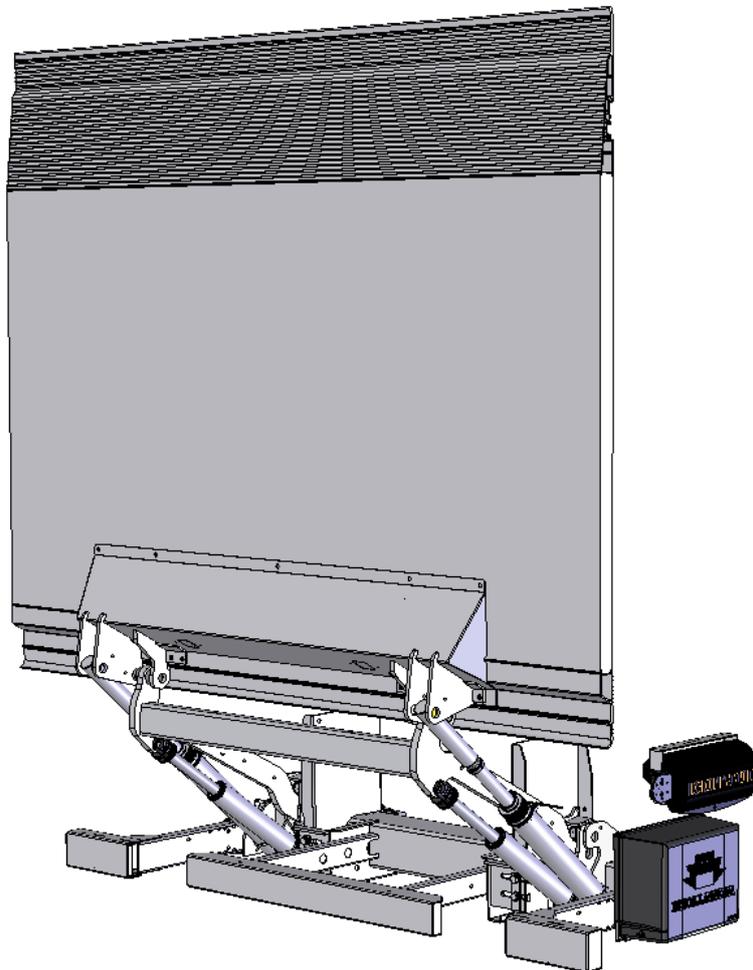




DHOLLANDIA

DH-L* cantilever tail lifts

OPERATION MANUAL



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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

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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 from page 46 onwards for an overview of signs and symbols used in DHOLLANDIA manuals, and their meaning.

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 proper 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 to 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 IDENTIFICATION AND INSPECTION LOGBOOK (separate) contains the serial number identification, the CE 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

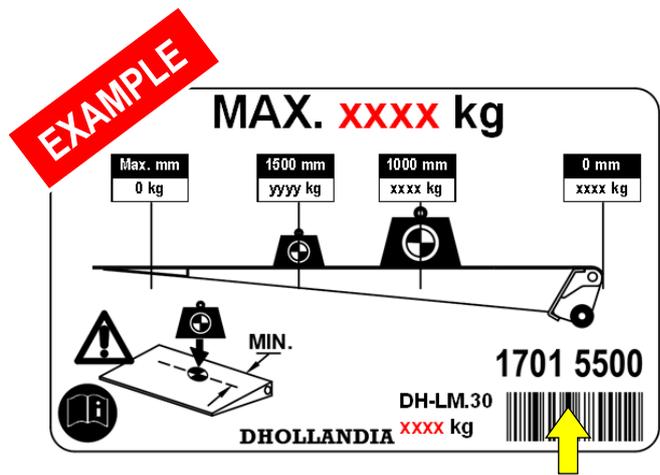
DHOLLANDIA tail lifts are designed to be fitted to commercial vehicles (commercial trucks, trailers and semi-trailers), and shall be used exclusively to load and unload the goods transported on the vehicle it is fitted to, within the limits of the load chart, in compliance with the operator instructions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

WARNING

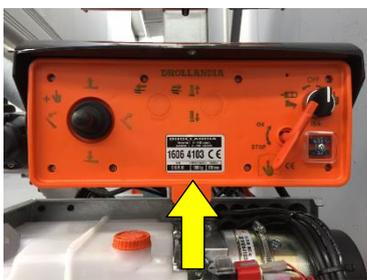
- Improper use of the tail lift will put the operator and bystanders at great risk of serious bodily injury and death. Therefore, it is strictly forbidden to use the tail lift in a different way, or for different purposes than described in the operation manual.
- The tail lift must NEVER be used as an elevated work platform, to push loads, 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 certificate 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



On the main external control box



On the lift frame



On the hydraulic cylinders



On the platform



In the pump unit

6 DESCRIPTION AND TAIL LIFT TERMINOLOGY

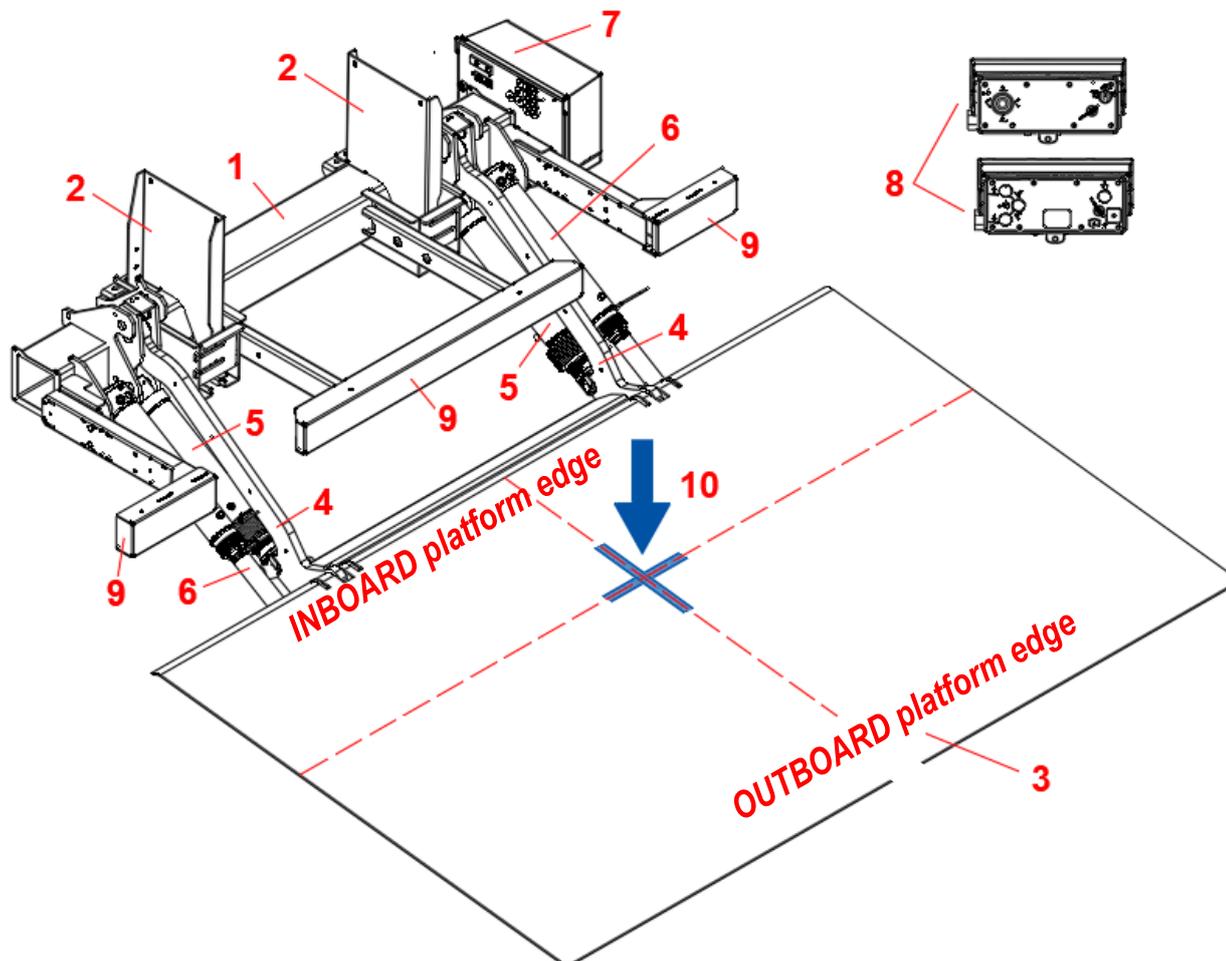
6.1 GENERAL

- 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 safety regulations mentioned in the Declaration of Conformity issued with each lift (unless otherwise agreed for tail lifts exported outside the CE region).
- The DH-L... series comprises of a range of cantilever tail lifts, designed for a wide variety of factory-built panel vans, trucks, trailers and semi-trailers, and is available with lift capacities ranging from 300 to 9.000 kg.
- In its travel position, the platform of the cantilever tail lift is stowed vertically behind the vehicle body. Before use, the platform is tilted open 90 degrees from the vertical travel position, to a horizontal work position.
- Main details and terminology: see next page.

TAIL LIFT TERMINOLOGY

See figure below for parts corresponding to numbers in this table

#	Description
1	Lift frame: mounted in a fixed position under the vehicle chassis. It bears the platform and its load via connection to the lift arms and hydraulic cylinders.
2	Mounting plates: used to mount the lift frame to the vehicle chassis.
3	Platform: carries the load during loading / unloading, lifting / lowering. Manufactured from steel or light-weight aluminium and with a non-slip working surface. Equipped with synthetic rollers to protect it from scraping the ground.
4	Lift arms L+R: actuated by the hydraulic lift cylinders, used to LIFT / LOWER the platform and its load.
5	Lift cylinders L+R: 1 or 2 hydraulic cylinders used to LIFT / LOWER the lift arms, the platform and its load.
6	Tilt cylinders L+R: 1 or 2 hydraulic cylinders used to OPEN / CLOSE the platform, or to change its angle when opened in work position.
7	Hydraulic pump unit: contains the electric motor driving the hydraulic pump, the oil tank, and the control valves.
8	Main external control box: mounted in a fixed position at the side of the vehicle, under the body. Contains the electrical switches allowing the operator to execute all tail lift functions OPEN - LOWER - LIFT - CLOSE.
9	Bumper bar: under run protection device.
10	Center point of maximum load: point up to which the maximum rated capacity of the tail lift is valid. Beyond that point, the maximum safe working load diminishes according to the applicable load charts found at section 8 on page 24 of this manual.



6.2 SAFETY DEVICES

DHOLLANDIA tail lifts are equipped with 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 following safety devices are incorporated or recommended on most tail lifts:

- **Electrical safety valves mounted on all cylinders** [standard].

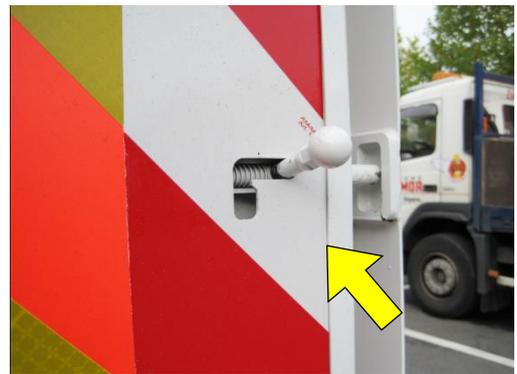
The safety valves lock the oil inside the hydraulic cylinders as long as they are not energized via the electrical controls. The purpose is to secure the platform in its travel position while driving, or in any other fixed position, in case of accidental failure of a hydraulic pipe (as soon as the electrical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



- **Mechanical platform lock(s)** [optional]. DHOLLANDIA offers (a) mechanical platform lock(s) as an option, to further secure the platform in its travel position in case of accidental loss of hydraulic pressure.

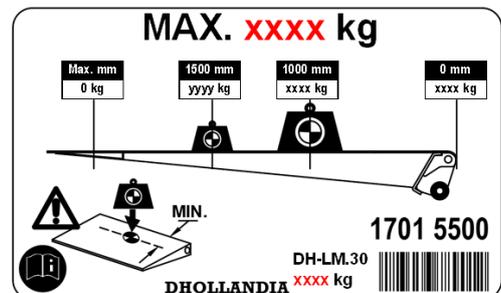
The use of a platform lock is good and safe practice in general. Also, depending on the vehicle pay-load and the type of tail lift, extra locks might be compulsory to comply with the CE load containment regulations EN12195 and EN12642 Code XL. Ask DHOLLANDIA for further advice.



- **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 compensated 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 on page 24 on load charts and correct loading procedures.



- **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.



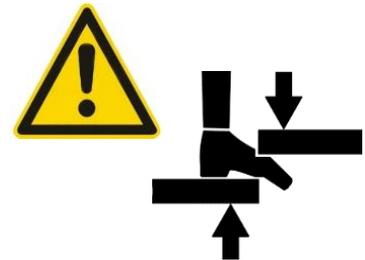
- **Tail lift on/off switch** [min. 1 compulsory]. Depending on configuration, the electrical power to the tail lift is switched on / off by means of:

1. A **cabin switch** provided by the truck manufacturer or DHOLLANDIA [option OAE503.2]. This switch enables the operator to switch the control power to the main external control box on / off. If equipped with a position sensor [option OAE502], it also provides 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 150 - 250A 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** [1 min. compulsory]. The 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. At least 1 solution, ordered from DHOLLANDIA, or realized during installation, must be foreseen. Consult the installation manual FIT-ELEC-OPTION in its latest version. In case of doubt, contact DHOLLANDIA. See page 3 for contact information.



- **Foot controls** [optional]. See also previous point. 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.



- **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 cart-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.



- **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. Bi-directional **flashing platform lights** [option OAE200], 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.



- **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 2 m 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.



- **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 and 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 must 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 a hardhat is recommended.

