Inspection Check List for: Elevator

Risk assessment	
Frequency of the In-service inspection done by the user/owner	Ok
operation manual & Maintenance Record available upon request write either(• both available, • operation manual only)	Ok
Labels and decals for operation on the lift write either(• available • owner provided)	Ok
Previous 3rd party certificate if any write either(•New equipment (first inspection) • present and valid • present and invalid • Not available)	Ok
Operator training proof write either (• training certificate available• brief training provided by inspector• Experiences proof)	Ok
Operator training proof write either (• training certificate available• brief training provided by inspector• Experiences proof)	Ok
Appropriate PPE for the operator write either(• helmet • shoes , • harness, • safety reflection jacket)	Ok
Is the environmental contain any hazardous conditions such as, extreme humidity, dust, sand, salt air, etc. write either (• air conditioning• periodic break• water present• supervision • safety goggles)	Ok
Is the location is next foot walks or traffic workstation or public areas write either (• present , • site condition not required)	Ok
Isolate all area, and put sign board for inspection progress write either (• present • site condition not required)	Ok
Manufacture documents matching the lift installed write either (• yes matching • verification with the manufacture after inspection)	Ok
Ensure the foundation/test area floor is adequate and leveled write either (• leveled, leveled with ease of facility/equipment)	Ok
Housekeeping, where applicable write either (• clear • clear after rectification)	Ok
Wind speed within the limits (12.5 m/s) write either (• within the limit, • waiting to be reduced)	Ok
Hazards from electrical lines write either (• obstruction provided • safe distance)	Ok
Approval from structure engineer/authority for the foundation write either(• approval available • inspector verification on the foundation (torque test for bolts & visual inspection))	Ok
Adequate lighting	Ok
Preform tools box meeting	Ok
Falling form height hazard write either (• safety harness worn • barrication provided)	Ok
Is there any Mechanical hazards, Generated by machine parts or work pieces such: shape, inadequacy of mechanical strength, Crushing,	
impact, contact of person with machine.	Ok
Elevator-Machine room	
Machine room door & label (A label showing "Access forbidden for unauthorized persons" shall be posted on machine room door, m/c room door shall be minimum 2m x 0.6m – outward opening with unlock without a key when locked	Safe
Clear height of 2.10m working area, horizontal area in front of controller 0.7m width 0.5m or full width of control cabinet, clear height of movement not less than 1.8m.	Safe
clear vertical height at least 0.3m above unprotected rotating parts of the machine,	Safe
Ferrule projection at least 50mm above the slab of finished floor)	Safe
Machine room condition (A/C, lighting, tidy) (5-40oc & 200 lux)	Safe
Fire extinguisher / sprinkler system (when sprinklers are used activation shall possible, when the lift is stationary at a landing and the	
electrical supply of the lift and lighting circuits are automatically switched off by the fire or smoke detection system)	Safe
Wire rope & termination condition(Rope end termination – wedge, ferrule secured eye or swage terminals) Rope traction (5.5.3)	Safe
a) No slip when loaded with 125% of rated load	Safe
b) Deceleration during emergency braking whether loaded or empty –to decelerate to a speed which is lower or equal than the speed for which the buffers are designed	Safe
c) Not possible to raise empty car up when counterweight is stalled (either the ropes shall slip on traction sheave or the machine shall be stopped by an electric safety device	Safe
d) Nominal diameter of ropes shall be at least 8mm (EN 12385-5 for properties(5.5.1)	Safe
e) The minimum number of ropes or chains shall be two	Safe
Sheave & pulley condition (The ratio between pitch diameter of sheave, pulleys or drums and the nominal diameter of ropes shall be at	Safe
least 40mm)	Cl. C.
