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## 1. DISCLAIMER

This Owners Information Manual has been prepared as a guide only for use by qualified Otis mechanics trained and skilled in the maintenance and service of Otis Equipment, who are expected to make their own assessment as to the appropriate maintenance and service required in any particular circumstance.

Otis does not accept liability for any loss or damage however caused, resulting from:-

1. Inappropriate use of this Manual;
2. The failure to understand or correctly implement any procedure or service described herein;
3. The failure to use spares or replacement parts manufactured or approved by Otis;
4. Faulty workmanship by any person whether relying on this manual or not.



## 1. WARNING

***You, your agents and employees are cautioned that: preventive maintenance or any other equipment maintenance procedure should be performed only by a skilled Otis mechanic. Because the elevators and escalators contain high-voltage circuits and high speed machinery that pose hazards to the inexperienced or untrained. As well as numerous other hazards which may result in faults if servicing is not done professionally.***

Please note that the information contained in this Owner's Information Manual is not intended nor should it be interpreted to in anyway alter, expand, modify or otherwise change the express terms and conditions of the Contract and its specifications under which your equipment was furnished and installed by Otis, including specifically all limitations of liability and the exclusive express guarantee against defects in materials and workmanship provided therein.

Otis hereby expressly disclaims any responsibility for any personal injury or property damage including damage to the elevator or escalator equipment, as a result of any negligence, misuse or abuse of the equipment, misinterpretation of the information in this manual, or any other cause beyond the control of Otis Elevator Company Pty. Ltd. by any person other than Otis its servants or agent.



## 2. OTIS CONTACT DETAILS

**OTISLINE 24 HOUR SERVICE: 1 800 626 847**

You have selected the most experienced elevator company in the world to supply your vertical transportation equipment.

Otis Elevator Company Pty. Ltd., the leading manufacturer of elevators and escalators, traces its beginnings back to 1852 when Elisha Graves Otis invented the first safety hoist.

The efficient and safe performance of your Otis equipment, however, depends as much on the knowledge and skill of those who will operate, monitor and maintain it as on the experience of those who manufactured it.

Otis provides many forms of scheduled preventive maintenance, as well as a complete spectrum of repair services, all designed to extend the life of the elevator and escalator equipment. We can assist all owners in maintaining their equipment for the safest, most reliable performance available.

We urge you to contact your nearest Otis office for any assistance you may require with your elevator equipment.

OTIS ELEVATOR COMPANY PTY. LTD.

ADDRESS: 2 Montague Street,  
South Melbourne,  
VIC, 3025.

Telephone No: (03) 9644 3100

Facsimile No: (03) 9646 3772

**OTISLINE 24 Hour Service: 1800 626 847**



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### 3. BUILDING & CONTRACT UNIT DETAILS

|                         |                                                                                                                                       |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTRACT NUMBER:</b> | 31NF5699-701                                                                                                                          |
| <b>BUILDING NAME:</b>   | Fifty Albert                                                                                                                          |
| <b>ADDRESS:</b>         | 42-50 Albert Road South Melbourne VIC 3205                                                                                            |
| <b>EQUIPMENT TYPE:</b>  | GeN2 Lux                                                                                                                              |
| <b>DUTY LOAD:</b>       | 1300kg<br>1600kg                                                                                                                      |
| <b>RUNNING SPEED:</b>   | 2.5m/s                                                                                                                                |
| <b>NUMBER OF STOPS:</b> | Lift no. 1, 2 & 3 - 31 stops / 31 openings                                                                                            |
| <b>FLOOR MARKINGS:</b>  | Lift no. 1, 2 & 3 - G, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29 & 30 |
| <b>MAIN LANDING:</b>    | Ground                                                                                                                                |



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## 4. AUTHORITIES REQUIREMENTS

### DUTIES OF THE OWNER / MANAGER OF A LIFT

The current occupational health and safety regulations require owner/managers to identify hazards, assess risks and control risks associated with the lift installation, and in doing so attend to the following:

- Ensure that any records required under the regulations are received from the lift supplier.
- Ensure that any records required under the regulations are provided to persons involved in cleaning, maintenance, upgrading, dismantling and disposal of the lifts.
- Cause such lifts to be kept in a safe and serviceable condition.
- Keep the lift well and the machine room free from rubbish, dust, dirt or any material not associated with the operation or maintenance of the lift .
- Cause free egress to be provided at all times between the entrance to every landing door, and
  - i. any emergency access door, or
  - ii. a fire exit door.
- Ensure all lifts are regularly maintained and inspected, so as to eliminate or minimize risks to Health and Safety.
- Prevent interference and unauthorized alterations to the lift.
- Keep records of inspections and maintenance carried out on lifts.
- Ensure that when a lift is not in use it does not create a hazard.
- **Ensure all lifts registrations remain current. (Initial registration is included in section 8 of this manual.) This must be renewed every 5 years.**
- Advise authority of any change of ownership, alteration to, or relocation of any lift.
- For more detailed information refer to:
  - i. Occupational Health and Safety Act 1985
  - ii. Equipment (Public Safety) (General) Regulations 1995
  - iii. Occupational Health and Safety Regulations 2007.
  - iv. Occupational Health and Safety (Incident Notification) Regulations 1997
  - v. Equipment (Public Health) (Incident Notification) Regulations 1997

## 4. AUTHORITIES REQUIREMENTS

### NOTIFICATION OF ACCIDENTS

An incident which is caused or contributed to by any plant or the operation of plant, occurs if it:

- causes bodily injury or loss of life to any person; or
- involves damage to any part of equipment so as to prevent the safe operation of the plant; or
- endangers the lives or the health and safety of people in the immediate vicinity (a “near-miss”).

After the occurrence of any such incident, the owner/manager must immediately notify the Victorian Work Cover Authority by phone, and provide written notice in the form of the Incident Notification Form (copy attached) within 48 hours of the incident occurring. Keeping of records, preserving a fatal accident site and procedures to meet regulatory obligations must be completed in accordance with the Occupational Health and Safety (Incident Notification) Regulations 1997.

**NOTE**      The owner/manager of a lift has the same responsibility as an employer.

## 5. GENERAL GUIDE TO MAINTENANCE

### EVERY VISIT

- See the person responsible within building.
- Ride in car observing starting and stopping operation of doors and door reversal devices.
- Post 'Elevator Under Service' Notices.
- Check door reversal operation.
- Check alarm bell for operation.
- Check emergency phone operation.
- Check stop button/switch operation.
- Observe floor levels.
- Report materials required.
- Report any items requiring attention outside the scope of routine examination and adjustment.
- Remember: "Downward" travel is safer than "Upward" when riding the car top.
- Stop the lift if considered dangerous until rectified. Notify client.

## 5. GENERAL GUIDE TO MAINTENANCE

### LANDING PROTECTION AND HOISTWAY

#### - MISCELLANEOUS

MONTHLY

##### *Landing Protection:*

- Check door reversal device.
- Check door operation at all floors.
- Check floor levels.
- Make correction as required by these above checks.

##### *Hoistway Miscellaneous:*

- Check hall lanterns.
- Check telltale lights.
- Check mechanical operation of push buttons.

## 5. GENERAL GUIDE TO MAINTENANCE

### CONTROL CIRCUITS

### MONTHLY

#### ***Controller:***

- Clean as necessary.
- Check alignment and air gaps of relays and switches
- Check oil, setting and operation of overload.
- Check and clean fuses and holders, check connections.
- Check relay and switch connectors for tightness and flexibility.
- Adjust or replace parts as necessary.

## 5. GENERAL GUIDE TO MAINTENANCE

### DRIVING MECHANISM

### MONTHLY

#### ***Machine Brake:***

- Inspect brake coupling and linings for wear.
- Ensure keys and fixing bolts are secure.
- Ensure linings are free from lubricants.
- Check all moving parts for wear.

