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Electrical and Mechanical Engineering Group

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Dear Sir/Madam

AMENDMENTS TO THE BUILDING MAINTENANCE AND STRATA MANAGEMENT (LIFT, ESCALATOR AND BUILDING MAINTENANCE) REGULATIONS

This circular is to inform the industry of the upcoming amendments to the Building Maintenance and Strata Management (Lift, Escalator and Building Maintenance) Regulations 2016 (the “BMSM Regulations”). Please refer to the table of contents below for the relevant sections, with affected stakeholders specified for each section.

Section	Key Amendments	Stakeholders Affected
Part (A)	New Specialist Professional Engineer in the Specialised Branch of Lift and Escalator Engineering	Specialist Professional Engineers (SPEs)
Part (B)	Major Alteration or Replacement Works	Owners, Contractors & SPEs
Part (C)	Requirements on Periodic Maintenance and Annual Examination, Inspection and Testing	Owners, Contractors & SPEs
Part (D)	Exclusion of Low-Rise Wheelchair Lifters	Owners, Contractors & SPEs
Part (E)	Preservation of Incident Site	Owners & Contractors
Part (F)	Requirement to submit Video Recordings of Incident	Owners
Part (G)	Requirement to transfer Maintenance Records and Other Documents	Owners & Contractors

KEY AMENDMENTS TO THE BMSM REGULATIONS

(A) New Specialist Professional Engineer in The Specialised Branch of Lift and Escalator Engineering [*Effective Date: 15 January 2019*]

2. In January 2017, the Professional Engineers Board introduced a new Specialist Professional Engineer scheme in the area of lift and escalator (“SPE(L&E)”). The intent of the scheme was to increase the pool of available professionals who can certify compliance with requirements for lifts and escalators. The SPE(L&E) scheme will also replace the Authorised Examiner (“AE”) scheme in lift equipment, which is administered by the Ministry of Manpower (“MOM”), in due course. To-date, 92% of AEs for lift equipment have been registered as SPEs(L&E).



3. With effect from 15 January 2019, the BSM Regulations will allow the SPE(L&E) to certify lifts and escalators for the purpose of applying for Permits to Operate (“PTOs”). The BSM Regulations will provide a six-month grace period to allow owners of lifts and escalators time to adjust their operations to transit from AEs to SPEs(L&E). From 15 July 2019 onwards, AEs must not certify for any lift or escalator under the BSM Regulations.

4. AEs who have not registered themselves as SPE(L&E) are encouraged and reminded to register with the Professional Engineers Board (PEB) as soon as possible. Please refer to www.peb.gov.sg for details of the conditions as stipulated in the Professional Engineers (Amendment) Rules 2018 that need to be satisfied for registration as SPE(L&E) with the Professional Engineers Board Singapore.

(B) Major Alteration or Replacement Works

5. As required under the BSM Regulations, an owner of a lift or an escalator must notify the Commissioner of Buildings (“COB”) in writing before any major alteration or replacement work (“major A/R work”) is carried out on the lift or escalator. The existing PTO for the lift will cease to be valid once the works commence. A new PTO must be applied for once the works are completed and certified by an SPE(L&E) and before operating the lift or escalator. Please refer to **Annex A** for the list of works which constitute major A/R works.

Alternative Standards or Modification of Requirements for Major Alteration or Replacement Works [Effective Date: 15 January 2019]

6. If the design and installation of any altered or replaced part of a lift or escalator cannot comply with any of the requirements in the applicable standards, the owner of the equipment may apply to the COB for acceptance of an alternative standard or a modification of the requirements in the applicable standard for that part. The accepted alternative standard or modified requirements will be applicable to future periodic maintenance and annual examination, inspection and testing of that altered or replaced part. Please refer to **Annex B** for the applicable standards for major A/R works. The application forms may be downloaded from BCA’s website (<https://www.bca.gov.sg/LiftSafety/lift.html> and <https://www.bca.gov.sg/EscalatorSafety/escalator.html>).

