



HÄNEL

Service

/

Safety inspection



Lean-Lift model year 1995 and later

A complete safety inspection must be carried out by a trained technician at least once a year.

During the inspection, the points listed on Pages 2 - 12 must be checked for compliance and confirmed. This also applies before a new installation is put into service and after safety-related structural components are modified.

In doing so, applicable national regulations of the country of use, for example the Machinery Directive in Europe, must be followed, as must the operating, monitoring, control and safety instructions of the owner/operator.

Unit data (Lean-Lift)

Customer address
Company / owner/operator:

Type + number of access
points

Access points

Commission No.:

Location:

Operating time of the
system (in h):

Run cycles of the system:

Multi-unit network installation

☐ YES

☐ NO

Total number in multi-unit
networks:

Comm. No. **Lift** to the
left of the equipment
being inspected:

Comm. No. **Lift** to the **right**
of the equipment being
inspected:

Type of inspection:

☐ First inspection

☐ Annual inspection

☐ Special inspection

Summary:

a) The unit conforms to requirements.

☐ YES

☐ NO [continue with b)]

b)



The following points do not conform to the requirements and must be rectified immediately by the owner/operator for safety/technical reasons:

Last inspection was on:

Date of inspection:

Name of trained technician (in block letters):

Signature:

Name of responsible person designated by customer (in block letters):

Signature:



Commission No.:

Safety inspection logfor devices of type **Lean-Lift** model year 1995 or later**"Inspect"** always means (as also explained in the text where applicable) both: . . .**"Visual inspection":** Check that everything is in place, correctly positioned (where applicable) and in compliance with intended use, and that the overall appearance is (technically) sound.

And, where feasible:

"Functional check": Verify firsthand that function is as intended.

The following tasks, which are briefly outlined below, are for the purpose of an inspection or check carried out by a specially trained technician (qualified person). The authoritative text for all safety aspects is that of the current version of "EN 15095:2007+A1:2008" and its published amendments, as well as any additional national requirements of the respective country of use.

No general work is permitted on the lift in conjunction with the annual safety inspection.

Please tick the relevant boxes and enter the requested information in the spaces provided. Then, indicate your evaluation by ticking "Yes" or "No" next to each subject.

1.	<u>Mechanical system and documentation (partial list)</u>	Evaluation Requirements fulfilled
1.1 Condition	→ Inspect For general proper working condition, including the operating conditions (loaded - unloaded) and the assessment of the ambient conditions (e.g. space requirements - temperature - humidity) and intended use according to the operating manual.	☐ YES ☐ NO
1.2 Deflection	→ Inspect For greater than permitted material load of structural components (e.g. deflection of containers). The lift is loaded. ☐ YES ☐ NO No overload found. (Otherwise, <u>all</u> containers must be checked and the load(s) reduced accordingly)	☐ YES ☐ NO
1.3 Stability	→ Inspect For plumb installation, with anchoring provided by owner/operator where necessary (see operating manual "Technical data") (see equipment data). Height of the lift: m Is anchoring provided by owner/operator / anchoring of the lift required? ☐ YES ☐ NO Is anchoring provided by owner/operator / anchoring of the lift present? ☐ YES ☐ NO	☐ YES ☐ NO





Commission No.:

Safety inspection logfor devices of type **Lean-Lift** model year 1995 or later

1.	<u>Mechanical system and documentation</u> (partial list)	Evaluation Requirements fulfilled
1.4	Technical documentation of the lift → Inspect That it is present in the local language. The information must be complete and guarantee safe operation according to the intended use.	☐ YES ☐ NO
1.5	Securing against falling out or falling down → Inspect For loose or inadequately secured inner equipment of the containers. All articles protrude beyond the container edge (such as storage boxes) are detected by the height detection light barriers.	☐ YES ☐ NO
1.6	Marking → Inspect Whether the information from the Operating Manual that is essential for safe operation is attached to the outside of the carousel in a clearly legible and permanent manner and is in the local language (see "Safety instructions" sign). Safety signs: compliance with the document "SiSchi".	☐ YES ☐ NO
1.7	Type plate → Inspect For minimum specifications such as the manufacturer name, model year, commission number, total load ("total load" in accordance with EN 15095), container load ("compartment load" in accordance with EN 15095) and electrical specifications (connection values, cable cross-sections & safeguards provided by the customer).	☐ YES ☐ NO
1.8	Securing of hazard areas → Inspect Whether equipment such as sliding doors, service openings, panelling or structural extensions can only be removed using a tool and/or are electrically locked. If there are multiple access points, only one may be open or active at a time. Are shaft panelling and, in the case of multi-unit networks, intermediate panels present for all lifts? ☐ YES ☐ NO	☐ YES ☐ NO
1.9	Protection from hazardous movement → Inspect For prevention of hazard areas such as crush or cut points. It must not be possible to reach above or below safety devices.	☐ YES ☐ NO
1.10	Inner equipment → Inspect For prevention of hazardous conditions caused by loose/unsecured inner equipment.	☐ YES ☐ NO
1.11	a) vertical drive & shaft/chain → Inspect for damaging abrasion and scratch marks, cracks or missing parts and adequate lubrication.	☐ YES ☐ NO
	b) horizontal drive & shaft/chain → Inspect For damaging abrasion and scratch marks, cracks or missing parts and adequate lubrication.	☐ YES ☐ NO



Commission No.:

Safety inspection logfor devices of type **Lean-Lift** model year 1995 or later

1.	<u>Mechanical system and documentation</u> (partial list)	Evaluation Requirements fulfilled
1.12	Service access door → Inspect Is the service access door on the Lean-Lift useful for service work?	☐ YES ☐ NO
1.13	Extractor alignment and stop position → Inspect Check whether the extractor alignment and the extractor holding position are set correctly: extractor alignment relative to the side parts: check the tolerance for the carriers, refer to the Extractor Alignment Setting Instructions LL-EXTJUS Vertical extractor holding position: check tolerances as described in the Installation Instructions INST-LL-S and INST-LW.	☐ YES ☐ NO
1.14	Extractor (only for extractor with rollers) → Inspect Are brackets present for all extractor rollers on the extractor? Are rollers damaged? Also see Spare parts price list LL-237.	☐ YES ☐ NO ☐ not available
1.15	Bottom frame → Inspect Is the bottom frame level relative to the positions of the rectangular tubes, drives, and chain wheels, or, if uneven, is it shimmed using plates?	☐ YES ☐ NO
1.16	Visual inspection of the locking device → Inspect Both locking devices are housed properly, completely, have no missing parts, deformations or damage in the intended storage container stored on the intended carriers.	☐ YES ☐ NO ☐ not available



Commission No.:

Safety inspection log

for devices of type **Lean-Lift** model year 1995 or later

2.	Electrical system (partial list)	Evaluation Requirements fulfilled
2.1 General Notes	→ Inspect For proper installation and equipment of the system. Safety-related parts must be suited to the application or bear a corresponding certification mark. Visually inspect the wiring and measure the a) earth wire resistance and b) insulation resistance in accordance with "EN 60204-1:2018" or "EN 50678:2022-02" or "EN 50699:2021-06" and "EN 50110-1:2023". When working on the electrical system, follow the safety instructions on Page 8. Document the values on pages 9 and 12. Separate earth wire to power terminal strip "X0" also available	☐ YES ☐ NO ☐ YES ☐ NO
2.2 Main switch (incl. de-energising switch)	→ Inspect For good visibility, good accessibility and ability to be locked. All service access doors that are not visible from the access point are secured by padlocks. Does the lift have an optional "Electrical drawer structurally separated from the access point" version or a "Separate control cabinet" version; each with integrated de-energizing switch (black/white)?	☐ YES ☐ NO ☐ YES ☐ NO
2.3 Main service switch (more than one where applicable)	→ Inspect For good visibility, good accessibility and ability to be locked. All service access doors that are not visible from the access point are secured by main service switches. When the main service switch is switched off, <u>operation of the lift is not</u> possible.	☐ YES ☐ NO ☐ not available
2.4 Vertical motor - current load	→ Measure and log the motor current during the upwards movement of an <u>unloaded</u> container: "M1" motor current A	
2.5 Safety devices at all access points	→ Inspect The safety light barriers or safety light curtain with integrated start-up testing (ESPE type 4 in accordance with EN 61496-1). For the safety light curtain, the inspection must be carried out in accordance with (operating/technical instructions of the manufacturer).	☐ YES ☐ NO ☐ YES ☐ NO
2.6 Command and monitoring devices	→ Inspect (electrical components: control devices such as main switch, emergency stop, and monitoring devices such as evaluation units like safety light curtains, but also the control system with its respective equipment identifier) For good accessibility and clear and permanent labelling.	☐ YES ☐ NO