#### ***Machine Sheave:***

- Observe if sheaves are tight on shafts.
- Sound spokes and rim with hammer for cracks.
- Check grooves for wear and signs of rope slip.

#### ***Gear:***

- Check condition of worm and wheel, thrust bearing and gland packing.
- Check oil level.

#### ***Secondary and Deflector Sheaves:***

- Ensure sheaves are tight on shafts. Sound spokes and rim with hammer for cracks.
- Check grooves with gauge for wear and signs of rope slip.

#### ***Governor:***

- Check over speed governor for wear and ensure fixings are secure.

## 5. GENERAL GUIDE TO MAINTENANCE

### LANDING AND CAR ENTRANCE PROTECTION

MONTHLY

#### *Doors and Accessories:*

Where necessary -

- Clean and lubricate track.
- Clean and lubricate hangers.
- Check eccentric rollers on hangers.
- Check door inter-connecting aircords or chains for wear and tension.
- Check bottom gibs on doors or gate.
- Check bottom tracks.
- Check closers.
- Check lock contacts for condition and follow up.
- Check lock latching mechanism.

## 5. GENERAL GUIDE TO MAINTENANCE

### SAFETY GEAR EXAMINATION

6 MONTHLY

- Check and lubricate governor and associated electrical switches.
- Check car guide shoes and safety blocks for correct clearance to guide rails.
- Guide fixing.
- Check safety link arms and moving parts attached to car frame for lubrication and freedom of movement.
- Check car enclosure steady plates or rollers and platform location blocks.
- Check governor tension frame.
- Check counterweight shoes to guide clearances.
- If you have any doubts ask your supervisor for guidance.

#### ***Every 5 Years or When Local Codes Dictate:***

- Or after a major repair or replacement to governor or safety parts in addition to the one year check.
- Apply safety with no load in car and inspect parts for damage.
- Check distance of slide and car setting.

## 5. GENERAL GUIDE TO MAINTENANCE

### ROPE INSPECTION

### 6 MONTHLY

Wire rope is made up of a number of strands (usually eight in elevator service), which are twisted around a core, usually of hemp fibres.

Each strand is in turn made up of 19 or more individual wires twisted together. The wires are held to an exact size within about .001 and are made of special steel combining relative lightness with great strength.

A wire rope lay is the distance measured along the length of a rope within which the spiral strands complete one turn about the axis. It may be considered as a section of rope approximately  $6\frac{1}{2}$  times the diameter of the rope. This would be about 82mm for 13mm rope and about 102mm for 16mm rope.

## 5. GENERAL GUIDE TO MAINTENANCE

### ***Rules for Replacement:***

Rope is often replaced sooner than necessary; sometimes when 85% to 90% of its original tensile strength remains. While there is no simple formula for determining when the useful life of rope is exhausted, the following will serve to prevent some waste of time and material occasioned by replacement sooner than really needed.

1. Watch ropes carefully as soon as any broken wires appear. Check at frequent intervals to determine if the rate of increase in the number of broken wire is significant, but usually the number of broken wires will remain relatively constant for a considerable period of time.
2. Count the number of broken wires in rope lay. If the broken wires are equally distributed among the strands, remove ropes when the number of broken wires per rope lay in the worst section of rope exceeds 24 to 30.
3. If the distribution of broken wires is unequal and broken wires predominate in one or two strands, remove ropes when the number of broken wires per rope lay in the worst section of rope exceeds 8 to 12.
4. If 4 or 5 wires side by side are broken across the crown of the strands, remove ropes when the number of broken wires per rope lay in the worst section of rope exceeds 12 to 20.
5. If any unfortunate factors such as corrosion (red dust or rouge), excess wear of individual wires in the strands, unequal tension, undersize ropes, poor sheave grooves, etc. existing ropes should be removed when the number of broken wires, exceed 50% of the value indicated for the condition No.2, 3 and 4 described above.

## 5. GENERAL GUIDE TO MAINTENANCE

### ***Rope Hitches:***

Check all rope hitches and rope equalising devices.

### ***Hoistway Travelling Cables:***

Ensure that the travelling cables are secure and check them for damage.

***Note: Written instructions can never take the place of the Otis Service Organization.***



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## 5. INSTRUCTIONS FOR NORMAL USE

Lifts are one of the safest forms of modern transportation, but as with most forms of transport, they demand responsibility and common sense from those who operate and use them. Sensible and careful use of a lift installation will enhance its long-term performance significantly. Below are a few key points that should be noted.

**DO NOT** climb in the car or attempt to ride on it.

**DO NOT** overload the car; carefully observe the load limits stated on the signs in the lift.

The carrying capacity of each lift car is prominently displayed in the car as the maximum number of persons and the weight in kilograms it is designed to carry. The stated limit of the number of passengers or the weight should never be exceeded.

**DO NOT FORCE THE DOORS OPEN**

**NEVER WASH DOWN** the lift car or other parts of the lift. Wipe the car with a damp cloth if it is necessary and dry thoroughly afterwards.

**DO NOT** attempt to gain access to the lift well or control panels.

**IF YOU NOTICE** or experience **ANYTHING UNUSUAL**, such as excess noise, vibration, smoke or smell when using the lift, it must be reported immediately to Otis.

**IF ANY PART OF THE LIFT IS FOUND TO BE MALFUNCTIONING**, such as lighting, ventilation, leveling, or controls, or if the lift exhibits abnormal motion, it must be reported immediately to Otis.

**THE ENTRANCE SILLS** at the entrance have recessed grooves for guiding the doors. Care should be taken to avoid tripping when entering and exiting. Persons wearing thin heeled shoes and long garments should take particular care.

**WHERE A LIFT CAR IS FITTED WITH GLASS OR MIRRORED PANELS**, care should be taken when using trolleys or transporting large objects in the lift.

**A LIFT SHOULD NEVER BE USED FOR ANY PURPOSE OTHER** than that for which it is intended.

**PARTICULARLY, CHILDREN** should not be permitted to use lifts unattended or as playthings.

## 5. INSTRUCTIONS FOR NORMAL USE

The lift must never be used in case of fire or water in the building

People who are not able to operate the lift safely (children), should be accompanied by a person to assist them.

The lift is only allowed to operate with a proper working car light. If the car light is out of order, the lift must be switched off and the lighting repaired accordingly.

Stay away from the landing-and car-doors to avoid any catching of clothes or fingers between door panels and between panels and frames.

**Keep the access to the Machinery space and Controller adjacent to the top landing clear**

The access to the machinery space and controller, adjacent to the top landing shall be permitted to authorized persons only and abuse be prevented by according means. To have access for emergency situations, rescue and maintenance operations, the key(s) need to be available at all times to authorized persons.

The safe access to the machinery area and the controller must be assured and any changes or hazards need to be reported to the maintenance company immediately.

### **Safe Loading And Unloading**

The car can at times stop slightly below or above the landing level. Care must be taken to prevent tripping of passengers and goods, especially if the latter are moved on rollers. Do not use small rollers, they may get stuck in the gap between the sills of the car and the landing or the sill tracks.

Special care must be taken on the gap between car-and landing-sill, to prevent objects being stuck (sticks, shoe heels, etc) between the gap and falling into the well.

If a load is transported, it must be evenly distributed on the lift car floor and fixed to avoid any internal movement during the travel. Check the maximum load capability of your lift versus the weight of your goods and persons to be transported. Overload might cause danger to the load (goods, passengers) and the lift itself.

The use of forklifts to load and unload goods in the car is forbidden.

