

TEST AND EXAMINATION REPORT FOR ELECTRIC PASSENGER LIFTS*/FREIGHT LIFTS*/VEHICLE LIFTS*

1. Description of Installation
 Location _____
 Manufacturer _____ Plant No. _____
 Lift Identification No. _____ Length of Travel _____ m
 Levels Served _____
 Rated Load _____ kg _____ Person Rated Speed _____ m/s
 Power Supply at Time of Test _____ Volt _____ Phase _____ Hz
 Levelling tolerance ± _____ mm Number of Starts _____ /hr
 Car Floor Area _____ m²
 Machine Room Location: above lift well*/below lift well*/at side*/Others _____
 Is this a fireman's lift? Yes No
 Is this lift for persons with a disability? Yes No
 The model no. and manufacturer of the controller _____

2. Static Examination – Mechanical

2.1 Suspension
 (a) Suspension Ropes
 Certificate No. & Date of Issue _____
 (i) Number _____ (ii) Nominal Diameter _____ mm
 (b) Type of Anchorages: Car _____
 Counterweight _____
 Have the anchorages been examined and found in good working condition? Yes No

2.2 Safety Gear
 Has the safety gear been certified in accordance with 5.11.1 of the Design Code, Part 1? Yes No
 Model No., _____
 Certificate No. & Date of Issue _____

2.3 Energy Dissipation Buffers N.A.*/Fitted*
 (a) Have the buffers been certified in accordance with 6.2.1 of the Design Code, Part 1? Yes No
 (b) Model No., _____
 Certificate No. & Date of Issue _____
 (c) Is the buffer switch functioning properly? Yes No

2.4 Energy Accumulation Buffers N.A.*/Fitted*
 (a) Have the buffers been certified in accordance with 6.2.1 of the Design Code, Part 1? N.A. Yes No
 (b) Model No., _____
 Certificate No. & Date of Issue _____
 (c) Do the buffers comply with 6.2.2 of the Design Code, Part 1? Yes No

2.5 Brake
 Does the brake sustain the static car, in the lower part of its travel, with the rated load plus 25% (passenger/general freight lifts) or 50% (vehicle lifts/industrial truck loaded freight lifts)? Yes No

2.6 Overspeed Governor
 (a) Has the governor been certified in accordance with 5.12.1 of the Design Code, Part 1? Yes No
 (b) Model No., _____
 Certificate No. & Date of Issue _____
 (c) Is the data plate in accordance with 11.6 of the Design Code, Part 1? Yes No
 (d) Does the governor rope conform to 5.12.6 of the Design Code, Part 1? Yes No
 (e) Is the governor rope slack switch working properly? Yes No

2.7 Landing Door Locking Device
 Has the landing door locking device been certified in accordance with 3.7.3.1 of the Design Code, Part 1? Yes No
 Model No., _____
 Certificate No. & Date of Issue _____

2.8 Ascending Car Overspeed Protection Means
 Has the ascending car overspeed protection means been certified in accordance with 5.13.11 of the Design Code, Part 1? N.A. Yes No
 (a) Overspeed Governor
 (i) Is the Overspeed Governor using the one as mentioned in item 2.6? Yes No
 (If 'Yes', skip the following and go to item 2.8 (b).)
 (ii) Has the governor been certified in accordance with 5.12.1 of the Design Code, Part 1? Yes No
 (iii) Model No., _____
 Certificate No. & Date of Issue _____
 (iv) Is the data plate in accordance with 11.6 of the Design Code, Part 1? Yes No
 (v) Does the governor rope conform to 5.12.6 of the Design Code, Part 1? Yes No
 (vi) Is the governor rope slack switch working properly? Yes No
 (b) Speed Reducing Element
 (i) Type: Car Safety Gear (acting upwards) Brake on Sheave
 Counterweight Safety Gear (acting downwards) Rope Gripper

* Delete whichever not applicable

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Others _____

(ii) Model No., _____
 Certificate No. & Date of Issue _____

3. Static Examination – Electrical

3.1 Insulation Resistance to Earth

- (a) Lift Motor _____ MO
 (b) MG Set (if fitted): Motor _____ MO Generator _____ MO
 (c) Power System _____ MO (d) Safety Circuits _____ MO

