Introduction to the Registered Lift and Escalator Contractors' Performance Rating System





Introduction

This brief explains the background, purpose, assessment criteria and calculation method of the Registered Lift and Escalator Contractors' Performance Rating System.

Background

The Lifts and Escalators Ordinance (Chapter 618) ("the Ordinance") came into full operation on 17 December 2012 and repealed the Lifts and Escalators (Safety) Ordinance (Chapter 327) which was enacted in 1960. The Ordinance provides the Electrical and Mechanical Services Department ("EMSD") a legal framework to regulate lift and escalator safety in Hong Kong.

> The Ordinance stipulates that a responsible person (RP) for a lift/escalator must ensure that the lift/escalator is kept in a proper state of repair and in safe working order. The RP is also required to cause the lift/escalator to be maintained by a registered lift/escalator contractor ("RC") at intervals no exceeding a month, and must be thoroughly examined by a registered lift/escalator engineer at least once a year for lifts and half a year for escalators.

EMSD adopts a risk-based approach to carry out audit inspections of lift and escalator works carried out by RCs to check if there is any non-compliance.

To assist lift/escalator owners or their property management agents to choose appropriate RCs for provision of lift/escalator maintenance and repair services. EMSD introduced the Contractors' Performance Rating System ("CPR") in June 2009. The CPR is based on a scheme of performance monitoring ("PM") points to provide a fair and transparent mechanism for reflecting the performance of RCs in safety and services quality aspects. The CPR is not a requirement under the Ordinance. It is an administrative measure adopted by the EMSD to support enforcement of the Ordinance. The EMSD reviews and improves the CPR from time to time. The current system is the latest version incorporated with changes made in consultation with the Lift and Escalator Safety Advisory Committee.



Purpose

RPs can make use of the CPR results as one of the reference parameters for choosing RCs for provision of lift/escalator maintenance and repair services.

Assessment Criteria

Operation of the CPR was based on the scoring of PM points. If an RC has shown inferior performance and non-compliant items are found during lift/escalator inspections by the EMSD, the EMSD will take appropriate follow up action and prosecution action, and accord PM points to the RC based on the inferior performance and non-compliances. The PM points accorded will be valid and accumulated for 12 calendar months. The CPR results will be updated and announced every 3-month.

The operating mechanism of the CPR is explained below:

- 1. The non-compliant items are classified into 6 categories, namely Categories A, B, C, D, E and X*. Category A consists of safety critical non-compliant items and is known as the category for rating the Safety Performance. Non-compliant items in Categories B, C, D and E belong to the category for rating the **Services Quality Performance**. According to their differences in severity, each item in Categories B, C, D and E is accorded 6 PM points, 4 PM points, 3 PM points and 2 PM points respectively. Category X* includes convictions by the Court for contraventions of the Ordinance and guilty counts by the Disciplinary Board, which are to be accorded 20 PM points and 15 PM points respectively.
- 2. In relation to paragraph 1, EMSD will, apart from according PM points for non-compliant items and rating the performance, issue warning letters to RCs in the following circumstances:

a. Identification of any Category A non-compliant item or a total of 12 PM points or more accorded for non-compliant items under the Services Quality Performance category found in a single lift/escalator inspection; or

b. The average PM points accorded over a 12-month period exceed 4 PM points.

- 3. To effectively reflect the performance of RCs, only the performance rating of RCs with 5 or more lifts/escalators inspected by the EMSD will be included in the table.
- 4. Simplified examples of non-compliant items are listed at the end of this brief for reference. (Remark: For details of non-compliant items, please refer to the details in the Circular posted on the EMSD's website.)

Overall Performance Rating

The Overall Performance Rating of an RC is made up of two parts: Safety Performance Rating refers to identification of Category A non-compliant items, and Services Quality Performance Rating refers to the index (0 to 100 marks) as calculated from the PM points accorded. Please refer to the following formula:



Services Quality Performance Index= 100 x 1 - (total PM points accorded) (number of lifts/escalators inspected in the period)

Example: Company A has in the assessment period 75 lifts inspected by the EMSD. Five non-compliant items were found and none of them was a Category A safety critical non-compliant item.