## 5. INSTRUCTIONS FOR NORMAL USE

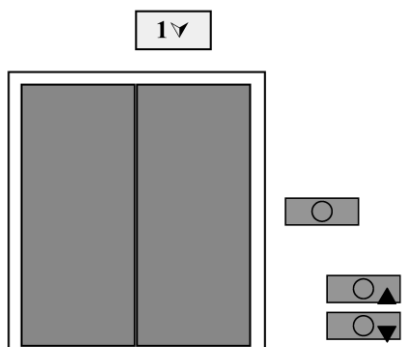
### Ensure free access on lift landings

The landings shall be clear and never be obstructed by any obstacles, to avoid any risk of danger to passengers entering or exiting from the lift.

## GENERAL CONTROLS

Your lift has been designed for ease of use with simple controls for passengers to operate and signals which give clear indication of the status of the lift. There are two main points at which passengers control a lift and receive information; these are on the landing and in the car.

### On the landing



On each of the lift landings, there is a push buttons to make landing calls. This is the term used in the lift industry to describe the action of a passenger at a floor requesting the service of a lift.

A lamp, usually in the push-button itself, will illuminate to indicate to the passenger that a request for service has been registered.

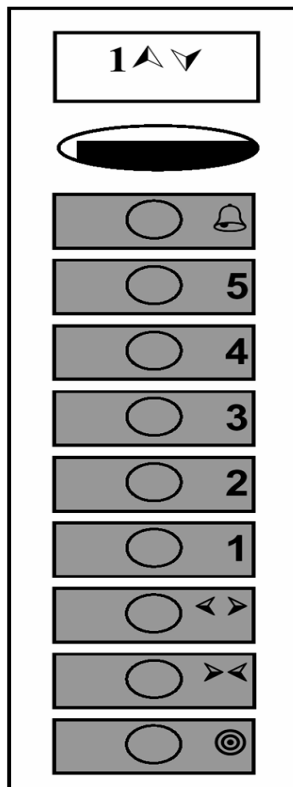
Depending on the type of lift, there may also be illuminated signals to indicate the current direction of travel of each lift and its current floor location.

On more simple systems, only an indicator shows that a lift is in use. An audible warning signal is often provided when the lift arrives to announce its presence to passengers.

In some installations a key switch may be provided at some floors. This may have one of a number of purposes, which are described later.

## 5. INSTRUCTIONS FOR NORMAL USE

### In the car



In each car there are push buttons to make a car call. This is the term the lift industry uses to describe the action of a passenger selecting a destination floor. A lamp, usually in the push-button itself, will illuminate to indicate to the passenger that his or her request for service has been registered.

There may also be illuminated signals to indicate the current direction of travel of the lift and its current floor location. An audible signal is often provided when the lift arrives at a floor that is subject to a landing or car call.

The panel in which the push buttons are located is known as the car-operating panel or COP. A car-operating panel may also contain other features. An emergency alarm button and door open button are fitted as standard. Key switches for various purposes may be fitted and an intercom is frequently provided. These items are discussed later.

## 5. INSTRUCTIONS FOR NORMAL USE

### Independent Service

A two-position key switch marked OFF-ON is provided in the car to operate Independent Service.

When activated it will:

1. Cause the car to ignore all hall calls and allow manual control of the door closing, and the car is removed from the group.
2. Cancel all existing car calls.
3. Cause the doors to remain open unless the door close button is pressed. If the button is released before the doors have fully closed, the doors will re-open.
4. The car will not start unless the door close button is pressed.

When switched to the OFF position lift/s will operate on normal service.

## 5. INSTRUCTIONS FOR NORMAL USE

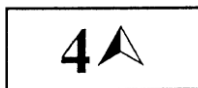
### METHOD OF LIFT CONTROL

The principal method of controlling a passenger lift system is Full Collective Control.

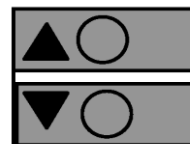
#### ◆ Full Collective Control ( FCL )

The type of controls, which equip your lift, are indicated in this section

#### Landing Calls



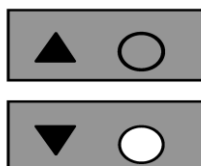
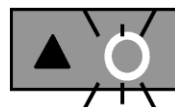
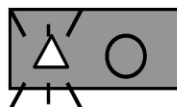
At each intermediate floor there is a push-button panel with two push buttons. One is for an up journey, one is for down journeys. The direction of each button is indicated by an arrow by the button.



At the highest floor there is only a down button, and at the lowest floor only an up button.



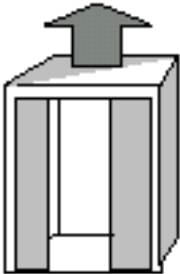
Some lifts have illuminated arrows and on certain installations, a single illuminated ring around the button.



Press the call button with the arrow pointing in the direction in which you wish to travel to call the lift. The registered lamp will light up. Wait for the lift car. The response from the lift car will depend on what it is doing when you call.

## 5. INSTRUCTIONS FOR NORMAL USE

### Up Landing Calls

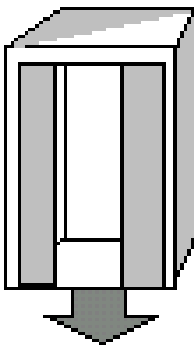


If the car is inactive with no calls outstanding, it will respond immediately wherever it is positioned and answer your call. If you make an up call and the car is below your floor, on an upward journey to car call destinations above your floor, the lift will include a call at your floor to take you to your destination. If you make an up call and the car is on a downward journey to car call destinations below your floor, the lift will not respond to

You may see the descending lift pass your floor or if a current car call happens to be moving downward toward your landing, the lift will stop and you can join it, but it will not respond to any up car or landing calls until the prevailing down calls are complete.

Once down calls are finished, the lift changes to up mode, and will go first to the lowest floor with an active up landing call. It will then ascend, dealing with all up calls.

### ◆ Full Collective control DOWN Landing Calls



If you make a down call and the car is above your floor, on a downward journey to car call destinations below your floor, the lift will include a call at your floor to take you to your destination.

If you make a down call and the car is on an upward journey to car call destinations above your floor, the lift will respond to your call only after completing the up car calls.

You may see the ascending lift pass your floor or, if a current car call happens to be at your floor landing, the lift will stop and you can join it, but it will not respond to any down car or landing calls until the prevailing up calls are complete.

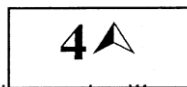
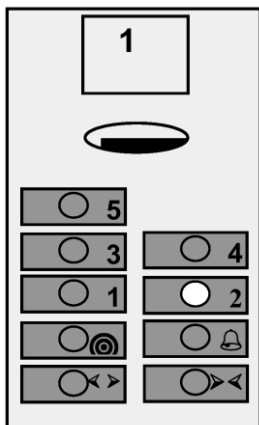
## 5. INSTRUCTIONS FOR NORMAL USE

### Car Calls

Inside the car there is a push-button panel with a button for each floor.

Press the buttons for all floors to which incoming passengers wish to travel. The selected buttons will light. The lift doors will close and the lift will proceed.

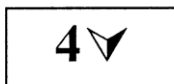
UP



↑ journey it will respond

If the lift is on an ascending journey it will respond to up car calls first, intermixed with any up landing calls encountered en route. Calls will be dealt with in ascending floor sequence

DOWN



If the lift is on a descending journey it will respond to down car calls first, intermixed with any down landing calls encountered en route. Calls will be dealt with in descending floor sequence.

