

1- Introduction

This document forms a supplement to the various mounting instructions for cantilever lifts DH-L*, and must be read in conjunction with these.

This document deals with the difficulties encountered when **mounting cantilever lifts DH-L* on cargo boxes with protruding container door locks**. The ambition is to provide the installer with a number of tips & options how to make a clean fitting job. The list is not compulsory nor exhaustive. It is the final responsibility of the installer to provide a durable and functional solution.

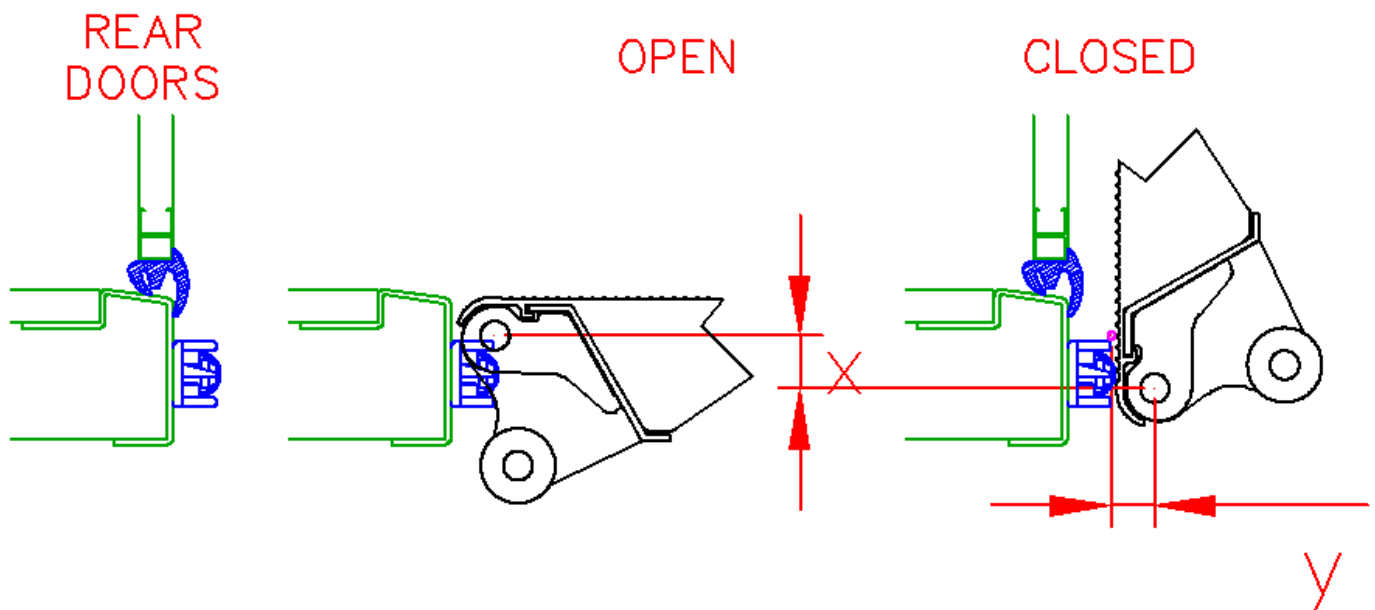


2- Problem definition

To close the platform correctly, the operator should first elevate the platform up to the loading floor, then pressurize the lift circuit, and then close (see user's manual).

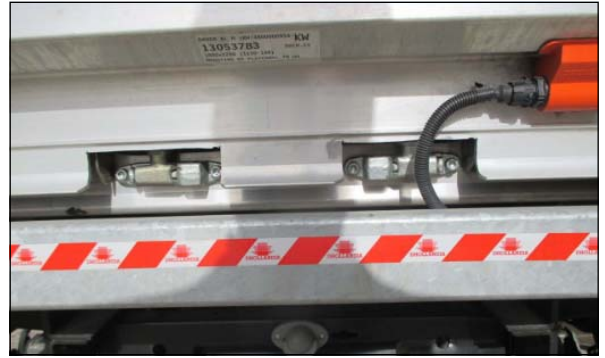
If the door locks protrude beyond the end of the loading floor of the cargo box, the platform cannot be closed at the floor level, because it would crush into the locking gear of the rear doors.