Braking system: a)shall have an electro-mechanical brake (friction type), but may have in addition other braking means (electric)	Safe
Braking system: b)Capable of stopping car in downward with rated speed and load plus 25%. The average retardation of car shall not exceed that resulting from operation of safety gear or stopping on buffer	Safe
Braking system: c)All mechanical components of the brake which take part in the braking action shall be installed at least in 2 sets. If one of the brake sets is not working due to failure of a component a sufficient braking effort to decelerate, stop and hold the car, travelling downwards at rated speed and with rated load in the car and upward with empty car shall continue to be exercised.	Safe
Braking system: d)The machine shall be capable of having the brake released by a continuous manual operation (electrical or mechanical)	Safe
Braking system: : e)It shall be possible to test each brake set independently from outside of the well	Safe
Braking system: : f) Manual rescue instruction shall be displayed near brake release area.	Safe
Governor system: A)The aim of the test before putting into service is to check mounting, correct setting and the soundness of the complete assembly, comprising car and decorative finishes, safety gear, guide rail and their fixing to the building.	Safe
Governor system: B)The test shall be made while the car is descending with the required load uniformly distributed over the car area with machine running until the rope slip or become slack and under the following condition.	Safe
Governor system: C) Instantaneous safety gear: the car shall travel at rated speed and be loaded either 1. With rated load when the rated load corresponds with table-6 (5.4.2.1) 2. For hydraulic lift with 125% of the rated load except that the load shall not exceed the corresponding table-6 load when the rated load is smaller than the value given by table-6 (5.4.2.1)	Safe

Governor system: D. Progressive safety gear: for traction drive lift the car shall be loaded with 125% of the rated load and travel at rated speed or lower 1. For positive drive lift and hydraulic lift when the rated load corresponds with table-6 (5.4.2.1) the car shall be loaded with rated load and travel at rated speed or lower 2. For hydraulic lift when the rated load is smaller than the value given by table-6 (5.4.2.1) the car be loaded with 125% of the rated load except that the load shall not exceed the corresponding table-6 load and travel at rated speed or lower. 3. When the test is made with lower then rated speed the manufacturer shall be provided curve to illustrate the behavior of the type tested progressive safety gear when dynamic ally tested with the suspension attached. 4. After the test it shall be ascertained that no deterioration. Which could adversely affect the normal use of the lift has occurred if necessary friction components may be replaced visual check is considered to be sufficient. 5. In order to facilitate disengagement of the safety gear it is recommended that the test be carried out opposite a door in order to be able to unload the car.	Safe
Governor system: E.(Tripping by over speed governor – tripping shall occur at least equal to 115% of rated speed and less than (5.6.2.2.1.1)	Safe
Governor system: F. 0.8 m/s for instantaneous safety gears except for captive roller type	Safe
Governor system: G. 1 m/s for safety gear of captive roller type	Safe
Governor system: H. 1.5 m/s for progressive safety gear used for speed not exceeding 1 m/s	Safe
Governor system: I. 1.25 V + (0.25/V) expressed in m/s – for progressive safety gear with rated speed exceeding 1 m/s.	Safe
Governor system: J. Direction of rotation, corresponding to action of safety gear shall be marked on governor	Safe
Governor system: K. Verify the type of safety gear and clearance between safety gear and guide rail below the car bottom as per manufacture specification.	Safe
Tensile force generated by over speed governor when tripped – at least greater of the following two values (1. Twice that necessary to engage safety gear or 2.) 300 N (5.6.2.2.1)	Safe
Response time – in order to ensure tripping of over speed governor before a dangerous speed can be reached – the maximum distance between tripping points on the governor shall not exceed 250mm related to the movement of the governor rope	Safe
Tank condition (provision to check hydraulic fluid level, to fill and drain and on the tank characteristics of fluid shall be indicated)	Safe
