



# EA LIFT

Manual for safe installation and  
operation

**PASSENGER LIFT SOLUTIONS**

Unit 2, Summit Crescent Ind. Est. West Midlands, B66 1BT, GB. +44 (0) 121 552 0660



## Logistics & Storage

Ensure that the lift delivered is as ordered

Packaging is undamaged and contents are intact

Use an appropriate lifting device for transportation of packaged lifts

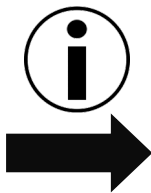
Use suitably rated load capacity equipment



Wear Safety Shoes with reinforced toe caps and non-slip soles, gloves and safety glasses

If the lift is to be stored proceed as follows:

- Transport the lift to an appropriate storage area, free from atmospheric agents / elements
- Ensure all electrical / electronic devices are insulated from external environment so to prevent humidity damaging those components
- Storage area selected **MUST** ensure temperature variation is between 5 C to 50°C
- Ensure all sliding parts (for example guides and cylinders) are adequately protected from dust, rust and water damage



**STORAGE OF THE LIFT IN CONDITIONS THAT DO NOT COMPLY WITH THE ABOVE DESCRIPTION SHALL NULLIFY THE WARRANTY FOR ANY PARTS TO BE REPLACED**

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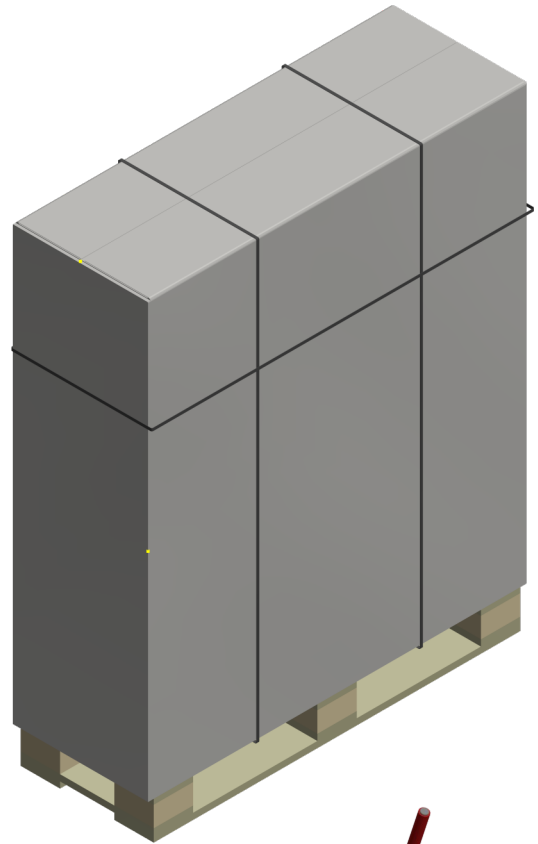
## Unpacking

The lift is supplied bolted to a pallet

There is an over box and internal packaging, banded to the pallet

(NOTE: Larger lifts may be supplied with an upper extension)

Remove the outer banding and over box



Do NOT cut the inner banding



WARNING

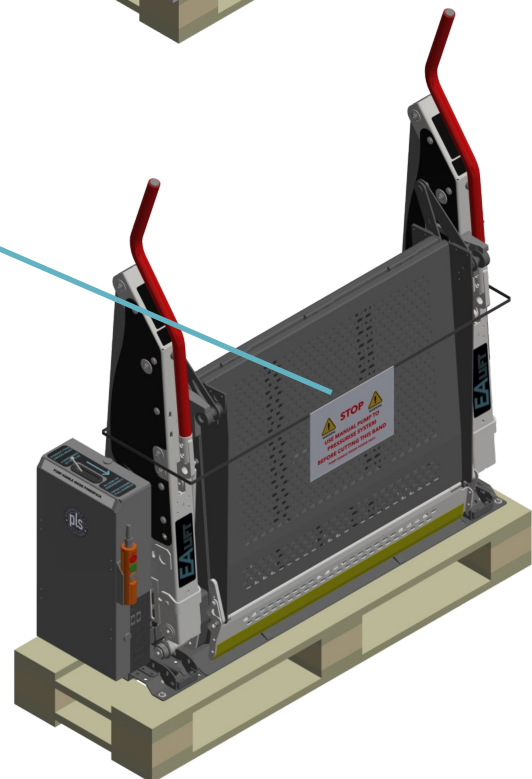
**STOP**



WARNING

**USE MANUAL PUMP TO  
PRESSURISE SYSTEM  
BEFORE CUTTING THIS BAND**

**PUMP HANDLE INSIDE POWER PACK**



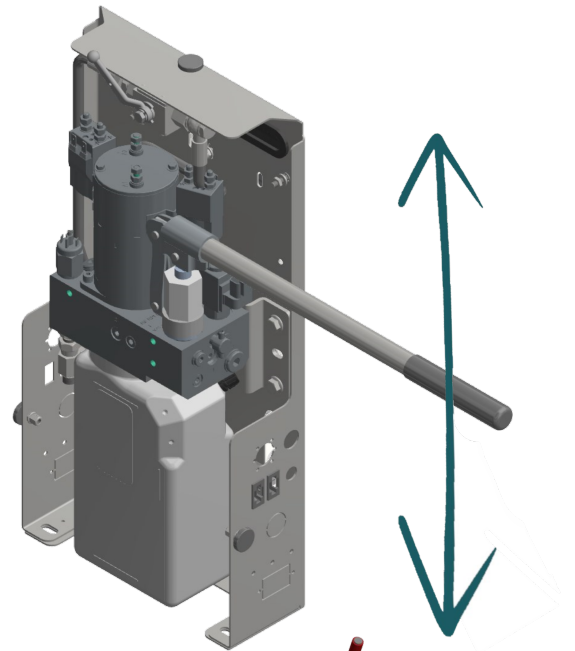
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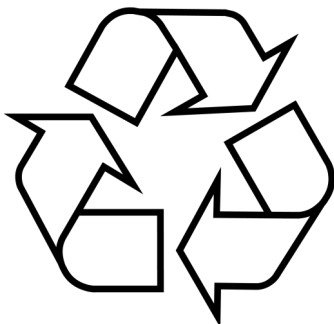
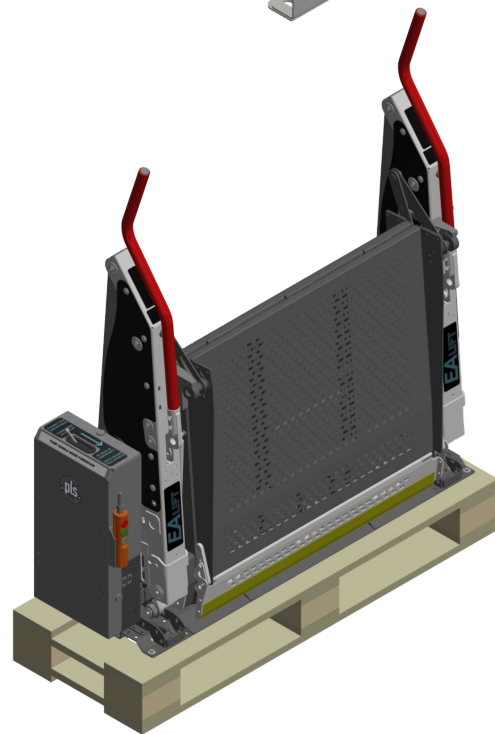
## Unpacking

