

Our Ref: APPBMSMA-2023-02 Electrical and Mechanical Engineering Group

4 September 2023

### See Distribution List

Dear Sir/Madam

### **ENSURING SAFE OPERATION OF LIFTS AND ESCALATORS**

## **Objective**

This circular advises owners of lifts and escalators ("L&E") on their duties in ensuring safe operation of the L&E and the checks that they could carry out in respect of the L&E.

### **Duties of L&E Owners**

- 2. On 1<sup>st</sup> August 2022, BCA issued a circular¹ highlighting the statutory duties of L&E owners and service contractors and their follow-up actions, in situations in which L&E are unsafe for operation. Under Regulations 12 and 24 of the Building Maintenance and Strata Management (Lift, Escalator and Building Maintenance) Regulations ("LEBM Regulations"), all L&E owners must ensure that their L&E are kept "in good working condition at all times and are periodically maintained".
- 3. As owners, you have the daily control and access to the L&E. You are in the best position to ensure that the L&E are safe for use by members of the public.

## **Daily Checks on Escalators**

4. We have observed a trend of escalator incidents involving failures of moving handrails. The consequence of a handrail failure can be serious, especially in cases involving elderly users or long escalators. The causes of such incidents vary, ranging from inadequate tensioning in the handrail belt to breakage in handrail chains. It will not be sufficient to depend solely on the conditioning of these moving equipment carried out by the escalator technicians once every month.

<sup>&</sup>lt;sup>1</sup> BCA Circular Ref No. APPBMSMA-2022-04 - Circular to remind LE Owners and Service Contractors of their Statutory Duties ( https://go.gov.sg/bca-circular-leosc)





- 5. Therefore, you are advised to put in place daily routine checks on your escalators, including the following visual and functional inspections (not exhaustive):
  - a. The handrail belts are properly tensioned.
  - b. The difference between the speed of the handrail belts and the steps is between 0 and +2%.
  - c. The escalator steps are free from debris.
  - d. The sides of the escalators are free from any sharp protrusions that could potentially cause injury to the users.
- 6. For the purposes of (a) and (b) above, you should consider installing Handrail Speed Monitoring Devices which will provide real-time monitoring of the handrail speed, as well as stop the operation of the escalators in the event of abnormalities such as handrail stoppages. If the Handrail Speed Monitoring Devices are not installed, you must conduct physical checks on the handrails daily.

## **Daily Checks on Lifts**

- 7. For lifts, the daily checks should include the following visual and functional inspections:
  - a. Door open buttons are working as intended.
  - b. Door edge protection devices (e.g., safety edges, light curtains) are operational.
  - c. Alarm bell and intercom system are functional.
  - d. Lift lighting and ventilation fan are in operation.
- 8. Should you detect any problem from the checks above for L&E, you should rectify the problem quickly. Pending the rectification of the problem, you should suspend the operation of the L&E

## **Display of Emergency Contact Number**

9. In addition to the above, a contact number for the purpose of reporting malfunctions of L&E and emergencies should be prominently displayed in or near to the L&E such that it is visible and easily accessible to all passengers. This allows users to report any L&E safety-related issues immediately for prompt rectifications.

#### Feedback and Clarification

10. For further information, feedback or clarification, please submit your enquiry through BCA's Online Feedback Form at <a href="https://www.bca.gov.sg/feedbackform">https://www.bca.gov.sg/feedbackform</a> or call us at (65)1800-342 5222 (1800-DIAL BCA).





Yours faithfully

TEO ORH HAI

**GROUP DIRECTOR** 

ELECTRICAL AND MECHANICAL ENGINEERING GROUP

**BUILDING AND CONSTRUCTION AUTHORITY** 

for COMMISSIONER OF BUILDINGS



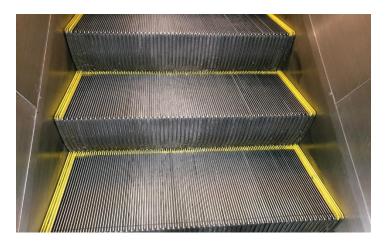


### **ANNEX**

# A) Daily Checks for Escalator

I. Below is a list of how the L&E owner can carry out their daily checks at the start of the escalator operation:

- a. Ensure that the handrail belts are properly tensioned by giving a slight pull force.
- b. The difference between the speed of the handrail belts and the steps is between 0 and +2% by using a tachometer.
- c. The escalator steps are free of debris.



d. The sides of the escalators are free from any sharp protrusions that could potentially cause injury to the users.







# B) Daily Checks for Lift

- I. Below is a list of how the L&E owner can carry out their daily checks at the start of the lift operation:
  - a. Ensure that when the door open button in the stationary lift car is pressed, the lift doors must reopen and stay open.



b. Ensure that upon activation of any door protective devices and sensors (e.g. lift curtain, door safety edge), the doors must reopen.









c. Press the lift car emergency alarm to check if it can be heard from outside the lift well and at the designated floor.



d. Test the intercom system to make sure that the voice communication can be heard in both directions.







Intercom system





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