

**APPENDIX G – PREVENTIVE MAINTENANCE SPECIFICATIONS
FOR MISCELLANEOUS LIFT EQUIPMENT**

MAINTENANCE SPECIFICATIONS FOR DUMBWAITERS

I. FULL-SERVICE WARRANTY MAINTENANCE REQUIREMENTS

- A. The Contractor shall examine, adjust, lubricate, clean, and when conditions warrant, repair or replace the following items and components thereof and all other mechanical or electrical equipment, including, but not limited to the following:
1. Entire machine, including housing, drive sheave, drive sheave shaft bearings, brake, and brake assembly, and component parts.
 2. Motor including auxiliary rotating systems, motor windings, rotating elements, commutators, and bearings.
 3. All sheaves.
 4. All controller components, including all relays, contracts, solid state components resistors, condensers, transformers, contacts, leads, mechanical, or electrical timing devices, computer devices.
 5. Selector, or indicators: all components including selector drive tape, wire, or cable, hoistway vanes, magnets, and all other mechanical, and electrical drive components.
 6. Motor brushes, and brush holders.
- B. Correct any deficiencies found. Contractor shall be responsible for the correction of deficiencies.

II. ITEMS OF PREVENTATIVE MAINTENANCE WORK

The preventive maintenance specified herein is considered the minimum for all equipment. If specific equipment covered by this Contract requires additional preventive maintenance for safe, reliable operation, as specified by the manufacturer, the Contractor shall perform the required additional preventive maintenance without added cost to the Authorized User.

Monthly Preventive Maintenance

1. Perform general inspection of machinery, sheaves, worm and gear, motor, brake, selectors, or floor controllers, when used, lubricate as required.
2. Empty drip pans, discard oil in an approved manner.
3. Observe brake operation, and adjust, or repair, if required.
4. Inspect, and lubricate, machinery, contacts, linkage, and gearing.
5. Clean, and inspect, brushes, and commutator, perform needed repairs.
6. Clean, and inspect, controller, selectors (when used), relay connectors, contacts, etc.
7. Inspect governor, (when used), for working parts, clean, and lubricate.
8. Clean, and lubricate, signal drive mechanism, when used.
9. Check condition, and lubrication, of car end counterweight.
10. Check governor, (when used), and tape tension sheave lubrication.
11. Clean pit, remove all rubbish, trash, etc., and empty drip pans.
12. Replace all burned out lamps in dumbwaiter car, pit, hall fixtures, etc.

Quarterly Preventive Maintenance

1. Perform Monthly Tasks.
2. Check door operation. Clean, lubricate, and adjust brake, linkages, gears, motor, check keys, set screws, contacts, chains, belts, and cams.
3. Check door counterweight. Clean, adjust, and lubricate, car gate tracks, and pivot points.
4. Check selector, (when used). Clean, adjust, and lubricate brushes, dashpots, traveling cables, chain, pawl magnets, wiring, contacts, relays, tape drive, and broken switch.

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5. Check car. Clean, adjust, and lubricate car door, and gate tracks.
6. Observe operation of signal, and operating system. Inspect buffers, tape clamps, slack cable switch, couplings, keyways, and pulleys. Clean, adjust, and lubricate, as necessary.
7. Check oil level in car, and counterweight oil buffers, (when used), and add oil, as required.
8. Check brushes, and commutators. Inspect commutators for finish, grooving, eccentricity, and mica level. If required, clean, turn, or refinish, commutator to provide proper commutation. Inspect brushes for tension, seating, and wear, replace, or adjust, as required.
9. Lubricate guide rails, where applicable.
10. Check controller contacts, and relays. Visually inspect, check adjustment, and replace contacts, as required.
11. Visually inspect, and clean, governors, (when used).

Semi-Annual Preventive Maintenance

1. Perform Monthly Tasks.
2. Check leveling operation. Clean, and adjust, leveling switches, hoistway vanes, magnets, and inductors, or selectors, (when used). Repair, or adjust, for proper leveling.
3. On hoistway doors, clean, lubricate, and adjust tracks, and interlocks.
4. Inspect all fastenings, and ropes, for wear and lubrication. Clean both governor, (when used), and hoist ropes, and lubricate hoist ropes, if needed. Inspect all rope hitches, and shackles, and equalize rope tension.
5. Clean, adjust, and lubricate car door, or gate tracks.
6. Inspect hoist reduction gear brake, and brake drum, drive sheave, and motor, and any bearing wear.
7. Inspect, clean, and adjust retiring cam device, chain, dashpots, commutators, brushes, cam pivots, and fastenings.
8. Inspect safety parts, pivots, setscrews, switches, etc. Check adjustment of car, and counterweight gibs, or shoes, lubricate, and adjust, if necessary.
9. In the pit, inspect hitches, inspect governor, (when used), and tape tension sheave fastenings. Empty, and clean, oil drip pans.
10. Clean all parts of safeties and lubricate moving parts to assure their proper operation. Check, and adjust, clearance between safety jaws, and guide rails. Visually inspect all safety parts.
11. Clean, and examine, governor rope, (when used), replace, if needed. (Do not lubricate governor ropes.)

