

TEST AND EXAMINATION REPORT FOR HYDRAULIC 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 _____ Persons Rated Speed Up _____ m/s
 Dia. of Ram _____ m Ram Action: Direct*/Indirect* Type of Ram: Single*/Telescopic*
 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

Devices provided against free fall and descent with excessive speed of the car:-

(i) Safety gear tripped by overspeed governor Yes No
 (ii) Safety gear tripped by failure of suspension gear or by safety rope Yes No
 (iii) Rupture valve Yes No
 (iv) Restrictor Yes No

Devices/system provided against creeping of the car:-

(i) Safety gear tripped by downward movement of the car Yes No
 (ii) Pawl device Yes No
 (iii) Clamping device Yes No
 (iv) Electrical anti-creep system Yes No

2. Static Examination - Mechanical

2.1 Jack
 Single Jack Multi Jack Number of Jacks _____
 In multi jack system, are the jacks, in compliance with 8.1.3 of the Design Code, Part 2? N.A. Yes No

2.2 Suspension
 (a) Suspension Ropes
 (i) Certificate No. & Date of Issue _____
 (ii) Number _____ Nominal Diameter _____ mm
 (b) Type of Anchorage: Car _____
 Counterweight (if provided) _____
 Have the anchorages been examined and found in good working condition? Yes No
 N.A.*/Fitted*

2.3 Suspension Chains
 (a) Number _____ (b) Pitch _____ mm

(c) Type and Construction _____

2.4 Safety Gear N.A.*/Fitted*
 Has the safety gear been certified in accordance with 5.10.1.5 of the Design Code, Part 2? Yes No
 Model No., _____
 Certificate No. & Date of issue _____

2.5 Energy Dissipation Buffers N.A.*/Fitted*
 (a) Have the buffers been certified in accordance with F5 of BS5655, Part 2? Yes No
 (b) Model No., _____
 Certificate No. & Date of issue _____
 (c) Is the buffer switch functioning properly? Yes No

2.6 Energy Accumulation Buffers N.A.*/Fitted*
 (a) Have the buffers been certified in accordance with F5 of BS5655 Part 2? N.A. Yes No
 (b) Do the buffers comply with 6.2.3 of the Design Code, Part 2? Yes No

2.7 Overspeed Governor N.A.*/Fitted*
 (a) Has the governor been certified in accordance with F.4.3 of BS5655 Part 2? 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 2? Yes No
 (d) Does the governor rope conform to 5.12.6 of the Design Code, Part 2? Yes No
 (e) Is the governor slack rope switch working properly? Yes No

2.8 Landing Door Locking Device
 Has the landing door locking device been certified in accordance with 3.7.3.1 of the Design Code, Part 2? Yes No
 Model No., _____
 Certificate No. & Date of Issue _____

3. Static Examination – Electrical

3.1 Insulation Resistance to Earth
 (a) Pump Motor _____ MO (b) Power System _____ MO
 (c) Safety Circuits _____ MO

* Delete whichever not applicable

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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 $\geq 0.75\text{mm}^2$? 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 Failure and Phase Reversal Devices

Do the phase failure and phase reversal 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) Does the final limit switch operate in accordance with 6.3 of the Design Code, Part 2? 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 2? Yes No

4.3 Clearances and Runbys

- (a) Will the car and counterweight (if fitted) clear all obstacles when driven at slow speed:
- (i) with the car and rated load compressing the car buffers? Yes No
- (ii) with the counterweight (if fitted) compressing its buffer (car empty)? N.A. Yes No
- (iii) with the ram fully extended to the ram stop? Yes No
- (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 the rectangular block as specified in 1.5.2(a) of the Design Code, Part 2 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 (if fitted) _____ 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 2? N.A. Yes No
- (f) Do the car doors fulfil the requirements of 4.10 of the Design Code, Part 2? Yes No

5. Measurements of the Hydraulic and Electrical System

Note: 1 bar = $10^5\text{N/m}^2 = 10^5\text{Pa}$

- (a) With rated load in the car and highest floor level, state static hydraulic pressure _____ bar
- (b) When subject to 200% of full load pressure applied between the non-return valve and the jack (included) for a period of 5 minutes, is there evidence of any pressure drop or leakage of hydraulic fluid? Yes No
- (c) Particulars of the pump motor (as stated on data plate)
- Maker _____ Drive System _____
- Serial No. _____ Speed _____ r/min Frequency _____ Hz
- Power Rating _____ kW Rated Voltage _____ V Current Rating _____ A

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(d) Particulars of the pump (as stated on data plate)
 Maker _____ Serial No. _____ Type _____

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

	Hydraulic pressure (See Note 1)	Lift Speed	Motor Input (See Note 2)	
No Load Up	bar	m/s	V	A
Rated Load Up	bar	m/s	V	A

Note 1 – The pressure readings should be taken between the check valve, or down direction valve, and the supply line to the cylinder.