Must:



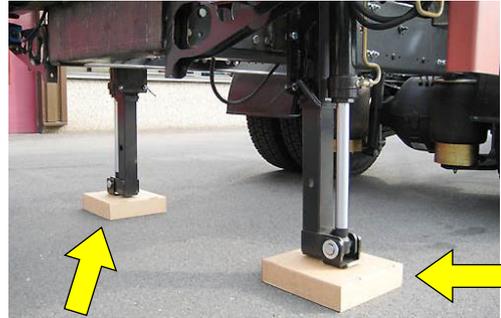
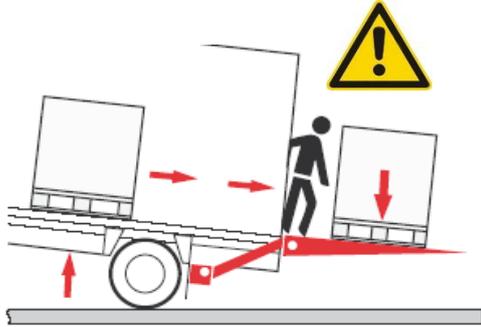
Recommended:



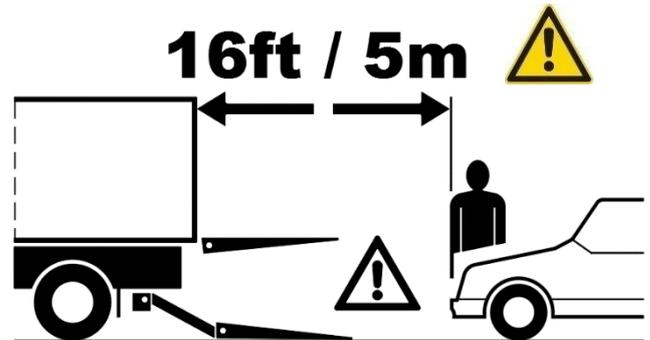
- Slipping (and falling) can result in serious bodily injury and death. To prevent injury by slipping:
 - ALWAYS wear professional safety-toe shoes with a good non-slip sole.
 - DO NOT use the tail lift if it is covered with snow, mud, dirt, debris, liquids or other substances.
 - DO NOT run on the platform.
- 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 7.4 from page 17 onwards.
 - Use guard rails where available. See 7.4 from page 17 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.

⚠ WARNING

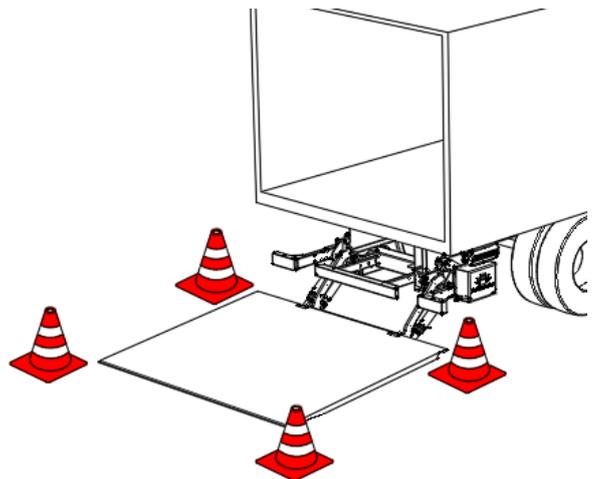
- Prior to operating the tail lift, the vehicle must be safely parked on level and solid ground, have the parking brake applied, and the engine switched off. Lock open the rear doors and secure all other moving parts of the vehicle body. Failure to abide by these instructions can result in serious bodily 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 stabilizing legs, deploy these before opening the platform. Ensure that the stabilizing legs are positioned on solid even ground. In case of soft terrain (sand, gravel...), solid support blocks must be used under the stabilizing 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.

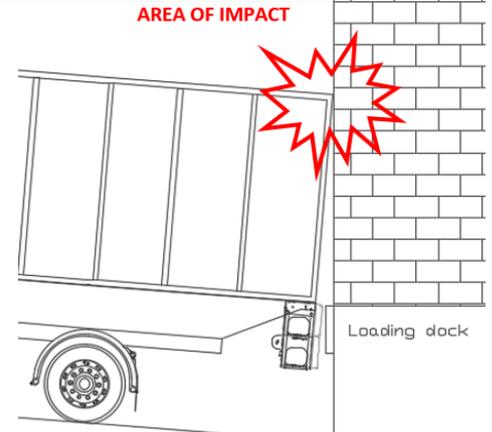


NOTICE

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 your 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 and serious bodily injury 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 7.6 from page 22 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; 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.



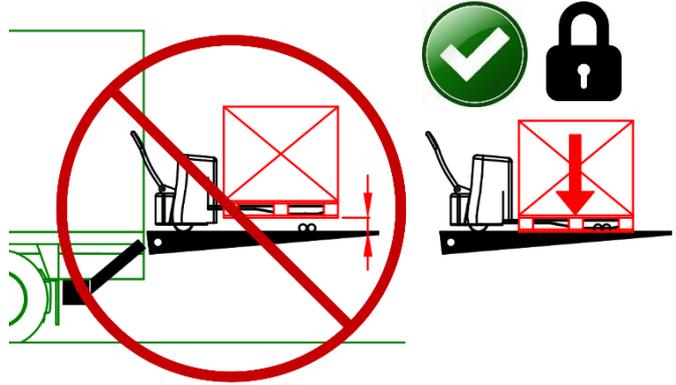
- DO NOT allow any other person, to stand in the proximity of the tail lift and its platform. ENSURE AT ALL TIMES THAT NOBODY STANDS UNDER OR WITHIN REACH OF THE MOVING PLATFORM.

- 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.



WARNING

- For loads on wheels, engage wheel brakes of carts, trolleys and machinery (if available) before operating the tail lift.
- 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.
- When using a pallet jack, lower and rest the pallet or load upon the platform surface 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 9.8 from page 41 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 9.6 from page 36 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.
- Exception: marshalling manoeuvres to reverse a vehicle into a loading dock or drive off, are excluded from aforementioned prohibition. It is strongly recommended that fleet operators execute site-specific risk analysis, and provide instructions to their drivers accordingly. When accepted by your Health & Safety management for specific sites or applications, driving manoeuvres with open platform must be supervised by a banksman, or controlled by other means such as a reverse camera and sensor system.
- 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 colours 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 most important safety and operation instructions are summarized in a product video that can be viewed online at:

<http://www.dhollandia.com/uservideo/LM-EUR EN-2017-01>

- Make sure you review these instructions prior to operation of the associated DHOLLANDIA tail lift.

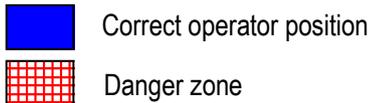


NOTICE

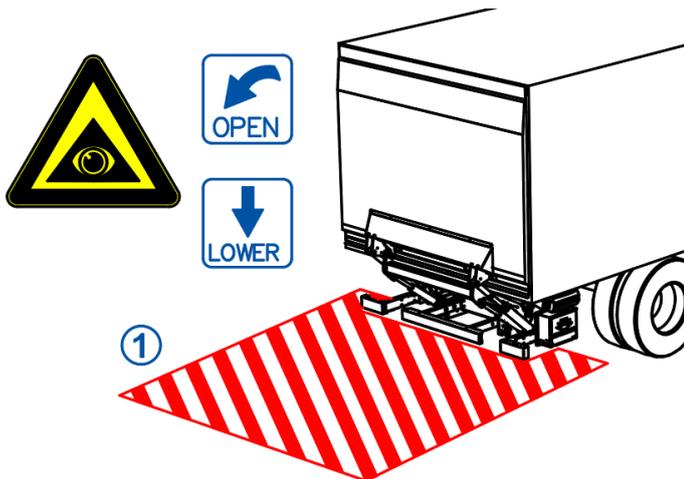
- The safety instructions in this manual are drawn up with an average, common use of the tail lift in mind.
- For specific applications or work conditions, other instructions might be appropriate to reach a higher level of safety. If contraindications exist, a formal risk analysis must be performed by 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

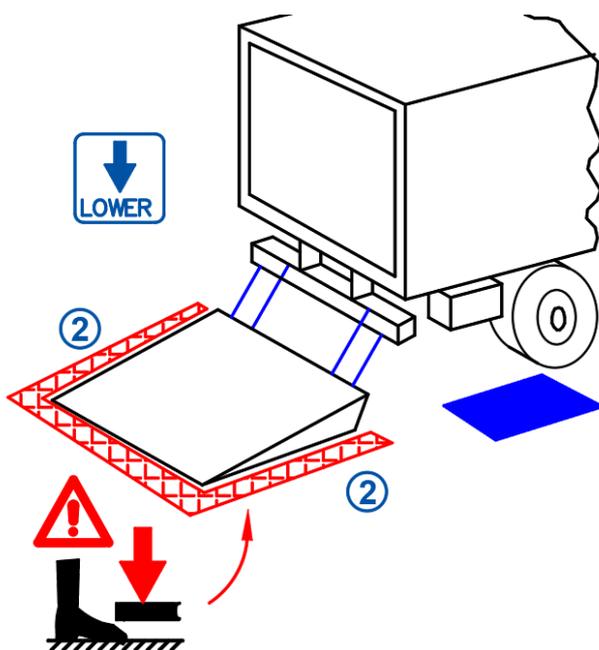
- There are 4 main danger zones on and around the platform, that can be hazardous to the operator and any other persons nearby:



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



2. Beware of crushing zone between lowering platform and ground



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 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.

WARNING

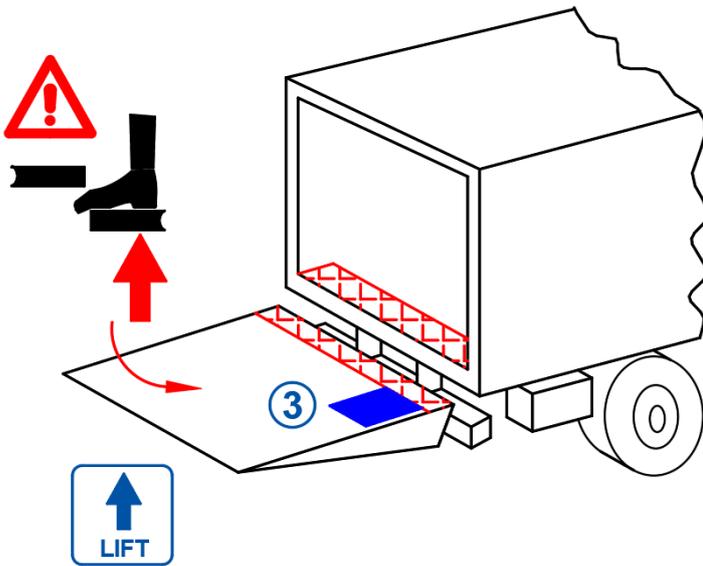
Lowering an empty or fully loaded platform on one's feet may result in serious bodily injury. To prevent people from having their feet crushed or sheared by the lowering platform:



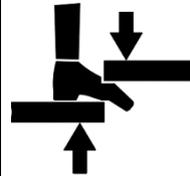
- Keep visual control over the entire working area of the tail lift at all times, including the area directly behind and under the platform;
- When operating the tail lift from a position on the ground, ALWAYS stand at the side of vehicle body, at a safe distance of minimum 50 cm away from the moving platform.



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



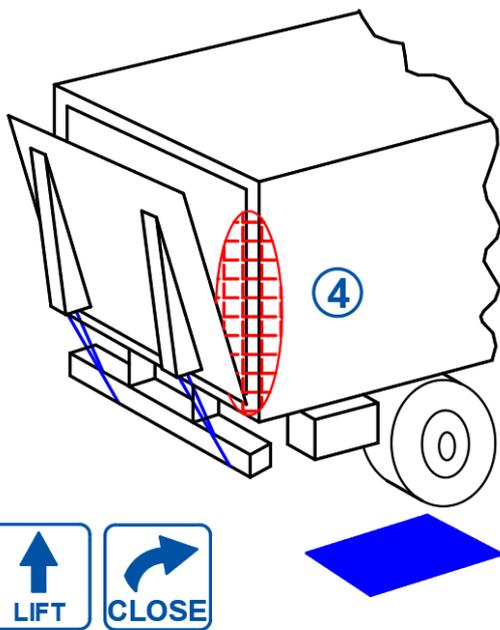
! WARNING



- If the operator on the platform stands too close to the inboard platform edge, protruding toes might be crushed or sheared between the rising platform and the 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

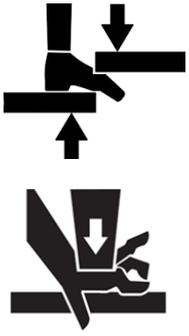


! WARNING



- If the operator enters the zone between the closing platform and the rear frame of the vehicle body 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 rear frame of the vehicle body.
- 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.

! WARNING

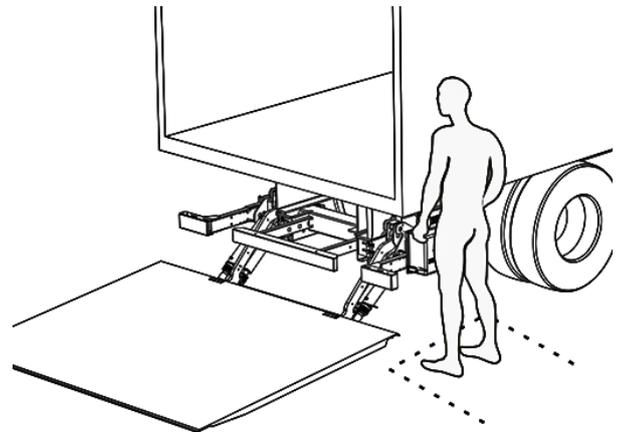


The operator or other persons approaching too close to these danger zones risk serious bodily injury or death by pinching, crushing or shearing of limbs, upper body or head. To prevent these hazards:

- 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 SAFE OPERATOR POSITION

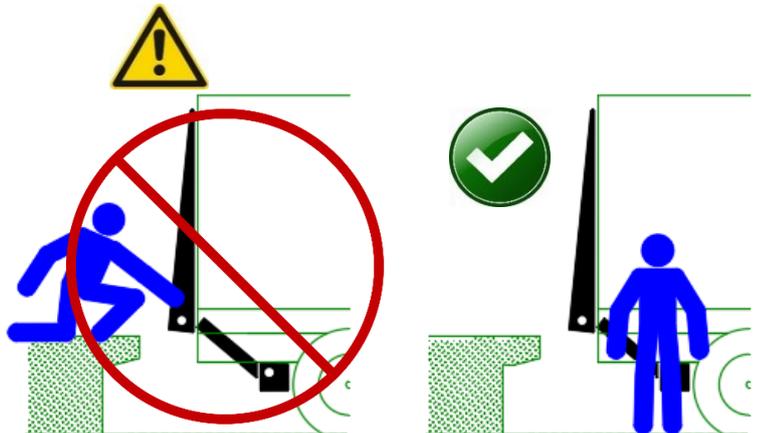
- The instructions on safe operator position aim to enforce that the operator stands in a safe position before and while operating the tail lift and protect him/her against the risks of crushing and shearing as described in 7.3 from page 15 onwards.
- **Main external control box:** the zone just in front of the side-mounted external control box, equipped with mandatory 2-hand operation, 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.



