

Our reference 本署檔號：
(54) in EMSD/LESD 7-2/4A Pt II

Telephone 電話號碼：2808 3861

Your reference 來函檔號：

Facsimile 圖文傳真：2504 5970

29 September 2021

To: All Registered Lift/Escalator Contractors
All Registered Lift/Escalator Engineers

Dear Sirs,

Circular No. 9/2021 Strengthening the Monitoring of Periodic Examinations – Submission of Photos after Periodic Examinations

The requirements promulgated via circulars 7/2013 and 8/2017 for Registered Engineers (REs) to keep records and photos of the suspension system of electric traction lifts and the drive system of escalators during periodic examinations have contributory effect for enhancing the quality of periodical examinations.

To further uplift the quality and standard of periodic examinations, the requirements of photo submissions are to be extended to all periodic examinations of (i) electric traction lifts, (ii) hydraulic lifts and (iii) escalators (including passenger conveyors). The measures are summarized below:

1. **For electric traction lifts, hydraulic lifts and escalators (including passenger conveyors):** the RE responsible for the examination is required to capture photos of critical components of the lift / escalator listed in **Annex I** and submit the photos within one month after completion of the examination through the department's e-platform at <https://e-platform-photos.gld.emsd.gov.hk>¹. Detailed requirements of photos for each component are also listed in **Annex I** for compliance. *(New requirement)*
2. **For electric traction lifts:** in addition to the requirements in point (1) above, the RE responsible for the examination of electric traction lifts is required to capture and keep records and photos of the suspension systems of the lifts as required in **Annex II**, and input the inspection results of the traction system into the current e-platform within one month after completion of the examination. In case of non-compliance found on suspension ropes and/or traction/deflection sheave, photos are required to be provided with the submission; otherwise, the records and photos are required to be kept properly for sample inspection. *(Existing requirement from circular 7/2013)*
3. **For escalators (excluding passenger conveyors):** in addition to the requirements in point (1) above, the RE responsible for the examination of the escalators is required to capture and

¹ The e-platform will commence operation on 1 November 2021.

keep records and photos of the drive system of the escalators as required in **Annex III**, and input the inspection results of the drive system into the current e-platform within one month after completion of the examination. In case of non-compliance found on drive chains and/or sprockets, the photos are required to be provided with the submission; otherwise, the records and photos are to be kept properly for sample inspection. (*Existing requirement from circular 8/2017*)

The above arrangements apply to all periodic examinations to be conducted on or after 1 November 2021. Circulars 7/2013 and 8/2017 will cease to be effective on 1 November 2021.

If you have any question on this subject, please contact our officer on tel. number 3757 6120.

Yours faithfully,



(LAU Lik-kee)

for Director of Electrical and Mechanical Services

c.c. The Director of Housing (Attn.: SM/QM)
The Lift and Escalator Contractors Association
The Registered Elevator and Escalator Contractors Association Limited
International Association of Elevator Engineers (HK-China Branch)
The Hong Kong Institution of Registered Engineers (Lift & Escalator)

Annex I - Detailed Requirements of Photos for Critical Components

Detailed requirements of the photos for individual types of lifts / escalators are as tabulated in this Annex. The photos should be sharp, clear, with good brightness and contrast for showing the conditions of the critical components. Photos should be in jpeg (*.jpg) file format and have a file size between 1 – 3 MB each.

Table 1 - Detailed Requirements of Photos for **Electric Traction Lifts**:

Item	Component	Item(s) to be included by the Photo
1	Machine room or machinery space	Overview of the machine room / machinery space, including motor, traction sheave and machine mounting in the machine room or machinery space.
2	Overspeed governor	Overspeed governor rope, wheel and floor mounting with the guard removed.
3	Operation brake	For drum type brake - the brake's plunger, brake arm, spring, brake pad and braking drum. For disc type brake - condition of the brake and thickness of brake pad (photo to be taken with the brake cover removed or folded back).
4	Rope and traction sheave (Two photos)	The portion of suspension ropes* adjacent to drive sheave inside the lift machine room / machinery space when the lift car is stationary at (i) the main landing and (ii) the top landing. (* including any alternative suspension and/or traction means)
5	Pit and buffer	Overview of the pit, showing all buffers, tensioning device, etc., and their floor mountings.

Table 2 - Detailed Requirements of Photos for **Hydraulic Lifts**:

Item	Component	Item(s) to be included by the Photo
1	Machine room or machinery space	Overview of the machine room / machinery space, showing the control valve, reservoir tank and its surrounding environment.
2	Hydraulic cylinder	The cylinder head showing the gland/oil seal and adjacent piston rod (about 1 m in length).
3	Hydraulic pipeline	Hydraulic pipelines and connectors adjacent to the cylinder.
4	Pit and buffer conditions	Overview of the pit, showing all buffers and their floor mountings.
5	Suspension rope (for indirect acting hydraulic lifts only)	Portion of suspension ropes adjacent to the sheave on top of the piston rod.

Table 3 - Detailed Requirements of Photos for **Escalators (including Passenger Conveyors)**:

Item	Component	Item(s) to be included by the Photo
1	Handrail tensioning device	The handrail tensioning device, showing the spring, mechanism and the rollers.
2	Condition of driving station	Overview of the machine, driving sprocket / wheel / gear, motor base and machine mountings.
3	Broken Drive Chain Device	Detection mechanisms and triggering switch of the device.
4	Drive chain	The portion of driving chain adjacent to step-side sprocket inside the driving station. In case of escalators driven by shafts or gear wheels, the shafts or gear wheels adjacent to step-side driving wheel / gear inside the driving station.
5	Step Chain Tensioning Device	Overview of the tensioning device, showing the spring and tensioning mechanism taken from the top.

Annex II - Detailed Requirements of Photos for Suspension System of Electric Traction Lifts

Photos should be taken for the portion of suspension ropes adjacent to drive sheave inside the lift machine room when the lift car is stationary at the main landing and top landing.

Depending on the condition on site and the type of lift concerned, the photos can also be taken by a practitioner standing on the car top of the lift. The photos must be sharp, clear, with good brightness and contrast for showing the texture of wires/strands and conditions of the rope(s) in order to see if any of the following conditions is present:

- (a) Reduction in diameter;
- (b) Externally visible broken wires;
- (c) Thick layer of residual lubricant/scum and debris in groove of the sheaves and ropes;
- (d) Abraded red particles/rouge exuding from the valleys between rope strands and/or distributed to the sheaves; or
- (e) Unacceptable wear and groove shape (V-grooves, U-grooves with undercut or ground grooves) on the sheaves.

Photos should be in jpeg (*.jpg) file format and have a file size between 1 – 3 MB each.

Annex III - Detailed Requirements of Photos for Driving System of Escalators

Photos should be taken for the portion of driving chain adjacent to the sprocket inside the driving station.

The photos should be sharp, clear, with good brightness and contrast for showing the conditions of the links of chain in order to see if any of the following conditions is present:

- (a) Fractured link plate(s);
- (b) Fractured pin(s);
- (c) Elongated link plate hole(s);
- (d) Excessive roller bore wear;
- (e) Rubbing marks on inner side of link plate; or
- (f) Spring clip/cotter pin not in good condition.

Photos should be in jpeg (*.jpg) file format and have a file size between 1 – 3 MB each.