Table 1. Certificate of test and examination for electric passenger and goods lifts (cont.)

b) 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?

O Yes O No

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. A list of typical inclusions and exclusions is given in BS 5655 : Part 6

if NO, provide details :

16 Declaration of conformity of design and manufacture

Does the design and manufacture of the lift conform to BS 5655 : Part 1? O Yes O No *

If NO, state deviations: *

Signatures(s): * GARY POYNTER *

Company position: CONSTRUCTION DIRECTOR *

Table 1. Certificate of test and examination for electric passenger and goods lifts (concluded)

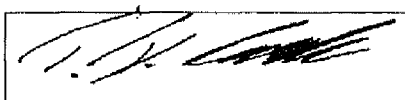
17 Declaration of test

i/we certify that on 3/2/06 the equipment was thoroughly examined and found to be free from obvious defects, subject to any statement in 15c and that the foregoing is a correct report of the result.

Vendor/purchaser's identification number:

C5470 H090

Signatures(s):



T COOK

Name and address of public service, association,company firm or person making the examination:

APEX LIFTS
APEX HOUSE
LEFA BUSINESS PARK,
EDGINGTON WAY, SIDCUP
KENT DA14 5BH

Position in the above organization of the person who conducted the examination:

TESTER

or
Qualifications of examiner, if working on his/her own account:

Test certificate serial number:

C5470

Date:

14/2/06

APEX DATA

Table 1. Certificate of test and examination for electric passenger and goods lifts

Notes for the completion of this certificate

1 The references quoted below in association with a part number refer to clauses, figures, tables, or annexes of the stated part of BS 5655. Other clause numbers relate to this subsection of BS 5655.

2 Statements and replies to all relevant questions should be entered in the appropriate boxes. Where multiple choice questions are posed, only one of the alternative boxes should be ticked.

3 Boxes marked with an asterisk (*) should be completed by the vendor's design office.

4 Italic type is used where reference is made to a requirement of BS 5655 Part 1: 1995.

1 Description of installation

Location: Grenfell Tower.

Vendor: Apex Lifts *

Length Of Travel: 60 m Approx.

Vendors Identification No *

Number of levels served:

Total	22	*
Front	22	*
Rear	—	*
Side	—	*

Purchasers identification No *

H090

Power Supply: ☑ Permanent ○ Temporary

Rated Load: 900 kg * 12 Persons *

Rated Speed: 2.0 m/s *

	Specified		Actual at time of test
Voltage		*	402
Phase		*	3
Frequency		*	50
Wire(3or4)		*	3
Fuse Rating		*	100
Fuse Type		*	HRC

Machine room location

☑ Above well *
○ Below well *
○ At side *
○ Within Shaft *

Are the above entries acceptable?

☑ Yes ○ No

Machine room temperature at start of dynamic tests: 17 °C

Reeving Ratio: 1:1 *

	Specified *	Actual
Main Switch Rating	A	100 A
Is the Switch Fused	○ Yes ○ No	☑ Yes ○ No
Is it lockable off	○ Yes ○ No	☑ Yes ○ No
Number of poles		3

NOTE. A four-pole switch is necessary if emergency lowering is fitted

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

2. Static Examination (mechanical)

2.1 Suspension

a) Suspension ropes:

	Specified		Actual	
Number:		*	6	
Nominal diameter:		mm*	13	mm
Lay & construction:		*	8/19 RHOL	
Is test certificate in order & available?	O Yes O No *			
Is rope data plate fitted to crosshead?	O Yes O No			

b) Rope anchorages :

	Car	Counterweight
Type	SOCKET + WEDGE	SOCKET + WEDGE.
Number Of Rope Grips (if any):	\	\
Confirm that rope grips (if any) are fitted correctly :	☑ Yes	☑ Yes

State BS number and type of socketed anchorages used (if any):

Describe any other kind of anchorage used:

	Specified	Actual
Are anchorages in accordance with 9.2.3. of part 1 ?	O Yes O No *	☑ Yes O No
Are the anchorages prevented from rotating through 180° ?	O Yes O No *	O Yes O No
Do the ropes conform to 9.5 of part 1 ensuring distribution of load between the ropes?	O Yes O No *	☑ Yes O No

c) Suspension chains: ☑ N/A

	Specified	Actual
1) Number :	*	
2) Pitch :	*	
3) Type and construction:	*	

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

4) Is the chain test certificate available and in order? O Yes O No *

5) *Are the anchorages in accordance with* 9.2.5 *of Part 1?* O Yes O No *

	Specified	Actual
6) *Do the chains conform to* 9.5 *of part 1,ensuring distribution of load between chains?*	O Yes O No *	O Yes O No
d) Eyebolts:	Specified	Actual
if eyebolts used do they conform to Pan 8?	O Yes O No *	O Yes O No

2.2 Compensation

a) Is compensation provided? O Yes ✓ No *

b) If yes what type?

	Specified	Actual
1) Rope:	*	
2) Chain:	*	
3) Anti Rebound:	*	
4) Number:	*	
5) Size:	*	

2.8 Safety gear, overspeed governor, ovarspeed governor rope and tension pulley

a) *Has the safety gear been tested in accordance with* F.3 *of part 1 and certified in accordance with* F.3.5 *of part 1?* O Yes O No *

b) *If YES, is the data plate fitted in accordance with* 15.14 *of Part 1?* ✓ Yes O No

c) *Is the safety gear sealed (see* 9.8.6.4 *of Part 1)?* ✓ Yes O No

d) *Confirm that the governor has been tested in accordance with* F.4 *of Part 1 and certified in accordance with* F.4.3 *of part 1* O Yes O No *

e) Specify overspeed governor type:

f) State type of overspeed governor fitted: BODE TYPE 7

g) *Is the date plate fitted & in accordance with* 15.6 *of Part 1?* ✓ Yes O No

h) Confirm that the governor is sealed: ✓ Yes

	Specified	Actual
i) State safety rope nominal diameter:	mm*	8 mm
j) Confirm that the safety gear, overspeed governor, overspeed governor ropa and the tension pulley operate as a compatable system:	O Yes *	✓ Yes

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

2.4 Car

a) *Confirm that the available floor area, related to rated load and maximum number of passengers, conforms to* **8.2** *of Part 1?*

O Yes *

	Specified	Actual
b) State the internal width, i.e. wall to wall (without finishes):	mm*	mm
c) State the internal depth, i.e. front return to rear wall or front return to rear return (without finishes):	mm*	mm

2.5 Energy accumulation buffers (spring buffers) ☑ N/A *

a) *Confirm that the buffers conform to* **10.4.1** *of part 1* O Yes *

	Specified	Actual
b) State number fitted		*

c) Confirm that the buffers are correctly identified O Yes

2.6 Energy accumulation buffers (polyurethane buffers) ☑ N/A *

a) *Confirm that the buffers conform to* **10.4.1** *of part 1* O Yes *

	Specified	Actual
b) State size selected:		*
c) State number fitted:		*

d) Confirm that the buffers are correctly identified: O Yes

2.7 Energy dissipation buffers (e.g. oil) O N/A *

a) *Confirm that the buffers have been tested in accordance with* **F.5** *of Part 1 and certified in accordance with* **F.5.4** *of Part 1?*