As a consequence, in many cases it is left to the operator to "guesstimate" how he should close the platform correctly. Lower the platform a bit down (dim. X below) so that it moves out behind the door locks (dim. Y below), then close.



In real life, if lifts are mounted this way without applying any additional solution, the daily practice will lead to various kind of problems, abuse, and damage.

- The installer will probably have to make substantial cut-outs in the rear edge of the platform, to enable the open platform in work position to pass over the door locks when it is lowered to the ground.
- This can sometimes weaken the platform, or the gap might cause problems to pass roll-cages and pallet jacks in an easy way over the edge between the platform and the loading floor.



- Leaving it to the driver to "guesstimate" how and at which height to close the platform, will very probably lead to incorrect operations and mechanical damage to the platform and / or the door locks of the cargo box.



- It is good practice to pressurize the platform against the rear frame of the cargo box, both at the end of the LIFT as at the end of the CLOSE cycle.
- If the platform is closed below the floor level, it is not pressurized against the cargo box. The platform will be juddering and rocking backwards & forwards as the vehicle moves on bad roads. Finally pins and bearings, potentially cylinder seals will wear prematurely.



Any solution will foresee in means that allow to close the platform in a pressurized way behind the door locks. That means: **first lift up the platform to the vehicle floor, and pressurize the LIFT circuit; then close the platform into its travel position, and pressurize the TILT circuit.**

3- Solution 1: EXTENSION NOSE for the loading floor

The **EXTENSION NOSE to the loading floor** is the most popular, and the **preferred** solution. It can be...

- A welded extension nose directly foreseen and integrated by the body builder
- A bolt-on extension added by the installer of the lift
- Any material: alu, galvanised steel, stainless steel etc... to suit the rear frame and desired level of quality and finish.

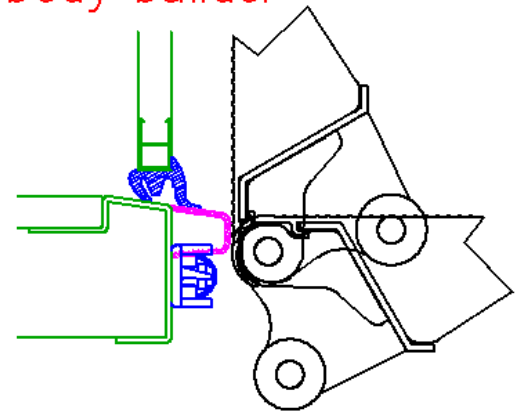
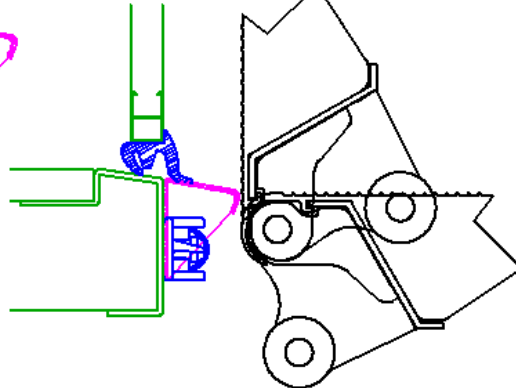
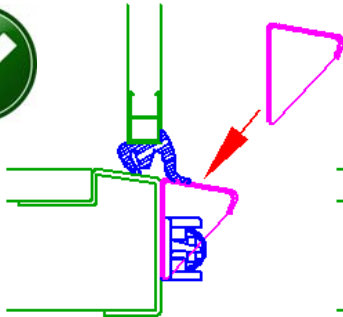
Various body builders offer different executions of this idea, all with the same goal: enable the platform to be pressurized and closed behind the locking mechanism of the rear doors.



REAR DOORS

DHO option S429

alternative from body builder



Floor extensions are available from DHOLLANDIA as an option on the lifts DH-L*

→ Option S249 (steel, alu or stainless steel)



This solution is focused on the main goal:

first lift up the platform to the vehicle floor, and pressurize the LIFT circuit; then close the platform into its travel position, and pressurize the TILT circuit.