Hydraulic hoses (Safety factor of flexible hoses between cylinder and non-return valve shall be at least 8 relating full load pressure and bursting pressure) Flexible hoses shall be marked with (name of manufacturer, test pressure, date of test)	Safe
Plunger, check & relief valve Rupture valve – shall be tripped at least when car speed reaches a value equal to rated speed downwards plus 0.3 m/s . (average retardation shall be $0.2 \text{ g} - 1 \text{ g}$) – retardation of more than 2.5 g shall not last longer than 0.04s .	Safe
a) Accessible from car roof or pit	Safe
b) Integral with cylinder	Safe
c) Close to cylinder connected by means of short rigid pipes	Safe
d) Connected directly to the cylinder by threading	Safe
e) There shall be a device in machinery space which can be manually operated from outside well allowing to reach tripping flow of the rupture valve without overloading the car (5.6.3.7)	Safe
f) Accessible from car roof or pit	Safe
g) Integral with cylinder	Safe
h) Close to cylinder connected by means of short rigid pipes	Safe
i) Connected directly to the cylinder by threading	Safe
j) There shall be a device in machinery space which can be manually operated from outside well allowing to reach tripping flow of the restrictor without overloading the car	Safe
k) Data plate on rupture valve (name of manufacturer, type test certificate no, tripping flow for which it has been adjusted)	Safe
Restrictor (5.6.4) – in case of major leakage in hydraulic system the restrictor shall prevent the speed of the car with rated load in downward movement exceeding the rated speed downwards by more than 0.3 m/s	Safe
Data plate on restrictor (name of manufacturer, type test certificate no, tripping flow for which it has been adjusted)	Safe
Protection guard for moving parts Protection guard shall be provided for rotating parts. Traction sheave, hand winding wheels, brake drums, and any similar smooth round parts shall be painted yellow at least in part	Safe
Protection of sheaves, pulleys and sprockets (provision to avoid bodily injury, rope retainers and provision to avoid introduction of objects)	Safe
Check the emergency landing device (ELD) Verify elevator floor leveling with door open	Safe
Check the upper & lower limit switches from control panel Confirm the safety switch function.	Safe
Floor condition shall not slippery	Safe
Traction lubrication & gears(check the gear oil level and oil condition)	Safe
Manual lowering rescue instruction board	Safe
Hook capacity (Hook above the traction machine shall be labeled with SWL.)	Safe
Motor runtime limiter (Motor run time limiter For traction drive lifts- causing the de energizing of the machine and keep it de-energized if (5.9.2.7)	Safe
1.) Machine does not rotate when a start is initiated	Safe
2.) Car/counterweight is stopped in downwards movement which causes the ropes to slip on sheave	Safe
3.) Motor run time limiter shall function in a time which does not exceed the smaller of following values- a) 45 s, b) time for travelling the full travel in normal, plus 10s, with a minimum of 20s if the full travel time is less than 10s.	Safe
4.) The motor run time limiter shall not affect the movement of the car under either the inspection operation or the emergency electrical	
operation. Elevator-Electrical	Safe
Isolator / main breaker (Capable of breaking supply to the lift on all the live conductors (5.10, 5.10.5)	Safe
a) This switch shall not cut the circuits feeding – car lighting and ventilation, socket outlet on car roof, lighting of machinery spaces and	
pulley rooms, lighting of the well.	Safe

b) The switch shall be located in the machine room, in the control cabinet where no machine room exists, at the emergency test panel when control cabinet is mounted in the well.	Safe
c) Isolator shall be easily identifiable.	Safe
Electrical layout & its termination	Safe
protection by means of PCD with recidual operating current not avecading 20mA shall be provided for socket outlets, control circuits &	Safe
voltage 500 V and the insulation resistance value shall be ? I Mega Onins) Earthling value shall be less than 0.5 onins	Safe
Earthing test (loop impedance method)	Safe
No continuity between earthing (PE) and phase	Safe
continuity test between earthing and metallic parts (0-5 ohms)	Safe
conditions of electrical wire , loose ,security	Safe
No leakage between PE – N ,maximum allowable voltage is shall be 0-50 v	Safe
No damage to panels enclosure	Safe
Elevator-Cabin	
Cabin condition(check cabin condition, SWL, No of persons, serial number and take measurement of cabin size)	Safe