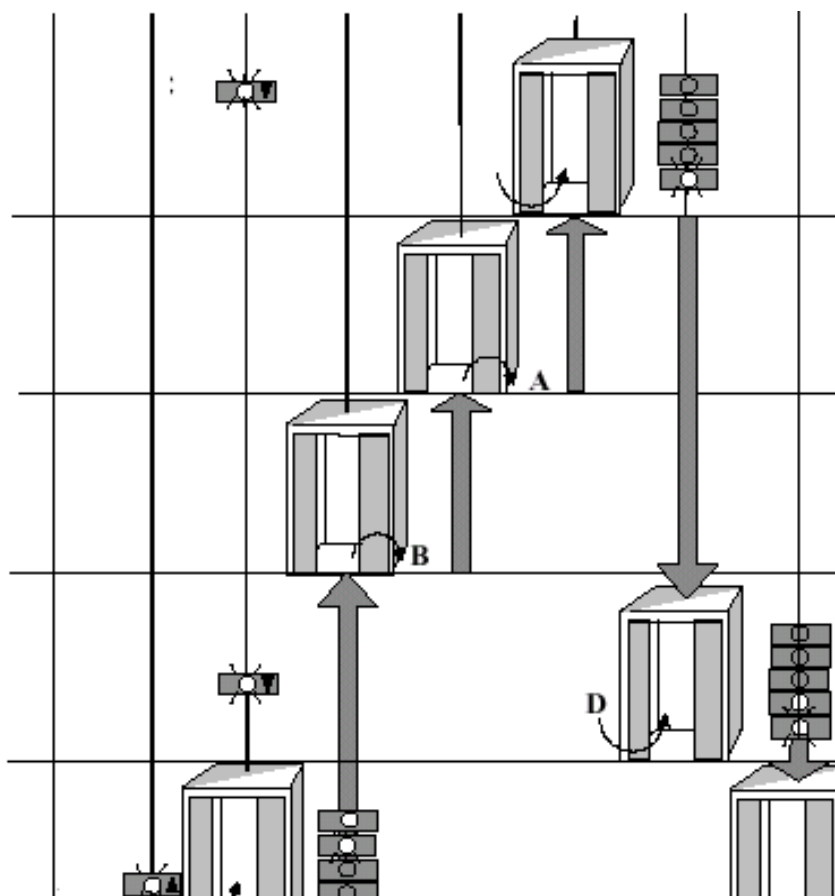
An indicator in the lift shows the direction of travel and the current floor. When the lift arrives at a selected floor the doors will open automatically.

Cars that are fully loaded are directed by the system to bypass landing calls until some passengers have been let out. Where there are car position indicators on a landing, this means that waiting passengers will be aware that the lift has apparently ignored their call. It is not a fault, but a design safety feature to ensure the car cannot be overloaded.

## 5. INSTRUCTIONS FOR NORMAL USE

### Full Collective - Single car - how it works

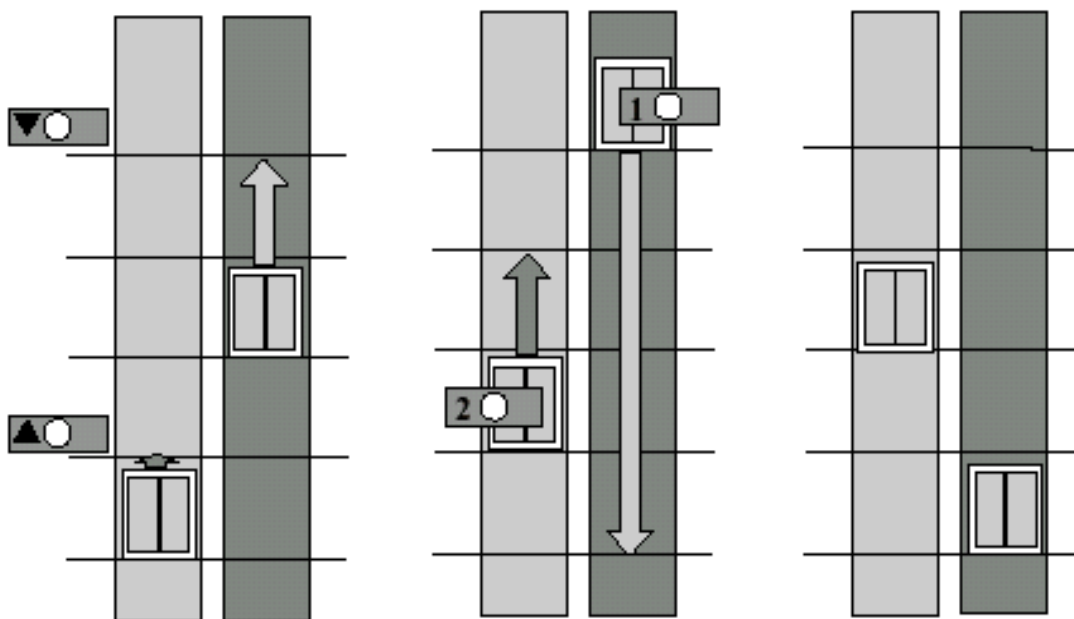
1. When the passengers (A) enter at the main lobby, the lift will ascend (or perhaps descend if there is a basement) to the floors requested by their car calls.
2. Landing calls and car calls are memorized and handled in logical sequence according to the direction of travel of the lift and independently of the order in which the calls were registered.
3. Cars that are fully loaded are directed by the system to bypass landing calls until some passengers have been let out. Where there are car position indicators on a landing, this means that waiting passengers will be aware that the lift has apparently ignored their call. It is not a fault, but a design safety feature to ensure the car cannot be overloaded.



## 5. INSTRUCTIONS FOR NORMAL USE

### Full Collective-Multiple car-how it works.....

In a multiple car installation, one car waits at the main lobby and the remaining car or cars are distributed throughout the building. The lift computer-based control system will send the car best suited to provide efficient passenger service for any given call entered on a landing.



## 5. INSTRUCTIONS FOR NORMAL USE

### ADDITIONAL CONTROLS

#### Landing fixtures

#### Key Switch Type



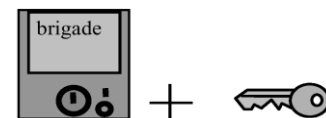
In some installations, all the fixtures or some of the landings may contain key switches. These switches must be operated by authorised users only and can have different purposes.

Car to Lobby: Calls the lift car (or cars) to the main lobby. Cars are then held stationary at the lobby with their doors open.

Fire fighting control switch: situated at a landing designated for fire fighting access (see below for details).

#### ·Firefighting Switch, Functionality:

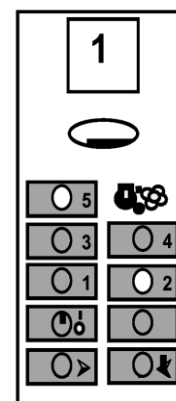
When a lift system is switched into fireman operation, it will immediately return to the designated fireman access floor. This will be a floor as agreed with the local fire officer. The lift system will ignore ALL existing car and landing calls during the operation. On arrival at the fireman access level the car will park with its doors open.



The lift stops at the selected floor, but the doors will NOT open until the door open button is pressed. Again this must be pressed continuously until the doors are fully open, otherwise the doors will immediately close again. Once the doors are fully open, the lift car will wait at that floor until another car call is made according to fireman operation procedures.

#### ·Car Operating Panels(COP)

Your car operating panel contains an alarm button, door open button in addition to the push buttons for normal operation of the lift. It may contain a number of other push buttons and switches as optional.



## 5. INSTRUCTIONS FOR NORMAL USE

### CONSTANT FIXTURES

#### Alarm Push-button



Sounds an audible alarm when pressed to warn that passengers in the lift need assistance. It may also activate the lift car communication system if installed. It is for emergency use only.

#### Door Open Push-button



When the car is at a landing it opens the car and landing doors when pressed. It can be used to reopen the doors to let passengers in or out, provided the lift travel cycle has not begun.

#### Fan Switch



Turns the lift car ventilation fan on and off.

