



Hengyi Industries Sdn Bhd  
恒逸实业（文莱）有限公司

HYBN-T3-07-0028-2024-1



## Elevator Maintenance System



## 电梯使用维护保养制度



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 <b>HENGYI</b>	<b>Hengyi Industries Sdn Bhd 恒逸实业（文莱）有限公司</b>			
	<b>Elevator Maintenance Regulation 电梯维护保养规定</b>			
	Doc No.	HYBN-T3-07-0028-2024-1	Ver No.	1

## 1 Purpose

### 目的

This system specifies the relevant contents of the company's elevator maintenance during use, so as to ensure the safe use of the elevator.

本制度规定了公司电梯使用过程中维护保养的相关内容，以确保电梯的安全使用。

## 2 Scope of Application

### 适用范围

Applicable to all elevators in the company.

适用于公司内所有电梯。

## 3 术语和定义

3.6 Elevator: refers to mechanical and electrical equipment driven by power to lift or transport people and goods in parallel using a box running along a rigid guide rail or steps (steps) running along a fixed line.

电梯：是指动力驱动，利用沿刚性导轨运行的箱体或者沿固定线路运行的梯级（踏步），进行升降或者平行运送人、货物的机电设备。

## 4 管理职责

### 4.1 Centralized management department

#### 归口管理部门

4.1.1 The Equipment management Dept. is the centralized management department for elevator usage management. Be responsible for the outsourcing maintenance and supervision of elevators;

机械动力部是电梯使用管理的归口管理部门。负责电梯的外协维修以及监督管理；

4.1.2 Organize the preparation of elevator account; Check the use and daily maintenance of elevators.

组织编制电梯台帐；检查电梯的使用及日常维保。

4.1.3 Be responsible for elevator forensics, deferred inspection, decommissioning, scrapping, cancellation, etc.

负责电梯取证及延期检验、停用、报废、注销等工作。

#### 4.2 Collaborative management department

协同管理部门

4.2.1 Safety supervision of elevators in HSE management department; Organizing the preparation of emergency plans for elevator accidents; Participate in elevator accident investigation and handling; Sign the application for extension of elevator inspection.

HSE 管理部电梯的安全监督；组织编写电梯事故应急预案；参与电梯事故调查和处理；会签电梯延期检验申请。

4.2.2 The Material and Equipment Department is responsible for the procurement of spare parts and maintenance services for the maintenance and repair of truck cranes and forklifts.

物资装备部负责电梯维护保养、修理所用配件以及维护保养服务的采购。

#### 4.3 Executive department

执行部门

4.3.1 The elevator use department is responsible for the maintenance of the elevator in the daily use process, keep the elevator clean and tidy. Responsible for the declaration of elevator spare parts; The establishment of elevator equipment files, maintenance, repair records should be complete

电梯使用部门负责电梯日常使用过程中的维护保养，保持电梯卫生整洁。负责电梯备品配件的申报；建立电梯的设备档案，保养、检修记录要齐全。

4.3.2 The vehicle maintenance unit is responsible for the lubrication, maintenance and troubleshooting of truck cranes and forklifts.

电梯维保单位负责电梯的维护保养及故障排除工作。

### 5 Maintenance Contents

维护保养内容

#### 5.1 Daily Inspection and Maintenance

日常检查与维护保养

5.1.1 The user department is responsible for the daily inspection and maintenance of the elevator. The operators on duty take the elevator to check the warning signs, lighting, buttons and displays, floor hygiene, alarm devices and floor level conditions, door opening and closing functions, etc. for the next time, and make records in the "Elevator Daily Checklist".

使用部门负责电梯日常的检查与维护保养，当班操作人员乘电梯上下一次检查警示标志、照明、按钮及显示、地坎卫生、报警装置及平层情况、开关门功能等情况进行检查并在《电梯日常检查表》上进行记录。

5.1.2 The equipment management personnel of the operation department shall check the

above situation of the elevator once a month and record it in the "Elevator Monthly Checklist".  
运行部设备管理人员每月对电梯上述情况进行一次检查，并在《电梯月度检查表》上记录。

**5.1.3** The operation department cleans the elevator car floor, walls, car doors, landing doors and floor sill gaps every day to ensure the elevator is clean and tidy.

