PAS 32-2:1999

Specification for examination and test of new lifts before putting into service —

Part 2: Hydraulic lifts

ICS 91.140.90

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Contents

Foreword

Lifts Directive 95/16/EC requires the installer of a lift to take responsibility for its design, manufacture, installation and placing upon the market.

For conformity assessment the Directive requires that before placing upon the market and putting into service a lift shall have undergone certain procedures including inspection and test.

The inspection and test procedures may be undertaken by the installer provided that:

a) the installer can demonstrate the necessary expertise by having an appropriate quality assurance system; and either

b) the lift conforms to a harmonized standard; or

c) the lift has an EC Design Examination Certificate from a Notified Body.

The level of quality assurance may vary in accordance with which conformity assessment route applies, i.e. ISO 9001, ISO 9002 or ISO 9003.

This specification provides tests and examination requirements deemed to ensure conformity to BS EN 81-2:1998. It does not cover every clause in BS EN 81-2:1998 as many requirements are covered by the installer's quality control procedures.

This specification does cover the tests in of annex D of BS EN 81-2:1998, as well as tests that do not fall within the installer's quality control system; for example, the depth of the pit to ensure conformity to arrangement drawings.

It is recognized that certain tests/checks can be carried out more effectively before installation, and that others should only be made on-site unless it can be demonstrated by a quality control procedure and risk assessment that they can be performed with equal effectiveness off-site. Answer boxes in this specification that contain a shaded square imply that the test should be carried out on-site.

This specification does not carry the full force of a British Standard but is intended for use as a guidance document.

This specification omits some of the tests specified in BS 5655-10, but includes some new tests as well as the tests specified in annex D of BS EN 81-2:1998.

It is intended to review this specification in July 2000.

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This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a Product Assessment Specification does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 29 and a back cover.

1 Scope

This Product Assessment Specification (PAS) specifies requirements for testing, examination and recording results for new hydraulic lifts conforming to BS EN 81-2:1998, before putting into service.

2 Risk assessment

The purpose of this PAS is to ensure that the safety requirements of BS EN 81-2:1998 are complied with and that the associated risks are addressed. This PAS does not contain its own risk assessment but utilizes the risk assessment in BS EN 81-2:1998.

3 Test documentation

The following documents are required for the tests and examination to be carried in accordance with annex C of BS EN 81-2:1998:

— general arrangement drawing;
— electrical schematic drawing;
— copies of test certificates;
— copy of Quality Assurance Certificate (if applicable) covering design and manufacture;
— Notified Body approvals (if applicable).

4 Test and examination

The test and examination shall be carried out in accordance with Table 1. To ensure conformity to BS EN 81-2:1998 all questions should be answered. Some sections may be completed at different stages during the manufacture, installation and test.

NOTE Test methods are detailed in annex D of BS EN 81-2:1998.

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts

1.0 Basic characteristics

Location

Installer

Layout drawing Reference No.

Lift serial number

Length of travel (m)

Installer type reference

Number of levels served

Total.

Front.

Rear.

Side.

Power supply

Voltage. (V)

Phases.

Frequency. (Hz)

Wire 3/4 or 5?

Rated load. (Kg).

Persons.

Rated Speed. (m/s)

Location of machine room

Above well

Below well

At side

Is the above in accordance with information on the layout drawing / wiring diagram or the other information sheets?

Yes

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

2.0 Machine and pulley room

2.1 Main switch

Does the installed main switch conform to the specification? Specified ☐ Yes ☐

Is the main switch control mechanism easily identifiable and accessible from the machine room doorway? (See **13.4.2** of EN 81-2:1998) Yes ☐

Is the main switch lockable in the OFF position? (See **13.4.2** of EN 81-2:1998) Yes ☐

2.2 Lighting

Does the lighting conform to **6.3.6** of EN 81-2:1998? Yes ☐ ☐ lux.