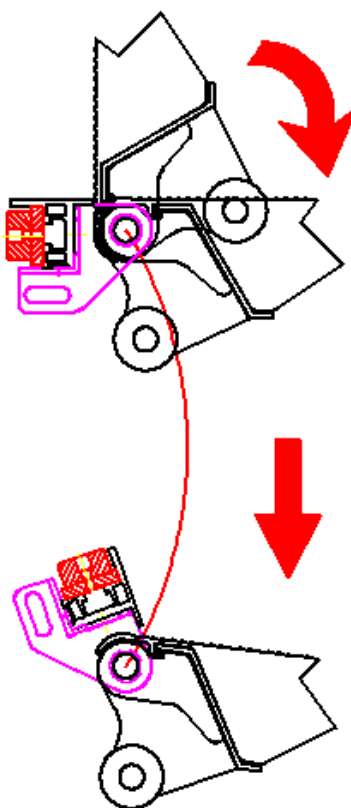
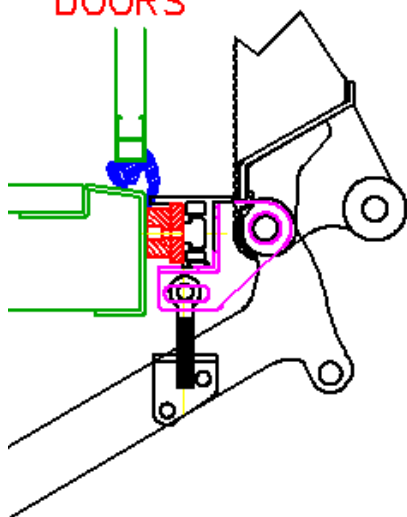
4- Solution 2: **AUTOMATIC TOE-GUARD OAP407 for alu platforms**

- Option OAP407 features an **AUTOMATIC TOE-GUARD / BRIDGE PLATE** mounted across the front edge of the aluminium platform.
- When lifting off the ground, it automatically articulates from a vertical position (where it serves as toe-guard for the operator on the platform) to a flat horizontal position at the loading floor (where it serves as bridge or link plate between platform and vehicle floor).
- The shape of the door locks can be cut-out and trimmed from the alu profile during installation.



REAR
DOORS

DHO option
OAP407

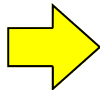
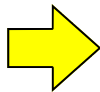
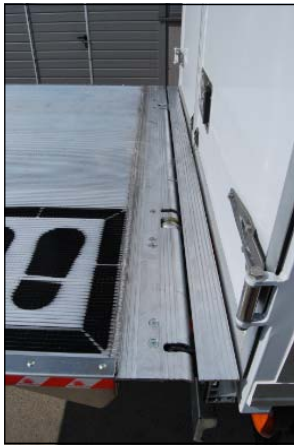


Again this option is focused on the main goal:

first lift up the platform to the vehicle floor, and pressurize the LIFT circuit; then close the platform in its travel position, and pressurize the TILT circuit.