Safety inspection log

for devices of type **Lean-Lift** model year 1995 or later

Hänel Büro- und Lagersysteme	D 74173 Bad Friedrichshall	Technical after-sales service		+49 7136 - 277 - 25
2025-02-11	Page 6/12	F-SichB3.en.odt		



Commission No.:

Safety inspection log

for devices of type **Lean-Lift** model year 1995 or later

2.	<u>Electrical system</u> (partial list)	Evaluation Requirements fulfilled
Variant 2: Weighing a weight of kg as described in the aforementioned Hänel Installation Instructions: Measured value at 4 corners [2] kg [3] kg [1] kg [4] kg		☐ YES ☐ NO
2.12 Residual current circuit breaker → Inspect		
Actuating the test button must cause the residual current circuit breaker to trigger. Note: Miscellaneous optional circuits such as power sockets or lighting can be outfitted with a residual current circuit breaker.		☐ YES ☐ NO ☐ not available
2.13 Read out fault memory / log of lift run errors → and evaluate		
Note: To do so for "MP12N" control systems (~ 2012 or later), save the "Log of lift run errors" locally with the software JUMP using the "Download" function. Run error statistics created using the functions "Open data backup" ☐ and "Configuration of the display". Not necessary when unit is first put into service!		☐ YES ☐ NEIN ☐ not available
2.14 Test run feature "CHECK EXTRACTOR DRIVE" → Run		
Note: For MP12N control systems, software version as of V4.5 STANDARD PACKAGE 1 and MP14 software version as of V5.7 STANDARD PACKAGE 1 together with MP12N CPU-1 as of V4.3 UPGRADEABLE (available as of ~ 2025), select test run 5 CHECK EXTRACTOR DRIVE under SERVICE FUNCTIONS \ TEST RUN FUNCTIONS and start the test run by entering a shelf number. Upon completion of a test run, the display must read "NO ERROR PRESENT !"		☐ YES ☐ NO ☐ not available





3. For work on the electrical systems,

the following safety measures, among others, must be followed:

- a) It must be carried out by a qualified person only (described in the German "TRBS Part 1203:2021" or "NFPA 70 :2020" - Qualified person -).
- b) Suitable measuring instruments (according to EN 61557-1:2021 61557-4:2021), measurement conditions and circuits must be used. Regular function checks of the devices are required.
- c) The systems must be de-energised (for example, by switching off the main switch).
Caution:
For lifts with the "Main switch with undervoltage trip" feature, voltage is still present at the corresponding terminals (see circuit diagram)! If present, switch MP100 must also be shut off, and for Lean-Lift in a multi-unit network with shared service door, the external voltage supply F19 must be shut off, too.
- d) The de-energised state must be secured (for example, by locking the main switch).
- e) The system must be earthed and short-circuited (where necessary).
- f) Cover or block off neighbouring live parts.



For the sequence of the required tests of the primary circuits, refer to	
"DIN EN 60204-1:2018"	Electrical equipment of machines (Section 18) (for putting into service for the first time).
"EN 50678:2020"	General procedure for verifying the effectiveness of the protective measures of electrical equipment after repair.
"EN 50699:2020"	Recurrent Test of Electrical Equipment
"EN 50110-1:2023"	Operation of electrical installations (here, for periodic inspections with fixed connection).
Measuring device inspection	Carry out function testing before starting measurements, observing these limit values of the test dummy: PE: 0.05 0.15 Ω ISO: 1.95 2.05 MΩ The reference point is connected to the test dummy terminal "PE2" using the alligator clip. The test probe is connected to the "PE" test point to carry out the earth wire self-test and is connected to the "ISO" test point to carry out the insulation resistance self-test.
Visual inspection	For suitability for intended use Assess the condition of the mains supply line and cabling of the entire electrical system. Damaged cables or wires must be replaced. The lift may not be switched on again and put into operation until after the replacement.





