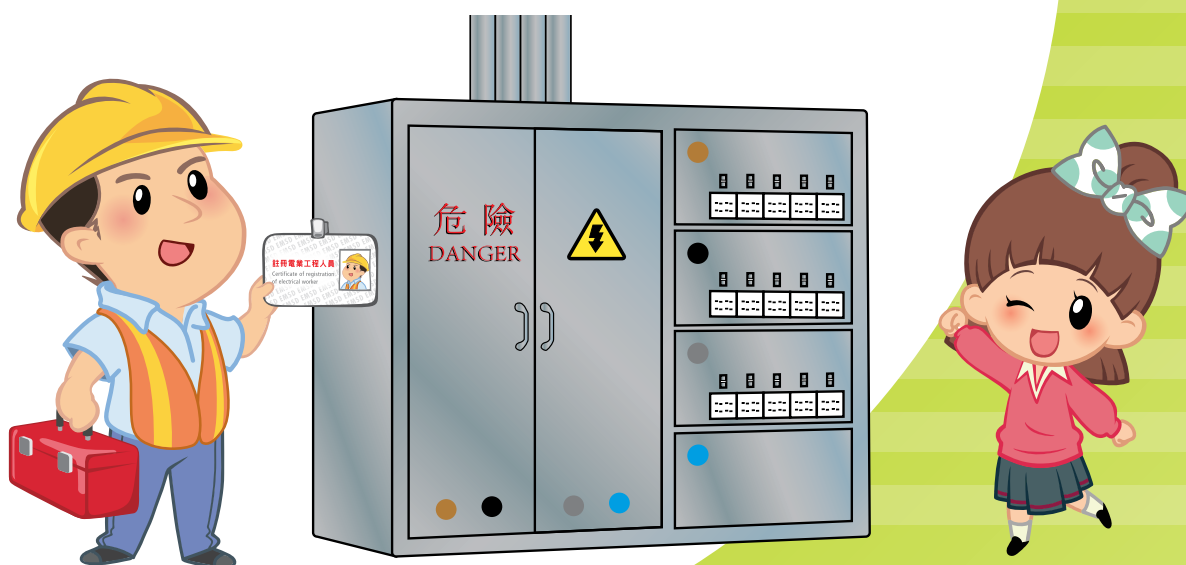


### Periodic Inspection and Testing and Regular Maintenance of **Fixed Electrical Installations**



### Notes on the Purchase and Safe Use of **Chargers**

New

### Energy Efficiency Grading Standards

Fully Implemented



### Major Regulatory Requirements Applicable to **LPG Vehicle Maintenance Workshops** and **LPG Vehicle Mechanics**



### Highlights of the Modernisation Solutions for

### Old Lifts



## From the Editor

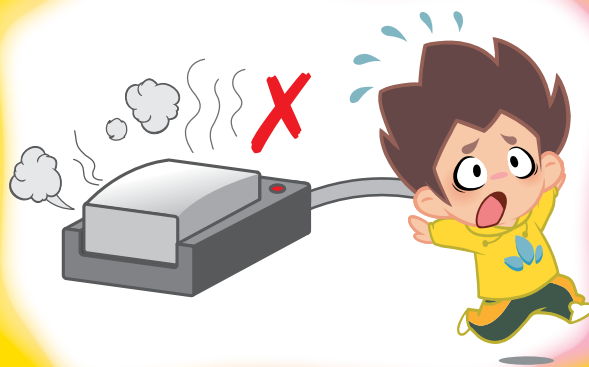
Thanks to your support, this issue of E&M Safety Newsletter is now the 24th since its launch. It features a rich variety of content, including an introduction by cartoon characters of the 2015 edition of the Code of Practice for the Electricity (Wiring) Regulations, tidbits of the launch of the "Energy Saving for All" Youth Competitions, the new energy efficiency grading standards, and highlights of the modernisation solutions for old lifts. We will also review with you some electrical safety tips such as how to use chargers safely, as well as the major regulatory requirements applicable to LPG vehicle maintenance workshops and mechanics.

With the New Year just around the corner, we wish you a happy holiday and a productive year ahead.