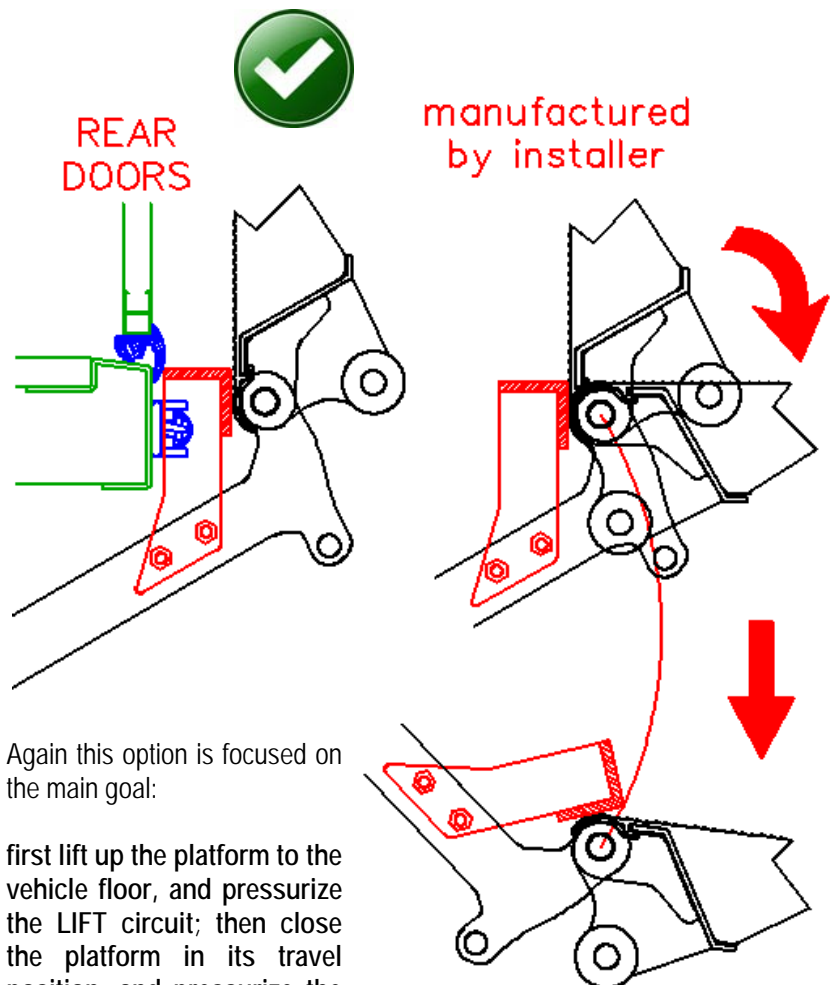


Other case study using the same option (with rear doors which bottom edge protrudes below the sill of the loading floor):



5- Solution 3: AUTOMATIC TOE-GUARD manufactured by installer

- On steel platforms, option OAP407 is only available for larger orders (on special request).
- For both steel and aluminium platforms it is also relatively easy for the installer to manufacturer a similar **AUTOMATIC TOE-GUARD / BRIDGE PLATE** from steel angle pressing of sufficient strength.
- The profile can be mounted on the lift arms, and functions the same way as option OAP407 under solution 2.
- The shape of the door locks can be cut-out and trimmed from the alu profile during installation.

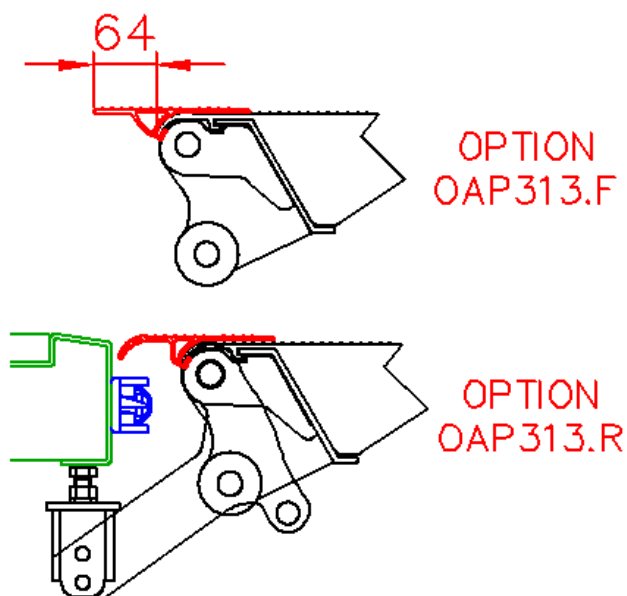
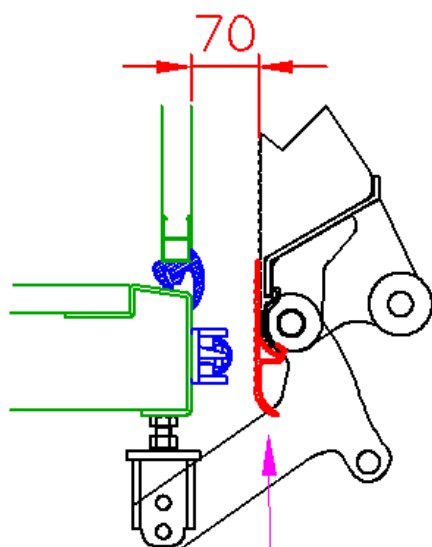
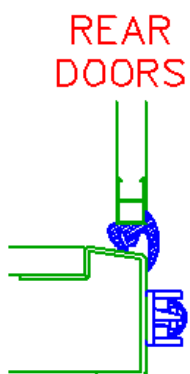


Again this option is focused on the main goal:

first lift up the platform to the vehicle floor, and pressurize the LIFT circuit; then close the platform in its travel position, and pressurize the TILT circuit.