Annual Preventive Maintenance

1. Perform Monthly Tasks.
2. Clean controllers with blower, check alignment of switches, relays, timers, hinge pins, etc., adjust, and lubricate. Check all resistance tubes, and grids. Check oil in overload relays, settings, and operation of overloads. Clean, and inspect, fuses, and holders, and all controller connections.
3. Inspect sheaves to ensure they are tight on shafts. Sound spokes, and rim, with hammer for cracks.
4. Examine all hoist ropes for wear, lubrication, length, and tension. Replace, lubricate, and adjust, as required, to meet code requirements.
5. In the hoistway, examine guide rails, cams, fastenings, and counterweights. Inspect, and test, limit, and terminal switches.
6. Clean all overhead cams, sheaves, sills, bottom of platforms, car tops, counterweight, and hoistway walls.
7. Check damping motor brushes, and replace, if needed.

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**MAINTENANCE SPECIFICATIONS – STAGE LIFTS/VERTICAL PLATFORM /
WHEELCHAIR LIFTS/ MATERIAL LIFTS**

I. FULL-SERVICE WARRANTY MAINTENANCE REQUIREMENTS

- A. The Contractor shall examine, adjust, lubricate, clean, and when conditions warrant, repair or replace the following items and components thereof and all other mechanical or electrical equipment, including, but not limited to the following:
1. Motors, including auxiliary rotating systems, motor windings, rotating elements, couplings, and bearings.
 2. Controller: all components including all relays, contacts, solid state components resistors, condensers, transformers, contacts, leads, mechanical, or electrical timing devices.
 3. Selector (when used): all components including selector drive tape, wire, or cable, hoistway vanes, magnets, inductors, and all other mechanical, and electrical, drive components.
 4. Tanks, pumping units, check, relief, and pressure valves.
 5. Hoistway door interlocks, or locks, and contacts; hoistway door hangers, and tracks, bottom door gibs, cams, rollers, and auxiliary door closing devices for power operated doors. Chains, tracks, cams, interlocks, sheaves for vertical bi-parting doors.
 6. Hoistway limit switches, slowdown switches, leveling switches, and associated cams, and vanes.
 7. Guide shoes; including rollers, or replaceable gibs.
 8. Automatic power operated door operator, door protective devices, car hangers, tracks, and car door contacts for both side slide, and vertical, bi-parting doors.
 9. Traveling cables.
 10. Elevator control wiring in hoistway, and machine room.
 11. Buffers.
 12. Fixture contacts, push buttons, key switches and locks, and lamps and sockets, of button stations (car and hall), hall lanterns, position indicators (car and hall), direction indicators.
- B. The Contractor shall keep the guide rails free of rust, where roller guides are used, and properly lubricated, when sliding guides are used. Renew guide shoe rollers, and gibs, as required, to insure smooth, and satisfactory operation.
- C. The Contractor shall also examine, and make necessary adjustments, or repair, to the following accessory equipment, including, revamping of signal equipment: hall lanterns, car, and corridor, position indicators, car stations, traffic director station, electric door operators, intercom systems, interlocks, door hangers, safety edges.
- D. The Contractor shall be responsible for keeping the exterior of the elevator machinery, and any other parts of the equipment, subject to rust, painted with heat resistant enamel, and presentable at all times. The motor windings shall be treated, as needed, with proper insulating compound, as recommended by the motor manufacturer. Cleaning, and refinishing, of the interior of the cars, and exterior of hoistway doorframes, are excluded from this contract.

II. ITEMS OF PREVENTATIVE MAINTENANCE WORK

The preventive maintenance specified herein is considered the minimum for all equipment. If specific equipment covered by this Contract requires additional preventive maintenance for safe, reliable operation, as specified by the manufacturer, the Contractor shall perform the required additional preventive maintenance without added cost to the Authorized User.