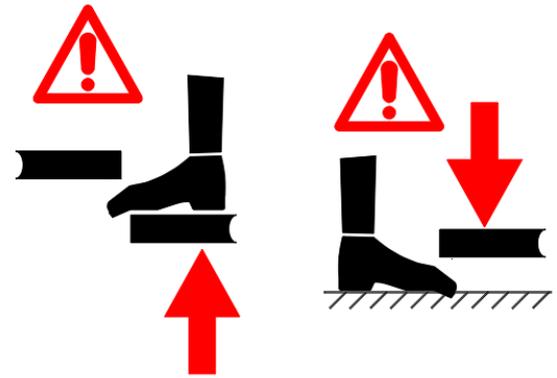
! WARNING



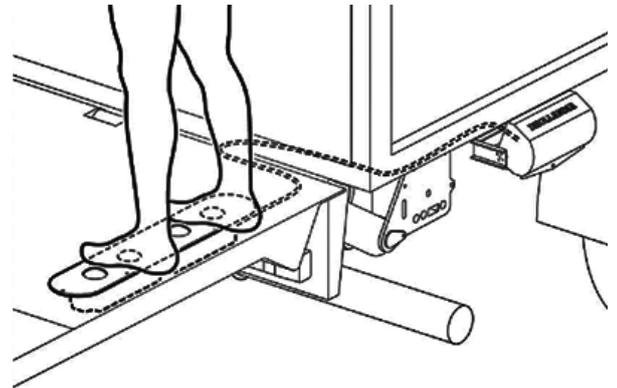
- ALWAYS stand with both feet on the ground on safe operator position at the side of the body when operating the external control box (see also 7.3 from page 15 **Fout! Bladwijzer niet gedefinieerd.** onwards) or the platform locks. NEVER operate the external control box or the platform locks from an 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 lift. ALWAYS keep your head, limbs and body clear of the moving platform and other pinch points.



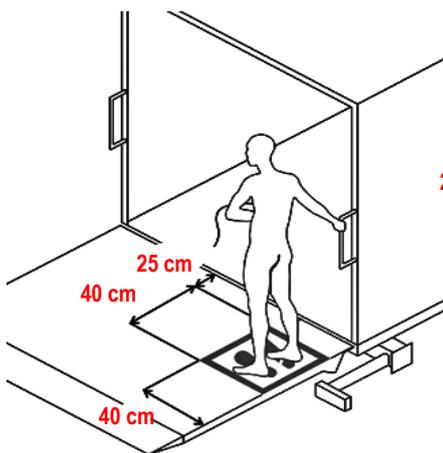
- **Auxiliary controls:** the operator may also LOWER and LIFT the platform through use of the auxiliary controls. The operator must use **extreme caution** when lowering or lifting the platform with the auxiliary controls and must ensure it is done from a safe position. Use of auxiliary controls from an improper position greatly increases the operator's risk of crushing or shearing of toes, limbs, head, and upper body as well as death.



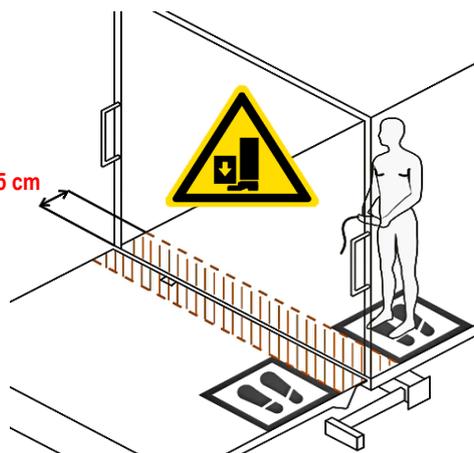
- The operator may also LOWER and LIFT the platform through the use of the platform mounted foot controls (optional) which restrict both operator's feet to a predetermined position on the platform. The operator must use **extreme caution** when using platform mounted foot controls to avoid falling from the platform. ALWAYS maintain 3 points of contact (see below).



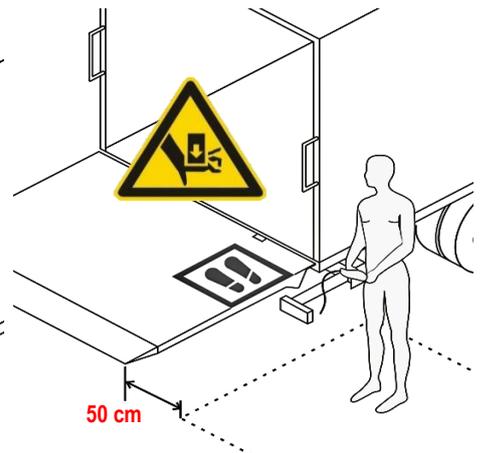
- Handheld auxiliary controls with a spiral cable should only be used under the following conditions (1):



On the platform, from a safe operator position of minimum 40 cm 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 below).



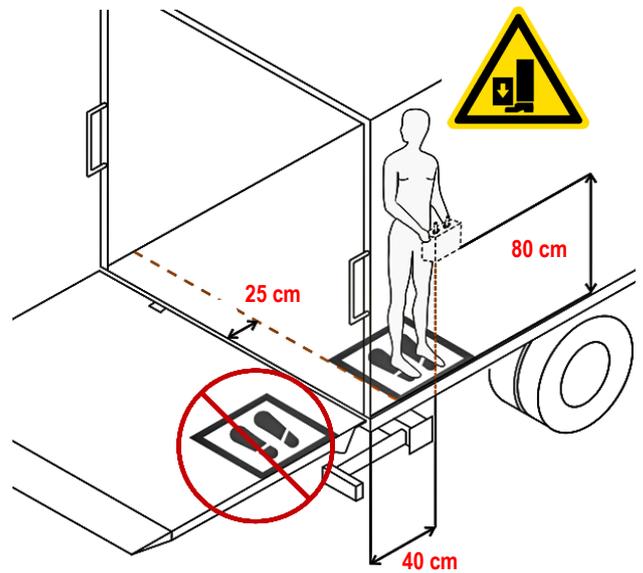
Inside the vehicle body, from a safe operator position of minimum 40 cm x 40 cm square, clearly and permanently marked at minimum 25 cm distance from the hazard zone between the platform and the rear of the vehicle floor.



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 shearing 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 cm 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 3 in 7.3 from page 15 onwards). 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 connection of the power to the external control box does not deactivate the auxiliary controls, stop using the tail lift, and contact an authorized DHOLLANDIA agent to rectify.



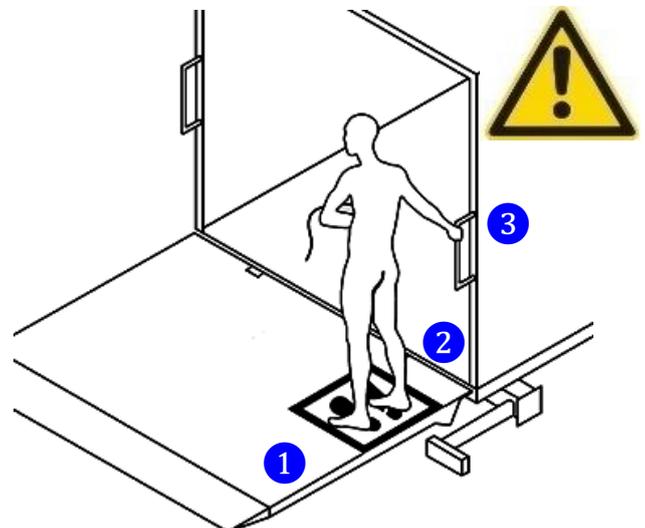
⚠ WARNING

- 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.

⚠ WARNING



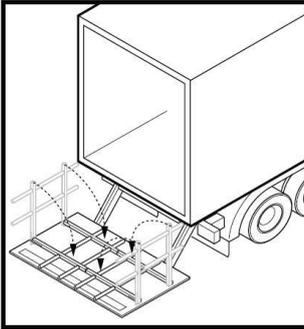
- If not standing solidly, an operator on the platform risks serious injury or death by falling off.
- While riding on the platform, ALWAYS make sure your footing is solid, and ALWAYS maintain 3 points of contact, as shown in the picture to the right.



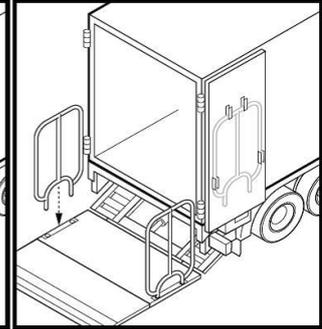
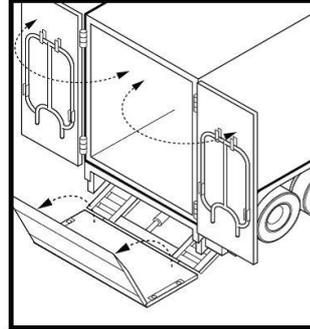
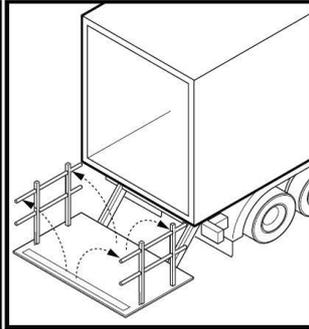
- Note: these 3 points of contact usually include the 2 feet positioned solidly on the platform, and a handgrip mounted to the rear frame of the vehicle body.



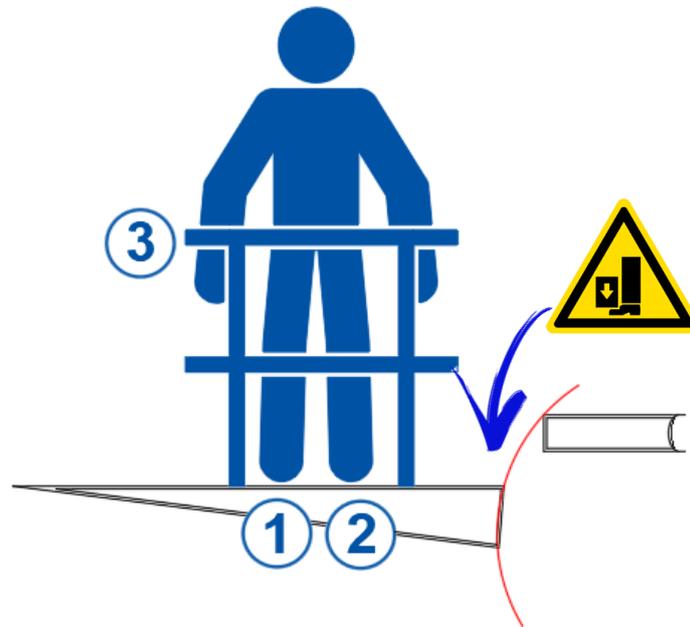
- To reduce the risk of serious bodily injury or death from falling, DHOLLANDIA recommends the use of guard rails along the exposed edges of the tail lift platform. Guard rails may be purchased along with your tail lift at the initial order, or may be purchased and retrofitted to your tail lift later. Please see www.dhollandia.com for further information or contact your national DHOLLANDIA distributor. See page 3 for contact info.



Example: hinged guard rails



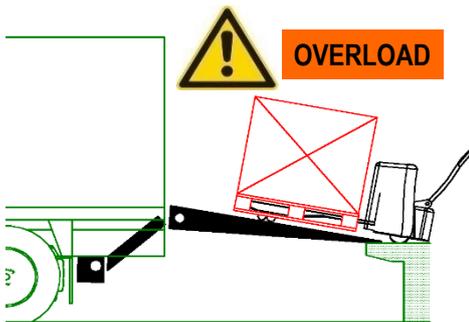
Example: demountable guard rails



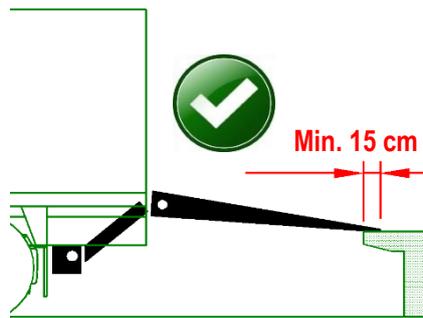
7.5 INSTRUCTIONS FOR WORKING AT LOADING DOCKS

WARNING

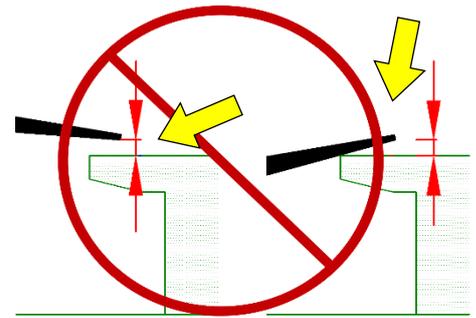
- Improper use of the tail lift may result in damage, premature wear or failure of the tail lift, and will increase the risk of serious injury or death to the operator and other persons nearby.
- In order to maximize the durability, ensure long-term reliability of the tail lift, and protect operators and bystanders from serious bodily injury or death, the operator must comply with the loading instructions and safe working procedures below.
- When using the tail lift platform as a bridge plate between the loading floor of the vehicle and the loading dock, follow the instructions below:



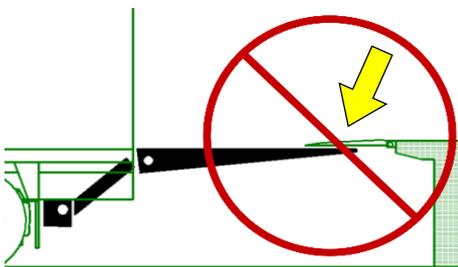
The total weight of the load and the lifting device (forklift, electric or manual pallet jack, etc...) must not exceed the maximum rated capacity of the tail lift. Beware not to overload!