### OPTIONS

#### Door Close Push-button



When pressed, it enables passengers to override the automatic door closing controls and close car and doors immediately.

#### Independent Service Key Switch



Removes the car from normal service. The car will park with its doors open and will respond only to a single call at a time.

## 5. INSTRUCTIONS FOR RESCUE OPERATIONS

Before placing a call to the chosen service check the answer to the following questions:

1. Are there any trapped passengers?
2. Are the key switches in the lift set for normal operation?
3. Are any of the push buttons jammed/stuck?
4. Are the lift and landing doors unobstructed and clear to run?
5. Is the door detector and the safety edge clean and free to work?
6. Are the main switches for electrical power to the system switched on?
7. Has the lift been overloaded?

**Your rescue service must be trained to help to resolve difficulties and to take the right action for almost all eventualities.**

Do not hesitate to call: **OTISLINE 24 HOUR SERVICE: 1 800 626 847**

### Use of the Emergency Unlocking Key

Each of the landing doors can be unlocked from the outside with the aid of a key, which will fit the unlocking triangle. Keys of this type shall be given only to a responsible person. After an emergency unlocking, the locking device shall not be able to remain in the unlocked position with the landing door closed.

### Emergency Hand-Release of lift passengers

There may be rare occasions, through system malfunction, when a lift stops between floors, thereby perhaps trapping passengers. A facility is provided ***in the Emergency & Inspection panel*** of each lift to move the car ***manually***. This is a one-person task and must be carried out only by persons specially trained for the task.

## 5. INSTRUCTIONS FOR RESCUE OPERATIONS

### WARNING

**Manual movement of a lift car can be dangerous. It must be carried out only by properly trained personnel in accordance with procedures laid down for the installation.**

### EMERGENCY RELEASE OF LIFT PASSENGERS

This is to be carried out by **AUTHORISED PERSONS** ensuring all codes and regulations are complied with.

1. Tell passengers not to open doors until instructed to do so.
2. Check if the elevator is level with the landing by using a door key to open the landing door a small amount and noting how far the elevator is above or below the landing.
3. If there is no gap between the toe guard and the landing, the passengers may egress through the landing door.
4. If there is a gap between the toe guard and the landing, inform the passengers that the elevator will be moved.
  - a. Inform the passengers that the elevator will start and stop several times.
  - b. Remind the passengers not to open the doors until instructed to do so.
5. Remove power from the emergency & inspection panel (E&I), lock and tag out the main circuit breaker.
6. Check the "con speed" indicator
7. If the "con speed" indicator is flashing, do not attempt rescue and contact Otis.
8. If the "con speed" indicator is not flashing, turn the emergency rescue key to the "on" position and hold the key in the "on" position.
9. Press the brake release button, the speed indicator will show movement.
10. Release the brake release button when the buzzer sounds.
11. Continue to push and release the button until the "DZI" indicator illuminates
12. If the elevator does not move, contact Otis.
13. After moving the elevator, proceed to the landing where the elevator is located.
14. Unlock and open the doors, and rescue the passengers.

## 5. GENERAL MAINTENANCE INSTRUCTIONS

This section gives instructions and advice for you as the owner on how to maintain your lift.

### **WARNING**

**Maintenance is a special task and only persons trained and competent in the specific equipment should be permitted to carry out**

A lift owner carries heavy statutory responsibility for ensuring that a lift installation is adequately maintained. It is therefore of extreme importance that a sound policy for maintenance is resolved by the time your lift goes into normal operation, including;

1. The lift runs and the doors operate, without any unusual noise, vibration or smell.
2. All safety notices are in position.
3. The lift car lighting is fully operational.
4. The alarm system functions.
5. The door reversal (protective system) works correctly, including the Door Open button.
6. The lift car floor levels approximately to the landing floor level (within the tolerances).
7. Any glass sections or panels in the car or doors are undamaged and secure.
8. The car floor does not present a hazard, particularly to cause slipping or tripping.
9. All indicators and controls function correctly.
10. The landing door release key and other system keys are where they should be.

### **Spare Parts**

Use only original Spare Parts for replacement. Not using original Spare Parts can influence the safety of your lift.

## 5. GENERAL MAINTENANCE INSTRUCTIONS

### General check

The information following indicates the maintenance task to be carried out on your lift. In this section it is only the intention to indicate those tasks that must be performed to ensure safe lift operation.

#### **DANGER**

**For safety reasons the operations must only be performed by a trained lift maintenance engineer.**

1. Inspect car interior for damage and repair sharp and protruding edges.
2. Observe starting and stopping for signs of deterioration or malfunctions.
3. Observe floor leveling to ensure it is within tolerance.
4. Check the operation of the car and landing doors and ensure all reversal devices function properly.
5. Check the operation of all controls within the car and especially the alarm devices.
6. Check the operation of normal and emergency car lighting.

### Controller

#### **WARNING**

**The controller contains high voltage equipment. Power must be off unless suitable live working methods are employed**

1. Check all electrical connections for tightness.
2. Ensure ventilation fans and grills are clean and functioning.
3. Check fuse devices.
4. Keep all parts clean of dust.
5. The condition of relay contacts should be checked to ensure correct operation.
6. Ensure cabinet doors are locked shut after inspection.

## 5. GENERAL MAINTENANCE INSTRUCTIONS

### Landing Fixtures

**WARNING**  
**Turn off the power before working on any fixtures**

1. Check the operation of all fixtures.
2. Check the correct operation of the fire service switches.

### Landing entrances

1. Clean the landing door tracks
2. Check the doors for free operation
3. Check that the doors will close due to gravity or spring force.
4. Check correct engagement and contact wipe.
5. Check for excessive play in the bottom shoes.
6. Check the condition of the air cords or other coupling devices.
7. Check that the bolts and fixings are tight.
8. Check the condition of the panels for damage.
9. Check glass doors for fractures and replace-damaged panels immediately.
10. Check the correct setting of up thrust devices.
11. Check security of the tracks and the sills.
12. Inspect architraves and trims for damage and security.

### Guide rails

1. Check that the joints are secured.
2. Remove dirt and dust.
3. Lubricate when sliding shoes are provided.

### Belts and Terminal Hitches

1. Inspect the main belts for signs of deterioration.
2. Check the security of all terminations.
3. Check and adjust the lengths to maintain correct over-runs.
4. Ensure that the rope tensions are equal.

## 5. GENERAL MAINTENANCE INSTRUCTIONS

### Car Entrance & Operator

1. Clean the car door track of all debris.
2. Check the security of all fixings.
3. Check the security and adjustment of the door coupling mechanism.
4. Check the door shoes for excessive movement.
5. Check the up thrust devices for minimum clearance.
6. Check the electrical cables for signs of damage.
7. Check the security of all tracks.
8. Check the clearances between door panels and returns.
9. Check the correct operation of the door locking mechanism.
10. Check the door closing speed and force.
11. Check the operation of the door open button and all other reversal devices

### Hoistway Switches

1. Clean the switches and check arms and rollers for free movement.
2. Check the function of all terminal switches.
3. Check the running clearance of inductors and magnets.

### Car Frame equipment

1. Clean off lint and dust.
2. Ensure all the joints are secured.
3. Check for excessive clearance on sliding type shoes.
4. Investigate any unusual noise, heat or vibration.
5. Check the free operation of the safety gear linkage.
6. Ensure adequate clearance is maintained between the safety blocks and the rails.
7. Check the safety gear for correct engagement.
8. Check the condition and the adjustment of cab steadier devices.
9. Check trailing flexes for correct hand and sings of damage.
10. Check the condition of all sheave grooves, safety of compensation (if provided.)

