

BUILDING MAINTENANCE AND STRATA MANAGEMENT ACT 2004 (CHAPTER 30C)

**BUILDING MAINTENANCE AND STRATA MANAGEMENT
(LIFT, ESCALATOR AND BUILDING MAINTENANCE) REGULATIONS 2016**

**ALTERNATIVE MAINTENANCE REQUIREMENTS FOR
LIFT(S) / ESCALATOR(S)**

Commissioner of Buildings
Building & Construction Authority
52 Jurong Gateway Road #11-01
Singapore 608550
Website: <http://www.bca.gov.sg/>

INSTRUCTIONS:

- (1) Tick the checkbox where applicable.
- (2) *Delete where inapplicable.
- (3) Please submit the completed form along with any required documentations in PDF format to BCA_lift_escalator@bca.gov.sg

Section A – Lift/Escalator Location Details

Address: _____

Building Name (if any): _____

Section B – Lift/Escalator Details

Using one row for each lift/escalator, please fill in the required details below.

Lift / Escalator No.	Lift / Escalator ID <i>(compulsory for equipment with existing PTO)</i>	Lift / Escalator Type <i>(see note 1 in Explanatory Notes for the list of lift/escalator type)</i>	Standard which the Lift / Escalator is designed to

Details of additional lift(s)/escalator(s)* are attached in **Appendix A**.

For Alternative Maintenance Requirement(s) for Escalators [under Regulation 25(2A)] (see note 3 in Explanatory Notes)

- the alternative maintenance requirement(s) in sub-section (e) below for the escalator(s) listed under **Section B**, in respect of each maintenance requirement in Part 2 of the First Schedule listed in sub-section (d) below. I/We* confirm that the specified maintenance requirement listed in sub-section (d) cannot be complied with, and that the alternative maintenance requirement in sub-section (e) will not affect the safe operation of the escalator(s).

(d) Maintenance Requirement(s) in Part 2 of the First Schedule (see note 5 in Explanatory Notes for the list of maintenance requirements) **that cannot be complied with and the reason(s) for not being to comply with each maintenance requirement:**

(e) Proposed Alternative Maintenance Requirement(s) in respect of each maintenance requirement listed in sub-section (d) above (please state clearly the lift part(s) corresponding to each alternative maintenance requirement):

(f) Technical information or proof that the alternative maintenance requirement(s) will not affect the safe operation of the escalator(s):

- Additional supporting details (e.g. calculations, testing reports) are attached in the Appendix _____ (please attach as a separate Appendix to this form).

Submitted by lift/escalator* service contractor, for the acceptance of the Commissioner of Buildings:	
Name and UEN of lift/escalator* service contractor (company name)	Company stamp
Name and NRIC/FIN of authorised representative of lift/escalator* service contractor	Signature of authorised representative of lift/escalator* service contractor
Address of lift/escalator* service contractor	Email address of lift/escalator* service contractor
Tel No. of lift/escalator* service contractor	Date:

Acknowledged by lift/escalator* owner:	
Name and UEN of lift/escalator* owner (company/organization/individual's name)	Company/organization stamp
Name and NRIC/FIN of authorised representative of lift/escalator* owner	Signature of authorised representative of lift/escalator* owner
Address of lift/escalator* owner	Email address of lift/escalator* owner
Tel No. of lift/escalator* owner	Date:

Explanatory Notes

(1) Below are the descriptions of each lift/escalator type:

Equipment type	Description
Passenger lift	A lift primarily used to carry persons. This includes a hospital bed lift.
Home lift	A lift, not being common property, installed in a private home solely for the use of its occupants. A home lift does not include a stairlift or a vertical platform lift installed in a private home solely for the use of its occupants.
Stairlift	A motorised platform or seat installed in a stairway, which transverses the stairs when activated.
Vertical platform lift	A vertical lifting platform intended for use by people with impaired mobility, with or without wheelchair, travelling vertically between predefined levels along a guided path.
Goods lift	A lift, primarily used to carry goods, but in which only the persons required to load and unload the goods are permitted to ride.
Service lift	A passenger lift so designed, to be able to also carry goods.
Car lift	A lift, primarily used to carry vehicles, but in which only the driver and the passengers of the vehicle are permitted to ride.
Escalator	A power-driven stairway with continuously moving steps and handrails, which is for carrying people between different floors of a building.
Passenger conveyor	A power-driven installation comprising a continuously moving walkway for conveying people between different parts of a building or between two buildings.

(2) According to Regulation 13 of the Building Maintenance and Strata Management (Lift, Escalator and Building Maintenance) Regulations 2016:

(2A) If the maintenance works for the lift cannot be carried out in accordance with the maintenance requirements in Part 1 of the First Schedule, the lift service contractor may apply to the Commissioner in the form and manner required by the Commissioner, for an alternative maintenance requirement to be accepted by the Commissioner in respect of each maintenance requirement in Part 1 of that Schedule that cannot be complied with.

(2B) The Commissioner may accept an alternative maintenance requirement proposed by the lift service contractor if –

- (a) the maintenance requirement in Part 1 of the First Schedule for which the alternative maintenance requirement is proposed cannot be complied with; and***
- (b) the alternative maintenance requirement will not affect the safe operation of the lift.***

(2C) To avoid doubt, parts of the same lift may be subject to different requirements.