运行部每天对电梯轿厢地面、墙壁、轿厢门、层门进行、各层地坎缝隙进行清扫，保证电梯干净整洁。

## 5.2 Regular maintenance

### 定期维护保养

**5.2.1** Regular maintenance of elevators is entrusted by the company to maintenance units with maintenance capability.

电梯定期维护保养由公司委托具有维保能力的维保单位进行维护保养。

**5.2.2** The periodic maintenance of the elevator shall be carried out by professional technicians according to planned maintenance cycle: routine maintenance, quarterly maintenance and annual repair & maintenance. Routine maintenance shall be carried out twice a month, in case of quarterly maintenance or periodic repair, quarterly maintenance or periodic repair shall be carried out. The elevator safety management personnel of related department shall inspect the elevator monthly and make a record on monthly checklist.

电梯定期维护保养由维保人员按计划进行周期养护，分为例行保养，季度保养，年检修保养。例行保养每两周进行一次，遇到季度保养或定期修理时，执行季度保养或定期修理。维保完成后填写贴于轿厢内的维保记录单。每次保养后应填写保养单，保养单由用户签字确认。

#### 5.2.2.1 Routine Maintenance Content

例行保养内容。

(1) Clean the floor of apparatus room.

清洁机房地面。

(2) Clean hoisting machine, speed limiter and control cabinet inner side.

清洁曳引机、限速器、控制柜内卫生

(3) Inspect and fasten all connection terminals of main power supply, auxiliary power, hoisting machine and control cabinet.

检查并紧固主电源、辅助电源、曳引机、控制柜中各接线端子。

(4) Inspect the fuse of main power and control power to ensure good connection. 检查主电源及控制电源的熔断器，确保接触良好。

(5) Check speed reduction of hoisting machine, oil level and temperature increase of motor to ensure the normal operation.

检查曳引机减速，电动机的油位，温升，确保曳引机运行正常。

(6) Inspect and adjust the gap between brake shoe and wheel disc of elevator brake, and make sure the gap is no more than 0.7mm (unless other special requirements required by manufacturers) and meanwhile guarantee the flexibility and reliability of brake.

检查并调整电梯制动器的制动闸瓦与制动轮盘的间隙，确保间隙不大于 0.7mm（厂家有特殊要求除外），同时保证制动器工作灵活可靠。

(7) Add lubrication oil to car and counterweight oil cup to ensure the lubricity of runway.

添加轿厢或对重油杯中的润滑油，使导轨润滑良好。

(8) Add lubrication oil to speed limiter and tension pulley shaft to ensure the normal operation of speed limiter system.

添加限速器和限速器张紧轮轴润滑油，使限速器系统工作正常。

(9) Clean car top, door header, door sill and pit.

清洁轿顶，门头，门地坎和地坑卫生。

(10) Check, adjust and test each safety switch to guarantee normal function.

检查或调整各安全开关，试验各安全开关，确保功能正常。

(11) Clean door operator system

清洁开门机系统。

(12) Check each mechanical connection parts of door operator system

检查开门机系统各机械连接部件。

(13) Check and adjust the verticality of door panels, and check whether the gap of door clearance meets requirements.

检查并调整门扇的垂直度，门中缝的间隙是否符合要求。

(14) Add lubrication oil to each mechanical rotating parts of door operator.

添加门机各机械传动部的润滑油。

(15) Check the tension and friction of door operator belt and process as the case may be.

检查门机皮带的松紧及摩擦，并视其情况处理。

(16) Fasten all bolts of door motor and door resistance.

紧固门电机、门电阻的各螺栓。

(17) Check the completeness of switch, reductor and door operator limit.

检查开关、减速器、门机限位是否完好。

(18) For VVVF door operator system, clean rotary encoder.

VVVF 门机系统还应清洁旋转编码器。

(19) Adjust the cam verticality and ensure the gap between cam and sill is among 5-10mm.

调整门刀的垂直度，同时保证门刀与厅门地坎间隙在 5-10mm。

(20) Adjust hoist way system to ensure the gap between door panels is among 1-6mm, the gap between door panel bottom and sill is among 1-6mm, and the lock resultant before power connection shall be no less than 7 mm.

调整厅门系统，确保门扇与门扇间隙 1-6mm，门扇下端与地坎间隙 1-6mm，门锁在电气接触前齿合量不小于 7mm。

(21) Ensure the door and electrical interlock is safe and reliable.

确保门电气联锁装置安全可靠。

(22) Ensure the self-closing door device is available.

厅门自动关门装置有效。

(23) Add lubricating oil to landing door gateway to ensure the flexibility and reliability.

