EXAMINATION REPORT FOR HYDRAULIC LIFTS

1. Description of Installation

Location
(Address) _____

Manufacturer _____

Model _____

Lift No. _____

Lift Location ID _____ Length of Travel _____ m

Passenger Lift ☐ Freight Lift ☐ Vehicle Lift ☐ Platform Lift ☐ Stairlift ☐

Car Parking System ☐

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 / systems 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

Not Tested ☐

2.1 Jack Not Tested ☐

Single Jack ☐ Multi Jack ☐ Number of Jacks _____

In multi jack system, do the jacks comply with relevant clause of the applicable Design Code?

N.A. ☐ Yes ☐ No ☐

2.2 Suspension Not Tested ☐

(a) Suspension Ropes

Certificate No. _____ Date of issue _____

Number _____ Nominal Diameter _____ mm

Have the suspension ropes attained the criteria for replacement in accordance with relevant clause of the applicable Works Code?

Yes ☐ No ☐

(b) Type of Anchorages: Car _____

Counterweight (if provided) _____

Have the anchorages been examined and found in good working condition?

Yes ☐ No ☐

2.3 Suspension Chain N.A. ☐ Fitted ☐ Not Tested ☐

(a) Number _____ (b) Pitch _____ mm

(c) Type _____ Construction _____

2.4 Safety Gear N.A. ☐ Fitted ☐ Not Tested ☐

Has the safety gear been certified in accordance with relevant clause of the applicable Design Code? Yes ☐ No ☐

Manufacturer _____

Model _____

Certificate No. _____ Date of issue _____

2.5 Energy Dissipation Buffer N.A. ☐ Fitted ☐ Not Tested ☐

(a) Has the buffers been certified in accordance with relevant clause of the applicable Design Code? Yes ☐ No ☐

(b) Manufacturer _____

Model _____

Certificate No. _____ Date of issue _____

(c) Is the buffer switch functioning properly? Yes ☐ No ☐

2.6 Energy Accumulation Buffer N.A. ☐ Fitted ☐ Not Tested ☐

(a) Has the buffers been certified in accordance with relevant clause of the applicable Design Code?

N.A. ☐ Yes ☐ No ☐

(b) Manufacturer _____

Model _____

Certificate No. _____ Date of issue _____

(c) Do the buffers comply with relevant clause of the applicable Design Code?

Yes ☐ No ☐

EXAMINATION REPORT FOR HYDRAULIC LIFTS

2.7 Overspeed Governor N.A. ☐ Fitted ☐ Not Tested ☐

(a) Has the governor been certified in accordance with relevant clause of the applicable Design Code? Yes ☐ No ☐

(b) Manufacturer _____

Model _____

Certificate No. _____ Date of issue _____

(c) Is the data plate in accordance with relevant clause of the applicable Design Code? Yes ☐ No ☐

(d) Does the governor rope conform to relevant clause of the applicable Design Code? Yes ☐ No ☐

(e) Is the governor slack rope switch working properly? Yes ☐ No ☐

2.8.1 Door Locking Device Not Tested ☐

(a) Has the landing door locking device been certified in accordance with relevant clause of the applicable Design Code? Yes ☐ No ☐

Manufacturer _____

Model _____

Certificate No. _____ Date of issue _____

(b) Does the car door locking device comply with relevant clause of the applicable Design Code? Yes ☐ No ☐

Manufacturer _____

Model _____

Certificate No. _____ Date of issue _____

2.8.2 Door Locking Device (2nd Type) Not Tested ☐

(a) Landing Door Locking Device

New / Added ☐ Replaced ☐ Existing ☐ N.A. ☐

Has the landing door locking device been certified in accordance with relevant clause of the applicable Design Code? Yes ☐ No ☐

Manufacturer _____

Model _____

Certificate No. _____ Date of issue _____

(b) Car Door Locking Device (2nd Type)

New / Added ☐ Replaced ☐ Existing ☐ N.A. ☐

Does the car door locking device comply with relevant clause of the applicable Design Code? Yes ☐ No ☐

Manufacturer _____

Model _____

Certificate No. _____ Date of issue _____

2.8.3 Add or replacement of door panel (for major alteration works only) N.A. ☐

Car Door Panel Added ☐ Replaced ☐

Landing Door Panel Added ☐ Replaced ☐

Floor(s): _____

2.9 Rupture Valve/One-way Restrictor Not Tested ☐

Has the rupture valve/one-way restrictor been certified in accordance with the relevant clause of the applicable Design Code? N.A. ☐ Yes ☐ No ☐

Manufacturer _____

Model _____

Certificate No. _____ Date of issue _____

2.10 Unintended Car Movement Protection Means Not Tested ☐

New / Added ☐ Replaced ☐ Existing ☐ N.A. ☐

(a) Type of Unintended Car Movement Protection Means

Car Safety Gear ☐ Valve ☐ Others _____ ☐

(b) Has the unintended car movement protection means in 2.10 (a) been certified in accordance with the relevant clause of the applicable Design Code? N.A. ☐ Yes ☐ No ☐

Manufacturer _____

Model _____

Certificate No. _____ Date of issue _____

EXAMINATION REPORT FOR HYDRAULIC LIFTS

3. Static Examination – Electrical Not Tested ☐

3.1 Insulation Resistance to Earth Not Tested ☐

(a) Pump Motor _____ MΩ (b) Power System _____ MΩ

(c) Safety Circuits _____ MΩ

3.2 Earthing Not Tested ☐

(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 Not Tested ☐

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 Not Tested ☐

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

4. Dynamic Tests Not Tested ☐

4.1 Safety Contacts/Circuits Not Tested ☐

(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 movement of the car? Yes ☐ No ☐

