

DIRECTORATE GENERAL OF BORDER ROADS
GENERAL MAINTENANCE INSTRUCTION NO.98
OF
CARE AND MAINTENANCE OF LEAD – ACID BATTERIES
OF
SLOW PLOUGH ROLBA R-1200 (MONOFORCE)

Introduction

1. Battery is a costly accessory in a vehicle or on equipment. Proper care and daily maintenance of the battery to captimise its life, therefore, needs no emphasis. It must be remembered that (ROTARY SLOW PLOUGH ROLBA R-1200 (MONOFORCE)) :-

- (a) Is a specialist equipment and is vital for the logistic support.
- (b) Cannot be tow started with the help of another vehicles or equipment.
- (c) DUETZ engine, the prime mover of the ROLB Snow Clearing machine, can be started only when the two Lead-Acid Batteries (12 Volt 138 Ampere Hour each) are in a serviceable and well charged condition.

2. To prevent Lead Acid Batteries getting discharged at rapid rate under severe cold conditions existing in the heavily snow bound areas, where these machines have to actually operate, keep these in good charged condition.

Aim

3 To lay down instruction on the daily maintenance and care of 2 nos Lead-Acid Batteries (12 Volt 138 Ampere Hour each).

Action by

4. (a) User Units. Carry out maintenance tasks regularly as per details given

in paras 6 to 13..

(b) Field Workshops (GREF) :

Check serviceability of the Batteries, whenever a ROLBA machine comes to Field Workshop (GREF) for periodic inspection/repairs.

Items Affected

5. Two numbers 12 Volt 138 Ampere Hour each i.e. 24-Volt system of Rotary Snow Plough ROLBA R-1200 "MONOFORCE".

6. **Details**

When working under temperature condition below minus 20 degree C, ensure to remove batteries daily after the day's work from machine and store in a warm place overnight.

Caution :- Lift 'Parallelogra' by 2 feet to approach batteries to take out and refit next morning. Keep wooden blocks under the Scraper blade to support the lifted plough.

7. Next morning, refit and secure batteries in the brackets properly. If batteries have not been removed from the machine, check next morning that the batteries are properly secured.

Caution :- Ensure NEGATIVE terminal is earthed.

8. Check terminals for tightness. Apply only MINERAL JELLY on terminals and battery posts.

Caution : (a) DO NOT hit battery terminals inside battery posts with spanner.

(b) DO NOT put nails or metallic pieces to tighten up terminals over posts.

Rebuild posts with milten lead in Field Workshops. Ensure positive post is thicker than the negative post and mark these with ' + ' and ' - ' respectively.

(c) NEVER apply GREASE in place of MINERAL JELLY. It will cause fire.

9. Check electrolyte level in each cell of both the Batteries if about 1/2 " above the plates. Top up with DISTILLED WATER to make up for the evaporation.

Caution : (a) DO NOT add ordinary (spring/river) water. IN EMERGENCY, heat up clean snow in a clean pot and use in lieu of Distilled Water.

(b) Keep a bottle of Distilled Water in the Operator's Cabin duly labeled for topping up.

10. Keep all the vent holes of each vent plug clear off any dirt to allow escape of gases and avoid damage to batteries.

Note : Existing vent plugs may be exchanged/replaced with the vent plugs, provided on the Indian Lead-Acid batteries.

Caution : NEVER use waste colon if vent plug is lost. Keep spare one or two vent plugs in maintenance spares/tools for immediate replacement.

11. Check specific gravity every week after every 50 hrs of running. In the snow clearance ares, it should normally be not less than 1250. Send batteries for recharge.

12. After the snow clearance season, remove batteries from the machine, keep in a warm place and give trickle charge every month.

13. Before are welding on the machine, disconnect negative terminal (earth cable) to avoid damage to the batteries (and alternator assembly).