## Notes on the Purchase and Safe Use of Chargers

**T**he Electrical Products (Safety) Regulation stipulates that household electrical products sold in Hong Kong, including chargers, should be issued with "certificates of safety compliance" as proof that the products comply with the relevant international safety standards or other equivalent safety standards. Members of the public should take heed of the following when buying and using chargers:

1. Choose and buy chargers from reputable stores. Do not buy chargers which are unbranded or of unknown origin.
2. Buy and use chargers fitted with 3-pin plugs which comply with the safety requirements.
3. To avoid danger caused by overloading, use chargers that match with the input power (or current) of the electrical product to be connected.
4. Charging time should not be unduly long. Adhere to the instructions in the user manual. Before leaving home or when the charger is left unattended, unplug the charger to avoid connecting it to power supply when not in use.
5. Do not let the electrodes of the output connector be in contact with any metallic object (e.g. the metallic



casing of an electrical product). Otherwise, it may cause short-circuiting and fire.

6. Do not use charger in a wet or humid environment (e.g. bathroom and kitchen).
7. Stop using the charger immediately if any abnormalities, such as strange noises and smells or overheating, are observed in the course of using the charger.

For enquires on electrical products safety, please call 1823 Citizen's Easy Link or email to [info@emsd.gov.hk](mailto:info@emsd.gov.hk). You may also write to EMSD at 3 Kai Shing Street, Kowloon.

## The New 2015 Version of the Code of Practice for the Electricity (Wiring) Regulations

The current edition of the Code of Practice for the Electricity (Wiring) Regulations (CoP) was published in 2009. To keep abreast with the latest development in technology, safety requirements and trade practice, the Electrical and Mechanical Services Department (EMSD) has earlier conducted a review of the CoP. The review is now complete, and the approved new CoP is expected to be launched for sale in 2015. Members of the public can purchase a copy of the new CoP at the Publications Sales Unit of the Information Services Department, or the online

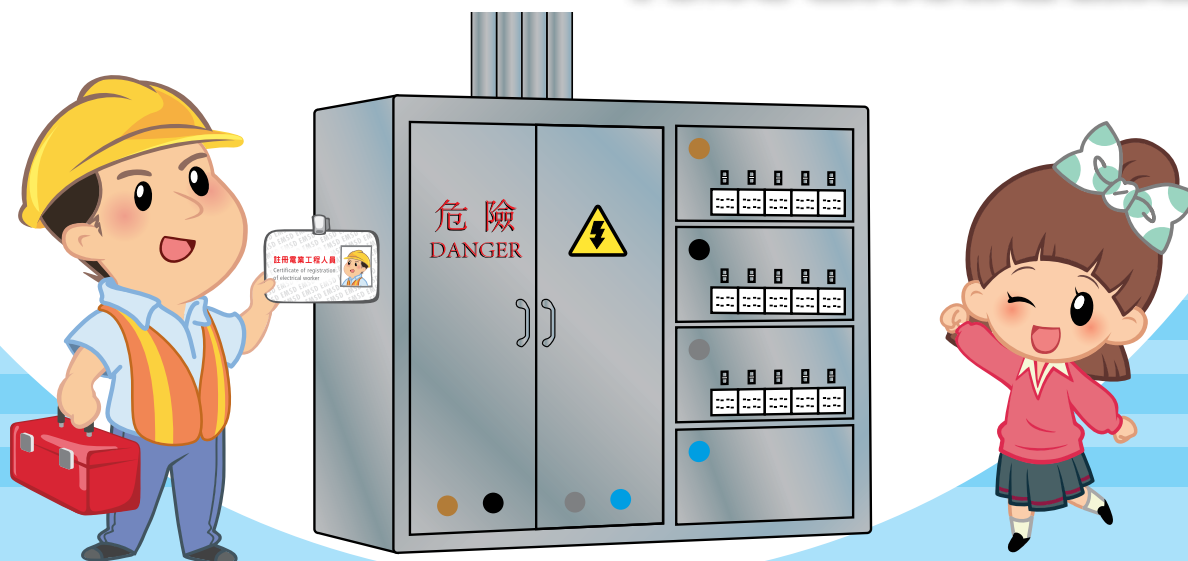
Government Bookstore at GovHK. Copies may also be downloaded from the EMSD website. The website of the online Government Bookstore:

<http://www.gov.hk/en/residents/government/publication/publication/bookstore.htm>

The EMSD website for downloading:  
[http://www.emsd.gov.hk/en/electricity\\_safety/publications/codes\\_of\\_practice/index.html](http://www.emsd.gov.hk/en/electricity_safety/publications/codes_of_practice/index.html)



# Periodic Inspection and Testing and Regular Maintenance of **Fixed Electrical Installations**



Pursuant to the Electricity Ordinance, owners of communal fixed electrical installations (including individual flat owners and incorporated owners) in a building with an approved loading exceeding 100A are required to have these installations inspected, tested and issued with a Periodic Test Certificate (i.e. Form WR2) by a registered electrical contractor at least once every 5 years. Before carrying out the work, owners of these installations should discuss and reach a consensus with the electrical contractor and the management company on the power suspension arrangement and the corresponding provisional measures that meet the operational needs of the building, so as to ensure the safety of the electrical workers and minimise the impact of the periodic inspection, testing and certification (PITC) work on building users.

To enhance public understanding of the PITC and maintenance work for fixed electrical installations, a series of related briefing materials and updated information have been uploaded onto the following web page for viewing by the public:

[http://www.emsd.gov.hk/en/electricity\\_safety/periodic\\_test\\_for\\_fixed\\_electrical\\_installations/index.html](http://www.emsd.gov.hk/en/electricity_safety/periodic_test_for_fixed_electrical_installations/index.html)

You can also browse the following EMSD web page for a suitable registered electrical contractor to carry out electrical works:

[http://www.emsd.gov.hk/en/electricity\\_safety/registers/registered\\_electrical\\_contractors/index.html](http://www.emsd.gov.hk/en/electricity_safety/registers/registered_electrical_contractors/index.html)

Various forms of assistance to facilitate fixed electrical installation owners to arrange and complete the PITC work are currently provided by other government departments, including:

- The District Offices which assist flat owners in setting up owners' corporation. Please visit the web page of the Home Affairs Department for details: <http://www.had.gov.hk> (Public Services > Building Management > Formation of Owners' Corporations)
- The Hong Kong Housing Society, the Urban Renewal Authority and the Buildings Department which provide financial support through building maintenance assistance schemes. Please visit the web page of the Hong Kong Housing Society for details: <http://www.hkhs.com> (Our Business > Building Maintenance > Integrated Building Maintenance Assistance Scheme) For enquiries, please contact EMSD at 1823.

## Tips for Household Electrical Safety

In case of doubt on the safety of a household electrical installation, as evidenced by frequent tripping, detection of the residual current device (commonly known as "earth leakage circuit breaker") not functioning properly when its switch is pressed for periodic testing, or the electrical installation being affected by ingress of water, etc., arrangement should be made as early as possible

to have the installation inspected and repaired by a registered electrical contractor (REC) and a registered electrical worker (REW) so as to ensure household electrical safety and avoid accident. Moreover, it is advised that periodic inspection and maintenance of household electrical installations by an REC and REW should also be arranged for enhancing household electrical safety.








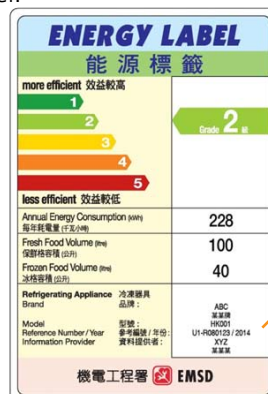
# New Energy Efficiency Grading Standards Fully Implemented

The Electrical and Mechanical Services Department published the Code of Practice on Energy Labelling of Products 2014 (the Code) on 31 October 2014 to upgrade the energy efficiency grading standards of room air conditioners, refrigerating appliances and washing machines. The new grading standards were fully implemented from 25 November 2015, with the aim of encouraging importers to introduce more energy efficient electrical products to enable the public to reduce electricity consumption, save money and enhance energy efficiency.