O Yes *

b) *Is the data plate in accordance with* **15.8** *of part 1?* ☑ Yes O No

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

c) *If No are they suitable for submission to the test described in* **11.3** *of this table?* — O N/A O Yes O No

d) Are they correctly filled and not leaking? — ☑ Yes O No

e) Is there reduced stroke buffering (see item **10** of this table)? — O Yes O No *

f) Is the stroke of each buffer in accordance with **10.4.3** of Part 1? — ☑ Yes O No

g) Slate number fitted — Specified: — Actual: 1 Car / 1 Weight

2.8 Brake

Confirm that the brake sustains the static car at the lowest level whan loaded with **125%** of rated load — ☑ Yes

2.9 Landing door assemblies

a) Does the contract require the landing door assemblies to be fire-rated — O Yes O No *

if YES what is ihe fire-rating requirement — Hour*

b) Is the test certificate available and in order — O N/A O Yes O No *

c) If yes and the doors are manually operated is the means of fire prevention a fusible link — O N/A O Yes O No *

d) If NO describe the method used

e) Confirm that the fire rated elements of the door assembly are correctly fitted : — ☑ Yes

2.10 Door locks

a) *Confirm that all the door locks have been tested in accordance with* **F1** of *Part 1 and certified in accordance with F.1.4 of Part 1:* — O Yes *

b) *Does the data plate conform to* **15.13** *of Part 1:* — O Yes ☑ No

Table 1. Certificate of teat and examination for electric passenger and goods lifts (*cont*)

3 Static examination (electrical)

3.1 Electric safety devices

Confirm that the electric safely devices are in accordance with appendix A of Part 1	☑ Yes

3.2 Insulation resistance to earth (see clause 5)

a) Lift motor	841 MΩ
b) MG set (if filled)	
1) Motor	N/A MΩ
2) Generator	N/A MΩ
c) Power system	704 MΩ
d) Safety devices (state minimum reading)	>999 MΩ

3.3 Earthing

a) *Is the maximum continuity resistance to the earth provided less than 0.5 ? (see clause 7b):*	☑ Yes ○ No
b) *Is the car connected to the controller earthing terminal by a separate conductor at least 0.75mm in cross section*	☑ Yes ○ No

3.3 Protection of conductors

a) Is the fixed wiring in conduits (or trunking, or fittings which ensure equivalent protection) throughout?	☑ Yes ○ No
b) *If NO do the cables conform to* 13.5.1.2 *of Part 1?*	☑ N/A ○ Yes ○ No

3.3 Phase failure device

Confirm that the phase reversal and phase failure protection operates correctly:	☑ Yes

3.3 Electrical wiring

Do the electrical conductors, including travelling cables conform to 13.5 *of Part 1?*	☑ Yes ○ No

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

4 Dynamic tests

4.1 Safety contact/circuits

a) *Have the contacts at each landing entrance been proved so that when broken they stop and prevent movement of the car outside the unlocking zone?* ☑ Yes ○ No

b) *Have the mechanical locks at each tending 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 outside the unlocking zone?* ☑ Yes ○ No

d) *If separate terminal stopping switches are fitted do they operate satisfaciorily?* ○ N/A ☑ Yes ○ No

e) *Do tha final limit switches operate satisfacfnily?* ☑ Yes ○ No

		Nominal		Actual	
f) State the distance beyond terminal floor level at which the final limit switches are set to operate:	Top		mm *	100	mm
	Bottom		mm *	100	mm

g) *Have the stopping devices on the car top and in the pulley room and pit been proved so that when broken they stop and prevent movement of the car?* ☑ Yes ○ No

h) *Have all the other switches/contacts in safety devices been proved so that when broken ihey stop and prevent movement of the car?* ☑ Yes ○ No

i) Does the earthing of the most remote contact (lock or push button) operate a fuse or trip a circuit breaker without delay? ☑ Yes ○ No

j) *Have the stopping devices on the car top and in the pulley room and pit, been proved sa that when broken tnoy stop and prevent movement of the car under emergency electucal operation?* ☑ N/A ○ Yes ○ No

4.2 Car top control station

a) *Confirm that the lift speed when under car top control does not exceed 0.63 m/sec:* ☑ Yes

b) Speed up: 0·25 m/s

c) Speed down: 0·25 m/s

d) *Confirm that the design of the car top station conforms to* **14.2.1.3** *of part 1:* ○ Yes *

e) *Confirm that the operation of the car top station conforms to* **14.2.1.3** *of Part 1:* ☑ Yes

Table 1. Certificate of teat and examination for electric passenger and goods lifts (cont)

4.3 Clearance and run-bys

a) *Will the car and counterweight clear all obstacles with the car and rated load compressing the car buffers?* ☑ Yes ○ No

b) *When the counterweight rests on its fully compressed buffers, what is the minimum distance to the first striking point above the car, determined in accordance with* 5.7.1.1c *of Pad* 1? 0.44 m*

c) By how much is the distance in *b) exceeded?* 0 m

d) *When the counterweight rests on its fully compressed buffers, is there a sufficient space to accomodate a rectangular block 0.5 m x 0.6 m x 0.8 m above the car as specified in* 5.7.1.1d *of Part 1?* ☑ Yes ○ No

e) *Confirm that the further guided travel of the counterweight, with the car on its fully compressed buffers, exceeds 300mm, as specified in* 5.7.1.2 *of part 1:* ☑ Yes

f) *When the car rests on its fully compressed buffers, is there a sufficient space to accomodate a rectangular block* 0.5 m x 0.6 m x 1.0 m *below the car as specified in* 5.7.3.3 *of Part* 1, *and at least 0.5 m between the bottom of the pit and the lowest point of the car* ☑ Yes ○ No

NOTE. *Attention is drawn to the requirement given in* 5.7.3.3.b2 *of part 1 that the clear distance between the bottom of the pit and the lowest part of the guide shoes or rollers of safety gear block, toe guards or parts of vertical sliding doors be at least 0.1m*

4.4 Entrance clearances

a) *Is the horizontal distance between tha sill of the car and sill of all the landing doors* 35 mm *or less?* ☑ Yes ○ No

b) *Is the running clearance between door panels, and between panels and upright, linlets or sills* 6 mm *or less?* ☑ Yes ○ No

c) *Confirm that no recess or projection on the face of the sliding door panels exceeds* 3 mm: ☑ Yes

d) *Is the distance between the inner surface of the wall 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? ☑ Yes ○ No

e) *If the answer to d) is NO, is the car door mechanically locked when away from the unlocking zone, in accordance with* 8.11.1 of Part 1? ☑ N/A ○ Yes ○ No

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

4.5 Door tests

NOTE. Where appropriate , the following tests should be carried out with the car and landing doors coupled

a) How are the doors operated? ○ Manually ● Powered — If so answer f, h, i, j, k, l, m, n. If so answer all except m.

b) Is the measured maximum force to prevent closing, at the mid point of travel, 150 N or less? ● Yes ○ No

State the figure recorded: 108 N

c) Is the measured kinetic energy 10 J or less? ● Yes ○ No

State the figure recorded: 1.9 J

d) Do all the protective devices reverse the doors in accordance with 7.5.2.1.1.3 of Part 1? ● Yes ○ No

e) If the protective device is made inoperative (see 7.5.2.1.1.3c of Part 1)?