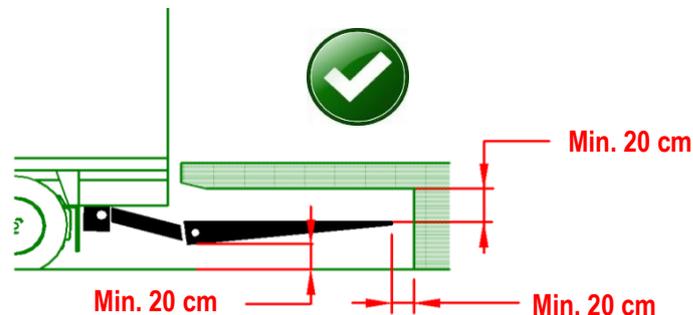
A minimum section of 15 cm of the platform point must cover the loading dock.



When loading or unloading, the loading floor of the vehicle might lower or rise relative to the loading dock. Use the electrical controls to tilt the platform to maintain flat contact with the dock.



NEVER place dock plates or bridges on an unsupported platform. The platform point should ALWAYS overlap a rigid support structure over a minimum span of 15 cm.



Wherever the loading dock is equipped with a storage pocket for tail lift platforms, it is strongly recommended to tuck the platform away in this area. Before reversing into the dock, check if it is deep enough for the depth of the platform. Ensure there is sufficient clearance under and above the platform, taking into account all anticipated position shifts of the vehicle suspension. Make sure the platform does not touch the ceiling, ground or end wall of the storage pocket.

NOTICE

- When reversing a vehicle with tail 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.

7.6 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) the 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.

Follow the instructions in section 9 from page 28 onwards to open and lower the platform to the ground, and continue the checks:

- Visually inspect the general condition of the lift frame, lift arms, and mounting plates to the vehicle chassis. Look for cracks or deformation in the material and welds. Make sure the bolts of the mounting plates to the chassis are tightened.
- Make sure all pivot pins and retainer bolts are properly locked and secured.
- Visually inspect the general condition of the platform. Look for cracks or deformation in the material and welds. If so equipped, make sure the platform-mounted options function correctly (roll stops, foot controls, flashing warning lights).
- 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 lift and tilt cylinders, their lock 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

7.7 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 to the platform and the external control box.
- Warn your supervisor and have the 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 MANUAL for all maintenance and repair works.

8 LOAD CHARTS AND CORRECT LOADING PROCEDURES

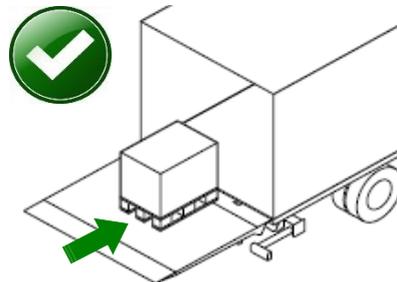
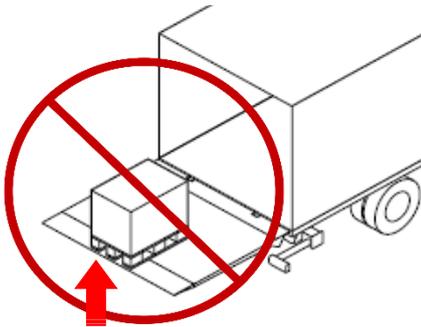
NOTICE

- 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.
 - 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.

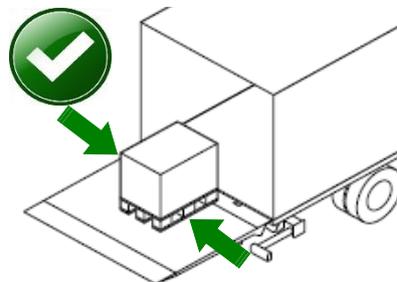
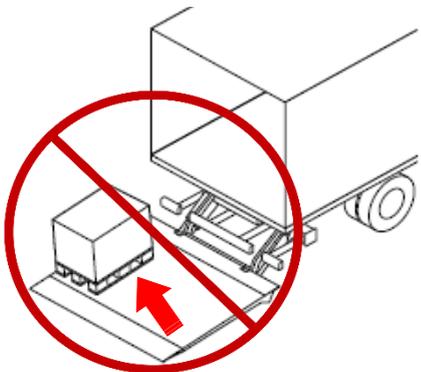


OK
ALWAYS position the load as close as possible to the rear of the vehicle, near the inboard platform edge.



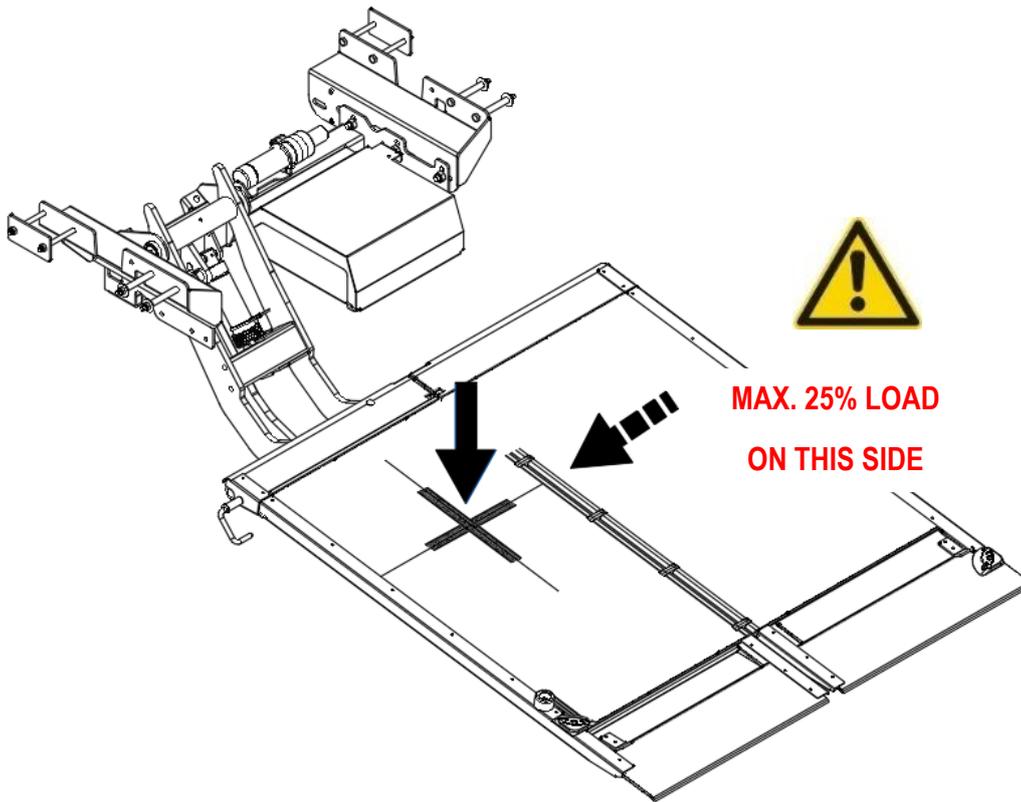
- Uneven loading on one side of the platform should be avoided. Limit the load to 50% of the maximum rated capacity when loading on one side of the platform only.

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.

- For cantilever lifts DH-LMZ / LCZ with narrow lift arms and a much wider foldable platform, the center point of maximum load is situated in the middle between the 2 lift arms, this is in the middle of the platform section supported by the tilt cylinder.

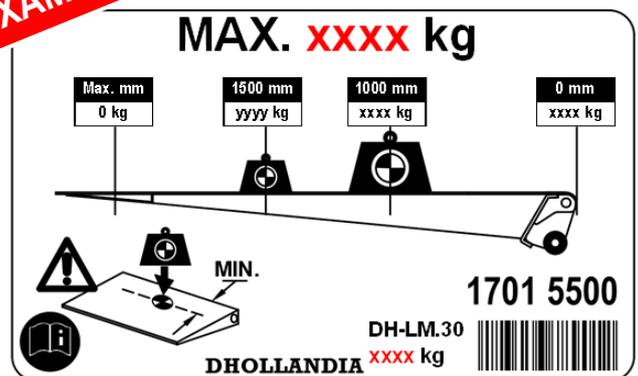


- The maximum **safe working load** GOES DOWN according to the load charts. The following type of load chart decals are supplied with the tail lift and must be duly observed.

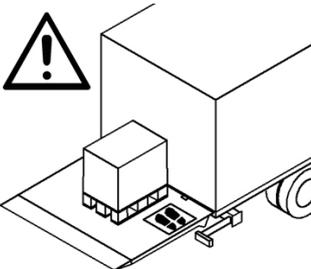
EXAMPLE



EXAMPLE



PLATFORM LOADING INSTRUCTIONS



Position load as close as possible to inboard platform edge.

Position load in middle line of platform. Avoid loading on 1 side only.

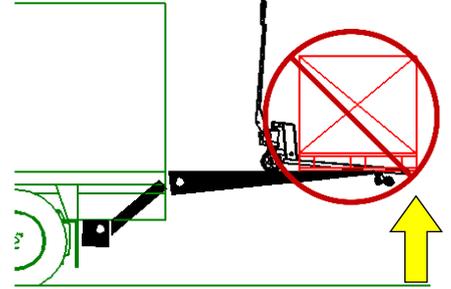
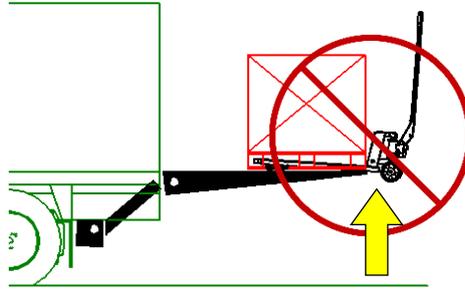
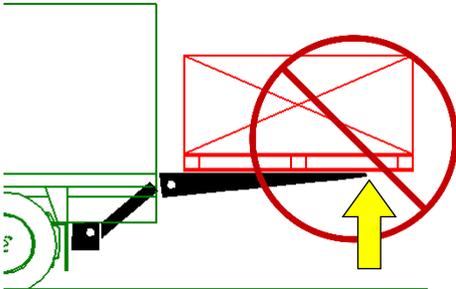
Operator should stand on side of load, well clear of inboard platform edge to avoid crushing feet.

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

DHOLLANDIA EF0564-EN

⚠ 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

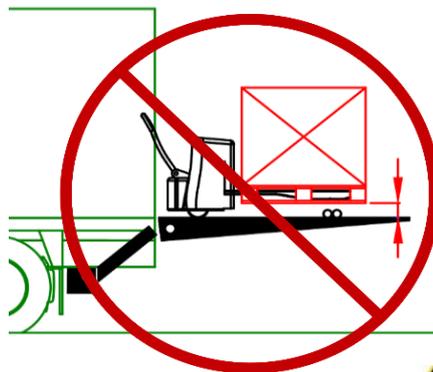
- NEVER let the load extend beyond the outboard edge or side edges of the platform.



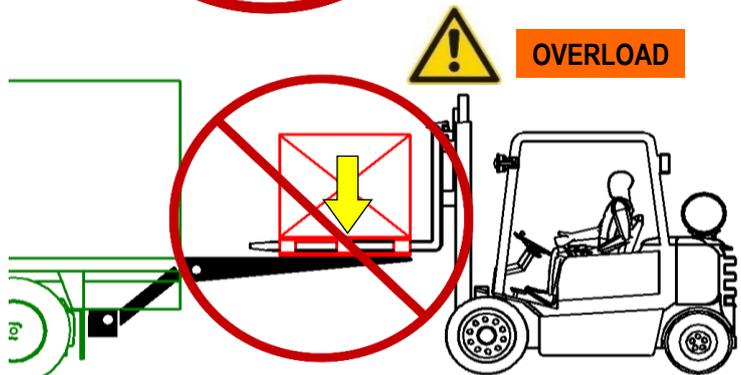
OVERLOAD

- 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.

- 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.

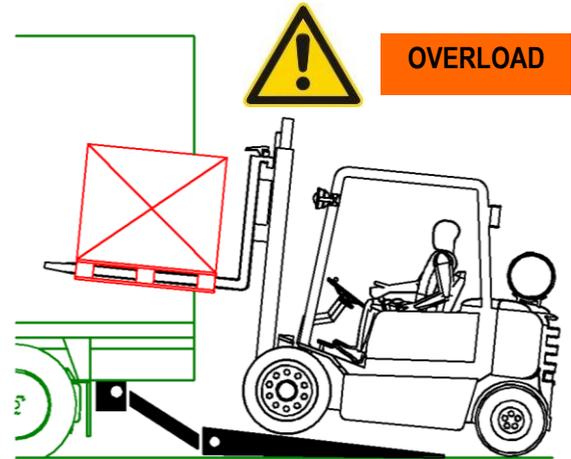


⚠ WARNING

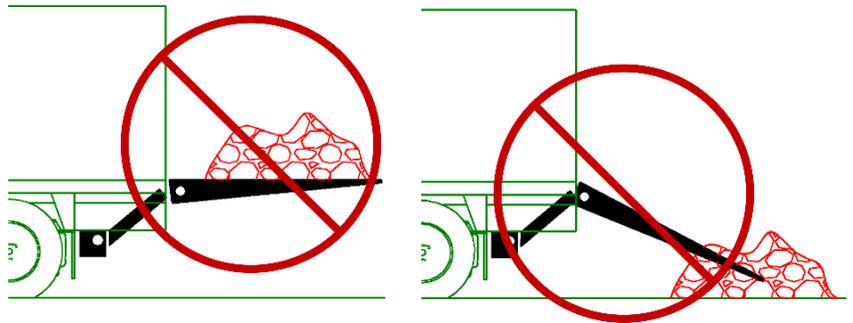
- Forklift access is allowed only when the platform is in full contact with the ground. **The combined weight of the forklift plus load must not exceed 1.5 x the maximum rated capacity.**

⚠ WARNING

Driving too heavy loads 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.