Periodic Maintenance and Annual Examination, Inspection and Testing of Parts underwent Major Alteration or Replacement Works for Lifts [Effective Date: 15 January 2019]

7. Currently, when a lift undergoes major A/R works, the BSM Regulations require the maintenance and annual testing of the entire lift to comply with the prevailing standard applicable to the part altered or replaced, whilst the rest of the remaining parts of the lift would have been approved under an older standard.

8. Taking into account of the feedback from the industry, with effect from 15 January 2019, the annual examination, inspection and testing, as well as periodic maintenance, of the lift (excluding the part that undergoes major A/R works) can continue to comply with the standard that applied to the lift when it was first approved. Only the part that has been altered or replaced needs to comply with the prevailing standard that applies when the

major A/R works were carried out. Please refer to **Annex C** for an example for clarification and the list of applicable codes/standards.

Major Alterations or Replacement Works for Escalators including Passenger Conveyors
[Effective Date: 15 April 2019]

9. A circular (ref: *APPBCA-2017-08*) was issued by BCA on 1 December 2017 to notify the industry of the adoption and implementation of Singapore Standard 626: 2017 – Code of Practice for Design, Installation and Maintenance of Escalators and Moving Walks (“SS 626”). With effect from 1 March 2018, any new escalator approved will have to comply with SS 626 which is the acceptable solution in BCA’s Approved Document for the design of escalators under the Building Control Regulations.

10. For older escalators which were approved to meet standards prior to SS 626 (such as SS CP 15), please note that if the owner notifies of any major A/R works on or after 15 April 2019, that part that has been altered or replaced will have to comply with SS 626. The altered or replaced part must also be maintained, examined, inspected and tested in accordance with SS626 while the rest of the escalator will comply with the standard to which they were approved previously.

(C) Requirements on Periodic Maintenance and Annual Examination, Inspection and Testing

Alternative Maintenance Requirements [Effective Date: 15 January 2019]

11. Due to design constraints, a small number of older lifts or escalators may not be able to meet certain maintenance requirements stipulated under the First Schedule of the BSM Regulations. In such instances, the lift or escalator service contractor (“L/E Contractor”) maintaining the equipment may make an application for an alternative maintenance requirement to be accepted by the COB. Upon acceptance of the application, the L/E Contractor must maintain the equipment in accordance with the accepted alternative maintenance requirement. The application forms may be downloaded from BCA’s website (<https://www.bca.gov.sg/LiftSafety/lift.html> and <https://www.bca.gov.sg/EscalatorSafety/escalator.html>). Please note that the application must minimally satisfy the following two guiding principles.

- (i) It is proven that the maintenance requirement in the First Schedule of the BSM Regulations indeed cannot be complied with by virtue of the inherent design of the lift or escalator; and
- (ii) The alternative maintenance requirement will not affect the safe operation of the lift or escalator.

New Maintenance Requirements for Controller and Electrical System [Effective Date: 15 January 2019]

12. With more electronic controls introduced into lift and escalator systems, poorly maintained printed circuit boards (“PCBs”) could directly or indirectly affect safety related controls. All L/E Contractors are expected to ensure that the PCBs are at all times well-maintained and kept in a state of good and serviceable repair.

13. With effect from 15 January 2019, the maintenance requirements in the First Schedule of the BSM Regulations will include new requirements on the proper

maintenance of PCB which are part of the list of items regularly maintained by L/E contractors. The new requirements are applicable to maintenance requirements of both lifts and escalators. Please refer to **Annex D** for the changes.

Requirements for Home Lift, Vertical Platform Lift or Stairlift [Effective Date: 15 January 2019]

14. For home lift, vertical platform lift or stairlift, if there are no maintenance, examination, inspection or testing requirements specified in the manufacturer's recommendations or in the standards to which they were designed, the SPE(L&E) may propose alternative requirements for the Commissioner's consideration and acceptance. The relevant forms for this proposal can be downloaded from BCA's website (<https://www.bca.gov.sg/LiftSafety/lift.html> and <https://www.bca.gov.sg/EscalatorSafety/escalator.html>).