1) Do the doors remain open ● Yes ● No

2) If the answer to 1) is NO, do the doors close with a kinetic energy not exceeding 4 J ? ○ N/A ● Yes ○ No

f) Is the unlocking zone 0.2 m or less above and below landing levels (or 0.35 m in the case of simultaneously operated car and landing doors)? ● Yes ○ No

g) Do the landing doors have an automatic mechanical self-closing mechanism? ○ N/A ● Yes ○ No

h) Is each set of landing doors capable of being unlocked from the outside with an emergency key? ● Yes ○ No

If not, why not?

i) Does the door motor/retiring ramp actuator protection system function correctly? ○ N/A ● Yes ○ No

j) What form of electrical protection is provided for the door motor/retiring ramp actuator?

☐ D.C. circuit breaker ☐ Three phase circuit breaker ☐ Overloads in each phase ☑ Timing relay ☐ Thermistors

State the relavent characteristics: ○ N/A Time to operate 25 s

Trip current (if applicable) A

k) Can the 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 Part 1)? ● Yes ○ No

l) If the rated speed of the lift is greater than 1.0 m/s is the force required to open the car doors when outside the unlocking zone 50 N or greater? ○ N/A ● Yes ○ No

m) Does the 'car here' indicator confonn lo 7.6.2 of Part 1 for manual doors? ● N/A ○ Yes ○ No

n) If the entrance clearances are not in accordance with 4.4d of this table, has it been checked that the car doors are mechanically locked when outside the unlocking zone in normal operation ? ● N/A ○ Yes ○ No

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

5 Measurements of the electrical system

a) State the power system (use terms as described in 4.2.3 of Part 6) VVVF

b) Provide the following details of the lift motor (as stated on the data plate)

	Specified		Actual	
Maker		*	Zeihl-Abegg	
Serial number		*	04500773/1	
Type		*	VFD 200L-4	
Voltage	v	*	360	v
Power Rating	kw	*	30	kw
Current Raling	A	*	66	A
Speed	r.p.m.	*	1470	r.p.m.
Class of insulalion		*	F	
Duty rating		*	S4	

c) Measure and record the following operational data when the car is at mid point of travel

Rated-speed operation (with lift performing approximately to its power system)

Car loading condition		Lift motor speed 1)	Lift speed 1)	Lift motor input			System input 2)		
				Running		Start	Running		Start
		r.p.m.	m/s	V	A	A	V	A	A
Empty	up		2.0	316	29.4	48.0	402	0.7	39.2
	down		2.0	323	37.1	84.0	399	28.0	68.2
400 Balanced	up		2.0	318	29.2	64.5	399	12.3	51.7
	down		2.0	318	28.9	63.8	398	12.1	52.5
Rated	up	1327	2.0	323	41.0	69.0	399	30.5	77.8
	down		2.0	316	30.0	47.5	403	0.7	37.0

1) Complete either of these columns in its entirety & make one entry only in the alternative column for tha "rated up" condition
2) Energy convertor or equivalent. Measure the system input to the controller from the main supply

Low-speed operation (with two speed a.c. motor) N/A *

Car loading condition		Lift motor speed 1)	Lift speed 1)	Lift motor input			System input 2)		
				Running		Start	Running		Start
		r.p.m.	m/s	V	A	A	V	A	A
Empty	up								
	down								
Balanced	up								
	down								
Rated	up								
	down								

1) Complete either of these columns in its entirely & make one entry only in the alternative column for the "rated up" condition
2) Energy convertor or equivalent. Measure the system input to the controller from the main supply

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

Maximum levelling deviation

Car loading condition		Maximum levelling deviation (+ or -) Specified mm	Actual mm
Empty	up		3
	down		3
Balanced	up		LEVEL
	down		LEVEL
Rated	up		3
	down		3

d) Quote the following data from the nameplate of the associated energy convertor(s) ☑ N/A

1) Type
2) Serial No
3) Input kw A V r.p.m.
4) Output kw A V r.p.m.

6 Lift motor overcurrent protective devices

6.1 Main windings

a) Measure and record the following (tick box or enter value, as appropriate):

Type of device	Manual reset	Automatic reset	Time to operate s	Trip current A	Setting
Three phase circuit breaker					
Overloads in each phase					
Timing relay DJR	✓		70		
Thermistor		✓	TESTED BY DISCONNECTION		
Other (name type)					

b) Have you found these satisfactory? ☑ Yes ○ No

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont.)

6.2 Slow speed windings ☑ N/A

a) Measure and record the following (tick box or enter value, as appropriate):

Type of device	Manual reset	Automatic reset	Time to operate s	Trip current A	Setting
Three phase circuit breaker					
Overloads in each phase					
Timing relay					
Thermistor					
Other (name type)					

b) Have you found these satisfactory? ○ Yes ○ No

6.3 Convertor input ☑ N/A

a) Measure and record the following (lick box or enter value, as appropriate):

Type of device	Manual reset	Automatic reset	Time to operate s	Trip current A	Setting
Three phase circuit breaker					
Overloads in each phase					
Timing relay					
Thermistor					
Other (name type)					

b) Have you found these satisfactory? ○ Yes ○ No

6.4 MG set drive motor ☑ N/A

a) Measure and record the following (tick box or enter value, as appropriate):

Type of device	Manual reset	Automatic reset	Time to operate s	Trip current A	Setting
Three phase circuit breaker					
Overloads in each phase					
Timing relay					
Thermistor					
Other (name type)					

b) Have you found these satisfactory? ○ Yes ○ No

Table 1. Certificate of teat and examination for electric passenger and goods lifts (cont.)

7 Overspeed governor tests

7.1 Car governor

Complete the following:

Governor lype: Bode Type 7

Serial number: 104 10 1884

Device	Tripping speed m/s			Does it operate effectively?
	Marked	Measured		
		Car up	Car down	
Electrical		2.6	2.6	☑ Yes O No
Mechanical	2.63	2.6	2.6	☑ Yes O No

Stale how the governor was tested on the inslailation

Allowing fully loaded car to overspeed in down direction.

7.1 Counterweight governor

Complete the following: ☑ N/A

Governor type:

Serial number:

Device	Tripping speed m/s			Does it operate effectively?
	Marked	Measured		
		Car up	Car down	
Electrical				O Yes O No
Mechanical				O Yes O No

State how lhe governor was tested on the installation:

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont.)

8 Car safety gear test

NOTE. The following tests are to be conducted with the car descending. The test load is to be uniformly distributed in the car, and the safely gear switch, overspeed governor switch. buffer switch or any other electrical devices that may cause the lift to stop are to be temporarily shorted out. During the tests the brake is to be kept open, with the machine continuing fo run until the ropes slip or become slack

8.1 Progressive safety gear — ○ N/A

a) Does the safety gear operate oorrectly when engaging ai rated speed with 125 % of rated load uniformly distrihuled ? — ☑ Yes ○ No

b) Stale slide distance? — 0·43 m

c) Does this value lie within the range given by the manufaclurer? — ☑ Yes ○ No

d) Is the floor uf the lift car horizontal or sloping less than 5 % from the horizontal? — ☑ Yes ○ No

e) Following the test of 8.1a. confirm lhat no delerioration which could adversely affect the normal use of the lift has occurred: — ☑ Yes

8.2 Instantaneous safety gear — ☑ N/A

a) Does the safety gear operate correctly when engaging at rated speed wilh the rated load uniformly distributed ? — ○ Yes ○ No

b) Is the floor of the lift car horizontal or sloping less than 5 % from the horizontal? — ○ Yes ○ No

c) Following the test of 8.2a, confirm lhat no deterioration which could adversely affect the normal use of the lift has occurred — ○ Yes

9 Counterweight safety gear test

NOTE. The following lasts are fo be conducted wilh the counterweight descending. There is to be no load in the car and the safety gear switch. overspeed governor switch. buffer switch or any other electrical devices lhat may cause the lift lo slop are to be temporarily shorted out During the tests the brake is to be kept open, with the machine continuing to run until the ropes slip or become slack.

