



WEST CENTRAL RAILWAY

Office of the
Principal Chief Electrical Engineer
Jabalpur

No. WCR/L/02/1106

Date: 23.03.2026

Sr. DEE/G/JBL, BPL, KOTA.

Sub: Schedule Maintenance Instructions for Lifts/Elevators.

Ref: SMI circulated by RDSO (Enclosed)

A copy of SMI circulated by RDSO under reference is enclosed here with for information and it is requested to check and maintain the Lifts/Elevators as per SMI prepared by RDSO.

DA: As above

**Dy.CEE/G/WCR
for PCEE/WCR**

Schedule Maintenance Instructions for Lifts/Elevators

| ELEVATOR MAINTENANCE CHECK LIST – Daily | | | | |
|---|---|-----------------------|----------------|-------------------|
| Date: | | Time : | | |
| Station Name: | | Elevator No: | | Location : |
| Sl. No. | Description | Method | OK /NOT OK/ NA | Remark |
| 1. | Checking of car and inside equipments i.e. car operating buttons, light, fan, handrail, mirror, CCTV, announcement intercom. | Visual and functional | | |
| 2. | Checking of Car door and landing door functions : 1. Smooth opening of door 2. Smooth closing of door 3. Auto opening in case of obstruction between doors | Visual | | |
| 3. | Checking of Maintenance access panel for any flash ark or damage | Visual | | |
| 4. | Operation of lift 1. In Normal mode 2. Functioning of Auto Rescue Device by switching off the power | Visual | | |
| 5. | Checking at landing side for : 1 Fireman switch, 2 Call buttons, 3 Display, 4 Announcements. | Visual | | |
| 6. | Checking of electrical switch box for any 1 Damage 2 Flash/ burnt marks | Visual | | |
| 7. | Checking of abnormal noise, Vibration & Jerk | Audio observation | | |
| 8. | Safety instruction including emergency contact number | Visual | | |
| 9. | Function of landing door opening by use of key | Functional | | |
| 10. | Proper closing of all panels before leaving the site. | Visual | | |
| 11. | Record last two fault | Record | | |
| Railway Representative Signature: Name : | | | | |

Note: Contractor representative will be involved as per the AMC contract conditions.

Schedule Maintenance Instructions for Lifts/Elevators

| ELEVATOR MAINTENANCE CHECK LIST – Monthly | | | | |
|--|---|-----------------------|------------------------|----------------------|
| Date: | | Time : | | |
| Station Name: | | Elevator No: | | Location : |
| Current: | | Voltage: | | Power Factor: |
| Sl. No. | Description | Method | OK /NOT OK/ NA | Remark |
| A. | Cabin car | | | |
| 1. | Checking of car and inside equipment i.e. buttons, lights, fans, handrails, mirror, CCTV, announcement, intercom | Visual | | |
| 2. | Check the operation of car operating buttons, lights, fans, intercom | function | | |
| 3. | Checking of Car door functions : 1. Smooth opening of door 2. Smoot closing of door 3. Auto opening in case of obstruction between doors | Visual | | |
| 4. | Levelling accuracy ($\pm 5\text{mm}$) at all floors between landing door & Car Floor | Measurement | ----- mm | |
| 5. | Condition of door locking : no gap between locking door | Visual | | |
| 6. | Illumination at floor level : Normal: 150 lux Emergency (Power outage): 100 lux | Measurement | ----- lux ----- lux | |
| 7. | Working of chime | Audio observation | | |
| B. | Landing side | | | |
| 8. | CCTV camera, Checking of display, call button, lighting, signage etc. | Visual | | |
| 9. | Working of call buttons at all floors | functional | | |
| 10. | Checking of landing door functions sensors/curtain 1. Smooth opening of door 2. Smoot closing of door | Visual and functional | | |
| 11. | Condition of door lock | Visual and functional | | |
| 12. | Check the condition Fire man switch (Glass should not be broken) | Visual | | |
| C. | Car top | | | |
| 13. | Conditions of 1. ropes for physical damage and, 2. wiring for burnt marks & loose connection | Visual | | |
| 14. | Condition (for landing doors) of: 1. Springs for tightness & integrity by tapping the spring 2. Rollers for any visual deformity /damage | Visual | | |
| 15. | Condition of Car door operator including driving motor and rope/belt | Visual | | |
| 16. | Check car door Electronic lock (Limit switch) for carbon/rust accumulation, if any clean the same | Visual | | |
| 17. | Limit safety switches (proper engagement at predefined condition should be witnessed) | Function | | |
| 18. | Inspection light socket | Function | | |