2.3 Dimensions

Are the dimensions the minimum specified in **6.3.2** of EN 81-2:1998? Yes ☐

2.4 Access

Is there safe access as defined in **6.2** of EN 81-2:1998? Yes ☐

2.5 Safety signs

Are notices and signs in place in accordance with **15.4** of EN 81-2:1998? Yes ☐

2.6 Power unit type

Is the correct power unit supplied? Specified ☐ Yes ☐

2.7 Oil cooler

Is the correct oil cooler supplied? N/A ☐ Specified ☐ Yes ☐

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

2.0 Machine and pulley room (*continued*)

2.8 Controller type		
Is the correct controller type supplied?	Specified ☐	Yes ☐
2.9 Emergency release		
Does the emergency operation system(s) function correctly as specified in **12.9** of EN 81-2:1998?		Yes ☐
Are the instructions specified in **15.4.3** of EN 81-2:1998 displayed?		Yes ■
2.10 Machine room ventilation		
Is the machine room ventilated as specified in **6.3.5** of EN 81-2:1998?		Yes ■
2.11 Doors/trap doors		
Are the machine room doors or trap doors fitted with a suitable lock conforming to **6.3.3.3** of EN 81-2:1998?		Yes ■
2.12 Communication		
Is there a communication device in place and working as specified in **14.2.3.4** of EN 81-2:1998?	N/A ☐	Yes ■

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

3.0 Well

3.1 Clearance and run-bys

NOTE In a) and f), $h = 0.035v_m^2$ for indirect acting lifts. For direct acting lifts, $h = 0$ [see **5.7.1.1**f) of EN 81-2:1998]

a) With the ran in its ultimate position, confirm, with reference to Figure 1, that:

i) the rail lengths can accommodate a further travel of at least (0.1 + h) m [see **5.7.1.1**a) of EN 81-2:1998]	Specified	m	Actual	Distance
ii) the dimension of the standing area on the car roof to the first striking point above is at least (1.0 + h) m [see **5.7.1.1**b) of EN 81-2:1998]	Specified	m	Actual	m
iii) the free vertical distance between the lowest part of the ceiling of the well and the highest item of equipment on the car roof [excluding iv)] is at least (0.3 + h) m [see **5.7.1.1**c)1) of EN 81-2:1998]	Specified	m	Actual	m
iv) the free vertical distance between the lowest part of the ceiling and the highest part of the guide shoes/rollers, rope attachments, header, or parts of vertically sliding doors should be at least (0.1 + h) m [see **5.7.1.1**c)2) of EN 81-2:1998]	Specified	m	Actual	m

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

3.0 Well (*continued*)

Is there sufficient space above the car to accommodate, resting on one face, a rectangular block 0.5 m × 0.6 m × 0.8 m? [See **5.7.1.1**d) of EN 81-2:1998]

Yes ☐

For indirect acting lifts, is there at least 0.1 m above the ram to the first striking point? [See **5.7.1.1**e) of EN 81-2:1998]

Yes ☐

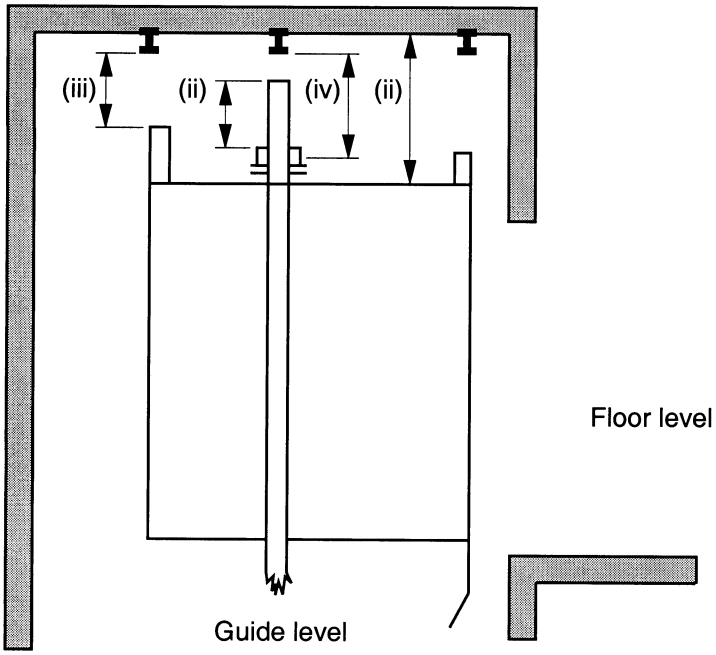

Figure 1 — Overhead clearances

b) With the car resting on its fully compressed buffers, is the further guided travel of the balancing weight at least $(0.1 + 0.035v_d^2)$ m? (See **5.7.1.2** of EN 81-2:1998)