9.1 Progresaive safety gear — ☑ N/A

a) Does the safety gear operate correctly when engaging at rated speed with the car empty? — ○ Yes ○ No

b) Stale slide distance? — m

c) Does this value lie within the range given by the manufacturer? — ○ Yes ○ No

d) Following the test of 9.1a, confirm that no deterioration which could adversely affeci the normal use of the lift has occurred: — ○ Yes

9.2 Instantaneous safety gear — ☑ N/A

a) Does the safely gear operate correctly when engaging at rated speed wilh the car empty? — ○ Yes ○ No

b) Following this test, confirm that no deterioration which could adversely affect the normal use of the lift has occurred: — ○ Yes

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont.)

10 Reduced stroke buffering ☑ N/A

Does the terminal speed reduction system ensure that the buffer impact speed is appropriate to the stroke of the buffer (see 10.4.3.2 of Part 1)? ○ Yes ○ No

11 Buffers

11.1 Energy accumulation buffers (spring type)

When the car with its rated load is placed on the buffer(s), the ropes being made slack, confirm that the compression corresponds to that given by the characteristic curve of the buffer (as supplied by the buffer supplier or the lift supplier): ☑ N/A ○ Yes

11.2 Energy accumulation buffers (polyurethane type)

When the car with its rated load is placed on the buffer(s), the ropes being made slack, confirm that the compression corresponds to that given by the characteristic curve of the buffer (as supplied by the buffer supplier or the lift supplier): ☑ N/A ○ Yes

11.3 Energy dissipation buffers (oil type) ○ N/A

a) Car buffers:
When the car is 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, is operation satisfactory? ☑ Yes ○ No

b) Counterweight buffers:
When the counterweight is brought into contact with the buffer with the car empty at rated speed, or at a speed for which the stroke of the buffer has been calculated, is operation satisfactory? ○ Yes ○ No

c) Do the buffers recover automatically after operation? ☑ Yes ○ No

12 Traction checks

a) Does the car stop under emergency conditions:

1) with car empty, when travelling upwards at rated speed? ☑ Yes ○ No

2) with 125 % rated load, when travelling downwards in the lower part of the well at rated speed? ☑ Yes ○ No

b) When the counterweight is resting on its compressed buffers is it impossible for the empty car to be raised under power? ☑ Yes ○ No

c) From the measurements recorded in item 5 of this table is the balance satisfactory? ☑ Yes ○ No

	Specified	Actual
State the percentage of the balance:	% *	45 %

d) Confirm that the filler weights in the counterweight have been secured: ☑ Yes

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont.)

13 Duty cycle tests

a) Does the lift operate satisfactorily for a period of at least 0 5 *h* when running with rated load, full travel and intermediate stops at a rate of starts at least equal to the number of starts recommended in part 4.2 of Part 6? ☑ Yes ○ No

b) State the *machine room* temperature at the end of this test: 17 °c

Is this temperature rise acceptable? ☑ Yes ○ No

If NO, state reasons:

NOTE. it may be necessary to adjust or omit the operation of the doors to achieve the required number of starts per hour

14 General

a) *Is the maximum load indicated in the car (e.g. number of persons, load in kilograms and identification number) and does it conform to* **15.2.1** *of Part 1?* ○ Yes ○ No *

b) If the lift is a firefighting lift , confirm that it has been designed in accordance with BS 5588 : Part 5: ○ N/A ○ Yes *

c) If the lift is a firefighting lift , confirm that it has been tested in accordance with BS 5588 : Part 5: ☑ N/A ○ Yes

d) If the lift has an evacuation system for disabled persons, confirm that it has been designed in accordance with BS 5588 : Part 8: ○ N/A ○ Yes *

e) If the lift has an evacuation system for disabled persons. confirm that it has been Tested in accordance with BS 5588 : Part 8: ☑ N/A ○ Yes

f) *Confirm that the emergency instructions are displayed in the machine room in accordance with* **15.4** *of Part 1:* ☑ Yes

g) *Confirm that the emergency operation system(s) function correctly in accordance with* **12.5** *of Part 1:* ☑ Yes

	Name:	Organisation:
To whom has the emergency operation system been demonstrated?	NOT DEMONSTRATED	

h) *Confinn that the artificial lighting in the machine room conforms to* **6.3.6** *of Part 1:* ☑ Yes

Tabla 1. Certificate of test and examination tor electric passenger and goods lifts (cont.)

i) *Confirm that the artificial lighting in the well conforms to* 5.9 *of Part 1:* ○ N/A ☑ Yes

j) Are the machine room conditions satisfactory? ○ Yes ☑ No

If NO, state reasons: Trap door to be renewed.

k) Are the provisions for heating and ventilating the machine room in working order? ☑ Yes ○ No

l) *Confirm that the machine room doors or trap doors are fitted with a suitable lock conforming to* 6.3.3.3 *of Part 1:* ☑ Yes

m) What are the means of emergency communication for passengers in the lift car? Audible signal: Bell; Voice communication: Autodialer

Confirm that at least one means of emergency communication works: ☑ Yes

n) *Confirm that the emergency lighting of the car stays illuminated for at least* 1h: ☑ Yes

o) *Is there safe means of access to all items of lift equipment in accordance with Part 1?* ☑ Yes ○ No

If NO, state reasons:

p) *Confirm that the safety notices/instructions specified in clause* 15 *of Part 1 and recommended in* 3.6 *of Part 6 are correctly displayed:* ☑ Yes

q) *Confirm that the toe guard conforms to 8.4 of Part 1:* ☑ Yes

r) Has a counterweight screen been fitted? ○ N/A ☑ Yes ○ No

15 Conclusions

a) Following the foregoing tests, confirm that all items for which the lift contractor is responsible are complete and that no deterioration which could adversely affect the normal use of the lift has occurred ☑ Yes

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont.)

b) 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? O Yes O No

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. A list of typical inclusions and exclusions is given in BS 5655 : Part 6

If NO, provide details :

16 Declaration of conformity of design and manufacture

Does the design and manufacture of the lift conform to BS 5655 : Part 1? O Yes O No

If NO, state deviations:

Signatures(s):

Company position:

Table 1. Certificate of test and examination for electric passenger and goods lifts (concluded)

17 Declaration of test

I/We certify that on 3.2.06 the equipment was thoroughly examined and found to be free from obvious defects, subject to any statement in 15c and that the foregoing is a correct report of the result.

