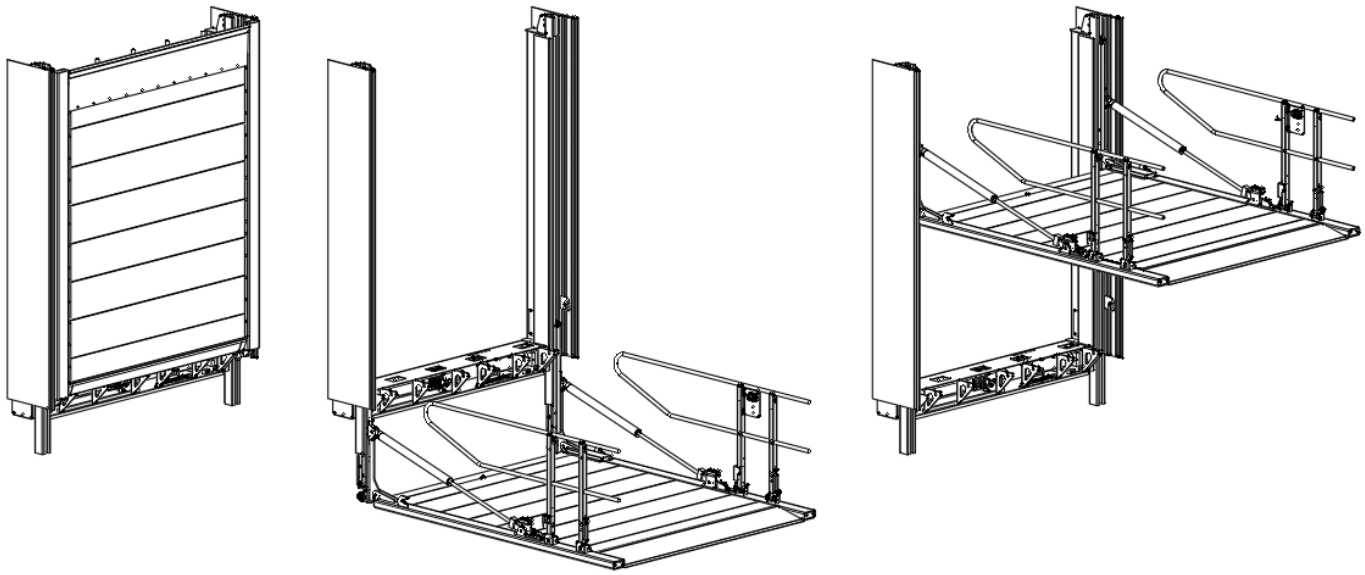
DHOLLANDIA

DH-V* multi-deck tail lifts

OPERATION MANUAL



Manufacturer:
DHOLLANDIA N.V. Zoomstraat 9 9160 LOKEREN (Belgium)
Tel : +32 (0)9 349 06 92 Fax : +32 (0)9 349 09 77
e-mail : info@dhollandia.be
website : www.dhollandia.com

Read the manual in its entirety before operating the tail lift

Keep this manual in the vehicle cab, as reference for the driver and tail lift operator

Order ref : **MD024.EN** Doc : **USE_CE UKCA operation manual Double Deck lifts EUR EN_2021** Rev: **2** Date: MAR 17, 2023

TABLE OF CONTENTS

1 UNDERSTANDING SAFETY AND WARNING SIGNS

Many safety signs and symbols used in this manual are based on international standards, others refer to specific situations or actions.

Consult section 11 page 75 for an overview of signs and symbols used in DHOLLANDIA manuals and their meanings.

Please take special notice of the following signs used in the manual. They indicate the likelihood and severity of a potential injury if a person fails to follow the instructions presented on the safety sign.

DANGER: indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. [white letters on red background]

WARNING: indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury. [black letters on orange background]

CAUTION: indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. [black letters on yellow background]

NOTICE: is used to address practices not related to physical injury. [white letters on blue background]

SAFETY INSTRUCTIONS: indicate general instructions relative to safe work practices, reminders of pcabler safety procedures, or the location of safety equipment. [white letters on green background]

SAFETY ALERT SYMBOL: is used to alert the user to potential hazards. All safety messages that accompany this sign shall be obeyed to avoid possible harm. [free-standing, or on back-ground colours red, orange, yellow or black]

WARNING

- Failure to understand and follow the instructions in this manual can put the operator and any bystanders at great risk of serious bodily injury and death.
- Prior to operating the tail lift, make sure you understand the safety and warning signs used, and read them in conjunction with the instructions in this manual.
- If in doubt, DO NOT operate the tail lift. Contact your national DHOLLANDIA distributor. See page 3 for contact info.

2 CONTACT INFORMATION AND DISCLAIMERS

- DHOLLANDIA tail lifts are regularly being adapted to new vehicle and chassis developments and specialized customer requirements. Therefore, DHOLLANDIA reserves the right to alter product specifications without prior notice; and potentially modifications or new developments might not have been taken into account at the time of printing.

NOTICE

Please confirm you have reviewed the most up-to-date version of this manual prior to operation of the associated DHOLLANDIA tail lift. See below for instructions to download the latest version of the manual.

- Contact your national DHOLLANDIA distributor if you have any questions regarding the installation, operation, repair and maintenance of DHOLLANDIA tail lifts, to obtain replacement copies of manuals or decals, or to learn about available equipment options for DHOLLANDIA tail lifts.

If in doubt where to find your national DHOLLANDIA distributor, visit the official DHOLLANDIA website:

www.dhollandia.com → Country & language selection → Distributors & service

The latest version of all manuals can also be downloaded from the DHOLLANDIA website:

www.dhollandia.com → Country & language selection → Downloads → Operation manuals → … select required manual

- Take notice of following important disclaimers:

DISCLAIMERS

- DHOLLANDIA disclaims liability for any personal injury, death, or property damage that results from **operating a tail lift that has been modified from the original design**, without explicit written approval from the manufacturer.
- DHOLLANDIA disclaims liability for any personal injury, death, or property damage that results from **use of aftermarket or non-OEM replacement parts for service or repair of the tail lift**.
- DHOLLANDIA disclaims liability for any personal injury, death, or property damage that results from **improper use of the tail lift**.
- DHOLLANDIA disclaims liability for any personal injury, death, or property damage that results from **overloading or improperly loading the platform**, disregard of the maximum rated lift capacity and the applicable load charts.
- There are no warranties, express or implied, including the warranty of merchantability or a warranty of fitness for a particular purpose extending beyond that set forth in this manual.

3 GENERAL INTRODUCTION

- This OPERATION MANUAL explains how the DHOLLANDIA tail lift is manufactured, what safety devices are incorporated in its design; and how to use the tail lift in a correct manner, that preserves the integrity of the machine over the intended lifetime and helps maximize the safety of the operator and any bystanders.
- The MAINTENANCE AND REPAIR MANUAL (separate) explains how to maintain and service the tail lift in the appropriate manner, maximizing the safety of the operator and any bystanders, and ensuring the reliability of the tail lift over the intended lifetime.
- The CE / UKCA IDENTIFICATION AND INSPECTION LOGBOOK (separate) contains the serial number identification, the CE / UKCA Declaration of Conformity, the Fitting Declaration to be filled out by the installer of the tail lift, and an overview of the owner's legal obligations in terms of periodic testing and certification.
- The manuals must be kept with the tail lift at all times, as a reference book for the operators and technical service

⚠ WARNING

- Improper use of the tail lift will put the operator and other parties at great risk of serious bodily injury and death. Therefore, the use of the tail lift is restricted to skilled operators only; who have been properly trained, and who know and understand the full contents of this manual.
- Unauthorized modifications to the tail lift can put the operator and other parties at great risk of serious bodily injury and death. Therefore, it is strictly forbidden to modify the tail lift and its safety devices in any way.
- Use of aftermarket or non-OEM replacement parts to repair or maintain the tail lift is strictly prohibited and may result in serious bodily injury or death to the operator or any bystanders.

4 INTENDED USE

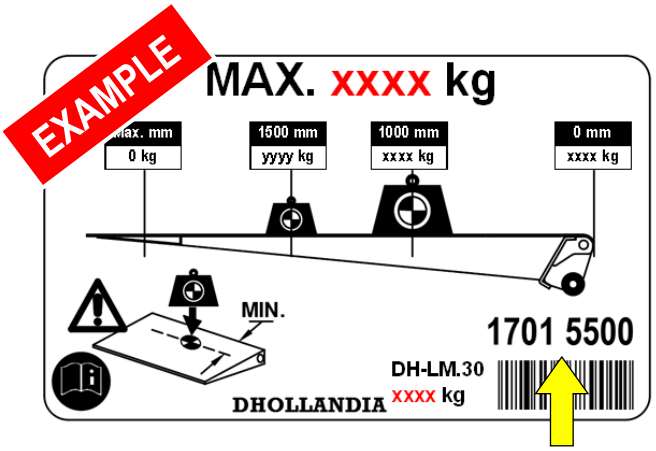
DHOLLANDIA tail lifts are designed to be fitted to commercial vehicles (commercial trucks, trailers and semi-trailers), and shall be used exclusively to load and unload the goods transported on the vehicle it is fitted to, within the limits of the load chart, in compliance with the operator instructions and safety instructions described in this manual.

⚠ WARNING

- Improper use of the tail lift will put the operator and bystanders at great risk of serious bodily injury and death. Therefore, it is strictly forbidden to use the tail lift in a different way, or for different purposes than described in the operation manual.
- The tail lift must NEVER be used as an elevated work platform, to push loads, or to carry people.
- The tail lift must NEVER be used as a wheelchair lift.
- DHOLLANDIA disclaims liability for any personal injury and / or property damage that results from improper use.

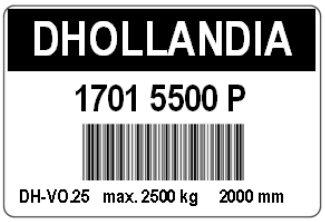
5 IDENTIFICATION

- Every DHOLLANDIA tail lift is identified by and labelled with a **unique 8-digit serial number** (with or without a space between the first and last 4 digits). Use this number for any inquiry on a particular tail lift, or when ordering replacement parts.
- In addition to the tail lift type and serial number, the various serial number labels provide additional information, such as the maximum rated lift capacity and load chart, the bumper certification number, the date of manufacture, etc...
- These labels are usually affixed to the vehicle body and various tail lift components, and can be found in following locations (the yellow arrows point to the serial numbers):



Affixed to the side of the vehicle body, or on the platform

1



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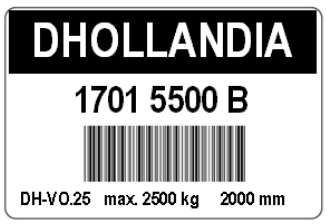

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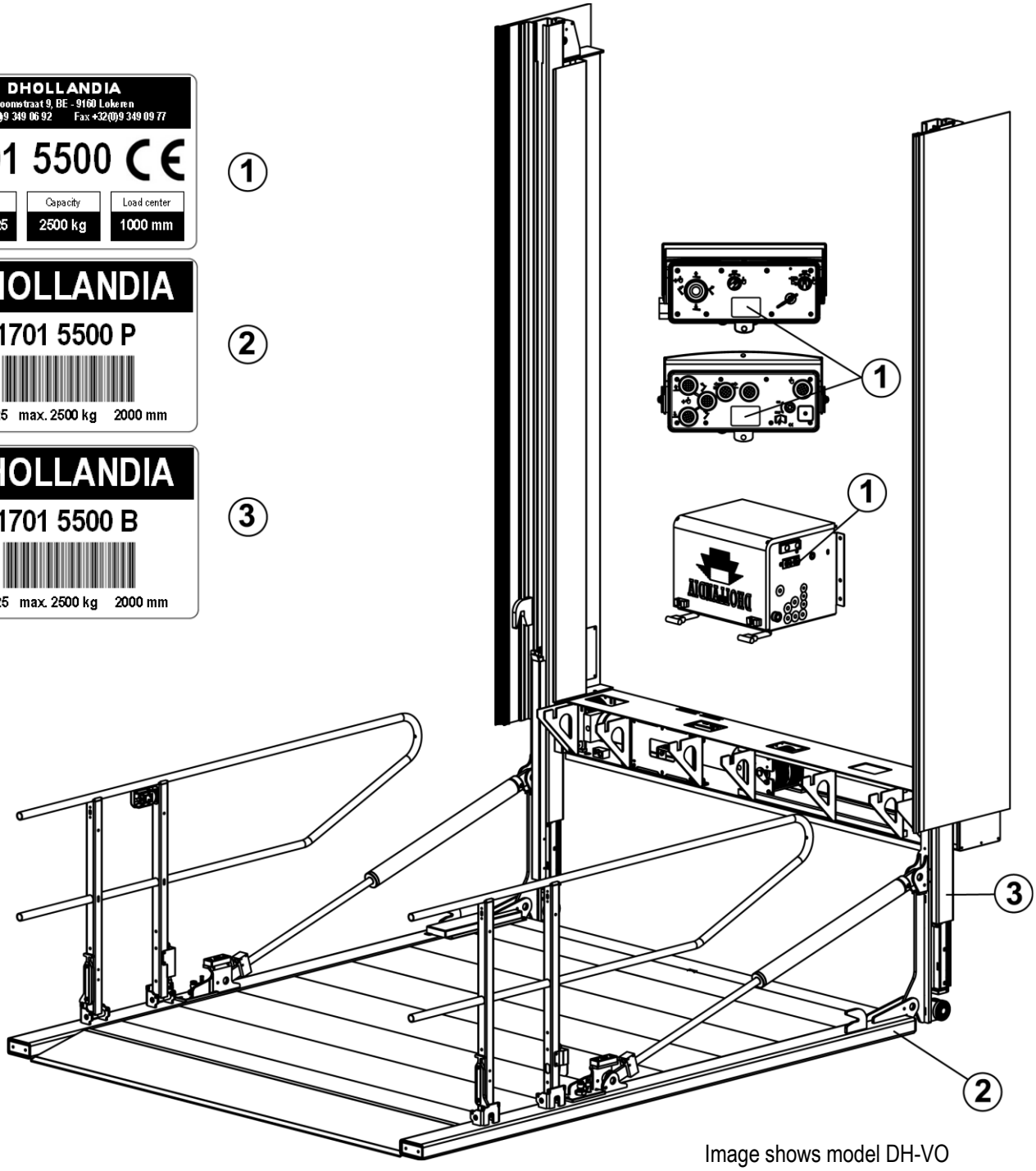


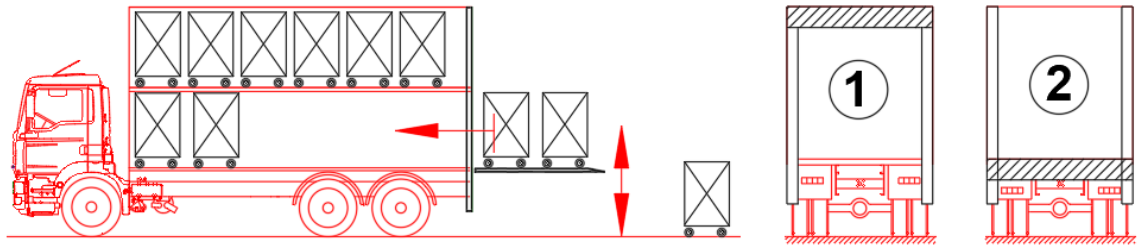
Image shows model DH-VO

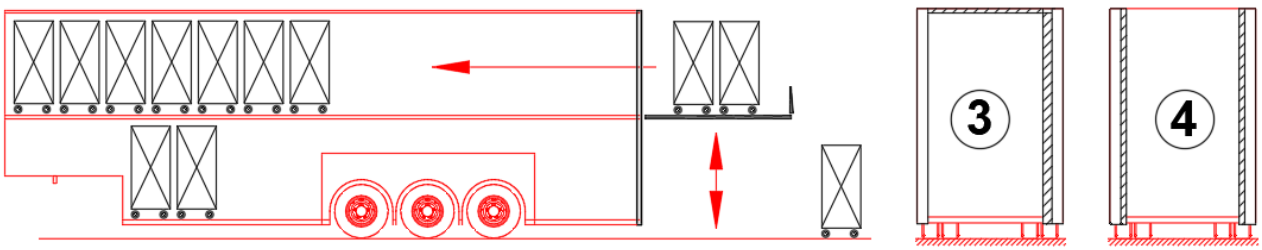
6 DESCRIPTION AND TAIL LIFT TERMINOLOGY

6.1 GENERAL

- DHOLLANDIA tail lifts are developed and manufactured using state-of-the-art technology, high quality materials and components, and highly skilled workmanship. They comply with the European CE and UKCA safety regulations mentioned in the Declaration of Conformity issued with each lift (unless agreed otherwise for tail lifts exported outside of CE / UKCA region).
- The range of multi-deck column lifts DH-V* comprises of a wide variety of constructions with different lifting mechanisms, but share main components such as the platform and its safety features, roll stop and ramp options, safety devices etc.
- These column lifts are designed for a wide variety of trucks, trailers and semi-trailers, and offer lift capacities of 750 to 4.000 kg.
- When considering the drive mechanism of the various lifts, the following types can be distinguished between:

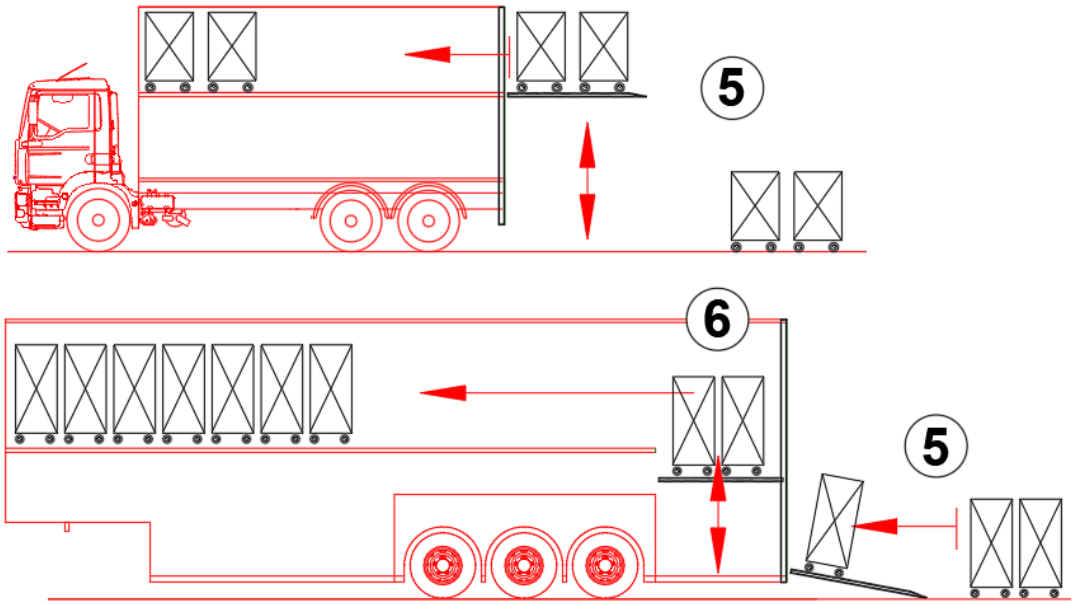
Fig. nr	Type	Description
1	DH-VB*	Overhead beam lift: operated by a single lift cylinder mounted in a beam at the vehicle roof and a set of steel cables and pulleys
2	DH-VO*	Lower beam lift: operated by a single lift cylinder mounted in a beam at the vehicle floor and a set of steel cables and pulleys, or heavy-duty chains and pulley.
3	DH-VX*	Operated by a single lift cylinder mounted vertically in the right side column, and a set of steel cables and pulleys
4	DH-VH*	Operated by 2 hydraulic lift cylinders mounted in the left and right side columns. No cables or chains involved.





- When considering where the platform operates, the following types can be distinguished between:

Fig. nr	Type	Description
5	External lift	• In its travel position, the platform is stowed vertically behind the vehicle body. Before use, the platform is lowered approx. 10 cm, then tilted open 90 degrees from the vertical travel position to a horizontal work position. • The external lift has the 4 functions: OPEN - LOWER - LIFT - CLOSE • Usually the opening and closing of the platform is driven by 2 hydraulic tilt cylinders, and the orientation of the platform can be adjusted to the slope of the ground. Depending on options chosen, manual closure or hydraulic closure by 1 hydraulic tilt cylinder are also available. In these cases, the orientation of the platform is not adjustable.
6	Internal lift	• Platform or “moving deck” travelling UP - DOWN between 2 or more decks inside the vehicle body. • Usually the internal lift has no tilt cylinders, no adjustable platform orientation.



- Main details and terminology: see next pages

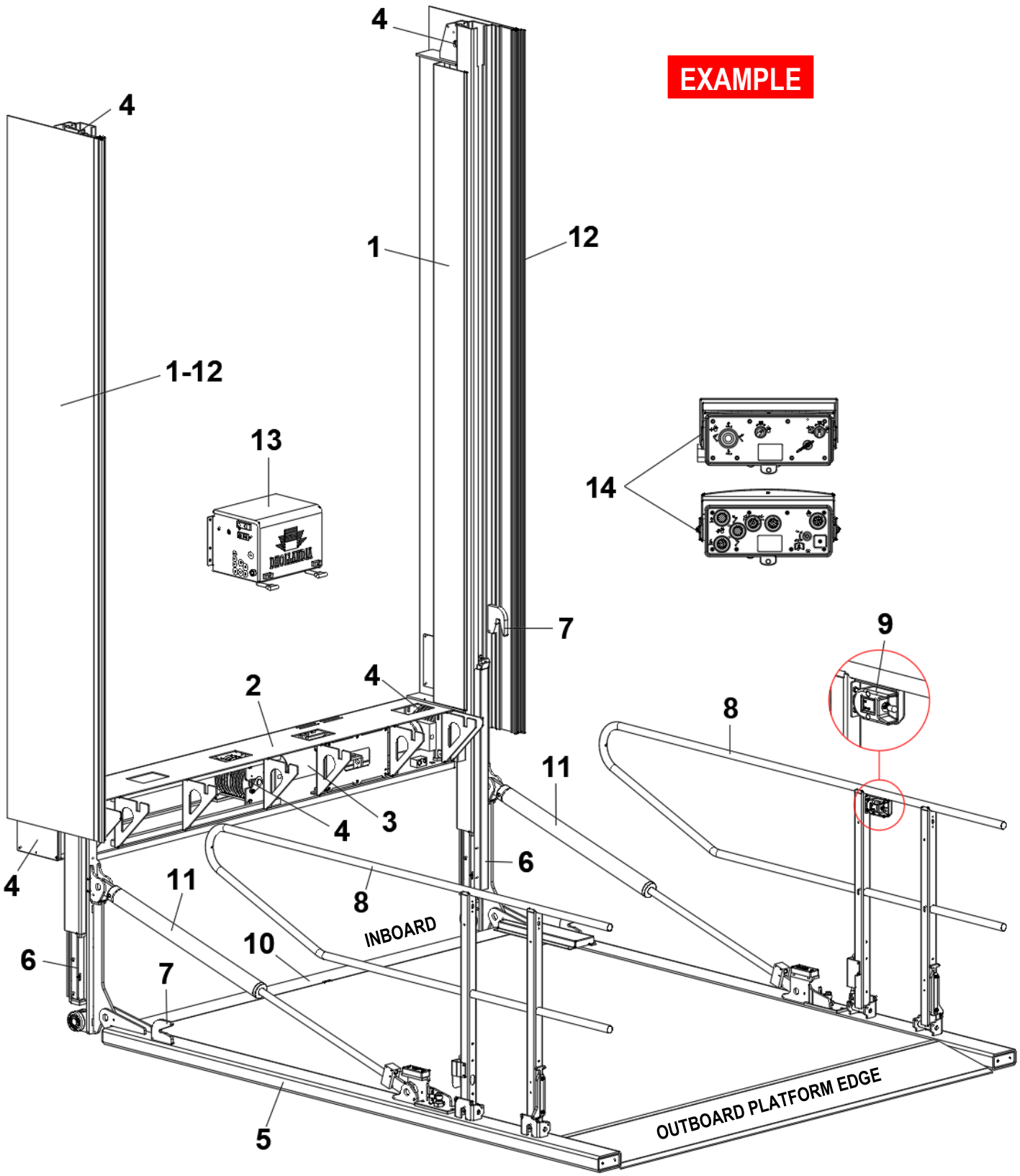
NOTICE

- The range of multi-deck column lifts DH-V* comprises of a wide variety of lifts with an even wider variety of options, which cannot all be covered within the scope of this generic operation manual.
- The images in the next pages are therefore only examples of the most popular executions, but might differ from the column lift actually delivered to you.
- Even if details in the execution of your lift are not reflected in this manual, the general safety precautions and operation instructions apply, and must be observed prior to and during operation.

⚠ WARNING

If in doubt on any tail lift related issue, ALWAYS contact your local DHOLLANDIA distributor for help or advice, prior to continuing.

DH-VO* / VB* / VX* ● HYDRAULIC CLOSURE ● TERMINOLOGY	
See figures below for parts corresponding to the numbers in this table	
#	**Description**
1	**Lift columns L+R**: set of 2 columns mounted in a fixed position against the vehicle body. They form the rails in which the lift runners and the platform travel up and down.
2	**Cylinder beam**: horizontal or vertical beam mounted at various positions in function of the lift type. See 6.1 above for an overview of the different configurations. This beam contains the lift cylinder and the drive system, consisting of steel cables or chains and pulleys.
1+2	**Lift frame**: the lift columns + cylinder beam together form the lift frame.
3	**Lift cylinder**: usually 1, or sometimes 2 hydraulic cylinder(s) used to LOWER / LIFT the lift runners, the platform and its load.
4	**Drive system**: set of steel cables or chains and pulleys, used to transfer the stroke of the lift cylinder to the lift runners and the platform. The drive system usually contains multiple tiers, so that the stroke of the cylinder results in a multiplied vertical travel of the platform.
5	**Platform**: carries the load during lifting and lowering. Usually manufactured from a steel frame with aluminium infill profiles with a non-slip working surface. In standard execution, the platform is equipped with a fixed leading edge. Optional roll stops or roll stop ramps at the outboard platform edge, are available as an option.
6	**Lift runners L+R**: set of 2 slides carrying the platform, travelling up and down in the lift columns. They are lifted and lowered by the lift cylinder and the drive system.
7	**Stow lock**: set of 2 hooks mounted on the platform, L+R of the inboard platform edge; and 2 hooks on the lift columns. To stow the platform in its travel position, CLOSE the platform from the open work position to the vertical position. Then LIFT the vertical platform until the hooks on the platform engage in the hooks on the lift frame, and you hear the hydraulic system turn in overpressure.
8	**Guard rails L+R**: rails to protect the operator against falling from the platform at greater heights, and suffering serious personal injuries or death. They should be used on all exposed platform sides. In accordance with EN1756-1, guard rails are mandatory for all lifting heights above 2 m.
9	**Auxiliary controls**: auxiliary LIFT / LOWER controls, usually integrated in one of the guard rails
10	**Toe-guard flap**: hinged flap + detection switch stopping the LIFT function when a person steps on it or load stands on it. Purpose is to protect the toes and feet of the operator in the dangerous crushing zone formed by the moving platform and the loading floors of the vehicle.
11	**Tilt cylinders L+R**: usually 2 hydraulic cylinders used on external lifts to OPEN / CLOSE the platform, or to change its orientation when opened in work position. Depending on options chosen, manual closure or hydraulic closure by 1 hydraulic tilt cylinder are also available. In these cases, the orientation of the platform is not adjustable.
12	**Side shrouds and seals L+R**: set of panels and sealing rubbers mounted on the left and right side columns of external lifts, used to seal the platform against the columns, and protect the cargo from rain.
13	**Hydraulic pump unit**: contains the electric motor driving the hydraulic pump, the oil tank, and the control valves. The unit is mounted separately on the vehicle chassis.
14	**Main external control box**: mounted in a fixed position at the side of the vehicle or under the body. It contains the switches to OPEN - LOWER - LIFT - CLOSE the platform.
15	**Overhead cross member** [on DH-VX*]: profile linking the top of the L and R lift columns. It is used as a passage for steel cables from the lift cylinder in the R side column to the lift runner in the L side column.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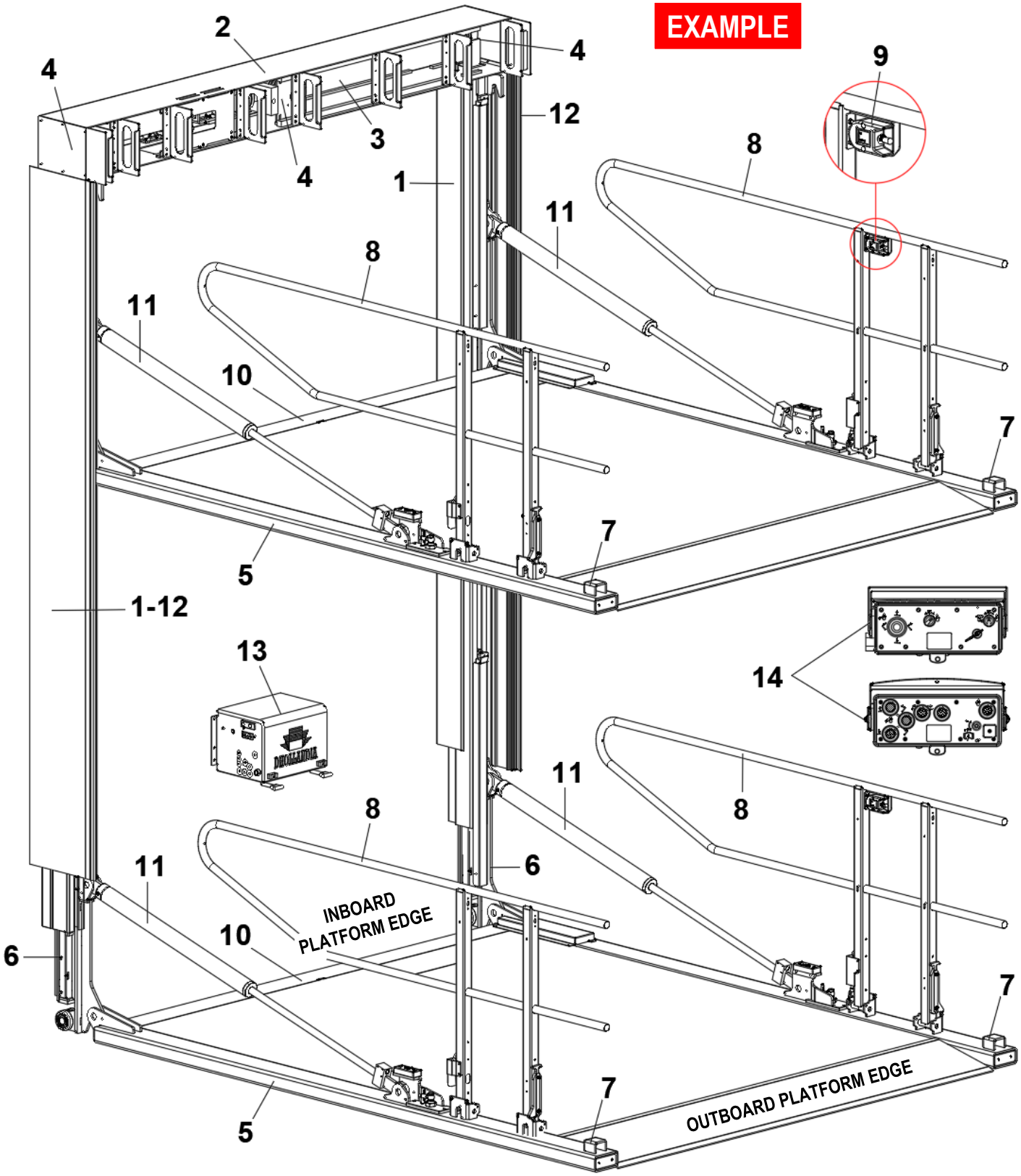
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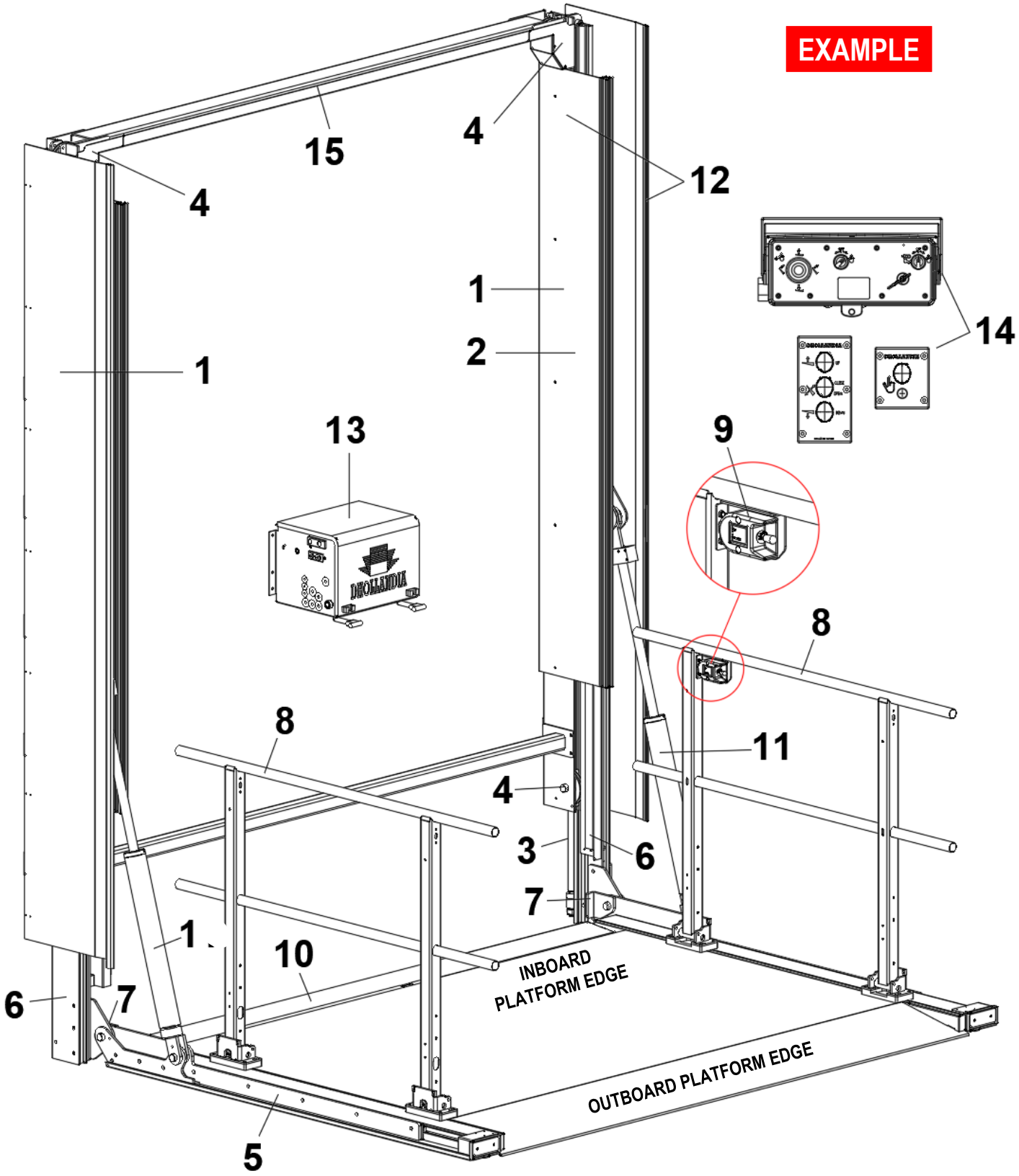
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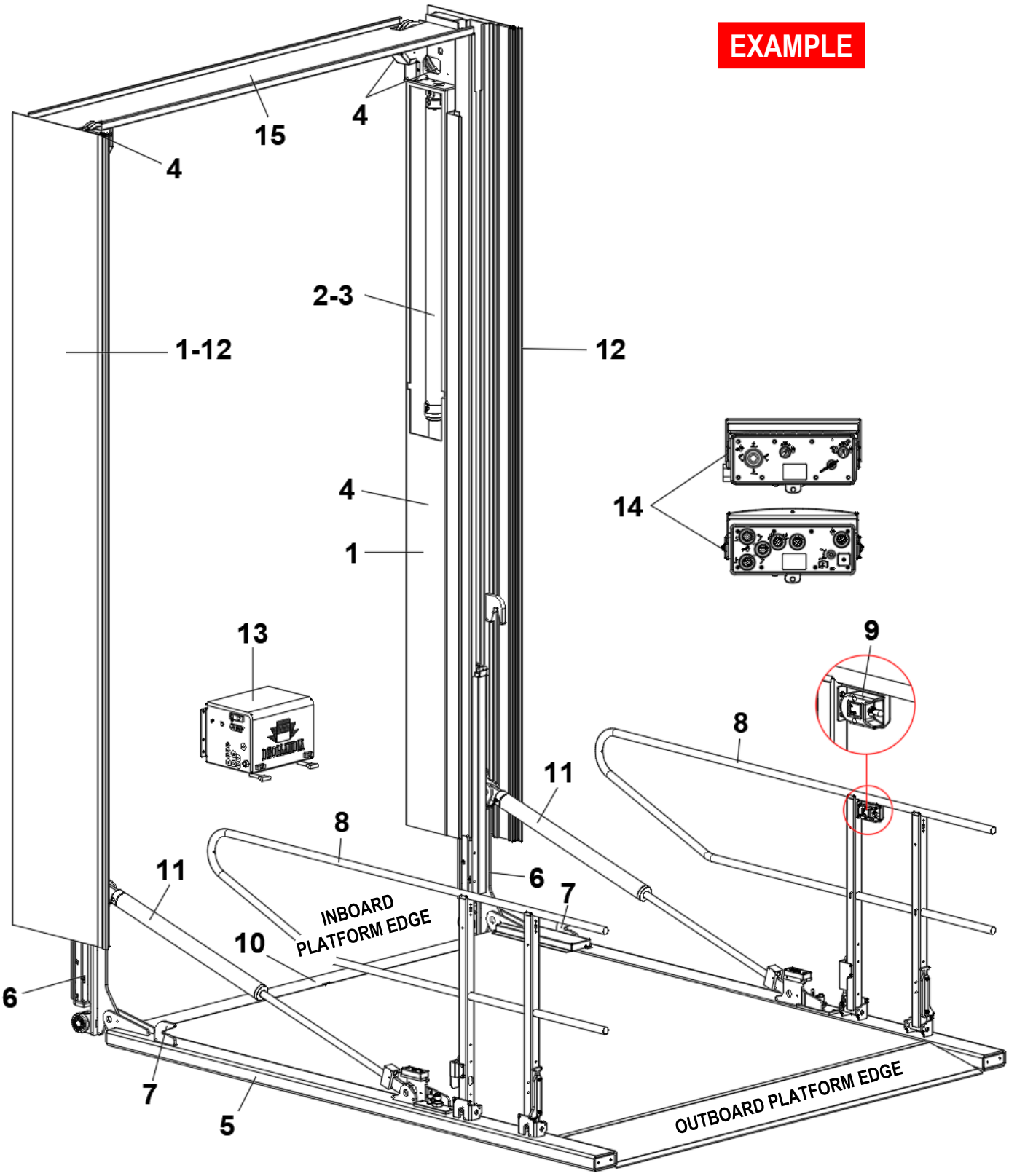
DHOLLANDIA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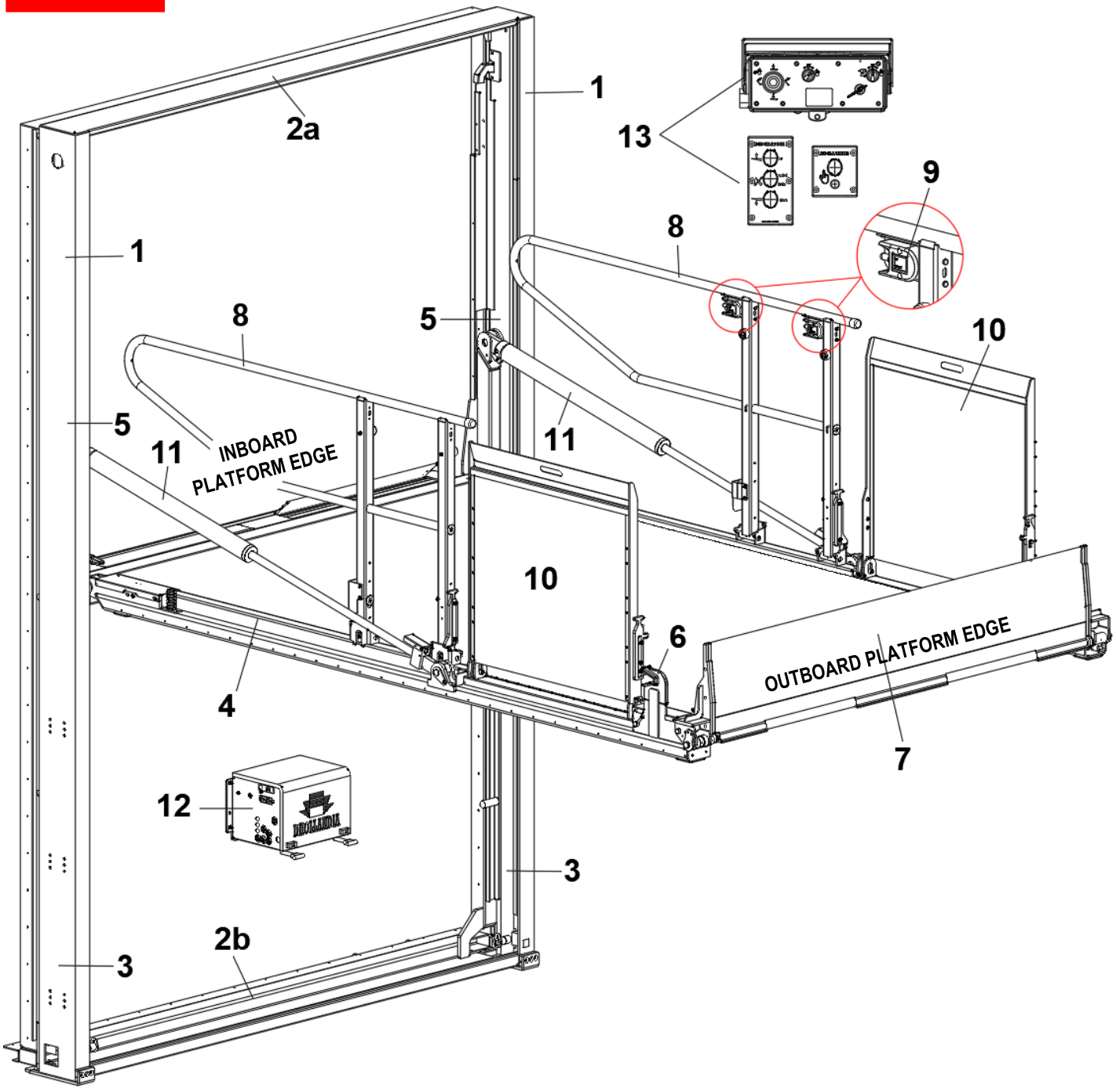
OUTBOARD PLATFORM EDGE