Example of PM points related to non-compliant items of lift:

Category of Non-compliant Item	Description	PM Points Accorded
Cat. B	Ineffective emergency alarm device	6
Cat. B	Ineffective car emergency lighting	6
Cat. C	Inoperative car ventilation fan	4
Cat. D	Ineffective landing door emergency release function	3
Cat. E	Inoperative car lighting	2

Services Quality Performance Index of Company A = $100 \times [1 - (6 + 6 + 4 + 3 + 2) \div 75] = 72$ point

Star Rating System

In order to assist RPs in understanding and making reference to the performance of RCs as one of the selection parameters for choosing RCs for provision of lift/escalator maintenance and repair services, the results of the CPR will be announced in a new format. The presentation format of the CPR as revised in consultation with the Lift and Escalator Safety Advisory Committee makes use of a simpler and clearer Star Rating System to present the safety and services quality performance of contractors. A green Safety Star "* "will be awarded to an RC without any safety non-compliance being found during the preceding 12 months' inspections of their lifts/escalators. The performance rating on maintenance services quality of an RC, who has been awarded with a Safety Star, would be presented by the number of blue Quality Stars " \star ". The higher the number of Quality Stars, the better is the services quality of the RC. A remark would be added for cases where the RCs do not possess a Safety Star to indicate that non-compliance found in safety aspect , thus served with warning letter.

Category X also belongs to the Services Quality Performance category. The irregularity concerned has not been included as a non-compliant item in the CPR or the non-compliance was not identified in an audit inspection.

Different ratings of RCs'performance:

「Safety Star ★ 」+ 「Quality Stars★ 」				
★ + ★★★★★	No non-compliance found in both safety and services quality aspects in two recent quarterly announcements (Safety Star awarded and the services quality performance index at 100 points in the two recent quarterly announcements)			
* + ***	No non-compliance found in both safety and services quality aspects (performance index at 100 points in this quarterly announcement)			
★ + ★ ★	No non-compliance found in safety aspect and services quality performance index is between 90 and 99 points			
★ + * *	No non-compliance found in safety aspect and services quality performance index is between 80 and 89 points			
★ + ★	No non-compliance found in safety aspect and services quality performance index is between 70 and 79 points			
*	No non-compliance found in safety aspect and services quality performance index is less than 70 points			
	Non-compliance found in safety aspect, thus served with warning letter. The record of non-compliance will be kept for one year.			

(i)Examples of Performance Rating

Results on Safety Performance and Services Quality Performance of RCs

Name of RC	RC number	Safety Performance Index (Cat. A non-compliant item)	Services Quality Performance Index (100 points max.)
Company A	RLC00001	No	100 points (two recent quarters)
Company B	RLC00002	No	100 points
Company C	RLC00003	No	98 points
Company D	RLC00004	No	90 points
Company E	RLC00005	No	82 points
Company F	RLC00006	No	70 points
Company G	RLC00007	No	63 points
Company H	RLC00008	No	55 points
Company I	RLC00009	Yes	90 points

(ii) Performance Rating of RCs

The presentation of RCs' performance ratings in EMSD's website:

Name of RC	RC number	Safety Performance Rating ^(Note1)	Services Quality Performance Rating ^(Note 1)
Company A	RLC00001	*	****
Company B	RLC00002	*	****
Company C	RLC00003	*	***
Company D	RLC00004	*	***
Company E	RLC00005	*	**
Company F	RLC00006	*	*
Company G	RLC00007	*	-
Company H	RLC00008	*	-
Company I	RLC00009	_ (Note2)	

Note 1 :

- ★ + ★★★★★ No non-compliance found in both safety and services quality aspects in two recent quarterly announcements (Safety Star awarded and the services quality performance index at 100 points in the two recent quarterly announcements)
- $+ \pm \pm \pm$ No non-compliance found in both safety and services quality aspects (performance index at 100 points in this quarterly announcement)
- $+ \star \star \star$ No non-compliance found in safety aspect and services quality performance index is between 90 and 99 points
- ★ + ★★ No non-compliance found in safety aspect and services quality performance index is between 80 and 89 points
 - No non-compliance found in safety aspect and services quality performance index is between 70 and 79 points
 - No non-compliance found in safety aspect and services quality performance index is less than 70 points
- Note 2 : Non-compliance found in safety aspect, thus served with warning letter. The record of non-compliance will be kept for one year until *(Month/Year)*.



Simplified Examples of Non-compliant Items for Lifts

(Remark: Refer to the Circular posted on the EMSD's website for details of the non-compliant items.)



Category A Non-compliant Items (15 PM points)

- ▲ The car door electrical interlock device is ineffective such that the lift is still operational with a car door not fully closed.
- ▲ The landing door interlock device is ineffective such that the lift can be operated with a landing door not fully closed or locked.
- ▲ The safety gear is ineffective such that the lift car, which has attained the set speed limit of the overspeed governor, cannot be stopped.
- A The machine brake is ineffective such that the lift car cannot be stopped.
- ▲ The buffer is ineffective.



The emergency alarm device is ineffective.

Category B Non-compliant Items (6 PM points)

- ▲ Incorrect setting of the car overload device such that the lift can close its doors
 - and operate when the load in the car exceeds the rated load.
- ▲ Overspeed governor setting is incorrect.
- ▲ The fireman's lift fails to perform the required fireman's lift operating mode.
- A The emergency alarm device is ineffective.
- A The car emergency lighting is ineffective.