N/A ☐ Yes ☐ Distance Actual ☐

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

3.0 Well (*continued*)

c) With the car resting on its fully compressed buffers, confirm the following (see Figure 2)

Distance

i) Is there sufficient space below the car to accommodate, resting on one face, a rectangular block 0.5 m × 0.6 m × 1.0 m? [See **5.7.2.3**a) of EN 81-2:1998] Yes ☐

ii) Is there a free vertical space between the bottom of the pit and the lowest part of the car [excluding the area in iii)] of at least 0.5 m? [See **5.7.2.3**b) of EN 81-2:1998] Yes ☐ ☐ m

iii) Is there a free vertical distance of at least 0.1 m, within a horizontal distance of 0.15 m, between: 1) clamping/pawl devices, the apron, or parts of the vertical sliding door and adjacent walls; and 2) the lowest parts of the car and the guide rails? [See **5.7.2.3**b) of EN 81-2:1998] Yes ☐ ☐ m

iv) Except for the items in iii), is there a free vertical distance of at least 0.3 m between the highest parts in the pit and the lowest part of the car? [See **5.7.2.3**c) of EN 81-2:1998] Yes ☐ ☐ m

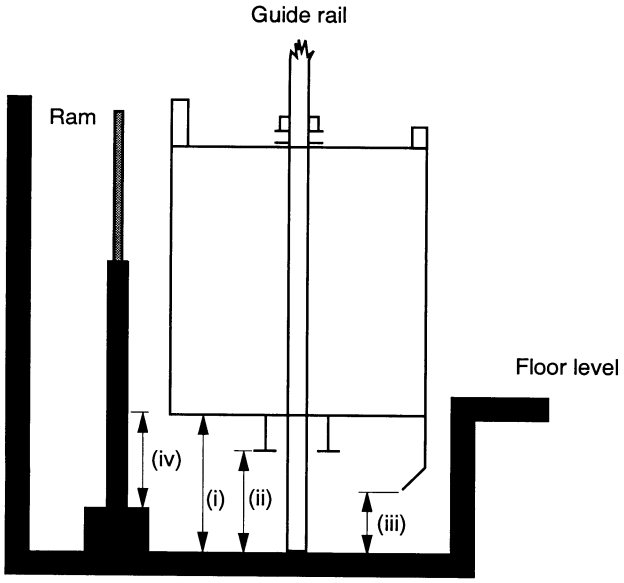

Figure 1 — Bottom clearances

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

3.0 Well (*continued*)

d) If there is an inverted jack, is the distance between the ram head and the first striking point in the pit at least 0.5 m (0.1 m with a screen)? [See **5.7.2.3**d) of EN 81-2:1998]	N/A ☐	Yes ☐	Actual ☐	Distance		
e) If there is a telescopic jack with a guiding yoke, is there 0.5 m between the lowest yoke and the pit floor with the jack fully collapsed? [See **5.7.2.3**e) of EN 81-2:1998]	N/A ☐	Yes ☐	Actual ☐	m		
f) With the jack fully extended, is there at least (0.1 + h) m further guided travel for the balancing weight? (See **5.7.2.4** of EN 81-2:1998)	N/A ☐	Yes ☐	Actual ☐	m		
3.2 Buffers Do the car buffers conform to those specified?	Specified	Type ☐ No. ☐	Yes ☐			
3.2.1 Energy accumulation buffers (linear type)	N/A ☐					
With the car and its rated load placed on the buffer(s), and the ropes slack, does the compression correspond to that given by the characteristic curve of the buffer (as provided by the buffer supplier or lift supplier)? [See **D.2**n) of EN 81-2:1998]			Yes ☐			
3.2.2 Energy accumulation buffers (non-linear type)	N/A ☐					
Is the buffer CE marked?			Yes ☐			
3.2.3 Energy dissipation buffers (oil type)	N/A ☐					
When the car and its rated load is brought into contact with the buffer at speed as designed [see **10.4.3.2**c) of EN 81-2:1998], confirm that there is no deterioration to the lift or buffer			Yes ☐			
Is the buffer CE marked?			Yes ☐			