Remove pump cover, then with manual handle, pump the lift to full stow position and pressure is full



The lift can now be unbolted and transferred to a forklift truck ready for installation into the vehicle

Once fixed in the vehicle, the inner banding can be removed



Recycle packaging correctly

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## Installation

### Fitting sequence

Please refer to the following pages for accompanying installation diagrams.

### When positioning the lift into the vehicle:

1. Ensure the vehicle is parked on a level area.
2. Centre the lift in the door aperture (the distance between the inside of the door aperture and the outside of the hand rails must be equal both sides).
3. Check from below the vehicle that hole positions will not foul exhaust and fuel systems, chassis side sections. Plan spacer and packing requirements for the floor type installed.
4. Close the vehicle door and push the lift towards the door, leave MIN 15mm clearance between the door and the outer barrier and outer arms.



5. All manual override systems must be fully accessible (the pump cover is removeable by slackening the side thumb screws and removing the top thumb screw)

6. Install the lift. When the lift is lowered to the ground, the bridge plate must be clear of must clear the bumper and valance. The vehicle surface MUST be flat. Do not attempt to mount base plate on top of extruded seat tracking sections. Shim base plate above tracking if necessary. Base plate shim is supplied in the kit and is also available from Passenger Lift Solutions.

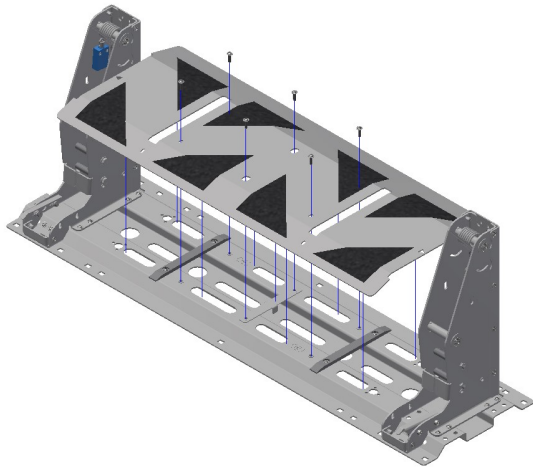
If the surface is not flat, when the lift is bolted down the base could distort to the contours of the floor. This will have the effect of altering the position of the lifting arms, thus twisting the lift.

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# Installation



1. Identify the vehicle floor/ structure type and use one of the three fitting options.
2. Remove the threshold plate by: removing x6 fixing bolts. Lift the threshold plate away.
3. Correctly position the lift base, then clearly mark the hole positions that are accessible.

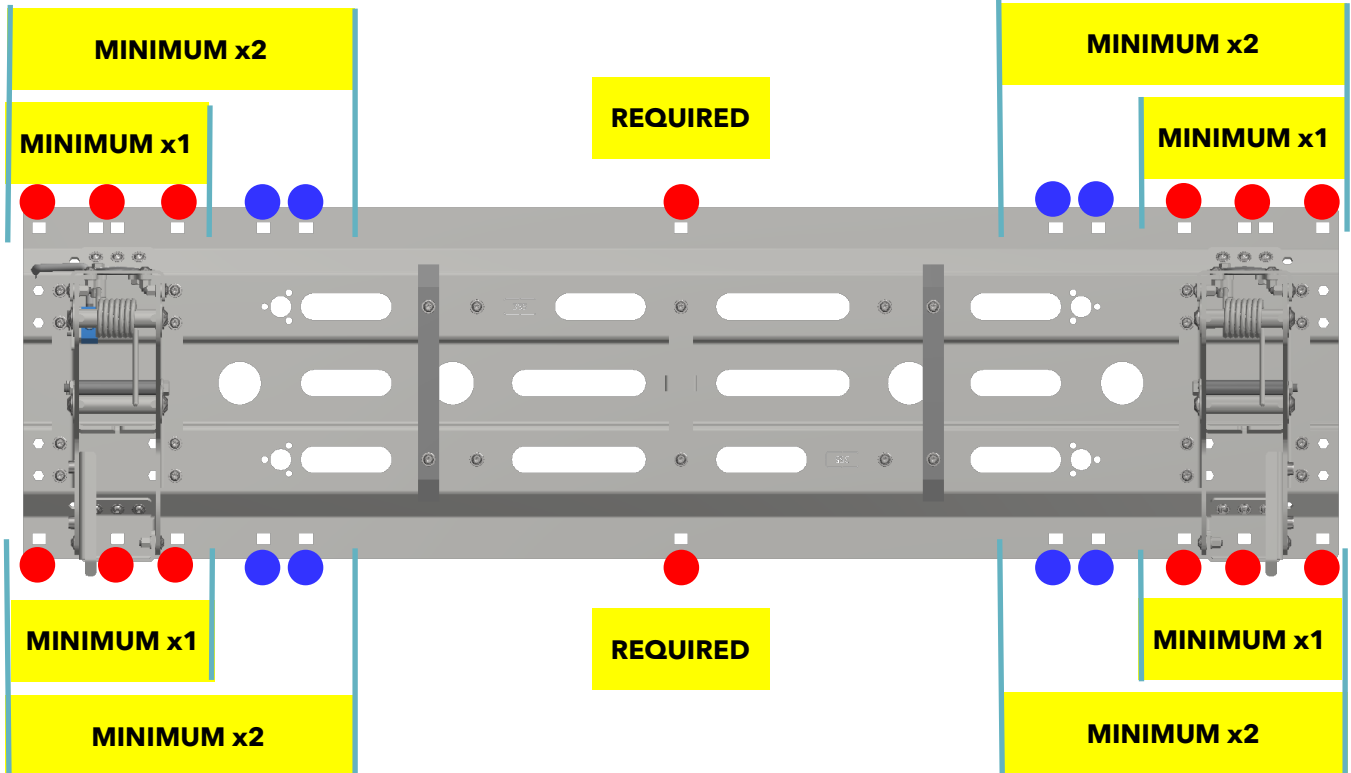
## When bolting in the base:

BOLT POSITION

**MUST** FIT FOR INSTALLATION



Additional fixing points



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## Installation

### **When bolting in the base:**

4. Move the lift to a safe location.
5. Check under the vehicle for any obvious obstructions in the areas to be drilled.

### **DO NOT DRILL THROUGH SIDE WALLS OF CHASSIS—FIND CLOSEST ALTERNATIVE POSITION**

6. Carefully drill pilot holes through the marked positions, ensuring the drill is kept vertical.
7. Check under the vehicle and ensure the pilot holes have cleared all obstructions.
8. Drill bolt clearance holes suitable for the selected bolts.
9. If the floor is a laminated type, bore out the appropriate size holes to fit the correct spacers, ensure these are cut the same length as the floor depth.
10. Drill clearance holes suitable for the selected spacers where applicable. Drill from above but only through to next layer
11. Re-position the lift base and measure the total depth from the top of the lift base to the underside of the vehicle, add 50mm and select the bolt closest to this dimension.
12. Fit the coach bolts through the lift base and then slide on the correct spacer, PLS universal plate and the nylock nut from below the vehicle.
13. Initially tighten the nuts so they support the lift, when all fixings have been fitted then securely tighten from the centre outwards to the appropriate torque.
13. After the lift has been weight tested check/ re-tighten all nylocks to the appropriate torque.

### **Adjusting the lift:**

1. Ensure vertical stow position is set correctly.
2. Ensure horizontal platform position is set correctly.
3. Ensure roll off ramp end of platform lands on ground first.
4. Ensure platform is symmetrical (not twisted).
5. For vertical split lifts ensure gates are locating together correctly.
6. To correctly adjust

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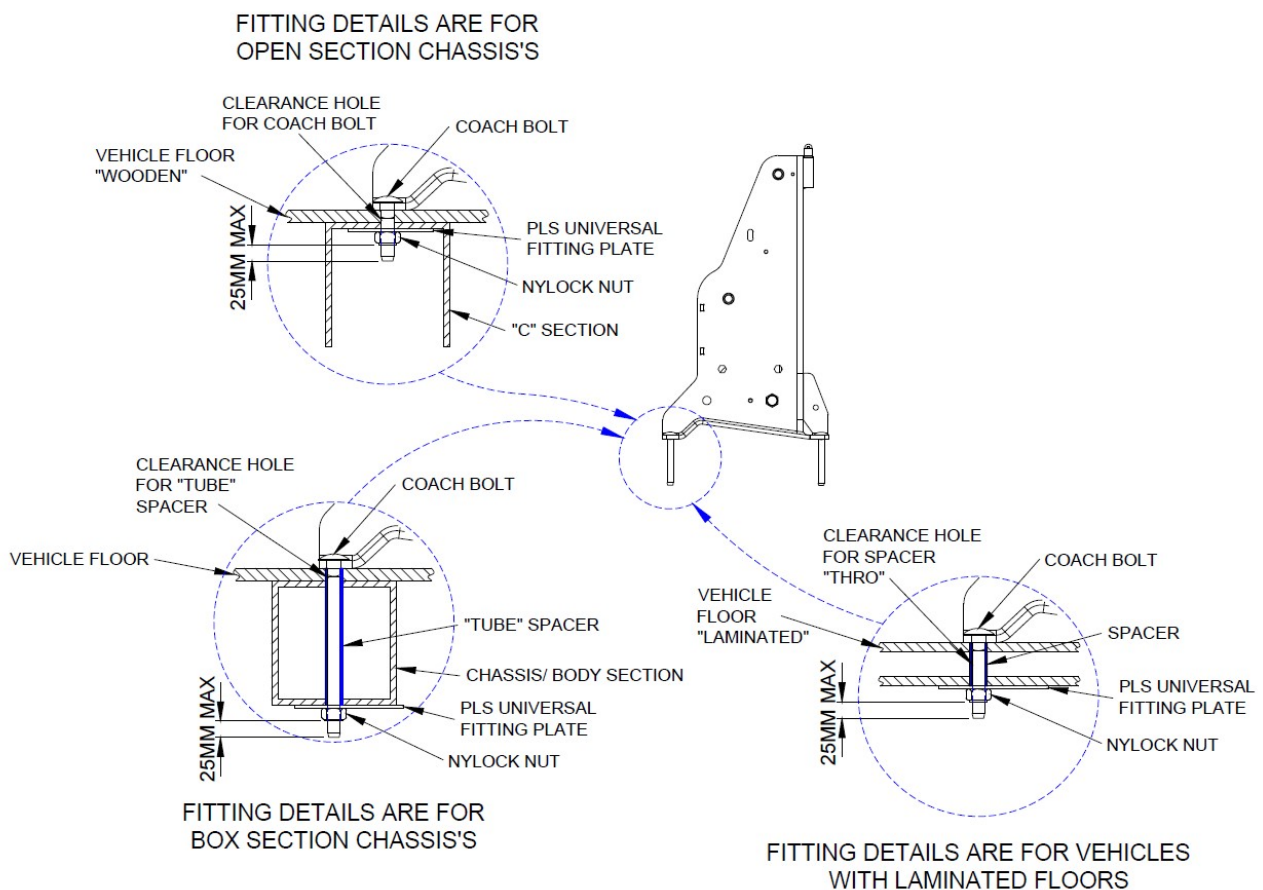


## Installation

### To Finish: Weight Test to current UK LOLER recommendation / regulations.

1. Check all fitting bolts are tightened
2. Check all lift fastenings are tight.
3. Check all information decals are positioned correctly.
4. Lift serial number and SWL visible.
5. Complete weight certificate.
6. Complete LOLER certificate (UK only).