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Monthly Preventive Maintenance

1. Raise unit to its full height to rid of cylinder oil seepage buildup and lubricate the upper cylinder barrel. For other types of drives, check for proper function throughout limits of travel.
2. Check operational control device for proper function.
3. Check emergency signal operation.
4. Check condition of brake and safeties.
5. Check condition of ropes.
6. Check breather lines for proper hydraulic fluid return to reservoir.
7. Check hydraulic fittings for cracks, or leaks, and clean up any weepage on, or beneath, the cylinder.
8. Clean, and remove, unnecessary debris from the vicinity of floor, and pit mounted units, to avoid interference with the lift mechanism, or rollers.
9. Check the hydraulic fluid level, and hydraulic chain, for proper operation.
10. Check hydraulic fittings for cracks, or leaks, and clean up any weepage on, or beneath the cylinder.
11. Check for proper seating of all snap rings, and clips on axles, cylinder, and rollers.
12. Check rollers, pins, and bushings, for any signs of wear, such as flat spots, missing fasteners, or dislodged bearing material.
13. Check hoses, and electrical lines, for abrasions, or other abuse. Check connections for tight fit.
14. Grease the whale slots, fold slots, and safety barrier.
15. Inspect the motor for proper operation.
16. Inspect power to the lift for proper operation.
17. Inspect the battery power for proper operation.
18. Inspect the sides of the lift for proper operation.
19. Inspect the frame for proper operation.
20. Inspect the lowering device for proper operation.
21. Inspect the gates for proper operation.
22. Inspect the emergency stop button for proper operation.
23. Inspect the handrail for proper operation.
24. Inspect the flooring of the unit. Correct any abnormalities.
25. Inspect the guards for proper operation.
26. Inspect safety devices on the unit for condition of pleated bellows, or smooth operation of the electric toe guards.
27. Operate the unit, and check for any abnormal noise, or vibrations.
28. Check inside and outside runway for proper clearance.
29. Check runway door locking device.
30. Check slack rope device.
31. Check condition of limit switches.

Quarterly Preventive Maintenance

1. Perform Monthly Tasks.
2. Lightly oil the whale pins, safety barrier hinge, bridge plate hinge, platform fold bearings, and horseshoe pivot pins.

**APPENDIX G – PREVENTIVE MAINTENANCE SPECIFICATIONS
FOR MISCELLANEOUS LIFT EQUIPMENT**

**ELEVATOR INSPECTION AND TESTING SERVICE OF MISCELLANEOUS
LIFT EQUIPMENT**

As required by ASME A17.1 and A18.1, all dumbwaiters, wheelchair lifts, and stage lifts shall be appropriately inspected every six (6) months and tested annually. Additionally, all traction and roped hydraulic elevators shall be tested every five (5) years. The tasks are detailed below and on the ASME A17.1 and A18.1 Checklists for Inspection of Elevators (Exhibit B). The Contractor must complete this checklist and submit to the Authorized User upon completion of each inspection service performed.

SEMI-ANNUAL INSPECTION SERVICE

1. Perform the required Semi-Annual inspection and testing service for each elevator.
2. The Contractor shall examine and test all safety devices, governors, oil buffers, etc. as required and outlined in the current adopted edition of ASME A17.1 and ASME A18.1.
3. The Contractor shall notify the Authorized User of any noted deficiencies and furnish a test and condition report for each elevator to the Authorized User after the inspection using the Checklists for Inspection of Elevators (Exhibit B).

ANNUAL INSPECTION TESTING SERVICE – CAT-1 & CAT-5

1. The Contractor shall provide any needed equipment to perform the pretest examinations and tests at no additional cost to the Authorized User.
2. The Contractor shall provide all necessary weights and testing equipment, an adequate quantity of qualified journeyman elevator mechanics familiar with the equipment to perform tests and assist the inspector at no additional cost to the Authorized User.
3. The Contractor shall make formal safety tests and inspections as required and outlined in the current adopted edition of ASME A17.1.
4. These tests shall be conducted in the presence of an Authorized User-selected and qualified Independent Elevator Inspector. It is the CONTRACTOR's responsibility to ensure the presence of the Independent Elevator Inspector at the Annual and Five-year tests.
5. Tests performed on 1 and 5-year intervals will be scheduled to comply with the 1 and 5-year interval specified in ASME A17.1 Appendix.
6. The Contractor shall furnish test and condition reports to the Authorized User after each test using the Checklist for Inspection of Elevators (Exhibit B).
7. After tests have been performed, all load weighing devices, etc. shall be checked and adjusted as required to meet manufacturer's recommendations. ***Cars shall not be placed in service until all tests, checks and adjustments are completed and the elevators are in proper working condition.*** The Contractor will not be held responsible for any damage to the building and equipment (excluding elevator and related elevator equipment) caused by these tests unless such damage is a result of negligence by the Contractor.
8. Failure to follow correct procedures to prevent damages and failure to perform pretest examination shall be considered negligence by the Contractor.
9. The Contractor shall furnish and install, at no additional cost to the Authorized User, any missing code data plates as required by ASME A17.1. If necessary, the Authorized User will assist the Contractor in obtaining the data for the replacement code data plates.
10. If during the inspection/testing of a particular elevator, such elevator fails, Contractor shall continue the inspection/testing procedure with other elevators so as not to delay the overall inspection/testing process.
11. The Contractor shall provide a separate crew to repair deficiencies.