6- Solution 4: Platform extension OAP313 for alu platforms

- Option OAP313.F features a 64mm long straight **EXTENSION PROFILE** for aluminium platforms. OAF313.R offers the same with a rounded edge.
- These extension profiles enable the installer to fit the lift further back on the chassis, behind the door locks. When the platform is opened, the extension profile will reach forward to join up with the cargo floor.
- The shape of the door locks on the cross member of the loading will need to be cut / trimmed out of the extension profile. Additionally, in function of the mounting height, the profile might touch the lift arms or tilt cylinders (when in closed position), and minimal trimming might be required.



Again this option is focused on the main goal:

first lift up the platform to the vehicle floor, and pressurize the LIFT circuit; then close the platform in its travel position, and pressurize the TILT circuit.

7- Solution 5: HINGED RAMP manufactured by installer

- The **HINGED RAMP** solution is popular for cargo boxes where the door closes behind the rear frame, and the bottom door edge protrudes below the loading floor of the box. But it can also be used for doors inset in the door frame, with just the locking gear on the back of the rear floor cross member (as in previous cases).
- The hinged ramp enables the installer to fit the lift further back on the chassis, behind the door locks. When the platform is opened, the operator has to manually swing the ramp over from its travel position inside the cargo box to its horizontal position reaching out for the platform.
- There is no need to make any cut-outs.

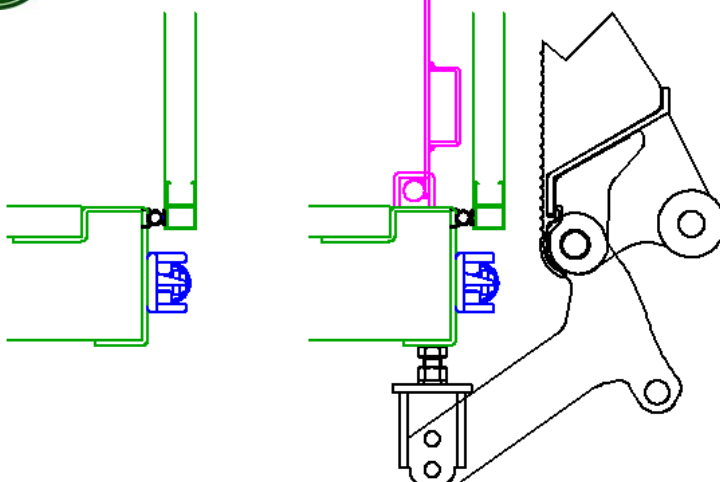


Again this option is focused on the main goal:

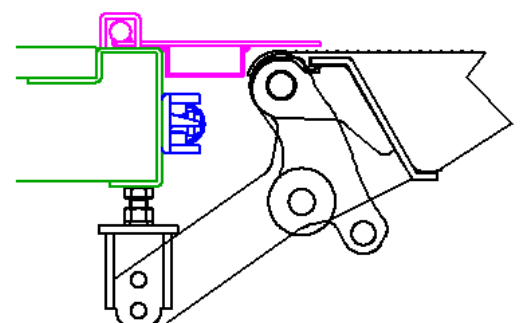
first lift up the platform to the vehicle floor, and pressurize the LIFT circuit; then close the platform in its travel position, and pressurize the TILT circuit.



REAR DOORS



ARTICULATED RAMP manufactured by installer



8- Solution 6: DOOR MOUNTED ARM STOPPERS manufactured by installer

- This solution is only applicable for cargo boxes where the door closes behind the rear frame, and the bottom edge of the door protrudes below the loading floor of the box.
- The arm stops are fitted to the rear doors by the installer of the lift. When the doors are closed, they stop the lift arms at a distance X below the floor, and allow the platform to close behind the doors. When the doors (with the stops mounted to it) are swung open position, the lift arm can go higher to reach the floor at the regular level.
- Depending of the position of the doors locks on the rear cross member of the loading floor, the shape of these locks might have to be cut-out and trimmed from the front edge of the platform.