### Bolting in the Base Details.



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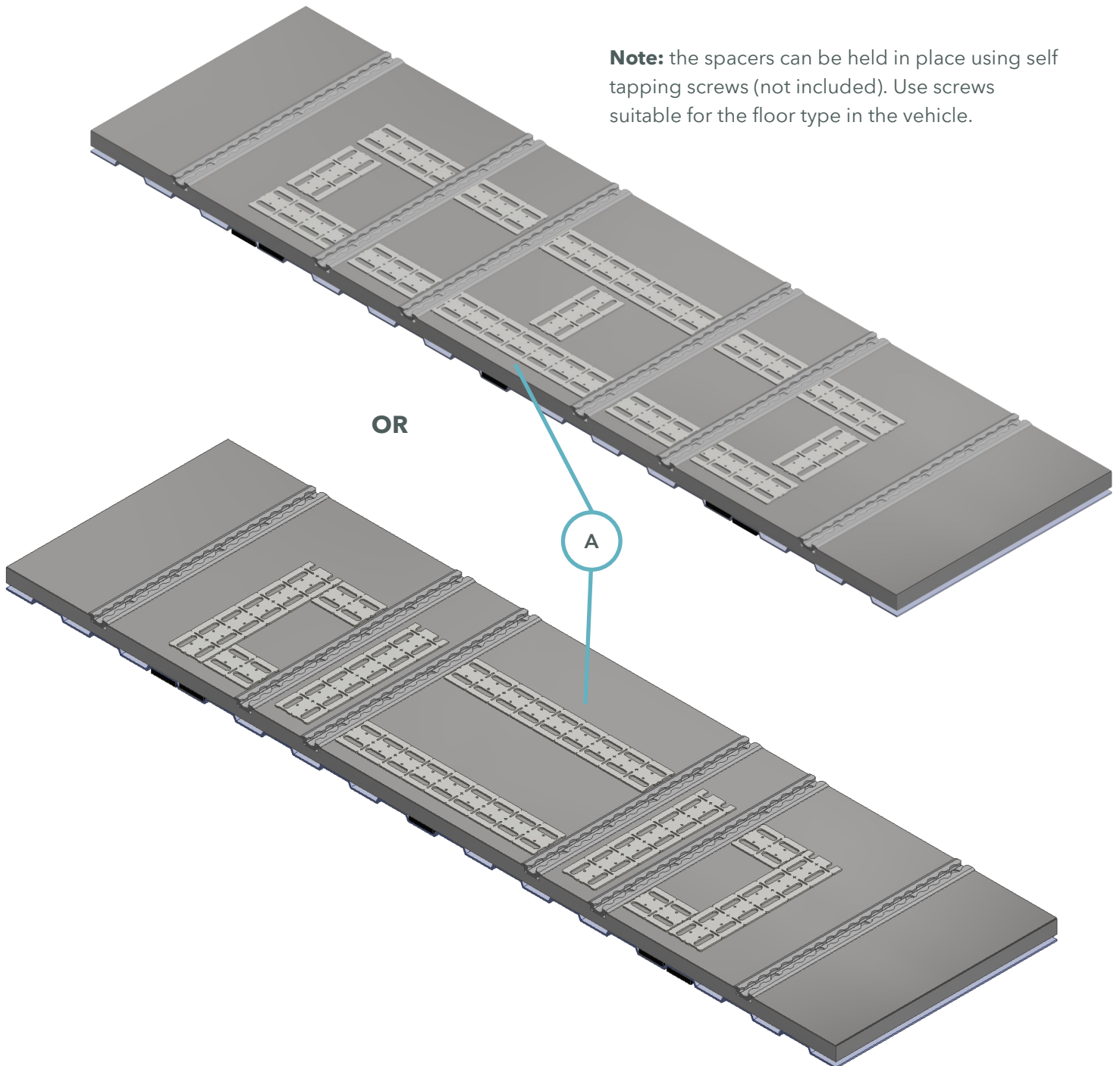




## Installation—Above Rail Packers

Use Upper Packer Plate to fill the gap between the upper rail profile and the laminate / aluminium profile bonded floor **A** **Two possible layouts are shown**

**Note:** the spacers can be held in place using self tapping screws (not included). Use screws suitable for the floor type in the vehicle.



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## Installation / Examination and Confirmation of Weight Certification

The following test Conforms to the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER98), for Passenger Carrying Vehicle Tail Lifts