Vendor/purchaser's identification number:

HO 90

Signatures(s):

T. W. Cook.

Autodialer Numbers.
0207 838 5374
0845 634 0213

Name and address of public service, association,company firm or person making the examination:

T.C. Lift Aid Ltd.
17 Cherry Orchard Rd.
Bromley
Kent.
BR2 8NE.

Position in the above organization of the person who conducted the examination:

TESTER/DIRECTOR

or
Qualifications of examiner, if working on his/her own account:

NVQ Level 4

Test certificate serial number:

Date:

APEX LIFTS

Table 1. Certificate of test and examination for electric passenger and goods lifts

Notes for the completion of this cartifloata

1. The references quoted below in association with a part number refer to clauses, figures, tables or annexes of the stated part of BS 5655. Other clause numbers relate to this subsection of BS 6655
2. Statements and replies to all relavent questions should be entered in the appropriate boxes. Where multiple choice questions are posed, only one of the alternative boxes should be ticked.
3. Boxes marked with an astensk (*) should be completed by the vendors design office
4. Italic type is used where reference is made to a requirement of BS 5655: Part 1: 1986

1 Description of installation

Location GRENFELL TOWER *

Vendor Apex Lifts Ltd *

Vendors Identification No
C5470 *

Purchasers identification No
H091 *

Length Of Travel 63.209 m

Number of levels served:

Total	22	*
Front	22	*
Rear	-	*
Side	-	*

Power Supply
◉ Permanent
○ Temporary

Rated Load 900 kg * 12 Persons *

Rated Speed 2.0 m/s *

	Specified		Actual at time of test
Voltage	415	*	413
Phase	3	*	3
Frequency	50	*	50
Wire(3or4)	3	*	3
Fuse Rating		*	100
Fuse Type		*	HRC

Are the above entries acceptable?
○ Yes ○ No

Machine room location
◉ Above well *
○ Below well *
○ At side *
○ Within Shaft *

Machine room temperature at start of dynamic tests 26 °c

	Specified *		Actual	
Main Switch Rating	100	A	100	A
Is the Switch Fused	○ Yes ○ No		◉ Yes ○ No	
Is it lockable off	○ Yes ○ No		◉ Yes ○ No	
Number of poles			3	

Reeving Ratio 1.1 *

NOTE. A four-pole switch is necessary if emergency lowering is fitted

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

2. Static Examination (mechanical)

2.1 Suspension

a) Suspension ropes:

	Specified	Actual
Number:	6 *	6
Nominal diameter:	13 mm*	13 mm
Lay & constmction:	R.H. Ordinary 8/19 *	R.H. Ordinary 8/19
Is test certificate in order & available?	◉ Yes ○ No *	
Is rope data plate fitted to crosshead?	◉ Yes ○ No	

b) Rope anchorages :

	Car	Counterweight
Type	WEDGE CLAMP	WEDGE CLAMPS
Number Of Rope Grips (if any):	1	1
Confirm that rope grips (if any) are fitted correctly :	◉ Yes	◉ Yes
State BS number and type of socketed anchorages used (if any):	EYE BOLTS	EYE BOLTS
Describe any other kind of anchorage used:		

	Specified	Actual
Are anchorages in accordance with 9.2.3. of part 1 ?	◉ Yes ○ No *	◉ Yes ○ No
Are the anchorages prevented from rotating through 180° ?	◉ Yes ○ No *	◉ Yes ○ No
Do the ropes conform to 9.5 of part 1 ensuring distribution of load between the ropes?	◉ Yes ○ No *	◉ Yes ○ No

c) Suspension chains: ◉ N/A

	Specified	Actual
1) Number :	*	
2) Pitch :	*	
3) Type and construction:	*	

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

4) Is the chain test certificate available and in order? ○ Yes ○ No *

5) Are the anchorages in accordance with 9.2.5 of Part 1? ○ Yes ○ No *

	Specified	Actual
6) Do the chains conform to 9.5 of part 1, ensuring distribution of load between chains?	○ Yes ○ No *	○ Yes ○ No

d) Eyebolts:

	Specified	Actual
If eyebolts used do they conform to Part 8?	○ Yes ○ No *	○ Yes ○ No

2.2 Compensation

a) Is compensation provided? ○ Yes ◉ No *

b) If yes what type?

	Specified	Actual
1) Rope:		*
2) Chain:		*
3) Anti Rebound:		*
4) Number:		*
5) Size:		*

2.3 Safety gear, overspeed governor, overspeed governor rope and tension pulley

a) Has the safety gear been tested in accordance with F.3 of part 1 and certified in accordance with F.3.5 of part 1? ◉ Yes ○ No *

b) If YES, is the data plate fitted in accordance with 15.14 of Part 1? ◉ Yes ○ No

c) Is the safety gear seated (see 9.8.6.4 of Part 1)? ◉ Yes ○ No

d) Confirm that the governor has been tested in accordance with F.4 of Part 1 and certified in accordance with F.4.3 of part 1: ◉ Yes ○ No *

e) Specify overspeed governor type: BIDIRECTIONAL - BODE

f) State type of overspeed governor fitted: VCB 098/1

g) Is the data plate fitted & in accordance with 15.6 of Part 1? ◉ Yes ○ No

h) Confirm that the governor is sealed: ◉ Yes

	Specified	Actual
i) State safety rope nominal diameter:	8 mm*	8 mm
j) Confirm that the safety gear, overspeed governor, overspeed governor rope and the tension pulley operate as a compatable system:	◉ Yes *	◉ Yes

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

2.4 Car

a) *Confirm that the available floor area, related to rated load and maximum number of passengers, conforms to* **8.2** *of Part 1?* ◉ Yes *

	Specified	Actual
b) State the internal width, i.e. wall to wall (without finishes):	mm*	1400 mm
c) State the internal depth, i.e. front return to rear wall or front return to rear return (without finishes):	mm*	1400 mm

2.5 Energy accumulation buffers (spring buffers) ◉ N/A *

a) *Confirm that the buffers conform to* **10.4.1** *of part 1* ○ Yes *

	Specified	Actual
b) State number fitted		*

c) *Confirm that the buffers are correctly identified* ○ Yes

2.6 Energy accumulation buffers (polyurethane buffers) ◉ N/A *

a) *Confirm that the buffers conform to* **10.4.1** *of part 1* ○ Yes *

	Specified	Actual
b) State size selected:		*
c) State number fitted:		*

d) Confirm that the buffers are correctly identified: ○ Yes

2.7 Energy dissipation buffers (e.g. oil) ◉ N/A *

a) *Confirm that the buffers have been tested in accordance with* **F.5** *of Part 1 and certified in accordance with* **F.5.4** *of Part 1?* ◉ Yes *

b) *Is the data plate in accordance with* **15.8** *of part 1?* ◉ Yes ○ No

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

c) *If* No are *they suitable for submission to the test described in* **11.3** *of this table?*	◉ N/A ○ Yes ○ No
d) Are they correctly filled *and not* leaking?	◉ Yes ○ No
e) Is there reduced stroke buffering (see Item 10 of this table)?	○ Yes ◉ No *
f) Is the stroke of each buffer in accordance with **10.4.3** of *Part 1*?	◉ Yes ○ No
g) Slate number fitted	Specified 2 * Actual 2

2.a Brake

Confinn that the brake sustains the static car at the lowest level when loaded with **125%** of rated load	◉ Yes