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EXHIBIT A - SPARE PARTS LIST

- A. The Contractor shall maintain on-site, as a minimum, the following replacement parts:
1. Five (5) Fuses of each size, type and current rating.
 2. Adequate supply of replacement lamps.
 3. Four (4) each type car and hoistway door hanger rollers
 4. One (1) each type hoistway door interlock assembly, complete
 5. One (1) infrared door detector, receiver and transmitter along with associated cables
 6. One (1) set of rollers for car and counterweight roller guide assemblies
 7. One (1) plug-in relay for each type used
 8. Two (2) replacement LED lamps for cab lights
 9. All required lubricants, cleaning agents, compounds and other materials and equipment required for preventive maintenance procedures specified herein.
 10. At the completion of the Elevator Full Maintenance term, the above parts list is to be turned over to the facility.
- B. The Contractor shall maintain at their local office, or have available within 24 hours of need, the following replacements parts:
1. Door operator motor
 2. Door clutch
 3. Printed circuit boards each type used, including power supplies
 4. Printed circuit boards for signal fixtures
 5. Transformers for each type and size used
 6. Motor Drive

**APPENDIX G – PREVENTIVE MAINTENANCE SPECIFICATIONS
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EXHIBIT B – CHECKLIST FOR INSPECTION OF ELEVATORS**

CHECKLIST FOR INSPECTION OF ELECTRIC ELEVATORS

GENERAL NOTES:

- (a) See ASME A17.2–2004 for detailed inspection information on each item number.
 (b) OK = meets requirements; NG = insert number to identify comment on back of this Checklist; NA = not applicable.

Address: _____

- Routine inspection and test
 Periodic inspection and test
 Acceptance inspection and test

ID No: _____

Code Edition: _____

Passenger Rated load: _____
 Freight class _____ Speed: _____

Inspected by: _____

Signature: _____ Date: _____

QEI No: _____ Certifying organization: _____

	OK	NG	NA		OK	NG	NA
1 ELEVATOR — INSIDE OF CAR							
1.1 Door reopening device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.21 Belt- or chain-drive machine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2 Stop switches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.22 Motor generator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3 Operating control devices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.23 Absorption of regenerated power	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4 Sills and car floor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.24 AC drives from a DC source	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5 Car lighting and receptacles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.25 Traction sheaves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.6 Car emergency signal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.26 Secondary and deflector sheaves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7 Car door or gate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.27 Rope fastenings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.8 Door closing force	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.28 Terminal stopping devices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.9 Power closing of doors or gates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.29 Car and counterweight safeties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10 Power opening of doors or gates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.39 Low oil protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11 Car vision panels and glass car doors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.40 Inspection control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.12 Car enclosure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.41 Maintenance records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13 Emergency exit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.42 Static control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.14 Ventilation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3 ELEVATOR — TOP OF CAR			
1.15 Signs and operating device symbols	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.1 Top-of-car stop switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.16 Rated load, platform area, and data plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.2 Car top light and outlet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.17 Standby power operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.3 Top-of-car operating device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.18 Restricted opening of car or hoistway doors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.4 Top-of-car clearance, refuge space, and standard railing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.19 Car ride	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.5 Normal terminal stopping devices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 ELEVATOR — MACHINE ROOM				3.6 Final and emergency terminal stopping devices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1 Access to machine space	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.7 Car leveling and anticreep devices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2 Headroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.8 Top emergency exit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3 Lighting and receptacles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.9 Floor and emergency identification numbering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.4 Machine space	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.10 Hoistway construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.5 Housekeeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.11 Hoistway smoke control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.6 Ventilation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.12 Pipes, wiring, and ducts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.7 Fire extinguisher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.13 Windows, projections, recesses, and setbacks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.8 Pipes, wiring, and ducts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.14 Hoistway clearances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.9 Guarding of exposed auxiliary equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.15 Multiple hoistways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.10 Numbering of elevators, machines, and disconnect switches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.16 Traveling cables and junction boxes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.11 Disconnecting means and control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.17 Door and gate equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.12 Controller wiring, fuses, grounding, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.18 Car frame and stiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.13 Governor, overspeed switch, and seal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.19 Guide rails fastening and equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.14 Code data plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.20 Governor rope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.15 Static control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.21 Governor releasing carrier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.16 Overhead beam and fastenings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.22 Wire rope fastening and hitch plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.17 Drive machine brake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.23 Suspension rope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.18 Traction drive machines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.24 Top counterweight clearance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.19 Gears, bearings, and flexible couplings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.25 Car, overhead, and deflector sheaves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.20 Winding drum machine and slack cable device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