Schedule Maintenance Instructions for Lifts/Elevators

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|-----------|---|-----------------------|--|--|
| | 1. Visual check for burnt marks 2. Check for power | | | |
| 19. | Condition of motor and OSG : Check for burnt marks & loose connection | Visual | | |
| 20. | Car and counter Guiderails, faceplate and fasteners inspection : Visual check for any deformity/damage | Visual | | |
| 21. | Lubricant in oil tank | Visual | | |
| 22. | Safety rails/ frame on top | | | |
| 23. | Illumination of shaft min 100 lux | Measurement | ----- lux | |
| 24. | Illumination at control panel 150 lux | Measurement | ----- lux | |
| 25. | Proper opening and closing of passenger trap door | Function | | |
| 26. | Condition of traveling cables : Check for burnt marks & loose connection | visual | | |
| 27. | Check the alarm in power off mode | Audio Function | | |
| 28. | Availability of of Exhaust fan & working condition | Function | | |
| D. | ARD function | | | |
| 29. | Health of ARD system: 1. Measure the input & output current & voltage of battery charger 2. Measure the output voltage of battery | Measurement | I/p = ---- A & --- volt O/p = ---- A & --- volt --- volt | |
| 30. | Operation of ARD for 3 cycles without intermediate charge | Function verification | | |
| 31. | ARD function completion time for one cycle | Measurement | ----- min | |
| 32. | Check battery for voltage & codal life, replace if expired | Visual Function | | |
| E. | Mechanical/electrical rescue device | | | |
| 33. | Operation and condition of mechanical/ electrical rescue device 1. Check the physical condition of rescue device for damage 2. Simulate the operation of the rescue devise by ensuring the unavailability of ARD (Cut the batter supply) | Functional | | |
| F. | Car bottom | | | |
| 34. | Safety gears and diverting pulley conditions | Visual | | |
| 35. | Checking any damage | | | |
| G. | Pit | | | |
| 36. | Limit safety switches (proper engagement at predefined condition should be witnessed) | Function | | |
| 37. | Illumination of shaft min 100 lux | Measurement | ----- lux | |
| 38. | Emergency stop switch, : (after the pressing of emergency stop switch lift movement should be disabled) Water level switch : | Function | | |
| 39. | Buffer condition : for visual damage/ crack, rusting & cleaning | Visual | | |
| H. | Maintenance access panel | | | |

Schedule Maintenance Instructions for Lifts/Elevators

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|--|---|---------------------|---|--|--|
| 40. | Condition of panel including relays, MCCB/ RCCB/ SPD/ switches etc for any: 1 Damage 2 Flash/ burnt marks | Visual | | | |
| 41. | Conditions of wiring conduits and connections: For damage & loose connection | Visual | | | |
| 42. | Record of major/critical faults with date and time, if any. | Record | | | |
| I. | General | | | | |
| 43. | Proper earthing for all the panels and equipment | Visual | | | |
| 44. | Conduit/ trench of wiring for damage etc | Visual | | | |
| 45. | Random checking of earth continuity | Functional | | | |
| 46. | Cleaning of all the equipment such as motor, Governor, car, shaft, pit, panel, ropes, guiderails etc. | Visual and Cleaning | | | |
| 47. | SMS alert, web monitoring, IR-NIYANTRAC | Function | | | |
| 48. | Regenerative drive | Visual | | | |
| 49. | Check any material/ tools are left on car top & pit | Visual | | | |
| 50. | Check all panels are closed properly | Visual | | | |
| 51. | Remove the safety barricades at all landings | Visual | | | |
| 52. | Display of safety Certificate | Visual | | | |
| 53. | Overload Testing of lift | Function | | | |
| 54. | Functioning of Phase preventer/Phase failure relay | Function | | | |
| J. | Machine Room, If available | | | | |
| 55. | Check motor condition and abnormal heating. | Visual | | | |
| 56. | Inspect gearbox oil level (for geared lifts). | Measurement | | | |
| 57. | Check brake shoe clearance and wear | Visual | | | |
| 58. | Inspect traction sheave condition | Visual | | | |
| 59. | Check tightness of foundation bolts. | Function | | | |
| 60. | Clean controller panel with air blower. | Function | | | |
| 61. | Check contactors and relays for carbon deposits. | Visual | | | |
| K. | Recommendations For Parts Replacements, If Any | | | | |
| Contractor Representative: Name : | | | Railway Representative Signature: Name : | | |