See figure below for parts corresponding to the numbers in this table

#	Description
1	**Lift columns L+R**: set of 2 columns mounted in a fixed position against the vehicle body. They form the rails in which the lift runners and the platform travel up and down.
2a	**Overhead cross member**: cross member of the lift frame located just below the vehicle roof.
2b	**Floor cross member**: cross member of the lift frame located at the (lowest) vehicle floor level.
1+2	**Lift frame**: the lift columns, overhead and floor cross members together form the lift frame.
3	**Lift cylinders L+R**: 2 hydraulic cylinders mounted vertically in the lift columns, used to LOWER / LIFT the lift runners, the platform and its load.
4	**Platform**: carries the load during lifting and lowering. Usually manufactured from a steel frame with aluminium infill profiles with a non-slip working surface. In standard execution, the platform is equipped with a fixed leading edge. Optional roll stops or roll stop ramps at the outboard platform edge, are available as an option.
5	**Lift runners L+R**: set of 2 slides carrying the platform, travelling up and down in the lift columns. They are lifted and lowered by the 2 lift cylinders.
6	**Stow lock**: set of 2 hooks mounted on the L and R side of the platform, and 2 hooks on the lift columns. Purpose is to secure the platform in its travel position, and pressurise it against the sealing rubbers at the rear of the vehicle body.
7	**Hydraulic roll stop ramp**: optional full-width roll stop flap, operated by a hydraulic cylinder in the platform and the electric controls of the lift. When travelling up and down, the ramps can be raised and secured in vertical position to prevent trolleys, roll cages and other wheeled objects on the platform from falling off. At the ground, the ramps can be deployed as an access ramp to drive the load on and off the platform.
8	**Guard rails L+R**: rails to protect the operator against falling from the platform at greater heights, and suffering serious personal injuries or death. They should be used on all exposed platform sides. In accordance with EN1756-1, guard rails are mandatory for all lifting heights above 2 m.
9	**Auxiliary controls**: LIFT / LOWER controls integrated in one of the guard rails. If an optional hydraulic ramp is mounted (see #7), additional controls are mounted on the guard rails to RAMP UP / RAMP DOWN.
10	**Side loading ramps**: optional combination of guard rails and side loading ramps. In travel position, these ramps are folded down on the platform surface. When raised and blocked in vertical position, they function as guard rails. When opened up to the side, they function as side ramp for loading / unloading cargo to / from the kerb. ***NOTICE*** Although the side loading ramps can be blocked in vertical position as guard rails for the operator on the platform, they are NOT designed to function as heavy-duty load-restraints and to sustain frequent, hard impact from trolleys, roll cages or pallet trucks.
11	**Tilt cylinders L+R**: 2 hydraulic cylinders used on external lifts to OPEN / CLOSE the platform, or to change its orientation when opened in work position.
12	**Hydraulic pump unit**: contains the electric motor driving the hydraulic pump, the oil tank, and the control valves. The unit is mounted separately on the vehicle chassis.
13	**Main external control box**: mounted in a fixed position at the side of the vehicle or under the body. It contains the switches to OPEN - LOWER - LIFT - CLOSE the platform. If an optional hydraulic roll stop ramp is mounted, the control box also incorporates the functions RAMP UP / RAMP DOWN.

EXAMPLE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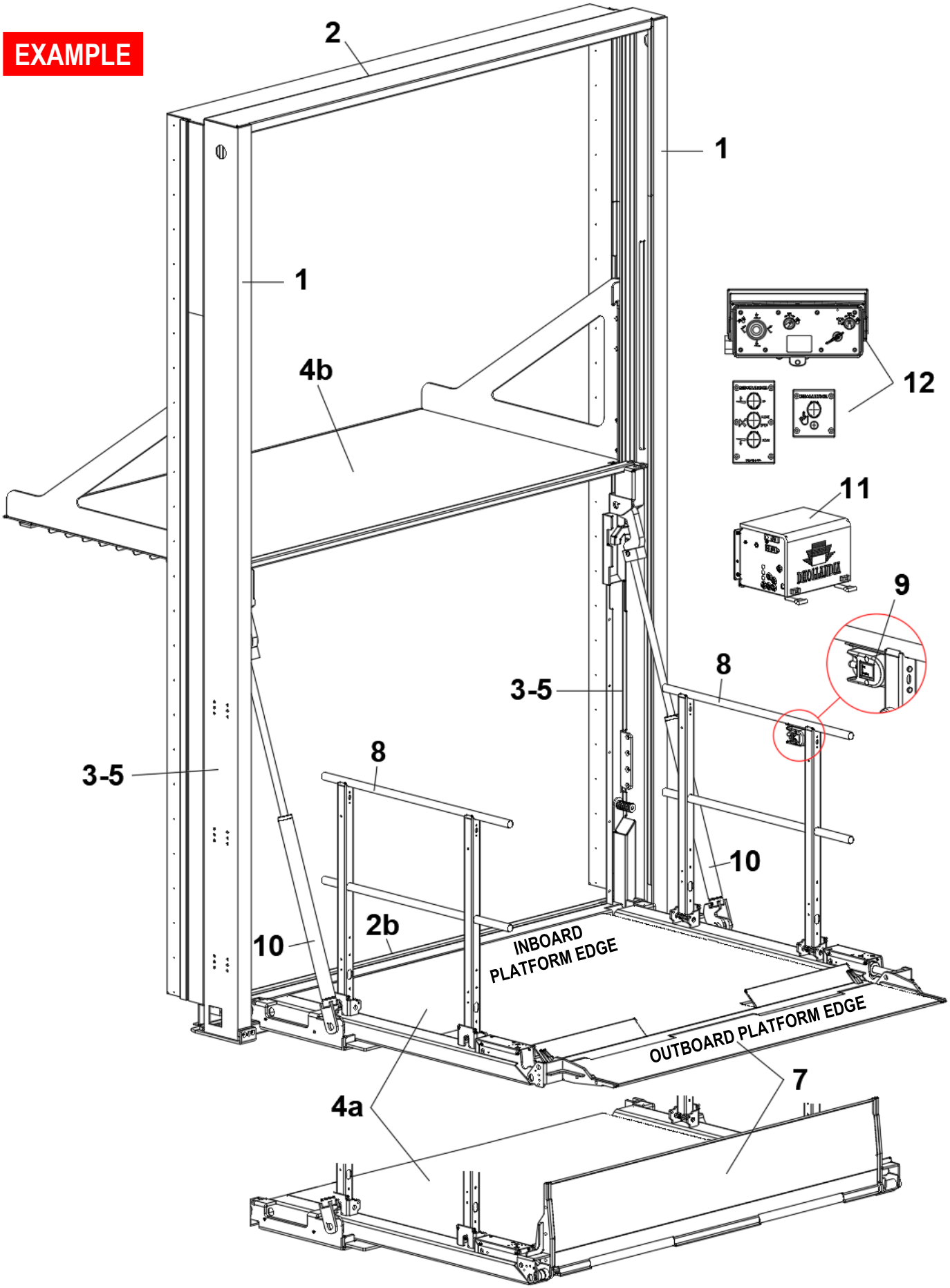
DH-VH* EXTERNAL COLUMN LIFT + INTERNAL PLATFORM ● HYDRAULIC CLOSURE	
See figure below for parts corresponding to the numbers in this table	
#	**Description**
1	**Lift columns L+R**: set of 2 columns mounted in a fixed position against the vehicle body. They form the rails in which the lift runners and the platform travel up and down.
2a	**Overhead cross member**: cross member of the lift frame located just below the vehicle roof.
2b	**Floor cross member**: cross member of the lift frame located at the (lowest) vehicle floor level.
1+2	**Lift frame**: the lift columns, overhead and floor cross members together form the lift frame.
3	**Lift cylinders L+R**: 2 hydraulic cylinders mounted in the lift columns, used to LOWER / LIFT the lift runners, the platform and its load.
4a	**External platform**: raised and lowered by the L+R lift cylinders and carries the load during lifting and lowering. Usually manufactured from a steel frame with aluminium infill profiles with a non-slip working surface. In standard execution, the platform is equipped with a fixed leading edge. Optional roll stops or roll stop ramps at the outboard platform edge, are available as an option.
4b	**Internal "slave" platform**: internally mounted platform that also carries load during lifting and lowering. This "slave" platform has no own lift system to travel up and down independently. It can travel up / down when linked to the external platform, or stay parked at the upper or lower deck when disconnected from it. The locking device used to park the internal platform at the second deck is provided by the vehicle manufacturer.
5	**Lift runners L+R**: set of 2 slides carrying the platform, travelling up and down in the lift columns. They are lifted and lowered by the 2 lift cylinders.
6	**Stow lock L+R**: set of 2 hooks mounted on the L and R side of the platform, and 2 hooks on the lift columns. Purpose is to secure the platform in its travel position, and pressurise it against the sealing rubbers at the rear of the vehicle body Often, such vehicles are equipped with rear doors behind the external platform, to close the rear side of the vehicle body. Hence, depending on execution, the external platform might not be equipped with stow locks as shown in #6 on previous page.
7	**Hydraulic roll stop ramp**: optional full-width roll stop flap, operated by a hydraulic cylinder in the platform and the electric controls of the lift. When travelling up and down, the ramps can be raised and secured in vertical position to prevent trolleys, roll cages and other wheeled objects on the platform from falling off. At the ground, the ramps can be deployed as an access ramp to drive the load on and off the platform.
8	**Guard rails L+R**: rails to protect the operator against falling from the platform at greater heights, and suffering serious personal injuries or death. They should be used on all exposed platform sides. In accordance with EN1756-1, guard rails are mandatory for all lifting heights above 2 m.
9	**Auxiliary controls**: LIFT / LOWER controls integrated in one of the guard rails. If an optional hydraulic ramp is mounted (see #7), additional controls are mounted on the guard rails to RAMP UP / RAMP DOWN.
10	**Tilt cylinders L+R**: usually 2 hydraulic cylinders used on external lifts to OPEN / CLOSE the platform, or to change its orientation when opened in work position.
11	**Hydraulic pump unit**: contains the electric motor driving the hydraulic pump, the oil tank, and the control valves. The unit is mounted separately on the vehicle chassis.
12	**Main external control box**: mounted in a fixed position at the side of the vehicle or under the body. It contains the switches to OPEN - LOWER - LIFT - CLOSE the platform. If an optional hydraulic roll stop ramp is mounted, the control box also incorporates the functions RAMP UP / RAMP DOWN.

EXAMPLE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OUTBOARD PLATFORM EDGE
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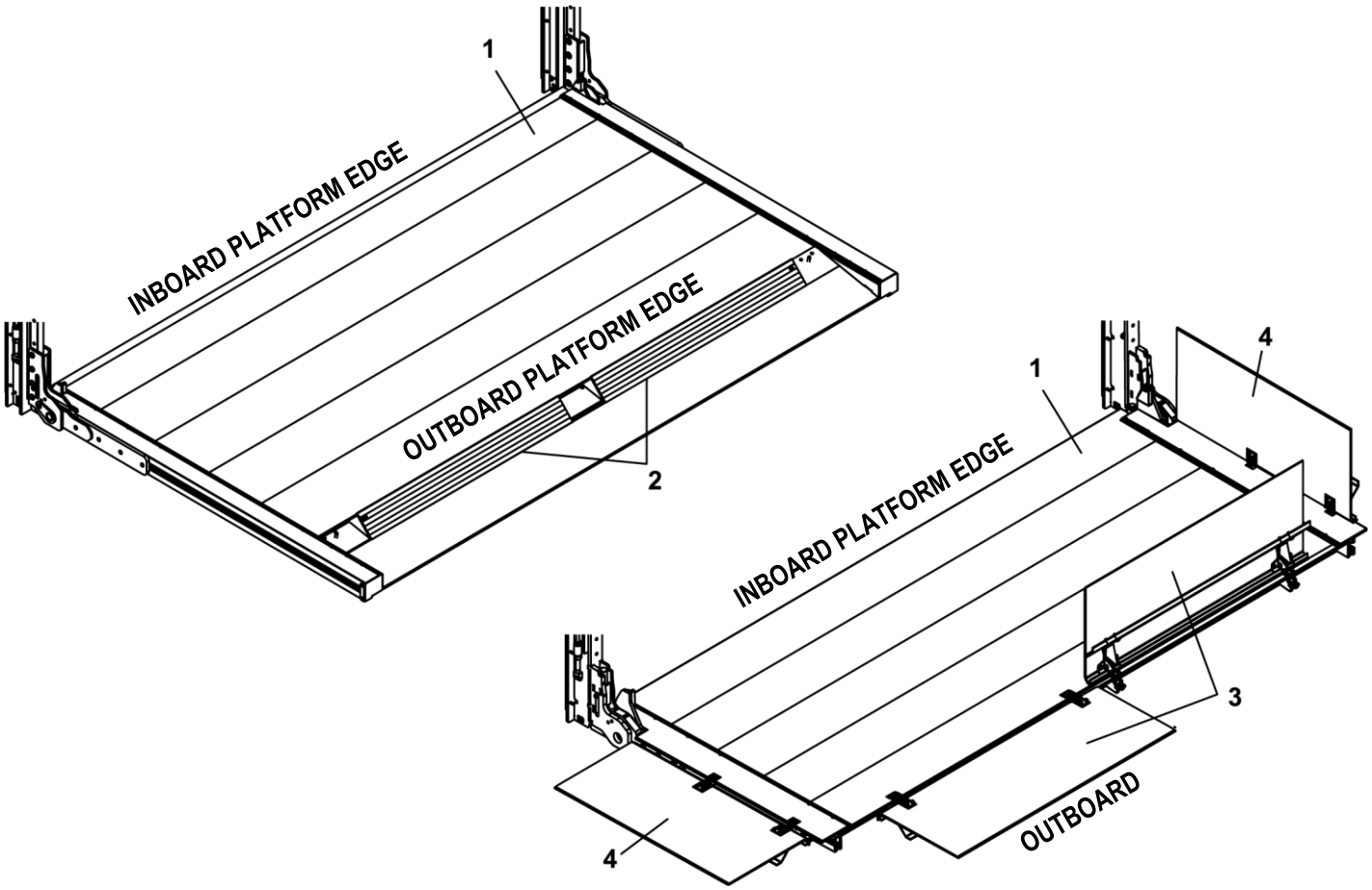
LOAD RESTRAINTS ● TERMINOLOGY	
See figure below page for parts corresponding to numbers in this table	
#	**Description - see also 9.9 from page 68 onwards**
1	**Platform**: carries the load during lifting and lowering. Manufactured from steel or light-weight aluminium and with a non-slip working surface. In standard execution, the platform is equipped with a fixed leading edge. Optional roll stops in the platform surface, or a roll stop ramp at the outboard platform edge, are available as an option.
2	**Roll stops**: usually 2 load restraint flaps mounted in or just in front of the fixed leading edge of the platform. Depending on options chosen, the roll stops feature a manual or an automatic operation and are actuated by springs.
3	**Rear or outboard roll stop ramps** : 1 full-width or 2 partial width load restraints ramps mounted at the outboard platform edge. In travel position, the ramps lie folded back on the platform surface. When travelling up and down, the ramps can be raised and blocked in vertical position to prevent rolling cargo on the platform from falling off. At the ground, the ramps can be deployed as an access ramp to drive cargo on and off the platform.
4	**Side roll stop ramps** : 2 load restraints ramps mounted at the side edges of the platform. In travel position, the ramps lie folded back on the platform surface. When travelling up and down, the ramps can be raised and blocked in vertical position to prevent rolling cargo on the platform from falling off. At the ground, the ramps can be deployed as an access ramp to drive cargo on and off the platform.
	See previous page for the optional **hydraulic roll stop ramp** (#7).



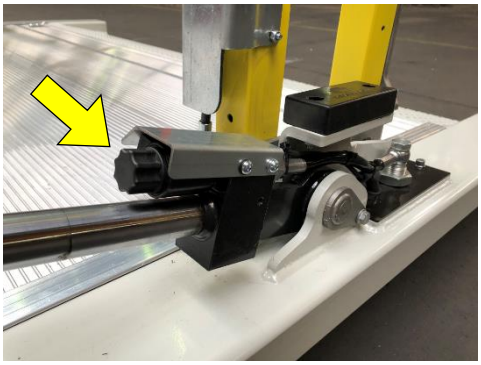
6.2 SAFETY DEVICES

DHOLLANDIA tail lifts are equipped with a multiple safety devices in order to ensure that goods can be loaded and unloaded with maximum safety for the operator, any incidental bystanders, and the load itself. The safety devices listed below are incorporated or recommended on most tail lifts.

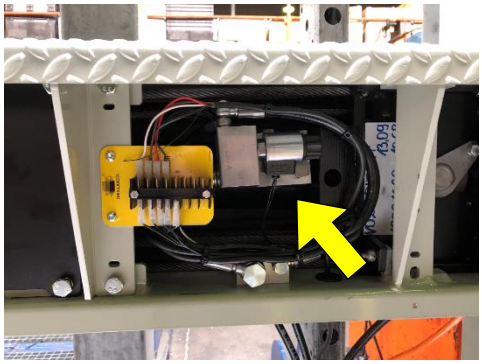
Note: the illustrations below are EXAMPLES for the most common types of lifts, and might differ from the actual devices on your lift. If any further information is required, please contact your national DHOLLANDIA distributor. See page 3 for contact info.

- **Electrical safety valves mounted on all cylinders** [standard]. The safety valves lock the oil inside the hydraulic cylinders as long as they are not energized via the electrical controls. The purpose is to secure the platform in its travel position while driving, or in any other fixed position, in case of accidental failure of a hydraulic pipe (as soon as the electrical controls are released).

  DHOLLANDIA safety valves are equipped with a manual emergency control, allowing the operator or repair agent to open the valve manually in case of electrical failure (see MAINTENANCE AND REPAIR MANUAL).

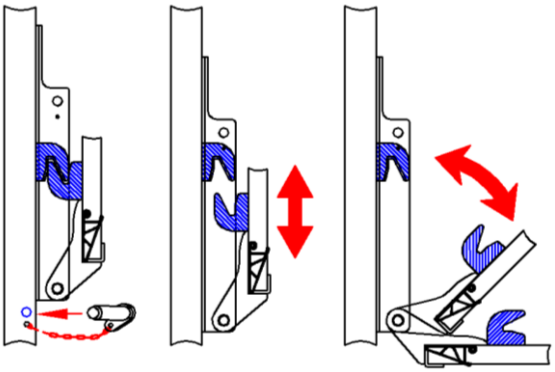


Safety valve on tilt cylinder (DH-VO)



Safety valve on lift cylinder (DH-VO)

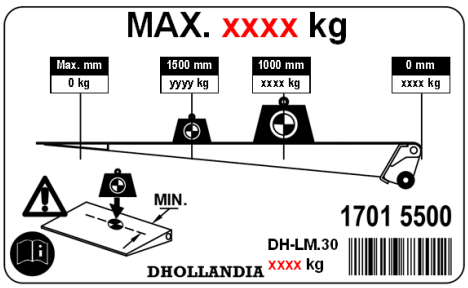
- **Mechanical platform locks** [optional]. DHOLLANDIA offers stow locks on the platform and locking pins under the lift as an option, to secure the platform in its travel position in case of accidental loss of hydraulic pressure.



- **Pressure relief valve** [standard]. Safety device integrated in the pump unit, enabling the manufacturer and the installer of the tail lift to limit the real lift capacity to the maximum rated capacity of the tail lift sold, and to protect it against overload while LIFTING.

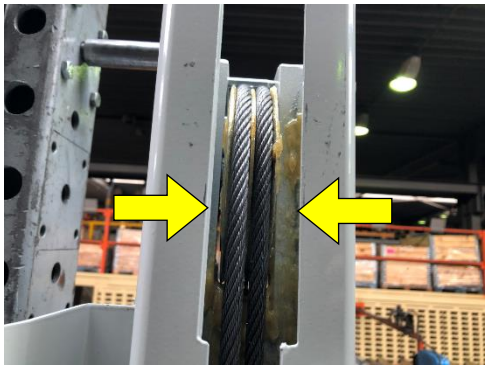
- **Pressure compensating flow valves** [standard]. Flow valves are integrated in the hydraulic circuits to ensure the platform lowers at a safe speed, both when empty as when fully loaded.

- **Marking of the centre point of maximum load** [standard]. Tail lifts are not designed to LIFT and LOWER weights corresponding to their maximum rated capacity over the entire surface of the platform. The maximum rated capacity is only valid at a specified distance or “centre point of maximum load” behind the vehicle body. Behind that point marked on the platform, the maximum safe working load diminishes according to the load diagrams supplied with the tail lift. See also section 8, page 44, on load charts and correct loading procedures.

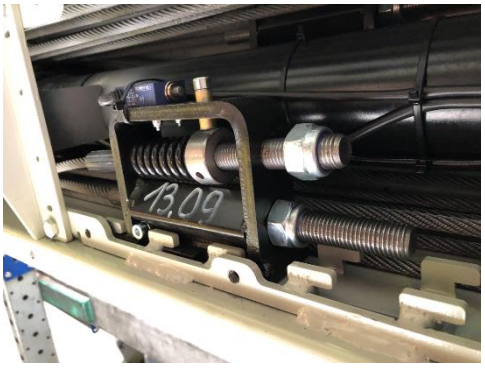


- **Double cable system or load safety device (LSD)** [standard]. All column lifts must be protected from falling in case of accidental failure of the suspension system (steel cables or chains, pulleys, etc...). This protection can be:

  → **Double cable system + cable break protection device.** Most cable lifts DH-VB* / VO* / VX* are equipped with 2 main cables plus 2 safety cables. If one of main cables breaks, the platform is caught by the safety cable and a cable rupture detection activated. If activated, the platform can only be lowered to offload any goods on the platform. An emergency button enables the operator to LIFT and CLOSE the platform in its travel position, and drive to an authorised service agent for repair. [see MAINTENANCE AND REPAIR MANUAL].



Double cable system (DH-VO)



Cable rupture detection inside cylinder beam (DH-VO)

  → **Load safety device (LSD).** Few types of DH-VB* / VO* / VX* are equipped with chains or single cables. On such lifts, both lift runners are equipped with an chain break protection or cable break protection device. In the unlikely event of a steel cable or chain breaking, the LSD will jam the lift runner and the platform in the lift column, preventing the platform to drop more than 10 cm from its position at the time of the failure [see MAINTENANCE AND REPAIR MANUAL].

  → Note: the fully hydraulic lifts DH-VH* are equipped with vertically positioned lift cylinders with electrical safety valves. They don't use steel cables or chains, and are not equipped with an LSD.

- **2-hand external control box** [standard]. On the external control box mounted in fixed position at the side of the vehicle body, all functions are actuated by means of a control switch and a safety switch. The compulsory use of the 2 hands to actuate the various lift functions, protects the operator from crushing his head, limbs or upper body between the LIFTING or CLOSING platform and the rear frame of the vehicle body.

- **Tail lift on/off switch** [min. 1 compulsory]. Depending on configuration, the electrical power to the tail lift is switched on / off by means of:

  1. A **cabin switch** (provided by the truck manufacturer or DHOLLANDIA [option OAE503.1]). This switch enables the operator to switch the control power to the main external control box on / off. If equipped with a cabin switch [option OAE503.2] and a position sensor [option OVE221], the tail lift can also be set-up to provide a signal if the platform is stowed in its travel position, or left open.
  2. A **main battery disconnect switch** integrated in the external control box [optional]. This switch enables the operator to switch the main battery power to the tail lift on / off. If available, the operator MUST switch off the main battery disconnect switch after each use of the tail lift.
  3. A combination of both.

- **Fuses** [standard]. A 15A fuse for the electrical control circuit is premounted in the pump unit and in the main external control box (for most types). A 250-300 A fuse for the electrical main battery circuit is supplied by the truck manufacturer or by DHOLLANDIA. Both fuses protect the electrical circuits against short-circuits and amperage peaks.

- **Protection of toes and feet against crushing and sheering** [min. 1. compulsory]. The European tail lift standard EN1756-1 and DHOLLANDIA's fitting manuals provide a number of solutions to prevent the operator from crushing his toes or feet between in the inboard platform edge of the rising platform and the rear cross member of the vehicle floor or the cylinder beam of the column lift.

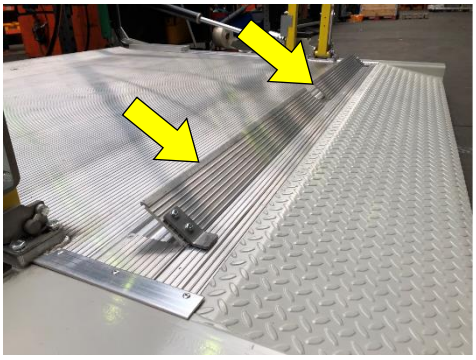
  Depending on the vehicle configuration (e.g. internal lifts), other risk areas for crushing and shearing might exist. The vehicle manufacturer MUST ALWAYS make a thorough risk analysis of all possible pinch points and risk areas; and adopt solutions accordingly. DHOLLANDIA offers various solutions for specific applications. See page 3 for contact info.