## 5. GENERAL MAINTENANCE INSTRUCTIONS

### Specific point for Gen2 models

#### **Warning**

**The machine is positioned inside the well, at the top of the hoist way.**  
**The machine accessibility depends on specific instructions.**  
**Any intervention on the machine has to be done by people specifically trained.**

### **Traction Machine & Brake**

1. Investigate for any unusual noise, heat, vibration or excessive movement of parts.
2. Check the security of all bolts and fixings.
3. Check the security of the traction sheave.
4. Inspect the sheave for wear and damage.
5. Observe operation for signs and belt slippage.
6. Check the security and condition of all electrical connections.
7. Inspect the brake for free operation and minimum lift.
8. Check the machine brake release.

### **Counterweight**

1. Check that the weights are properly secured.
2. Check the security of the sheave, frame, comp ropes, chain and guiding.
3. Check the sheave for lubrication when provided
4. Ensure free operation of any safety gear linkage.
5. Ensure adequate clearance is maintained between safety blocks and rails.
6. Check the safety gear for correct engagement.

### **Pit Equipment**

1. Check free movement of the governor tension device, and check the switch.
2. Check the security of the buffer.
3. Check the correct hang of the compensating chains or free rope compensation.
4. Ensure all equipment is clean.

## 5. GENERAL MAINTENANCE INSTRUCTIONS

### CARE & CLEANING

#### CABS & ENTRANCES

Years of high-volume construction have created a plentiful supply of apartment and office space in city after city. As tenants grow more demanding, building management puts greater emphasis on top-flight elevator service as a prime appeal in renting space - and in keeping it rented.

To stay on top in this increasingly competitive market, a building's elevators must provide - first of all - safe, dependable, and prompt movement of people from floor to floor. Preventive maintenance and progressive modernisation keep behind-the-scenes elevator machinery operating to keep ahead of competition.

Next to efficient elevator operation, today's tenants demand attractive, inviting appearance. Good looks depend on elevator cabs and entrances, the parts of the installation that passengers see and use.

Occupants and visitors soon become disenchanted with elevators whose beauty has faded six months after a building has opened. But management can preserve elevator looks year after year, decade after decade.

#### Elevators - Look Up!

To make elevators a positive factor in decor as well as in service, manufacturers in recent years have offered cabs and entrances finished in wider varieties of designs and materials. Durability and easy maintenance, as well as bright, colourful appearance, have been objectives guiding the development of finishes that will not only stand up under the heavy wear inflicted by the using public, but can also keep the good looks people expect.

Today's popular elevator finishes range from stainless steel through plastic laminates to vinyl laminated on steel and actual vinyl fabrics. These materials create effects that accent a building's design with elevator cabs and entrances of distinguished appearance.

Aesthetic and functional requirements determine cab and entrance materials and finishes. For example, service-type cars often require stainless steel satin finishes or rigid and other durable materials. Passenger elevators in office buildings use the popular plastic laminates for wall panelling, preferably with removable panels easily replaceable in case of serious damage.

## 5. GENERAL MAINTENANCE INSTRUCTIONS

Materials used in elevator finishes are selected not only for their attractive appearance but also for easy maintenance. If elevators are to keep their looks, car and entrance finishes must receive proper upkeep.

Our experience in fabricating and maintaining cabs and entrances during the past quarter-century is summarized for the first time in the following recommendations. They outline preferred applications as well as proper procedures for the care and cleaning of a broad range of contemporary materials and finishes.

An urgent note of caution applies to the cleaning of all materials and finishes listed below. When using any cleaning fluids that contain volatile solvents, work only in a well-ventilated area away from any open flame and do not smoke.

Stainless steel offers a rich lustrous appearance and exceptional durability, along with easy maintenance, making it one of the most popular architectural metals for elevator cabs and entrances. Corrosion-resistant, with a smooth, dense surface that sheds dirt, stainless steel is a practical material for elevators that operate in the open as well as in conventional hoistways.

In elevator cabs, this metal's durability favours its use especially in the fronts of cabs and car doors, most exposed to view and wear. Even in buildings with upper-floor elevators entrances finished in baked enamel or other more economical material the main lobby entrances - those most exposed to public use and view - are often stainless steel.

This metal resists scratching and other abuse in installations that handle heavy traffic. Scratches, when they occur, can be removed by hand polishing with an abrasive. Since the metal is stainless steel throughout, polishing does not reduce corrosion resistance.

Because it requires no protective coating, stainless need never be refinished. All it usually takes to clean is a damp cloth. To remove fingerprints, use a commercial stainless steel cleaner.

Stainless steels are available with a variety of effects, from smooth satin finish to highly polished mirror finishes.

## 5. GENERAL MAINTENANCE INSTRUCTIONS

- **STAINLESS STEEL, SATIN FINISH (Sanded)**

### **Normal Cleaning:**

Dust weekly with a soft clean cloth and clean periodically with mild soap and warm water to remove grime. Thoroughly rinse and dry washed surfaces. Remove oil or tar by wiping with a special cleaner supplied by the elevator manufacturer, and then wash as above. Clean only with soft cloths, taking care to wipe only in direction of the grain.

### **Waxing or Oiling:**

To restore sanded or grained finishes to their original lustre, use a polish soaked with lemon oil or mineral oil and rub lightly in the direction of grain or sanding lines. After polishing, wipe the surfaces almost dry with clean soft cloths.

### **Remove Scratches:**

Should normal cleaning fail to remove scratches, sanding may be necessary. Use sand paper with grits of #80, #120 and #180, with mineral oil. Start with the finest grit, #180, and proceed to the coarsest needed to remove the scratch. Then revert to the finest grit, followed by polish and oil finishing as described above. In all cases, rub with the grain.

### **Abrasives:**

Except as indicated in polishing and scratch removal, avoid abrasives for sanded natural metal finishes.

- **STAINLESS STEEL, SATIN FINISH (Sanded Lacquered)**

As indicated above, stainless steel need not be lacquered. But if it is, use these maintenance techniques:

### **Normal Cleaning:**

Follow the procedure for satin finish, non-lacquered, taking care to wipe only in direction of grain.

### **Waxing or Oiling:**

Avoid using wax or oil, which would raise the gloss to an undesirable level.

## 5. GENERAL MAINTENANCE INSTRUCTIONS

### **Remove Scratches:**

To remove deep scratches, remove the lacquer coating by using lacquer thinners. Remove the residue with kerosene, wipe off with Varsol, or the special cleaner provided by the elevator manufacturer, finish by wiping dry.

All plastic fittings such as numerals or lenses must be removed before using lacquer thinners. Remove scratches using sandpaper with grits #180, and proceed to the coarsest required to remove the scratch, then revert to the finest grit, followed by a polish containing mineral oil. In all cases rub with the grain. New lacquer must be applied immediately after removing all traces of oil.

### **Abrasives:**

Except as indicated for scratch removal, don't use abrasive.

#### • **TEXTURED STAINLESS STEEL**

Stainless steel finished in texture patterns is gaining popularity, primarily because it resists vandalism. This characteristic is encouraging greater use of textured stainless steel in heavily used elevator cabs, especially in public housing. The material has long proven its worth in service-type elevator cars which carry food carts or hand trucks.

Textured stainless steel is being finished more frequently with painted highlights, achieved by painting the entire textured facing and then belting the top point of the textured pattern. The result is a distinctive architectural treatment in which textured stainless steel serves, not as a cold metal, but as a warm finish that adds appeal to the decor of a modern building.

Follow the same techniques as for satin stainless steel. For painted backgrounds, wipe only with soft clean cloths.

#### • **STAINLESS STEEL, MIRROR FINISH**

Most reflective of all widely-used finishes, this is achieved by polishing with successively finer abrasives, then buffing extensively with a fine buffing compound to remove grit lines. Increasingly popular despite the care it requires mirror-finished stainless steel is used primarily to accent smaller areas, for example, suspended car ceilings.