From 25 November 2015 onwards, energy labels with new energy efficiency grading must be shown on the above three types of electrical products for supply in Hong Kong. The prefix "U1" is added in front of the reference number of the new grading energy label while the other format remains unchanged. For example:

Product	Existing Grading Standard Reference Number	New Grading Standard Reference Number
 Room Air Conditioner	C080123	U1-C080123
 Refrigerating Appliance	R080123	U1-R080123
 Washing Machine	W080123	U1-W080123

The diagram below shows the new grading energy label:



Energy label using new grading standards (fully implemented from 25 November 2015)

U1-R080123

When purchasing the above three types of products, members of the public are advised to take note of the new grading energy label that is required to be shown on the product, and the reference number on the new label which should bear the prefix "U1".

For enquires on the energy efficiency of individual product models or details of the upgrading of energy efficiency grading standards, please visit the Energy Label Net of the Electrical and Mechanical Services Department (<http://www.energylabel.emsd.gov.hk>).



## "Energy Saving for All" Youth Competitions Successfully Launched

The Youth Energy Saving Award and the New Energy New Generation Solar Car Competition organised by the Environment Bureau and the Electrical and Mechanical Services Department were launched at the Electrical and Mechanical Services Department Headquarters on 6 July 2015. As part of the "Energy Saving for All" Campaign, the two competitions aim to enhance young people's knowledge of renewable energy and energy efficiency.

At the launching ceremony, the Director of Electrical and Mechanical Services, Mr Frank Chan, appealed to young people to join the competitions and become the leaders of the new "Energy Wise" generation. He also encouraged them to work together to save energy and help develop Hong Kong into a low-carbon and liveable city.

The Youth Energy Saving Award Competition is divided into primary school, secondary school and open group categories. The open group is for students of tertiary institutions and young people at or under the age of 25. Participants will form a 10-member team and propose energy-saving measures for their households or organisations. They will also be required to propose innovative and effective ways to promote renewable energy and energy-saving measures to the public. Apart from promoting environmental protection, the competition helps to spread a caring culture in the community. Each winning team will be granted a cash reward for donation to a non-governmental organisation nominated by them for implementing and providing youth services.

A pledging ceremony by the 11 teams joining the New Energy New Generation Solar Car Competition was also held at the launching ceremony. Each team will design and construct a solar car with the integration of environmental technologies and different innovative elements. The competition will be held in January next year and the teams will compete for four awards, namely the Renewable Energy Capture and Conversion Efficiency Award, the Energy Efficiency Design Award, the Innovative Design Award and the Best Team Spirit Award.



The Director of Electrical and Mechanical Services, Mr Frank Chan (back row, fifth left), and the Deputy Secretary for the Environment, Mr Vincent Liu (back row, fourth right) pictured with representatives of 11 teams participating in the New Energy New Generation Solar Car Competition.



The fifth-generation solar-powered electric car, SOPHIE V, developed by the Hong Kong Institute of Vocational Education.