  Note: certain DH-VH* lifts are not equipped with a toe-guard flap, and require further risk analysis by the vehicle manufacturer during the vehicle conception.

Standard toe-guard flap + toe-guard switch on exterior platform (DH-VO* / VB* / VX*)

- **Foot controls** [optional]. Platform mounted foot controls (2 buttons or 4 buttons) immobilise the feet of the operator on a safe position on the platform, and protect him from crushing his toes or feet between in the inboard platform edge of the rising platform and the rear cross member of the vehicle floor or the cylinder beam.

- **Roll stops** [optional]. If a platform is aimed at LIFTING and LOWERING loads that cannot be braked or secured by their design or their method of transportation, the platform MUST be equipped with roll stops that prevent the load from accidentally rolling off the platform, and hitting the operator or any bystanders. DHOLLANDIA offers a variety of roll stops that can be fitted near the outboard platform edge, or at intermediate distances. [see also 9.9 from page 68 onwards.]

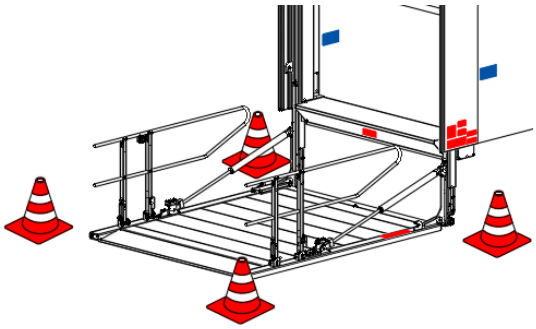


- **Guard rails** [optional]. Guard rails MUST be fitted in all applications where a significant risk exists that the operator could fall off the platform and suffer bodily injury. They are compulsory above 2m lifting height.

  Guard rails may be purchased along with your tail lift at the initial order, or may be purchased and retrofitted to your tail lift later. They are available in a wide range of different executions to suit the particular needs of many applications. Contact your national DHOLLANDIA dealer for further information. See page 3 for contact info.

- **Visibility of the deployed platform** [min. 1 compulsory]. Any platform protruding beyond the extremities of the vehicle, MUST be clearly visible from all approachable sides in daylight and at night. Check any applicable national or local regulations, as these can be very strict on the application, size and type of means used. The visibility of the platform can be optimized by:

  1. **Reflective marking tape** applied to the sides of the platform [standard] applied during installation]
  2. **Platform flags** [option OAT020 - 023], mounted to the underside of the platform, near the outboard platform edge
  3. **Flashing platform lights** [option OVE201.A], mounted on the platform surface, near the outboard platform edge
  4. **Warning cones** (2 or 4) [widely available] placed around the work area of the platform
  5. A combination of 2 or more of the above. The various means above have variable efficiency depending on the direction of approach and the light conditions (e.g. bright sunlight versus night darkness). DHOLLANDIA strongly recommends a combination of 2 or 3 means to cover all circumstances.



- **Decals** [standard]. The tail lifts are supplied with a number of operation decals, load diagrams and safety decals, most of them to be applied to the vehicle body during installation. These decals must be kept clean and legible at all times, and replaced whenever required.

7 SAFETY INSTRUCTIONS FOR USING THE TAIL LIFT

7.1 DO NOT USE TAIL LIFT WITHOUT ADEQUATE SAFETY AND OPERATOR TRAINING

- DHOLLANDIA tail lifts shall be exclusively used to load and unload the goods transported on the carrying vehicle, within the limits of the applicable load chart, in compliance with the operator instructions and safety instructions in this manual.

⚠ WARNING

- Improper use of the tail lift will put the operator and other parties at great risk of serious bodily injury and death.
- To reduce the risk of serious bodily injury to the operator and any bystanders, the use of the tail lift is restricted to skilled operators, who have been properly trained, and who know and understand the full contents of this manual.
- To reduce the risk of serious bodily injury or death, THE OPERATOR MUST COMPLY WITH ALL SAFETY INSTRUCTIONS AND WARNING LABELS IN THIS SECTION AND THE ENTIRE MANUAL before and while operating the tail lift.

- The operator should follow all other policies and procedures applicable to the job situation including health & safety regulations, road and traffic regulations, as well as company procedures. The operator should not use the tail lift if he/she cannot use it in accordance with all applicable regulations and instructions.
- The operator shall be at least 18 years of age.

7.2 GENERAL SAFETY INSTRUCTIONS

⚠ WARNING

- To avoid serious bodily injury or death, the operator must use appropriate work clothes. NEVER wear loose-fitting clothes that may be trapped in the moving parts of the tail lift. ALWAYS wear professional safety-toe shoes, protective gloves, and eye protection. Use of hardhat is recommended.

Must: 

Recommended: 

- Slipping (and falling) can result in serious bodily injury and death. To prevent injury by slipping:

  - ALWAYS wear professional safety-toe shoes with a good non-slip sole.
  - DO NOT use the tail lift if it is covered with snow, mud, dirt, debris, liquids or other substances.
  - DO NOT run on the platform.

- Tripping (and falling) can result in serious bodily injury and death. To prevent injury by tripping:

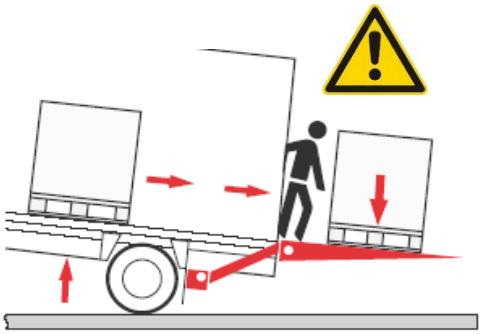
  - DO NOT use tail lift platform as a step. NEVER leave the tail lift unattended in partially deployed position.
  - Pay attention to protruding items on the platform surface at all times (ex. platform lights, roll stops and their levers, foreign objects, etc…).
  - DO NOT run on the platform.

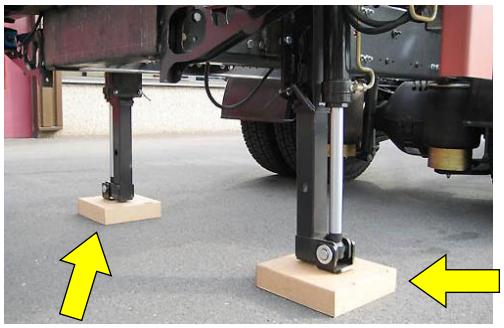
- Falling from the platform can result in serious bodily injury and death. To prevent injury by falling:

  - Make sure your footing is solid and you maintain 3 points of contact. See 7.5 from page 34 onwards.
  - Use guard rails where available. See 7.5 from page 34 onwards.
  - NEVER move the vehicle while a person is standing on the platform or inside the vehicle body.
  - NEVER use the platform as an elevated working platform, without formal risk analysis by the client's health and safety manager, and issuance of clear safe work procedures for the operators.

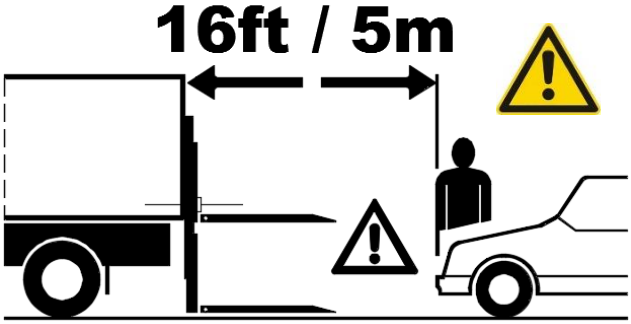
⚠ WARNING

- Prior to operating the tail lift, the vehicle must be safely parked on level and solid ground, the parking brake applied, and the engine must be switched off. Lock open the rear doors and secure all other moving parts of the vehicle body. Failure to abide by these instructions can result in serious bodily injury or death to the operator or bystanders.
- Ensure that the vehicle cannot tip-over when putting heavy weight on the platform. If the vehicle or the tail lift are equipped with mechanical or hydraulic stabilising legs, deploy these before opening the platform. Ensure that the stabilising legs are positioned on solid even ground. In case of soft terrain (sand, gravel, etc…), solid support blocks must be used under the stabilising legs. Failure to abide by these instructions can result in serious bodily injury or death to the operator or bystanders.

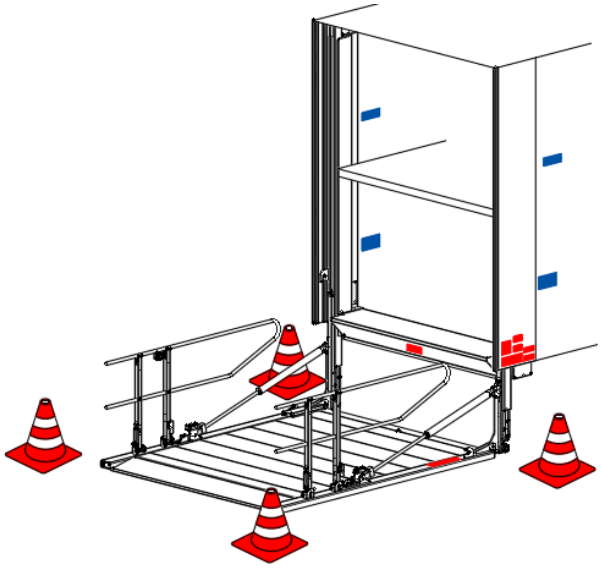




- To reduce the risk of serious bodily injury or death which may result from other vehicles when parked, ALWAYS make sure a safety distance of 16 ft. or 5 m. is kept between the back of the truck and the following vehicle.



- To reduce the risk of serious bodily injury or death, ALWAYS make sure the platform is clearly visible to other persons from all approach directions. DHOLLANDIA recommends the use of 4 warning cones, placed around the work area of the platform. [See notice below].
- To reduce the risk of serious bodily injury or death, make sure the working zone is sufficiently lighted.

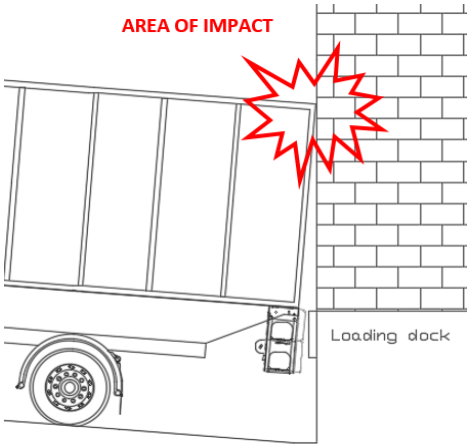


NOTICE

DHOLLANDIA offers optional platform mounted flashing lights and flags to make the platform more visible to other people. Please visit www.dhollandia.com or contact the national DHOLLANDIA distributor for more information. See page 3 for contact info.

⚠ WARNING

- When loading or unloading at a loading dock, make sure to not hit the wall with the body / tail lift. Failure to abide by these instructions can result in material damage, serious bodily injury or death to the operator or bystanders.

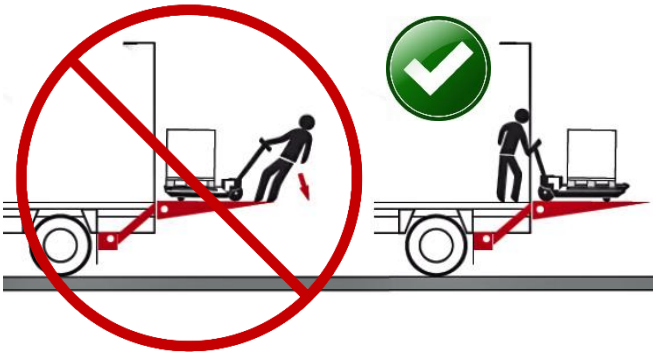


- Prior to releasing the mechanical platform lock (if so equipped) and using the tail lift, check if the tail lift can be used safely. Take precautions to ensure your own safety, and the safety of bystanders or other parties in traffic. Clear the working area of any objects that could potentially impede movement of the tail lift. Failure to abide by these instructions can result in serious bodily injury or death to the operator or bystanders.
- Inspect the tail lift prior to each use. If any unsafe condition exists or unusual noises or movements are noticed, DO NOT use the tail lift and contact an authorized DHOLLANDIA service agent for repair. Please see 'pre-trip inspection' procedures under 7.7 from page 40 onwards.
- Read and comply with all warning decals, pictograms and instructions affixed to the tail lift. Failure to abide by warnings and instructions may result in serious bodily injury or death.
- The tail lift must not be used if the operator is intoxicated, impaired or distracted in any way. NEVER use a phone or mobile device when operating the tail lift.
- The tail lift shall be used by means of original control units only. Operating the tail lift with unauthorized control units will increase risk of serious bodily injury or death to the operator or any bystanders.
- Limit the operation of the tail lift to one single operator. Operation of the tail lift by more than one operator at a time may cause confusion and increase the risk of serious bodily injury or death.
- To prevent people from being hit by the platform, by objects falling off the platform or being caught in pinch points or being pinched by the moving parts of the tail lift:

→ Keep visual control over the entire working area of the tail lift and its platform at all times, including the area DIRECTLY BEHIND and UNDER the platform.

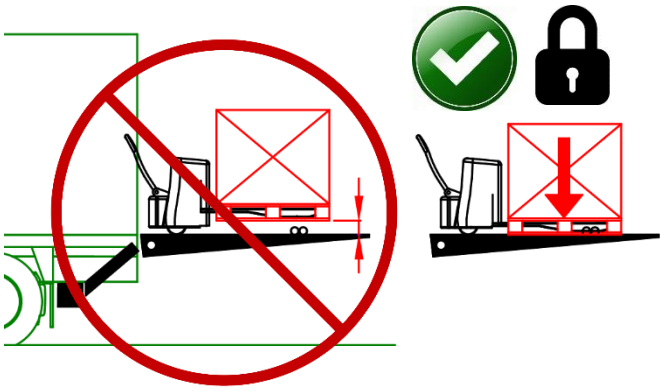
→ DO NOT allow any other person, to stand in the proximity of the tail lift and its platform. ENSURE AT ALL TIMES THAT NOBODY STANDS UNDER OR WITHIN REACH OF THE MOVING PLATFORM.

- When unloading from the vehicle body to the platform, ALWAYS push the load out, to prevent the load from hitting you. NEVER pull the load from the vehicle onto the platform. Pulling the load from the vehicle can result in a fall from the platform causing serious injury or death.
- If pushed out too far, the load can fall off the platform, and cause serious bodily injury or death to other people. Deploy the roll stops before pushing out the load. If not available, push the load slowly while checking the outboard platform edges.
- The load must ALWAYS be secured when raising or lowering on the tail lift, to prevent it from shifting position and rolling off the platform edges. Failure to properly secure the load will increase the risk of serious bodily injury or death to the operator or any bystanders.



⚠ WARNING

- When using a pallet jack, lower and rest the pallet or load upon the platform surface before operating the tail lift.
- For loads on wheels, engage wheel brakes of carts, trolleys and machinery (if available) before operating the tail lift.
- For loads that could slip, the use of original DHOLLANDIA roll stops or an appropriate alternative securement device (ex. ratchet straps) is required. The load must not be able to move during movement of the platform. See 9.9 from page 68 onwards for correct use of original DHOLLANDIA roll stops.



- NEVER leave the tail lift unattended in open position. Before leaving the vehicle unattended, close the doors of the vehicle, stow the platform in its travel position and switch OFF the main battery disconnect switch in the external control box (if so equipped), or the cab switch. Leaving the tail lift in open position unattended can result in serious bodily injury or death to unaware bystanders. See 9.5 - 9.7 from page 55 onwards for instructions on properly stowing platform into its travel position.
- Unless this instruction could cause other important risks, NEVER move the vehicle with the tail lift in the open position. ALWAYS close and secure the doors of the vehicle, stow the tail lift in its travel position and switch OFF the main battery disconnect switch in the external control box (if so equipped), or the cab switch, before moving the vehicle. If so equipped, close the mechanical platform lock after stowing the platform in its travel position. Failure to properly stow the tail lift in its travel position prior to moving the vehicle may result in serious bodily injury or death.
- Use of the tail lift near vehicular traffic may result in serious bodily injury or death from being struck by another vehicle. When operating the tail lift on or near a street or parking lot, be sure to stay clear of vehicular traffic. ALWAYS be sure to clearly identify to other drivers that the tail lift is in use. DHOLLANDIA recommends use of warning cones to clearly identify to drivers that the tail lift is being operated. When the tail lift is operated near vehicular traffic, wear working clothes in high-visibility colors and a retro-reflective safety vest.
- DO NOT raise the tail lift with the rear doors partially open. Doing so may damage the doors or the tail lift platform and may also result in serious bodily injury or death to the operator or any bystanders.
- Above all, USE GOOD COMMON SENSE when operating the tail lift. DO NOT operate the tail lift until the contents of this manual have been read and fully understood. Improper use of the tail lift increases the risk of serious bodily injury or death to the operator and any bystanders.

NOTICE

- The safety instructions in this manual are drawn up with an average, common use of the tail lift in mind.
- For specific applications or work conditions, other instructions might be appropriate to reach a higher level of safety. If contra-indications exist, a formal risk analysis must be performed by the client's health and safety management and safe work procedures for the drivers and operators must be issued.

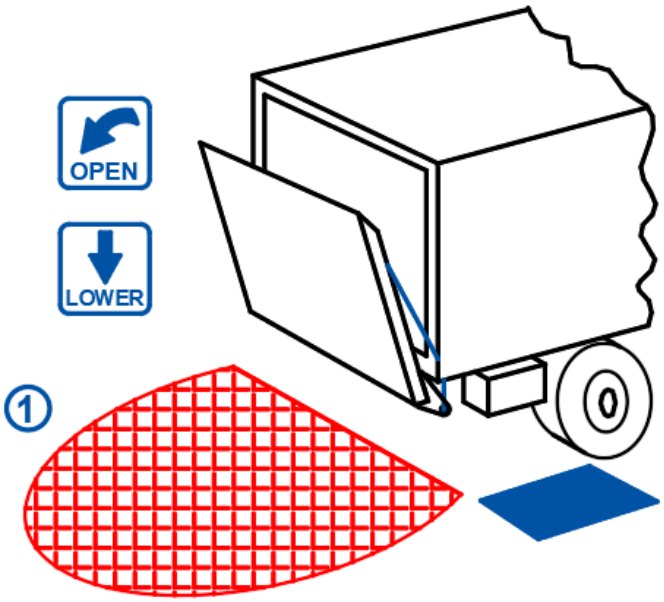
7.3 DANGER ZONES, RISK OF CRUSH AND SHEAR INJURY

- There are 4 main danger zones on and around the platform, that can be hazardous to the operator and any other persons nearby:

Correct operator position

Danger zone

1. ALWAYS stay clear of the range of motion of the platform.



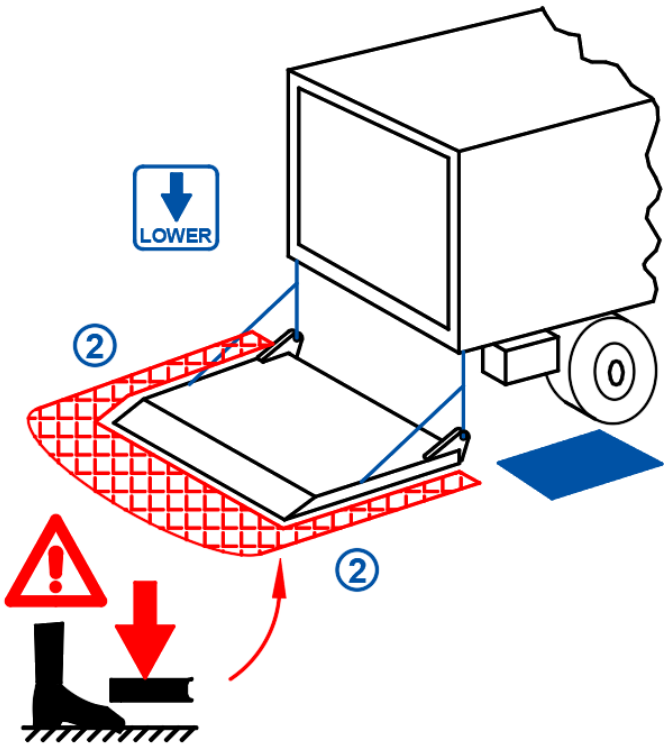
WARNING

Impact by the platform or the moving parts of the tail lift will result in serious bodily injury or death. To prevent people from being hit by the platform, by objects falling off the platform or being caught in pinch points or being pinched by the moving parts of the tail lift:

→ Keep visual control over the entire working area of the tail lift at all times, including the area directly behind and under the platform;

→ DO NOT allow any other person to stand near the tail lift and its platform. Ensure at all times that nobody stands under, or within reach of the moving platform and its load.

2. Beware of crushing zone between lowering platform and ground.



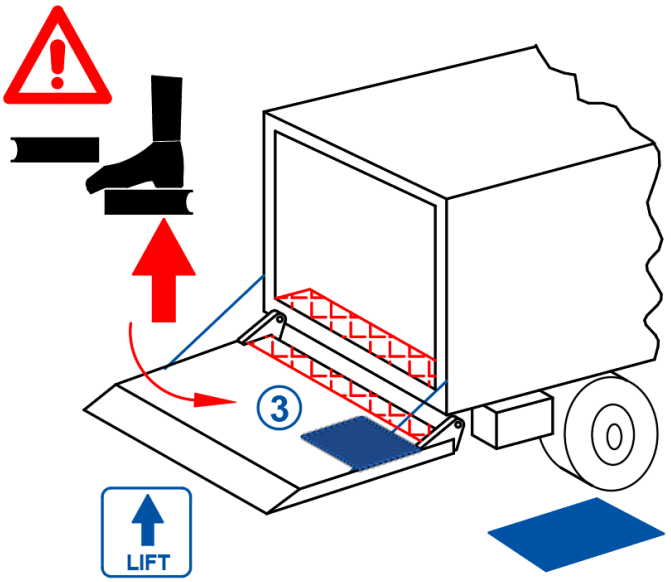
WARNING

Lowering an empty or fully loaded platform on one's feet may result in serious bodily injury. To prevent people from having their feet crushed or sheared by the lowering platform:

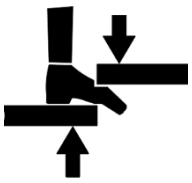
→ Keep visual control over the entire working area of the tail lift at all times, including the area directly behind and under the platform;

→ When operating the tail lift from a position on the ground, ALWAYS stand at the side of vehicle body, at a safe distance of minimum 50 cm away from the moving platform.

3. Beware of the crushing zone between rising platform and vehicle floor.

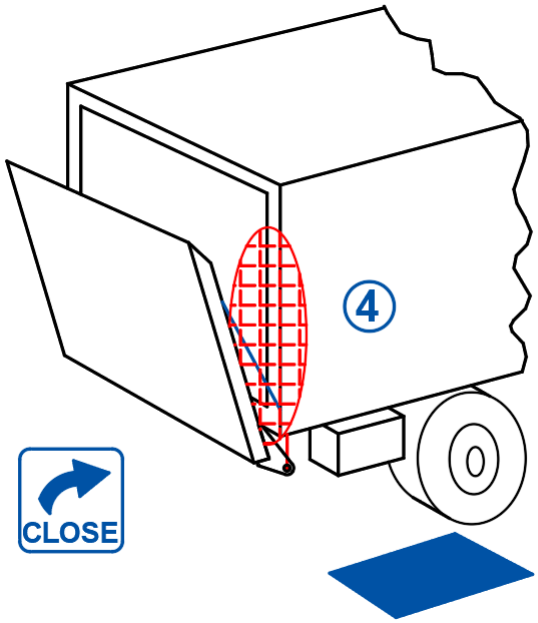


WARNING



- If the operator on the platform stands to close to the inboard platform edge, protruding toes might be crushed or sheared between the rising platform and the cylinder beam or vehicle floor. This can cause serious bodily injury.
- Therefore, when operating the tail lift from a position on the platform, ALWAYS stand at a safe distance of min. 25 cm from the inboard platform edge.
- NEVER reach over or through the platform and the moving parts of the tail lift while trying to operate the lift. ALWAYS keep your head, limbs and body clear of the moving platform and other pinch points.

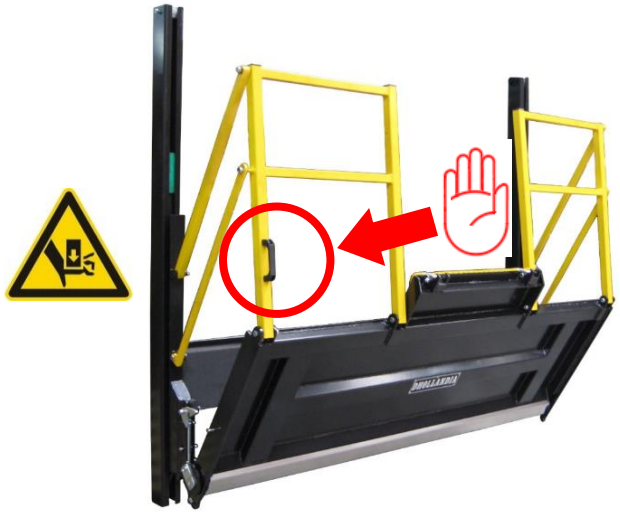
4. Beware of the crushing zone between closing platform and rear frame of vehicle body.



WARNING

- If the operator enters the zone between the closing platform and the lift columns with his head, upper body or limbs, protruding body parts may be hit, crushed or sheared by the closing platform. This will cause serious bodily injury or death.
- Therefore, while stowing the platform in its travel position, ALWAYS stand with both feet on the ground on a free-standing, safe operator position at the side of the body and ALWAYS keep head, limbs and upper body clear of hazardous space between the platform and the lift columns.
- NEVER reach over or through the platform and the moving parts of the tail lift while trying to operate the lift. ALWAYS keep your head, limbs and body clear of the moving platform and other pinch points.

In case of platforms equipped with manual closure and automatically folding guard rails (sides only), or gas-bottle execution (sides + rear), make sure you use the grab handle on the guard rail to open and close the platform.

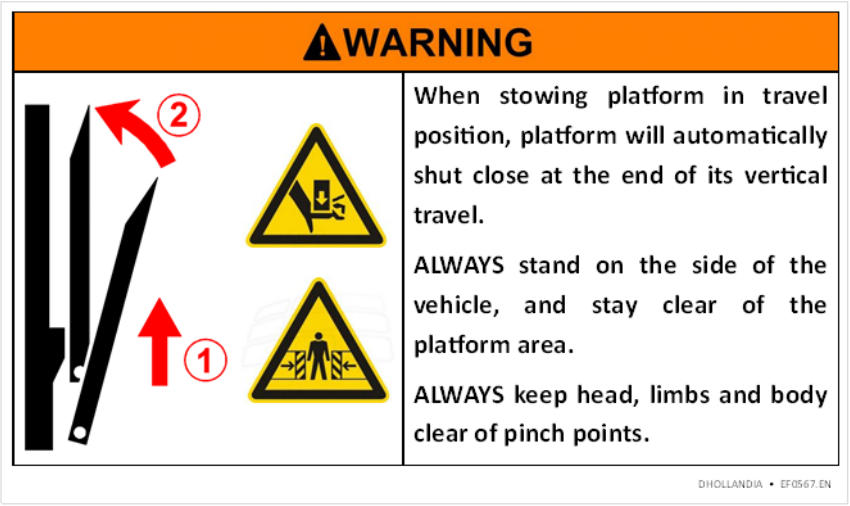


⚠ WARNING

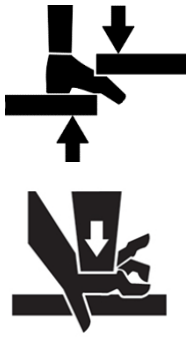
- Opening and closing of the platform by holding the steel members of automatically folding guard rails can crush the operator's hands between the moving elements of the guard rail.
- To avoid bodily injury, always use the grab handle to manually open or close the platform and its guard rails, and beware of pinch points at all times.

Most column lifts are equipped with a device that shut closes the platform tight against the lift columns, after it was tilted in the vertical position and while it is lifted in its travel position.

Therefore, the operator MUST stand on the side of the platform and keep head, limbs and upper body clear of hazardous space between the platform and the lift columns, while stowing the platform in its travel position.



⚠ WARNING



The operator or other persons approaching too close to these danger zones risk serious bodily injury or death by pinching, crushing or shearing of limbs, upper body or head. To prevent these hazards:

→ ALWAYS stand clear of the range of motion of the platform and moving parts of the tail lift;

→ Keep hands, feet and upper body clear of pinch points and moving parts of the tail lift;

→ DO NOT allow any other person to stand near the tail lift and its platform.

7.4 ADDITIONAL RISKS OF LIFTING ABOVE THE VEHICLE FLOOR LEVEL

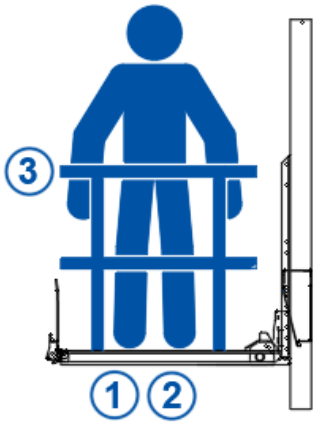
- The tail lift's capacity to travel above the vehicle floor level can cause additional risks that must be taken into account by the operator while using the tail lift. ALWAYS pay special attention to the following issues.

7.4.1 Risk of falling

- Multi-deck lifts usually travel up to a much higher distance above the ground than conventional tail lifts. The potential consequences of an accidental fall aggravate with the increased lifting height. Falling from heights can cause serious bodily injury or death.
- Tail lifts lifting higher than 2 m above the ground MUST be equipped with guard rails along the exposed edges of the platform. For tail lifts with a lower range, DHOLLANDIA still recommends that guard rails be used to mitigate the risk of falling.
- Guard rails may be purchased along with your tail lift at the initial order, or may be purchased and retrofitted to your tail lift later. Please see www.dhollandia.com for further information or contact your national DHOLLANDIA distributor. See page 3 for contact info.

⚠ WARNING

- Falling from heights can cause serious bodily injury or death.
- To prevent injury or death by falling from the platform:
  - → ALWAYS make sure your footing is solid;
  - → ALWAYS hold onto the guard rails;
  - → ALWAYS maintain 3 points of contact.

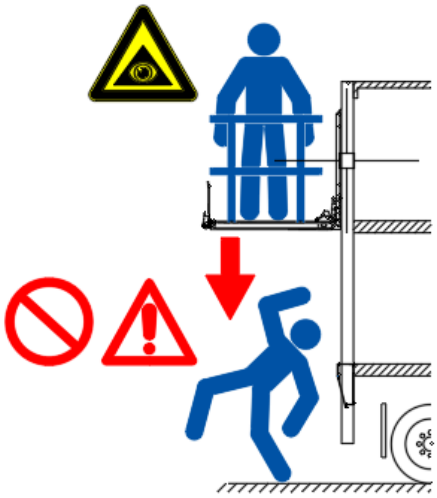


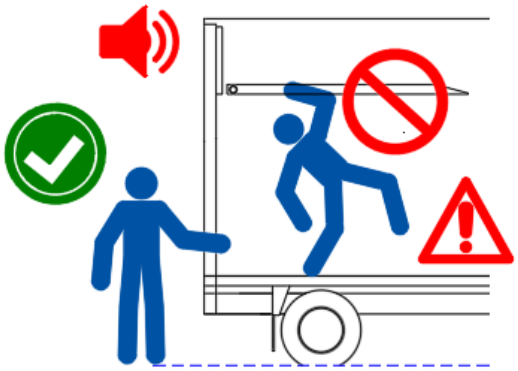
7.4.2 Risk of other persons standing under the platform

- Multi-deck lifts usually travel up to a much higher distance above the ground than conventional tail lifts. Therefore, there is a greater risk that somebody could stand under the platform while the platform is situated high above the ground. Lowering the platform onto a person will cause serious bodily injury or death.
- Tail lifts lifting higher than 2 m above ground level MUST be equipped with a sound alarm, activated whenever the platform is lowered.
- For internal lifts or the internal platforms of combined external + internal lifts, loading and unloading MUST be restricted to one single person to avoid that other persons stand or walk below the platform while the operator is using the internal platform.

⚠ WARNING

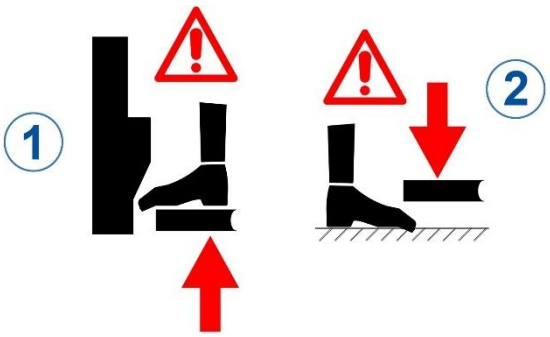
- If platform is lowered onto a person, this will cause serious bodily injury or death.
- To prevent bodily injury or death by a platform lowering onto a person:
  - → NEVER allow any other person to come near the working area of the tail lift and its platform.
  - → ALWAYS keep visual control over the entire working area of the tail lift and its platform.
  - → For internal platforms, NEVER allow any other person inside the vehicle body when using the tail lift.
  - → Before lowering, ALWAYS inspect the area UNDER and BEHIND the platform.





