# Chapter 8

# BATTERY, 24-VOLT, 0·4 AMP. HR.

## LIST OF CONTENTS



## LIST OF ILLUSTRATIONS



## LEADING PARTICULARS

| | |
|---|---|
| **Battery, 24 volt, 0·4 amp. hr.** .... .... .... | *Ref. No.* 5J/3340 |
| *Overall dimensions (over cover)* .... | 4·2 *in.* × 4·2 *in.* × 3·35 *in.* |

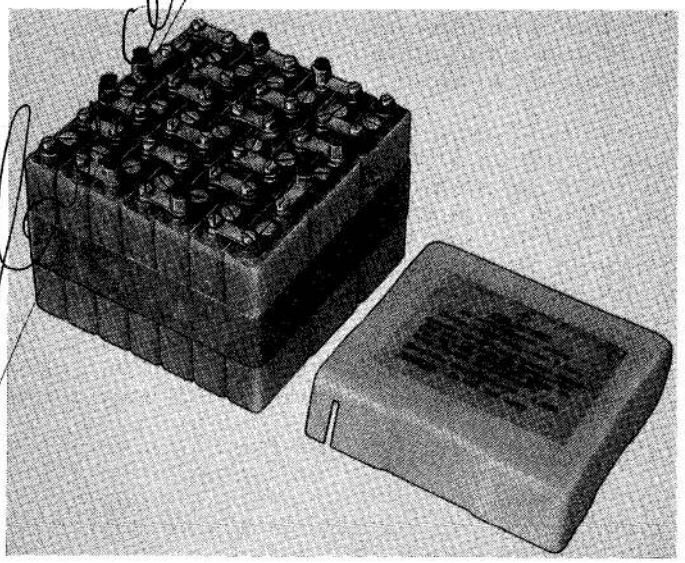

**Fig. 1. Battery, 24-volt, 0·4 amp. hr.**

### Introduction

**1.** The battery, 24-volt, 0·4 amp. hr., is an alkaline battery of conventional construction, as described in A.P.4343, Vol. 1, Sect. 3, Chap. 3. It is designed to supply power under emergency conditions to the turn and slip indicator, and in some instances an additional load for emergency cockpit lighting not exceeding 6 watts.

## DESCRIPTION

**2.** This battery is illustrated in fig. 1. It consists of 21 cells, each in a polystyrene container, secured together to form a rectangular block. The + and — terminals are at diagonally opposite corners, the cover being slotted to accommodate the connecting leads.

**3.** Each cell is fitted with a vented steel plug with a rubber ring release device. Eight of the inter cell connections are provided with rubber pads, which act as supports for the battery cover.

## SERVICING

**4.** General servicing instructions for this type of battery are given in A.P.4343, Vol. 1, Sect. 3, Chap. 3.

### Initial filling and charging

**5.** The amount of electrolyte required for filling the battery is approximately 165 c.c. Remove the vent plugs and fill each cell until the plates are just covered, then allow the cells to soak for 12 to 24 hours and adjust the electrolyte level with electrolyte as required.

**6.** Charge at 0·09 amp. for 15 hours, then leave the battery on open circuit for 24 hours without replacing the vent plugs. Check the electrolyte levels and top up as necessary with distilled water. Replace the vent plugs carefully to avoid stripping the threads in the cell lids, taking care not to overtighten.

**Note . . .**

*Batteries may be delivered filled and partly charged by the manufacturer. Before these batteries are fitted in aircraft, the procedure outlined for routine charging should be carried out.*

### Routine charging

**7.** Remove the vent plugs and check the electrolyte level in each cell, topping up with distilled water as necessary. Charge at 0·09 amp. for about seven hours, until the battery voltage rises to approximately 35 volts and remains constant for two hours. Leave the battery on open circuit for 24 hours without replacing the vent plugs.

**8.** Check the electrolyte levels, topping up as necessary with distilled water. Replace the vent plugs carefully to avoid stripping the threads in the cell lids, taking care not to overtighten.

◀**Note . . .**

*The procedure for routine charging should be carried out after the battery has been in use.*

### Capacity test

**9.** Due to the small capacity of this battery, it is not possible to test it on the standard tester. Instead, it may be tested at the one two-hour rate by discharging it through a small resistance, such as a filament lamp of suitable size, monitoring the current (initially) with a milliammeter. The rate of discharge is governed by the type of aircraft installation on which the battery is employed, as is the efficiency at which the battery is rejected for aircraft use.▶

### Storage of filled batteries

**10.** Ensure that the battery is fully charged and correctly topped up. External surfaces should be cleaned and dried, and the terminal connections lightly greased with protective PX-7. Inspect filled batteries for correct electrolyte level every nine months, and top up with distilled water as required.