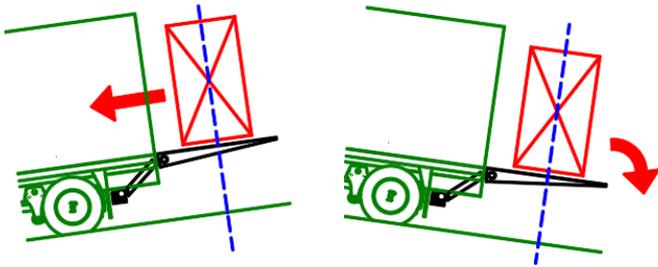


9 OPERATING INSTRUCTIONS - PRINCIPLES AND PROCEDURES

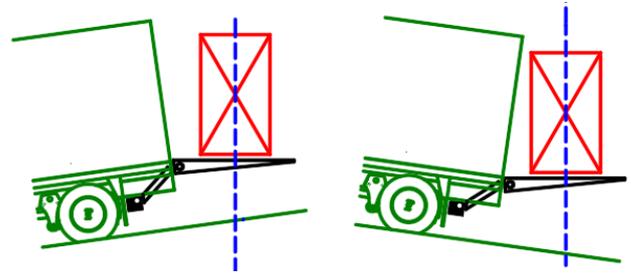
9.1 AUTOMATIC TILT AT GROUND LEVEL

- DH-L* cantilever tail lifts are equipped with 1 or 2 tilt cylinders. Upon platform deployment, they enable the operator to adjust the pitch of the platform to the slope of the ground and maximize the stability of the load on the platform.

Tail lift without tilt cylinders

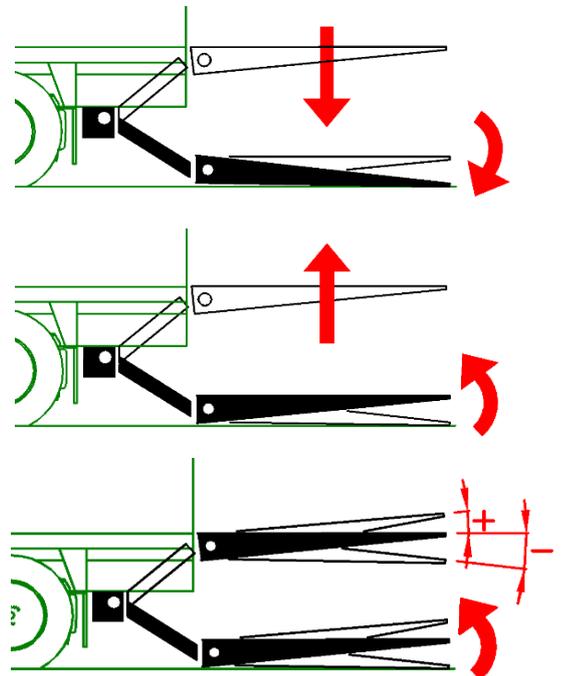


Tail lift with tilt cylinders



- DH-L* are designed as level-ride tail lifts with automatic tilt at ground level. This means:

	When lowering, the platform remains level from the vehicle floor down, until the platform makes contact with the ground. Next, the platform will tilt down automatically to a declined position that allows loading and unloading, as LOWER button(s) are held.
	When pressing the LIFT button(s) to lift the platform off the ground, it will first tilt up from its declined position at the ground to the horizontal position, then continue a level ride to the vehicle floor.



- The tilt at ground level does NOT require the activation of an additional tilt button, as is required on various competing products.
- The automatic tilt incorporates a “memory”: the pitch of the platform (set by the operator upon opening the platform) is automatically repeated upon every new LIFT cycle off the ground. This pitch is repeated or “memorized”.

NOTICE

Automatic tilt should be used with auxiliary controls which allow to LIFT / LOWER only: foot controls, 2-button handheld controls, 2-button fixed interior controls. DHOLLANDIA strongly recommends that you DO NOT use 3-button or 4-button handheld controls, that would also enable you to OPEN, CLOSE or TILT the platform.

WARNING



- The use of 3-button or 4-button handheld controls (including OPEN / CLOSE or TILT) may result in confusion and errors.
- When used incorrectly, or from a hazardous operator position, the use of such controls could result in damage to the tail lift and could result in serious bodily injury or death to the operator and any bystanders. Extreme caution should be taken when using such handheld auxiliary controls with tilt function. See also 7.4 from page 17 onwards.

9.2 REMARKS ON USE OF THE TILT CYLINDERS

- Decal EF0581.EN is usually affixed to the side of the vehicle body. Make sure you understand the meaning of this decal and apply the proper precautions when operating the tail lift.

! WARNING

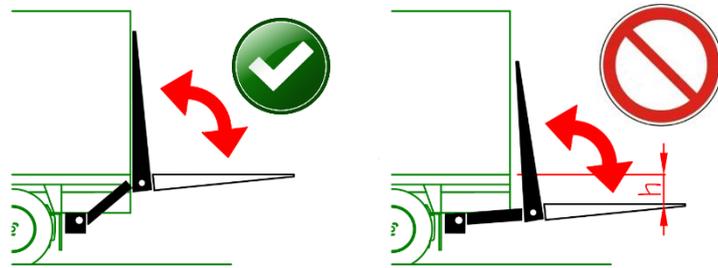
- If the platform is CLOSED when situated below vehicle floor level, this can cause severe damage to the tilt cylinders. Further use of a tail lift with damaged tilt cylinders can put the operator and any bystanders at great risk of serious bodily injury and death.
- Therefore, OPEN and CLOSE the platform at vehicle floor level only.

- When the platform is loaded, the platform pitch can be a few degrees lower than when the platform is empty, due to the compression of the vehicle suspension, some deflection of the vehicle chassis, and tolerances in the tail lift itself.

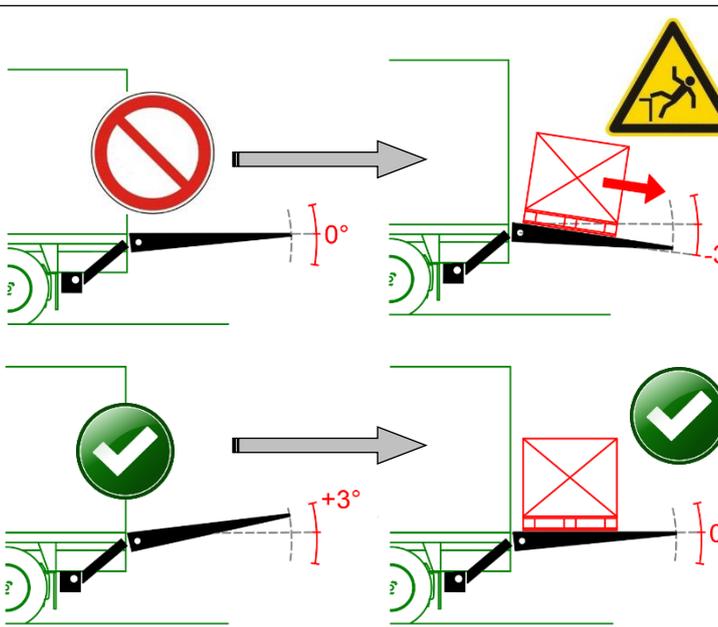
! WARNING

- Platform deflection can cause instability of the load on the platform, followed by a fall from the platform. This can put the operator and any bystanders at great risk of serious bodily injury and death.
- Therefore, anticipate platform deflection.
- Compensate for platform deflection by setting the pitch a few degrees higher than the intended pitch [note], when opening the platform.

! WARNING



Open or close platform at vehicle floor level ONLY



Adjust platform pitch up to compensate for deflection before load is put on platform

Note: the intended pitch is not always horizontal, it may depend on the slope of the ground. [See 9.1 on page 28].

9.3 MAIN EXTERNAL BOXES

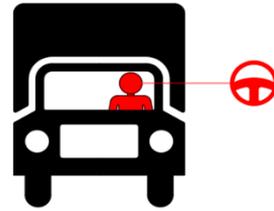
- All images, pictograms and decals in this manual represent the version for left hand drive vehicles, with the main external control box mounted on the right side of the vehicle.

- DHOLLANDIA offers various control boxes, delivered per customer specification. Contact your 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:

- prevent the operator from standing behind the platform when opening the platform which could result in serious injury or death by crushing.
- 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.

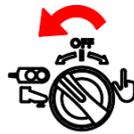
- The most popular models are outlined below. Contact your national DHOLLANDIA distributor for operation instructions on other models, or models with different options, prior to operating the tail lift. See contact info on page 3.



Joystick control box (ref. OAE030.BT)



Turn clockwise and hold to activate joystick

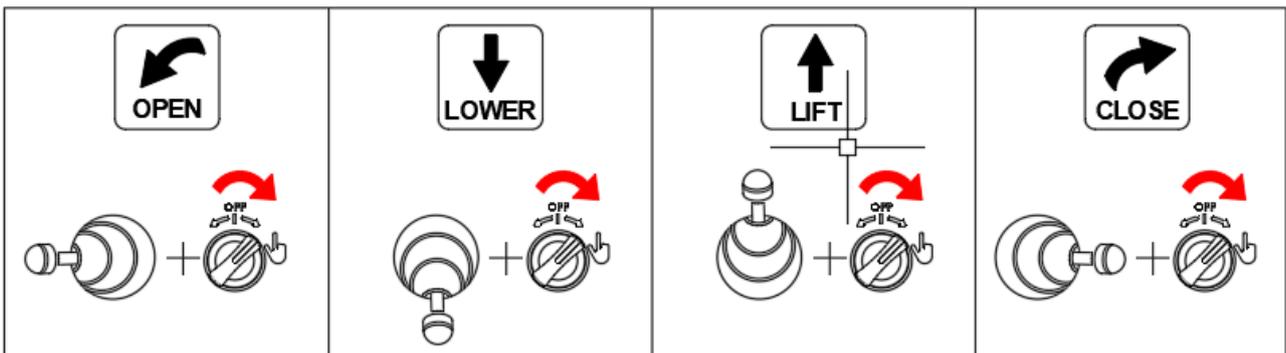


Turn counter-clockwise to enable auxiliary control

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. <ul style="list-style-type: none"> 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).

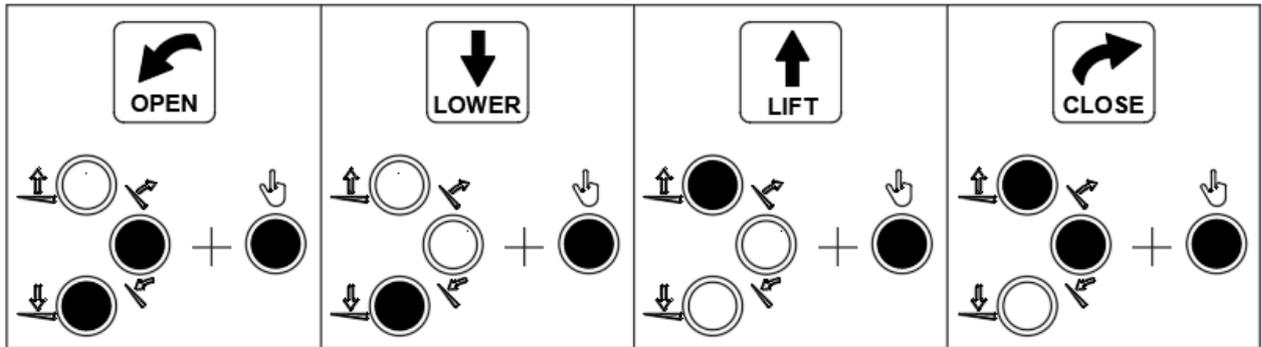


Arctic control box (ref. OAE041.BP)



- 2 Push and hold to activate push buttons of main external control box
Release to enable auxiliary control
- 3 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. <ul style="list-style-type: none"> • 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.)



Hydraulic stabilising legs (ref. OAH01...)

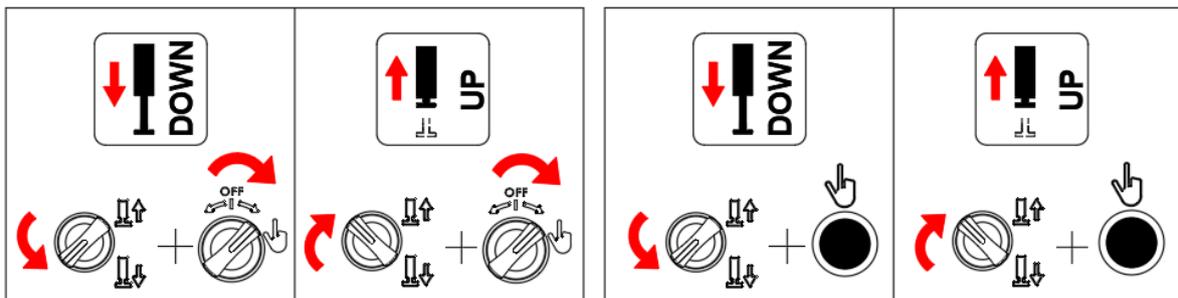


When the tail lift is equipped with hydraulic stabilising legs, the control units above are completed by a turn switch to push the legs down or pull them up.

1	Turn switch commanding the functions LEG DOWN - LEG UP
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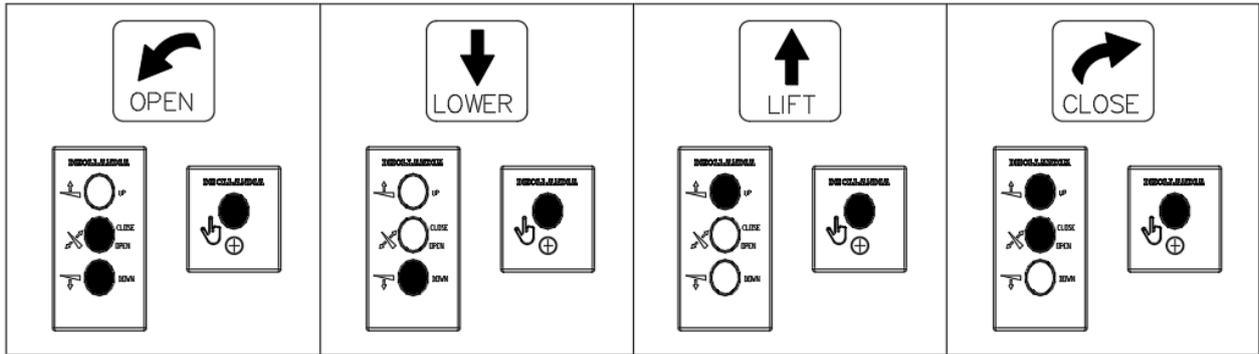
On OAE030... units

On OAE041... units

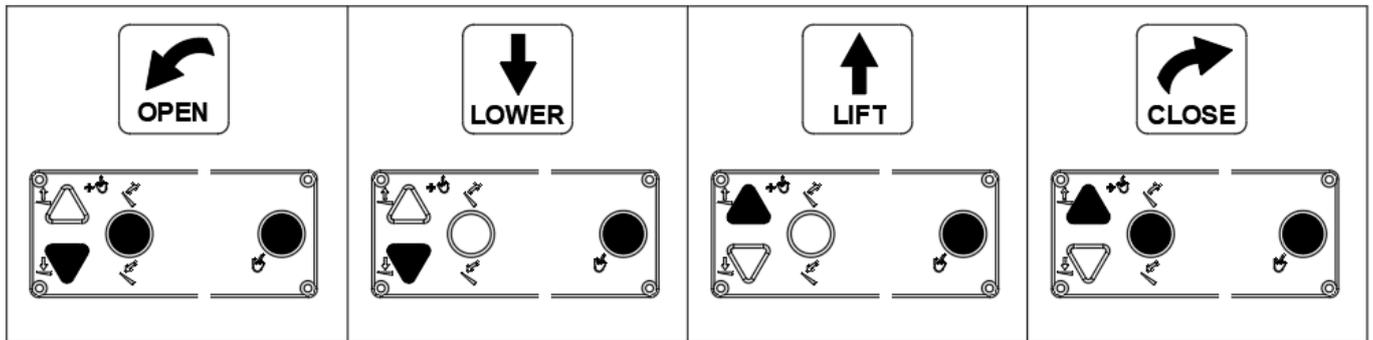


- Other control boxes with compulsory 2-hand controls feature push buttons or toggle switches to control the various functions OPEN - LOWER - LIFT - CLOSE. The units are not available with an integrated main battery disconnect switch.