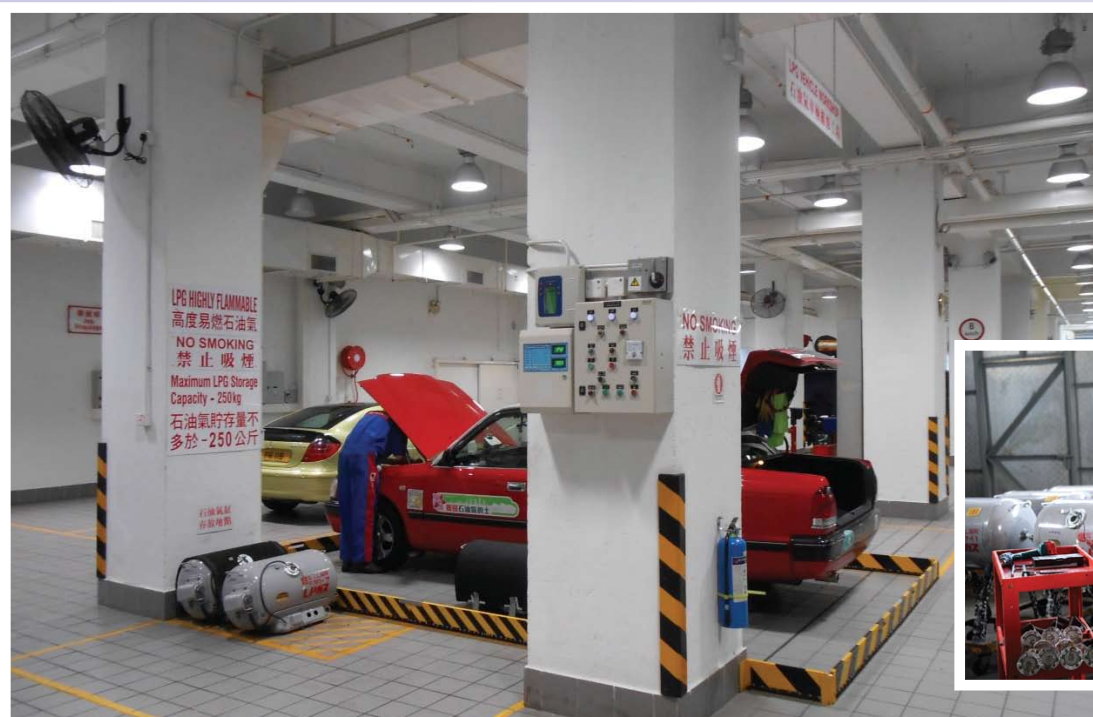
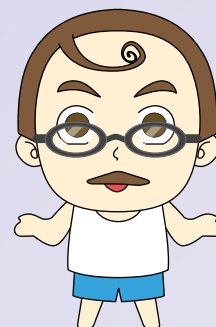
The Director of Electrical and Mechanical Services, Mr Frank Chan (front row right), and the Deputy Secretary for the Environment, Mr Vincent Liu (front row left), officiate at the "Energy Saving for All" youth competitions launching ceremony.

The event also showcased the fifth-generation solar-powered electric car, SOPHIE V, developed by the Hong Kong Institute of Vocational Education, including an overwhelmingly well-received demonstration of its operation.

For information about the Youth Energy Saving Award and the New Energy New Generation Solar Car Competition, please visit the website of "Energy Saving for All" Campaign at [www.energysaving.gov.hk](http://www.energysaving.gov.hk).



# Major Regulatory Requirements Applicable to **LPG Vehicle Maintenance Workshops** and **LPG Vehicle Mechanics**



## Adhere to Safety Requirements When Repairing LPG Vehicles

There are at present a total of about 18,000 LPG taxis and 3,700 LPG light buses in Hong Kong. The Government attaches great importance to the repair and maintenance of LPG vehicles. To protect public safety and enhance the standard of repair for LPG vehicles, EMSD has promulgated guidelines and code of practice on the repair of LPG vehicles, including the requirements on LPG vehicle maintenance workshops and LPG vehicle mechanics for reference by the trade.

To ensure the repair and maintenance work of LPG vehicles is handled in accordance with the safety requirements, vehicle maintenance workshops and vehicle mechanics involving in the repair and maintenance of LPG vehicle fuel system are required to adhere to the following regulatory requirements.

### 1. Requirements on Mechanics

(a) General vehicle mechanics may carry out general repair and maintenance work of LPG vehicles (such as replacement of tyre, indicator light, lubricant and repair of vehicle body or vehicle engine, etc.).

(b) Repair and maintenance work of LPG vehicles involving the repair, maintenance or replacement of fuel system or associated components (including vaporiser, LPG fuel pipe, pressure regulator, mixer) and replacement of LPG fuel tank must be carried out by a Competent Person (Class 6) or under his supervision.

(c) Work involving the structure or internal components of an LPG fuel tank (including replacement of fuel pump inside the tank and associated components, pneumatic leak test of fuel tank and 5-yearly revalidation of fuel tank) must be carried out by a Competent Person (Class 1) or under his supervision at an LPG Fuel Tank Workshop.

### 2. Requirements on Maintenance Workshops

(a) Work not involving the repair and maintenance of LPG vehicle fuel system or associated components (such as replacement of tyre, indicator light, lubricant and repair of vehicle body or vehicle engine, etc.) may be carried out at a general vehicle maintenance workshop. A workshop which hires a Competent Person (Class 6) to undertake such work may also carry out the work mentioned in 1(b) above.