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

3.0 Well (*continued*)

3.3 Protection in the well		
a) Is there a balancing weight screen fitted? (See **5.6.1** of EN 81-2:1998)	N/A ☐	Yes ■
b) For adjacent lifts, is there a screen in the pit extending 2.5 m above the lowest landing floor? (See **5.6.2.1** of EN 81-2:1998)	N/A ☐	Yes ■
c) If the distance between the moving parts of adjacent lifts is less than 0.5 m, is there a full screen height? (See **5.6.2.2** of EN 81-2:1998)	N/A ☐	Yes ■
d) Does the ram head of the inverted jack screen conform to **5.7.2.3**d) of EN 81-2:1998?	N/A ☐	Yes ■
e) Do the inspection doors and inspection traps conform to **5.2.2** of EN 81-2:1998?	N/A ☐	Yes ■
f) Does the access to the pit conform to **5.7.2.2** of EN 81-2:1998?		Yes ■
g) For partially enclosed wells, is there screening conforming to **5.2.1.2** and Figure 1 of EN 81-2:1998?	N/A ☐	Yes ■
h) Does the well conform to **5.2.1.2** of EN 81-2:1998?	N/A ☐	Yes ■

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

3.0 Well (*continued*)

3.4 Landing door assemblies

a) Is the running clearance between door panels and between panels and uprights, lintels or sills no more than 6 mm? (See **7.1** of EN 81-2:1998) Yes ☐

b) Does no recess or projection on the face of the sliding door panel exceed 3 mm? (See **7.5.1** of EN 81-2:1998) Yes ☐

c) If there is a fire test certificate required, is it available and in order? N/A ☐ Yes ☐

d) Are the landing doors correctly fire rated for the installation? Specified Type ☐ Rating Min. ☐ Yes ☐

e) If glass panels are used, are these marked as specified in **7.2.3.5** of EN 81-2:1998? Specified ☐ Actual ☐

f) Has one of the options for child protection in **7.2.3.6** of EN 81-2:1998 been adopted? N/A ☐ Yes ☐

3.5 Landing door locks

a) Are the correct door locks fitted? Specified ☐ Yes ☐

b) Are all the door locks CE marked? Yes ☐

3.6 Lighting

a) Does the lighting level in the well conform to **5.9** of EN 81-2:1998? Yes ■ ☐ ■ lux.

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

3.0 Well (*continued*)

3.7 Car and Balancing Weight Guide Rails

a) Is the designation of the guide rails in accordance with that specified?	Car	Specified		Actual	
	Balancing weight	Specified		Actual	
b) Is the pitch of the rail fixings in accordance with the layout drawing?	Car	Specified		Actual	
	Balancing weight	Specified		Actual	

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

4.0 Car, inspection operation and entrance clearances

4.1 Car

a) What is the weight of the empty car? Specified [ ] Kg Actual [ ] Kg

b) Does the available floor area, related to rated load and maximum number of passengers, conform to **8.2** of EN 81-2:1998? Specified [ ] m^2 Actual [ ] m^2

c) Is each glass panel (if used) correctly marked in accordance with **8.3.2.4** of EN 81-2:1998?

1) Doors Specified [ ] Actual [ ]

2) Walls Specified [ ] Actual [ ]

d) Has one of the options for child protection in **8.6.8** of EN 81-2:1998 been adopted? N/A [ ] Yes [ ]

e) Is the maximum load indicated in the car (i.e. no. of persons, load in kg, and identification no.), and does it conform to **15.2.1** of EN 81-2:1998? Yes [ ]

f) Does the emergency alarm device allow two-way communication with a rescue service as specified in **14.2.3.3** of EN 81-2:1998? Yes [■]

g) Does the car and emergency lighting conform to **8.17** of EN 81-2:1998? Yes [ ] [ ] lux

h) Does the car overload device operate as specified in **14.2.5** of EN 81-2:1998? Yes [■]

i) Does the apron conform to **8.4** of EN 81-2:1998? Yes [ ]

j) Do emergency doors and trap doors (if present) conform to **8.12** of EN 81-2:1998? N/A [ ] Yes [ ]

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

4.0 Car, inspection operation and entrance clearances (*continued*)

4.2 Car top

a) Does the car top conform to **8.15** of EN 81-2:1998? Yes ☐

b) Does the car top station conform to **14.2.1.3** of EN 81-2:1998 in construction and operation, and in neutralizing of other controls? Yes ☐

c) Does the alarm device as specified in **5.10** of EN 81-2:1998 operate correctly? N/A ☐ Yes ☐ Specified ☐

d) Does the balustrade on the car roof conform to **8.13.3** of EN 81-2:1998? N/A ☐ Yes ☐