## 5. GENERAL MAINTENANCE INSTRUCTIONS

### Normal Cleaning:

Follow the same procedure as for stainless steel, satin finish.

### Polishing:

This finish should only be buffed, with a soft clean cloth.

### Abrasives:

Do not use abrasive-type polishes, which will cloud the surface.

- **BRONZE**

The richness of this natural metal finish contributes to an elevator's warm, attractive appearance. Often combined with natural woods in elegant cab designs, bronze can vary in colour from reddish brown to yellow. Bronze is sometimes covered with a clear lacquered coating, primarily to protect the natural colour of the metal. For specific decorative effects, it can easily be finished with pigmented lacquers or paints.

For centuries, bronze has appealed to the senses through its beauty and smoothness, qualities that improve with age. Bronze needs a minimum of maintenance and - like good hardwood - becomes more attractive as it ages.

Bronze is used in elevator car fronts and car doors and as a trim in the base metal band around the bottom of the sidewalls. Especially in cab interiors, a lacquered coating after sanding or grain is applied protects bronze against oxidation. Its natural appearance after oxidation enhances the aesthetic appeal of lacquered bronze. Easier to maintain than brushed satin bronze, statuary or oxidised bronze is coming into vogue for elevator cab interiors.

- **BRONZE, NATURAL LACQUERED**

### Normal Cleaning:

Dust weekly with a soft clean cloth and clean periodically with mild soap and warm water to remove grime. Thoroughly rinse and dry the washed surfaces. Remove oil or tar by wiping with a special cleaner supplied by the elevator manufacturer, followed by washing as above. Clean only with soft cloths, wiping only in the direction of the grain.

## 5. GENERAL MAINTENANCE INSTRUCTIONS

### **Waxing or Oiling:**

Do not use wax or oil, which would raise the gloss to an undesirable level.

### **Removing Scratches:**

To remove deep scratches in the metal, dissolve the lacquer coating with lacquer thinners, after taking off all plastic fittings such as numerals or lenses. Remove the residue with kerosene, wipe off with special cleaner and finish by wiping dry.

Use sandpaper with grits of #180, #120 and #180, with lemon oil or mineral oil to remove the scratches. Start with finest grit, #180, proceed to the coarsest required to remove the scratch, and revert to the finest grit, followed by polish soaked in mineral oil. Always rub with the grain.

Remove all lacquer with special cleaner and finish by wiping dry. Apply new lacquer immediately after cleaning.

### **Abrasives:**

Except as indicated for scratch removal, don't use abrasives.

- **BRONZE, NATURAL UNLACQUERED**

### **Normal Cleaning:**

Wipe weekly using a soft cloth and a light coat of silicone wax or furniture wax to remove dirt and finger marking. Lemon oil or mineral oil may also be used for this purpose.

### **Polishing:**

Sanded or grained finishes can be returned to their original luster by using polish, soaked with lemon oil or mineral oil and rubbing lightly in the direction of the grain or sanding lines. After cleaning, wipe the surfaces almost dry with clean soft cloths, and treat with wax, lemon oil or mineral oil to retard oxidation.

## 5. GENERAL MAINTENANCE INSTRUCTIONS

### Removing Scratches:

Should normal cleaning be insufficient to remove scratches, sanding may be necessary. Use sandpaper with grits of #180, #120 and #180 with mineral oil. Start with the finest grit, #180, and proceed to the coarsest required to remove the scratch, then revert to the finest grit followed by polish and oil finishing as described above. In all cases, rub with the grain.

### Abrasives:

Except as indicated in polishing and scratch removal, don't use abrasives for sanded natural metal finishes.

- **BRONZE, STATUARY (Oxidised) FINISH**

### Normal Cleaning:

Oxidised bronze with a protective coating of Perma-Cote #62 in good condition requires little or no maintenance other than a weekly dusting with a soft, clean cloth and periodic cleaning with mild soap and warm water to remove stubborn stains

- **BRONZE, MIRROR FINISH**

### Normal Cleaning:

Use only soft clean cloths free from seams, cuffs or buttons that can easily scratch the highly polished surface. Using special cleaner, wipe the surface to remove any adhesive residue or dirt.

### Polishing:

Clean surface with a non-abrasive polishing preparation and polish to bright luster.

### Baked-Enamel Finish:

Architects and interior designers welcome the extended range of vivid new colours and graphic patterns now available in baked enamel finishes for elevator entrances and cab interiors. The durability as well as the appearance of these finishes contributes to their growing appeal.

## 5. GENERAL MAINTENANCE INSTRUCTIONS

### **Normal Cleaning:**

Dust weekly with a soft clean cloth and clean periodically with mild soap and warm water to remove grime. Thoroughly rinse and dry the washed surfaces. Remove oil or tar by wiping with Varsol or a special cleaner supplied by the elevator manufacturer, followed by washing as above. Clean only with soft cloths.

### **Waxing or Oiling:**

Not normally required.

### **Polishing:**

No polishing required.

### • **PLASTIC LAMINATES**

Most popular of the decorative materials introduced in recent years, plastic laminates are increasingly used in modern elevator cabs as finishes on removable, replaceable wall panels.

The panels consist of a plywood or composition chipboard core faced on the car-interior side with finished plastic laminates and on the reverse side with an equivalent weight of more-economical unfinished laminate. Thus balanced, panels stand straight for years without warping or bending.

Plastic laminate has proven its strength and durability in elevator cab walls. This material requires relatively little maintenance except when scratched or chipped by unusually severe vandalism. In this case, removing the damaged cab panel allows the elevator to continue running while the damage is being repaired.

### **Normal Cleaning:**

Dust weekly with a soft clean cloth and clean periodically with mild soap and warm water to remove grime. Thoroughly rinse and dry the washed surface. Don't rub hard or use abrasive material.

### **Waxing or Oiling:**

Don't use oil or wax, especially on textured surfaces. Oil or wax will build up on the surfaces to present an unattractive appearance.

## 5. GENERAL MAINTENANCE INSTRUCTIONS

- **WOOD VENEER**

Fine woods have been a traditional favourite of the interior designer since the days of ancient Egypt. Despite modern production methods and automatic machinery, the skills of wood craftsmen still determine the quality of wood finishes.

Wood veneers exert the strong appeal of natural beauty. Since the characteristics of woods differ widely, each selection of wood or veneer has its own unique appearance, distinctiveness that has helped make wood finishes popular century after century. Architects and designers appreciate the variety and richness inherent in wood and utilise its decorative possibilities to enhance the appearance of monumental buildings.

Veneer for elevator cabs is usually fabricated onto removable chipboard panels for the interior walls. Side as well as rear walls are finished this way, using the veneer facing for most of the elevator visible to the riding public. The veneer is usually finished with an oil finish to bring out the grain in its natural state.

- **NATURAL WOOD (Veneer and Solid)**

### **Normal Cleaning:**

Dust weekly with a clean, soft, white cloth free of seams and buttons. On veneer or wood with an oiled finish, remove dirt and finger marks by rubbing in a circular motion with a cloth dampened with lemon oil or other wood polish. Then wipe off all surfaces, leaving the veneer dry to the touch. On veneer or wood with a lacquer finish, engage an experienced wood finisher for any cleaning other than dusting with a clean soft cloth.

### **Remove Scratches:**

To tone down light scratches so that they are less conspicuous, wipe with lemon oil or other wood polish. Have an experienced wood finisher remove severe scratches.

### **Floor Tile:**

Asphalt tile floors are used in elevator cars that require an abrasion-resistant floor surface for heavy traffic areas as in service elevators and in hospital elevators carrying food carts and other heavy equipment.