Emergency lights – 5 lux for 1 hour at (should come on automatically upon failure of normal lighting)	Safe
Each alarm initiation device in the car and on the car roof	Safe
Emergency light: In the center of the car 1m above the floor	Safe
Capacity instruction plate as per cabin area (Available car area – measured wall to wall car body inner body dimensions – (area behind car door if not deeper than 100mm is not required to be counted if more it shall be counted) (5.3)	Safe
Car door operation 1) The effort need to prevent the door closing shall not exceed 150N excluding the first third of the travel of the door (Prevention shall initiate a reopening of the door and it does not imply that the door shall not open fully) 2) Non automatic power operated door: when the closing of the door is carried out under the continuous control and supervision of the user by continuous pressure on a button or similar (hold-to-run control) the average closing speed of the fastest panel shall be limited to 0.30 m/s when the kinetic	Safe
Reopening door device (safety edge / sensor) Protective device to initiate automatic reopening of the door(light curtain shall cover opening over the distance between at least 25 mm and 1600mm above the car door sill).	Safe
Car operating panel condition	Safe
Car toe guard (at least half of un locking zone +50mm & width al leased clear opening +25mm, 300n on 5 sq. cm no permanent deformation 15mm)	Safe
Run-by clearance	Safe
Car door mechanism: Clear Height of entrance 2 m.	Safe
Leveling between the sill's at all floor (Car sill to landing sill ? 35mm - The levelling accuracy shall not exceed 20mm)	Safe
Hall call button operation	Safe
Elevator-Car top, hoist way	
Emergency device(activate the emergency stop switch and checked)	Safe
Light and inspection switch(check the car top inspection light, UP, Down, Normal & inspection switch(selector switch)	Safe
Wire rope termination (check the wire rope condition and termination) The ends of the wire rope shall be fixed to the car, counter weight or balancing weight or suspension point of the dead parts of reeved ropes by means of self-tightening wedge type socket (according EN 13411-6 or 13411-8), ferrule secured eyes (according EN 13411-3), swage termination (according to EN 13411-8) The junction between the rope and the rope termination, shall be at least 80% of the minimum breaking load of the wire rope. The fixing of the wire rope on drums shall be carried out using a system of blocking with wedge using at least two clamps. in case of chains - The ends of each chain shall be fixed to car counter weight or balancing weight or suspension point of the dead parts of reeved chain.	Safe
Hydraulic hose line Flexible hoses shall be marked with (name of manufacturer, test pressure, date of test)	Safe
Hydraulic system: Pressure relief valve shall be connected between pump and the non-return valve – shall be adjusted to limit the pressure to 140% of full load pressure (5.9.3.5.3.1)	Safe
A pressure gauge shall be provided for indication of system pressure (circuit between non return valve or the down direction valve and the shut off valve)(5.9.3.6)	Safe
Ram & jack condition (Limitation of the ram stroke Safety factor of flexible hoses between cylinder and non-return valve shall be at least 8 relating full load pressure and bursting pressure	Safe
Ram & jack a) Means shall be provided to stop the ram with buffered effect by means of cushioned stop or by shutting off the hydraulic supply to the jack by means of a mechanical linkage between the jack and a hydraulic valve	Safe
Ram & jack b) The design of cushioned stop shall be such that the average retardation of the car does not exceed 1g and in case of indirect acting lift the retardation does not result in slack rope or chain.	Safe
Ram & jack c) Leak and scrape fluid from the cylinder head shall be collected	Safe
Ram & jack d) The jack shall be provided with an air venting device	Safe
Ram & jack e) Stops shall be provided between successive sections to prevent the rams from leaving their respective cylinders	Safe
Ram & jack f) If pipes pass through walls or floor they shall be protected by means of ferrules.	Safe
Shaft condition(check the shaft condition, shaft lights)	Safe
anding door condition (check the landing door electromechanical interlock, conduct bridge drive rone rollers condition, door counter	Safe

Landing door electro-mechanical inter lock (The electric safety of landing doors shall not be activated unless the locking elements are engaged by at least 7mm	Safe