(d) If separate terminal stopping switches are fitted, do they operate satisfactorily? N.A. ☐ Yes ☐ No ☐

(e) Do the final limit switch operate in accordance with relevant clause of the applicable Design Code? Yes ☐ No ☐

(f) Have the stopping devices on the car top, in the pulley room and pit been proved so that when broken there is no movement of the car? Yes ☐ No ☐

(g) Have all other switches/contacts in the safety circuit been proved so that when broken there is no movement of the car? Yes ☐ No ☐

(h) Does the earthing of the most remote contact (lock or push button) operates 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 Not Tested ☐

(a) Speed Up _____ m/s (b) Speed Down _____ m/s

(c) Does the design and operation of the car top station comply with relevant clause of the applicable Design Code? Yes ☐ No ☐

4.3 Clearances and Runbys Not Tested ☐

(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 sufficient space to accommodate the rectangular block as specified in relevant clause of the applicable Design Code with at least 0.5 m 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

4.4.1 Door Tests Not Tested ☐

(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 relevant clause of the applicable Design Code? N.A. ☐ Yes ☐ No ☐

(f) Do the car doors fulfil the requirements of relevant clause of the applicable Design Code? Yes ☐ No ☐

4.4.2 Door Test (2nd Type) Not Tested ☐

(a) Type of sliding door Horizontal ☐ / Vertical Collapsible ☐

(b) Form of operation of door 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 relevant clause of the applicable Design Code? N.A. ☐ Yes ☐ No ☐

(f) Do the car doors fulfil the requirements of relevant clause of the applicable Design Code? Yes ☐ No ☐

EXAMINATION REPORT FOR HYDRAULIC LIFTS

5. Measurements of the Hydraulic and Electrical System Not Tested ☐

Note: 1 bar = $10^5 N/m^2 = 10^5 Pa$

(a) With rated load in the car and at the highest floor level, state the 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 pump motor (as stated on data plate)

Maker _____ Drive System _____

Serial No. _____ Speed _____ rpm Frequency _____ Hz

Power Rating _____ kW Rated Voltage _____ V Current Rating _____ A

(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 valves, 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 ☐

(j) Does the operation of the manual lowering valve lower the 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 Not Tested ☐

(a) Governor N.A. ☐ Fitted ☐

Type _____ Serial No. _____

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

State how the governor was tested on the installation:

Simulation ☐ / Free Fall ☐ / Actual Overspeed ☐ / Others ☐ (please specify) _____

OR

(b) Safety Rope

If the safety gear ☐ / clamping device ☐ is tripped by a safety rope, does the triggering mechanism operates satisfactorily? 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 ☐

7. Car Safety Gear Tests N.A. ☐ Fitted ☐ Not Tested ☐

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

(a) Progressive Type

Does the safety gear operate correctly when engaging 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 when engaging 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 floor horizontal, or sloping less than 5% from the horizontal? Yes ☐ No ☐

EXAMINATION REPORT FOR HYDRAULIC LIFTS

8. Clamping Device Tests N.A. ☐ Fitted ☐ Not Tested ☐

(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. Unintended Car Movement Protection Not Tested ☐

(a) Subsequent to the operation for a downward moving lift car,

(i) the horizontal distance between the well wall and the sill or the entrance frame of the lift car (among from the level of the landing sill to 1,200mm downward) _____ mm

(ii) the free distance from car sill to landing door lintel _____ mm

(b) What was the deceleration in the test? _____ m/s²

10. Buffer Tests Not Tested ☐

(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 ☐

(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 ☐

11. Anti-Creep Not Tested ☐

Does the anti-creep device operate in accordance with conditions stipulated in relevant clause of the applicable Design Code? Yes ☐ No ☐

12. Duty Cycle Test Not Tested ☐

Does the lift operate satisfactorily 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 of starts equals to the number of starts per hour as stated in item 1? Yes ☐ No ☐

13. General (Lift Works)

(a) Is the maximum load indicated in the car and does it comply with relevant clause of the applicable Design Code? 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 relevant clause of the applicable Design Code? Yes ☐ No ☐

(e) Does the emergency lighting of the car comply with relevant clause of the applicable Design Code? Yes ☐ No ☐

(f) What are the emergency alarm devices?

	CarTop/ Pit	Management office	M/C room	Lift car	Main lobby/ Pit
Alarm bell		☐	☐	☐	☐
Intercom	☐	☐	☐	☐	
Indication light		☐	☐		
Indication light for acknowledgement & the notice			☐	☐	

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

EXAMINATION REPORT FOR HYDRAULIC LIFTS

14. General (Other works)

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

(b) Is the artificial lighting in the lift well comply with relevant clause of the applicable Design Code? 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 relevant clause of the applicable 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 relevant clause of the applicable 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 relevant clause of the applicable 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 and ☐ main lobby? N.A. ☐ Yes ☐ No ☐

15. Declaration

I certify that on _____ the lift and all its associated equipment or machinery was thoroughly examined, and found to be free from obvious defects and in safe working order. I confirm also that the design and construction of the lift and all its associated equipment or machinery complied with relevant clause of the applicable Design Code, Works Code, and CoP on Building Works for Lifts and Escalators with the exception of the following items (if any, please specify).

Exceptions & Remarks:

The information in this examination report is an accurate record of the examination carried out on the aforementioned date.

Remarks:

Design Code means CoP on the Design and Construction of Lifts and Escalators

Works Code means CoP for Lift Works and Escalator Works

_____ Name & Registration No. of Registered Lift Engineer

_____ Signature of Registered Lift Engineer

_____ Date