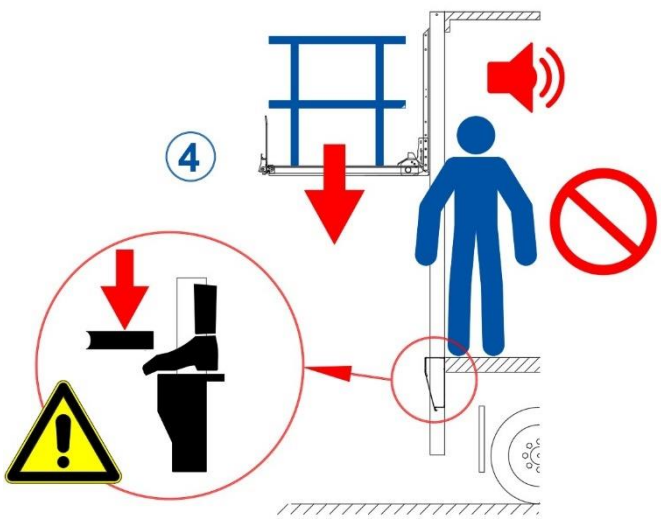
7.4.3 Risk of crushing and shearing

- For all brands and types of tail lifts, there is risks of crushing and shearing toes and feet between:
  1. the rising platform and the vehicle floor (see 1 on right side),
  2. or between the lowering platform and the ground (see 2 on right side).
- The operator must ALWAYS stand on a safe operator position while using the tail lift. See also 7.3 from page 26 onwards and 7.5 from page 34 onwards.
- Additional risk exists on multi-deck lifts for any person standing inside the vehicle body, or present in the scissor zone between the moving platform and the vehicle floor.
- Any person caught and crushed between the moving platform and the vehicle floor will suffer seriously injury or death (see 3 below).
- Any person standing inside the vehicle body, with feet protruding beyond the outboard edge of the vehicle floor, will suffer severe crushing and shearing of his feet or toes by a platform travelling down from a higher position. This can result in serious bodily injury (see 4 on right side and below).

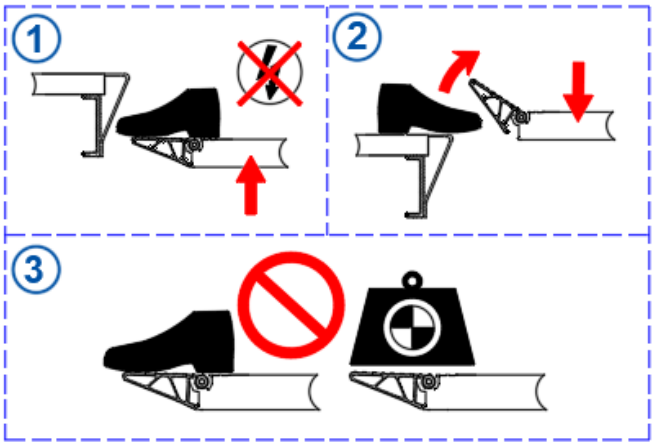


⚠ WARNING

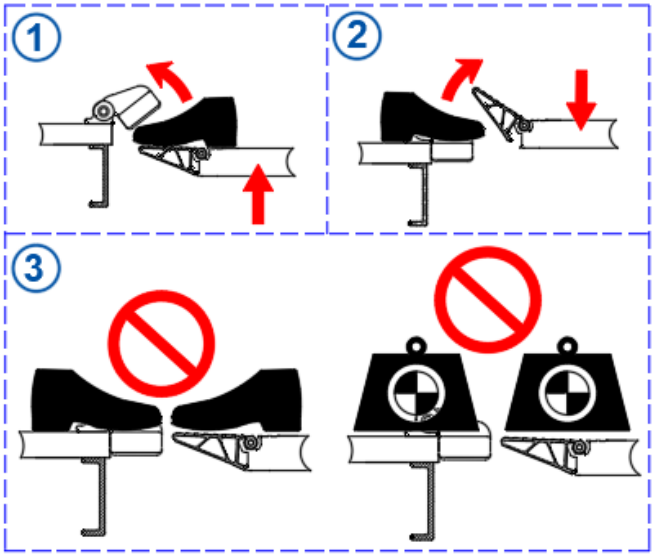
- Any person standing on the platform or inside the vehicle body, too close to the inboard platform edge, risks being crushed or sheared between the moving platform and the vehicle floor. This can result in serious bodily injury or death.
- To prevent injury or death by crushing or shearing:
  - → When standing on the platform, ALWAYS stand at a safe distance of min. 25 cm from the inboard platform edge;
  - → When standing inside the vehicle body, ALWAYS stand at a safe distance of min. 25 cm from the outboard edge of the vehicle floor;
  - → NEVER step in or out of the vehicle body while the platform is in motion.
  - → Before moving the platform, ALWAYS inspect the area UNDER and AROUND the platform.



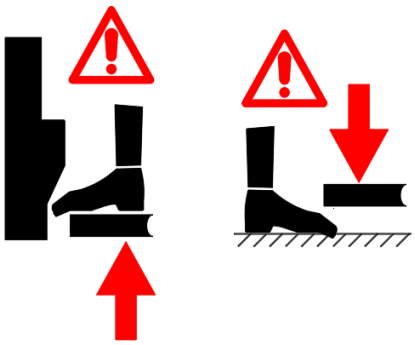
- Unless specified differently by the client, the external column lifts DH-VO* / VB* / VX* are equipped with a toe-guard flap with toe-guard switch [ref. OVP401] where possible.
    1. For the operator on the platform, this flap stops the LIFT movement if a person or an object stands on the flap. It prevents that his feet are crushed between the raising platform and the cylinder beam, vehicle floor or roof.
    2. For the operation standing inside the vehicle, this flap tilts up when hitting the operator's foot. It prevents his feet from being crushed between the lowering platform and the cylinder beam or vehicle floor.
    3. This toe-guard flap is a safety device. NEVER stand on it or place load on it.



- As alternative, the platform and the subsequent vehicle floors may be equipped with a hinged toe-guard flap [ref. OVP403 / 404].
    1. For the operator on the platform, the flap attached to the vehicle floor tilts up when hitting the operator's feet on the platform. It prevents his feet from being crushed between the raising platform and the cylinder beam or vehicle floor.
    2. For the operator standing inside the vehicle, the flap attached to the platform tilts up when hitting the operator's feet on the vehicle floor. It prevents his feet from being crushed between the lowering platform and the cylinder beam or vehicle floor.
    3. This toe-guard flap is a safety device. NEVER stand on it or place load on it.



⚠ WARNING

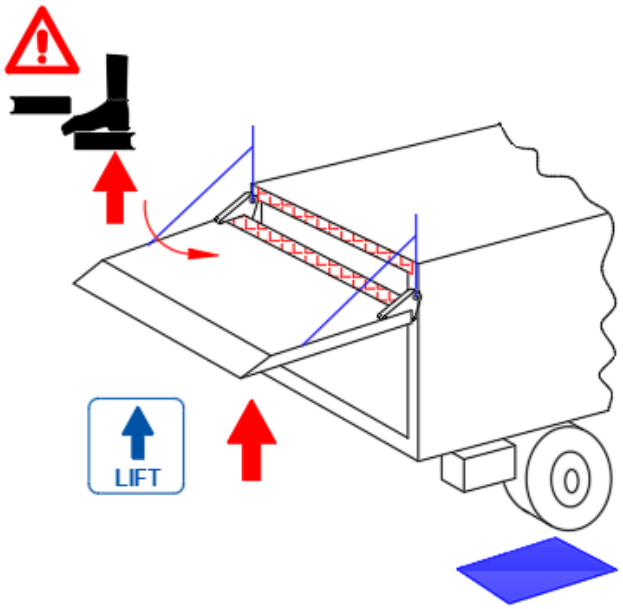


- The requirement to ALWAYS stand clear of the moving platform and the floors or roof of the vehicle applies to all multi-deck lifts.
- This requirement applies to DH-VH* fully hydraulic lifts IN A CRITICAL WAY. Aforementioned toe-guard solutions cannot be adopted equally for all custom-built multi-deck vehicles with extreme deck heights. See note below.

- Note on DH-VH*: where possible, the vehicle manufacturer MUST install alternative safety systems, such as infrared or equivalent safety fences. A formal risk analysis MUST be made by the vehicle manufacturer and the client's health and safety manager, and clear safe work instructions for the driver and operators must be issued.

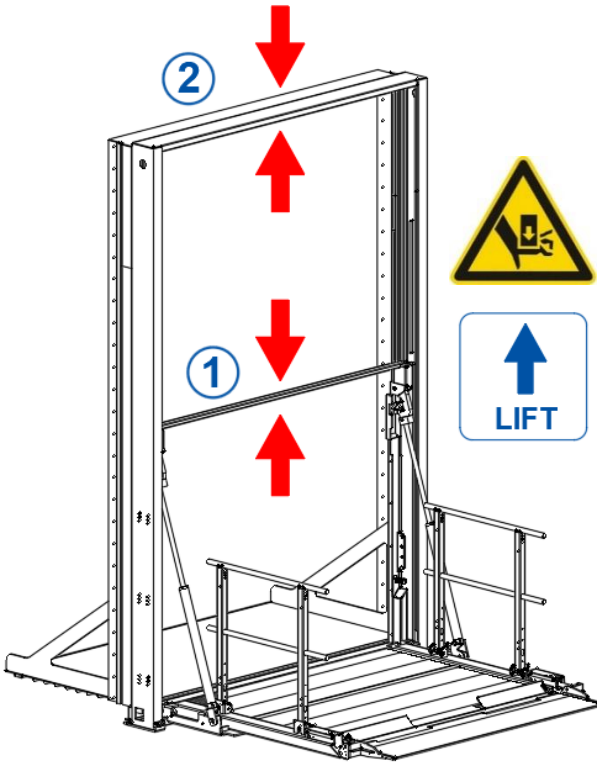
7.4.4 At the vehicle roof

- The risk of crushing and shearing is not only prevalent between the moving platform and the various floors, but also applies at roof level.
- Therefore, also at roof level the safety precautions of chapter 7 must be strictly followed.



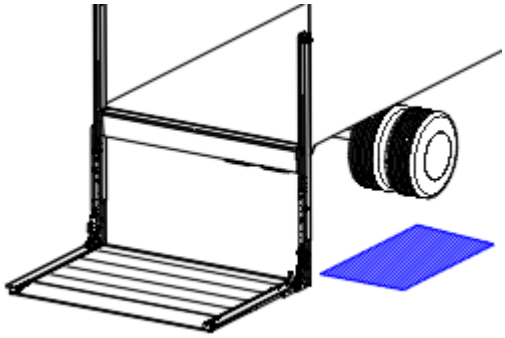
7.4.5 Special attention for overhead cross tube between the lift runners

- Certain column lifts (e.g. DH-VH*) are equipped with a cross tube [1] mounted between the left and right side lift runners.
- When moving up and down, this cross tube [1] can come in hard contact with overhead cross member [2] or roof, or even encroach into it.
- Therefore, any person laying his hand(s) on this cross tube while LIFTING, risks crushing his hands between the rising cross tube and overhead cross member or vehicle roof.

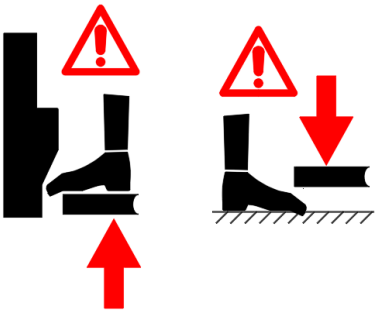


⚠ WARNING	
	• For lift runners equipped with a cross tube, resting the operator's hand on this cross-tube can lead to serious hand injuries when moving the platform up and down. • To avoid this risk, NEVER use this cross-tube as a handhold or as a 3rd point of contact. • ALWAYS make sure your footing is stable, and hold any free hands onto the dedicated guard rail.

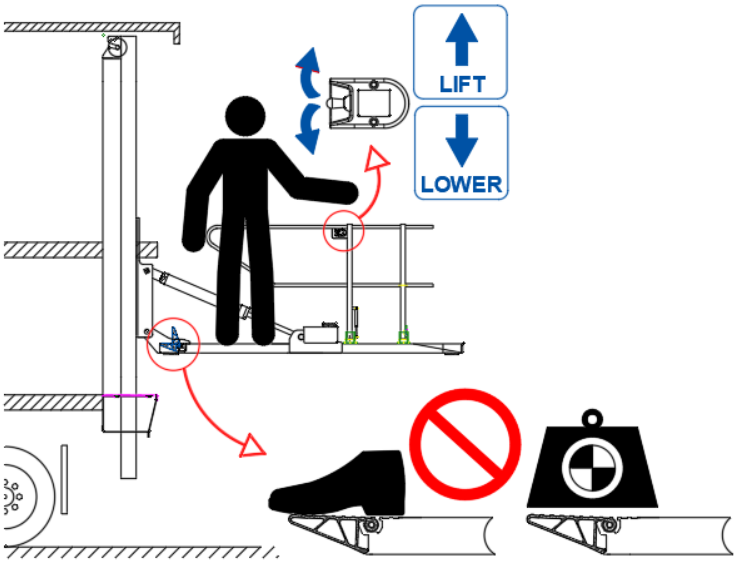
7.5 SAFE OPERATOR POSITION



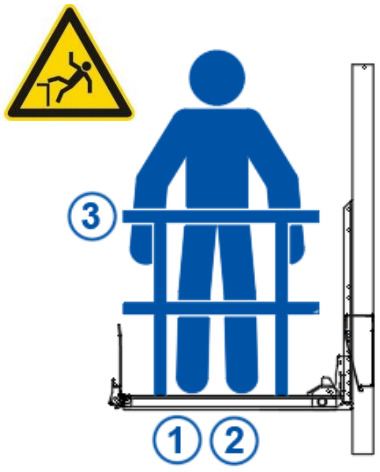
- The instructions on safe operator position aim to enforce that the operator stands in a safe position before and while operating the tail lift, and protect him against the risks of crushing and sheering as described in section 7.3 from page 26 onwards.
- **Main external control box**: the zone just in front of the side-mounted external control box, is the only position from where the operator can safely OPEN and CLOSE the platform. It is also safe to LOWER and LIFT the platform from this position.
- **Auxiliary controls**: the operator may also lower and lift the platform through use of the auxiliary controls. The operator must use **extreme caution** when lowering or lifting the platform with the auxiliary controls and must ensure it is done from a safe position. Use of auxiliary controls from an improper position greatly increases the operator's risk of crushing or shearing of toes, limbs, head, and upper body as well as death. See 7.3-7.5.from page 26 onwards.



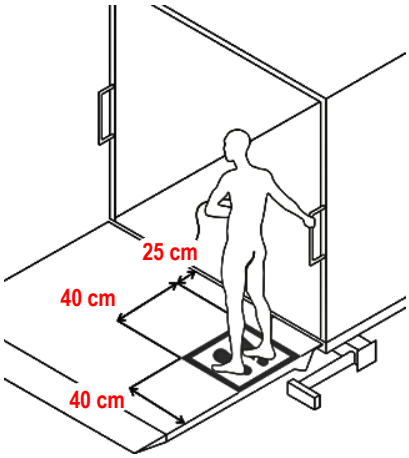
- Depending on options chosen, the guard rails on the platform may be equipped with integrated auxiliary controls for LIFT / LOWER.
- This set-up keeps the operator's feet at a safe distance from the crushing zone at the inboard platform edge, and encourages him to use the guard-rail as a means for his personal protection.
- While travelling on the platform, the operator must ALWAYS observe the safety precautions below.



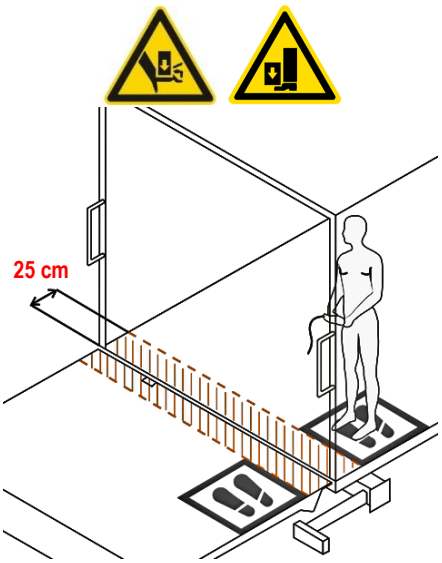
⚠ WARNING	
	• If not standing solidly, the operator could fall off the platform and suffer sever bodily injury or death. • While riding on the platform, ALWAYS make sure your footing is solid, and ALWAYS maintain 3 points of contact, as shown on the image on the right.
	• When reaching out your hand for a 3rd point of contact, ALWAYS stay clear of the open lift columns and the moving lift runner, chains or cables, and pulleys. • ALWAYS hold onto the guard rails as a 3rd point of.



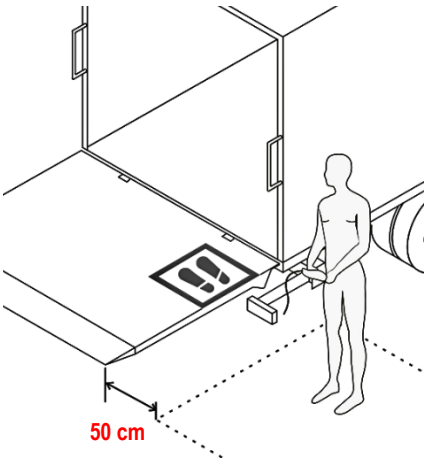
- If handheld auxiliary controls with a spiral cable are used, the following conditions must be met (1):



On the platform, from a safe operator position of minimum 40 x 40 cm square, clearly and permanently marked at minimum 25 cm distance from the hazard zone between the platform and the rear of the vehicle floor. Maintain 3 points of contact (see above).



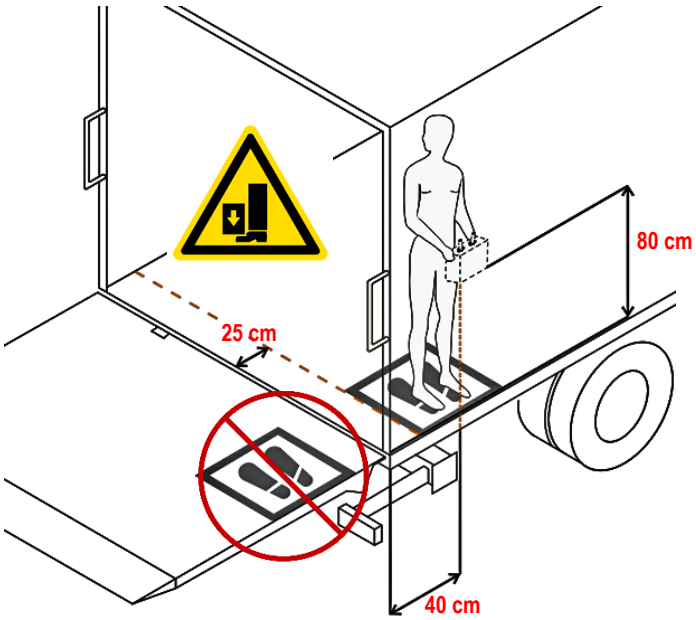
Inside the vehicle body, from a safe operator position of minimum 40 x 40 cm square, clearly and permanently marked at minimum 25 cm distance from the hazard zone between the platform and the rear of the vehicle floor.



On the ground, from a safe operator position minimum 50 cm away from the side edge of the platform.

(1) Remark: The CE standard EN1756-1 suggests a number of other, less usual solutions providing sufficient protection against crushing and sheering of the toes and feet, such as a hinged foot protector or cut-out switch. Consult the latest edition of DHOLLANDIA's fitting instructions FIT-ELEC-OPTION or contact your national DHOLLANDIA dealer for more information. See page 3 for contact info.

- A fixed internal control should only be used inside the vehicle body from a safe operator position that is a minimum 40 x 40 cm square, clearly and permanently marked at a minimum of 25 cm from the hazard zone between the platform and the rear of the vehicle floor (see above). A fixed internal control should NEVER be used from a position on the platform.
- The marked operator positions on the platform must be kept clear at all times. It is prohibited to place a load on these dedicated areas.



- The power to any of the auxiliary controls (hand held controls or platform mounted foot controls) must be connected to and dependent upon the safety switch in the main external control box. Activation of the auxiliary controls must deactivate the functions on the external control box.
- It is prohibited to bypass or modify any of the safety features of the tail lift. If activation of the external control box does not deactivate the auxiliary controls, stop using the tail lift, and contact an authorized DHOLLANDIA agent to rectify.

⚠ WARNING

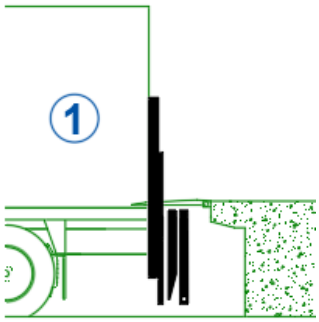
- When standing in front or behind the load, the operator risks being pushed off the platform, or being crushed between the moving load and the rear frame of the vehicle body, resulting in serious bodily injury or death.
- To prevent this hazard, ALWAYS stand on the side of the load, NEVER in front or behind.

7.6 INSTRUCTIONS FOR WORKING AT LOADING DOCKS

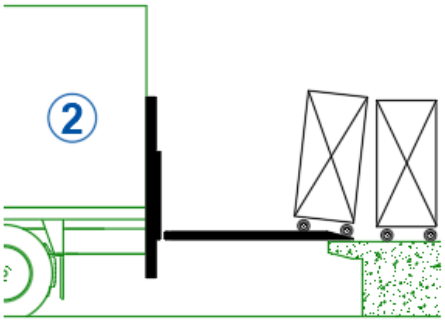
⚠ WARNING

- Improper use of the tail lift may result in damage, premature wear or failure of the tail lift, and will increase the risk of serious injury or death to the operator and other persons nearby.
- In order to maximize the durability, ensure long-term reliability of the tail lift, and protect operators and bystanders from serious bodily injury or death, the operator must comply with the loading instructions and safe working procedures below.

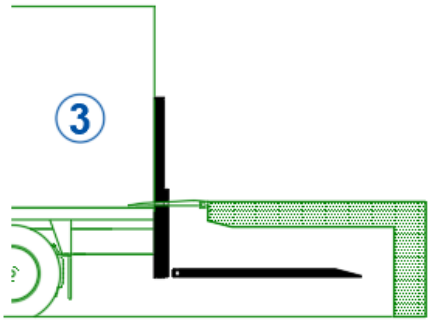
- There are 3 main ways of handling a column lift at the loading docks: Restrictions and precautions do apply. See below.



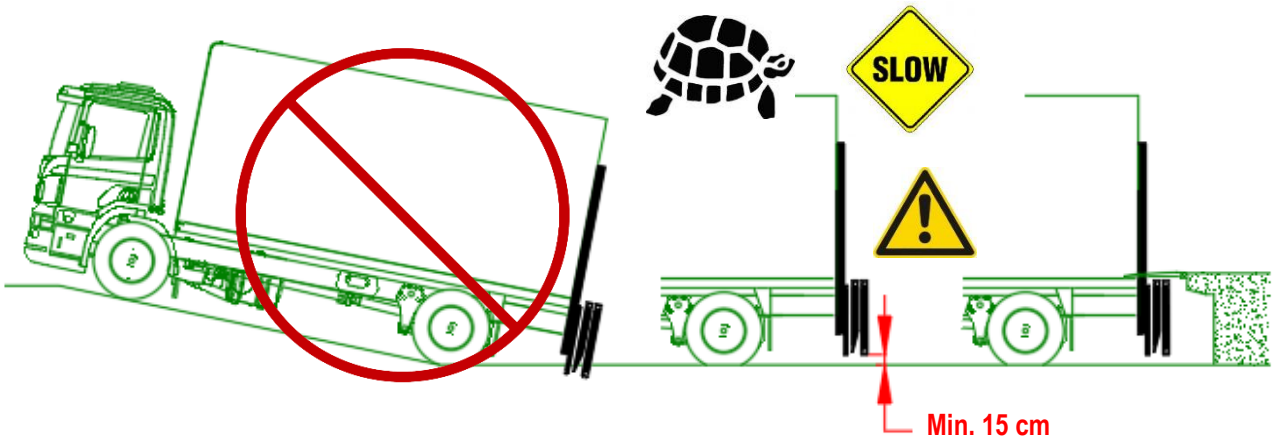
1. Platform lowered below the vehicle floor level. All cargo is loaded / unloaded over a dock plate that links the dock and the vehicle floor.



2. Platform is used as a loading platform; or as a bridge plate (in case of optional tilt cylinders).



3. Platform is hidden in a pocket or briefcase under the loading dock. All cargo is loaded / unloaded over a dock plate that links the dock and the vehicle floor.

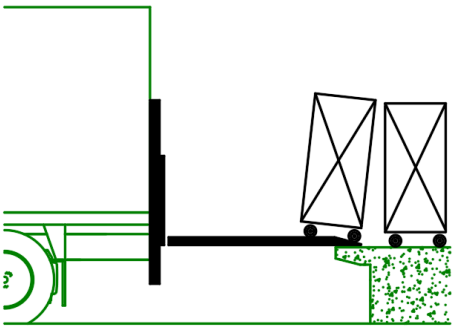


1. When the intention is to dock with the platform lowered below the vehicle floor level, DO NOT lower the platform until the vehicle is standing on flat even ground. ALWAYS revers slowly, and make sure you maintain sufficient ground clearance between the lowest part of the tail lift and the ground. Take into account variations in the suspension and vehicle height.

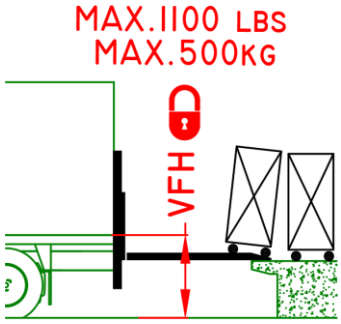
NOTICE

- When reversing a vehicle with column lift into a loading dock, ALWAYS make sure there is sufficient ground clearance between the lowest part of the tail lift and the ground.
- ALWAYS reverse slowly, and avoid hard dock impact on the tail lift.
- Reversing with insufficient ground clearance, or with too hard dock impact may result in severe damage to the tail lift.

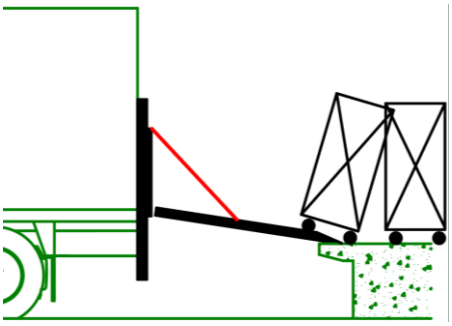
2. When the intention is to use the platform as a loading platform or bridge plate, the following instructions apply:



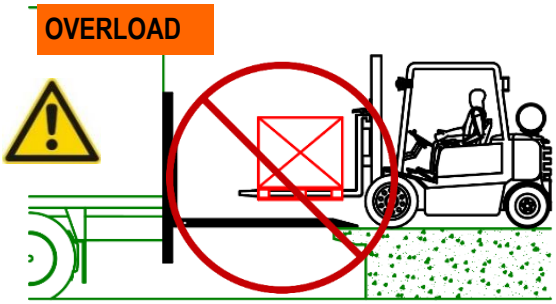
The tail lift can only be used as a loading platform if the dock is lower than the vehicle floor.



Unless the vehicle suspension can be blocked and the floor maintained at the original vfh, the max. load transferred over the platform should not exceed 1100 lbs / 500 kg. Exception: column lifts with 2 tilt cylinders [option OVH011].

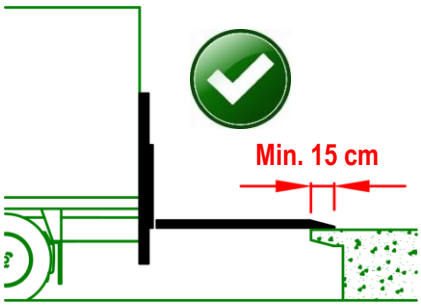


The tail lift can be used as a bridge plate, if it is equipped with the optional tilt cylinders with adjustable platform orientation [option OVH011].

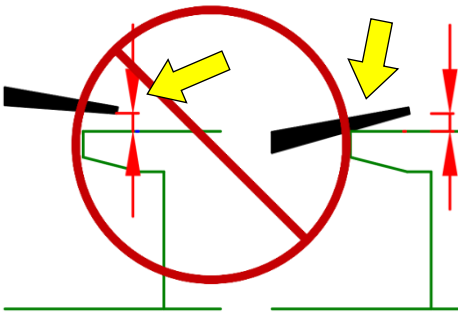


It is forbidden to drive forklifts or heavy electric pallet jacks over the platform.

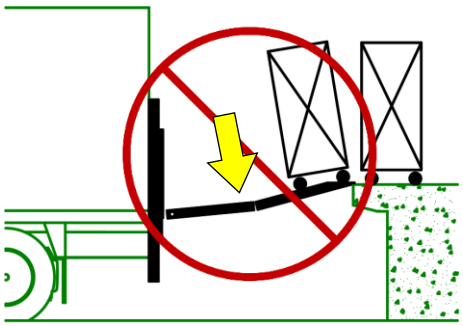
The total weight of the load and the lifting device must not exceed the maximum rated capacity of the tail lift. Beware not to overload!



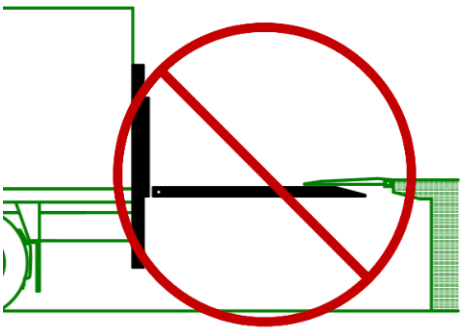
A minimum section of 15 cm of the outboard platform edge must rest on the loading dock.



While loading or unloading, the loading floor of the vehicle might lower or rise relative to the loading dock. Use the electrical controls to adjust the platform position flush with the loading dock surface.



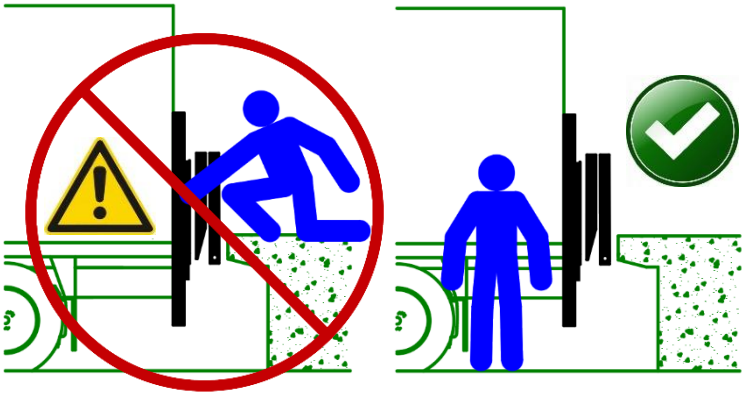
NEVER use a foldable platform as a bridge plate between the vehicle floor and a loading dock.



NEVER use a dock plate on top of a floating platform as a bridge plate between the loading dock and the vehicle floor.

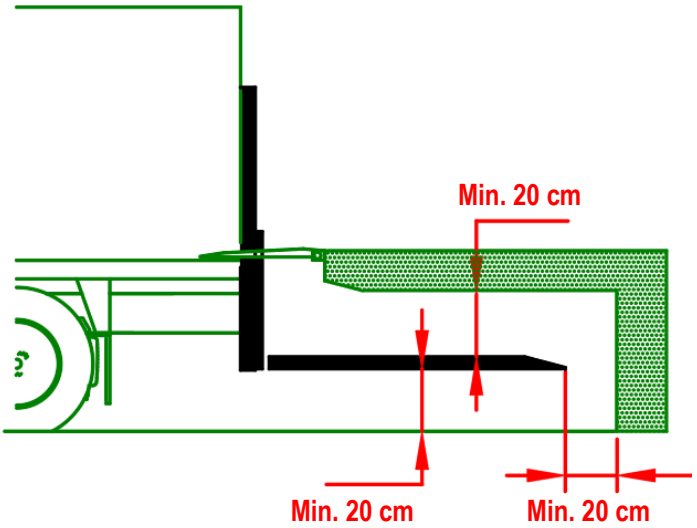
⚠ WARNING

- ALWAYS stand with both feet on the ground on safe operator position at the side of the body when operating the external control box (see also 7.5 from page 34 onwards) or the platform locks. NEVER operate the external control box or the platform locks from an elevated position, such as the platform or a loading dock.
- NEVER reach over or through the platform and the moving parts of the tail lift while trying to operate the tail lift. ALWAYS keep your head, limbs and body clear of the moving platform and other pinch points.

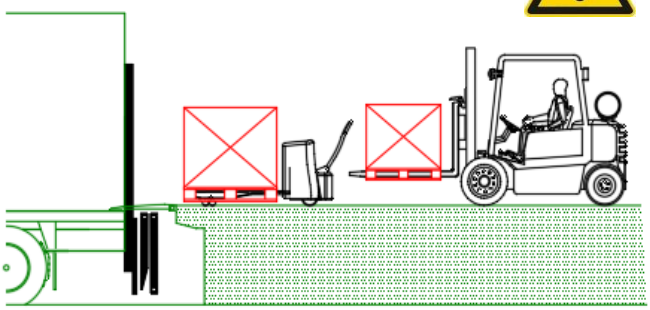


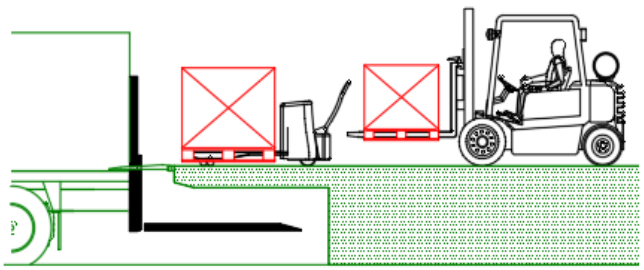
3. When the intention is to stow the platform in a pocket or brief case under the loading dock, observe following points before reversing into the dock:

- Make sure the pocket is deep enough for the depth of the platform.
- Make sure there is sufficient clearance above and below the platform, taking into account all possible variations in vehicle suspension and vehicle floor height.
- Make sure the platform does not touch the ceiling, ground or end wall of the pocket.



CLEARANCE !

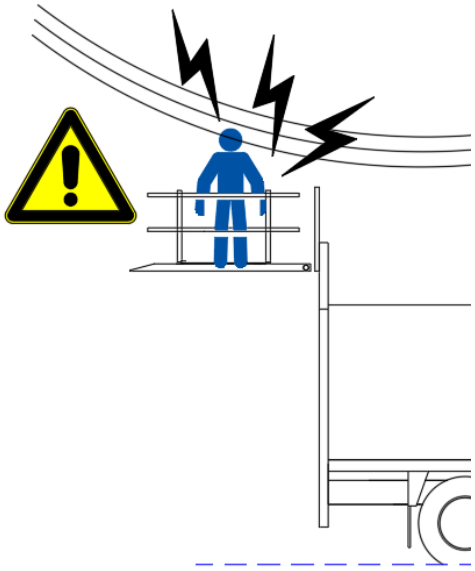




- Whenever cargo is loaded or offloaded with forklifts, electric pallet jacks, and the total weight of the load plus handling equipment exceeds the maximum rated capacity of the tail lift, ALWAYS use a dock plate from the loading dock to the vehicle floor, and safely stow the lift below the vehicle floor level, or in the pocket or brief case under the loading dock.