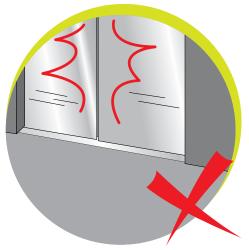






Category C Non-compliant Items (4 PM points)

- ▲ Self-closing function of the landing door is ineffective.
- ▲ More than 10 % of the total number of landing/car doors inspected has excessive clearance.
- Damage of car cages, car doors or landing doors which affect the safety of passengers.
- ▲ Car top control switch is ineffective.
- ▲ The car ventilation fan is inoperative.



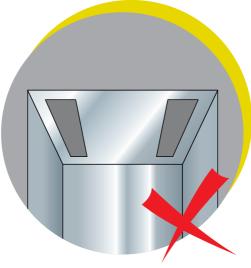
Door closing force is excessive

Category D Non-compliant Items (3 PM points)

- ▲ The landing door emergency release function is ineffective.
- ▲ Door sensitive protective devices are ineffective.
- ▲ Door closing force is excessive.
- ▲ Filler weights of the counterweight are insecure.
- ▲ The car apron is not properly fixed.







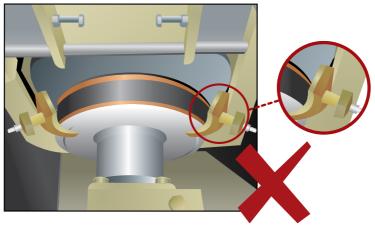
Ventilation slots are blocked up

Category E Non-compliant Items (2 PM points)

- Ventilation slots are blocked up.
- ▲ Car lighting is inoperative.
- Malfunction of the brake release device.
- ▲ Oil leakage from machinery resulting in insufficient lubrication or oily floor.
- ▲ Load plate is not provided inside the lift car.

Simplified Examples of Non-compliant Items for Escalators

(Remark: Refer to the Circular posted on the EMSD's website for details of the non-compliant items.)



The main brake is ineffective such that the escalator cannot be stopped

Category A Non-compliant Items (15 PM points)

- The main brake is ineffective such that the escalator cannot be stopped.
- A The step chain or the shaft of the drive machine is broken.

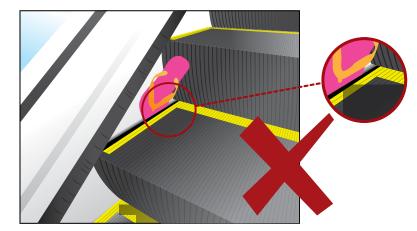




The emergency stop switch is ineffective

Category B Non-compliant Items (6 PM points)

- ightarrow The emergency stop switch is ineffective.
- ▲ The broken step chain device is ineffective.
- ▲ The comb plate device is ineffective.
- ▲ The skirt panel device is ineffective.



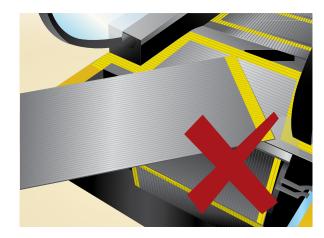
The clearance between the skirt panel and the step exceeds 4mm

Category C Non-compliant Items (4 PM points)

- ▲ The clearance between the skirt panel and the step exceeds 4mm.
- ▲ The clearance between the comb and the step exceeds 4mm.
- ▲ The enclosure is not properly installed such that the machinery, moving parts or electrical parts are exposed.
- ▲ The inspection door device is ineffective.
- ▲ The clearance between the handrail profile and cover profile exceeds 8mm.



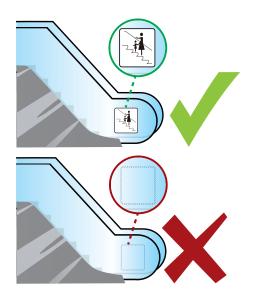
14



The guard is not properly installed

Category D Non-compliant Items (3 PM points)

- \land The guard is not properly installed.
- ▲ The protective cover for moving parts is not installed.
- ▲ Deviation of the speed of handrail from the speed of the steps is exceeding the allowable tolerance of 0 to +2%.
- ▲ The skirt guard is not properly installed.



The pictograph is not provided

Category E Non-compliant Items (2 PM points)

- ▲ The brake release instruction is not provided.
- ▲ The pictograph is not provided.
- ▲ Failure to update the logbook.





16



3 Kai Shing Street, Kowloon, Hong Kong Telephone no. : (852) 1823 Fax no. : (852) 2504 5970 Website : www.emsd.gov.hk Email : info@emsd.gov.hk