Schedule Maintenance Instructions for Lifts/Elevators

| ELEVATOR MAINTENANCE CHECK LIST – Six Monthly / Half yearly | | | | |
|--|---|-----------------------|----------------|--------|
| Date: | | Time : | | |
| Station Name: | | Elevator No: | | |
| Current: | | Voltage: | | |
| Location : | | Power Factor: | | |
| Sl. No. | Description | Method | OK /NOT OK/ NA | Remark |
| A. | Car and car door | | | |
| 1. | Alignment of door panels | Visual | | |
| B. | Landing side | | | |
| 2. | Alignment of landing door panels | Visual | | |
| 3. | Landing Door guide condition | Visual | | |
| 4. | Clearance between panels of landing door | Measurement | ----mm | |
| 5. | Landing Door operating mechanism including motor, mechanical lock, rollers, rope/ belt etc | Visual and functional | | |
| 6. | Fire man switch condition and operation | Visual and functional | | |
| 7. | Condition of power supply arrangements including safety switches, wiring, box etc | Visual | | |
| C. | Car top | | | |
| D. | Car door operating mechanism including rollers, rope/belt etc | Visual and functional | | |
| 8. | Guide shoe wear and tear | Visual | | |
| 9. | Check twist in the rope | Visual | | |
| 10. | Function of car top stop switch | Functional | | |
| 11. | Function of car top alarm and intercom | Functional | | |
| 12. | Function of 3 pin socket | Function | | |
| 13. | Function of lamp | Function | | |
| E. | Brake inspection | | | |
| 14. | Rope and sheave wear condition | Visual | | |
| 15. | Smooth operation of brake | Functional | | |
| F. | ARD function | | | |
| 16. | Battery back-up of ARD system 6 time operation without intermediate charging | Functional | | |
| 17. | Buzzer when ARD battery is low | Audio | | |
| G. | Mechanical /electrical rescue | | | |
| 18. | Glands for brake release cable | Visual | | |
| H. | UPS for light fan etc | | | |
| 19. | Back up of UPS 2hrs min. with operation of light, fan, announcement, alarm, intercom, etc. (power failure/ emergency should be simulated) | Functional | | |
| I. | Car bottom | | | |
| 20. | Car bottom to buffer clearance | Measurement | ----mm | |
| J. | Pit | | | |
| 21. | Counterweight run by to be checked (clearance between Counterweight & Carbody) | Measurement | ----mm | |
| K. | Maintenance access panel | | | |

Schedule Maintenance Instructions for Lifts/Elevators

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|---|--|--|----------------------------------|--|
| 22. | Glands condition | Visual | | |
| 23. | Clean the Transformer, firm connections and voltage setting 440 input and 220 output (to be measured with multi meter) | Measurement | I/p = --- volt O/p = --- volt | |
| 24. | SMPS input/output voltage (to be measured with multi meter) | Measurement | I/p = --- volt O/p = --- volt | |
| 25. | Proper ferruling, lugs etc | Visual | | |
| 26. | Working of cooling fan | Functional | | |
| L. | General | | | |
| 27. | Check any material/ tools are left on car top & pit | Visual | | |
| 28. | Replace Gear oil, if required | Visual | | |
| 29. | Check all panels are closed properly | Visual | | |
| 30. | Remove the safety barricades at all landings | Visual | | |
| M. | Recommendations For Parts Replacements, If Any | | | |
| Note: This yearly checklist shall be used along with Monthly Checklist | | | | |
| Contractor Representative: | | Railway Representative Signature: | | |
| Name : | | Name : | | |

Schedule Maintenance Instructions for Lifts/Elevators

| ELEVATOR MAINTENANCE CHECK LIST – YEARLY | | | | |
|---|--|----------------------|----------------------------------|--------|
| Date: | | Time : | | |
| Station Name: | | Location : | | |
| Current: | | Power Factor: | | |
| Elevator No: | | Voltage: | | |
| Sl. No. | Description | Method | Values/ Remarks (OK /Not OK/ NA) | Remark |
| A. | Controller Inspection | | | |
| 1. | Check condition of VVVF Drive for burnt mark, overheat & clean the drive. | Visual | | |
| 2. | Check condition of fuse and replace if damages | Visual | | |
| 3. | Air filter Clean, replace as necessary | Visual | | |
| B. | Brake Inspection | | | |
| 4. | Brake Coil should be checked for burnt, overheat, wear and noise Inspection | Visual | | |
| C. | Emergency Inspection | | | |
| 5. | Condition of Circuit diagram in control panel, it should be legible | Visual | | |
| 6. | Rope tension to be checked using gauge | Measurement | | |
| D. | Mechanical Inspection | | | |
| 7. | Fixing & Condition of Travelling cables Check for burnt marks & loose connection, if any | Visual | | |
| 8. | Tightness of all fasteners (Motor bed plate, Guide brackets, Governors, Safety gears, Panels etc.) | Tighten | | |
| 9. | Tightness of all Guide clips, Buffers, Pit pulleys etc and its fixing | Tighten | | |
| 10. | Condition of diverter pulley, grooves and rope guards | Measurement | | |
| 11. | Running clearance should be 25-30 mm | Measurement | ---- mm | |
| 12. | Rope anchorage condition, lock nuts, cotter pins etc. | Tighten | | |
| 13. | Inspect Brake lining thickness | Measurement | ---- mm | |
| 14. | Detailed inspection of suspension ropes (measure diameter reduction). | Measurement | ---- mm | |
| 15. | Replace worn ropes/belt, if beyond permissible limit | Function | | |
| 16. | Check traction ratio and rope slip. | Measurement | | |
| 17. | Inspect motor bearing for abnormal sound | Audio Function | | |
| E. | Performance/Inspection | | | |
| 18. | During Load test for Over load at 105% of load inside car, whether display shows Over load with announcement | Functional | | |
| 19. | Perform Brake test at 125% of Rated load at bottom terminal landing and measure for level variation. | Functional | | |
| 20. | Full load running test in both UP and Down Direction for 1 hour - Check current rating | Functional | | |