7.7 ELECTROCUTION HAZARDS

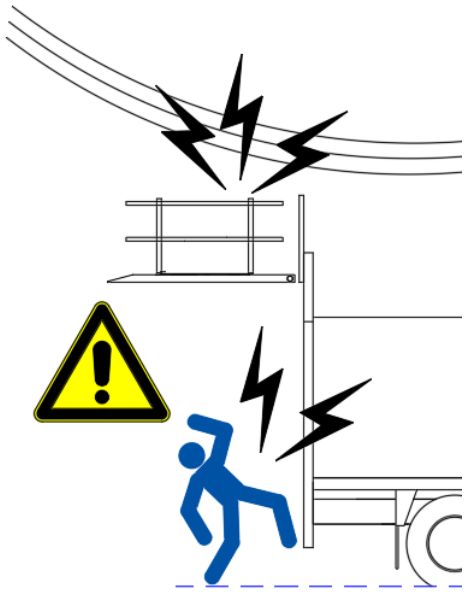
WARNING



- This machine is not electrically insulated and will not provide protection from contact with or proximity to electrical current.
- Obey all local and governmental regulations regarding required clearances from electrical power lines.
- In absence of other instructions, ALWAYS observe the following minimum safe distance requirements:

Line Voltage	Required Clearance
0 to 50KV	3.05m
50 to 200KV	4.60m
200 to 350KV	6.10m
350 to 500KV	7.62m
500 to 750KV	10.67m
750 to 1000KV	13.72m

- Improper use of the tail lift and negligence of these safety warnings, will put the operator and other parties at great risk of serious bodily injury and death.



- ALWAYS take into account the possible movement of the platform, sway or sag of the electrical lines, and beware of strong or gusty winds.
- ALWAYS keep away from the tail lift if it or the vehicle is in contact with the energized power lines. Personnel on the ground or on the platform must NEVER touch or operate the tail lift until the energized power lines are shut off.
- DO NOT operate the tail lift during lighting or storms
- DO NOT use the tail lift as a ground for welding.
- Improper use of the tail lift and negligence of these safety warnings, will put the operator and other parties at great risk of serious bodily injury and death.

7.8 RECOMMENDED DAILY PRE-TRIP INSPECTION

⚠ WARNING

- Using a tail lift that is damaged or improperly serviced can put the operator and bystanders at great risk of serious bodily injury and death.
- To avoid this risk, inspect the tail lift prior to the first use of each day. Ensure that all safety systems and all functions operate correctly, and that no maintenance or repair is required.
- If any unsafe condition exists or unusual noises or movements are noticed, DO NOT use the tail lift, and contact an authorized DHOLLANDIA agent. [see Notice].
- DO NOT cover up any accidents or damage; it can be dangerous to you, your co-workers, and other persons.

NOTICE

Authorized DHOLLANDIA service agents may be found at www.dhollandia.com or by calling your regional DHOLLANDIA distributor. See page 3 for contact info.

Before operating the tail lift, the operator must conduct the following daily pre-trip inspection. Use caution: stay clear of the area directly behind the platform while conducting the daily pre-trip inspection.

☐ Replace missing, worn or illegible warning decals immediately. See page 3 for contact info.

☐ Make sure the cabin switch and / or main battery disconnect switch in the control box switch on and off accordingly.

☐ Make sure the battery is fully charged, the main fuse is in good condition, and battery terminal connections are corrosion-free and tight.

☐ Check the overall condition of the main external control box and its switches. Confirm that all switches (except the ON / OFF cabin switch) swiftly return to the neutral position after releasing them.

☐ Check the overall condition of the cables entering the various control units, and of the cables to the pump unit. Make sure cables are not chafed, loose or damaged.

☐ Ensure the cover of the pump unit is properly installed and secured.

☐ Check the pump unit for visible oil leaks.

☐ Check if the platform is standing tight and straight between the columns (no cables, chains or pulleys damaged).

Follow the instructions in section 9 from page 47 onwards to open and lower the platform to the ground, and continue the checks:

☐ Visually inspect the general condition of the lift frame, lift runners, the mounting bolts or welds to the rear frame of the vehicle body, and diagonal braces supporting the underside of the columns. Look for cracks or deformation in the material and welds. Make sure the bolts of the columns to the rear frame are tightened

☐ Visually inspect the columns and lift runners. Visually inspect that main cables or chains are under tension and the platform hangs level with the vehicle floor. Visually inspect that cables don't look damaged or unravelled. Make sure the inside of the columns is free of sand, dirt or debris.

☐ Make sure all pivot pins are properly locked and secured.

☐ Visually inspect the general condition of the platform, the stow locks, and the folding or slide-out ramps (if so equipped). Look for cracks or deformation in the material and welds. If so equipped, make sure the platform-mounted options function correctly (roll stops, roll stop ramps, foot controls, flashing warning lights, etc.).

- ☐ Check the general condition and operation of the guard rails and their controls. Look for cracks or deformation in the material and welds. Ensure they remain locked in the raised position after deployment.
- ☐ Check the general condition and operation of the toe-guard flap at the inboard platform edge. Make sure it can tilt up and down freely. Verify, without creating hazardous situations, that the LIFT function is interrupted when the flap is pushed down.
- ☐ Visually inspect the cable and hydraulic hose loom between the lift runners and the platform. Make sure the cables and hoses are not chafed, loose or damaged.
- ☐ For lifts with manual closure: check the operation and overall condition of the platform lock. After lowering the platform down from its travel position, it should not be possible to pull the platform open by more than 10° without disengaging the platform lock.
- ☐ For lifts with manual closure: Check the operation and overall condition of the torsion bars. The platform can be manually opened and closed without excessive effort.
- ☐ Check the overall condition of the auxiliary controls and their switches. Confirm that all switches swiftly return to the neutral position after releasing them. In case of a handheld control with spiral cable, inspect the spiral cable for wear or damage.
- ☐ Make sure safe operator position and center point of maximum load are clearly marked on the platform.
- ☐ Make sure the platform surface is clean and can be accessed safely. Remove any snow, mud, dirt, debris, or slippery liquids. Make sure you wear safety-toe shoes with a good non-slip sole.
- ☐ Check the cylinder beam and optional tilt cylinders, their safety valves and fittings for visible oil leaks. Follow the hydraulic pipes and fittings to the pump unit. Make sure all wires and hydraulic pipes are undamaged, not pinched or chafed anywhere, and adequately secured with cable ties. Check for visible oil leaks.

Perform all movements with an unloaded platform several times with all available control units. Use the operation manual for guidance.

- ☐ Make sure all movements occur smoothly and quietly, without jerking motion or unusual noises. During LIFT and CLOSE functions, only the sound of the electric motor in the pump unit should be audible.

Remember: if any part of the pre-trip inspection reveals a need for service or repair

→ **DO NOT use the tail lift until it has been serviced or repaired by a qualified service technician.**

→ **Switch OFF power at the main battery disconnect switch or cabin switch** [see 9.4 on page 54].

7.9 IMPORTANCE OF PREVENTATIVE MAINTENANCE

NOTICE

- Competent and regular preventative maintenance is essential to the operational reliability of the tail lift as well as the safety of the operator and all bystanders.
- All maintenance and repair work must be performed by authorized DHOLLANDIA service agents, and using original DHOLLANDIA replacement parts only.
- Please consult the separate MAINTENANCE AND REPAIR MANUAL for specific instructions regarding periodic maintenance.

- If a tail lift cannot be repaired immediately in case of breakdown, it must be put out of operation and secured against unauthorized use.
- A tail lift put into its travel position with the help of external devices (forklift, gantry crane, etc.), is not supported by its hydraulic cylinders. After releasing the mechanical platform lock, the platform and lifting mechanism will drop in free fall, without any possibility to stop the fall by means of the regular controls.

⚠ WARNING

Impact by a falling platform will result in serious bodily injury or death. To reduce the risk of injury:

→ Close the platform lock (if available), and apply additional means to immobilize the platform [see note below].
→ Attach a clear and highly visible warning tag to the platform and the external control box.
→ Warn your supervisor and have this vehicle put out of service
→ Contact an authorized DHOLLANDIA service agent to repair the tail lift prior to any further use.

- Note: examples of additional means are additional securing of the platform lock (if available), or securing the platform by means of ratchet straps, hoists, etc.
- To re-open the tail lift, use again an external device (forklift, gantry crane, etc.) for additional support. Or repair the breakdown first, bring the hydraulic system under pressure, and release the platform locks after satisfactory testing of the hydraulic integrity. Follow the MAINTENANCE AND REPAIR MANUAL for all maintenance and repair works.

8 LOAD CHARTS AND CORRECT LOADING PROCEDURES

NOTICE

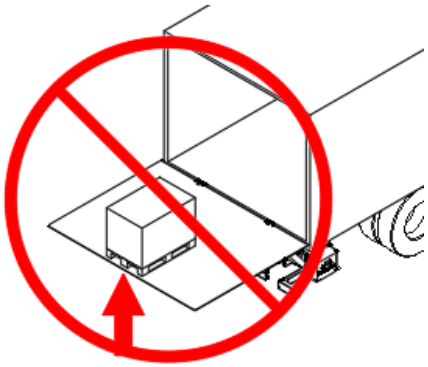
- Tail lifts are NOT designed to LIFT / LOWER weights corresponding to their **maximum rated capacity** over the **entire** surface of the platform. The maximum rated capacity is valid at a certain distance or **center point of maximum load** behind the vehicle body. Behind that point marked on the platform, the maximum safe working load diminishes according to the load charts below.
- When LIFTING, the tail lift is normally protected against overload by the pressure relief valve in the hydraulic circuit. Most of overload events and resulting damage happen when LOWERING loads.

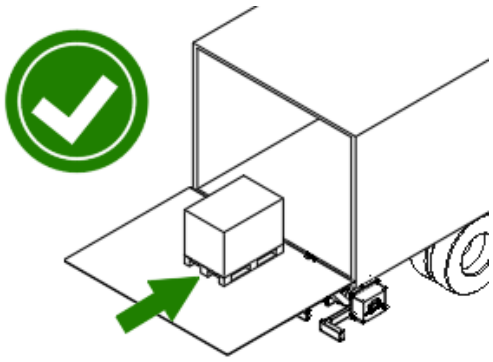
⚠ WARNING

- Overloading and improper loading and unloading of the tail lift will put the operator and bystanders at great risk of serious bodily injury or death. Such conditions will also cause premature wear and damage to the tail lift, or failure of the tail lift.
- Therefore, it is essential that the operator respects the maximum rated capacity and follows the loading instructions and the load chart with great care.
- DHOLLANDIA disclaims liability for all personal bodily injury and / or property damage that results from overloading practices.

- The **maximum rated capacity** is the maximum weight that the tail lift can carry under the following best possible circumstances:
  - → the center of gravity of the **load** stands no further than the designated center point of maximum load of the **tail lift**, marked on the platform surface, and
  - → the load stands mid-point between the lift arms, and is at equal distance from both platform sides.

NOT OK
NEVER position the load at the outboard platform edge.

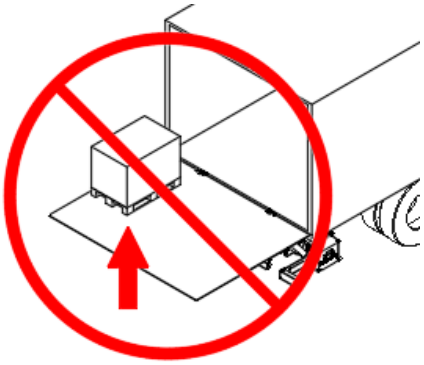


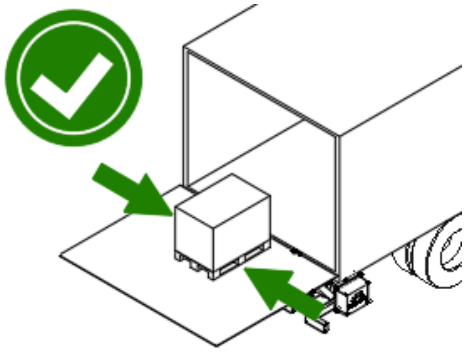


OK
ALWAYS position the load as close as possible to the rear of the vehicle, near the inboard platform edge.

- Uneven loading on one side of the platform should be avoided. Limit the load to 50% of the maximum rated capacity when loading on one side of the platform only.

NOT OK
NEVER load on one side of the platform only.
Or limit load to 50% of maximum rated capacity.



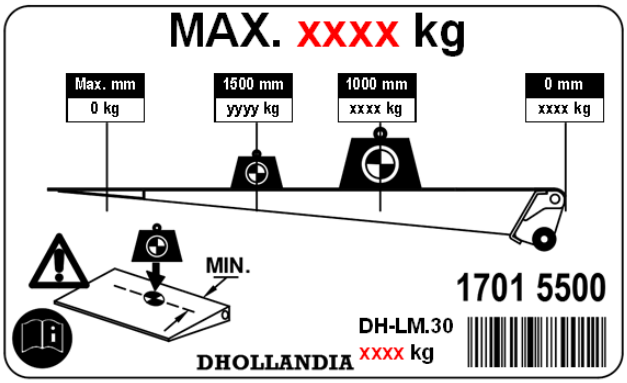


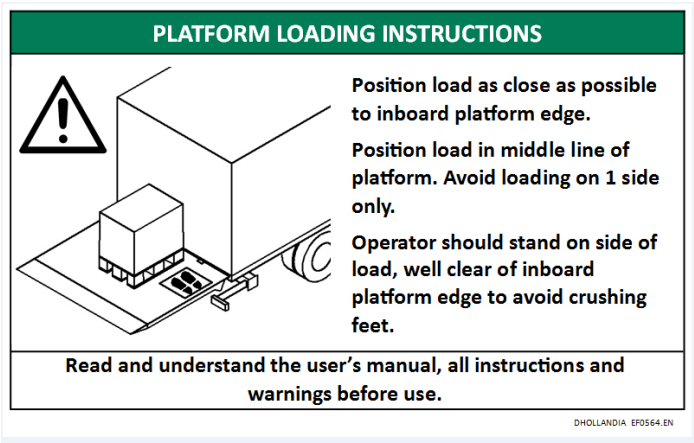
OK
ALWAYS position the load mid-point between the lift arms.

- The maximum **safe working load** GOES DOWN according to the load charts. The following type of load chart decals are supplied with the tail lift, and must be duly observed.

EXAMPLE

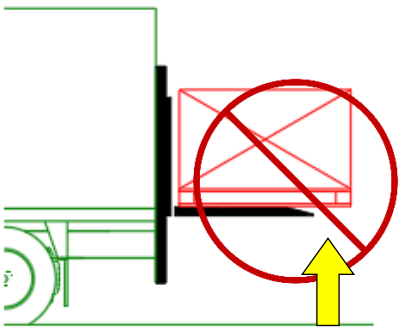
EXAMPLE





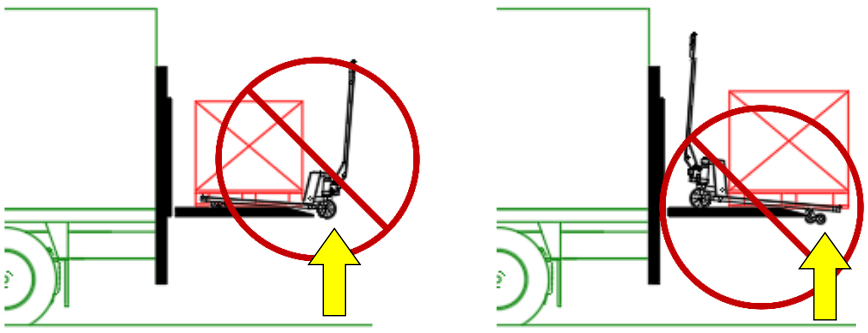
⚠ WARNING

- Overloading and improper loading and unloading of the tail lift will put the operator and bystanders at great risk of serious bodily injury or death. Such conditions will also cause premature wear and damage to the tail lift, or failure of the tail lift.
- Pay attention to avoid concealed overload situations as shown in examples below. Serious bodily injury or death may result from failure to abide by these warnings.



OVERLOAD

- NEVER let the load extend beyond the outboard edge or side edges of the platform.

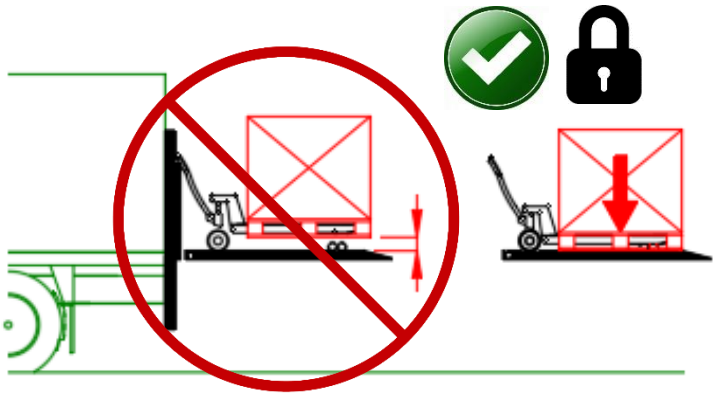


OVERLOAD

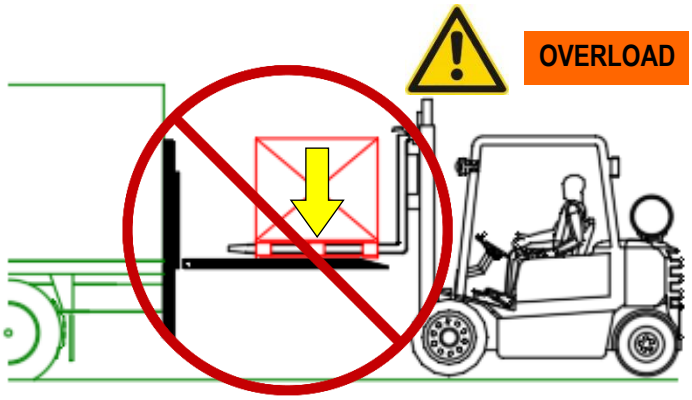
- NEVER let the wheels of a pallet jack extend or drop down beyond the outboard or side edges of the platform. Keep the pallet jack and its load on the platform surface, as close as possible to the inboard platform edge. Lower and rest the pallet or load on the platform surface to prevent it from shifting position while lifting and lowering.

⚠ WARNING

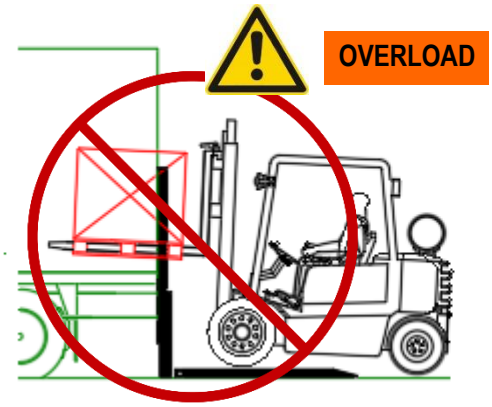
- Lower and rest the pallet or load on the platform surface to prevent it from shifting position while lifting and lowering.

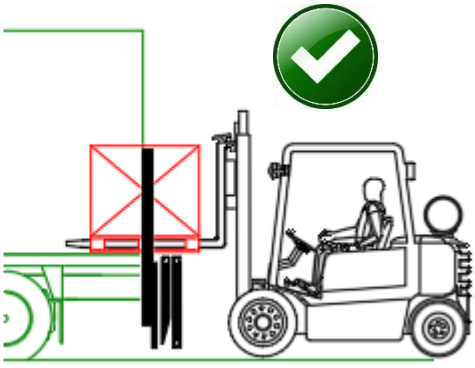


- NEVER drop any load on the platform (ex. by means of a forklift, gantry crane, etc…). The impact of dropping a load is far greater than the nominal weight of the load and can cause severe damage to the tail lift.

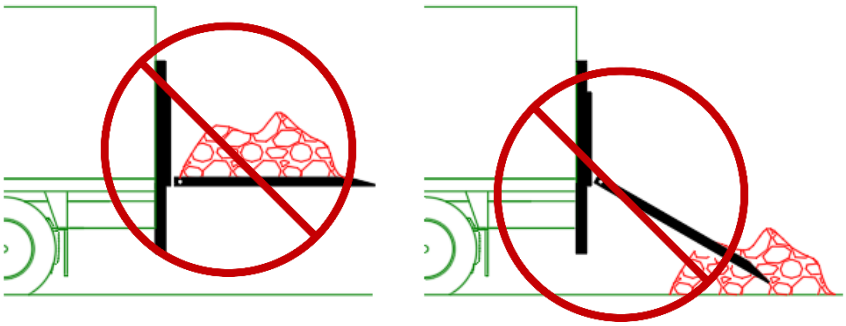


- NEVER drive a forklift onto the platform. Driving a forklift onto the platform can cause severe structural damage, potentially invisible to the operator at first glance. Further use of an overloaded or damaged platform can put the operator and bystanders at great risk of serious bodily injury and death.





- NEVER try to scoop loose material (ex. sand, gravel, rocks, etc…) from the ground, to attempt to move it by means of the platform, or to lift / lower it on the platform.
- NEVER use the platform to level the ground surface, or to push or pull loads or material by means of the platform. NEVER use the platform to move snow or other debris.

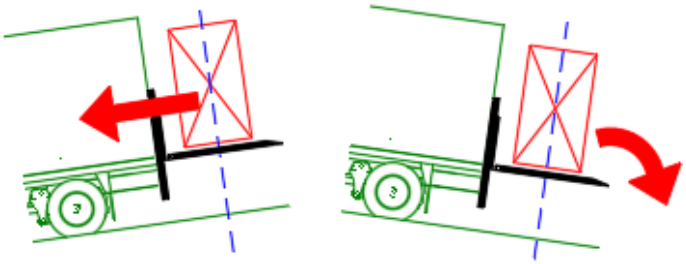


9 OPERATING INSTRUCTIONS – PRINCIPLES AND PROCEDURES

9.1 PLATFORM RIDE

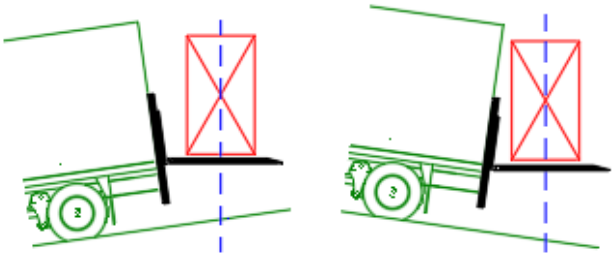
- The ride of a tail lift describes the movement that its platform goes through when lifting and lowering. All column lifts are equipped with a flat platform level ride.
- While the platform travels up and down, the angle between the platform and the columns remains unchanged. If the vehicle is standing level on flat, even ground, the platform will travel up and down level with the ground.
- The majority of column lifts are equipped with 2 tilt cylinders [ref. OVH001 or OVH002]. That enables the operator to open and close the platform hydraulically from the main external control box, and to adjust the orientation of the platform to the slope of the ground, or to tilt the platform towards a loading dock.
- Some of these column lifts are equipped with manual closure or with 1 tilt cylinder [ref. OVH003 - OVH004]. In both cases, the platform orientation is not adjustable. (Platform is fully closed at 90° or fully open at 0°).
- In case of manual closure, the platform is opened and closed manually, with assistance of one or more torsion bars inside the platform. Refer to the operation manual of the DH-VO*K9 lifts for important safety instructions on manual closure lifts. Copies of that manual can be obtained from the national DHOLLANDIA distributor. See page 3 for contact info.
- Option OVH003 - OVH004 (= 1 tilt cylinder) enables the operator to open and close the platform hydraulically instead of manually, but the orientation of the platform is not adjustable. (Platform is fully closed at 90° or fully open at 0°).

Manual closure -
Hydraulic closure with 1 tilt cylinder OVH003-OVH004



→ Fixed platform orientation

Hydraulic closure with
2 tilt cylinders OVH001-OVH002



→ Adjustable platform orientation

⚠ WARNING

- It is important for both types of tail lifts that loads on wheels, or loads that could easily shift position and fall from the platform, are properly secured on the platform surface prior to operating the tail lift. See also 9.9 from page 68 onwards.
- For lifts with non-adjustable platform orientation, it is ESSENTIAL that the operator ensures that roll stops or roll stop ramps are deployed (if available), wheel stops or brakes are activated, or the load is secured on the platform in a different way prior to operating the tail lift.
- For lifts with adjustable platform orientation, ALWAYS adjust the pitch of the platform prior to putting cargo on it. It is not allowed to change the pitch / angle of a loaded platform.
- Improperly secured loads could fall off the platform, and put the operator and bystanders at great risk of serious bodily injury and death.

9.2 MAIN EXTERNAL CONTROL BOXES

- All images, pictograms and decals in this manual represent the version for left hand drive vehicles, with the main external control box mounted on the right side of the vehicle
- DHOLLANDIA offers various control boxes, delivered per customer specification. Contact the national DHOLLANDIA distributor for more information, prior to ordering your tail lift. See contact info on page 3.
- All standard external control systems are equipped with mandatory 2 hand operation, and are mounted at the side of the vehicle body, in order to:
    1. prevent the operator from standing behind the platform when opening the platform which could result in serious injury or death by crushing.
    2. prevent the operator from crushing his / her limbs, upper body or head between the platform and the rear frame of the vehicle when closing the platform.
- The most popular models are outlined below. Contact the national DHOLLANDIA distributor for operation instructions on other models, or models with different options, prior to operating the tail lift. See contact info on page 3.

Joystick control box [ref. OAE030.BT]

Turn clockwise and hold to activate joystick

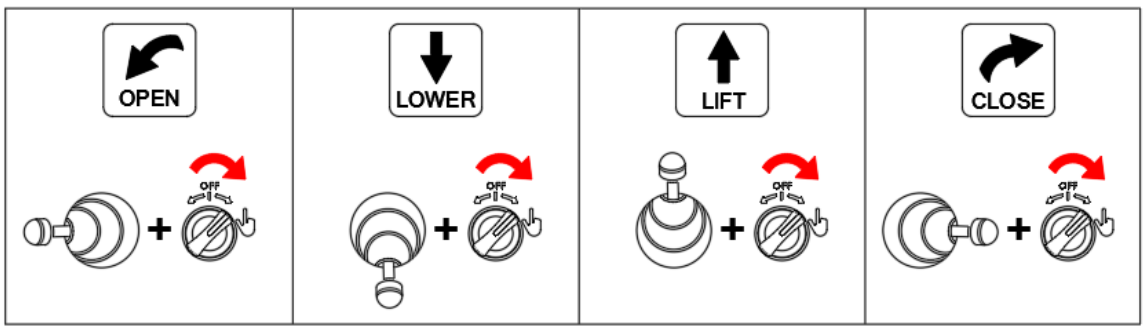
Turn counter-clockwise to enable auxiliary control

Turn clockwise to switch battery power ON

Turn counter-clockwise to switch battery power OFF

1	**Joystick** operating the functions OPEN - LOWER - LIFT - CLOSE
2	**Rotary safety switch** to activate the joystick, or to switch over to the auxiliary control
3	**Main battery disconnect switch** (optional) to switch the main power from the battery to the pump unit of the tail lift on / off. • Will stop the tail lift in case of emergency involving hazard to operator or bystander. • Will stop the tail lift and reduce the risk of a pump unit burn-out if the motor solenoid is stuck and the motor runs continuously (control button or contact damaged, motor solenoid short circuited by low voltage.)

Operation:



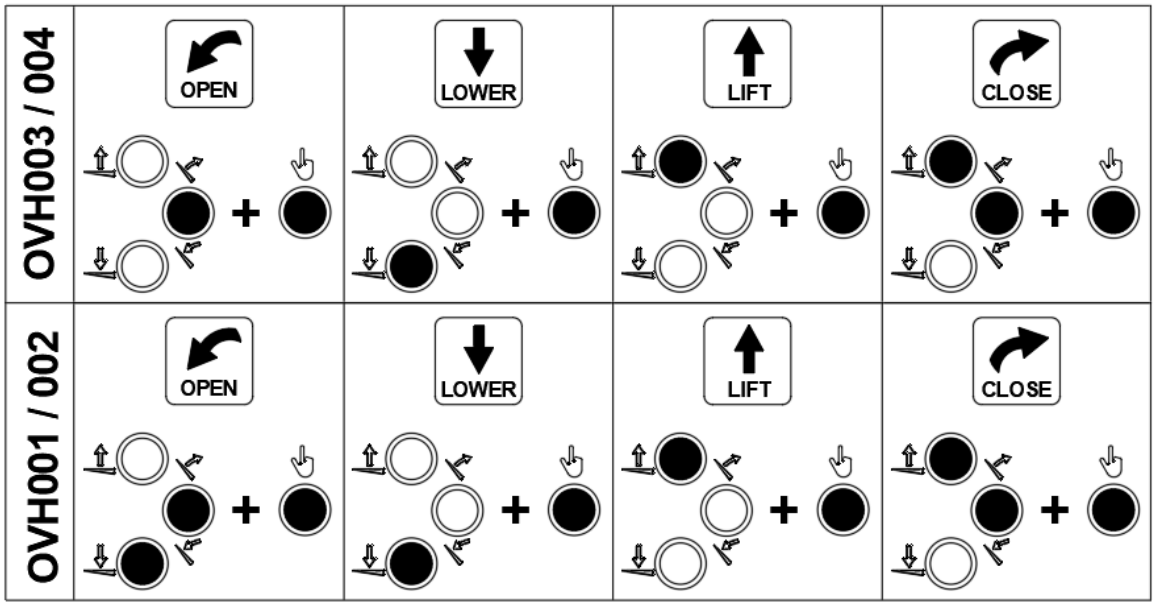
Arctic control box [ref. OAE041.BP]

Push and hold to activate push buttons of main external control box
Release to enable auxiliary control

Turn clockwise to switch battery power ON
Turn counter-clockwise to switch battery power OFF

1	**Push buttons** commanding the functions OPEN - LOWER - LIFT - CLOSE
2	**Safety switch** to enable the push buttons, or to switch over to the auxiliary control
3	**Main battery disconnect switch (optional)** to switch the main power from the battery to the pump unit of the tail lift on / off. • Will stop the tail lift in case of emergency involving hazard to operator or bystander. • Will stop the tail lift and reduce the risk of a pump unit burn-out if the motor solenoid is stuck and the motor runs continuously (control button or contact damaged, motor solenoid short circuited by low voltage.)

Operation:

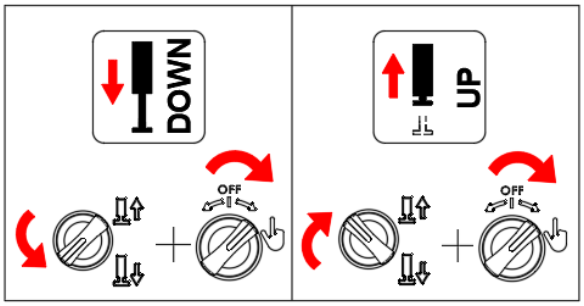


Hydraulic stabilising legs (ref. OAH01...)

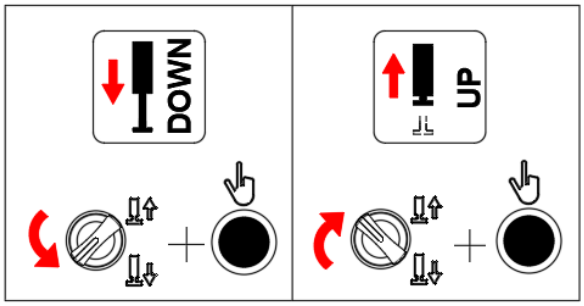
When the tail lift is equipped with hydraulic stabilising legs, the control units above are completed by a turn switch to push the legs down or pull them up.

1	**Turn switch** commanding the functions LEG DOWN - LEG UP

On OAE030… units

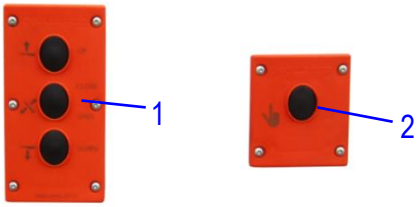


On OAE041… units



- Other control boxes with compulsory 2-hand controls feature push buttons or toggle switches to control the various functions OPEN – LOWER – LIFT – CLOSE. The units are not available with an integrated main battery disconnect switch.