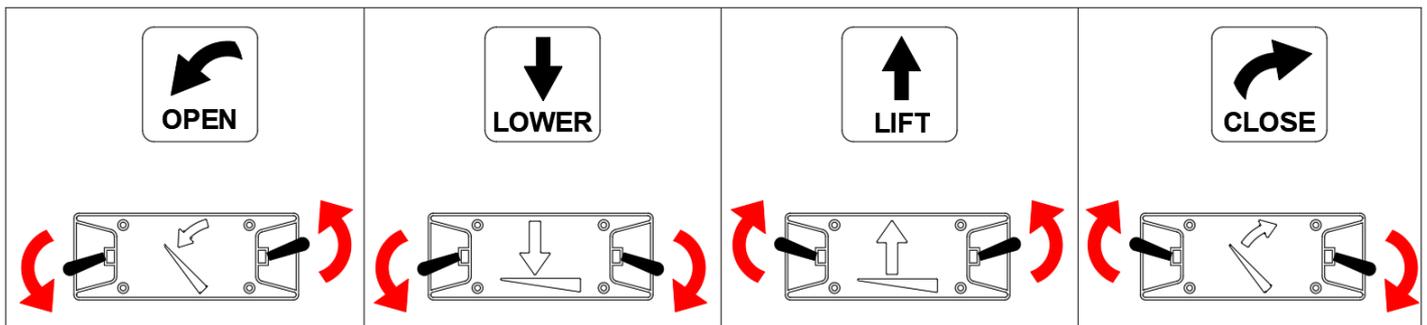
Flush mount control unit (ref. OAE031.ZP)



Flat external control box + push buttons (ref. OAE044.ZP)



Dual toggle-switch control box (ref. OAE048)



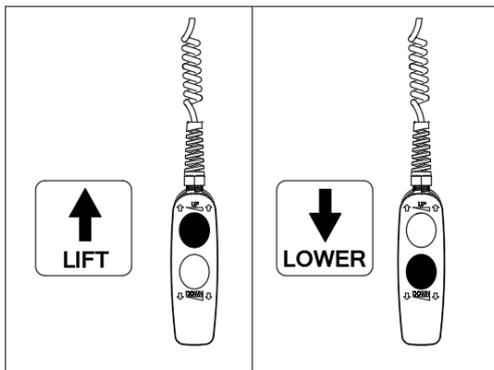
9.4 THE MOST POPULAR AUXILIARY CONTROLS

- DHOLLANDIA offers various 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. Contact your national DHOLLANDIA distributor for operation instructions on other models, or models with different configurations, prior to operating the tail lift. See contact info on page 3.

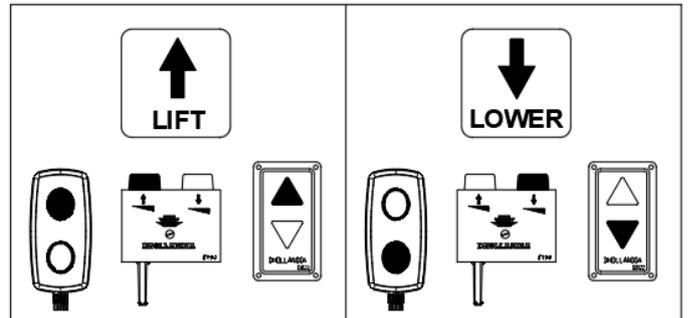
! WARNING

- 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 10 onwards.
- Any operator on the platform must stand clear of the crushing zone between the lifting platform and the 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.

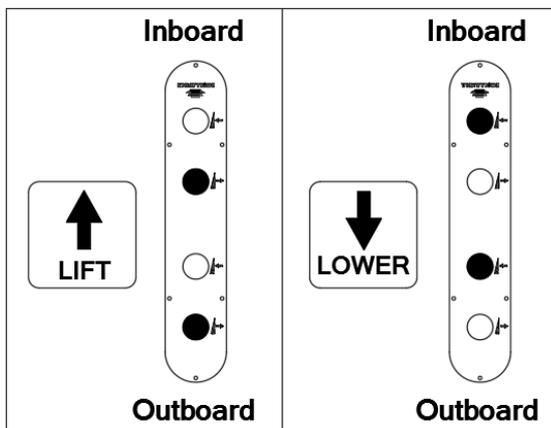
2-button handheld control with spiral cable (ref. OAE001)



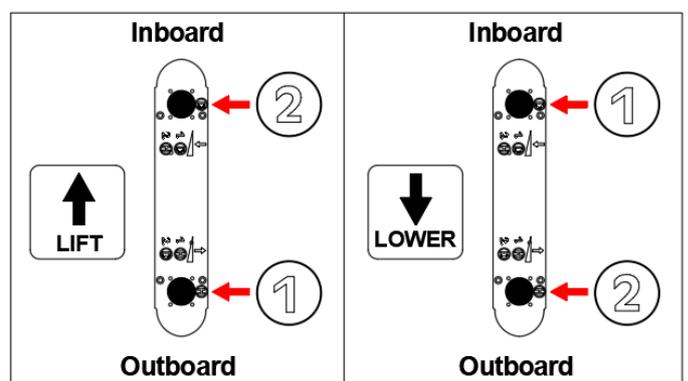
2-button interior control (ref. OAE003 / OAE005 / OAE012)



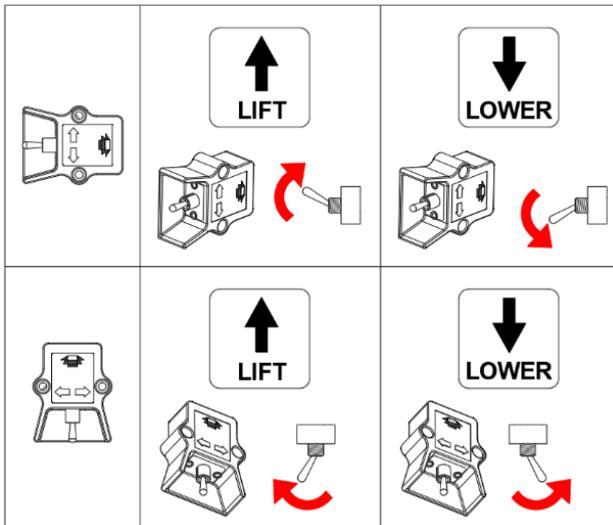
4-button foot controls on platform (ref. OAE060 / OAE064)



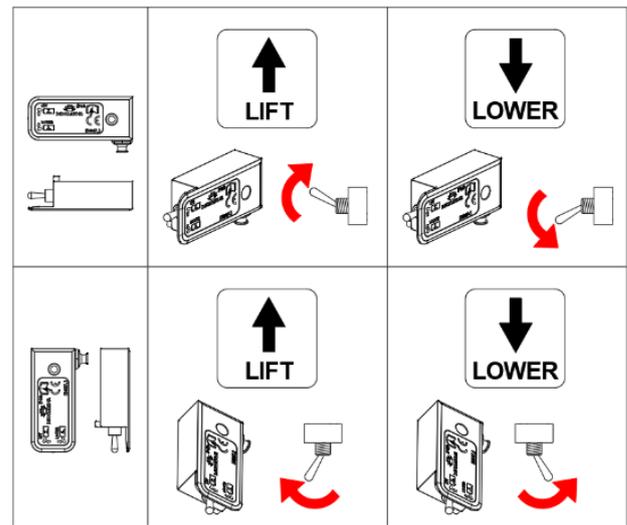
2-button foot controls on platform (ref. OAE067)



Toggle-switch controls (ref. OAE015.O)



Toggle-switch controls (ref. OAE015.B.O)



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.
- 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 their authorized occupational health and safety manager, and under guidance of safe work practices issued by them.

NOTICE

The cantilever tail lifts are equipped with automatic tilt at ground level (see 9.1 on page 28), operated from the functions LOWER and LIFT of the controls shown in this section. Handheld 3-button controls are NOT needed to tilt the platform at the ground.

9.5 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



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

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

If platform is equipped with a tilt sensor and option OAE503.2, 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 in use.

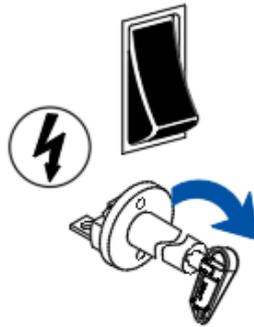
9.6 OPERATION

- 9.3 - 9.4 explain how each of the functions OPEN - LOWER - LIFT - CLOSE are activated via the various types of controls. 9.7 explains how the optional stabilizing legs are operated. This section explains in which sequence the DH-LM must be operated, and which steps must be followed.
- The images shown refer to instruction decal ref. EF0620.EN or equivalent, usually affixed to the side of the vehicle body. See also section 10 from page 43 onwards.

Opening the platform



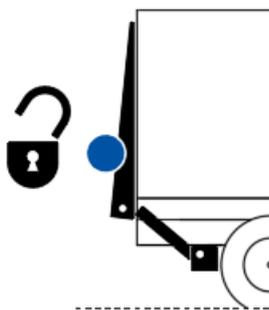
Consult the operation manual before getting started. Follow **ALL** safety and operation instructions.



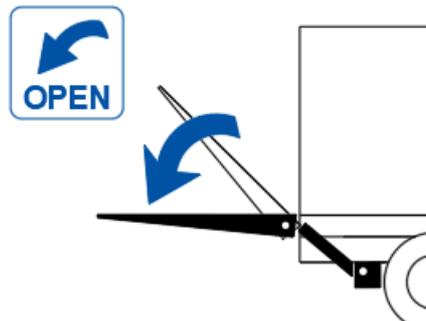
Switch on the electrical power to the tail lift (cabin switch or main battery disconnect switch in the external control box, or both if both are available).



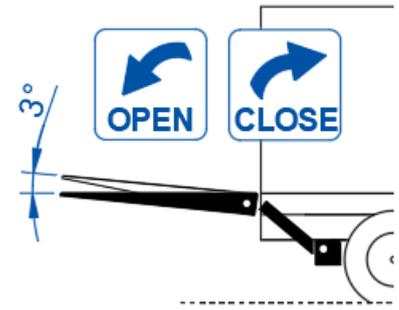
If so equipped, LOWER the mechanical or hydraulic stabilizing legs into work position.



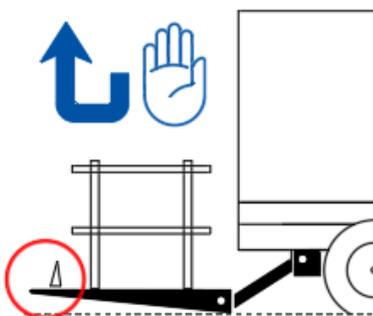
Observe all safety instructions, and open the platform lock (if so equipped).



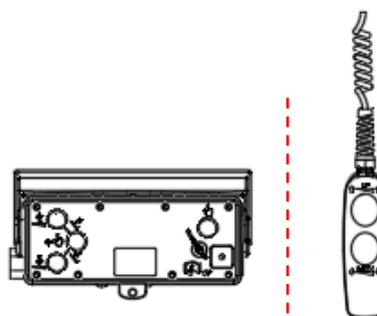
OPEN the platform, and adjust its pitch to the slope of the ground. **DO NOT LOWER** before the horizontal work position has been reached.



Adjust the platform pitch to compensate for the slope of the ground [see 9.1 on page 28] and platform deflection under load [see 9.2 on page 29].

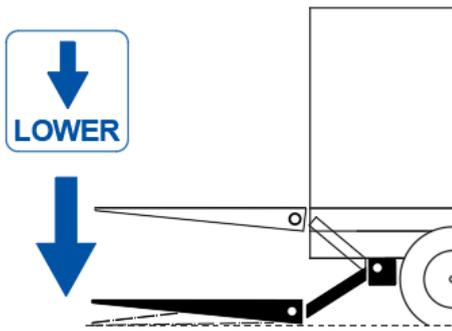


LOWER the platform to get easy access. If so equipped, deploy the roll stops and guard rails.

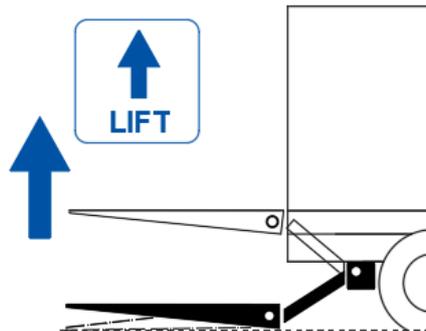


Select between main external control box or auxiliary control to continue [see 9.3-9.4 from page 30 onwards].