**APPENDIX G – PREVENTIVE MAINTENANCE SPECIFICATIONS
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EXHIBIT B – CHECKLIST FOR INSPECTION OF ELEVATORS**

CHECKLIST FOR INSPECTION OF HYDRAULIC ELEVATORS

GENERAL NOTES:

(a) See ASME A17.2–2004 for detailed inspection information on each item number.

(b) OK = meets requirements; NG = insert number to identify comment on back of this Checklist; NA = not applicable.

Address: _____

ID No: _____

Passenger Rated load: _____

Freight class _____ Speed: _____

- Routine inspection and test
- Periodic inspection and test
- Acceptance inspection and test

Code Edition: _____

Inspected by: _____ Print

Signature: _____ Date: _____

QEI No: _____ Certifying organization: _____

	OK	NG	NA		OK	NG	NA
1 ELEVATOR — INSIDE OF CAR				2.36			
1.1 Door reopening device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.37 Pressure switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2 Stop switches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.38 Roped water hydraulic elevators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3 Operating control devices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.39 Low oil protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4 Sills and car floor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.40 Inspection control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5 Car lighting and receptacles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.41 Maintenance records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.6 Car emergency signal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.42 Static control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7 Car door or gate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3 ELEVATOR — TOP OF CAR			
1.8 Door closing force	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.1 Top-of-car stop switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.9 Power closing of doors or gates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.2 Car top light and outlet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10 Power opening of doors or gates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.3 Top-of-car operating device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11 Car vision panels and glass car doors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.4 Top-of-car clearance, refuge space, and standard railing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.12 Car enclosure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.5 Normal terminal stopping devices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13 Emergency exit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.6 Final and emergency terminal stopping devices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.14 Ventilation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.7 Car leveling and anticreep devices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.15 Signs and operating device symbols	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.8 Top emergency exit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.16 Rated load, platform area, and data plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.9 Floor and emergency identification numbering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.17 Standby power operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.10 Hoistway construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.18 Restricted opening of car or hoistway doors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.11 Hoistway smoke control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.19 Car ride	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.12 Pipes, wiring, and ducts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 ELEVATOR — MACHINE ROOM				3.13 Windows, projections, recesses, and setbacks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1 Access to machine space	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.14 Hoistway clearances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2 Headroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.15 Multiple hoistways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3 Lighting and receptacles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.16 Traveling cables and junction boxes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.4 Machine space	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.17 Door and gate equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.5 Housekeeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.18 Car frame and stiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.6 Ventilation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.19 Guide rails fastenings and equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.7 Fire extinguisher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.20 Governor rope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.8 Pipes, wiring, and ducts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.21 Governor releasing carrier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.9 Guarding of exposed auxiliary equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.22 Wire rope fastening and hitch plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.10 Numbering of elevators, machines, and disconnect switches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.23 Suspension rope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.11 Disconnecting means and control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.27 Crosshead data plate and rope data tags	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.12 Controller wiring, fuses, grounding, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.28 Counterweight and counterweight buffer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.13 Governor, overspeed switch, and seal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.29 Counterweight safeties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.14 Code data plate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.30 Speed test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.30 Hydraulic power unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.31 Slack rope device — roped-hydraulic elevators installed under A17.1b–1989 and later editions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.31 Relief valves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.32 Traveling sheave — roped-hydraulic elevators installed under A17.1b–1989 and later editions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.32 Control valve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
2.33 Tanks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
2.34 Flexible hydraulic hose and fitting assemblies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
2.35 Supply line and shutoff valve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