4.3 Car entrance clearances

a) Is the running clearance between door panels, and between panels and uprights, lintels and sills no more than 6 mm? (See **8.6.3** of EN 81-2:1998) Yes ☐

b) Does no recess or projection on the face of the sliding door panels exceed 3 mm? (See **8.7.1** of EN 81-2:1998) Yes ☐

c) Is the horizontal distance between the sill of the car and the sill of the landing doors 35 mm or less? (See **11.2.2** of EN 81-2:1998) Yes ☐

d) Is the distance between the inner surface of the well and the sill or framework of the car entrance or door 0.15 m or less, or 0.2 m if over a height not exceeding 0.5 m? (See **11.2.1** of EN 81-2:1998) Yes ☐ No ☐

e) If the answer to d) is NO, does the car door mechanically lock when away from the unlocking zone, as specified in **11.2.1**c) of EN 81-2:1998? N/A ☐ Yes ☐

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

4.0 Car, inspection operation and entrance clearances (*continued*)

4.4 Landing and car door tests

NOTE If appropriate, the tests in 4.4 should be carried out with the car and landing doors coupled.

If the doors are manual	☐	check f), h), i), j), k), m), n), o), p)	
If the doors are power operated	☐	check all except p)	
a) Is the maximum force to prevent closing no more than 150 N? (See **7.5.2.1.1.1** and **8.7.2.1.1.1** of EN 81-2:1998)			Yes ☐
b) With a mechanical force of 150 N, do the clearances specified in **7.1** of EN 81-2:1998 not exceed 30 mm for side opening doors or 45 mm for centre opening doors? (See **7.2.3.2** of EN 81-2:1998)			Yes ☐
c) Is the energy 10 J or less? (See **7.5.2.1.1.1** and **8.7.2.1.1.2** of EN 81-2:1998)			Yes ☐
d) Do all the protective devices reverse the doors as specified in **7.5.2.1.1.3** and **8.7.2.1.1.3** of EN 81-2:1998?			Yes ☐
e) If the doors are able to close with the reversal device inoperative is the kinetic energy no more than 4 J? (See **7.5.2.1.1.3** and **8.7.2.1.1.3** of EN 81-2:1998)		N/A ☐	Yes ☐
f) Is the unlocking zone 0.2 m or less above or below landing levels (or 0.35 m for simultaneously operated car and landing doors)? (See **7.7.1** of EN 81-2:1998)			Yes ☐
g) Does the automatic mechanical self-closing mechanism on each set of doors function correctly? (See **7.7.3.2** of EN 81-2:1998)			Yes ☐
h) Is each set of landing doors unlockable from the outside with an emergency key? (See **7.7.3.2** of EN 81-2:1998)			Yes ☐

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

4.0 Car, inspection operation and entrance clearances (*continued*)

i) Can the car doors be manually opened within the unlocking zone with a force of less than 300 N with the power off? (See **8.11.2** of EN 81-2:1998)		Yes ☐
j) Is the maximum force to prevent opening of folding doors 150 N or less? (See **8.7.2.1.1.4** of EN 81-2:1998)	N/A ☐	Yes ☐
k) Do vertically sliding doors conform to **7.5.2.2**a), b) and d), and **8.7.2.2**b), c) and e), of EN 81-2:1998?	N/A ☐	Yes ☐
l) Do the contacts at each landing entrance stop and prevent movement of the car outside the unlocking zone when broken? (See **7.7.4** of EN 81-2:1998)		Yes ■
m) Are the mechanical locks at each landing entrance proved for positive locking? (See **7.7.5** of EN 81-2:1998)		Yes ■
n) If fitted, does the car door lock function correctly? (See **8.9.3** of EN 81-2:1998)	N/A ☐	Yes ■
o) Do the car door/gate contacts stop car movement outside the unlocking zone when broken? (See **8.9** of EN 81-2:1998)		Yes ■
p) Does the "car here" indicator conform to **7.6.2** of EN 81-2:1998 for manual doors?	N/A ☐	Yes ■