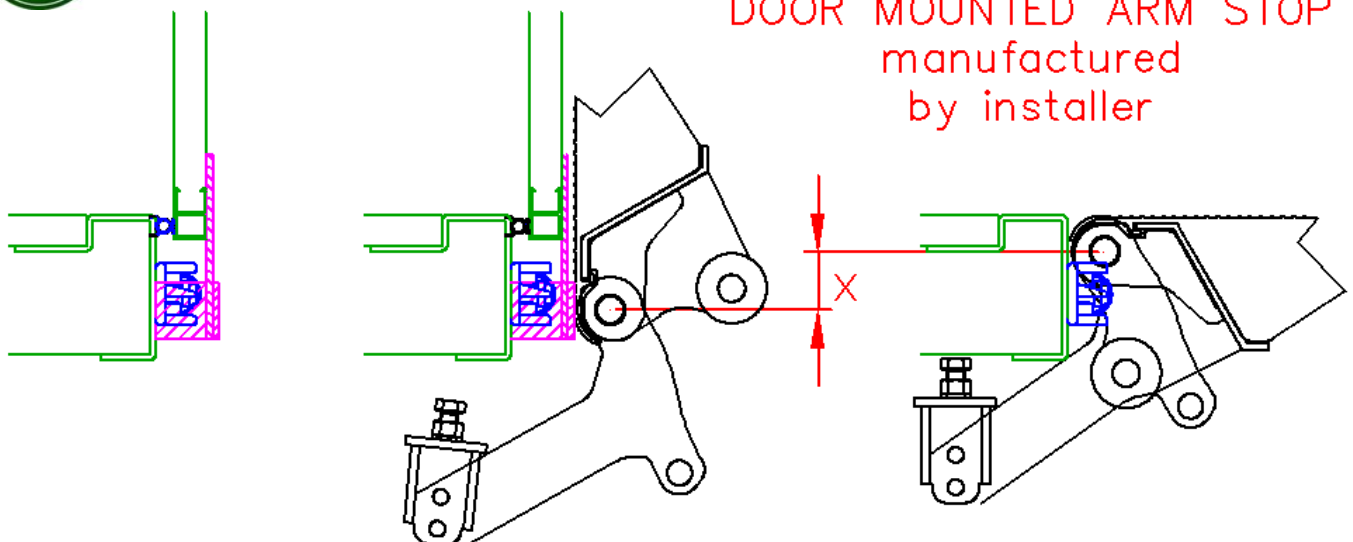
Again this option is focused on the main goal:

first lift up the platform to the vehicle floor, and pressurize the LIFT circuit; then close the platform in its travel position, and pressurize the TILT circuit.



REAR DOORS

**DOOR MOUNTED ARM STOP
manufactured
by installer**



Other case study using the same option (with rear doors which bottom edge protrudes below the sill of the loading floor):



9- Additional mounting tips



- For all these cases, it is important to have positive arm stops fitted, either to stop the lift arms against the underside of the vehicle body, or against the rear cross member of the cargo box. Refer to the general mounting instructions for available options and suggestions.

- Whenever platforms are mounted behind the locking gear of rear swing doors, and the platform cannot be pressurized over its full depth against the rear frame (or sealing rubbers mounted to the rear frame) of the cargo box, it is recommended to **mount rubber buffers at the level of the platform point**. This will prevent the platform from juddering, and rocking backwards and forwards in its travel position, and will increase the durability of articulation pins, bearings, and potentially cylinder seals.
- These rubbers can be mounted against the rear frame (if the doors can swing around them when opened), or on the side edges of the platform itself.



- If a mechanical platform lock is desired, and the rear doors cannot swing around a fixed locking plate mounted to the rear frame of the body, pivoting locking plates are available in different lengths from DHOLLANDIA spare parts department.



In case of doubt or hesitation how to realise any of these fitting solutions mentioned above, please don't hesitate and contact one of the technical-commercial staff of your national DHOLLANDIA distributor.