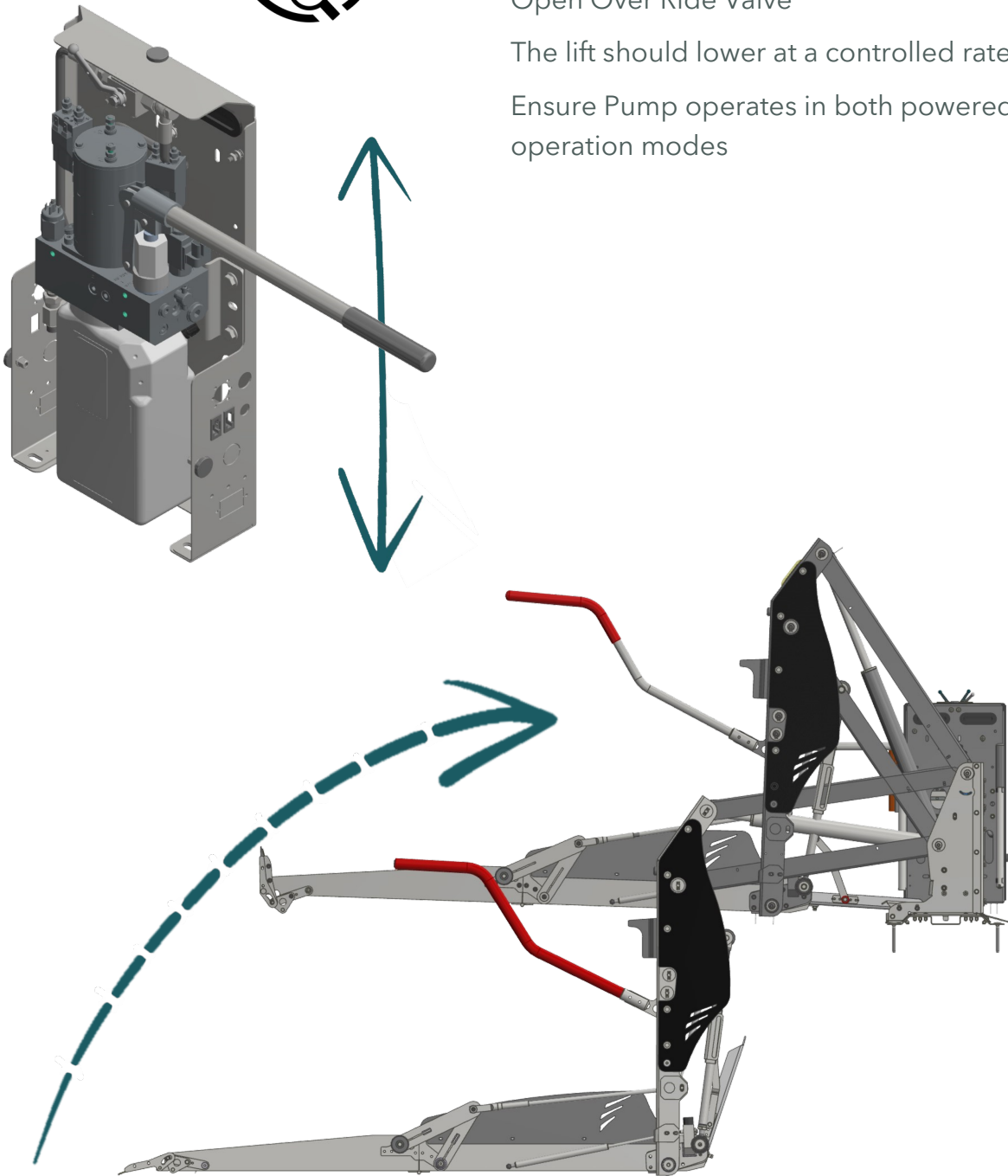
Check Pump Operation



Open Over Ride Valve

The lift should lower at a controlled rate

Ensure Pump operates in both powered and manual operation modes



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## Pressure Switch Location

The following test Conforms to the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER98), for Passenger Carrying Vehicle Tail Lifts

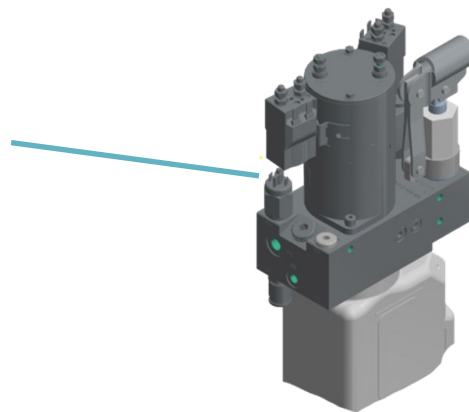
When performing the Stow Overload Test some hydraulic pressure adjustment may be necessary. Locate the pressure relief valve, turn it in the required direction to lift / not lift the 25kg weight. The switch is very sensitive, only turn by small increments to achieve the correct

Pressure Relief Valve

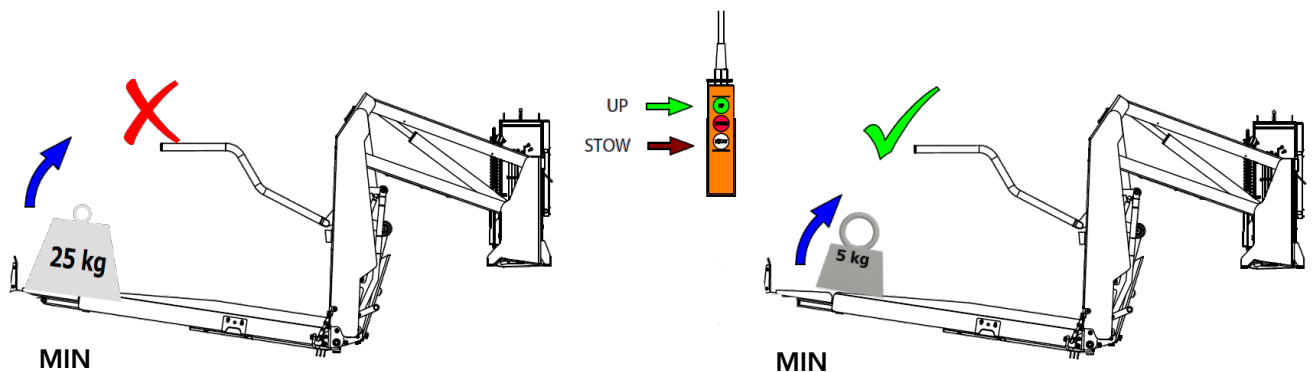
Turn Clockwise = Increase

Turn Anti-Clockwise =

Decrease



**Stow Overload Test**—the lift must not be able to lift over 25kg, if it can, adjust the Pressure Relief Valve as above



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## Installation / Examination and Confirmation of Weight Certification

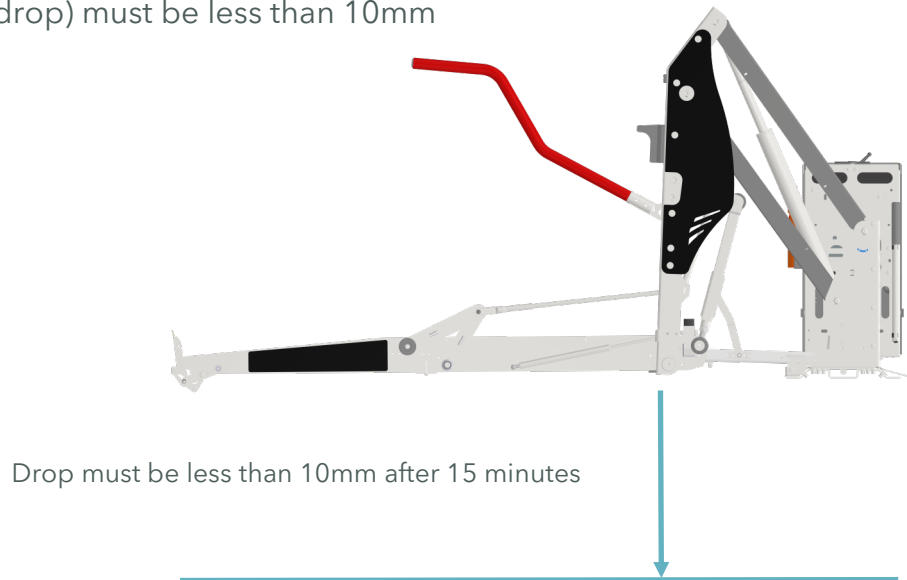
The following test Conforms to the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER98), for Passenger Carrying Vehicle Tail Lifts

### Creep Test

Deploy lift to vehicle floor level. Measure an outboard distance to floor

Start Timer. After 15 minutes re-measure

The change in height (drop) must be less than 10mm



### Installation Test

Inspect for damage:

Upper arm pin areas

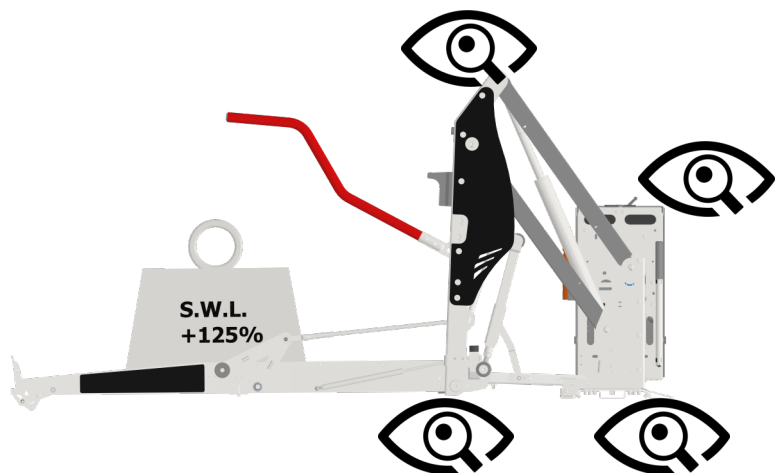
Lower arm pin areas

Base plate to vehicle floor

Arm to platform pins

Check that there is no

Lift to vehicle interface damage

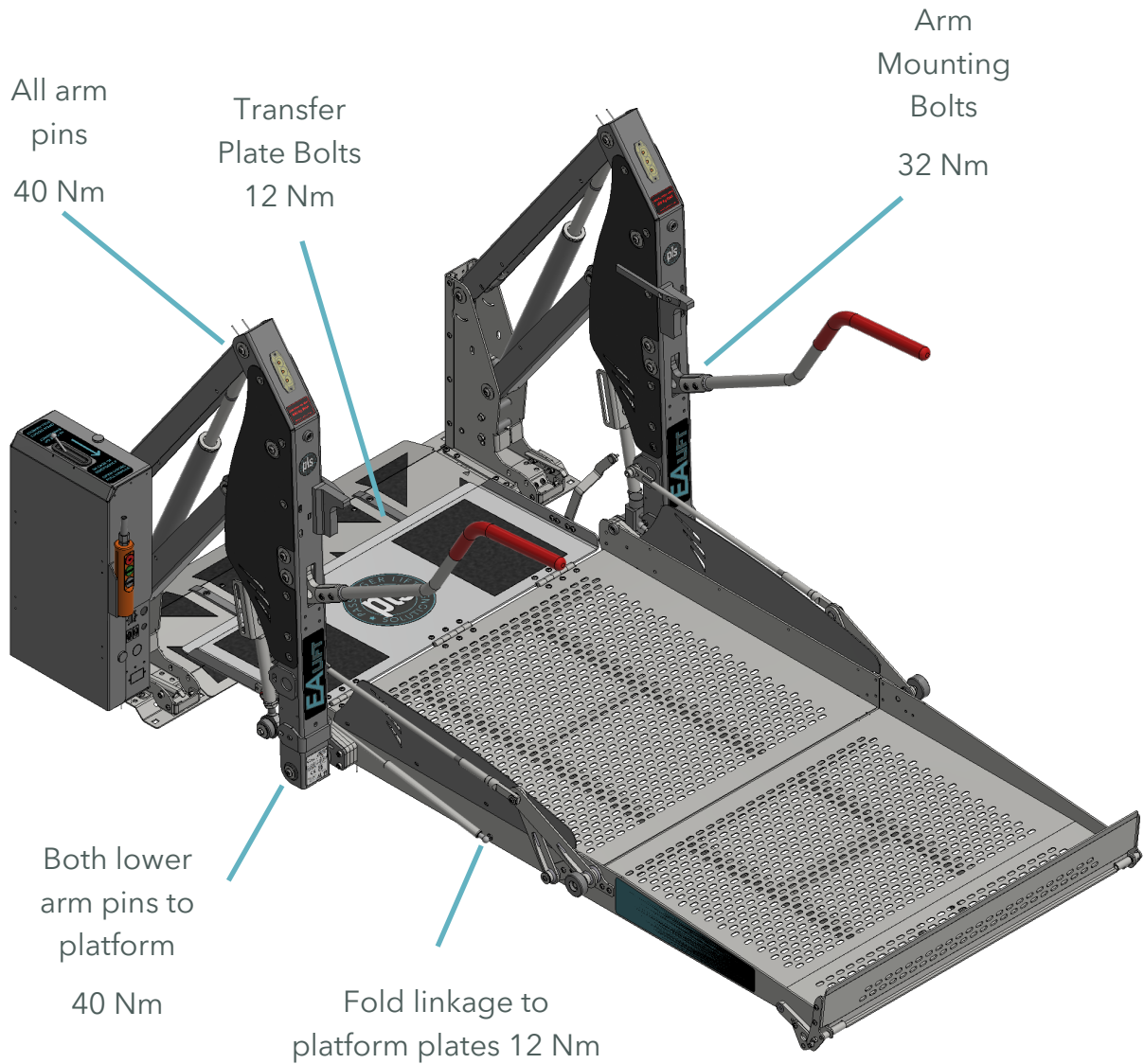


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## Torque Settings



NOTE: Base-Tower Sub-Assembly is a non-serviceable item

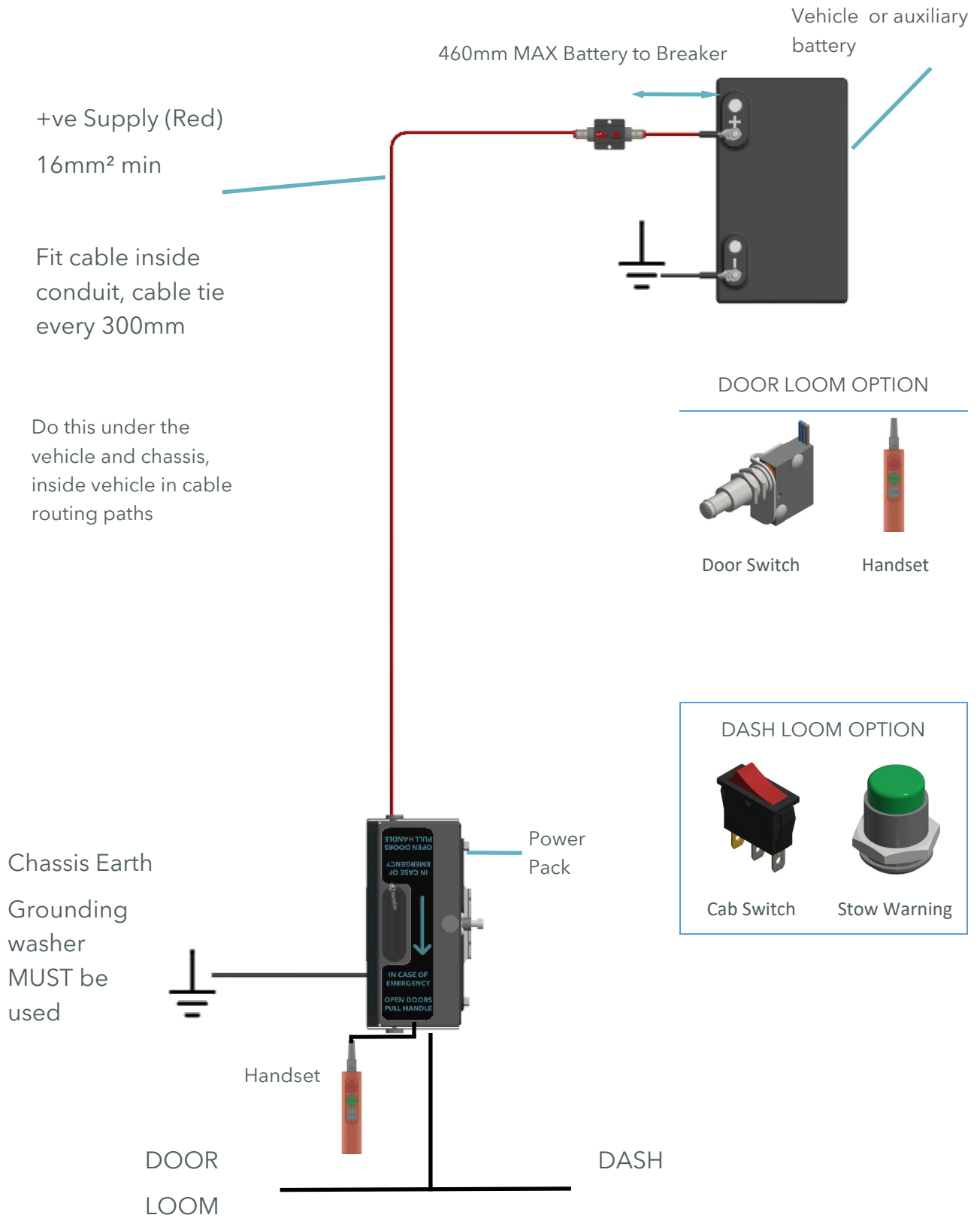


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# Electrical Installation Schematic



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## Adjustments–VERTICAL Split Platform

1. Lower the lift so that the platform is approximately 150mm above floor level.
2. Assess the tension in the platform knuckles.  
It is CRITICAL that there is NO tension, i.e. when a spanner is placed on the flat of the lower knuckle item '**A**' (Highlighted as '**C**') and turned from side to side, free movement **MUST** be seen/felt, if not adjustments **MUST** be made
3. Raise the lift so that the gates are open and approximately 75mm apart. See Enlarged view '**A**'.
4. Look at the imaginary centre line '**H**' between the locking pin '**F**' and receiving boss '**G**' both parts **MUST** be concentric so that they will fully engage when the lift is in the fully lowered position as shown in the Enlarged view on '**B**' ensuring that the two halves of the platform are securely locked together.