Flush mount control unit (ref. OAE031.ZP)

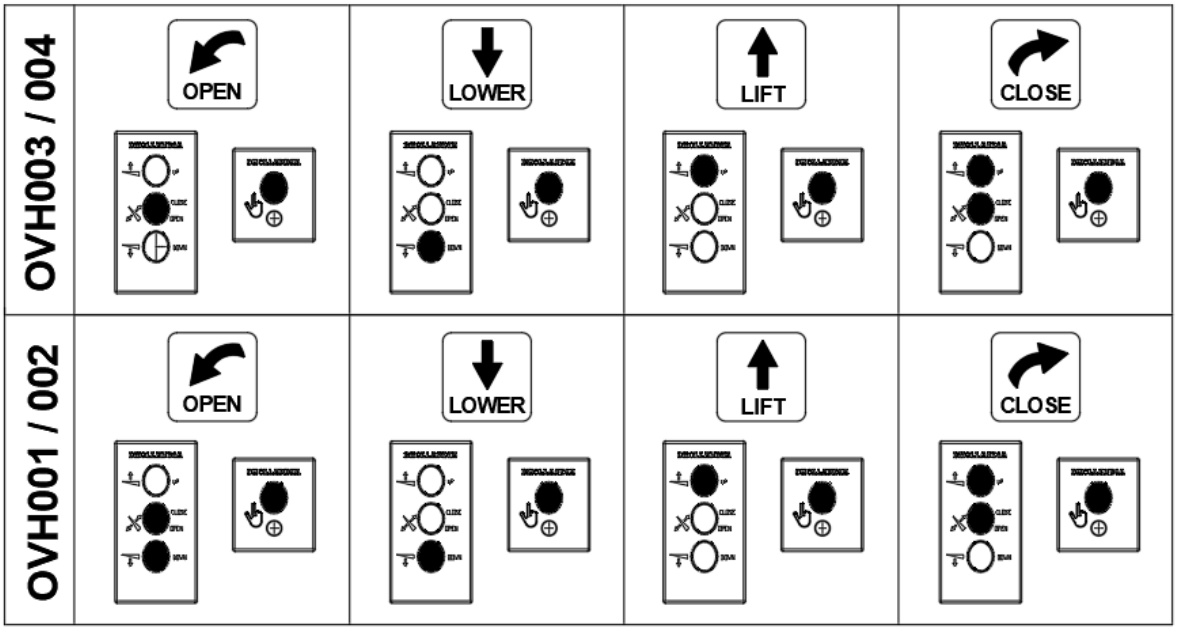


Push and hold to activate push buttons of flush mount control

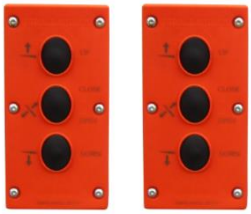
Release to activate auxiliary control

1	**Push buttons** commanding the functions LOWER – LIFT, and OPEN – CLOSE in case of hydraulic closure
2	**Safety switch** to enable the push buttons, or to switch over to the auxiliary control

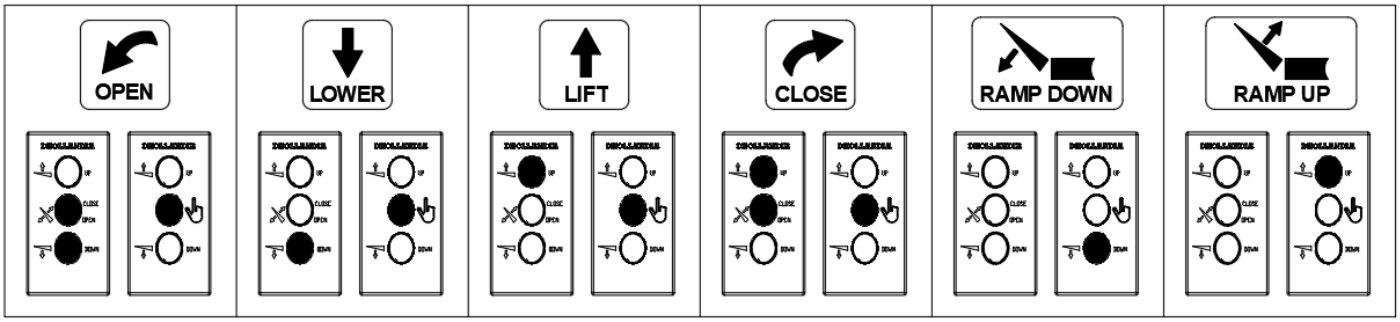
Operation:



Flush mount control unit (ref. OAE033.Z) for tail lift with hydraulic roll stop ramp (ref. OVP152)

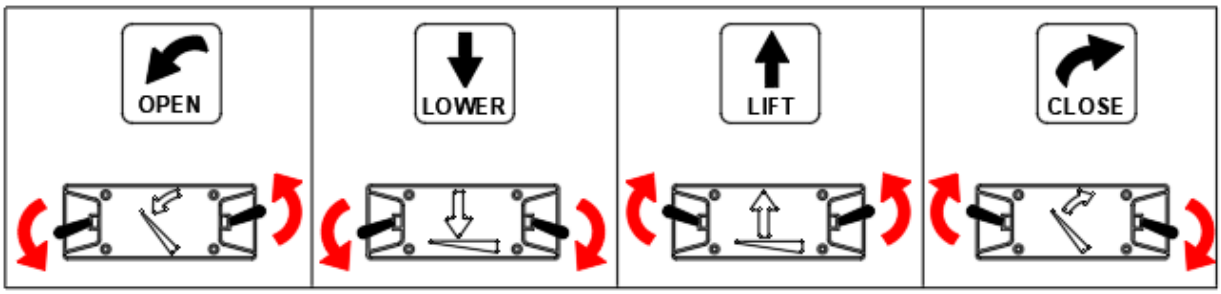


Operation:



Dual toggle-switch control box (ref. OAE048)

Operation:



⚠ WARNING

- Handheld 3-button or 4-button controls, enabling the operator to OPEN and CLOSE the platform, can be operated from an unsafe operator position (see 7.3 from page 26 onwards).
- If used from an unsafe operator position, the use of such handheld controls will put the operator at great risk of serious bodily injury and death. To prevent these risks:
  - → NEVER OPEN the platform while standing behind or in the range of motion of the platform
  - → NEVER CLOSE the platform, while standing close to the crushing zone between the closing platform and the rear frame of the vehicle body.
  - → Only use the handheld 3-button or 4-button controls with extreme caution.
- DHOLLANDIA strongly discourages the use of handheld 3-button or 4-button controls. They should only be used after adequate risk analysis by the vehicle owner or his authorized health and safety manager, and under guidance of safe work practices issued by them.

9.3 AUXILIARY CONTROLS

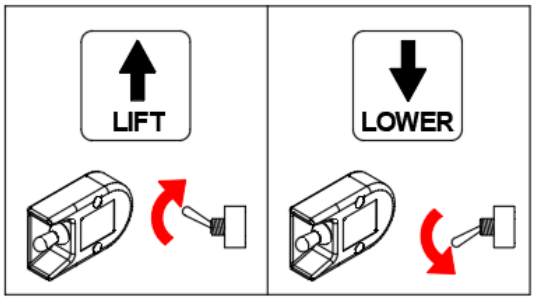
⚠ WARNING

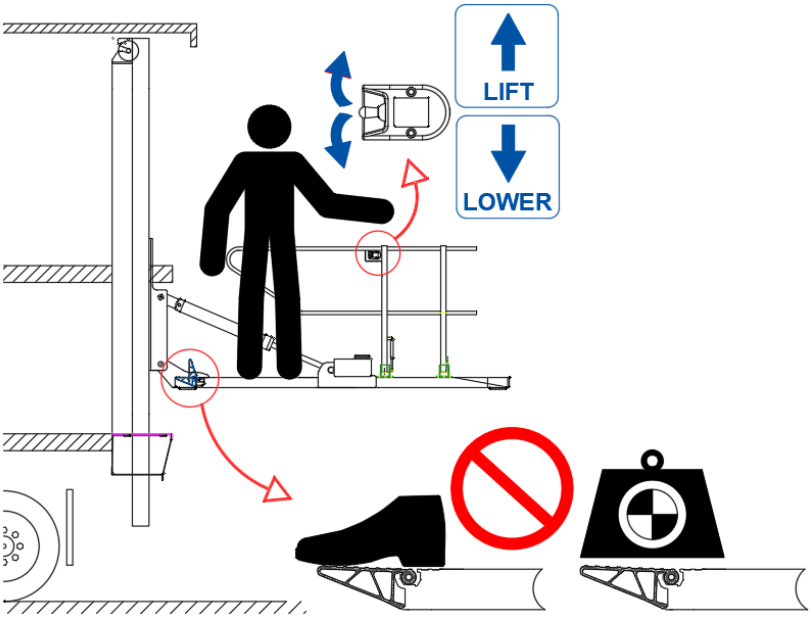
- To reduce the risk of injury to the operator or any bystanders, the auxiliary controls must only be used from a safe operator position on or beside the platform, conforming with the safety precautions described in section 7 from page 22 onwards.
- Any operator on the platform must stand clear of the crushing zone between the lifting platform and the cylinder beam or rear of the vehicle floor.
- Any operator on the ground must stand clear of the crushing zone between the lowering platform and the ground.
- Keep head, hands and feet clear of pinch points and moving parts. Beware of hand, foot and head traps at all times.
- NEVER wear loose fitting clothing when operating or standing near the tail lift as it increases the risk of serious bodily injury and death.
- ALWAYS be aware of vehicular traffic when using controls to operate the tail lift.
- Failure to abide by these warnings may result in serious bodily injury or death to the operator or any bystanders.

- DHOLLANDIA recommends the use of the LIFT / LOWER controls integrated in one of the guard rails on the platform.

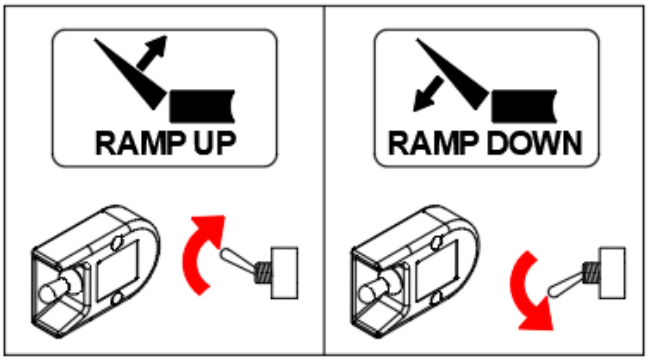
Toggle-switch controls [ref. OAE015.O]

Operation:





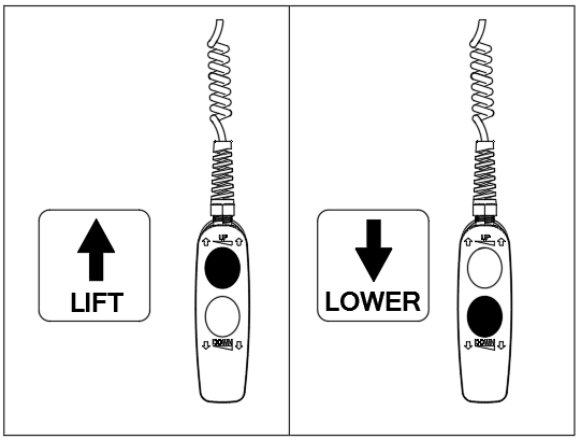
- Similarly, if the platform is equipped with a hydraulic roll stop ramp [ref. OVP152], that ramp is raised and lowered by a toggle switch on the guard rail [ref. OAE015.O].



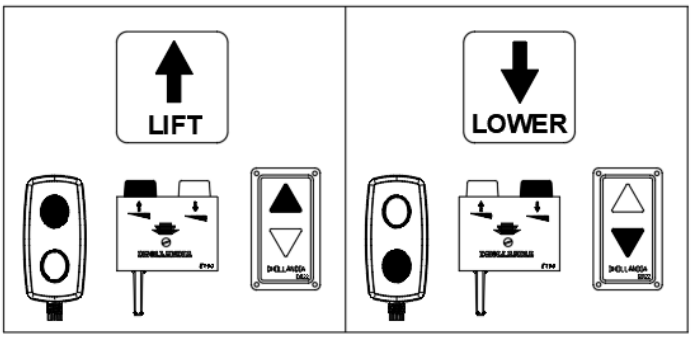
- DHOLLANDIA offers various other types of auxiliary controls, delivered to customer specification. Contact your national DHOLLANDIA distributor for more information, prior to ordering your tail lift. See contact info on page 3.

- The most popular options are outlined below. If missing in this overview, contact your national DHOLLANDIA distributor for operation instructions on other models, prior to operating the tail lift. See contact info on page 3.

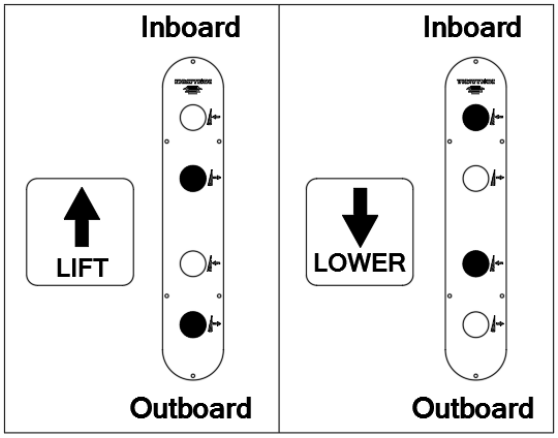
2-button handheld control with spiral cable [ref. OAE001]



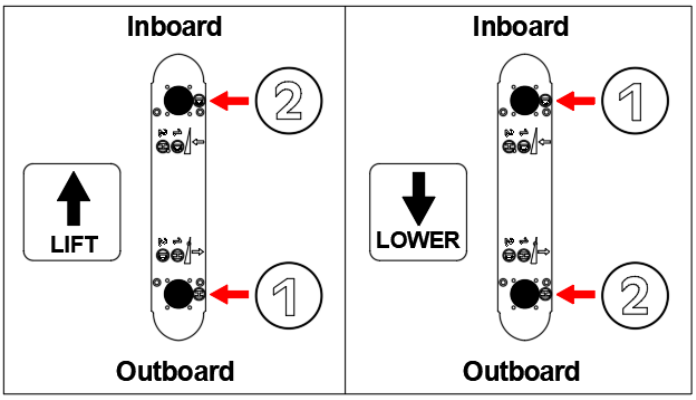
2-button internal control [ref. OAE003 / OAE005 / OAE012]



4-button foot controls on platform [ref. OAE060 / OAE064]

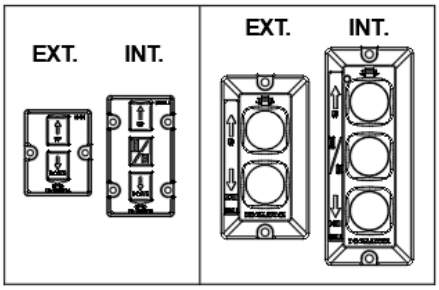


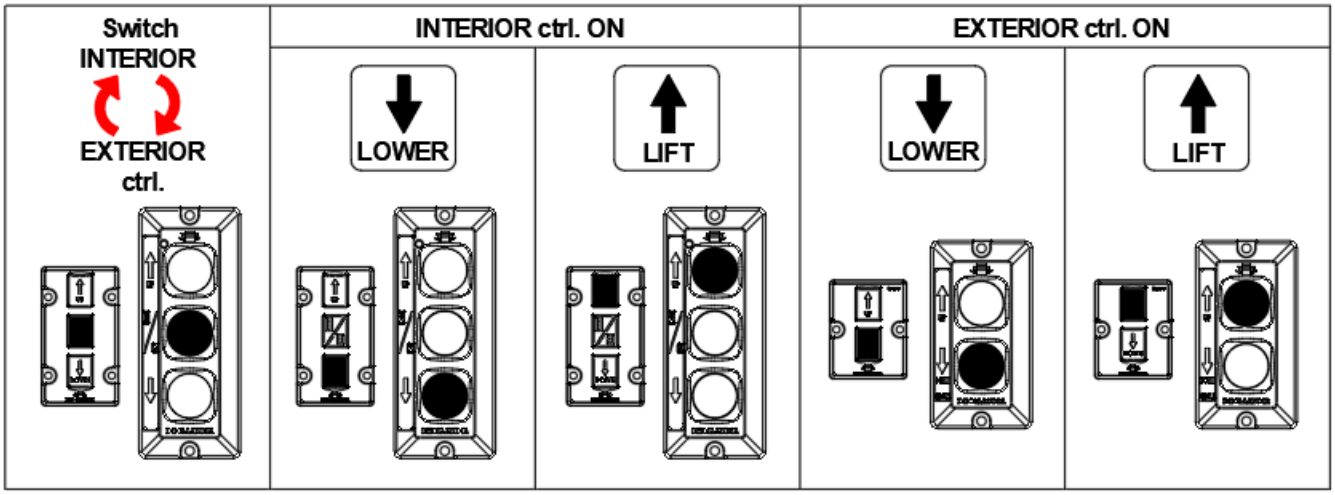
2-button foot controls on platform [ref. OAE067]



2-button internal controls plus change-over switch [ref. OAE019.3.C]

2-button external controls [ref. OAE019.2]





9.4 SWITCHING THE MAIN POWER ON / OFF

- Depending on configuration, the power to the tail lift can be switched ON / OFF by means of a cabin switch, a main battery disconnect switch, or a combination of both.

Cabin switch

example

If equipped with option OAE503.1:

Push button to switch tail lift power ON (indicator light on)
Push button to switch tail lift power OFF (indicator light off)

If the tail lift is equipped with a platform position sensor [option OVE221] and a dual function cabin switch [option OAE503.2], the indicator light can be configured to switch on if platform is not closed in its travel position.

Main battery disconnect switch

Turn clockwise to switch battery power ON

Turn counter-clockwise to switch battery power OFF

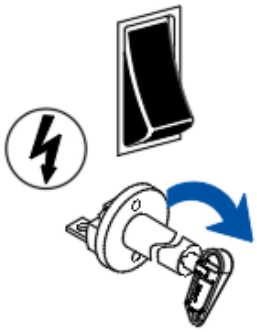
NOTICE
In case of combined system, (main battery disconnect and cabin switch) both must be switched on to activate the tail lift. Switching off only one of two will deactivate the tail lift, but it is strongly recommended to switch-off both. NEVER leave the main battery disconnect switch on while tail lift is not is use.

9.5 OPERATION OF THE STANDARD MULTI-DECK COLUMN LIFT WITH HYDRAULIC CLOSURE

- 9.2 - 9.3 above explain how the functions OPEN - LOWER - LIFT - CLOSE are executed via the various types of controls and how the optional stabilising legs are operated. This section explains in which sequence the DH-V* must be operated, and which steps must be followed.
- The images shown refer to instruction decal ref. EF0599.EN, usually affixed to the side of the vehicle body. See also section 10 on page 71.

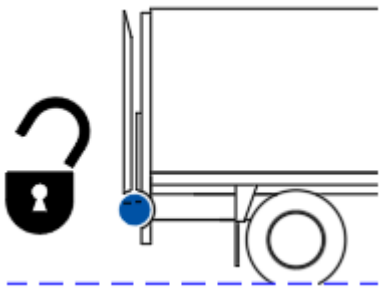
Opening the platform

Consult the operation manual before getting started. Follow **ALL** safety and operation instructions.

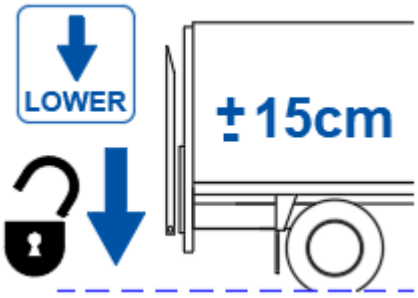


Switch on the electrical power to the tail lift (cabin switch or main battery disconnect switch in the external control box, or both if both are available).

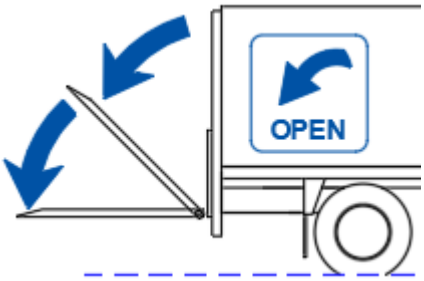
If so equipped, LOWER the hydraulic stabilising legs into work position.



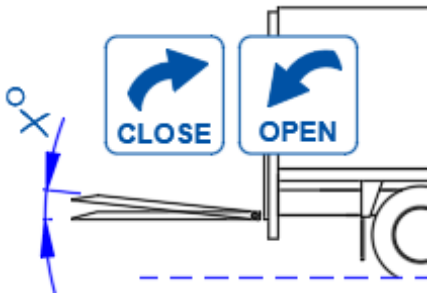
Observe all safety instructions and disengage the locking pins under the lift runners (if applicable).



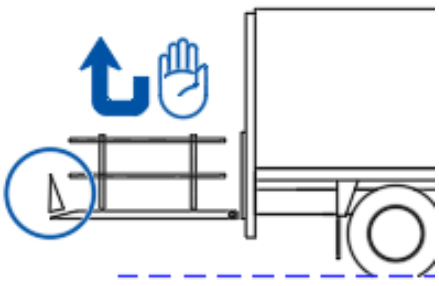
LOWER the platform approx. 15 cm to disengage the stow locks.



OPEN the platform into horizontal work position.

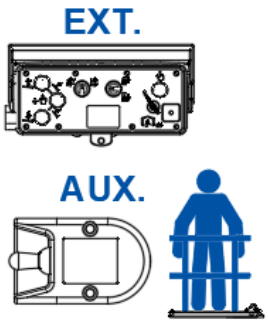


Adjust the platform orientation to compensate for the slope of the ground [see 9.1 on page 47].

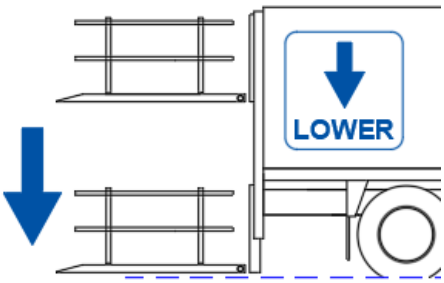


Unless unfolding automatically, deploy the guard rails and lock them in vertical position.

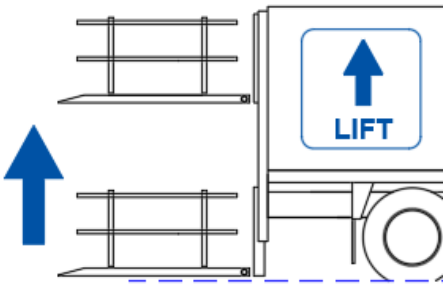
Deploy the roll stops or roll stop ramps at the outboard platform edge.



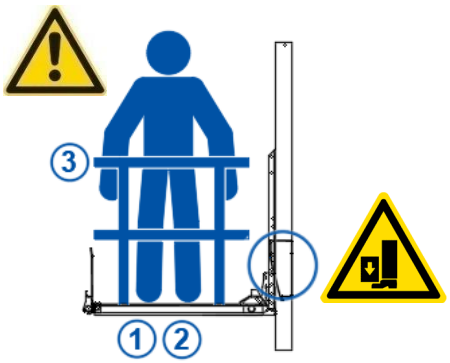
Select between main external control box or auxiliary control to continue [see 9.2-9.3 from page 48 onwards].



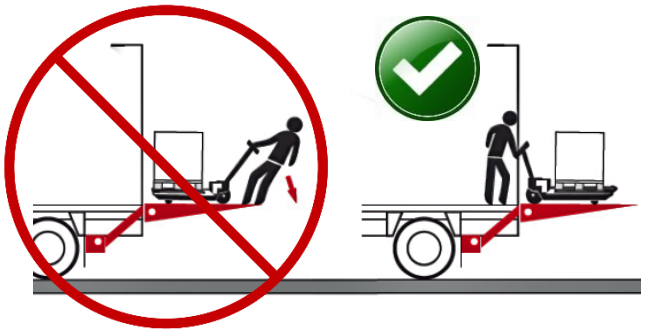
LOWER the platform to the ground.



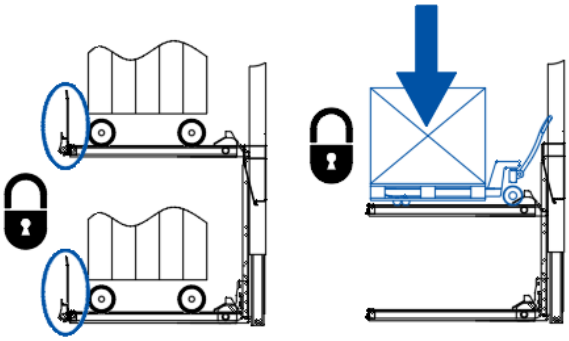
LIFT the platform off the ground. At the highest floor, continue to press LIFT until you hear the hydraulic system go in overpressure. Then, release the controls.



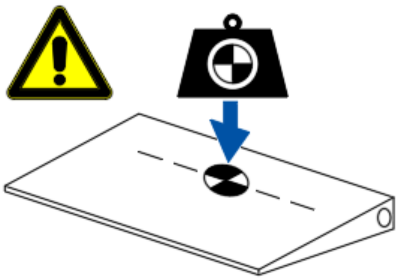
When riding on the platform, ALWAYS make sure you stand min. 25 cm away from the inboard platform edge. ALWAYS make sure your footing is solid. ALWAYS hold onto the guard rails. [see 7.5 from page 34 onwards].



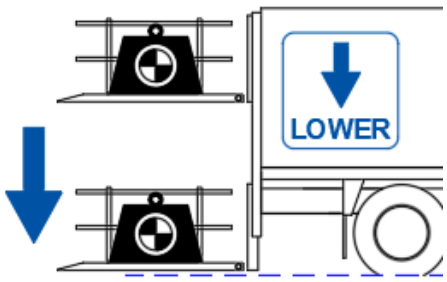
NEVER pull the load from the vehicle onto the platform. ALWAYS push it out. Pulling the load from the vehicle can result in a fall from the platform and cause serious injury or death.



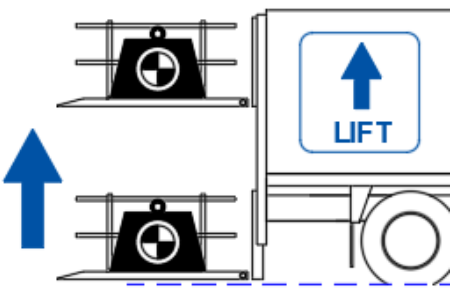
Before lifting or lowering loads, make sure the loads are secured on the platform surface. Deploy the roll stops or roll stop ramps (if so equipped), lower loads on a pallet jack down on the platform surface or immobilise the load via equivalent securement device.



Make sure you comply with load charts and instructions at all times

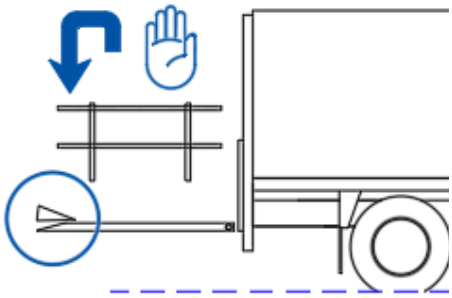


LOWER the platform to the ground, with respect for the load charts.



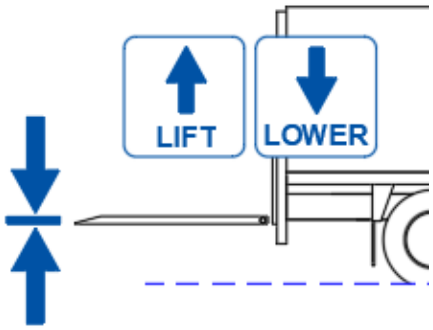
LIFT the platform off the ground, with respect for the load charts. At the highest floor, release the button when you hear the hydraulic system go in overpressure.

Closing up in travel position

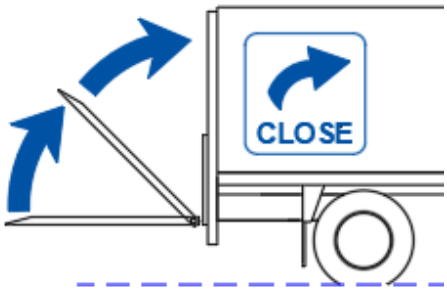


Stow the roll stops or roll stop ramps in their travel position.

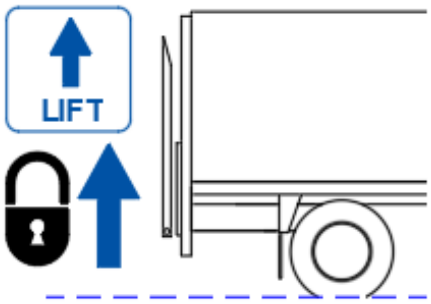
Unless unfolding automatically, stow and secure the guard rails in their travel position.



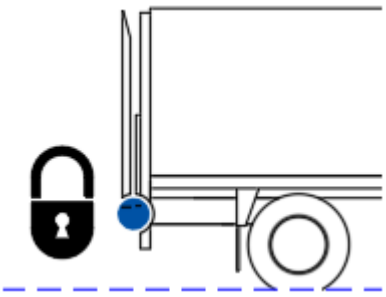
LIFT or LOWER the platform to the correct height for closing it. Normally approx. 15 cm below the vehicle floor.



CLOSE the platform. Continue to press CLOSE until you hear the hydraulic system go in overpressure. Then release the controls.

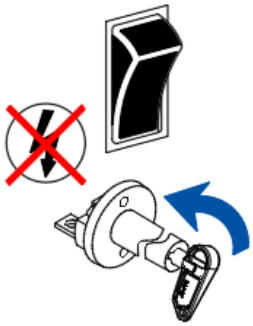


LIFT the platform until the stow locks are engaged. Release the button when you hear the hydraulic system go in overpressure.



If applicable, engage the locking pins under the lift runners.

If so equipped, raise the hydraulic stabilising legs into travel position.



Switch off the electrical power to the tail lift (cabin switch or main battery disconnect switch in the external control box, or both if both are available). Close the cover of the control box.

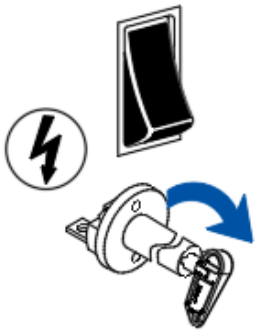
- The operator MUST stand on the side of the platform and keep head, limbs and upper body clear of hazardous space between the platform and the lift columns, while stowing the platform in its travel position.
- At any time during the operation, release the activated button(s) to stop the platform from moving. Additionally, if so equipped, turning the main battery disconnect switch counter-clockwise will switch off electrical power to the tail lift.

9.6 OPERATION OF THE INTERNAL COLUMN LIFT WITHOUT TILT CYLINDERS

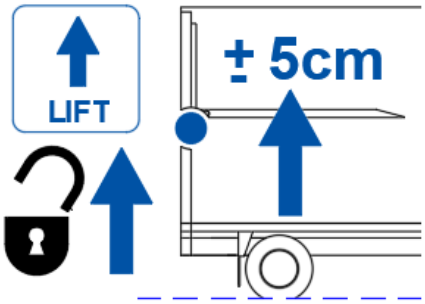
- Internal lifts travel up and down between 2 or more vehicle floors inside the vehicle body. They don't have tilt cylinders, their platform orientation cannot be altered during use.
- 9.2 - 9.3 above explain how the functions LOWER - LIFT are executed via the various types of controls and this section explains in which sequence the DH-V* must be operated, and which steps must be followed.
- The images shown refer to instruction decal ref. EF0600.EN, usually affixed to the side of the vehicle body. See also section 10 on page 71.

Opening the platform

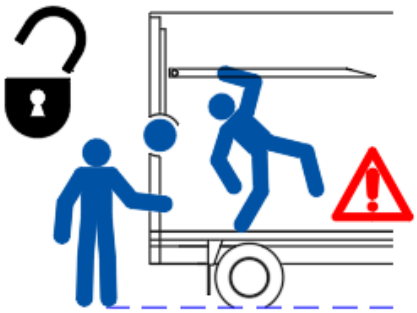
Consult the operation manual before getting started. Follow **ALL** safety and operation instructions.



Switch on the electrical power to the tail lift (cabin switch or main battery disconnect switch in the external control box, or both if both are available).

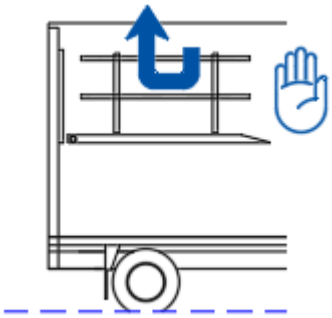


LIFT the platform approx. 5 cm to take the platform weight off the stow locks or pins.

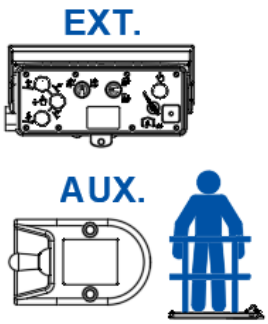


Observe all safety instructions.
Disengage the stow locks or pins underneath the platform.

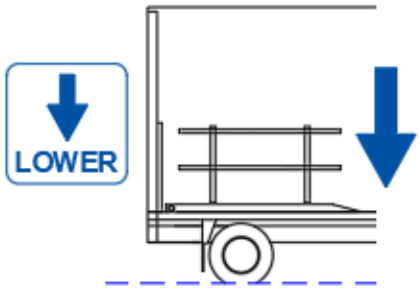
ALWAYS stand behind the platform while disengaging the stow locks or pins. NEVER stand or walk below a platform that is not secured by other means than its hydraulic cylinders and safety valves.



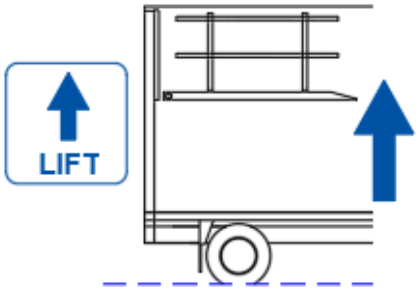
If applicable (e.g. on curtain-sider vehicle), deploy the guard rails, and lock them in vertical position.
Deploy the roll stops or roll stop ramps at the outboard platform edge.



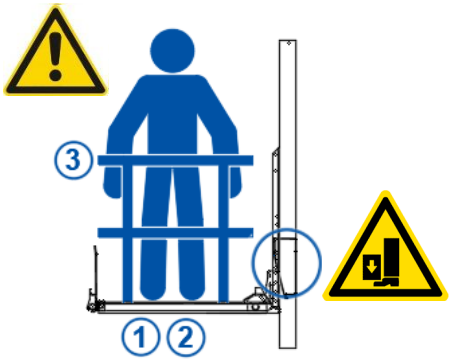
Select between main external control box or auxiliary control to continue [see 9.2-9.3 on page 48-52]



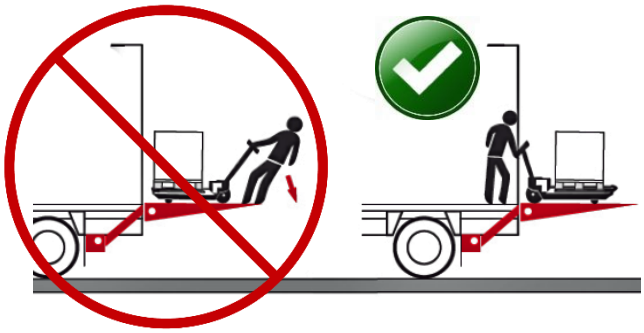
LOWER the platform to the lowest vehicle floor.