2.9 Landing door assemblies

a) Does the contract require the landing door assemblies to be fire-rated	◉ Yes ○ No *
if YES what is the fire-rating requirement	2 Hour*
b) Is the test certificate available and in order	○ N/A ◉ Yes ○ No *
c) If yes and the doors are manually operated is the means of fire prevention a fusible link	◉ N/A ○ Yes ○ No *
d) If NO describe the method used	
e) Confirm that the fire rated elements of the door assembly are correctly fitted :	◉ Yes

2.10 Door locks

a) Confirm that *all the door locks have* been tested *in* accordance *with* **F1** *of Part 1 and certified in* accordance *with* **F.1.4** *of Part* **1**:	◉ Yes *
b) Does *the data plate conform to* **15.13** *of Part 1:*	◉ Yes ○ No

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

3 Static examination (electrical)

3.1 Electric safety devices

Confirm that the electric safety devices are in accordance with appendix A of Part 1 ◉ Yes

3.2 Insulation resistance to earth (see clause 5)

a) Lift motor >280 M Ohms

b) MG set (if fitted)

1) Motor - M Ohms

2) Generator - M Ohms

c) Power system >900 M Ohms

d) Safety devices (slate minimum reading) >900 M Ohms

3.3 Earthing

a) *Is the maximum continuity resistance to the earth provided less than 0.5 Ohms ? (see clause 7b):* ◉ Yes ○ No

b) *Is the car connected to the controller earthing terminal by a separate conductor at least 0.75mm in cross section* ◉ Yes ○ No

3.3 Protection of conductors

a) Is tbe fixed wiring in conduits (or trunking, or fittings which ensure equivalent protection) throughout? ◉ Yes ○ No

b) *If NO do the cables conform to* **13.5.1.2** *of Part 1?* ◉ N/A ○ Yes ○ No

3.3 Phase failure device

Confirm that the phase reversal and phase failure protection operates correctly: ◉ Yes

3.3 Electrical wiring

Do the electrical conductors, including travelling cables conform to **13.5** *of Part 1?* ◉ Yes ○ No

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

4 Dynamic tests

4.1 Safety contact/circuits

a) *Have the contacts at each landing entrance been proved so that when broken they stop and prevent movement of the car outside the unlocking zone?* ◉ 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 outside the unlocking zone?* ◉ Yes ○ No

d) *If separate terminal stopping switches are fitted, do they operate satisfactorily?* ○ N/A ◉ Yes ○ No

e) *Do the final limit switches operate satisfactrily?* ◉ Yes ○ No

		Nominal	Actual
f) State the distance beyond terminal floor level at which the final limit switches are set to operate:	Top	150 mm *	100 mm
	Bottom	150 mm *	100 mm

g) *Have the stopping devices on the car top and in the pulley room and pit been proved so that when broken they stop and prevent movement of the car?* ◉ Yes ○ No

h) *Have all the other switches/contacts in safety devices been proved so that when broken they stop and prevent movement of the car?* ◉ Yes ○ No

i) Does the earthing of the most remote contact (lock or push button) operate a fuse or trip a circuit breaker without delay? ◉ Yes ○ No

j) *Have the stopping devices on the car top and in the pulley room and pit, bean proved so that whan broken they stop and prevent movement of the car under emergency electrical operaflon?* ○ N/A ◉ Yes ○ No

4.2 Car top control station

a) *Confirm that the lift speed when under car top control does not exceed 0.63 m/sec:* ◉ Yes

b) Speed up: 0.25 m/s

c) Speed down: 0.25 m/s

d) *Confirm that the design of the car top station conforms to* **14.2.1.3** *of part 1:* ◉ Yes *

e) *Confirm that the operation of the car top station conforms to* **14.2.1.3** *of Part 1:* ◉ Yes

Tabla 1. Certificate of test and examination for electric passenger and goods lifts (cont)

4.3 Clearance and run-bys

a) *Will the car and counterweight clear all obstacles with the car and rated load compressing the car buffers?* ◉ Yes ○ No

b) *When the counterweight rests on its fully compressed buffers, what is the minimum distance to the first striking point above the car, determined in accordance with* 5.7.1.1c *of Part* 1? 240MM *m**

c) By *how much* is the *distance* in b) *exceeded*? 20MM *m*

d) *When the counterweight rests on its fully compressed buffers, is there a sufficient space to accomodate a rectangular block* 0.5 *m x* 0.6 *m x* 0.8 *m above the car as specified in* 5.7.1.1d *of Part* 1? ◉ Yes ○ No

e) *Confirm that the further guided travel of the counterweight, with the car on its fully compressed buffers, exceeds* 300mm, *as specified in* 5.7.1.2 *of part* 1: ◉ Yes

f) *When the car rests on its fully compressed buffers, is there a sufficient space to accomodate a rectangular block* 0.5 *m x* 0.6 *m x* 1.0 *m below the car as specified in* 5.7.3.3 *of Part* 1, *and at least* 0.5 *m between the bottom of the pit and the lowest point of the car* ◉ Yes ○ No

NOTE. *Attention is drawn to the requirement given in* 5.7.3.3.b2 *of part* 1 *that the clear distance between tha bottom of the pit and the lowest part of the guide shoes or rollers of safety gear block, toe guards or parts of vertical sliding doors be at least* 0.1m

4.4 Entrance clearances

a) *Is the horizontal distance between the sill of the car and sill of all the landing doors* 35 *mm or less?* ◉ Yes ○ No

b) *Is the running clearance between door panels, and between panels and upright, lintels or sills* 6 *mm or less?* ◉ Yes ○ No

c) *Confirm that no recess or projection on the face of the sliding door panels exceeds* 3 *mm*: ◉ 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? ◉ Yes ○ No

e) *If the answer to d) is NO, is the car door mechanically locked when away from the unlocking zone, in accordance with* 8.11.1 *of Part* 1? ○ N/A ◉ Yes ○ No

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

4.5 Door tests

NOTE. Where appropriate , the following tests should be carried out with the car and landing doors coupled

a) How are the doors operated? ○ Manually ◉ Powered — If so answer f, h, i, j, k, l, m, n. if so answer all except m.

b) Is the measured maximum force to prevent closing, at the mid point of travel, 150 N or less? ◉ Yes ○ No

State the figure recorded: 140 N

c) Is the measured kinetic energy 10 J or less? ◉ Yes ○ No

State the figure recorded: 4 J

d) Do all tho protective devices reverse the doors in accordance with 7.5.2.1.1.3 of Part 1? ◉ Yes ○ No

e) If the protective device is made inoperative (see 7.5.2.1.1.3c of Part 1)?