(b) Any vehicle maintenance workshop storing an aggregated nominal water capacity of more than 130 litres of LPG (i.e. more than 1 number of LPG fuel tank) must seek the approval of EMSD to become a Vehicle Maintenance Workshop with approved Notifiable Gas Installation. The list of these workshops has been uploaded onto the EMSD web page.

(c) Work mentioned in 1(c) above must not be carried out at any vehicle maintenance workshop.





# Highlights of the Modernisation Solutions for Old Lifts

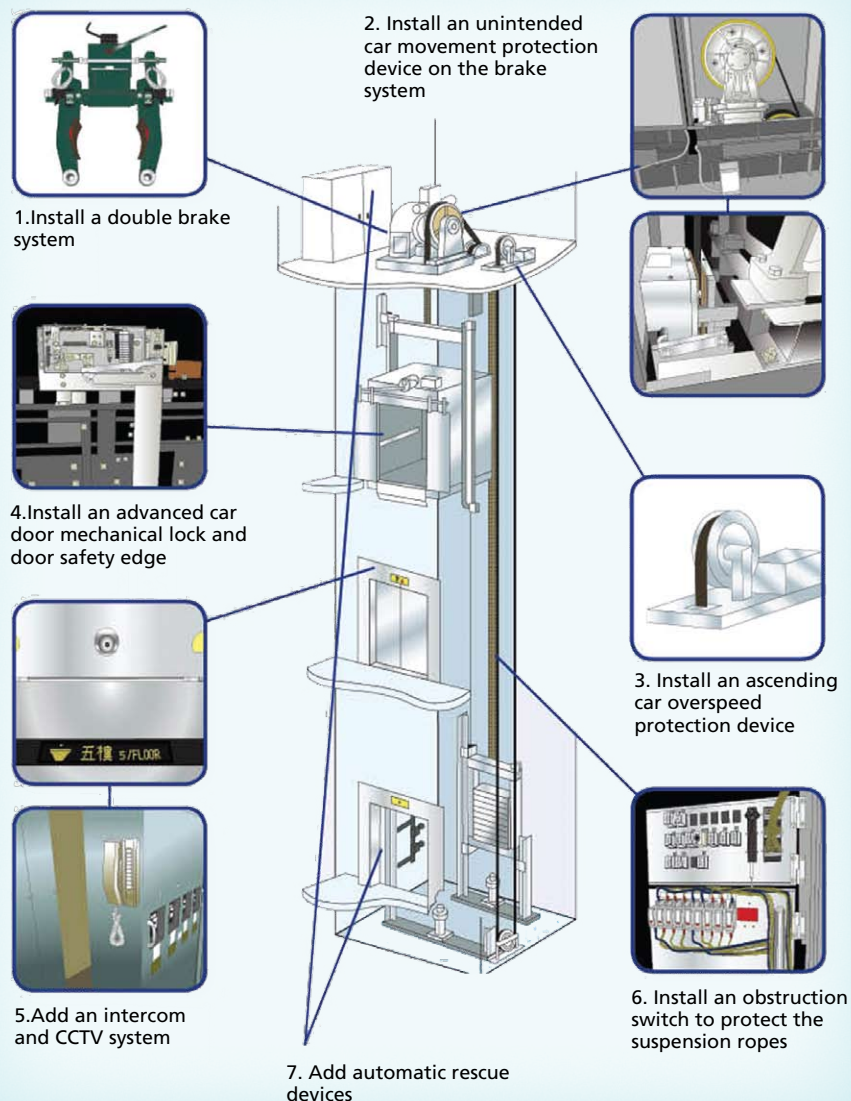
Lifts are closely related to our daily lives, which is why their technological and safety standards are matters of public concern. Existing lifts in Hong Kong were installed and put into operation in different eras, according to prevailing standards. But with rapid and continuous improvement in technological standards in recent years, early lifts may not be able to meet the most advanced standards of today's lifts. That's why there is plenty of room for improvement and enhancement to be made to old type lifts to make them safer, more reliable and more comfortable.