The engagement of locking elements shall not be diminished with the application of 300 N in the opening direction	Safe
Door locks shall be provided with transparent cover Data plate on locking device (name of manufacturer, type test certificate no. type of	Safe
locking device)	G 6
check the locking elementfor all floor after the landing door closed open manually use with emergency door open key	Safe
Trap door (Minimum dimension of emergency trap door on car roof – 0.4 m X 0.5m (5.4.6.1)	Safe
Top & run-by clearance (When the car is at its highest position at least 1 clear area where a refuge space can be accommodated shall be provided on car roof (Postures - Upright – 0.4 X 0.5 X 2 m, Crouching – 0.5 X 0.7 X 1 m	Safe
Sign on car roof for (allowed no. of personnel and type of posture)	Safe
Sign on or near counterweight screen – max. allowed clearances between the counterweight and counterweight buffer when car is at its upmost landing level in order to maintain the car headroom dimensions	Safe
When the car is at its highest position – lowest part of ceiling and the highest piece of equipment fixed on the roof – $0.5+0.035$ (V) ²	Safe
When the car is at its highest position – lowest part of ceiling and the highest part of guide shoes or rollers, rope termination, header or parts of vertically sliding doors shall be at least – $0.1+0.035$ (V) ²	Safe
When the car is at its highest position—lowest part of ceiling and the highest part of balustrade shall be at least $0.3 + 0.035$ (V) ²	Safe
When the car is at its highest position—lowest part of ceiling and the highest parts of an upward travelling ram-head assembly shall be at least $0.1 + 0.035$ (V) ²	Safe
Counter weight condition	Safe
Car and counterweight guide rail & guide shoes	Safe
Supporting structure including bolts & nuts(tightening of bolts & nuts, safety bin and lock nut)	Safe
Upper limit switches(activate and check the upper limit switch condition and fitting)	Safe
Elevator-Pit	
Pit condition (When the car is at its lowest position at least 1 clear area where a refuge space can be accommodated shall be provided on the pit floor (Postures - Upright – 0.4 X 0.5 X 2 m, Crouching – 0.5 X 0.7 X 1 m, Laying -0.7 X1.0 X 0.5 m)	Safe
Sign in pit (allowed no. of personnel and type of posture)	Safe
When the car is at the lowest position (completely compressed buffer)- vertical distance between highest parts fixed in the pit (e.g.;-tensioning device for compensating ropes being in its highest position, jack support, pipes and other fittings, and the lowest parts of the car except for the above case shall be at least 0.3m)	Safe
Pit light, ladder & stop switch ($?1.6m - 1$ stop switch 0.4m from lowest landing & 0.75m horizontal from door frame inner edge, $>1.6-2$ stop switch shall be provided)	Safe
Run-by clearance for counter weight (at least run by clearance should be 250mm)	Safe
Safety gear clutch Safety gear a) Data plate (name of manufacturer, type test certificate number, type of safety gear, if adjustable shall be marked with permissible load range or the adjustment parameter)	Safe
Safety gear clutch Safety gear b) Car safety gear shall be of progressive type	Safe
Safety gear clutch Safety gear c) Can be of instantaneous type if speed less than 0.63 m/s	Safe
Safety gear clutch Safety gear d) For counterweight- progressive type shall be used if rated speed exceeds 1m/s and other it may be of instantaneous type	Safe
Safety gear clutch Safety gear e) Retardation – for progressive safety gear – free fall with rated load in car the average retardation shall lie in between 0.2g and 1g.	Safe
Safety gear clutch Safety gear f) Safety gear electric switch	Safe
If adjustable final setting of safety gear shall be sealed	Safe
Governor tension weight condition (Measures shall be provided to prevent the introduction of objects in to governor wire rope tensioning pulley. Electric switch monitoring the tension on governor wire rope is not installed.	Safe
Fireman system	Safe
When the car is at the lowest position (completely compressed buffer) – the distance between the bottom of pit and the lowest parts of the car shall be at least 0.5 m. This may be reduced to a minimum of 0.1m for any part of the apron or parts of the vertically sliding car door	Safe
Elevator-documents	
Document verification (manufacturer operation manual, initial insulation test report, electrical diagram, previous inspection test report)	Safe
Elevator-Load Test Over load system (The stopping accuracy of car shall be +/- 10mm and levelling accuracy of +/- 20mm shall be exceeded during loading/	Safe