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| 21. | Compress Buffer Test Measure the gap between Pit floor to lower structure of Car platform (except guide shoes and safety gear) M1 (mm). Now load the lift to 100% of rated load in bottom terminal landing and Shut Down. Manually release brake lever, slowly lift will buffer and compress it. Measure the gap between Pit floor to lower structure of Car platform (except guide shoes and safety gear) M2 (mm). | Measurement | -----mm | |
| 22. | Calibrate load weighing device. | Function | | |
| 23. | Calibrate landing sensors. | Function | | |
| F. | Noise Level | | | |
| 24. | During of operation of elevator <55 dB | Measurement | ----- dB | |
| 25. | Machinery noise level under normal operation(1 meter from equipment) <70dB | Measurement | ----- dB | |
| G. | Ride Comfort Parameters:- | | | |
| No Load Condition: | | | | |
| 26. | Maximum Lateral Quaking (in any of X or Y direction) 12 Pk – Pk Gal | Measurement | ---- Gal | |
| 27. | Acceleration / deceleration(adjustable) 0.5 m/s ² | Measurement | ----- m/s ² | |
| 28. | Maximum Jerk 2 m/s ³ | Measurement | ----- m/s ³ | |
| 29. | Maximum Vertical Vibration (in Z direction) 20 gal (max. Pk - Pk) (1 to 100 Hz) Gal | Measurement | ----- Gal | |
| Full Load Condition: | | | | |
| 30. | Maximum Lateral Quaking (in any of X or Y direction) 12 Pk – Pk Gal | Measurement | ---- Gal | |
| 31. | Acceleration / deceleration(adjustable) 0.5 m/s ² | Measurement | ----- m/s ² | |
| 32. | Maximum Jerk 2 m/s ³ | Measurement | ----- m/s ³ | |
| 33. | Maximum Vertical Vibration (in Z direction) 20 gal (max. Pk - Pk) (1 to 100 Hz) Gal | Measurement | ----- Gal | |
| H. | LUX level | | | |
| 34. | Car top Min 150 lux | Measurement | ----- lux | |
| 35. | Pit Area Min 150 lux | Measurement | ----- lux | |
| 36. | Machine area Min 200 lux | Measurement | ----- lux | |
| 37. | Map Panel/MCCB panel Min 200 lux | Measurement | ----- lux | |
| 38. | Car inside Min 150 lux | Measurement | ----- lux | |
| 39. | Car emergency light Min 100 lux | Measurement | ----- lux | |
| 40. | Shaft light 100 lux | Measurement | ----- lux | |
| I. | Other items | | | |
| 41. | Check for the regeneration of lift | Functional | | |
| 42. | Safety test as per statutory authority requirements. | Function | | |
| 43. | Validation of safety Certificate | Record | | |
| 44. | RMS board battery to be replaced | Visual | | |
| 45. | Condition of machine anti vibration rubber pad | Visual | | |
| 46. | Condition of car isolation platform rubber pad | Visual | | |
| 47. | Condition of car door de-locking rope | Visual | | |

Schedule Maintenance Instructions for Lifts/Elevators

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| 48. | All labelling to be check and torn out labels to be replace | Visual | | |
| J. | It is recommended that major items be mandatorily scheduled for comprehensive annual overhauling. | | | |
| K. | Recommendations for parts replacements, if any | | | |
| L. | Details of additional works carried out, if any | | | |
| Note: This yearly checklist shall be used along with Monthly & half yearly Checklist | | | | |
| Contractor Representative: Name : | | Railway Representative : Name : | | |