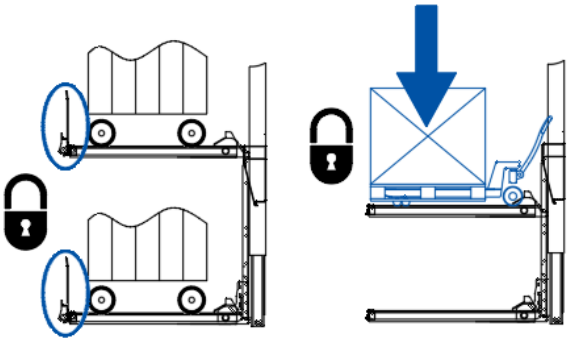
LIFT the platform. At the highest floor, release the button when you hear the hydraulic system go in overpressure.



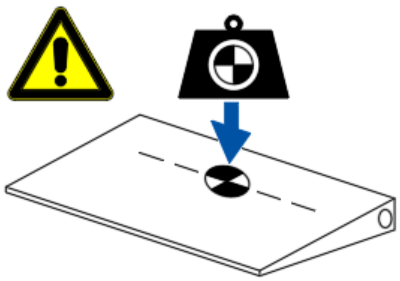
When riding on the platform, ALWAYS make sure you stand min. 25 cm away from the inboard platform edge.
ALWAYS make sure your footing is solid.
ALWAYS hold onto the guard rails. [see 7.5 from page 34 onwards].



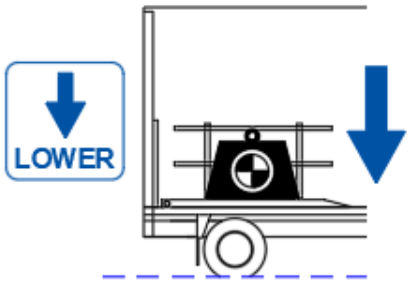
When using a second external lift to load or unload to the vehicle ground, NEVER pull the load from the vehicle onto the platform. ALWAYS push it out. Pulling the load from the vehicle can result in a fall from the platform and cause serious injury or death.



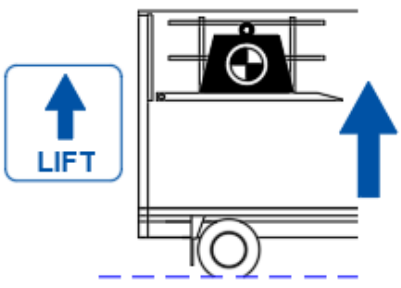
Before lifting or lowering loads, make sure the loads are secured on the platform surface. Deploy the platform roll stops or roll stop ramps (if so equipped), lower loads on a pallet jack down on the platform surface or immobilize the load via equivalent securement device.



Make sure you comply with load charts and instructions at all times

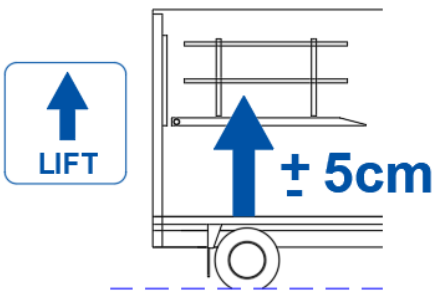


LOWER the platform to the lowest vehicle floor, with respect for the load charts.

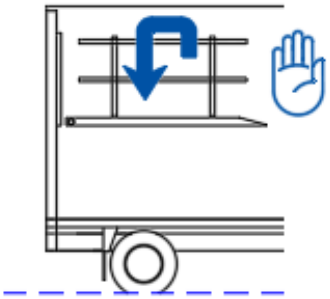


LIFT the platform, with respect for the load charts. At the highest floor, release the button when you hear the hydraulic system go in overpressure.

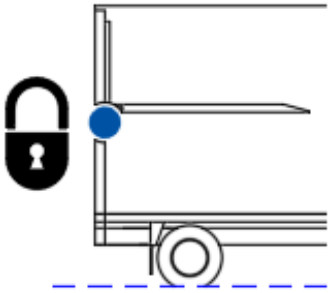
Closing up in travel position



LIFT the platform to approx. 5 cm above the height of the travel locks.



If applicable, stow the guard rails, and lock them in their travel position.
Stow the roll stops or roll stop ramps at the outboard platform edge.



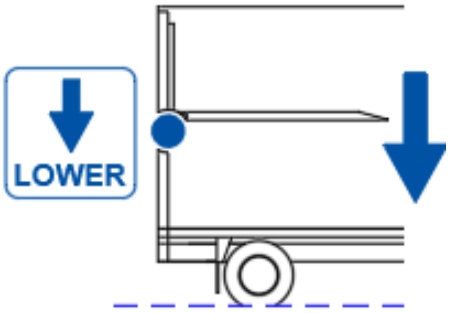
Engage the stow locks or pins underneath the platform. See notice.

NOTICE

While travelling, the platforms of internal lifts must be rested on and supported by travel locks or locking pins (different designs are possible):

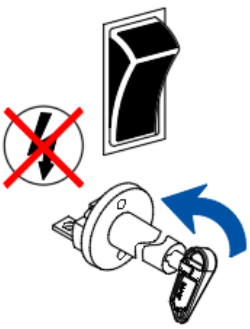
1. To prevent damage to the cargo loaded on the lower deck if the platform would creep down in case of an accidental pressure loss in the hydraulic system.
2. To avoid excess strain on the drive system (cables or chains, pulleys, etc.), if the platform would travel around with heavy loads on it in an unsupported way.

Negligence to do so, can cause premature wear or damage to the tail lift.



LOWER and rest the platform on the stow locks or pins.

ALWAYS stand behind the platform while engaging the stow locks or pins. NEVER stand or walk below a platform that is not secured by other means than its hydraulic cylinders and safety valves.



Switch off the electrical power to the tail lift (cabin switch or main battery disconnect switch in the external control box, or both if both are available). Close the cover of the control box.

At any time during the operation, release the activated button(s) to stop the platform from moving. Additionally, turning the main battery disconnect switch (if so equipped) counter-clockwise will switch off electrical power to the tail lift.

9.7 OPERATION OF THE DH-VO.20.D4 REMOVAL LIFT

- The column lifts type DH-VO.20.D4 are equipped with telescopic lift runners, enabling the platform to reach to lifting heights above the vehicle roof level, up to max. 6 m above the ground (depending on vehicle dimensions).
- The removal execution OVU002.B has extra standard features, to maximize the safety of the application:
  1. Hydraulic stabilising legs to stabilise the vehicle and platform when working at extreme heights.
  2. Limitation of the lift capacity above roof level at 500 kg.

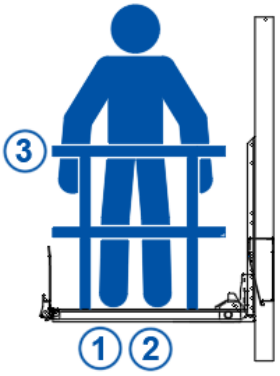
⚠ WARNING

- Lifting loads to and above vehicle roof level can destabilise the vehicle, the operator and the load on the platform.
- This can result in an accidental fall from the operator and / or the load from the platform, and can lead to severe personal injury or death of the operator or other bystanders.
- Therefore, the operator MUST ALWAYS deploy the hydraulic stabilising legs when going up to the roof level, or any lower height that causes instability due to the nature of the vehicle or cargo.
- If the platform movement feels unstable, DO NOT go any higher, try to stabilise the platform, and reduce the load on the platform in a safe way. Contact your superiors or DHOLLANDIA for further advice. See page 3 for contact info.

3. Detection on the stabilising legs, to prevent the platform from being closed as long as the stabilising legs are not fully retracted; and to prevent that the vehicle would drive-off with the stabilising legs in the down position.
4. Guard rails on the 4 platform sides to prevent the operator on the platform from falling from extreme heights.

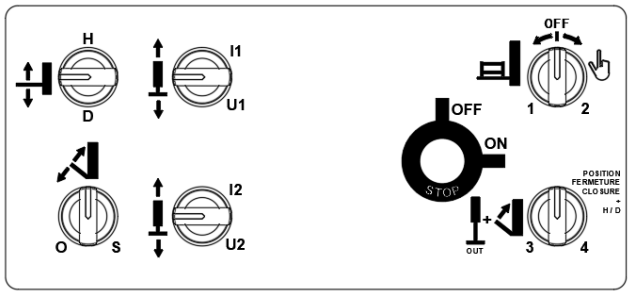
⚠ WARNING

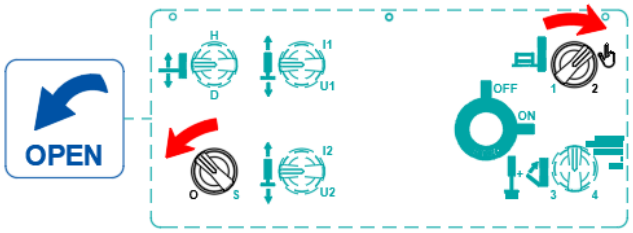
- Falling from heights can cause serious bodily injury or death.
- To prevent injury or death by falling from the platform:
  - → ALWAYS deploy the guard rails at the 4 platform sides
  - → ALWAYS make sure your footing in solid
  - → ALWAYS hold onto the guard rails
  - → ALWAYS maintain 3 points of contact.

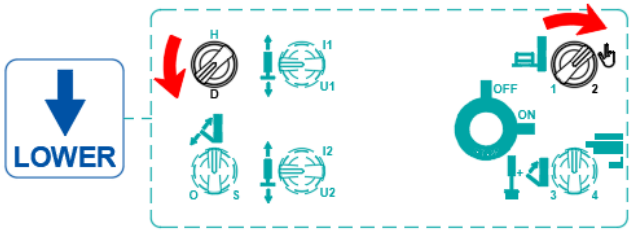


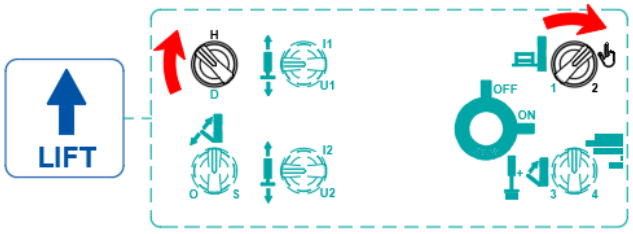
- Only 1 type of external control box is available on this tail lift. Most functions work the same way as on the more conventional column lifts. Following differences exist to CLOSE or TILT UP:
  1. CLOSE the platform only works when the stabilising legs are fully raised with function LEG UP.
  2. The function HEIGHT DETECTION TO CLOSE assists you to find the correct height at which the platform can be closed safely (not too high to prevent the platform from hitting the roof, not too low to prevent the guard rails from crushing into the cylinder beam).
  3. After CLOSING, the platform must be LIFTED further until the stow locks are engaged.
  4. TILT UP, to adjust the orientation of the platform while the stabilising legs are at the ground, requires a special combination of buttons. See below.

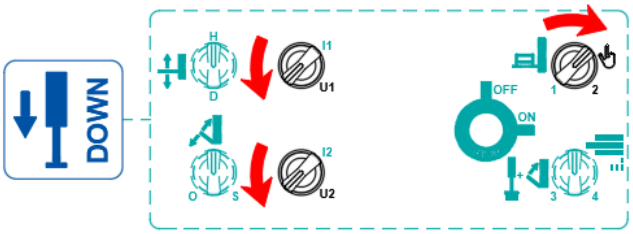
- The external control box foresees following functions:

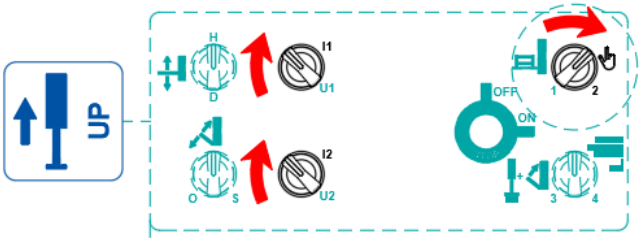


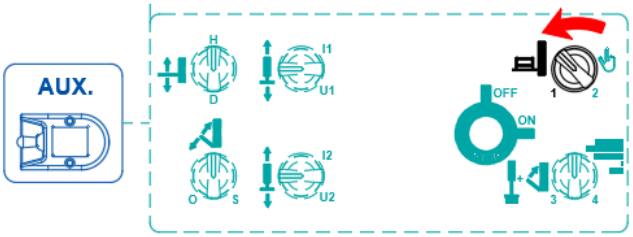




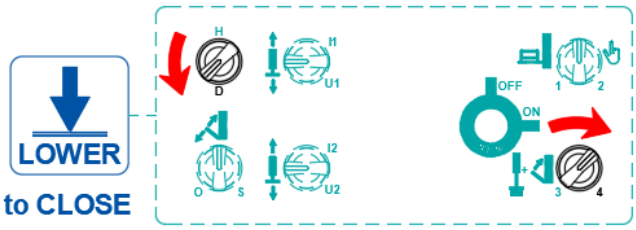


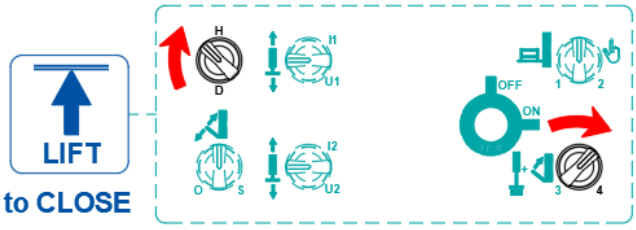




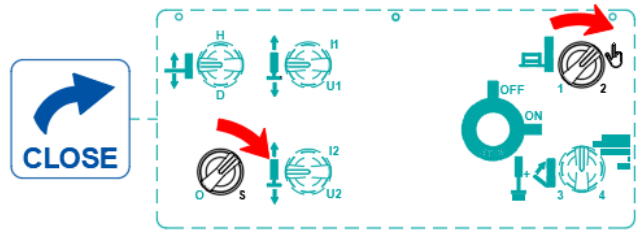


HEIGHT DETECTION to CLOSE

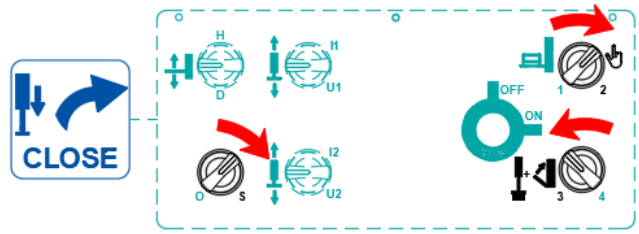




CLOSE when stabilising legs are IN

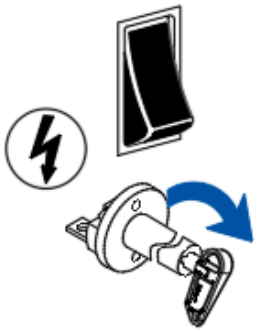


TILT UP when stabilising legs are OUT



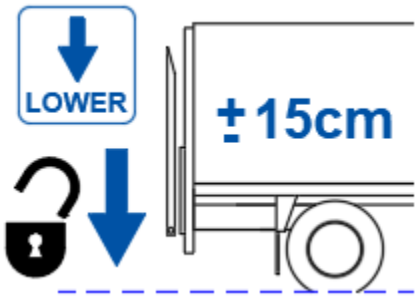
Opening the platform

Consult the operation manual before getting started. Follow **ALL** safety and operation instructions.

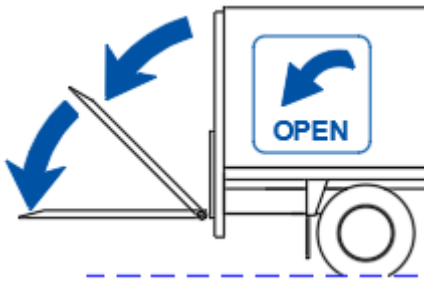


Switch on the electrical power to the tail lift (cabin switch or main battery disconnect switch in the external control box, or both if both are available).

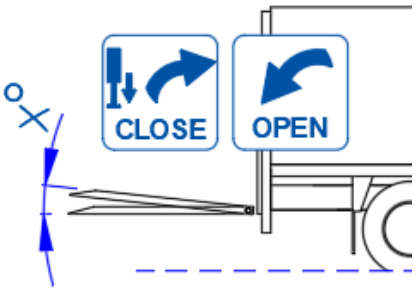
LOWER the hydraulic stabilising legs into work position.



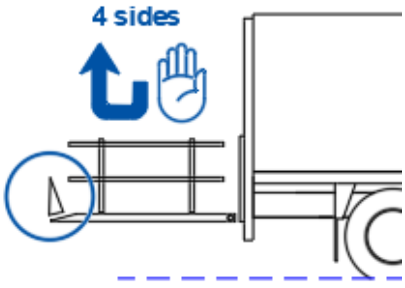
LOWER the platform approx. 15 cm to disengage the stow locks.



OPEN the platform into horizontal work position.

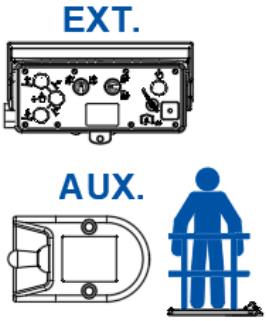


Adjust the platform orientation to compensate for the slope of the ground [see 9.1 on page 47].

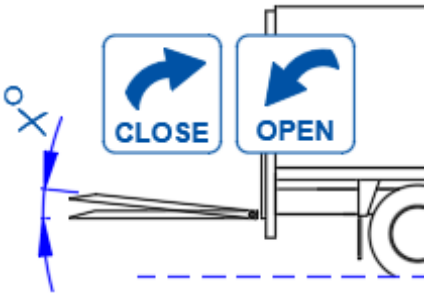


Deploy ALL guard rails and lock them in vertical position.

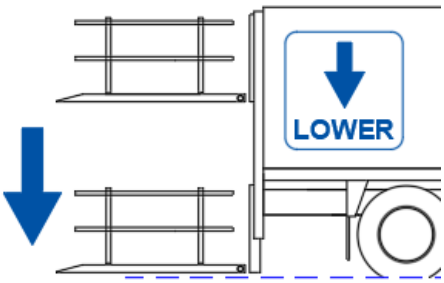
Deploy the roll stops or roll stop ramps at the outboard platform edge.



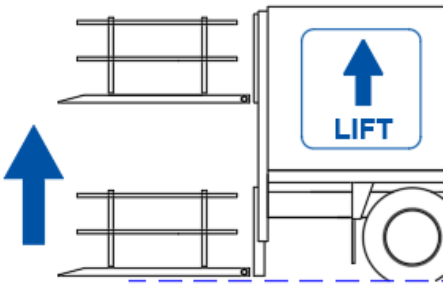
Select between main external control box or auxiliary control to continue. [see 9.2-9.3 on page 48-52]



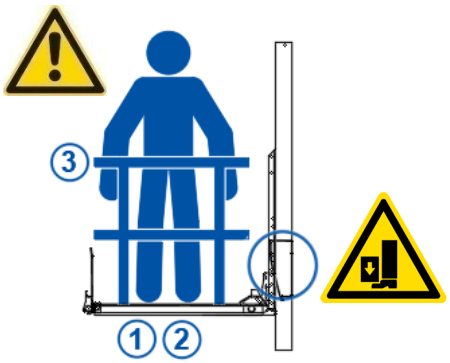
Adjust the platform orientation to compensate for the slope of the ground [see 9.1 on page 47].



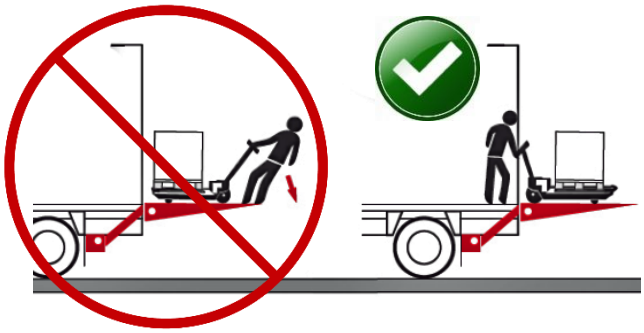
LOWER the platform to the ground.



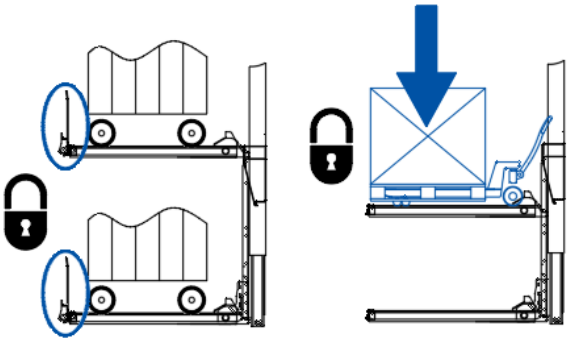
LIFT the platform off the ground. At the highest floor, release the button when you hear the hydraulic system go in overpressure.



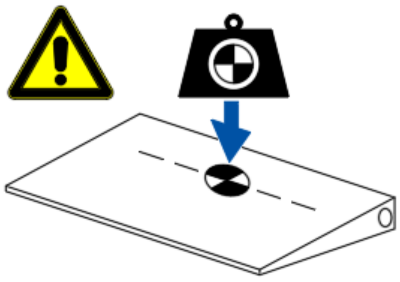
When riding on the platform, ALWAYS make sure you stand min. 25 cm away from the inboard platform edge.
ALWAYS make sure your footing is solid.
ALWAYS hold onto the guard rails. [see 7.5 from page 34 onwards].



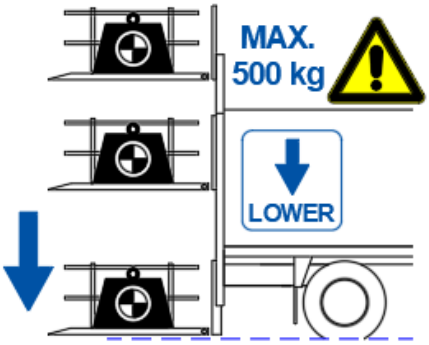
NEVER pull the load from the vehicle onto the platform. ALWAYS push it out. Pulling the load from the vehicle can result in a fall from the platform and cause serious injury or death.



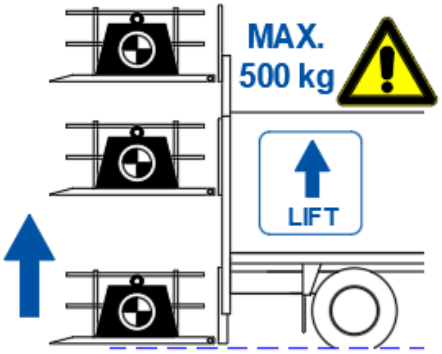
Before lifting or lowering loads, make sure the loads are secured on the platform surface. Deploy the platform roll stops or roll stop ramps (if so equipped), lower loads on a pallet jack down on the platform surface or immobilize the load via equivalent securement device.



Make sure you comply with load charts and instructions at all times

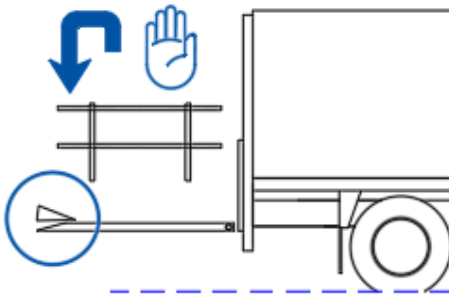


LOWER the platform to the ground, with respect for the load charts. **Above roof level, limit the load to 500 kg max.**



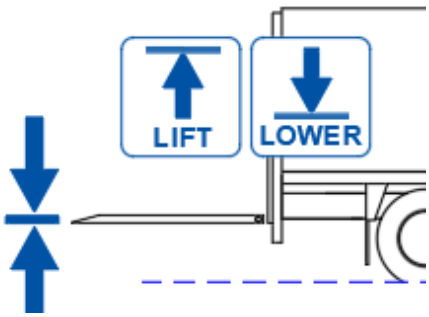
LIFT the platform off the ground, with respect for the load charts. **Above roof level, limit the load to 500 kg max.**
ALWAYS release the button when you hear the hydraulic system go in overpressure.

Closing up in travel position



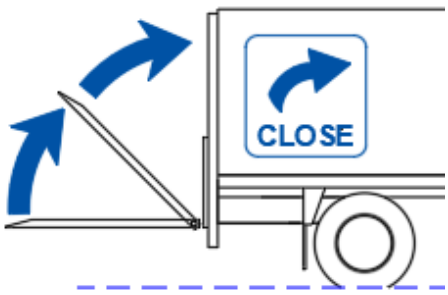
Stow the roll stops or roll stop ramps in their travel position.

Stow and secure the guard rails in their travel position.

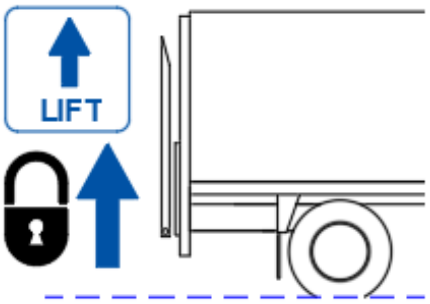


LIFT or LOWER the platform to the correct height for closing it. Normally approx. 15 cm below the vehicle floor. Use the HEIGHT DETECTION TO CLOSE for your convenience.

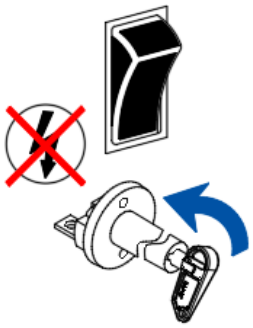
Raise the hydraulic stabilising legs into travel position. Release the button when you hear the hydraulic system go in overpressure.



CLOSE the platform. Continue to press CLOSE until you hear the hydraulic system go in overpressure. Then release the controls.



LIFT the platform until the platform stow locks are engaged. Release the button when you hear the hydraulic system go in overpressure.



Switch off the electrical power to the tail lift (cabin switch or main battery disconnect switch in the external control box, or both if both are available). Close the cover of the control box.

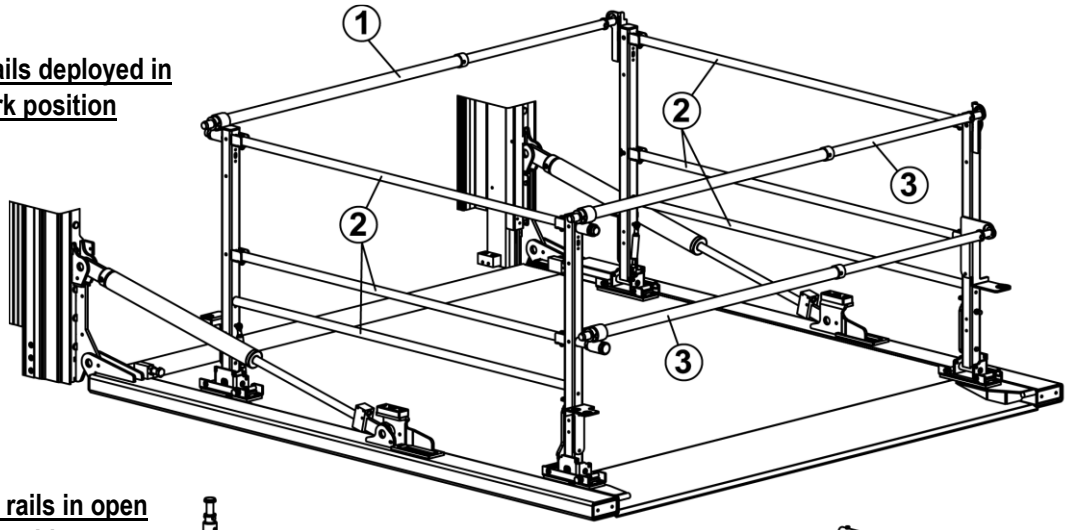
- The operator MUST stand on the side of the platform and keep head, limbs and upper body clear of hazardous space between the platform and the lift columns, while stowing the platform in its travel position.
- At any time during the operation, release the activated button(s) to stop the platform from moving. Additionally, if so equipped, turning the main battery disconnect switch counter-clockwise will switch off electrical power to the tail lift.

IMPORTANT NOTE:

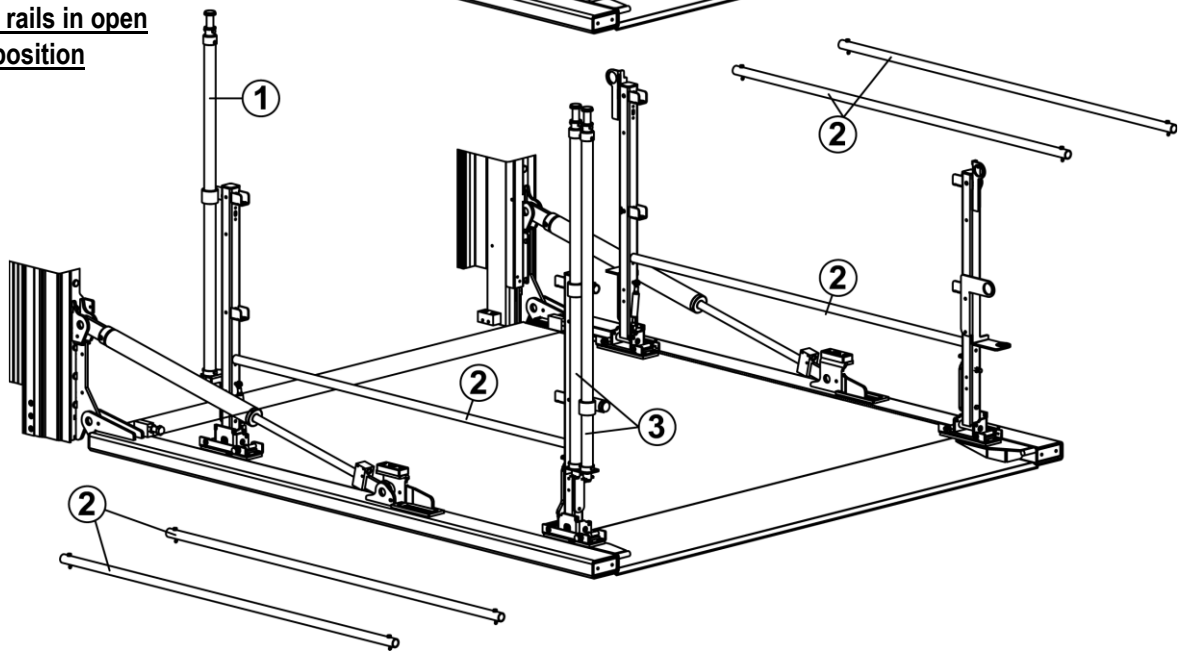
- The removal execution OVU002.B is equipped with guard rails along the 4 platform edges. Together, they form a safety cage, protecting the operator from falling down, while the platform is travelling up to maximum height (above the vehicle roof).

1	**Telescopic guard rail:** pivoting guard rail at the inboard platform edge. Open the guard rail to grant access between the platform and the vehicle floor. Deploy and secure the guard rail in work position to LIFT / LOWER.
2	**Lateral guard rails:** guard rails at the left and right side of the platform, partially fixed, partially removable. Open one side only, to enable movers to lift their cargo over the edge of the platform into the building (or vice versa). Deploy and secure all guard rails in work position to LIFT / LOWER.
3	**Telescopic guard rail:** pivoting guard rails at the outboard platform edge. Open the guard trail to grant access to the platform to load and unload. Deploy and secure the guard rail in work position to LIFT / LOWER.

Guard rails deployed in work position



Guard rails in open position



- While certain platform sides can be opened up, maximum safety precautions should be observed, as follows.

⚠ WARNING

- Falling from heights can cause serious bodily injury or death.
- To prevent injury or death by falling from the platform:
  - → ALWAYS deploy all guard rails and secure them in work position prior to LIFTING / LOWERING. NEVER LIFT / LOWER while one of the platform edges is open and unprotected.
  - → When loading / unloading at a level above the vehicle floor, NEVER open up more than 1 side of the platform.
  - → Park the vehicle at max. 20 cm from the wall. Take maximum precautions to avoid that the operator could fall between the side edge of the platform and the wall.
  - → Before LOWERING back down, ALWAYS deploy all guard rails and secure them in work position.

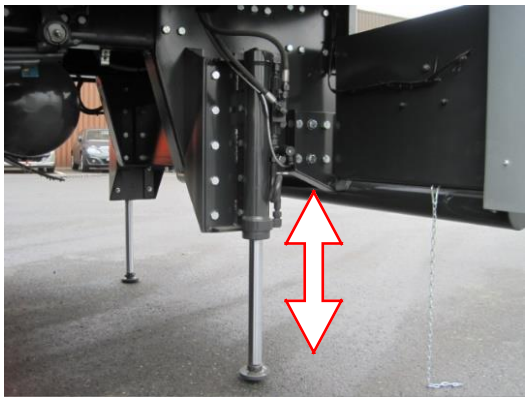
9.8 THE USE OF STABILISING LEGS

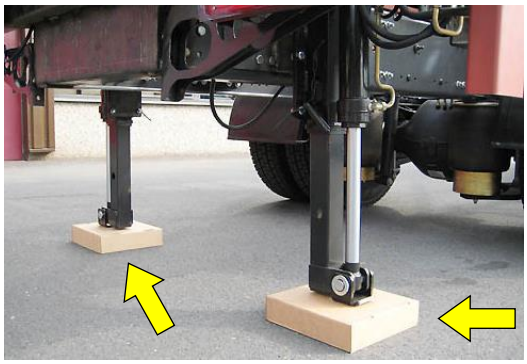
- Hydraulic stabilising legs, operated via the main external control box, are standard on the removal lifts type DH-VO.20.D4, and available as an option on most other column lifts. Standard stabilising legs have a maximum rated capacity of 4T.
- The purpose of the stabilising legs is to prevent the vehicle from tipping over, and to support the chassis and vehicle body during loading and unloading (e.g. vehicles with very long overhang, soft suspension, with relatively weak chassis, or in case of extreme lift capacities).