unloading phase, it shall be corrected to +/- 10 mm . Load control – overload shall be detected at the latest when the rated load is exceeded by 10% with a minimum of 75 kg. Visual and	Safe
audible warning – doors should be brought into fully open position.)	Batt
Elevator-Description	
Type of Lift	Electrical
Lift Identification No	43104501/L06
Type of Doors	Centrally Opening
Measurement of Car Area	2.4Sqm
Capacity and no of Person	600kg
No of Floors Served	2 Stops
Type of Buffer	Hydraulic
Model & Year of installation	Fernic OGG (AMA):
Types of Governor and Wire rope Diameter	OSG,6MM Dia
Motor Rating	NAV

Rated Speed	1.0m/s
Type of Machine	Gearless Traction
Machine Serial number	NA
Date and Proof Load Test	750kg
Wire rope Diameter & No of falls	Dia 12mm7Falls,2:1
Make and types of interlock safety device	Electromechanical
Type of Inspection	Periodic
Date of Last inspection	11.07.2020
Installer and Maintenance Company	Kone
Calibrated Test Equipment's	LDM 12,DC09
	Good
	06.01.2024
J 1 (J)	NA
manufacture	NIGMA
	Kone
IA coredited standard and procedure	BS EN 81 20;BS EN 81 50,2014
details of supplementary test e.g NDT	NA
***	B Safe
Elevator- Checklist summery	
Machine room door & Label	Safe
Machine room condition (A/C, lighting, tidy) (5 – 40OC & 200 lux)	Safe
Isolator / Main Breaker	Safe
Wire rope & termination condition	Safe
Sheave & pulley condition	Safe
Brake system	Safe
Governor system	Safe
Hydraulic hoses	Safe
	Safe
1	Safe
	Safe
Manual lowering rescue instruction board	Safe
	Safe
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	Safe
A	Safe
	Safe
·	Safe
Elevator- Car & Counterweight buffer	G - C.
	Safe Safe
	Safe
For hydraulic lifts, when buffers are fully compressed the ram shall not hit the base of cylinder Energy accumulation type buffers, with linear (spring) and nonlinear (polyurethane) characteristics shall only be used if the rated speed	Sale
of the lift does not exceed 1m/s.	Safe
	Safe
	Safe
Other than linear type buffers a data plate showing – name of manufacturer, type test certificate no., type of buffer, type designation of	Safe
liquid in case of hydraulic buffer.	
Energy accumulation type with linear characteristics (spring type) – total stroke of buffers shall be at least equal to twice the gravity stopping distance corresponding to 115% of rated speed (0.135 v^2) in meters (i.e, 2 $(1.15 \text{ v})^2/(2 \text{ g})$). However, the stroke shall not be less	Safe
than 65mm. (design should be to take a static load of between 2.5 times and 4 times the sum of mass of car and its rated load (or the mass of counterweight))	
Buffers with non-linear characteristics (polyurethane type) – when hitting the buffer with the mass of the car and its rated load or of the	
counterweight, in case of free fall with a speed of 115% of the rated speed 1.) Retardation shall not be more than 1 g. 2.) Retardation of more than 2.5 g shall not be longer than 0.04s. 3.) The return speed of car or counterweight shall not exceed 1 m/s. 4.) There shall not be	Safe
any permanent deformation after actuation.	

When the slowdown of lift at the ends of its travel is monitored rated speeds above 2.50 m/s the speed at which the car or the counter weight comes into contact with the buffers may be used instead of 115% of the rated speed. When calculated the buffer stroke shall not be less than 0.42 m.	Safe
Energy dissipation type buffer –the total possible stroke of the buffers shall be at least equal to gravity stopping distance corresponding to 115% of rated speed (0.0674 v²), stroke being expressed in meters. (5.8.2.2) 1.) Hitting the buffer with mass of the car with its rated load, in case of free fall with a speed of 115% of rated speed or reduced speed, the average retardation shall not be more than 1g. 2.) Retardation of more than 2.5 g shall not be longer than 0.04s. 3.) There shall not be any permanent deformation after actuation. 4.) Electric switch to monitor normal extended position 5.) Fluid level checking provision for hydraulic buffer.	Safe
Buffer Type for rated speed Specified buffer type	Safe
Measurement of Pit depth, run-by clearance, buffer stock length, after fully compressed buffer level between landing level to car level accordingly find out the clearance between car toe guard to pit clearance, buffer compressed length. • ? 1.0 m/s Spring • ? 1.6 m/s Spring with buffered return	Safe
Defects	
defect description	

Inspector Name:
Inspector Signature:
Date:
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