(D) Exclusion of Low-Rise Wheelchair Lifters [Effective Date: 15 January 2019]

15. From 15 January 2019 onwards, the amended BSM Regulations will exclude all wheelchair lifters, which satisfy all the following criteria, from complying with the maintenance and PTO requirements. A wheelchair lifter, which may take the form of a stairlift or vertical platform lift, is used to raise and transport a person with limited mobility to and from an elevated ground.

- (i) The wheelchair lifter has a maximum vertical displacement of less than 1,000mm during operation;
- (ii) exerts a maximum force of less than 150N when in operation; **and**
- (iii) serves only a single residential unit.

16. Notwithstanding the above exclusion, for their own safety, owners are reminded to maintain and check their wheelchair lifters from time to time to ensure that they are in a condition fit for operation.

(E) Preservation of Incident Site [Effective Date: 15 January 2019]

17. Currently, the owner and the L/E Contractor must inform BCA **as soon as practicable** upon the occurrence of certain incidents through the BCA incident reporting numbers (9088 7289 or 9782 7296) and within 24 hours submit an incident report using the prescribed form, which can be found at BCA's website at <https://www.bca.gov.sg/LiftSafety/lift.html>.

18. With the amendments to the BSM Regulations, no person shall, without the consent of the COB, alter, replace, remove or add to any machinery, equipment or article which may have contributed to the cause of the incident or modify the scene of the incident. The owner must also take all reasonable measures to prevent any person from doing so.

(F) Requirement to submit Video Recordings of Incident [Effective Date: 15 January 2019]

19. To facilitate investigation into any lift or escalator-related incident, with effect from 15 January 2019, the BSM Regulations require the owner of the incident equipment to provide video recordings (e.g. CCTV footages) of the incident within a stipulated time upon receipt of a written notice from the COB.

(G) Requirement to transfer Maintenance Records and Other Documents
[Effective Date: 15 January 2019]

20. When there is a change in L/E Contractor maintaining the lift or escalator, the outgoing L/E Contractor must, within 14 days after the contract termination, transfer maintenance records and other related documents (including the COB's acceptance of alternative maintenance requirements and acceptance of alternative standard or modification of requirements, etc.) to the owner. The owner must then transfer such maintenance records and documents to the new L/E Contractor within 14 days after the commencement of the new maintenance contract. L/E Contractors and owners are advised to apprise themselves of the complete list of documents and items that need to be transferred under the BSM Regulations.

SUMMARY OF EFFECTIVE DATES OF AMENDMENTS TO BSM REGULATIONS

21. Please refer to **Annex E** for the summary of the effective dates of the changes to the BSM Regulations.

FOR CLARIFICATION

22. We would appreciate it if you could convey the contents of this circular to the members of your organisation. For clarification, please submit your enquiry through BCA's Online Feedback Form at <https://www.bca.gov.sg/feedbackform/> or call us at 1800 342 5222.

Yours faithfully



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An MND Statutory Board

ANNEX A – Major Alteration or Replacement Works

Major alteration or replacement works on a lift or escalator includes, but is not limited to, any of the following:

Lift	Escalator
<ul style="list-style-type: none">(a) changing or removing any safety device of a lift, or adding any safety device to a lift(b) changing the mass of a lift car, including lift car finishing(c) changing the rated load or speed of a lift(d) changing the travel distance of a lift(e) changing the lift control operation (including changing the software or type of driving machine or brakes)(f) changing the number, type or size of the hoisting ropes supporting a lift car or its counterweight(g) changing the size of the guide rails of a lift(h) changing the type of safety gear(i) changing the lift landing door, lift car door and lift car door drive and control	changing the speed, drive, control, safety device, braking system or step band of an escalator

Note: To clarify, one-to-one replacement of parts will not be considered as major A/R works. This is to say that replacing a part of a lift or an escalator with a part of the same design and specifications does not constitute major A/R works on the lift or escalator.