1) Do the doors remain open ◉ Yes ○ No

2) If the answer to 1) is NO, do the doors close with a kinetic energy not exceeding 4 J ? ◉ N/A ○ Yes ○ No

f) Is the unlocking zone 0.2 m or lass above and below landing levels (or 0.35 m in the case of simultaneously operated car and landing doors)? ◉ Yas ○ No

g) Do the landing doors have an automatic mechanical self-closing mechanism? ○ N/A ◉ Yes ○ No

h) Is each set of landing doors capable of being unlocked from the outside with an emergency key? ◉ Yes ○ No

If not, why not?

i) Does the door motor/retiring ramp actuator protection system function correctly? ○ N/A ◉ Yes ○ No

j) What form of electrical protection is provided for the door motor/retiring ramp actuator? AC CIRCUIT BREAKER

☐ D.C. circuit breaker ☐ Three phase circuit breaker ☐ Overloads in each phase ☒ Timing relay ☐ Thermistors

State the relavent characteristics: ○ N/A Time to operate 20 s

Trip current (if applicable) 3 A

k) Can the 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 Part 1)? ◉ Yes ○ No

l) If the rated spaed of the lift is greater than 1.0 mis is the force required to open the car doors when outside the unlocking zone 50 N or greater? ○ N/A ◉ Yes ○ No

m) Does the 'car here' indicator conform to 7.6.2 of Part 1 for manual doors? ◉ N/A ○ Yes ○ No

n) If the entrance clearances are not In accordance with 4.4d of this table, has it been checked that the car doors are mechanically locked when outside the unlocking zone in normal operation ? ○ N/A ◉ Yes ○ No

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

5 Measurements of the electrical system

a) State the power system (use terms as described in 4.2.3 of Part 6) *

b) Provide the following details of the lift motor (as stated on the data plate)

	Specified		Actual
Maker		*	ZIEHL ABEGG
Serial number		*	0450077312
Type		*	VFD200L-4
Voltage	v	*	3 Y360/400 v
Power Rating	kw	*	30 kw
Current Rating	A	*	66 A
Speed	r.p.m.	*	1470 r.p.m.
Class of insulation		*	F
Duty rating		*	240 SPH

c) Measure and record the following operational data when the car is at mid point of travel

Rated-speed operation (with lift performing approximately fo its power system)

Car loading condition		Lift motor speed 1)	Lift speed 1)	Lift motor input			System input 2)		
				Running		Start	Running		Start
		r.p.m.	m/s	V	A	A	V	A	A
Empty	up	1351	2.0	571	40.7	63.5	412	1.1	45.2
	down	1348	2.0	547	46.5	98.4	410	29.5	76.9
Balanced	up	1349	2.0	556	39.2	80.2	413	9.8	59.0
	down	1350	2.0	559	38.4	78.2	413	9.4	58.8
Rated	up	1348	2.0	548	47.0	103.5	412	30.5	79.2
	down	1352	2.0	572	39.8	63.8	416	1.1	45.6

1) Complete either these columns in its entirety & make one entry only in the alternative column for the "rated up" condition
2) Energy convertor or equivalent. Measure the system input to the conlroller from the main supply

Low-speed operation (with two speed a.c. motor) ◉ N/A *

Car loading condition		Lift motor speed 1)	Lift speed 1)	Lift motor input			System input 2)		
				Running		Start	Running		Start
		r.p.m.	m/s	V	A	A	V	A	A
Empty	up								
	down								
Balanced	up								
	down								
Rated	up								
	down								

1) Complete either of these columns In its entirety & make one entry only in the alternative column for the "rated up" condition
2) Energy convertor or equivalent. Measure the system input to the controller from the main supply

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont)

Maximum levelling deviation			
Car loading condition		Maximum levelling deviation (+ or -)	
		Specified mm	Actual mm
Empty	up		4
	down		2
Balanced	up		3
	down		3
Rated	up		2
	down		4

d) Quote the following data from the nameplate of the associated energy convertor(s) ○ N/A

1) Type CIMR - L84045
2) Serial No JOO49G9963T002
3) Input kw 115 A 400 V r.p.m.
4) Output kw 80KV A 400 V r.p.m.

6 Lift motor overcurrent protective devices

6.1 Main windings

a) Measure and record the following (tick box or enter value, as appropriate):

Type of device	Manual reset	Automatic reset	Time to operate s	Trip current A	Setting
Three phase circuit breaker	X			100	
Overloads in each phase	X		19		
Timing relay		X			
Thermistor		X			
Other (name type)					

b) Have you found these satisfactory? ◉ Yes ○ No

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont.)

6.2 Slow spaed windings ◉ N/A

a) Measure and record the following (tick box or enter value, as appropriate):

Type of device	Manual reset	Automatic reset	Time to operate s	Trip current A	Setting
Three phase circuit breaker					
Overloads in each phase					
Timing relay					
Thermistor					
Other (name type)					

b) Have you found these satisfactory? ○ Yes ○ No

6.3 Convertor input ○ N/A

a) Measure and record the following (tick box or enter value, as appropriate):

Type of device	Manual reset	Automatic reset	Time to operate s	Trip current A	Setting
Three phase circuit breaker	X			100	
Overloads in each phase	-		-	-	-
Timing relay		X			
Thermistor		X			
Other (name type)					

b) Have you found these satisfactory? ◉ Yes ○ No

6.4 MG set drive motor ◉ N/A

a) Measure and record the following (tick box or enter value, as appropriate):

Type of device	Manual reset	Automatic reset	Time to operate s	Trip current A	Setting
Three phase circuit breaker					
Overloads in each phase					
Timing relay					
Thermistor					
Other (name type)					

b) Have you found these satisfactory? ○ Yes ○ No

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont.)

7 Overspeed governor tests

7.1 Car governor

Complete the following:

Governor type: VCB 098/1 , BIDIRECTIONAL - BODE

Serial number: 101 10 1886

Device	Tripping speed m/s			Does it operate effectively?
	Marked	Measured		
		Car up	Car down	
Electrical		2.60	2.64	◉ Yes ○ No
Mechanical			2.79	◉ Yes ○ No

State how the governor was tested on the installation

BIDERECTIONAL GOVERNER
CWT TESTED EMPTY CAR WITH CWT IN FREEFALL
CAR TESTED FULL LOAD WITH CAR IN FREEFALL

7.1 Counterweight governor

Complete the following: ◉ N/A

Governor type:

Serial number:

Device	Tripping speed m/s			Does it operate effectively?
	Marked	Measured		
		Car up	Car down	
Electrical				○ Yes ○ No
Mechanical				○ Yes ○ No

State how the governor was tested on the installation:

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont.)

8 Car safety gear test

NOTE. The following tests are to be conducted with the car descending. The test load is to be uniformly distributed in the car, and the safety gear switch, overspeed governor switch, buffer switch or any other electrical devices that may cause the lift to stop are to be temporarily shorted out. During the tests the brake is to be kept open, with the machine continuing to run until the ropes slip or become slack

8.1 Progressive safety gear ○ N/A

a) Does the safety gear operate correctly when engaging at rated speed with 125 % of rated load uniformly distributed ? ◉ Yes ○ No

b) State slide distance? 495MM m

c) Does this value lie within the range given by the manufacturer? ◉ Yes ○ No

d) Is the floor of the lift car horizontal or sloping less than 5 % from the horizontal? ◉ Yes ○ No

e) Following the test of **8.1**a, confirm that no deterioration which could adversely affect the normal use of the lift has occurred: ◉ Yes

8.2 Instantaneous safety gear ◉ N/A

a) Does the safety gear operate correctly when engaging at rated speed with the rated load uniformly distributed ? ○ Yes ○ No

b) Is the floor of the lift car horizontal or sloping less than 5 % from the horizontal? ○ Yes ○ No

c) Following the test of **8.2**a, confirm that no deterioration which could adversely affect the normal use of the lift has occurred: ○ Yes

9 Counterweight safety gear test

NOTE. The following tests are to be conducted with the counterweight descending. There is to be no load in the car and the safety gear switch, overspeed governor switch, buffer switch or any other electrical devices that may cause the lift to stop are to be temporarily shorted out. During the tests the brake is to be kept open, with the machine continuing to run until the ropes slip or become slack.