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

5.0 Suspension

5.1 Suspension — N/A ☐

a) Suspension ropes — N/A ☐

1) Number — Specified ☐

2) Nominal diameter — Specified ☐ mm

3) Lay and construction — Specified ☐

4) Are the correct ropes supplied and is the test certificate available and in order? (A copy is sufficient as the original is held by the rope maker) — Yes ☐

Rope anchorages: — N/A ☐

5) Type of termination — Car ☐ Balancing weight (if applicable) ☐ Suspension points ☐

6) Are the rope terminations correctly made and secure as specified in **9.2.3** and **9.2.4** of EN 81-2:1998? — Yes ■

7) Do the rope terminations conform to **9.3** of EN 81-2:1998, ensuring distribution of load between the ropes? — Yes ☐

b) Suspension chains — N/A ☐

1) Number — Specified ☐

2) Pitch — Specified ☐

3) Type and construction — Specified ☐

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

5.0 Suspension (*continued*)

4) Are the correct chains supplied and is the test certificate available and in order? (A copy is sufficient as the original is held by the chain maker)		Yes ☐
5) Do the chain terminations conform to **9.3** of EN 81-2:1998, ensuring distribution of loads between chains?		Yes ☐
5.2 Slack suspension device		
Does the slack suspension device operate correctly? (See **9.3.3** and **12.13** of EN 81-2:1998)	N/A ☐	Yes ■

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts *(continued)*

6.0 Safety contacts and circuits		
a) Are the final limit switches correctly positioned and do they operate correctly? (See **10.5** of EN 81-2:1998)		Yes ☐
b) Do the stopping devices on the car top, and (if required) in the car [see **14.2.2.1**e) of EN 81-2:1998], and in the pulley room and pit stop and prevent movement of the car when operated? [See **5.7.2.5**, **6.4.5**, **8.15**b), and **14.2.2.1** of EN 81-2:1998]		Yes ☐
c) Has the safety chain been tested to ensure that an earth fault at the most remote safety contact causes immediate disconnection? [See **14.1.1.1**d) of EN 81-2:1998]		Yes ☐
d) Does the phase reversal protection function correctly? [See **14.1.1.1**j) of EN 81-2:1998]		Yes ☐
e) Do the levelling and relevelling circuits operate? (See **14.2.1.2** of EN 81-2:1998)	N/A ☐	Yes ☐
f) Do all electrical safety devices on the landing door panels that are not directly, mechanically linked operate correctly? (See **7.7.6.2** of EN 81-2:1998)	N/A ☐	Yes ☐
g) For two rope suspension, does the slack rope safety device operate correctly? (See **9.3.3** of EN 81-2:1998)	N/A ☐	Yes ☐
h) Does the slack safety rope detector device operate correctly? (See **12.13** of EN 81-2:1998)	N/A ☐	Yes ☐
i) Does the stopping device in the car operate correctly? [See **14.2.1.4**i) of EN 81-2:1998]	N/A ☐	Yes ☐
j) Do all other switches/contacts in safety devices stop and prevent movement of the car when operated? (See annex A)		Yes ☐

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

7.0 Car and balancing weight safety gear and over-speed protection

7.1 Car safety gear — N/A ☐

a) Is the correct safety gear supplied?
Progressive - Specified ☐ Actual ☐
Instantaneous- Specified ☐ Actual ☐

b) Is the safety gear CE marked? — Yes ☐

c) Does the safety gear stop the car, in the downward direction, when operated by the governor and engaging at the appropriate speed, with the load uniformly distributed, at:

— rated load at rated speed in the case of instantaneous safety gear? [See **D.2**h)1)a) of EN 81-2:1998] — N/A ☐ Yes ☐

— 125 % rated load at rated speed, for instantaneous safety gear? [See **D.2**h)1)b) of EN 81-2:1998] — N/A ☐ Yes ☐

— 125 % of rated load at rated speed or lower, for progressive safety gear? [See **D.2**h)2) of EN 81-2:1998] — N/A ☐ Yes ☐

d) Is the floor of the lift car sloping no more than 5 % from horizontal? (See **9.8.7** of EN 81-2:1998) — Yes ☐

e) After the test, confirm that no deterioration that could aversely affect normal use of the lift has occurred [see **D.2**h) of EN 81-2:1998] — Yes ☐