5. If the parts are not correct then adjustments **MUST** be made.
6. Adjustments are made by either/or both increasing or decreasing the length of the Platform Knuckles.
7. Decreasing the distance between the the knuckles will raise the platform ends (this will increase the 150mm distance).
8. To achieve this see Enlarged view '**C**'.
9. Measure and note down the distance between the knuckles.
10. Loosen the locking nut '**E**' by turning anticlockwise.
11. Fully disconnect the lower knuckle item '**A**' by completely removing the bolt.
12. Wind the thread clockwise into the upper knuckle item '**B**'.
13. Wind the lower knuckle item '**A**' clockwise onto the thread item '**D**'.
14. It is CRITICAL that the white line (mid point of the thread) is located mid way between the knuckles. Adjust if necessary.
15. Measure the distance between the knuckles and note down.
16. When the required distance has been achieved, reconnect the lower knuckle item '**A**' by securely fixing the retaining bolt in position.
17. Turn the locking nut item '**E**' by turning clockwise until fully tightened **BEFORE** operating the lift.
18. Operate the lift fully twice then then repeat the whole procedure, make further adjustments if required.
19. To increase the 150mm clearance, increase the distance between the knuckles.

Note: It is CRITICAL that there is NO tension in the Platform Knuckles, tension may cause severe damage.

