

# Shared Learning

Key learning following a serious incident



everyone  
home safe  
every day

Issued to: **Network Rail line managers, safety professionals and accredited contractors**

Ref: NRL22-04

Date: 29/11/2022

Location: Eastleigh Depot, Wessex,

Region: Southern

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## Overview/Underlying causes

### Overview

On the 01/08/2022 at 09:25 a thermal runaway of a Robattery 700 portable lithium-ion battery pack occurred at Eastleigh P-way store. The building was evacuated, and the fire brigade called to control the heat and smoke emitted from the battery. The battery was fitted to a Robel tamper unit that had indicated a control unit fault so had been placed in quarantine awaiting repair.

### Underlying cause

An examination of the units carried out by the manufacturer concluded that the tamper unit fault had caused overheating and damage to the insulation on a cable in the battery causing a short circuit which led to the thermal event.

The remaining Robel battery powered tamper units were examined and no further control unit faults were found, however, an examination of other batteries identified an internal cable routed close enough to other components that could cause a short circuit leading to a thermal runaway.

Only Robattery 700 units with the following serial numbers were affected by this non-optimal cable routing:

- 71.01-04120 – 71.01-04366
- 71.01-05000 – 71.01-05930.

These have been quarantined and are being returned to the manufacturer for exchange. Once replacement batteries have been received the Robel battery powered tamper units may be returned to service.

Following the incident, a national Safety Bulletin NRB22-08 was issued and the fleet of Robel battery powered vertical tamper units were stood down. An examination of the other Robel units and lithium-ion batteries was carried out along with a local investigation into the incident.

The Robel tamper was reported as faulty on the 26/07/2022 and placed in the quarantine area in the Eastleigh P-way store. The tamper was not labelled as "not to be used", and the quarantine sign for the quarantine area had fallen off the wall. The faulty tamper was subsequently removed from the quarantine area and a battery was fitted in preparation for use by Network Rail staff on the night shift of the 31/07/2022.

On fitting the battery to the faulty tamper, the operative reported a strange humming sound, and then a slight orange light followed by a bang and some smoke. The tamper was then placed on the floor with the battery still attached. The following morning the battery was removed from the tamper and the thermal runaway event occurred

## Key message

- Defective equipment must be placed in a clearly defined and marked quarantine area and labelled "not to be used". Staff must be instructed in the arrangements for the reporting and labelling of quarantined equipment.
- Faulty equipment placed in a quarantine area must only be checked or repaired by the approved maintainer and never be removed by staff for operational use.
- The manufacturer has issued updated Service bulletins and operating manuals for the ROBEL 62.20L Tamper and 71.01 Battery. These publications must be made available to users and the instructions they contain followed.
- The equipment retains full Product Acceptance Ref: PA05/05265 & Catalogue number 094/022069. The specific conditions contained within the PA Certificate must always be complied with.