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

7.0 Car and balancing weight safety gear and over-speed protection (*continued*)

7.2 Car governor			N/A	☐
a) Is the correct governor supplied?	Specified	☐	Actual	☐
b) Is the governor CE marked?			Yes	☐
c) Does the electrical safety device stop the lift?			Yes	■
d) Is the governor sealed (if adjustable)?	N/A	☐	Yes	☐
e) Is the correct rope type supplied?	Specified	☐	Yes	☐
7.3 Balancing weight safety gear			N/A	☐
a) Is the correct safety gear installed?	Specified	☐	Actual	☐
b) Is the safety gear CE marked?			Yes	☐
c) Does the safety gear stop the balancing weight when operated and engaging at appropriate speed, with the car empty, at the following?			Yes	■
— at rated speed, for instantaneous safety gear? [See **D.2**i)1) of EN 81-2:1998]	N/A	☐	Yes	■
— at rated speed or lower, for progressive safety gear? [See **D.2**i)2) of EN 81-2:1998]	N/A	☐	Yes	■
d) After the test, confirm that no deterioration that could aversely affect normal use of the lift has occurred [see **D.2**i) of EN 81-2:1998]			Yes	■

Table 1. Result of test and examination for electric passenger and goods/passenger lifts (*continued*)

7.0 Car and balancing weight safety gear and over speed protection (*continued*)

7.4 Balancing weight governor		N/A ☐
a) Is the correct governor installed?	Specified ☐	Actual ☐
b) Is the governor CE marked?		Yes ☐
c) If fitted, does the electrical safety device stop the lift?		Yes ■
d) Is the governor sealed (if adjustable)?	N/A ☐	Yes ☐
e) Is the correct rope type supplied?	Specified ☐	Yes ☐
7.5 Car clamping device		N/A ☐
a) Does the clamping device stop the car travelling at rated speed with 125 % load uniformly distributed [see **D.2**j)1) and 2) of EN 81-2:1998]?		Yes ☐
b) Are the calculaltions available and in order as specified in **8.2.2.3** of EN 81-2:1998?		Yes ☐
c) After the test, confirm that no deterioration that could aversely affect normal use of the lift has occurred [see **D.2**j) of EN 81-2:1998]		Yes ☐

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

7.0 Car and balancing weight safety gear and over speed protection (*continued*)

7.6 Pawl device				N/A	☐
a) Does the pawl device stop the car travelling down at rated speed with 125 % load uniformly distributed? [See **D.2**m)1) of EN 81-2:1998]				Yes	■
b) After the test, confirm that no deterioration that could aversely affect normal use of the lift has occurred [see **D.2**m)1) of EN 81-2:1998]				Yes	■
7.7 Pipe rupture valve and restrictor				N/A	☐
a)i) Is there a pipe rupture valve installed?	N/A ☐	Specified		Actual	
a)ii) Is there a restrictor installed?	N/A ☐	Specified		Actual	
b) Is the device CE marked?				Yes	☐
c) Does the tripping speed conform to **D.2**r) and s) of EN 81-2:1998?				Yes	☐

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

7.0 Car and balancing weight safety gear and over speed protection (*continued*)

7.8 Mechanical anti-creep device	N/A ☐	
a) Clamping device/safety gear (see **9.10.5.2** of EN 81-2:1998)	N/A ☐	
Does the lever actuate the device at each floor level and does it engage on its stops correctly? [See **9.10.5.2**a) of EN 81-2:1998]	N/A ☐	Yes ■
Does the rope actuate the device? (See **9.10.5.1** of EN 81-2:1998)	N/A ☐	Yes ■
With the car running, is the device fully retracted clear of its stops? [See **9.10.5.2**b) of EN 81-2:1998]		Yes ■
b) Pawl device (see **9.11** of EN 81-2:1998)	N/A ☐	
Does the pawl device engage on its stops at each landing to support the car? [See **D.2**m)2) of EN 81-2:1998]		Yes ■
Does the pawl device properly clear its supports when the car travels through the lift shaft? [See **D.2**m)2) of EN 81-2:1998]		Yes ■
Is the buffer stroke correct for the pawl device? [See **D.2**m)3) of EN 81-2:1998]		Yes ☐
7.9 Electrical anti-creep device	N/A ☐	
a) Does the system operate correctly with rated load in the car? [See **14.2.1.5** and **D.2**y) of EN 81-2:1998]		Yes ☐