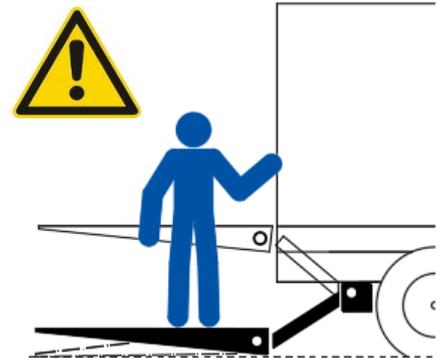
Loading and unloading



LOWER the platform to the ground. At the ground, use the AUTOMATIC TILT to decline the platform to the ground.



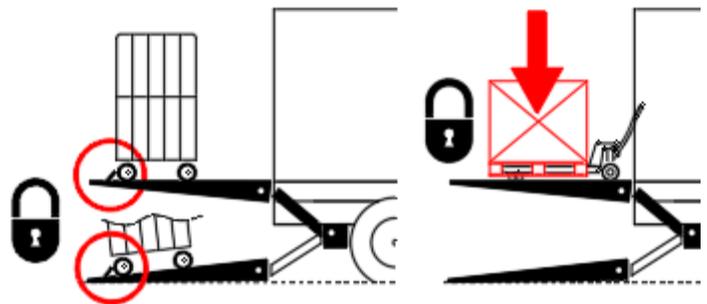
LIFT the platform off the ground. Use the AUTOMATIC TILT to return the platform to level pitch. If riding on the platform, DO NOT place your feet beyond the inboard platform edge.



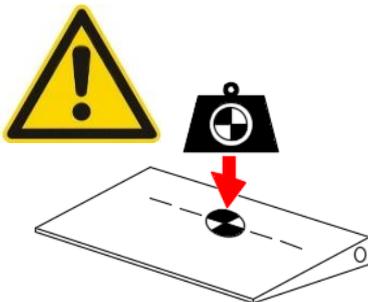
When riding on the platform, make sure you stand min. 25 cm away from the inboard platform edge, make sure your footing is solid, and ALWAYS maintain 3 points of contact. [see 7.4 from page 17 onwards].



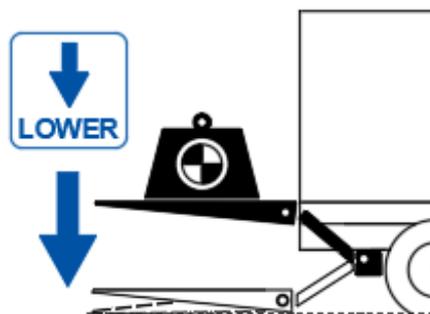
NEVER pull the load from the vehicle onto the platform. ALWAYS push it out. Pulling the load from the vehicle can result in a fall from the platform and cause serious injury or death.



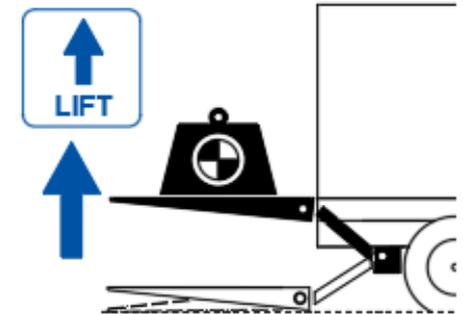
Before lifting or lowering loads, make sure the loads are secured on the platform surface. Deploy the platform roll stops (if so equipped), lower loads on a pallet jack down on the platform surface or immobilize the load via equivalent securement device.



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

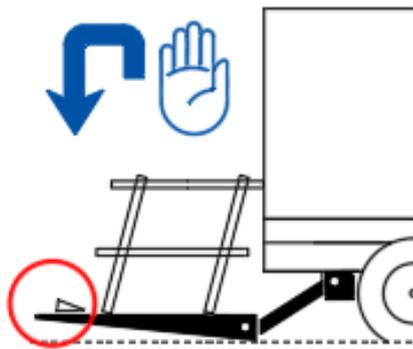


LOWER the platform to the ground. At the ground, use the AUTOMATIC TILT to decline the platform to the ground.

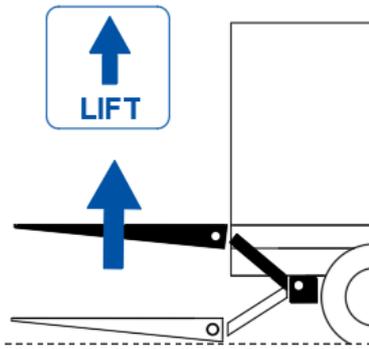


LIFT the platform off the ground. Use the AUTOMATIC TILT to return the platform to level pitch.

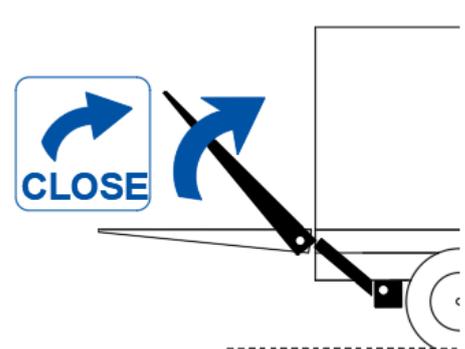
Closing up in travel position



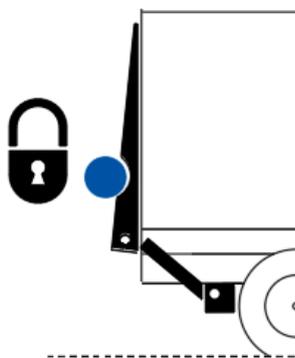
If so equipped, stow the roll stops and guard rails in their travel position.



LIFT the platform to vehicle floor level before closing the platform. NEVER CLOSE the platform before it is at maximum height at vehicle floor level.



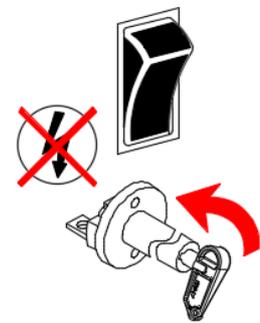
CLOSE the platform until it reaches the closed vertical position and you hear the hydraulic system turn in overpressure.



If so equipped, lock the platform lock.



If so equipped, raise the mechanical or hydraulic stabilizing 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.



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

NOTICE

OPEN and CLOSE the platform at vehicle floor level only. Opening and closing the platform at a lower level can cause serious damage to the hydraulic cylinders of the tail lift.

NOTICE

- The most important safety and operation instructions are summarized in a product video that can be viewed online at:

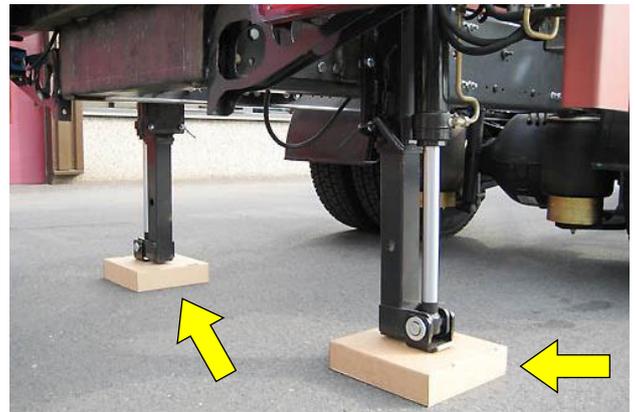
<http://www.dhollandia.com/uservideo/LM-EUR EN-2017-01>

- Make sure you review these instructions prior to operation of the associated DHOLLANDIA tail lift.



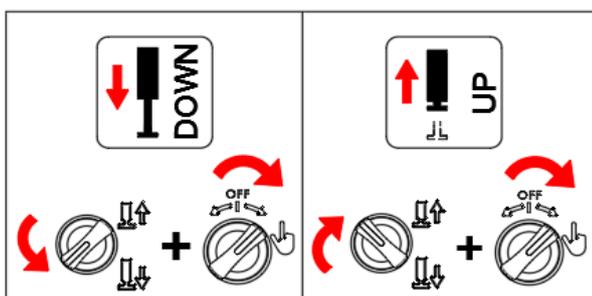
9.7 THE USE OF STABILIZING LEGS

- DHOLLANDIA tail lifts are available with 2 types of stabilizing legs:
 - Hydraulic stabilizing legs are operated via the main external control box. They are available in capacities of 2.5 tons, 4 tons and 10 tons, and are therefore suitable for a wide range of commercial vans and trucks.
 - Mechanical stabilizing legs are deployed and stowed manually by the operator. They are only suitable for light commercial vehicles up to 3.5 tons gross vehicle weight, and to handle cargo up to max. 750 kg nominal load.
- The purpose of the stabilizing legs is to prevent the vehicle from tipping over, and to support the chassis of the vehicle during loading and unloading (e.g. vehicles with very long overhang, soft suspension, with relatively weak chassis, or in case of extreme lift capacities).
- When using the stabilizing legs, the operator should observe following points:
 - Ensure that the vehicle is safely parked and immobilized, and the parking brake applied.
 - If so equipped, block the air suspension of the vehicle.
 - Ensure that the stabilizing legs are positioned on solid even ground. In case of soft terrain (sand, gravel,...), solid support blocks must be used under the stabilizing legs.
 - The stabilizing legs should be used to stabilize the vehicle only. They are not suitable to lift the vehicle.
 - The height of the stabilizing 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, and serious injury or death to the operator and any bystanders.
 - If so equipped, raise the air suspension of the vehicle, in order to relieve the stabilising legs from all pressure, prior to stowing them back in their travel position.
 - Do NOT move the vehicle if the stabilising legs are not fully raised and secured in their travel position.

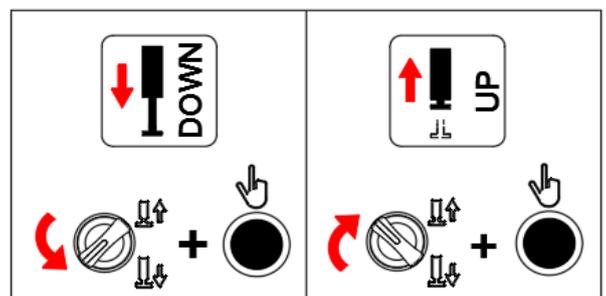


Hydraulic stabilizing legs

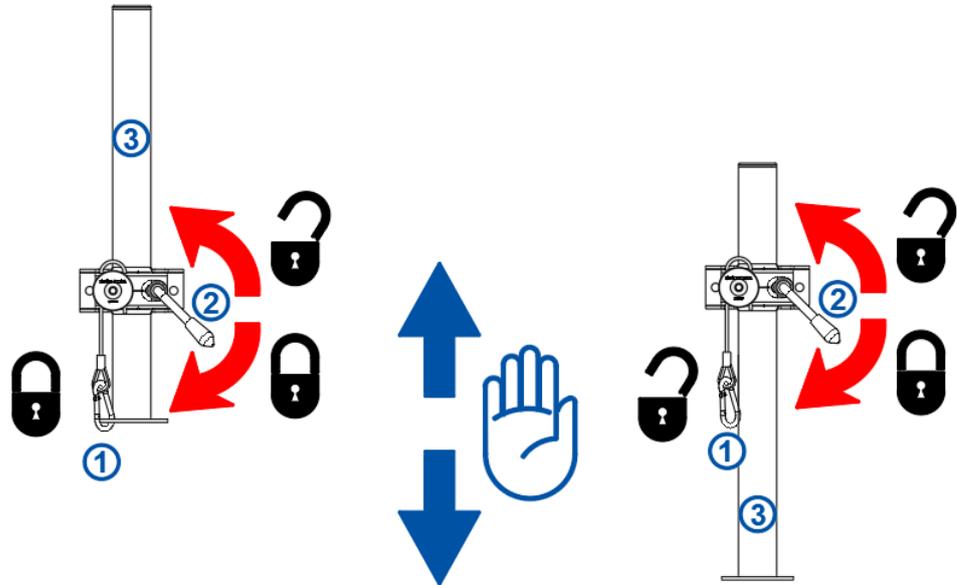
Joystick control box (ref. OAE030.BT)



Arctic control box (OAE041.BP)



Mechanical stabilizing legs



LEGS DOWN	<ul style="list-style-type: none"> • If so equipped, block the air suspension in the normal, medium work position. • Disengage the travel lock (1). • Turn the lever of the holder lock (2) counter clockwise to give the leg (3) free movement. • Lower the leg (3) to the desired height. Then turn the lever of the holder lock (2) clockwise very firmly, to secure the leg (3) in the desired position.
LEGS UP	<ul style="list-style-type: none"> • If so equipped, raise the air suspension fully, to relieve the legs from all pressure. • Turn the lever of the holder lock (2) counter clockwise to give the leg (3) free movement. • Raise the leg (3) to the highest possible position. Then turn the lever of the holder lock (2) clockwise firmly, to secure the leg (3) in its travel position. • Engage the travel lock (1).

⚠ WARNING

- When the legs are extended down at the ground, the weight of a loaded vehicle can put a lot of strain on the stabilising legs and cause a sudden, jerky movement when disengaging the holder lock. To reduce the risk of finger pinching and serious bodily injury, ALWAYS keep fingers away from the sliding parts of the legs.
- Upon release of the holder lock, the loaded vehicle body could suddenly drop down, hit the operator's head or upper body, and cause serious bodily injury. Therefore, ALWAYS operate the legs from a position at the side of the vehicle body, NOT from a position underneath the body.

NOTICE

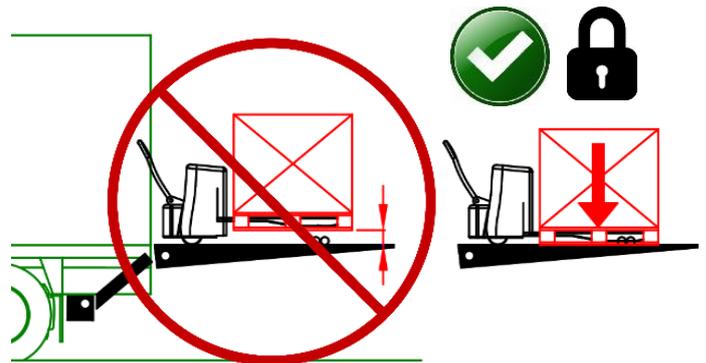
The use of stabilizing legs is mandatory on certain vehicles. Consult the operation manual and / or the Fitting and Body Building Instructions from the vehicle manufacturer.

