

Cancelled Obsolete

### Chapter 1

## BATTERY, TYPE L, 12-VOLT, 25 AMP. HR.

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### LEADING PARTICULARS

◀ Battery, Type L, 12V, 25 amp. hr.	Ref. No. 5J/3417
Capacity	
At 10 hr. rate	40 amp. hr.
At 1 hr. rate	25 amp. hr.
Weight (including electrolyte)	38.5 lb.
Overall dimensions:—	
Length	17.813 in.
Width	4.938 in.
Height	9.625 in. ▶

#### Introduction

1. The battery, Type L, 12-volt, 25 amp. hr., is a lead-acid battery of conventional construction, as described in A.P.4343, Vol. 1, Sect. 3, Chap. 2. It is a re-designed version of the 12-volt, 25 amp. hr. battery, Type C (Ref. No. 5J/9101534), and is considerably lighter due to the design of the inter-cell connectors and the container material. In addition, the Type L has a slightly lower internal resistance.

#### DESCRIPTION

2. The battery consists of six cells arranged in line, and housed in a monobloc polystyrene container. Each cell has 9 negative plates interleaved with 8 positive plates, with

separators of microporous P.V.C. The inter-cell connectors pass directly from cell to cell, unlike those in the Type C battery which are raised on pillars; this provides a saving of weight in the Type L, and a lower resistance path from cell to cell. The connectors are sealed with polystyrene.

3. The cells are fitted with unspillable vent plugs; it should be noted that the correct type for this battery have a BLACK head, and are not interchangeable with those fitted on the Type C battery.

4. Electrical connection is made to screw type terminals, one at each end of the battery, and marked + and - respectively. The terminal head has the contact washer incorporated.

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5. The battery container is mounted on an acid-proofed cast aluminium carrier, by means of rubber-bushed bolts which engage with inserts in the bottom of the container. A re-inforced carrying strap is secured to this carrier, which has mounting lugs suitable for the same fixing centres as the Type C. The arms at each end of the carrier are sheathed with polythene to avoid accidental contact.

### SERVICING

6. General information on the servicing of this type of battery is given in A.P.4343, Vol. 1, Sect. 3, Chap. 2. In addition, the following particular instructions apply.

#### Initial filling

7. The S.G. of electrolyte for initial filling is 1.270, correct to 60 deg. F. Unseal and remove the vent plugs, and fill each cell to a level of  $\frac{3}{16}$  in. above the separator guards. Allow the battery to stand for six hours, then add sufficient acid to restore the levels.

#### Initial charge

8. Charge for 24 hours at 4 amp., and then check the S.G. and voltage every hour, until steady values are obtained for three consecutive readings. The S.G. should be between

the limits of 1.270 and 1.295 at 60 deg. F. Adjust to 1.285 at 60 deg. F. Allow the battery to stand on open circuit until the temperature of the electrolyte falls to within 10 deg. F. of the ambient, then de-gas by gently rocking the battery from side to side. The electrolyte level should then be adjusted to  $\frac{3}{16}$  in. above the separator guards by removing electrolyte, or if necessary by adding acid of S.G. 1.285 corrected to 60 deg. F.

#### Routine charging

9. Ensure that the electrolyte level in all cells is at least slightly above the separator guards by the addition of distilled water. Charge at 4 amp. until the voltage and S.G. cease to rise and remain constant for three half-hourly readings (At the end of charge all cells in a healthy battery will be gassing freely). The electrolyte levels should be maintained at  $\frac{3}{16}$  in. above the separator guards by the addition of distilled water when the battery is in a fully charged and de-gassed condition. During charge, the temperature must not exceed the value stated on the manufacturer's label.

#### Note . . .

*It is essential that only vent plugs with BLACK heads should be used for this type of battery.*

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