添加厅门门道上的润滑油，使开关门灵活可靠。

(24) Clean the dust on light screen to ensure the safety and reliability

清洁光幕上的积尘，确保安全可靠，使用可靠。

(25) Maintain car inner side, external call button, floor indication to ensure its reliability.

保养轿内、外呼梯按钮、层显，确保完好可靠。

#### 5.2.2.2 Quarterly Maintenance 季度保养内容

(1) Add lubricating oil to the shaft of traction sheave, guiding pulley, car top sheave and counterweight sheave to ensure the shaft lubrication.

添加曳引轮轴承、导向轮轴承、轿顶道绳轮轴承、对重道绳轮轴承的润滑油，确保轴承润滑良好。

(2) Maintain selecting system to increase the accuracy of selector.

保养选层系统，使选层器的动作准确可靠。

(3) Maintain and adjust well sensor to ensure leveling reliability.

保养并调整井道传感器。确保平层准确可靠。

(4) Clean hoist rope and adjust the tension force of hoist rope to make the force deviation be less than 5%.

清洁曳引绳油污调整曳引绳的张力，使受力偏差在 5% 以内。

(5) Check the hoist rope combination, any broken wires and broken strands are not allowed.

检查曳引绳组合是否完好，曳引绳有无断丝、断股现象。

(6) Check whether the extended length of hoist rope exceeds overtravel, otherwise adjust the length as required.

检查曳引绳的伸长长度是否超出越程要求，不符合的调整曳引绳长度。

(7) Clean guide shoe and shoe liner, and replace the shoe liner with serious wear.

清洁导靴和靴衬，磨损严重的靴衬要予以更换。

(8) Replace roller guide shoe which is seriously unglued and broken.

滚动导靴滚轮开胶断裂严重的予以更换。

(9) When the elevator shakes during operation, adjust the gap between guide shoe and guide rail properly.

电梯运到左右晃动的，适当调整导靴与导轨间隙。

(10) Check for looseness of counterweight clip.

检查对重压板有无松动。

(11) Clean the oil fouling of safety gear jaw, check and adjust the gap between safety gear wedge and guide rail side, and test the reliability of safety gear switch by operating in slow mode manually.

清洁安全钳钳口油污，检查并调整安全钳楔块与导轨侧面的间隙，使其符合要求，调试后用慢车手动试验安全钳开关的可靠性。

(12) Maintain buffer to make sure that elastic buffer has no corrosion, and ensure the oil level of buffer is normal and buffer switch is valid.

保养缓冲器，确保弹性缓冲器无锈蚀，油压缓冲器油位正常，缓冲器开关有效。

(13) Check, adjust and test all safety switches to make sure them in good condition and are valid.

检查、调整并试验各安全开关，确保安全开关完好、有效。

(14) Check the limit and extreme distance, requirements are as follows: limit: 50-80mm; extreme: 120-150mm.

检查限位和极限距离符合要求：限位 50-80mm，极限 120-150mm。

### 5.2.2.3 Periodic repair contents

定期修理内容

Periodic repairs are the proper maintenance and repair of elevator performed once a year according to the safety inspection by management department. Regular repair shall meet the items and requirements specified in *Elevator Safety & Technology Inspection Report*, and rectification items shall be less than 8 items.

定期修理是针对主管部门对电梯每年一次的安全检验而进行适当的保养、修理。达到《电梯安全技术检验报告书》中规定的项目和标准要求，整改项目不多于 8 项。

(1) Replace the lubricating oil of hoisting machine reductor (unless other regulations of lubricating oil type and replace cycle provided by vender). Clean the core of electromagnetic brake and add appropriate amount of lubricating oil.

更换曳引机减速中的润滑油（厂家对润滑油的种类和换油周期有规定的除外）。清洁电磁抱闸铁芯，并添加适当适量的润滑剂。

(2) Adjust the braking spring of electromagnetic brake to ensure the gap between braking shoe and braking face is no more than 0.7mm (unless otherwise specified by vender) to guarantee accurate leveling and reliable braking (replace the worn out braking shoe).