9.8 THE USE OF ROLL STOPS

WARNING

- If the load is not properly secured on the platform while lifting or lowering, it could shift position, destabilize the operator riding on the platform, and cause him / her to fall. The load could also 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.

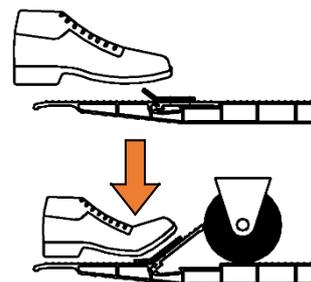


- Consult the DHOLLANDIA website to view operation videos on the various types of roll stop systems

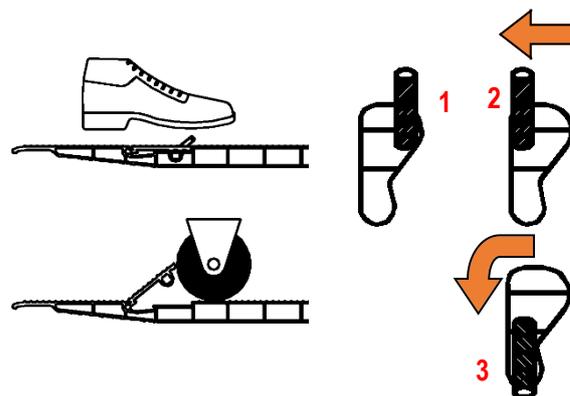
<http://dhollandia.com/GB/en/101/Movies#/cat/0>

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

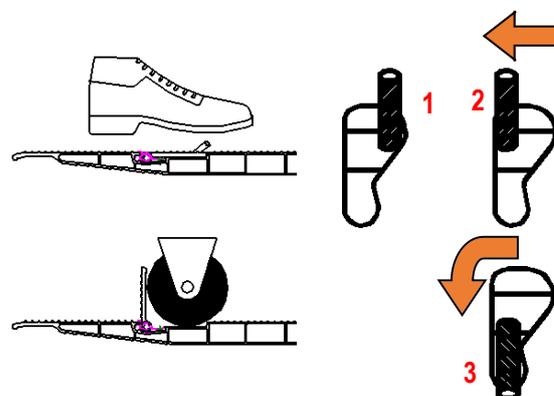
OAP100.M = Manual roll stops, operated by springs	
OPEN	Press the lever on the side of the roll stop flap.
CLOSE	Step on the roll stop flap. When driving a load from the ground onto the platform, the roll stop will automatically close.



<p>OAP100.A = Automatic roll stops, operated by springs.</p> <p>Roll stop flap opens to 40°.</p>	
<p>OPEN MANUAL MODE</p>	<p>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.</p> <p>When stepping on the roll stop flap, or when driving a load from the ground onto the platform, the roll stop will automatically close.</p>
<p>OPEN AUTOMATIC MODE</p>	<p>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.</p> <p>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.</p>
<p>CLOSE</p>	<p>Kick the lever into position 1.</p> <p>Step on the roll stop flap.</p>

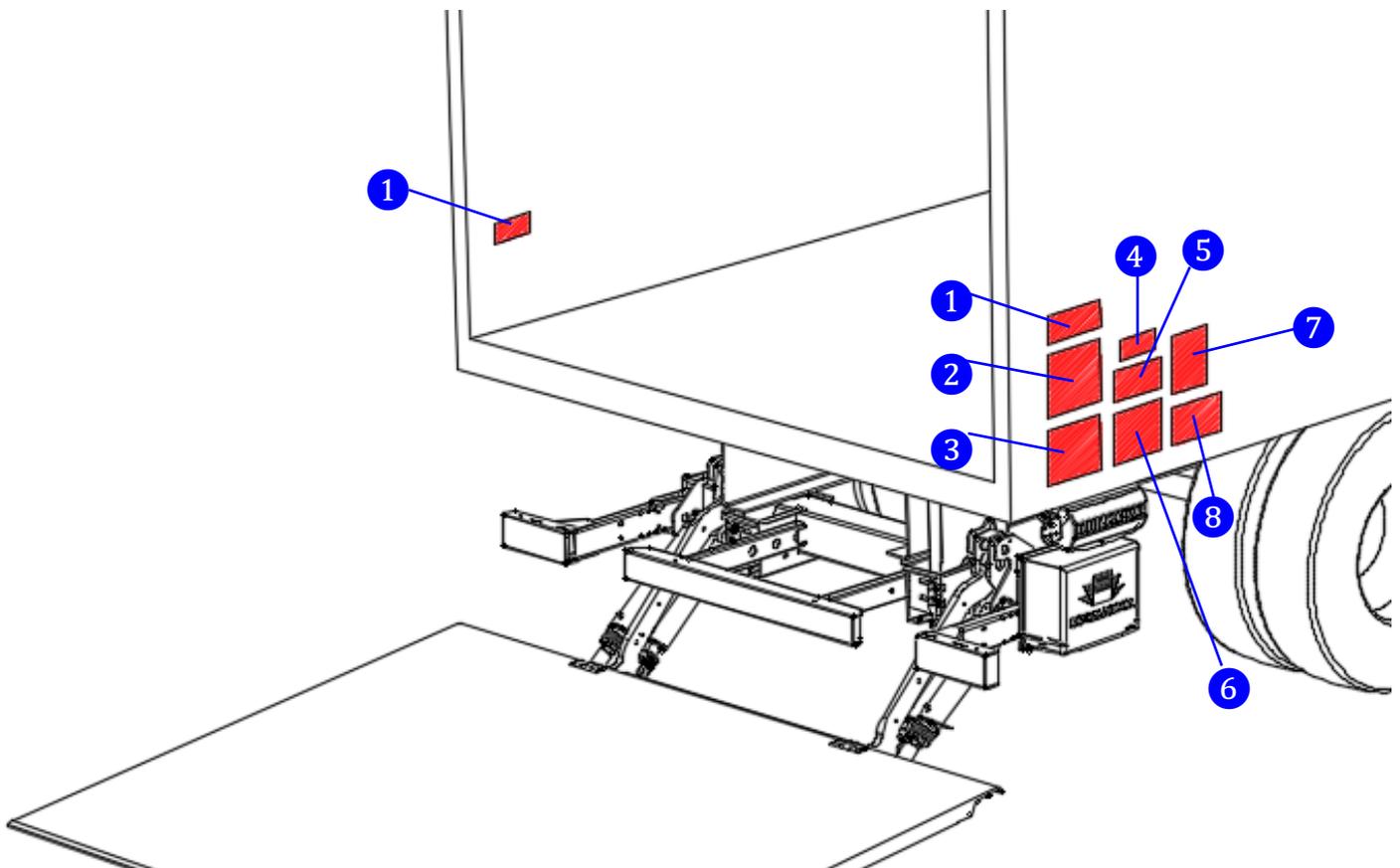
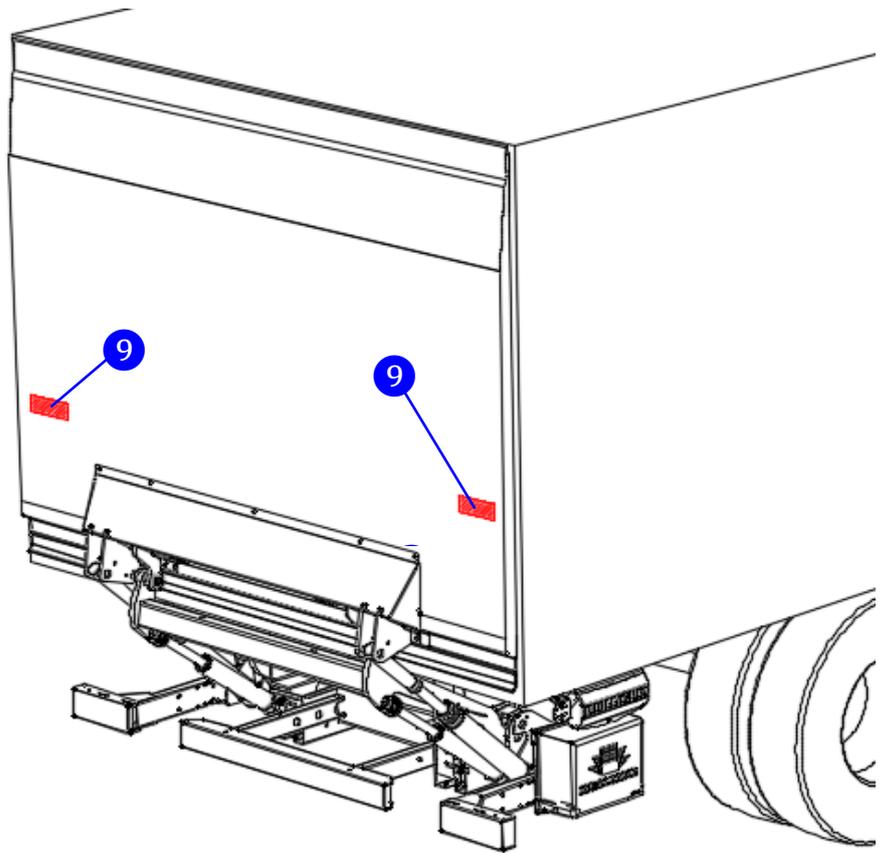


<p>OAP100.VA = Vertical roll stops, operated by springs.</p> <p>Roll stop flap opens to 90°.</p>	
<p>OPEN MANUAL MODE</p>	<p>Kick the lever on the side of the roll stop flap sideways from position 1 to position 2. The roll stop will now function as a manual roll stop OAP100.M.</p> <p>When stepping on the roll stop flap, or when driving load from the ground onto the platform, the roll stop will automatically close.</p>
<p>OPEN AUTOMATIC MODE</p>	<p>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.</p> <p>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.</p>
<p>CLOSE</p>	<p>Kick the lever into position 1.</p> <p>Step on the roll stop flap.</p>



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.



1

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⚠ WARNING

- DO NOT use this liftgate without adequate safety and operator training.
- View safety and operator video prior to use. Use this QR-code to connect.
- Review operation manual prior to use. Manuals can be obtained from your DHOLLANDIA distributor, or downloaded from: www.dhollandia.com
- Improper use of the liftgate will put the operator and other parties at great risk of bodily injury and death.
- In case of doubt, contact DHOLLANDIA toll free:

US West: 855 856 8225 US East: 855 894 1888 CAN: 888 750 5438

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EF0565.EN

⚠ WARNING - SAFETY INSTRUCTIONS

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

Carelessness or ignorance will put the operator and third parties at great risk of serious injury and death.

- Do not use liftgate unless you have been properly trained and instructed, you have read and you understand the full operating instructions.
- Wear appropriate working clothes, incl. footwear with steel toe caps and a good non-slip sole, and wear protective gloves.
- Ensure the vehicle is safely parked and braked before using the liftgate.
- Where applicable, refer to the site's specific risk assessment, and follow the local work & safety instructions.
- Always inspect the lift gate before using it. DO NOT use liftgate if there are signs of bad maintenance, subnormal 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.
- Do not overload. Observe the maximum rated capacity and load charts.
- Do not stand behind or within reach of the platform.
- 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.
- 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.
- Beware of finger and toe traps at all times. When riding platform, stand at safe distance of minimum 10" from the inboard edge of the platform adjacent to the rear sill of the vehicle body.
- It is prohibited for anyone other than the operator to travel on the platform.
- Liftgate is intended for loading and unloading cargo only. Do not use liftgate for anything else but its intended use.
- 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

EF0620.EN

OPERATION INSTRUCTIONS

Read and understand the operation manual and all safety decals before operating this liftgate. Improper use can put the operator and other parties at great risk!

OPEN PLATFORM

LOAD & UNLOAD

CRUSH HAZARD! KEEP FEET & HANDS CLEAR!

MAIN

AUXILIARY

CLOSE PLATFORM

4

EF0570.CAP

MAX. xxxx kg

EF0570.00500

5

EF0585.US

MAX. xxxx kg

Max. mm	1500 mm	1000 mm	0 mm
0 kg	yyyy kg	xxxx kg	xxxx kg

MIN.

1701 5500

DH-LM.30

DHOLLANDIA xxxx kg

6

EF0581.EN

⚠ WARNING

Open or close platform **at vehicle bed level ONLY**

Adjust pitch of platform up and compensate for deflection before load is put on platform

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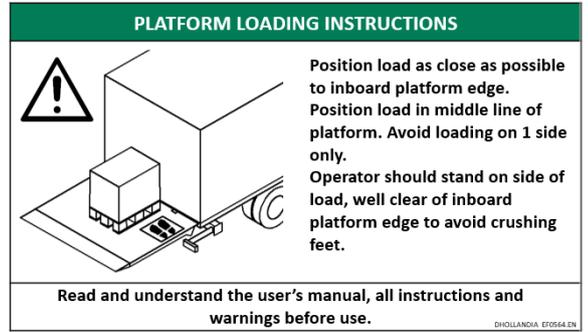
EF0562.EN



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EF0564.EN



DHOLLANDIA EF0564.EN

- Tail lift decals used and affixed in areas, other than the rear of the vehicle.



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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		MANDATORY ACTION signs	
	Overview and keep visual control over the working area of the tail lift at all times.		Contact your regional DHOLLANDIA distributor.
	General warning sign used to alert the user to potential hazards. All messages that follow this sign shall be obeyed to avoid possible harm.		Consult the DHOLLANDIA website. Download from DHOLLANDIA website.
	Entrapment hazard. Keep hands, limbs, loose clothes and long hair away from moving parts.		Read the manual or instructions.
	Crushing & shearing hazard. Keep hands away from moving parts.		Hold onto guard rail. Protect yourself from falling off the platform, or vehicle floor.
	Crushing & shearing hazard. Keep feet away from moving parts.		Wear safety gloves.
	Slipping hazard.		Wear safety-toe shoes.
	Tripping hazard.		Wear appropriate work clothes, avoid loose-fitting clothes that might be trapped in the moving parts of the lift.
	Hazard caused by tilting objects.		Wear safety protection, eye protection and a safety hard hat.
	Hazard of falling from heights.		Use a safety shield.
	Crushing & entrapment hazard. Keep head, upper body and limbs away from moving parts.		

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

- The most important safety and operation instructions are summarized in a product video that can be viewed online at:

<http://www.dhollandia.com/uservideo/LM-EUR EN-2017-01>

- Make sure you review these instructions prior to operation of the associated DHOLLANDIA tail lift.



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