Commission No.:

Safety inspection logfor devices of type **Lean-Lift** model year 1995 or later

Earth wire resistance PE	$\leq 0.1 \Omega$ company requirement for fixed connection When extensions are used, carry out measuring line compensation.
Insulation resistance ISO	$\geq 1 M\Omega$ at 500 V. The measurement of the installation can be carried out in part.
	The owner/operator must carry out an insulation test of the customer-side mains power line up to the mains power terminal strip. See "Data sheet on DGUV Regulation 3 (formerly BGV A3) inspection.pdf".
Amend the specified measuring points and areas to be measured according to the electrical equipment.	



If the required measured values are not complied with, the cause must be determined and be corrected by a corresponding repair if necessary!

Where applicable, enter other required test points into the blank fields.

Note: Due to the conductive connections of the lift housing and the corresponding parallel earthed protective conductor, in most cases there is a very low protective earth resistance $\ll 0.1 \text{ ohm}$.

Note: Line testing with measuring line compensation.

Area — Location		Earth wire resistance [Ω]
Drive motor, PE contact	Vertical	
	Horizontal	
Access side, panelling	Left	
	Right	
	Area of main switch	

Other PE contacts: - Power socket - Lighting if not LED - ...	Power socket (optional)	
	Varioarm (optional)	
	Lamp 1 (optional)	





Commission No.:

Safety inspection logfor devices of type **Lean-Lift** model year 1995 or later

Area — Location		Earth wire resistance [Ω]

Access point 1	Left side part	
	Right side part	
	Bottom access point cover	
	Area of main switch	
	Operating panel	
	High-speed door motor (optional)	
	Roller guide rails (optional)	

Measuring device	ID / serial No.	calibrated up to:





Commission No.:

Safety inspection log

for devices of type **Lean-Lift** model year 1995 or later

Other access points		☐ not available
Area — Location		Earth wire resistance [Ω]
Access point	Left side part	
	Right side part	
	Bottom access point cover	
	Proximity emergency stop	
	Operating panel	
	High-speed door motor (optional)	
	Roller guide rails (optional)	

Access point	Left side part	
	Right side part	
	Bottom access point cover	
	Proximity emergency stop	
	Operating panel	
	High-speed door motor (optional)	
	Roller guide rails (optional)	

Access point	Left side part	
	Right side part	
	Bottom access point cover	
	In proximity of the emergency stop	
	Operating panel	





Commission No.:

Safety inspection log

for devices of type **Lean-Lift** model year 1995 or later

	High-speed door motor (optional)	
	Roller guide rails (optional)	

Observe the following when measuring the insulation resistance (after de-energising the system):

The "Z4" input filter must be disconnected from the de-energised circuit and bypassed.

(This displays a measured value < 1 MΩ due to the integrated capacitors!)

The following parts should be disconnected from the de-energised circuit (and bypassed if necessary):

Unit control systems, lighting fixtures (using power contactors) and all connected peripheral devices (pull the plugs).

Load circuits must be connected through, for example by actuating all load contactors and protective motor switches.

Contacts of fuses and circuit breakers must be closed. Alternatively, a partial test can be carried out. Before the test, be sure to check the contact assignment of the electrical system by comparing it with the respective circuit diagram.

Where applicable, enter other required test points into the blank fields.

Location — Area of the circuit				Insulation resistance [MΩ]
from		to		
Q2	Main switch	→ T1	Transformer	
Q1	Protective motor switch	→		
		→		
		→ *K0	Power contactor	
		→	Mains power supply unit	
		→ U1	Frequency converter (input)	
U1	Frequency converter (output) /	→ K1	Motor contactor	
Z3	Output filter	→ K2		
		→	Motor contactor	
K1 K2	Motor contactor	→ M1	Vertical drive motor	
		→ M2	Horizontal drive motor	
		→ *M3	Drive motor	
		→		
		→		
		→		

* Optional depending on the supplementary features