## 5. GENERAL MAINTENANCE INSTRUCTIONS

### Normal Cleaning:

Clean with mild soap and warm water. Add mild abrasives when necessary to remove excessive dirt. Mops should always be wrung out before applying to the floor. Do not use excessive amounts of water. Avoid solvents or oils.

### Threshold and Sills:

Extruded aluminium sills are increasingly used in elevator cars and in hoistway entrances because of their naturally attractive appearance complementing metals inside the car or hallway areas. Extruded bronze is also popular with bronze front returns and car doors.

### Normal Cleaning:

Clean extruded aluminium and bronze thresholds and sills regularly by wire brushing. Use wax to obtain a shiny surface and retard oxidation.

Clean cast iron sills regularly by wire brushing. Repaint with black paint periodically to maintain an attractive appearance. Take care to keep excess paint from accumulating in the door guide grooves.

- **Cleaning/Protective Film to Stainless Steel**

If coarse grain use mix of light oil (10W)\* mixed with thinners 1:1. If finer grain, use turps in lieu of thinners. Wash steel with solution to remove all grime then dry with clean cloth to leave fine film of oil. If no turps, kerosene or methylated spirits would suffice. \* The lighter the oil the better.



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## **11. COMMISSIONING / HAZARD & RISK**

Commissioning Test Check Sheets & Hazard and Risk Analysis documents will be provided once lift has been completed and tested.

Thank you for your patience.



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## 12. WARRANTY

**Fifty Albert**  
**42-50 Albert Road**  
**South Melbourne VIC 3205**

**Otis Contract No: 31NF5699-701**  
**Lift no. 1, 2 & 3**

### **WARRANTY**

Warranty period is 12 months from date of Practical  
Completion of the Project.

Details are set out in the “Commercial Specification  
Schedule For Maintenance”  
which is attached to this document.



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## 12. COMMERCIAL SPECIFICATION SCHEDULE

### Intent

Our skilled personnel will provide quality maintenance which can be measured in terms of equipment performance and customer satisfaction.

In conjunction with this goal, we will work in partnership with you to provide a work environment free from hazards for our employees and all the users of the equipment.

### Quality

Working within the guidelines of the Otis Quality Manual and applying the systems of documented procedures and work instructions, we will ensure delivery of products and services of a consistent quality to all our customers. Otis management and employees are committed to making work improvements part of their daily activities in accordance with the principles of Total Quality Management (TQM). Otis is a Quality Accredited Company under International Quality Standards ISO9001 and 9002.

### Customer Service

We will assign a service representative to your account, who will periodically visit your building and will be available for consultation on any matter relating to the maintenance of the units. The appointed service representative will be available to discuss your elevator needs in the areas of modernization, traffic handling ability, recommendations and requirements of code authorities and proper use and care of the units.

### Scope

Our service technician will examine lubricate adjust and supply relevant components for the equipment using product specific techniques.

We will:-

- (a) provide regular maintenance in accordance with our planned Programmed Maintenance Schedule;
- (b) clean, lubricate, adjust and check the lift for safe, reliable and optimum performance including repairs or replacements of all parts which show signs of normal wear and tear. This includes the repair or replacement of any effected part and covers major mechanical or electrical breakdowns;
- (c) carry out regular safety checks as required by the relevant Standards Association of Australia (S.A.A.) code;
- (d) clean rubbish from machine rooms, secondary floors, internal ledges, sills, separating beams of hoistway and elevator pits other than waste that constitutes a health hazard or undue accumulation of excessive rubbish;
- (e) install standard commercial light tubes and globes (as supplied by the customer) in the car, hoistway, pit and motor room.

## 12. COMMERCIAL SPECIFICATION SCHEDULE

### Components

We will systematically examine, lubricate, adjust, repair or replace the following equipment:-

- (a) machines, worms, gears, thrust bearings, drive sheaves, drive sheave shaft bearings, brake pulleys, brake coils, contacts, linings and component parts;
- (b) motors and motor generators, motor windings, rotating elements, commutators, brushes, brush holders and bearings;
- (c) pumps, pump motors, operating valves, valve motors, leveling valves, plunger packings, exposed piping and hydraulic fluid tanks;
- (d) controllers, selectors and dispatching equipment, relays, solid state and electronic components, transducers, resistors, condensers, power amplifiers, transformers, contacts, leads, dashpots, timing devices, computer and microcomputer devices, selector tapes, mechanical and electrical driving equipment, lamps, buttons, signals and position indicating equipment;
- (e) governors, governor sheave and shaft assemblies, bearings, switches and governor jaws, deflectors or secondary sheaves and bearings, car and counterweight buffers, car and counterweight guide rails, hoistway limit switches, governor tension sheave assemblies, compensating sheave assemblies, car and counterweight guide shoes including rollers or gibs;
- (f) hoistway door interlocks and hangers, door guides and auxiliary door closing devices;
- (g) door operators, car door hangers, car door contacts, door protective devices, load weighing equipment, carframes, car safety mechanisms;
- (h) travelling conductor cables and hoistway and machine room wiring as required.
- (i) hoisting, governor and compensation ropes.

### Exclusions

It is expressly agreed that the following components and service are not included in this agreement:

- (a) the building structure, including but not limited to the elevator wells, pits, support walls, slabs, floors, machine rooms, and access ways;
- (b) the car enclosure including fixed and removable panels, the car platform, door panels, plenum chambers, light diffusers, light fittings including globes or tubes, other architectural features and accessories, hung ceilings, handrails, mirrors and floor coverings;



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Fifty Albert  
31NF5699-701

## 12. COMMERCIAL SPECIFICATION SCHEDULE

- (c) any maintenance, repairs or servicing necessary because of consequences of any water penetration, building compression or movement;
- (d) any maintenance, repairs or servicing of the sump pumps, hoistway enclosure, hoistway door panels, transom panels, frames and sills, buried caissons, buried cylinders and buried piping or other equipment not installed by Otis;
- (e) cleaning of areas not directly in the machine rooms, hoistways or for removal of dust and rubbish emanating from outside of this area;
- (f) repair of any damage resulting from vandalism, abuse, misuse or theft;
- (g) the power supply mains, and associated mains switching from the supply side of the machine room isolating switch or to the machine room circuit breaker, or any maintenance or repairs required because of an error, defect or fault in such power supply, main or switches;
- (h) machine room ventilation equipment and lighting, elevator shaft lighting, tubes, globes and fittings or fire protection equipment;
- (i) modification or alteration to the Equipment required as a result of any lawful directive from any Government authority or agency, changes in any law, regulation code or by-law;
- (j) communication, audio and security equipment unless specifically included under this agreement.

### Spare Parts

We will maintain a reasonable stock of spare parts and supplies to service your equipment. Where parts are no longer commercially available and have to be specifically manufactured for the equipment, the additional costs shall be borne by the customer.

### Emergency Response

1. You will have access to Otisline, a toll free 24 hours, year round Response Centre attended by Otis personnel. Should a unit malfunction occur, the Otisline customer service representative will, at your request, dispatch an examiner to perform emergency minor adjustment callback service 24 hours a day.
2. Breakdowns involving replacement or repair of major components or requiring work in excess of four hours, will be completed during regular working hours.
3. We will attend the installation as soon as practicable after receiving notification of a malfunction from the customer or the Otis Remote Elevator Monitoring system (REM).

## 12. COMMERCIAL SPECIFICATION SCHEDULE

### Inspection and Reports

We will carry out the following on your behalf:

*Certificate of Examination* - A report will be left on site for the customer who summarizes the work carried out on your equipment.

*Annual Survey* - A qualified person will complete a survey which summarizes the current condition of your equipment.

*Safety Survey* - Annually a qualified person will complete this survey covering the safety aspects of your equipment.

*Failures and Irregularities* - As requested by the customer, reports on equipment failures and irregularities will be provided.