The last issue of the E&M Safety Newsletter featured the first four modernisation solutions for old lifts (see items 1-4 in the diagram). This issue continues with the remaining three solutions (see items 5-7 in the diagram). Responsible persons for lifts may consider these solutions in light of the actual situation and individual needs.

## Add an Intercom and CCTV System (Item 5 in the diagram)

If trapped in a lift, passengers can always press the alarm bell for help, but according to experience, that is not the best way to seek help. Installing an intercom system makes it possible for trapped passengers to communicate directly with management office staff who can take speedy action to call Fire Services Department and the lift contractor. Some advanced intercom systems also allow passengers to directly contact the 24-hour call centre of the registered lift contractor for assistance.

Responsible persons for lifts may also consider installing



a closed-circuit television (CCTV) system which comprises a camera in the lift car and an emergency alarm push button with buzzer (or alarm bell), all connected to the building management office. Management office staff can monitor the situation in the lift round the clock through the CCTV and take speedy action during emergency.

Intercom



Intercom



CCTV system



### Install an Obstruction Switch to Protect the Suspension Ropes (Item 6 in the diagram)

Excessive wear and tear of suspension ropes is a major cause of rope breakages. The installation of an obstruction switch can prevent the excessive wear and tear of the suspension ropes and sheaves during breakdown, which can happen when the movement of the lift car or counterweight is obstructed while the motor is still in operation.



Obstruction switch installed in the control panel

### Add Automatic Rescue Devices (Item 7 in the diagram)

Passengers may be trapped inside a lift car in case of power failure. An advanced automatic rescue device, if installed, can maintain the lift in momentary operation for the safe exit of passengers, and prevent them from being trapped.

When normal power supply fails, the device will detect the voltage dip and make use of the back-up battery power to drive the lift to the nearest landing floor, and open the lift doors at the correct position to release the passengers. After that, the lift will remain out of service until normal power supply is resumed.



To enable readers to have a more comprehensive understanding of lift modernisation, the E&M Safety Newsletter has for two consecutive issues introduced the seven modernisation solutions for old lifts. These include installing a double brake system, installing an unintended car movement protection device, installing an ascending car over-speed protection device, installing a car door mechanical lock and door safety edge, adding an intercom and CCTV system, installing an obstruction switch to protect the suspension ropes, and adding automatic rescue devices. In deciding whether to adopt the modernisation solutions, responsible persons for lifts should discuss the relevant technical feasibility with their works consultants or lift contractors and implement the improvement measures in a gradual manner. The responsible persons must employ registered lift contractors to carry out any major alteration or modernisation works. Upon completion of the works, registered lift engineers should be arranged to conduct a comprehensive inspection and testing of the lifts concerned to ensure safety.

## Responsibility of Responsible Persons for Lifts and Escalators with Regard to the Report and Investigation of Incidents

In accordance with the Lifts and Escalators Ordinance (Cap.618) (hereafter referred to as "the Ordinance"), if there is an incident relating to a lift or an escalator, the responsible person for the lift and escalator must, within 24 hours after coming into knowledge of the incident, notify EMSD and the registered lift and escalator contractor concerned in writing by using the specified form LE27.

#### Reportable lift incidents include:

- (1) A person dies or is injured and the death or injury involves a lift or any associated equipment or machinery of a lift.
- (2) A failure of the main drive system of a lift occurs other than by reason of the failure of the main power system of the lift.
- (3) A breakage of any suspension rope of a lift.
- (4) A failure of any brake, overload device, safety component or safety equipment of a lift.
- (5) A failure of any interlocking device for any door of the lift-way of a lift occurs other than by reason of a failure of the making of electrical contact of safety contacts.
- (6) A failure of any interlocking device for any door of the carrier of a lift occurs other than by reason of a failure of the making of electrical contact of safety contacts.

#### Reportable escalator incidents include:

- (1) A person dies or is injured and the death or injury involves an escalator or any associated equipment or machinery of an escalator.
- (2) A failure of the main drive system of an escalator occurs other than by reason of the failure of the main power system of the escalator.
- (3) A failure of any brake, step chain, drive chain, safety component or safety equipment of an escalator.

Responsible persons for lifts and escalators who are uncertain whether an incident should be reported may consult with their registered lift and escalator contractors.