调整电磁抱闸制动弹簧，使制动闸瓦与制动面的间隙不大于 0.7mm（厂家有的规定的除外），确保电梯平层准确，制动可靠（制动闸瓦磨损严重的予以更换）。

(3) Clean speed limiter and add lubricating oil to the center shaft of speed limiter (adjusting and testing shall be conducted once every two years by national assigned testing institution). 清洁限速器，添加限速器中心轴承的润滑油（调整、试验两项由国家定点专检机构执行，每两年一次）。

(4) Clean, adjust, test and lubricate safety gear to ensure the gap between safety gear wedge and guide rail side is even and test the safety gear in slow mode to ensure reliable operation. 清洁、调整、试验、润滑安全钳机构，确保安全钳楔块与导轨侧面的间隙，左右均匀，慢车试验安全钳，能可靠工作，符合要求。

(5) Clean, adjust and test all hoistway doors, gate locks to ensure all inspection indexes of hoistway and car door lock meet specification.

清洁、调整、试验各厅门、轿厢门锁、确保厅、轿门锁各项检测指标符合要求。

(6) Clean oil fouling of hydraulic buffer, check oil level of hydraulic buffer to ensure normal level, and test buffer switch to ensure limited oil.

清洁油压缓冲器的油污，检查缓冲器油位，确保油位正常，试验缓冲开关，确保其由有限。

(7) Add anti-corrosion painting for elastic buffer.

添刷弹性缓冲器的防锈漆。

(8) Guarantee the hoist rope combination and ensure that all rope socket fastenings are firm, safe and effective. 保运曳引绳组合，保证各绳头组合牢固、安全、有效。

(9) Check and adjust guide shoe of car and counterweight to guarantee stable operation (replace when seriously wore out), and replace rolling guide shoe when it is unglued and broken.

检查并调整轿厢或对重的导靴，使电梯运行平稳（磨损严重的予以更换），滚动导靴开胶断裂的也应予以更换。

(10) Check the fastness of counterweight lock and other devices.

检查对重铁锁等装置是否牢固。

(11) Check and fasten cable bracket and make sure the cables do not contact hoistway or car edge.

检查并紧固电缆支架，电缆与井道或轿厢边沿有无碰撞。

(12) Check the validity of compensating device connection parts and adjust compensating chain if it is overlong.

检查补偿装置连接件是否完好有效，补偿链过长的予以调整。

(13) Check whether the elongation of hoist rope exceeds the upper or lower limit of car over-travel.

检查曳引绳的伸长量是否超过轿厢上下限的越程距离。

(14) Test grounding resistance (no less than  $4\ \Omega$ ) for elevator.

对电梯测试一次接地电阻（阻值不小于  $4\ \Omega$ ）。

(15) Test insulation resistance of each part (dynamic resistance shall be no less than  $0.8\text{M}\ \Omega$ , and the resistance of other circuits shall be no less than  $0.25\text{M}\ \Omega$ ), and micro-processor operation control system shall be removed before testing.

测试各部位绝缘电阻（动力阻值不小于  $0.8\text{M}\ \Omega$ ，其它回路不小于  $0.25\text{M}\ \Omega$ ），有微机控制的，应先拆出微机控制系统后才能测试。

## 6 Inspection and Supervision

### 检查与监督

Equipment Management Dept. shall supervise, examine and inspect the execution of rules on special equipment management.

机械动力部负责对电梯维护保养规定执行情况进行监督检查、考核。

## 7 Associated Procedures and Records

### 关联程序和记录

## 7.1 Associated program

关联程序

N/A

无

## 7.2 Associated record

关联记录

## 7.2.1 Elevator Daily Checklist (HYBN-T6-07-0086-001-2024)

电梯日常检查表 HYBN-T6-07-0086-001-2024

## 7.2.2 Elevator Monthly Checklist (HYBN-T6-07-0086-001-2024)

电梯月度检查表 HYBN-T6-07-0086-001-2024

## 8 Supplementary Rules

附则

8.1 This System is under the specific management of the Equipment Management Dept.

本制度由机械动力部归口管理。

8.2 The System is drafted by Equipment Management Dept.

本制度起草部门：机械动力部。

8.3 Equipment Management Dept. is responsible for the interpretation of the System.

本制度解释权机械动力部拥有。

8.4 Revision, preparation and approval of the System are shown in table 1:

本制度版本编制和审批情况见表 1:

**Table 1 Revision, preparation and approval of document**

**表 1 文件版本编制和审批情况**

2	2024-04-01	He Jiangang 何建刚	Zhao Tingyun 赵挺云	Xu Ye 徐野	Chen Liancai 陈连财
Revision 版本	Issued date 颁布日期	Prepared by 编制人	Reviewed by 审核人	Authorized by 审定人	Approved by 批准人