Note 2 – The motor current readings on conductors adjacent to the motor terminal block should be taken with the motor running steadily.

- (f) Pressure relief valve operated at pressure of _____ bar and is the integrity of the pipework satisfactory? Yes No
- (g) Is the relief valve secured against any unauthorized interference? Yes No
- (h) Does the check valve hold the car with rated load at floor level? Yes No
- (i) Does the rupture valve function correctly? N.A. Yes No
 Does the operation of the manual lowering valve lower the
- (j) car at a slow speed not exceeding 0.3m/s? Yes No
- (k) In the case of an indirect acting lift, does the slack chain*/ropes* switch or pressure switch prevent operation of the lift until pressure is re-established by the re-setting of the switch? N.A. Yes No
- (l) Are precautions against any overheating of the fluid provided? Yes No

6. Overspeed Governor/Safety Rope/Suspension Gear Tests

(a) Governor _____ Type _____ Serial No. _____ N.A.*/Fitted*

		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* _____
 OR

(b) Safety Rope
 If the safety gear*/clamping device* is tripped by a safety rope, does the triggering mechanism operate satisfactory? N.A. Yes No

(c) Suspension Gear
 If the safety gear*/clamping device* is tripped by the failure of suspension gear, does the triggering mechanism operate satisfactorily? N.A. Yes No
 N.A.*/Fitted*

7. Car Safety Gear Tests

Note: The following tests should be conducted with the car descending.

- (a) Progressive Type
 Does the safety gear operate correctly if engaged at levelling*/inspection*/rated* speed with 100%*/125%*/150%* of the rated load uniformly distributed in the lift car? Yes No
 State the speed: _____ m/s
 OR
- (b) Instantaneous Type
 Does the safety gear operate correctly if engaged at rated speed with the rated load uniformly distributed in the lift car? Yes No
- (c) What was the stopping distance in the test? _____ mm
- (d) After the lift car was brought to a halt in the above test, was the car floor horizontal, or sloping less than 5% from the horizontal? Yes No

8. Clamping Device Tests

- (a) Progressive Type
 Does the clamping device operate correctly when engaging with 125%*/150%* of the rated load uniformly distributed in the lift car? Yes No
- (b) Instantaneous Type
 Does the clamping device operate correctly when engaging with 125%*/150%* of the rated load uniformly distributed in the car? Yes No

9. Buffer Tests

- (a) For Car Buffers
 i) When the car was brought into contact with the buffers at rated load and at rated speed, or at a speed for which the stroke of the buffers has been calculated, was the operation satisfactory? Yes No

* Delete whichever not applicable

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- ii) Do the buffers automatically return to their designed position after undergoing compression? Yes No
- (b) For Counterweight Buffers (if fitted)
When the counterweight was brought into contact with the buffers with the car empty and travelling at rated speed, or a speed for which the stroke of the buffers has been calculated, was the operation satisfactory? N.A. Yes No
10. Anti-Creep
Does the anti-creep device operate in accordance with conditions stipulated in 10.3.1.4 of the Design Code, Part 2? Yes No
11. Duty Cycle Test
Does the lift operate satisfactory for a period of at least 0.5 hour when running with rated load over the full travel distance and serving intermediate stops at a rate equal to the number of starts per hour as stated in Item 1? Yes No
12. 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 2? 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 manual emergency operation system function correctly in accordance with 8.9 of the Design Code, Part 2? Yes No
- (e) Does the emergency lighting of the car comply with 4.16.3 of the Design Code, Part 2? 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
13. General (Other Work)
- (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 2? Yes No

- (c) Are the machine room conditions satisfactory? Yes No
- (d) Are the provisions for ventilation of 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 2 and COP on Building Works on Lifts and Escalators? Yes No
- If no, state details _____
- (g) Are the hoistway emergency door (if fitted), in compliance with 3.2 of COP of 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

14. Declaration

I certify that on _____ the equipment was thoroughly examined found to be free from obvious defects, and to comply with Part 2 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.

Exception:

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