(3) According to Regulation 25 of the Building Maintenance and Strata Management (Lift, Escalator and Building Maintenance) Regulations 2016:

(2A) If the maintenance works for the escalator cannot be carried out in accordance with the maintenance requirements in Part 2 of the First Schedule, the escalator service contractor may apply to the Commissioner in the form and manner required by the Commissioner, for an alternative

maintenance requirement to be accepted by the Commissioner in respect of each maintenance requirement in Part 2 of that Schedule that cannot be complied with.

(2B) The Commissioner may accept an alternative maintenance requirement proposed by the escalator service contractor if –

- (a) the maintenance requirement in Part 2 of the First Schedule for which the alternative maintenance requirement is proposed cannot be complied with; and*
- (b) the alternative maintenance requirement will not affect the safe operation of the escalator.*

(2C) To avoid doubt, parts of the same escalator may be subject to different requirements.

(4) According to Part 1 of the First Schedule of the Regulations, below are the maintenance requirements for lifts:

Areas of maintenance	Requirements
1. Door open control	<ul style="list-style-type: none"> (a) When lift car doors and lift landing doors are opened and the button controlling the opening of those doors is pressed, the opened lift car doors and lift landing doors must stay open. (b) When lift car doors and lift landing doors are partially closed and the button controlling the opening of those doors is pressed, the partially-closed lift car doors and lift landing doors must reopen.
2. Door protective devices	Lift car doors and lift landing doors must be operational at all times and reopen upon activation of door protective devices.
3. Lift car doors and lift landing doors	<ul style="list-style-type: none"> (a) Lift car movement must only be allowed when lift car doors are closed and landing doors are closed and locked, and — <ul style="list-style-type: none"> (i) the gap at lift car doorway is not more than 12 mm; (ii) despite sub-paragraph (i), when there is obstruction at lift car door sill, the upthrust rollers of lift car doors are set such that the gap at lift car doorway is not more than 25 mm if lift entrance height is not more than 2.1 m (if lift entrance height is more than 2.1 m, for every 0.5 m increment in height, the gap at lift car doorway may be increased by 3 mm); (iii) the gap at lift landing doorway is not more than 10 mm; (iv) the clearance between lift car door panels is not more than 10 mm; and (v) the clearance between lift car door panels and uprights, lintels or sills, is not more than 10 mm. (b) When lift landing doors are detected to be opened or unlocked during lift car movement, an emergency stop must be initiated immediately. (c) When lift car doors are detected to be opened during lift car movement, an emergency stop must be initiated immediately. (d) There must be no signs of excessive wear and tear of lift car doors and lift landing doors (or any component of the lift car door or lift landing door, including door shoes, rollers, hangers and linkages).
4. Lift car emergency alarm	<p>When lift car emergency alarm button is pressed, the alarm must be audible from —</p> <ul style="list-style-type: none"> (a) outside the lift well; and (b) the designated floor as defined in standard that the lift was designed to.
5. Lift car intercom	When lift car intercom button is pressed, the intercom system must function as intended.

6. Emergency power supply for lift car lighting and ventilation	Emergency power supply for lift car lighting and ventilation fan must remain functioning when normal power supply to lift car is disrupted.
7. Movement of lift car	Abnormal sounds or vibrations must not occur during any movement of the lift car.
8. Housekeeping	Machinery, machinery space, lift pit, hoistway and lift car top must be kept clean, tidy and free from discarded items and debris.
9. Lift machine and drive (including motor, gear box, drive sheave and motor generator set)	<ul style="list-style-type: none"> (a) Oil leakage must not occur in lift machine and drive. (b) Moveable parts, joints and gear box must be sufficiently lubricated. (c) Lift machine and drive must be securely mounted.
10. Brakes of lift machine and drive	<ul style="list-style-type: none"> (a) Brakes must not be contaminated with, or be at risk of being contaminated with, any oil or grease. (b) Brakes, when activated, must cause lift car to slow down, stop and stay at stopping position. (c) If lift is fitted with additional brake system for preventing uncontrolled lift car motion, the brake, when activated, must cause the lift car to stop and stay at stopping position.
11. Direct current machine	<ul style="list-style-type: none"> (a) Carbon brush length must be within the tolerance as recommended by the manufacturer. (b) Insulation at carbon brush holders must not show any sign of carbon particle build-up which may cause flash-over and burning. (c) The commutator must be free from any foreign deposit and must not cause any sparking when in operation.
12. Overspeed governor	<ul style="list-style-type: none"> (a) At all times when lift is in operation, overspeed governor must function as intended and be able to activate lift safety gears. (b) Governor ropes must not show any sign of excessive wear and tear, in accordance with manufacturer's recommendations or, where manufacturer's recommendations are not available, the requirements in ISO 4344:2004.
13. Main rope and compensation rope	<ul style="list-style-type: none"> (a) Main rope must be properly and equally tensioned. (b) Main rope and compensation rope must not show any sign of excessive wear and tear, in accordance with manufacturer's recommendations or, where manufacturer's recommendations are not available, the requirements in ISO 4344:2004.
14. Compensation rope and compensation rope sheave tie-down and tensioning	At all times when lift is in operation, compensation rope and compensation rope sheave tie-down must be properly tensioned and guided, in accordance with manufacturer's recommendations.
15. Buffer	<ul style="list-style-type: none"> (a) There must be sufficient oil in buffer, as indicated by oil level gauge, in accordance with manufacturer's recommendations. (b) Buffer must provide effective cushioning upon impact to protect passengers in lift car at all times when lift is in operation.
16. Controller and electrical system	(a) Ground and earth of controller, electronic and electrical systems and circuit boards (including printed circuit boards containing any contact or electronic component) must be firmly secured.