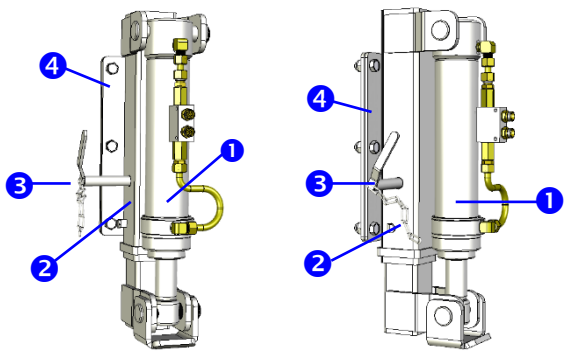
NOTICE

- DHOLLANDIA strongly recommends the use of hydraulic stabilising legs to load and unload at great heights.
- The use of stabilising legs is made mandatory by various vehicle manufacturers. Consult the instructions of the OEM vehicle manufacturer.

- When using the stabilising legs, the operator should observe following points:
  - → Ensure that the vehicle is safely parked and the parking brake applied.
  - → Ensure that the stabilising legs are positioned on solid even ground. In case of soft terrain (sand, gravel, etc.), solid support blocks must be used under the stabilising legs.
  - → Use the stabilising legs upon every loading / unloading activity.
  - → The stabilising legs should be used to stabilize the vehicle only. They are not suitable to lift the complete vehicle and its cargo.
  - → If so equipped, block the air suspension of the vehicle so that the vehicle floor cannot rise after deployment of the stabilising legs.
  - → The height of the stabilising legs should be adjusted during loading and unloading, to adapt them to the variation in the vehicle suspension. Failure to properly adjust height of stabilizing legs increases the risk of mechanical damage to the stabilising legs
  - → Before stowing the stabilising legs back in their travel position, raise the air suspension of the vehicle (if so equipped) in order to relieve the stabilising legs from excess pressure.
  - → Do NOT move the vehicle if the stabilising legs are not fully raised and secured in their travel position.
  - → In case of 10T stabilising legs, remove the locking pin from the support frame prior to use and operating LEG DOWN. After use, operate LEG UP to pull the stabilising legs back in their travel position, and reinsert the locking pin in the support frame.







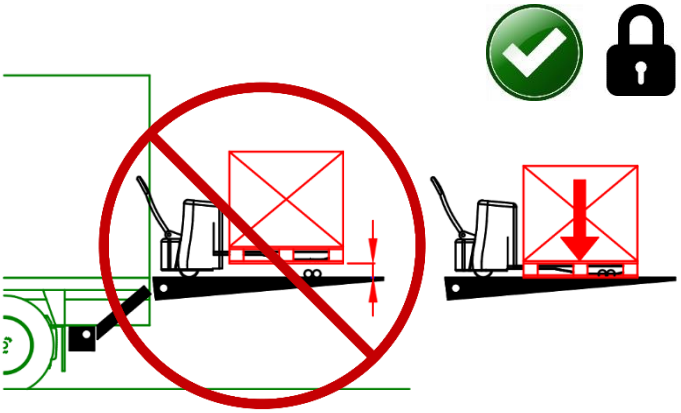
1	Hydraulic cylinder
2	Support frame
3	Locking pin
4	Mounting plate to chassis or ramp frame

9.9 THE USE OF ROLL STOPS

⚠ WARNING

- If the load is not properly secured on the platform while lifting or lowering, it could shift position, destabilise the operator riding on the platform, and cause him / her to fall. Or the load could fall off the edge, and hit the operator or bystanders.
- Improperly secured cargo can put the operator and any bystanders at great risk of serious bodily injury and death.
- Therefore, all cargo must be properly secured on the platform, before lifting or lowering.

- Before lifting or lowering loads, ALWAYS apply all brakes or stops available to secure the load. Engage the wheel brakes of carts, trolleys or machinery (if available). When using pallet jacks, lower and rest the pallet or load onto the platform surface.
- DHOLLANDIA offers various roll stop options, delivered to customer specification. Contact your regional DHOLLANDIA distributor for more information, prior to ordering your tail lift. See page 3 for contact info.
- The most popular roll stop models are discussed below. Contact your regional DHOLLANDIA distributor for operational instructions on other models or models with different options, prior to operating the tail lift. See page 3 for contact info.

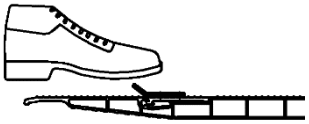


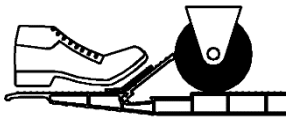
- Consult the DHOLLANDIA website to view operation videos on the various types of roll stop systems

  http://dhollandia.com/GB/en/101/Movies#/cat/0

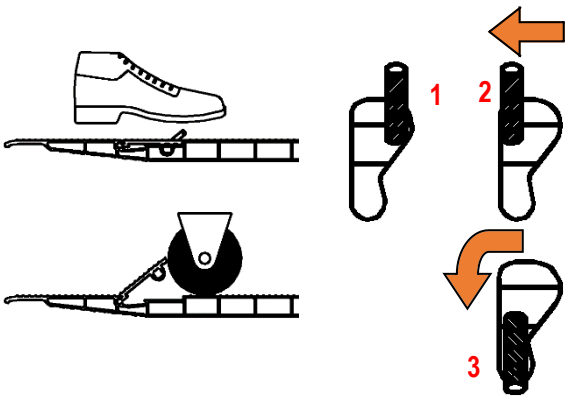
  www.dhollandia.com → Country & language selection → Videos → General → Roll-stop systems

OAP100.M = Manual roll stops, operated by springs	
OPEN	Press the lever on the side of the roll stop flap.
CLOSE	Step on the roll stop flap. When driving a load from the ground onto the platform, the roll stop will automatically close.

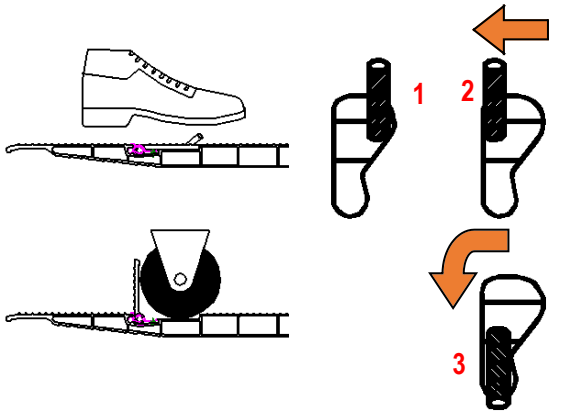




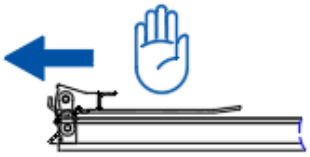
OAP100.A = Automatic roll stops, operated by springs. Roll stop flap opens to 40°.	
OPEN MANUAL MODE	Kick the lever on the side of the roll stop flap sideways from position 1 to position 2. The roll stop will now function as a **manual** roll stop OAP100.M. When stepping on the roll stop flap, or when driving a load from the ground onto the platform, the roll stop will automatically close.
OPEN AUTOMATIC MODE	Kick the lever on the side of the roll stop flap sideways + rearward, from position 1 to position 3. System will now function as **automatic** roll stop. When stepping on the roll stop flap, or when driving a load from the ground onto the platform, the flap automatically jumps back to the open position after releasing it, or when the load is passed over it.
CLOSE	Kick the lever into position 1. Step on the roll stop flap.

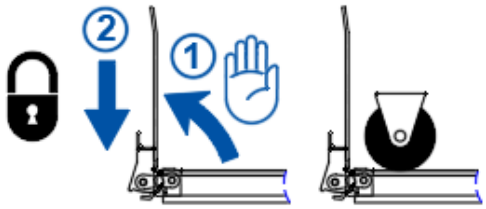


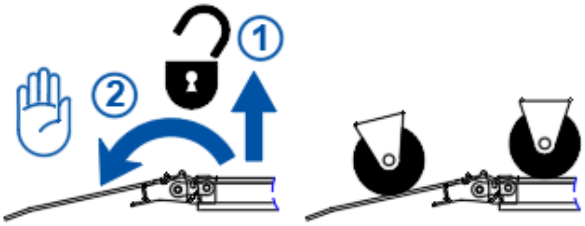
OAP100.VA = Vertical roll stops, operated by springs. Roll stop flap opens to 90°.	
OPEN MANUAL MODE	Kick the lever on the side of the roll stop flap sideways from position 1 to position 2. The roll stop will now function as a **manual** roll stop OAP100.M. When stepping on the roll stop flap, or when driving load from the ground onto the platform, the roll stop will automatically close.
OPEN AUTOMATIC MODE	Kick the lever on the side of the roll stop flap sideways + rearward, from position 1 to position 3. System will now function as **automatic** roll stop. When stepping on the roll stop flap, or when driving a load from the ground onto the platform, the flap automatically jumps back to the open position after releasing it, or when the load is passed over it.
CLOSE	Kick the lever into position 1. Step on the roll stop flap.



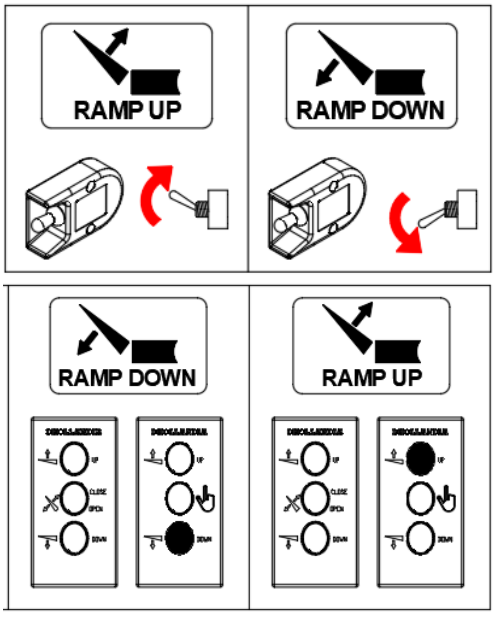
OVP120.S.R / OVP120.A.R = Rear or outboard roll stop ramps in steel or aluminium **OVP120.S.S / OVP120.S.R** = Side mounted roll stop ramps in steel or aluminium	
OPEN	Pull the rear side of the ramp towards you. Then raise the ramp in 90° vertical position and drop it down to lock.
RAMP	Raise the ramp to unlock. Swing it open towards the rear, and lay it open on the ground in ramp position
CLOSE	Raise the ramp. Swing it forward over 180° to lay it back onto the platform surface. The ramp will automatically lock when the platform is closed.

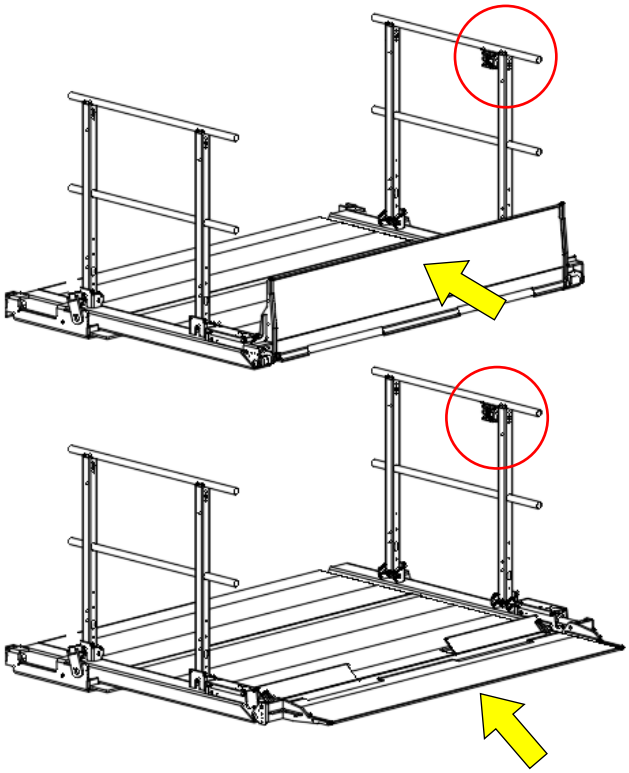






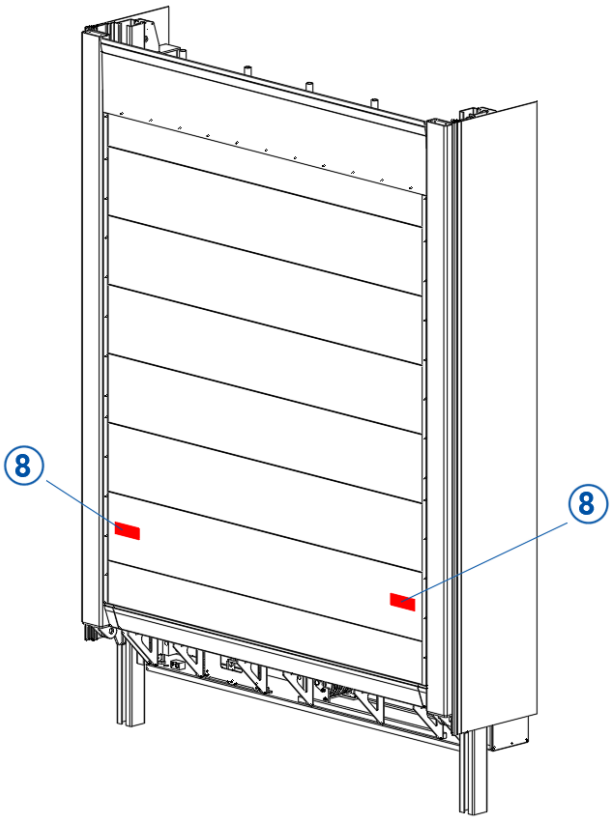
OVP152 = Hydraulic roll stop ramp, electro-hydraulically operated	
RAMP DOWN	Press RAMP DOWN on the main external control box or on the auxiliary controls. See 9.2 - 9.3.
RAMP UP	Press RAMP UP on the main external control box or on the auxiliary controls. See 9.2 - 9.3.

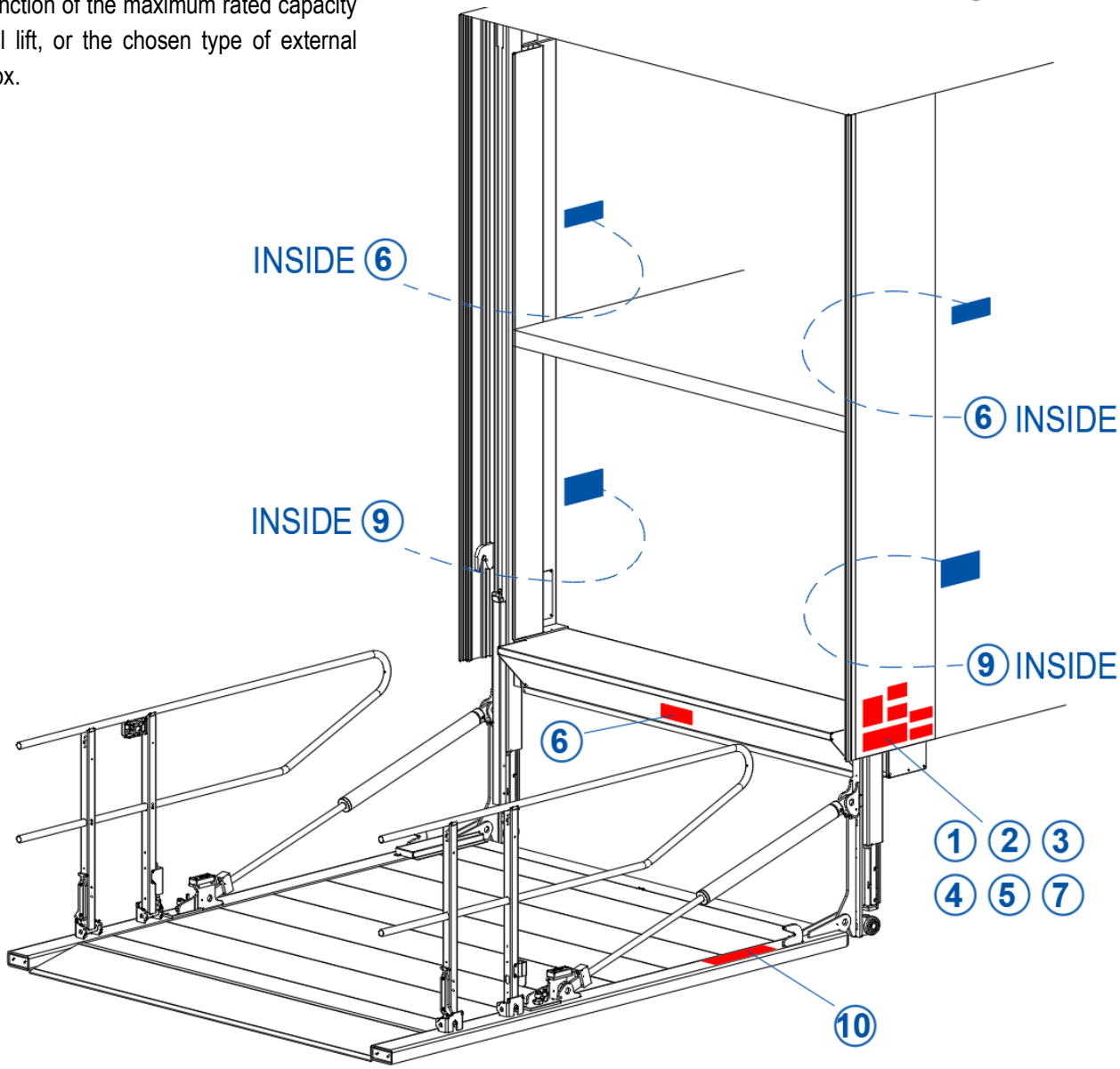




10 DECALS

- The following decals are supplied with each new tail lift, and should be affixed to the vehicle body during installation in the manner set forth in the adjacent drawings.
- NEVER remove or paint over any decal. Missing, worn or illegible warning decals must be immediately replaced. Get free replacement decals from DHOLLANDIA. Contact your regional DHOLLANDIA distributor. See page 3 for contact info.
- The operator should comply with all affixed safety and instructions decals. Be aware that the decals merely summarize the main points, and that the operator must know, understand, and comply with the full contents of the operation manual.
- Note: the decals marked as “EXAMPLE” can vary in function of the maximum rated capacity of the tail lift, or the chosen type of external control box.

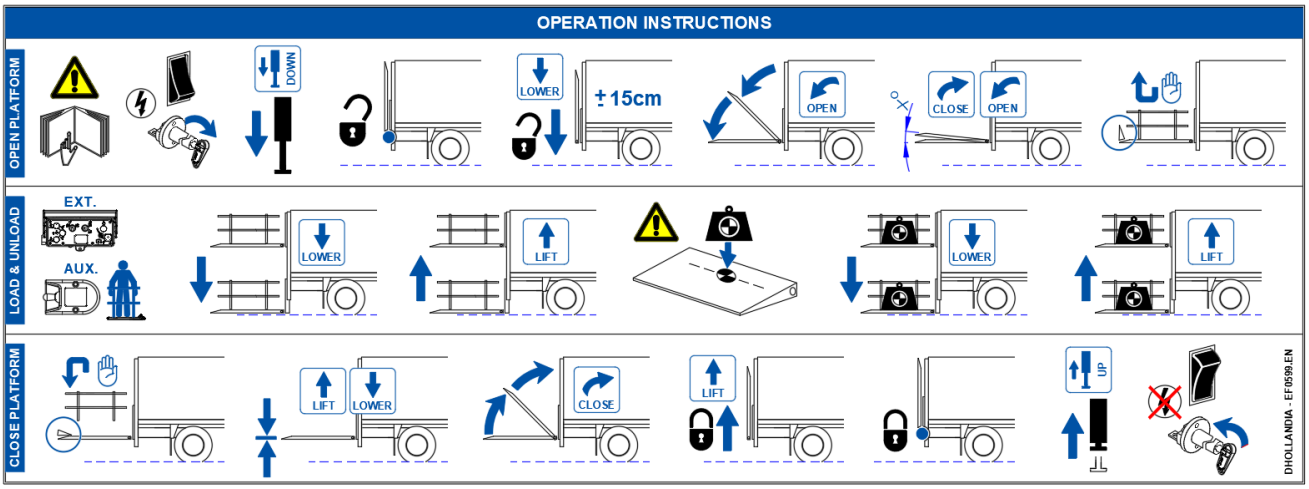




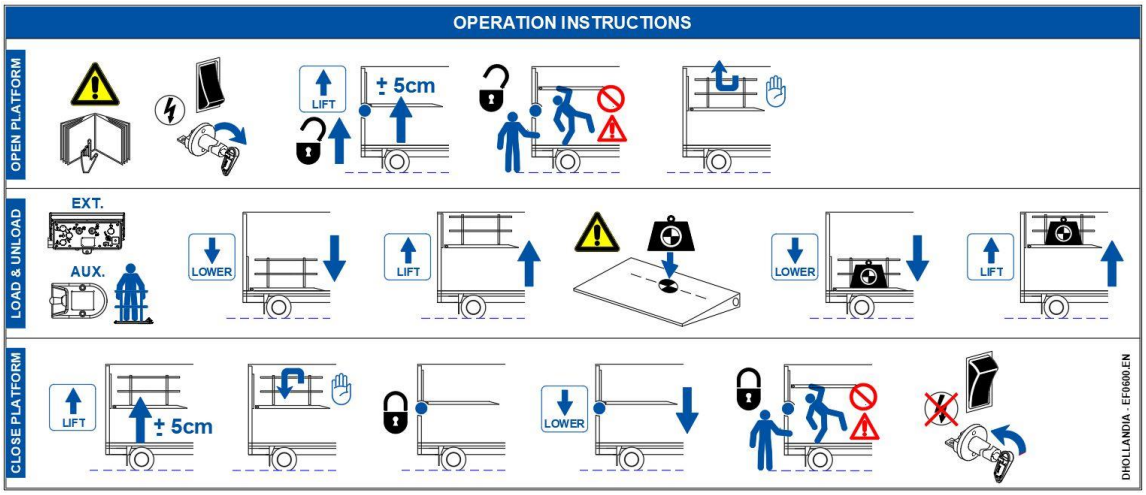
See table	Type	Decal n°
	External lift	EF0599.EN
	Internal lift	EF0600.EN
	DH-VO.20.D4 removal lift	EF0601.EN

1

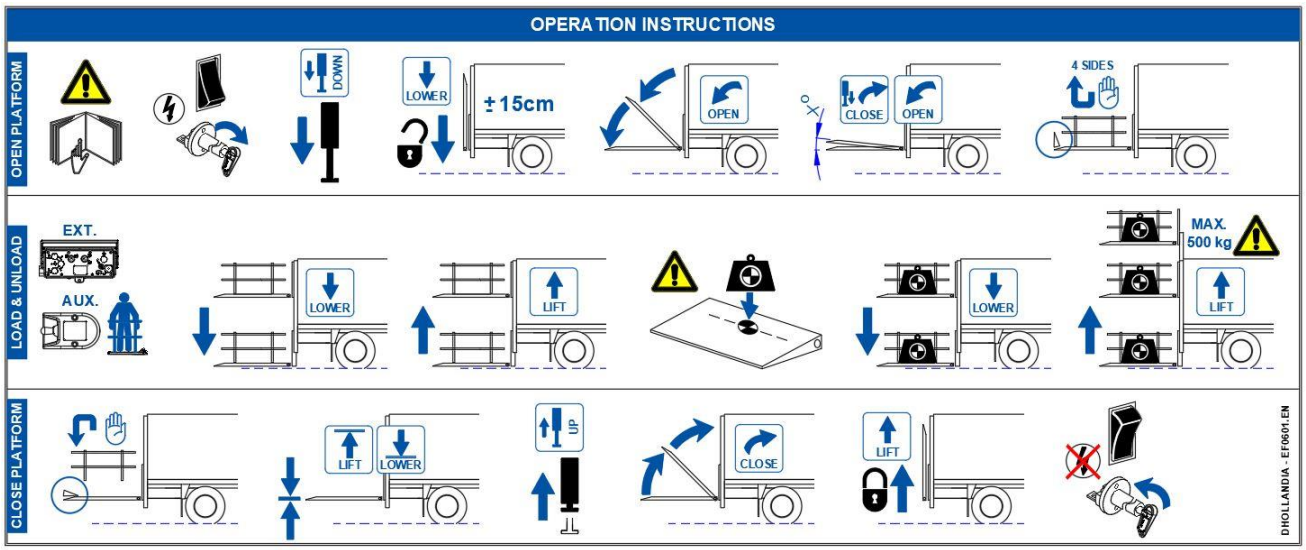
EF0599.EN



EF0600.EN



EF0601.EN



2

EF0565.EN

WARNING - SAFETY INSTRUCTIONS

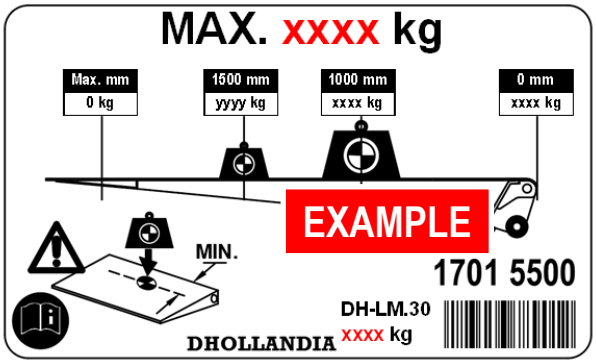
Read and understand the user's manual, all instructions and warnings before use.

Negligence or ignorance can put the operator and third parties at great risk.

1. Do not use liftgate unless you have been properly trained and instructed, you have read and you understand the full operating instructions.
2. Wear appropriate working clothes, incl. footwear with steel toe caps and a good non-slip sole, and wear protective gloves.
3. Ensure the vehicle is safely parked and braked before using the liftgate.
4. Where applicable, refer to the site's specific risk assessment, and follow the local work & safety instructions.
5. Always inspect if liftgate can be used safely before using it. Do not use liftgate if there are signs of bad maintenance, abnormal wear or damage, or if the platform surface is slippery. Do not attempt to repair liftgate yourself, unless you have been trained and authorized to do so.
6. Do not overload. Observe the maximum rated capacity and load charts.
7. Do not stand behind or within reach of the platform.
8. Make sure that platform area, including the area in which loads may fall from platform, is clear of obstacles and other people at all times.
9. Make sure you can see and keep visual control over the whole working area of the liftgate, the platform and its load at all times.
10. Beware of finger and toe traps at all times. When riding platform, stand at safe distance of min. 10" from the inboard edge of the platform adjacent to the rear sill of the vehicle body.
11. It is prohibited for anyone other than the operator to travel on the platform.
12. Liftgate is intended for loading and unloading cargo only. Do not use liftgate for anything else but its intended use.
13. Make sure platform is clearly visible from all approach directions (by means of flashing platform lights, platform flags, traffic cones, etc...) and that the working zone is sufficiently illuminated.

3

EF0585

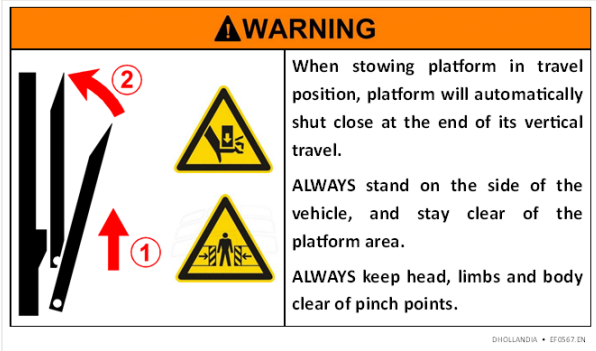


4

EF0570+Capacity

5

EF0567.EN



6

EF0545

7

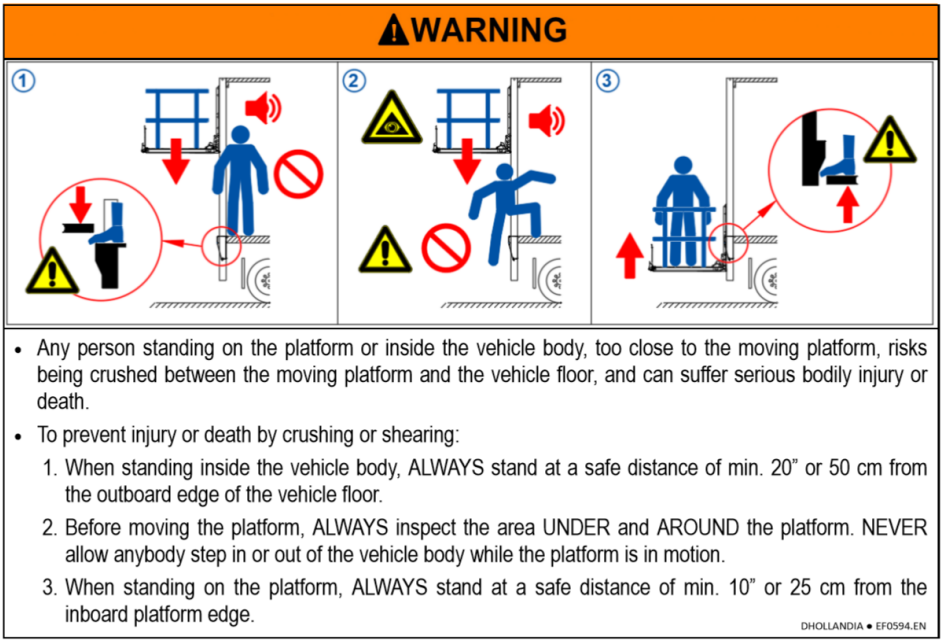
EF0563.EN

8

EF0562.EN

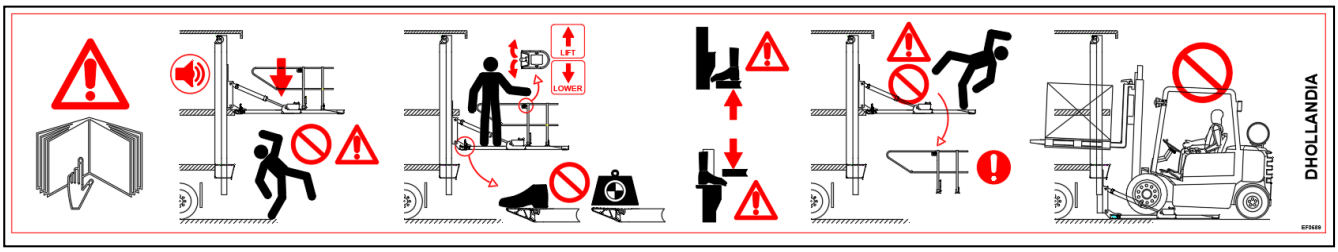
9

EF0594.US



10

EF0589



Tail lift decals used an affixed in areas, other than the rear of the vehicle:

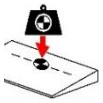
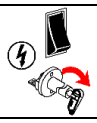
Cabin switch in driver's cabin to switch electrical power to tail lift on / off (if so equipped)

11 MEANING OF SAFETY AND WARNING SIGNS

WARNING signs	
	Overview and keep visual control over the working area of the tail lift at all times.
	General warning sign used to alert the user to potential hazards. All messages that follow this sign shall be obeyed to avoid possible harm.
	Entrapment hazard. Keep hands, limbs, loose clothes and long hair away from moving parts.
	Crushing & shearing hazard. Keep hands away from moving parts.
	Crushing & shearing hazard. Keep feet away from moving parts.
	Slipping hazard.
	Tripping hazard.
	Hazard caused by tilting objects.
	Hazard of falling from heights.
	Crushing and entrapment hazard. Keep head, upper body and limbs away from moving parts

MANDATORY ACTION signs	
	Contact your regional DHOLLANDIA distributor.
	Consult the DHOLLANDIA website. Download from DHOLLANDIA website.
	Read the manual or instructions.
	Hold onto guard rail. Protect yourself from falling off the platform, or vehicle floor.
	Wear safety gloves.
	Wear safety-toe shoes.
	Wear appropriate work clothes, avoid loose-fitting clothes that might be trapped in the moving parts of the lift.
	Wear safety protection, eye protection and a safety hard hat.
	Use a safety shield.

PROHIBITION signs			
	General prohibition. DO NOT do!		DO NOT use machine by more than 1 operator!
	General prohibition. DO NOT do!		DO NOT step or stand here!

Other frequently used signs	
	Yes do this way. Correct work procedure.
	Yes do this way. Correct work procedure.
	No, DO NOT do this way. -Incorrect work procedure.
	Position the load at the applicable center of gravity or load center. - Follow the load instructions.
	Emergency stop. Will cause an immediate stop of the tail lift.
	Emergency exit. Provision (lever, valve) creating an emergency exit.
	Unlock. Disengage the mechanical locking system.
	Lock. Engage the mechanical locking system.
	Switch ON the electrical power.
	Switch ON the electrical power to the tail lift via the main battery disconnect switch and / or cabin switch.
	Switch OFF the electrical power.
	Switch OFF the electrical power to the tail lift via the main battery disconnect switch and / or cabin switch.
	This is an operation to be executed manually (as opposed to an electrical function controlled by means of one of the control units).

12 END NOTE

NOTICE

- Competent and regular preventative maintenance is essential to the operational reliability, and the safety of the operator and bystanders.

- The latest update of our check-list for preventative maintenance & inspection can be downloaded from:

  www.dhollandia.com → Country & language selection → Downloads → Checklists → … select required manual

- All maintenance and repair work should be performed by authorized DHOLLANDIA service agents and using only authorized OEM DHOLLANDIA replacement parts.
- Consult the separate MAINTENANCE AND REPAIR MANUAL for safety instructions, maintenance guidelines, and troubleshooting support.
- Lubricate the tail lift on a regular basis to maximize its durability and operational reliability. this is at least 3 times per year in a single shift operation; more frequently in case of very intensive use (multiple shift, 24h operation, etc.) or use in hostile environment conditions (frequent high pressure cleaning with strong detergents, etc.).

- The latest version of the MAINTENANCE AND REPAIR MANUAL can be downloaded from the DHOLLANDIA website:

  www.dhollandia.com → Country & language selection → Downloads → Operation manuals → … select required manual