3.2 Earthing

- (a) Is the maximum continuity resistance to earth less than 0.5Ω? Yes No
 (b) Is the car connected to controller earthing terminal by a separate conductor=0.75mm²? Yes No

3.3 Protection of Conductors

Is the fixed wiring in conduit or trunking (or fittings which ensure equivalent protection) throughout? Yes No

3.4 Phase Reversal and Phase Failure Devices

Do the phase reversal and phase failure devices operate correctly? Yes No

4. Dynamic Tests

4.1 Safety Contacts/Circuits

- (a) Have the contacts at each landing entrance been proved to ensure that when broken there is no movement of the car? Yes No
 (b) Have the mechanical locks at each landing entrance been proved for positive locking? Yes No
 (c) Have the car door/gate contacts been proved so that when broken there is no car movement? Yes No
 (d) If separate terminal stopping switches are fitted, do they operate satisfactorily? N.A. Yes No
 (e) Do the final limit switches remove the motor supply before the car or counterweight contact the buffers? Yes No
 (f) Have the stopping devices on the car top, in the pulley room and pit, been proved so that when broken no movement of the car occurs? Yes No
 (g) Have all other switches/contacts in the safety circuit been proved so that when broken no car movement occurs? Yes No
 (h) Does the earthing of the most remote contact (lock or

push button) operate a fuse or trip a breaker without delay? Yes No

(i) Are all other electromechanical interlocks working properly? Yes No

4.2 Car Top Control Station

- (a) Speed Up _____ m/s (b) Speed Down _____ m/s
 (c) Does the design and operation of the car top station comply with 10.3.1.3 of the Design Code, Part 1? Yes No

4.3 Clearances and Runbys

- (a) With the counterweight on its fully compressed buffers, how much further can the lift car move upwards before it hits any obstruction? _____ mm
 (b) What is the distance between the car roof and the lowest parts of roof of the lift well, when the car levels with top floor? _____ mm
 (c) With the car resting on its fully compressed buffers, is there a sufficient space to accommodate a rectangular block as specified in 1.5.3(a) of the Design Code, Part 1 with at least 0.5m between the bottom of the pit and the lowest point of the car? Yes No
 (d) Distance of bottom runby of car _____ mm
 (e) Distance of bottom runby of counterweight _____ mm

4.4 Door Tests

- (a) Type of sliding doors Horizontal*/Vertical*/collapsible*
 (b) Form of operation of doors Manual*/Powered*
 (c) Power supply to door control circuit _____ V
 (d) Maximum force at the mid-point of the travel _____ N
 (e) Does the construction & operation of the door re-opening device comply with 3.5.2.2 & 4.6.2.2*/3.5.2.3 & 4.6.2.3* of the Design Code, Part 1? N.A. Yes No
 (f) Do the car doors fulfil the requirements of 4.10 of the Design Code, Part 1? Yes No

5. Measurements of the Electrical System

- (a) Particulars of Lift Motor (as stated on data plate)
 Maker _____ Drive System _____
 Serial No. _____ Speed _____ rpm Frequency _____ Hz
 Power rating _____ kW Rated Voltage _____ V Current Rating _____ A
 (b) Particulars of MG Set Drive Motor*/Convertor* (as stated on data plate)
 Maker _____ Serial No. _____

* Delete whichever not applicable

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Power Rating _____ kVA Voltage _____ V
 Current Rating _____ A Speed _____ rpm Frequency _____ Hz
 (Note: Speed and frequency not applicable for converter)

State how the governor was tested on the installation:
 Simulation*/Free Fall*/Actual Overspeed*/Others* _____

(c) Current and Speed Tests (at mid-point of travel)

| | Lift Motor Speed | Lift Speed | Lift Motor Input | | System Input MG Set*/Convector* | |
|--------------|------------------|------------|------------------|---|---------------------------------|---|
| No Load Down | rpm | m/s | V | A | V | A |
| Full Load Up | rpm | m/s | V | A | V | A |

