

**TB 164**

## TECHNICAL BULLETIN

### INFORMATION ONLY

**For the Attention of :** Service Engineers, Installers, Trade Customers, Training Dept,  
Production Team

**Date :** 21/02/2017

**Products:** Midilift SL and XL+

**Subject :** Midilift UPS inspections

**Originator :** Stannah Lifts Ltd, Anton Mill, Andover, Hants SP10 2NX 01264 339090

### Introduction

In order to maintain safe, reliable operation of the uninterruptable power supply (UPS) installed on certain Midilift SL and Midilift XL+ models, the following inspections should be completed at Phase 1 and Phase 4\* service intervals respectively.

\* *Phase 1 = every service visit, Phase 4 = once a year.*

### PHASE 1 INPECTIONS (every service visit)

#### **(1a) Establish the age of the batteries.**

UPS batteries must be replaced every 4 years to guarantee performance.

#### **(1b) Check the battery backup performance.**

Isolate lift mains supply and:

- ✓ Ensure batteries have been subjected to a full 24 hour charge prior to test.
- ✓ Check that the UPS is capable of **supporting the lift for 2 return journeys**.
- ✓ Check that audible alarm output is present for duration of battery backup test.
- ✗ If 2 return journeys are not supported then a more thorough examination is required. Refer to Phase 4 inspections and continue from (4c).

#### **(1c) Check ambient temperature of UPS location.**

- ✓ Check that the ambient temperature at UPS location is maintained between 10-25°C.
- ✓ Check that UPS is not located next to a heat emitting source (e.g. next to a radiator).
- ✗ Excessive ambient temperature can cause overcharging of the UPS internal batteries reducing life expectancy and ultimately may result in failure.
- ✗ If ambient temperature is greater than 25°C then it is recommended that as a minimum the internal batteries are visually inspected for signs of failure. Move to Phase 4 inspections and continue from (4d) and (4e).

**PHASE 1 INPECTIONS ARE COMPLETE**

## **PHASE 4 INSPECTIONS (completed once a year)**

### **(4a) Establish the age of the batteries.**

UPS batteries must be replaced every 4 years to guarantee performance.

### **(4b) Check the battery backup performance.**

As per Phase 1 (1b) inspection but **5 complete journeys must be supported.**

### **(4c) Check ambient temperature of UPS location.**

- ✓ Check that the ambient temperature at UPS location is maintained between 10-25°C.
- ✓ Check that UPS is not located next to a heat emitting source (e.g. next to a radiator).
- ✗ Excessive ambient temperature can cause overcharging of the UPS internal batteries reducing life expectancy and ultimately may result in failure.
- ✗ If ambient temperature is greater than 25°C then it is recommended that as a minimum the internal batteries are visually inspected for signs of failure. Move to Phase 4 inspections (4d) and (4e).

### **(4d) Visual inspection of batteries.**

Isolate mains supply and turn off UPS. Visually inspect each battery cell and check for:

- ✗ Any sign of swelling of the outer casing. Replace all UPS batteries if found.
- ✗ Any sign of sulphation (i.e. white crystal build up near terminals). Replace all UPS batteries if found.

### **(4e) Measure the Float Charge\* and Open Circuit\* voltages of each battery cell.**

**Float Charge Voltage** is the voltage applied under normal mains power 'ON' condition.

- ✓ 13.5 to 14.0 VDC measured at each battery cell.
- ✗ Replace battery if measurement is outside this range.

**Open Circuit Voltage** is the voltage measured on a fully charged, disconnected battery.

- ✓ 13.5 to 14.0 VDC measured at each battery cell.
- ✗ Replace battery if measurement is outside this range.

## **PHASE 4 INSPECTIONS ARE COMPLETE**

### **SUMMARY**

Midlift SL and XL+ contracts fitted with a UPS will require regular inspections to ensure continued safe and reliable operation.

If any issues are identified then it is recommended that all of the batteries are replaced and the UPS is subjected to a full inspection.

The ambient temperature in which the UPS is installed is a significant factor to achieving optimum performance and maximum life expectancy of the batteries. Under normal conditions, we recommend that the batteries are replaced every 4 years.