ANNEX B – Applicable Standards / Codes for Major Alteration or Replacement Works

Type of Lift or Escalator	Applicable Codes/Standards for major A/R
Home lift	<ul style="list-style-type: none"> • SS 550:2009 as amended by Amendment No. 1, Amendment No. 2 published in January 2017 • Directive 2006/42/EC
Vertical platform lift	<ul style="list-style-type: none"> • EN 81-41:2010 • ASME 18.1-2014 • Directive 2006/42/EC
Stairlift	<ul style="list-style-type: none"> • EN 81-40:2008 • ASME 18.1-2014 • Directive 2006/42/EC
Any other lift	<ul style="list-style-type: none"> • SS 550:2009 as amended by Amendment No. 1, Amendment No. 2 published in January 2017
Escalator	<ul style="list-style-type: none"> • SS 626:2017

ANNEX C – Applicable Codes/Standards for Examination, Inspection and Testing, and Periodic Maintenance of Lifts or Escalators

Please refer to the applicable Codes/Standards and a clarification example below.

Type of Lift or Escalator	Applicable Codes/Standards for Examination, Inspection and Testing, and Periodic Maintenance
Home lift	<ul style="list-style-type: none"> • SS 550:2009 • SS 550:2009 as amended by Amendment No. 1 published in December 2014 • SS 550:2009 as amended by Amendment No. 1, Amendment No. 2 published in January 2017 • SS CP 2:2000 • SS CP 2:2000 as amended by Amendment No. 1 published in January 2004 • SS CP 2:1979 • SS CP 2:1979 as amended by Amendment No. 1 published in July 1980 • SS CP 2:1979 as amended by Amendment No. 1, Amendment No. 2 published in April 1982 • SS CP 2:1979 as amended by Amendment No. 1, Amendment No. 2, Amendment No. 3 published in October 1983 • SS CP 2:1979 as amended by Amendment No. 1, Amendment No. 2, Amendment No. 3, Amendment No. 4 published in June 1984 • SS CP 2:1979 as amended by Amendment No. 1, Amendment No. 2, Amendment No. 3, Amendment No. 4, Amendment No. 5 published in December 1987 • SS CP 2:1979 as amended by Amendment No. 1, Amendment No. 2, Amendment No. 3, Amendment No. 4, Amendment No. 5, Supplement No. 1 published in December 1987 • SS CP 2:1979 as amended by Amendment No. 1, Amendment No. 2, Amendment No. 3, Amendment No. 4, Amendment No. 5, Supplement No. 1, Amendment No. 6 published in May 1990 • Directive 2006/42/EC • Directive 98/37/EC • Directive 98/37/EC as amended by Directive 98/79/EC of the European Parliament and of the Council of 27 October 1998 • Directive 89/392/EEC • Directive 89/392/EEC as amended by Council Directive 91/368/EEC of 20 June 1991 • Directive 89/392/EEC as amended by Council Directive 91/368/EEC, Council Directive 93/44/EEC of 14 June 1993 • Directive 89/392/EEC as amended by Council Directive 91/368/EEC, Council Directive 93/44/EEC, Council Directive 93/68/EEC of 22 July 1993
Vertical platform lift	<ul style="list-style-type: none"> • EN 81-41:2010 • ASME 18.1-2014 • Directive 2006/42/EC • Directive 98/37/EC • Directive 98/37/EC as amended by Directive 98/79/EC of the European Parliament and of the Council of 27 October 1998 • Directive 89/392/EEC • Directive 89/392/EEC as amended by Council Directive 91/368/EEC of 20 June 1991 • Directive 89/392/EEC as amended by Council Directive 91/368/EEC, Council Directive 93/44/EEC of 14 June 1993 • Directive 89/392/EEC as amended by Council Directive 91/368/EEC, Council Directive 93/44/EEC, Council Directive 93/68/EEC of 22 July 1993