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

8.0 Measurement system parameters

a) Check the mains current (running with full load) to ensure that it is within the specified limit [see **D.2**d) of EN 81-2:1998]

Specified _____ A Actual _____ A

b) Measure and record the following speeds when the car is at mid-point of travel [see **D.2**d) of EN 81-2:1998]

Car loading condition		Lift speed m/s	Levelling Speed * m/s	Re - levelling/ anti-creep m/s	Inspection Speed m/s	Emergency Operation Speed m/s	Docking Operation Speed m/s
EN 81-2 Clause No		12.8	14.2.1.2	14.2.1.2	14.2.1.3	12.9.1.3	14.2.1.4
Empty	up						
	down						
Rated	up						
	down						

* With advance door opening.

c) Do the measured speeds (empty car up, rated load down) conform to the specification? (See **12.8.2** of EN 81-2:1998)

Yes ☐

d) Does the maximum levelling deviation conform to within the manufacturer's tolerances?

Specified _____ Actual _____

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

8 Measurement systems parameters (*continued*)

e) Pressure test	☐ Bar
State the full load static pressure with the car at the top floor [see **D.2**q) of EN 81-2:1998]	Yes ☐
Does the pressure relief valve operate at 140 % full load pressure? [See **D.2**q) of EN 81-2:1998]	Yes ☐
With 200 % full load static pressure applied to the system for 5 min confirm that there is no pressure drop due to leakage [see **D.2**t) of EN 81-2:1998]	Yes ☐
Is the integrity of the hydraulic system maintained after the 200 % test?	Yes ☐
Confirm that the car does not creep down from the top floor more than 10 mm in 10 min [see **D.2**u) of EN 81-2:1998]	Yes ☐
Does the manual lowering automatically stop before the ropes or chain can become slack? [See **D.2**v) of EN 81-2:1998]	Yes ☐
Confirm that the oil temperature overheating protection device functions correctly [see **D.2**x) of EN 81-2:1998]	Yes ☐

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

9 Overcurrent protective devices		
9.1 Pump motor windings		
Is motor protection provided? (See **13.3** of EN 81-2:1998)	N/A ☐	Yes ☐
9.2 Door motor winding		
Is motor protection provided? (See **13.3** of EN 81-2:1998)	N/A ☐	Yes ☐
9.3 Main power convertor		
Is protection provided? (See **13.3** of EN 81-2:1998)	N/A ☐	Yes ☐
9.4 Motor run time limiter		
Is the correct motor run time limiter supplied? (See **12.12** of EN 81-2:1998)		Yes ☐

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

10 Electrical wiring examination	
10.1 Insulation resistance to earth	
Does the insulation resistance to earth for the electrical system correct and conforming to **13.1.3** of EN 81-2:1998? [See also **D.2**e)1) of EN 81-2:1998]	Yes ☐
10.2 Earthing	
Is all metal work correctly earthed to the main earthed isolator? [See **D.2**e)2) of EN 81-2:1998]	Yes ☐
10.3 Electrical wiring	
a) Do the electrical conductors, including travelling cables, conform to **13.5** of EN 81-2:1998?	Yes ☐
b) Is the wiring installed (for EMC compliance) in accordance with the manufacturer's instructions?	Yes ☐
11 Documentation	
Is there a register as specified in **16.2** of EN 81-2:1998?	Yes ☐
Is there an instruction manual as specified in **16.3** of EN 81-2:1998?	Yes ☐

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

12 Confirmation of conformity to EN 81-2

a) Are all the items associated with the installation, for which the lift manufacturer is not responsible, in a suitable state for the installation to be put into service? NOTE Some items requiring attention may not be part of the contract for the lift but part of the installation and the responsibility of others.	Yes ■ No ☐
If NO, provide details:	
b) Does the lift conform to EN 81-2?	Yes ■ No ☐
If NO, state the reasons [which may include Notified Body approval having been obtained (Design Examination Certificate) for any deviations from the standard for which additional/alternative tests may be required, and of which the results should be attached to the present test results]	
c) Have all questions been answered?	Yes ☐ No ☐
If NO, state reasons:	

Table 1. Result of test and examination for hydraulic passenger and goods/passenger lifts (*continued*)

12 Confirmation of conformity to EN 81-2

Signature		Name (In capitals)		Position	
Company		Date			

Place of signature

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