(d) Overcurrent protection devices

| | Lift Motor | MG Set Drive Motor | Convector |
|----------|------------|--------------------|-----------|
| Type | | | |
| Settings | | | |

6. Overspeed Governor Tests

6.1 Car Governor
 Governor Type _____ Serial No. _____

| | | Electrical | Mechanical |
|-----------------|----------|------------|------------|
| Device Tripping | Marked | m/s | m/s |
| Speed | Measured | m/s | m/s |

State how the governor was tested on the installation:
 Simulation*/Free Fall*/Actual Overspeed*/Others* _____

6.2 Counterweight Governor (if fitted)
 Governor Type _____ Serial No. _____

| | | Electrical | Mechanical |
|-----------------|----------|------------|------------|
| Device Tripping | Marked | m/s | m/s |
| Speed | Measured | m/s | m/s |

7. Car Safety Gear Tests

Note: The following tests should be conducted with the car descending, with the brake open and the machine continuing to run till the ropes slip or become slack.

- (a) Progressive Type N.A.*/Fitted*
- (i) Does the safety gear operate correctly when engaging at rated speed with the rated load uniformly distributed in the lift car? N.A. Yes No
- OR
- (ii) Does the safety gear operate correctly when engaging at levelling or inspection speed with 125%*/150%* of the rated load uniformly distributed in the lift car? N.A. Yes No
- State the speed _____ m/s
- (b) Instantaneous Type N.A.*/Fitted*
- Does the safety gear operate correctly when engaging at rated speed with the rated load uniformly distributed? Yes No
- (c) What was the stopping distance in the test? _____ m
- (d) After the lift car was brought to a halt in the above test was the floor horizontal, or sloping less than 5% from the horizontal? Yes No

8. Counterweight Safety Gear Tests

Note: The following tests should be conducted with the counterweight descending, with the brake open and the machine continuing to run till the ropes slip or become slack.

- (a) Progressive Type N.A.*/Fitted*
- (i) Does the safety gear operate correctly when engaging at rated speed with the car empty? N.A. Yes No
- OR
- (ii) Does the safety gear operate correctly when engaging at levelling or inspection speed with the car empty? N.A. Yes No
- (b) Instantaneous Type N.A.*/Fitted*
- Does the safety gear operate correctly when engaging at rated speed with the car empty? Yes No

9. Ascending Car Overspeed Protection Means Tests

9.1 Overspeed Governor Tests

(a) Car Governor
 Governor Type _____ Serial No. _____

* Delete whichever not applicable

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| | | Electrical | Mechanical |
|-----------------|----------|------------|------------|
| Device Tripping | Marked | m/s | m/s |
| Speed (upward) | Measured | m/s | m/s |

State how the governor was tested on the installation:
Simulation*/Actual Overspeed*/Others* _____

(b) Counterweight Governor (if fitted)
Governor Type _____ Serial No. _____

| | | Electrical | Mechanical |
|------------------|----------|------------|------------|
| Device Tripping | Marked | m/s | m/s |
| Speed (downward) | Measured | m/s | m/s |

State how the governor was tested on the installation:
Simulation*/Actual Overspeed*/Others* _____

9.2 Speed Reducing Element Tests

- (a) Car Safety Gear (if fitted)
The test should be conducted with the car ascending and the brake open.
- (i) Does the safety gear operate correctly when engaging at preset speed with the car empty? Yes No
State the measured speed _____ m/s
- (ii) What was the stopping distance in the test? _____m
- (iii) What was the deceleration in the test? _____m/s²
- (b) Counterweight Safety Gear (if fitted)
The test should be conducted with the car ascending and the brake open.
- (i) Does the safety gear operate correctly when engaging at preset speed with the car empty? Yes No
State the measured speed _____ m/s
- (ii) What was the stopping distance in the test? _____m
- (iii) What was the deceleration in the test? _____m/s²