Moreover, the Ordinance also stipulates that the responsible persons for lifts and escalators have the responsibility to assist in the investigation of incidents. Enforcement officers may request the responsible persons for lifts and escalators, and the responsible registered lift and escalator contractors, to provide without charge any assistance or information that may reasonably be required for carrying out the investigation.

## E & M Safety Quiz

Please fill in the reply slip below with **the most appropriate answers** and send it by post or by fax to the Editor, E&M Safety Newsletter (contact information is shown at the bottom of this page). The first 500<sup>[1]</sup> of the quiz participants answering all questions correctly will receive a souvenir (on a first-come-first-served basis).

- Pursuant to the legislation, owners of communal fixed electrical installations in a building with an approved loading exceeding 100A are required to have these installations inspected and tested at an interval of at least how many year(s)?**  
A. Every year      B. Every 5 years  
C. Every 10 years      D. Every 15 years
- Which of the following is an improper use of chargers?**  
A. Switch off the power supply of the charger when not in use.  
B. Use chargers that are fitted with 3-pin plugs which comply with the safety requirements.  
C. When leaving home or when the charger is left unattended for a long period of time, it is only necessary to disconnect the electrical appliance from the charger which is still plugged into a power source.  
D. Do not use charger in a wet or humid environment (e.g. bathroom and kitchen).
- At the launching ceremony of the "Energy Saving for All" Youth Competitions, the Director of Electrical and Mechanical Services, Mr Frank Chan, appealed to young people:**  
(i) To join the Youth Energy Saving Award Competition  
(ii) To be the leaders of the new "Energy Wise" generation  
(iii) To be the users of a low-carbon and liveable city  
(iv) To be the planners of energy-saving measures  
A. (i) & (ii)      B. (ii) & (iii)  
C. (i) & (iii)      D. All of the above
- The 5-yearly revalidation of LPG fuel tanks must be carried out at which of the following types of workshop and conducted or supervised by which class of Competent Person?**  
A. General vehicle maintenance workshop and general vehicle mechanic  
B. LPG fuel tank workshop and Competent Person (Class 1)  
C. LPG fuel tank workshop and Competent Person (Class 6)  
D. Vehicle maintenance workshop with approved Notifi
- Under which of the following circumstances the obstruction switch would be activated to protect the suspension ropes of the lift?**  
A. When normal power supply fails  
B. When an ascending car overspeeds  
C. When the movement of the lift car or counterweight is obstructed while the motor is still in operation  
D. When there is a breakdown and failure of the brake system
- In accordance with the Lifts and Escalators Ordinance (Cap.618), if there is an incident relating to a lift or an escalator, the responsible person for the lift and escalator must, within \_\_\_\_\_ hours after coming into knowledge of the incident, notify EMSD and the registered lift and escalator contractor concerned in writing by using the specified form LE27.**  
A. 12 hours      B. 24 hours  
C. 36 hours      D. 48 hours

REPLY SLIP <sup>[2]</sup>					
Name:			Tel.:		
Hong Kong Address:					
Answers:					
Q1	Q2	Q3	Q4	Q5	Q6
Where did you get this E&M Safety Newsletter?					
Residential estate	School	District Office	New immigrant centre		
Others (please specify):					

[1] Only the first 500 of the quiz participants sending in the Reply Slip with all answers correct will be notified.

[2] The personal data provided in the Reply Slip will only be used for the E & M Safety Quiz purpose. It will be kept confidential and will not be disclosed to any third party. You have the right to request in writing to check whether EMSD is keeping your personal data, to access or correct it, and to enquire about our policy and procedures in the use of such data as well as the types of personal data we are keeping. The above terms do not affect your rights as set out in the Personal Data (Privacy) Ordinance.

Answers to last issue's quiz: 1.D 2.C 3.B 4.D 5.B 6.D

## Feedback

Your comments and suggestions, whether on editorial style or contents, are most welcome. Tell us how we can improve and make the E & M Safety Newsletter a truly informative and interesting publication for you. Please contact us if you have any comments or enquiries, or need a printed copy. Both the English and Chinese versions of the E&M Safety Newsletter are available on our website at <http://www.emsd.gov.hk>.

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