	<p>(b) Controller must initiate immediate stopping of lift car and prevent lift movement under any condition that is unsafe for passengers and maintenance workers.</p> <p>(c) Safety switches must function as intended at all times when lift is in operation.</p> <p>(d) Controller, electronic and electrical systems, wirings and circuit boards (including printed circuit boards containing any contact or electronic component) must be free from defects (such as signs of overheating, delamination, burns, warping and corrosion).</p> <p>(e) Wirings in controller, electronic and electrical systems must be free from defects (such as incorrect or improper connections, non-intact insulation, and exposure of wire conducting elements).</p> <p>(f) Controller, electronic and electrical systems, wirings and circuit boards (including printed circuit boards containing any contact or electronic component) must function at all times when lift is in operation.</p>
17. Guide shoes or rollers of lift car and counterweight	<p>(a) Lift car and counterweight must be guided by guide shoes or rollers at all times when lift is in operation.</p> <p>(b) Guide shoes or rollers must not cause wear and tear of guide rails.</p>
18. Safety gear	<p>(a) Safety gear must be maintained and functioning at all times when lift is in operation.</p> <p>(b) Safety gear, when activated, must be able to stop and hold the lift car and counterweight within the allowable distance in accordance with the standard that the lift was designed to.</p>
19. All lift parts	Level of corrosion, wear and tear of all parts of lift must not affect the safe operation of the lift.
20. Stopping or level accuracy	The stopping accuracy of the lift car floor must be $\pm 10\text{mm}$.

(5) According to Part 2 of the First Schedule of the Regulations, below are the maintenance requirements for escalators:

Areas of maintenance	Requirements
1. Signage and indicator	<p>(a) Safety signage and direction indicator must be clearly and prominently displayed.</p> <p>(b) Edge of escalator step must be clearly demarcated with yellow lines.</p> <p>(c) There must be sufficient lighting in the vicinity of escalator combs.</p>
2. Anti-climbing, anti-sliding, access restriction and deflecting devices	Anti-climbing, anti-sliding, access restriction and deflecting devices must be in place and must effectively serve their intended purposes.
3. Emergency stop switch	Activation of emergency stop switch must initiate emergency stopping of escalator.
4. Handrail system	(a) Handrail must move in the same direction and speed (within a speed tolerance of + 2%) as escalator steps.

	(b) Handrail inlet safety switch must be activated if a foreign object enters inlet and must cause escalator to initiate emergency stop.
5. Housekeeping	All machinery and machinery space in driving station, return station and truss area must be kept clean, tidy and free from discarded items and debris.
6. Driving machine, brakes, sprocket and auxiliary brake	(a) Machinery must not have any oil leakage. (b) Moveable parts, joints and gear-box must be sufficiently lubricated. (c) Brakes, when activated, must stop the escalator within the distance specified in the standard that the lift was designed to. (d) All machinery must be securely mounted.
7. Safety switch and sensor (such as skirt panel switch, escalator comb switch, step sag switch, step up thrust switch, missing step detection device, floor plate or access cover detection switch, drive chain tension and step chain tension monitoring switch)	Activation of safety switch must cause escalator to initiate emergency stop.
8. Excessive speed and unintentional reversal protection	Emergency stop must be activated when speed of escalator steps exceeds rated speed by 20%.
9. Operational clearance	Clearance between escalator step and escalator skirt panel, clearance between escalator step and escalator comb, and all other clearances must comply with the requirements in the standard that the escalator was designed to.
10. All escalator parts	Level of corrosion, wear and tear of all parts of escalator must not affect the safe operation of the escalator.
11. Controller and electrical system	(a) Ground and earth of controller, electronic and electrical systems and circuit boards (including printed circuit boards containing any contact or electronic component) must be firmly secured. (b) Controller must initiate immediate stopping of escalator and prevent escalator movement under any condition that is unsafe for passengers and maintenance workers. (c) Controller, electronic and electrical systems, wirings and circuit boards (including printed circuit boards containing any contact or electronic component) must be free from defects (such as signs of overheating, delamination, burns, warping and corrosion). (d) Wirings in controller, electronic and electrical systems must be free from defects (such as incorrect or improper connections, non-intact insulation, and exposure of wire conducting elements). (e) Controller, electronic and electrical systems, wirings and circuit boards (including printed circuit boards containing any contact or electronic component) must function at all times when escalator is in operation.