- (c) Rope Gripper (if fitted)
The test should be conducted with the car ascending and the brake open.
- (i) Does the rope gripper operate correctly when engaging at preset speed with the car empty? Yes No
State the measured speed _____ m/s
- (ii) What was the stopping distance in the test? _____m
- (iii) What was the deceleration in the test? _____m/s²
- (d) Brake on Sheave (if fitted)
The test should be conducted with the car ascending.
- (i) Does the brake on sheave operate correctly when engaging at preset speed with the car empty? Yes No
State the measured speed _____ m/s
- (ii) What was the stopping distance in the test? _____m
- (iii) What was the deceleration in the test? _____m/s²

10. Buffer Tests

- (a) For Car Buffers
- (i) When the car was brought into contact with the buffers at rated load at rated speed, or at a speed for which the stroke of the buffers has been calculated, was the operation satisfactory? Yes No
Yes No
- (ii) Do the buffers recover automatically after operation? Yes No
- (b) For Counterweight Buffers
When the counterweight was brought into contact with the buffers with the car empty at rated speed, or a speed for which the stroke of the buffers has been calculated, was the operation satisfactory? Yes No

11. Traction Checks

- (a) Does the car stop under emergency conditions
- (i) with the car empty when travelling upwards at rated speed? Yes No
- (ii) with the rated load plus 25% when travelling downwards in the lower part of the lift well at rated speed? Yes No

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(b) With the counterweight resting on its fully compressed buffers, is it impossible for the empty car to be raised under power? Yes No

12. Emergency Stopping Distance
What was the stopping distance of the car travelling in down direction at rated speed and carrying 125% of the rated load under emergency stopping conditions? _____ m

13. Duty Cycle Test
Does the lift operate satisfactorily for a period of at least 0.5 hour when running with rated load, full travel and intermediate stops at a rate of starts equal to the number of starts per hour recommended in Item 1? Yes No

14. General (Lift Work)

(a) Is the maximum load indicated in the car and does it comply with 11.2.1 of the Design Code, Part 1? Yes No

(b) Does the fireman's lift operation function correctly? N.A. Yes No

(c) Are the emergency instructions displayed in the machine room? Yes No

(d) Does the emergency operation system function correctly in accordance with 8.5 of the Design Code, Part 1? Yes No

(e) Does the emergency lighting of the car comply with 4.16.3 of the Design Code, Part 1? Yes No

(f) What are the emergency alarm devices?

| | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| | Mangt office | M/C room | Lift car | Main lobby/Pit |
| Alarm Bell* | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Intercom* | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Indication light* | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Indication light for acknowledgement & the notice* | | | <input type="checkbox"/> | |

(g) Does the overload device operate satisfactorily? Yes No

15. General (Other works)

(a) Is the machine room artificial lighting adequate for maintenance purposes? Yes No

(b) Does the artificial lighting in the lift well comply with 1.7(b) of the Design Code, Part 1? Yes No

(c) Are the machine room conditions satisfactory? Yes No

(d) Are the provisions for ventilating the machine room adequate? Yes No

(e) Are the machine room doors or trap doors fitted with

a suitable lock to comply with 3.15.3 and 3.15.4 of COP on Building Works for Lifts and Escalators? Yes No

(f) Are the safety means of access to all items of equipment in accordance with the Design Code, Part 1 and COP on Building Works for Lifts and Escalators? Yes No

If no, state details _____

(g) Are the hoistway emergency doors (if fitted), in compliance with 3.2 of COP on Building Works for Lifts and Escalators? N.A. Yes No

(h) Documents (copy only) in respect of exemptions (if any) shall be provided for reference. N.A. Yes No

(i) Are CCTV camera provided in lift car and CCTV monitors provided in management office* and machine room*? N.A. Yes No

16. Declaration

I certify that on _____ the equipment was thoroughly examined and found to be free from obvious defects, and to comply with Part 1 of the Design Code, COP for Lift Works and Escalator Works and COP on Building Works for Lifts and Escalators with the exception of the following items and that the foregoing is an accurate record of the test and examination carried out.

Exceptions:

Name & Registration No. of Registered Lift Engineer

Signature of Registered Lift Engineer

Name of Registered Lift Contractor

Date

Remarks: COP means Code of Practice

* Delete whichever not applicable