding the glass tube vertically, slowly draw the liquid into the tube. Take the reading on the float scale at the highest point of the liquid.

When reading, the eye should be level with the surface of the liquid.



## Serviceable specific gravity 1.220 — 1.280 at 20°C (68°F)

If the specific gravity reading is below 1.220 at 20°C (68°F), the battery must be recharged and, if necessary, the specific gravity of the electrolyte must be adjusted. The specific gravity changes according to temperature. The standard temperature is considered to be 20°C (68°F).

When measuring the specific gravity, calculate as follows:

### Serviceable specific gravity S = St + 0.0007 (t - 20)

S = Specific gravity corrected for 20°C (68°F)

St = Measured specific gravity at t°C

t = Electrolyte temperature on centigrade scale (°C)

0.0007 = Temperature coefficient

### [EXAMPLE]

A hydrometer reading of 1.273 at 30°C (86°F) is corrected to 1.280 at 20°C (68°F), indicating that the battery is fully charged. On the other hand, a reading of 1.251 at –10°C (14°F) is corrected to 1.230 at 20°C (68°F), indicating that the battery is partially charged.