Type of Lift or Escalator	Applicable Codes/Standards for Examination, Inspection and Testing, and Periodic Maintenance
Stairlift	<ul style="list-style-type: none"> • EN 81-40:2008 • EN 81-40:2008 as amended on 31 December 2009 • ASME 18.1-2014 • Directive 2006/42/EC • Directive 98/37/EC • Directive 98/37/EC as amended by Directive 98/79/EC of the European Parliament and of the Council of 27 October 1998 • Directive 89/392/EEC • Directive 89/392/EEC as amended by Council Directive 91/368/EEC of 20 June 1991 • Directive 89/392/EEC as amended by Council Directive 91/368/EEC, Council Directive 93/44/EEC of 14 June 1993 • Directive 89/392/EEC as amended by Council Directive 91/368/EEC, Council Directive 93/44/EEC, Council Directive 93/68/EEC of 22 July 1993
Any other lift	<ul style="list-style-type: none"> • SS 550:2009 • SS 550:2009 as amended by Amendment No. 1 published in December 2014 • SS 550:2009 as amended by Amendment No. 1, Amendment No. 2 published in January 2017 • SS CP 2:2000 • SS CP 2:2000 as amended by Amendment No. 1 published in January 2004 • SS CP 2:1979 • SS CP 2:1979 as amended by Amendment No. 1 published in July 1980 • SS CP 2:1979 as amended by Amendment No. 1, Amendment No. 2 published in April 1982 • SS CP 2:1979 as amended by Amendment No. 1, Amendment No. 2, Amendment No. 3 published in October 1983 • SS CP 2:1979 as amended by Amendment No. 1, Amendment No. 2, Amendment No. 3, Amendment No. 4 published in June 1984 • SS CP 2:1979 as amended by Amendment No. 1, Amendment No. 2, Amendment No. 3, Amendment No. 4, Amendment No. 5 published in December 1987 • SS CP 2:1979 as amended by Amendment No. 1, Amendment No. 2, Amendment No. 3, Amendment No. 4, Amendment No. 5, Supplement No. 1 published in December 1987 • SS CP 2:1979 as amended by Amendment No. 1, Amendment No. 2, Amendment No. 3, Amendment No. 4, Amendment No. 5, Supplement No. 1, Amendment No. 6 published in May 1990
Escalator	<ul style="list-style-type: none"> • SS CP 15:1980 • SS CP 15:1990 • SS CP 15:2004 • SS 626:2017

For example, a lift that was installed in 2002 and complied with CP2: 2000, underwent major A/R works to replace its governor with a new compatible model in January 2014. The new governor would have to comply with the prevailing standard applicable at that time, i.e. SS 550: 2009. From 15 January 2019 onwards, the maintenance and annual testing of the new governor will have to comply with SS 550: 2009 while that of the rest of the lift may continue to comply with CP2: 2000.

ANNEX D – New Maintenance Requirements for Controller and Electrical System

Below table shows the expanded maintenance requirements for lifts and escalators in the area of controller and electrical system. The changes are highlighted in yellow.

Lift	Escalator
<p>(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> <p>(b) Controller must initiate immediate stopping of lift car and prevent lift movement under any condition that is unsafe to 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>	<p>(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> <p>(b) Controller must initiate immediate stopping of escalator and prevent escalator movement under any condition that is unsafe to passengers and maintenance workers.</p> <p>(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).</p> <p>(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).</p> <p>(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.</p>

ANNEX E – Summary of Effective Dates of Changes to the BSM Regulations

Amendments	Effective Date
Specialist Professional Engineer (Lift & Escalator)	15 January 2019. AEs will no longer certify lifts and escalators from 15 July 2019 onwards.
Change of applicable standard/code for major A/R works for escalators from SS CP 15 to SS 626	15 April 2019.
All other changes	15 January 2019

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All registered escalator contractors with BCA RW03

All lift owners including Town Councils

All escalator owners

All Professional Engineers registered with Professional Engineers Board

All Authorised Examiners registered with Ministry of Manpower