9.1 Progressive safety gear ◉ N/A

a) Does the safety gear operate correctly when engaging at rated speed with the car empty? ○ Yes ○ No

b) State slide distance? m

c) Does this value lie within the range given by the manufacturer? ○ Yes ○ No

d) Following the test of **9.1**a, confirm that no deterioration which could adversely affect the normal use of the lift has occurred: ○ Yes

9.2 Instantaneous safety gear ◉ N/A

a) Does the safety gear operate correctly when engaging at rated speed with the car empty? ○ Yes ○ No

b) Following this test, confirm that no deterioration which could adversely affect the normal use of the lift has occurred: ○ Yes

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont.)	
10 Reduced stroke buffering	◉ N/A
Does the terminal speed reduction system ensure that the buffer impact speed is appropriate to the stroke of the buffer (see 10.4.3.2 of Part 1)?	○ Yes ○ No
11 Buffers	
11.1 Energy accumulation buffers (spring type) When the car with its rated load is placed on the buffer(s), the ropes being made slack, confirm that the compression corresponds to that given by the characteristic curve of the buffer (as supplied by the buffer supplier or the lift supplier):	◉ N/A ○ Yes
11.2 Energy accumulation buffers (polyurethane type) When the car with its rated load is placed on the buffer(s), the ropes being made slack, confirm that the compression corresponds to that given by the characteristic curve of the buffer (as supplied by the buffer supplier or the lift supplier):	◉ N/A ○ Yes
11.3 Energy dissipation buffers (oil type)	○ N/A
a) Car buffers: When the car is 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, is operation satisfactory?	◉ Yes ○ No
b) Counterweight buffers: When the counterweight is brought into contact with the buffer with the car empty at rated speed, or at a speed for which the stroke of the buffer has been calculated, is operation satisfactory?	◉ Yes ○ No
c) Do the buffers recover automatically after operation?	◉ Yes ○ No
12 Traction checks	
a) Does the car stop under emergency conditions:	
1) with car empty, when travelling upwards at rated speed?	◉ Yes ○ No
2) with 125 % rated load, when travelling downwards in the lower part of the well at rated speed?	◉ Yes ○ No
b) When the counterweight is resting on its compressed buffers is it impossible for the empty car to be raised under power?	◉ Yes ○ No
c) From the measurements recorded in item 5 of this table is the balance satisfactory?	◉ Yes ○ No
State the percentage of the balance:	Specified 50 % * Actual 50 %
d) Confirm that the filler weights in the counterweight have been secured:	◉ Yes

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont.)

13 Duty cycle tests

a) Does the lift operate satisfactorily for a period of at least 0.5 h when running with rated load, full travel and intermediate stops at a rate of starts at least equal to the number of starts recommended in part 4.2 of Parl 6? ◉ Yes ○ No

b) State the machine room temperature at the end of this test: 29.9 °c

Is this temperature rise acceptable? ◉ Yes ○ No

If NO, state reasons:

NOTE. It may be necessary to adjust or omit the operation of the doors lo achieve the required number of starts per hour

14 General

a) *Is the maximum load indicated in the car (e.g. number of persons, load in kilograms and identification number) and does it conform to* **15.2.1** *of Part 1?* ◉ Yes ○ No *

b) If the lift is a firefighting lift , confirm that it has been designed in accordance with BS 5588 : Part 5: ◉ N/A ○ Yes *

c) If the lift is a firefighting lift , confirm that it has been tested in accordance with BS 5588 : Part 5: ◉ N/A ○ Yes

d) If the lift has an evacuation system for disabled persons, confirm that it has been designed in accordance with BS 5588 : Part 8: ◉ N/A ○ Yes *

e) If the lift has an evacuation system for disabled persons, confirm that it hes been Tested in accordance with BS 5588 : Part 8: ◉ N/A ○ Yes

f) *Confirm that the emergency instructions are displayed in the machine room in accordance with* **15.4** *of Part 1:* ◉ Yes

g) *Confirm that the emergency operation system(s) function correctly in accordance with* **12.5** *of Part 1:* ◉ Yes

	Name:	Organisation:
To whom has the emergency operation system been demonstrated?	S ELLIS	BUTLER & YOUNG LIFT CONSULTANTS

h) *Confirm that the artificial lighting in the machine room conforms to* **6.3.6** *of Part 1:* ◉ Yes

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont.)

l) *Confirm that the artificial lighting in the well conforms to* **5.9** *of Part 1:* ○ N/A ◉ Yes

j) Are the machine room conditions satisfactory? ◉ Yes ○ No

If NO, state reasons:

k) Are the provisions for heating and ventilating the machine room in working order? ◉ Yes ○ No

l) *Confirm that the machine room doors or trap doors are fitted with a suitable lock conforming to* **6.3.3.3** *of Part 1:* ◉ Yes

	Audible signal	Voice communication
m) What are the means of emergency communication for passengers in the lift car?		

Confirm that at least one means of emergency communication works: ◉ Yes

n) *Confirm that the emergency lighting of the car stays illuminated for at least* 1h: ◉ Yes

o) *Is there safe means of access to all items of lift equipment in accordance with Part 1?* ◉ Yes ○ No

If NO, state reasons:

p) *Confirm that the safety notices/instructions specified in clause* **15** *of Part 1 and recommended in* **3.6** *of Part* **6** *are correctly displayed:* ◉ Yes

q) *Confirm that the toe guard conforms to 8.4 of Part 1:* ◉ Yes

r) Has a counterweight screen been fitted? ○ N/A ◉ Yes ○ No

15 Conclusions

a) Following the foregoing tests, confirm that all items for which the lift contractor is responsible are complete and that no deterioration which could adversely affect the normal use of the lift has occurred ◉ Yes

Table 1. Certificate of test and examination for electric passenger and goods lifts (cont.)

b) 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? ◉ Yes ○ No

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. A list of typical inclusions and exclusions is given in BS 5655 : Part 6

if NO, provide details :

16 Declaration of conformity of design and manufacture

Does the design and manufacture of the lift conform to BS 5655 : Part 1? ◉ Yes ○ No *

If NO, state deviations: *

Signatures(s): * ROGER ANTHONY *

Company position: PROJECT MANAGER/TESTER *

Tsble 1. Certificate of test and axaminafion for alectric passenger and goods lifts (conducted)

17 Declaration of test

I/we certify that on 9/8/05 the equipment was thoroughly examined and found to be free from obvious defects, subject to any statement in 15c and that the foregoing is a correct report of the result.

Vendor/purchaser's identification number:

C5470 H091

Signatures(s):

ROGER ANTHONY

Name and address of public service, associafion,company firm or person making the examination:

APEX LIFTS
APEX HOUSE
LEFA BUSINESS PARK,
EDGINGTON WAY, SIDCUP
KENT DA14 5SH

Position in the above organization of the person who conducted the examination:

PROJECT MANAGER / TESTER

or
Qualifications of examiner, if working on his/her own account:

Test certificate serial number:

C5470

Date:

19/8/05

APEX DATA