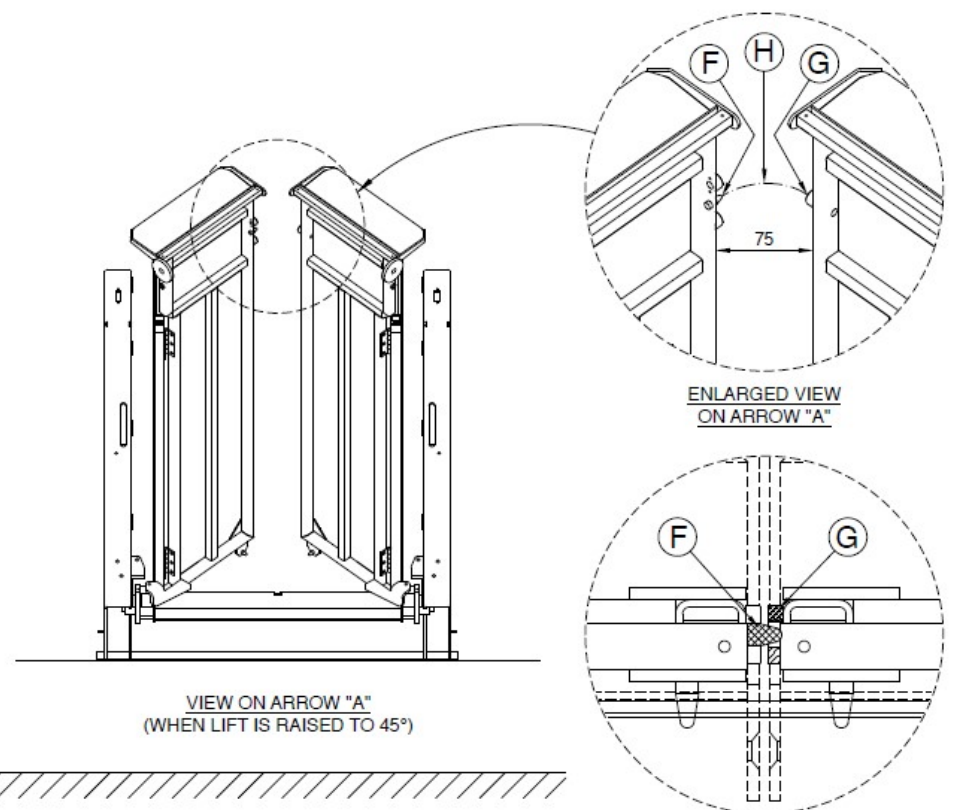
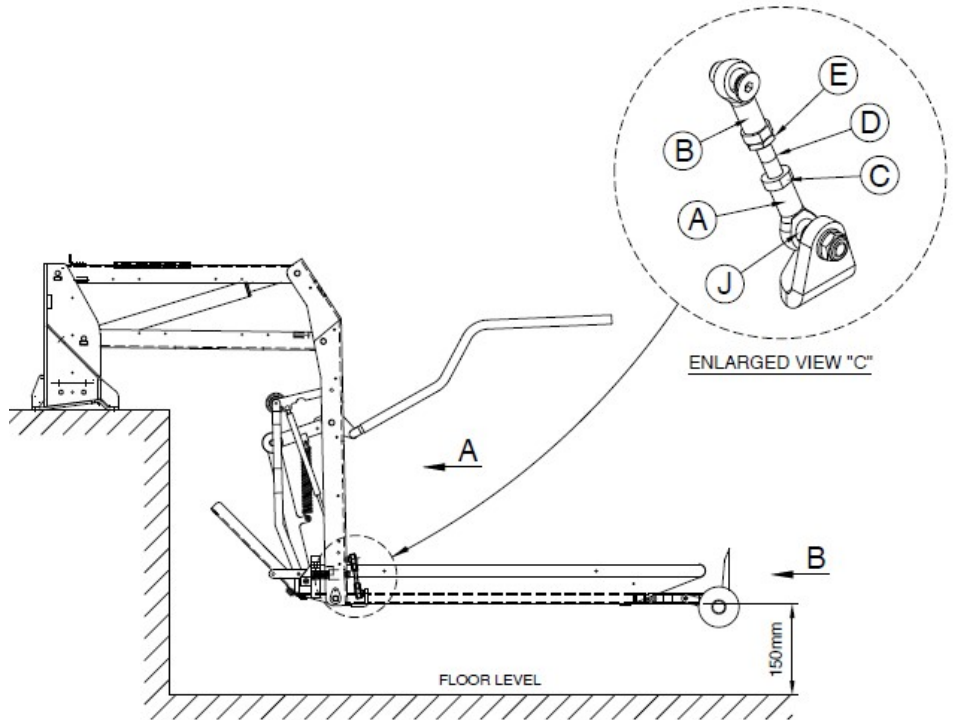
It may be necessary to adjust **BOTH** sides to obtain correct alignment.

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# Adjustments—VERTICAL Split Platform—Gates synchronising procedure

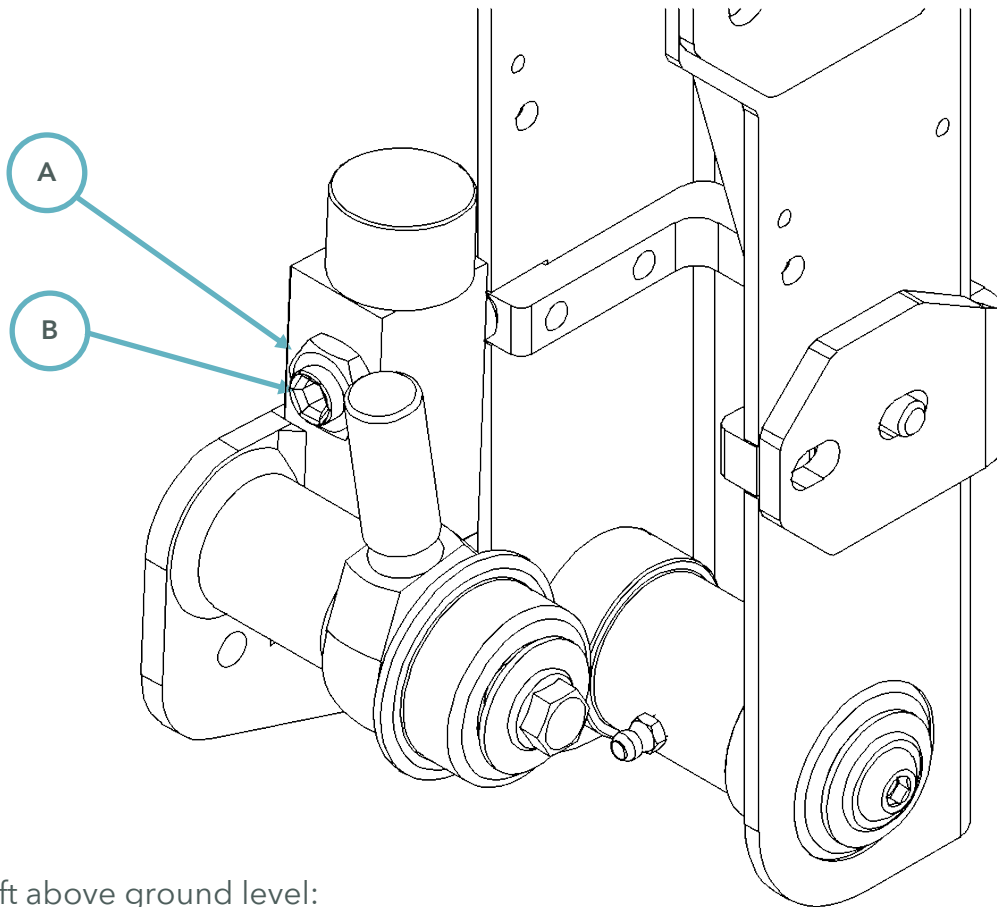


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## Adjustments–Horizontal Adjustment



With the lift above ground level:

1. Undo Locking Nuts–**A** until adjustment screw–**B** is free to move.

To increase the distance–**C** (platform end to ground) turn the adjustment screw **B** clockwise

To decrease the distance–**C** (platform end to ground) turn the adjustment screw **B** anti-clockwise

2. Turn the adjustment screw–**B** until the platform angle –**C** is tilted 1- 2° **INBOARD**

3. The locking nut **A** **MUST** be re-tightened after any adjustment

4. Lower the lift and ensure that the Landing Foot - **E** Roll Off Ramp **D** are in contact with the floor

If not repeat the above procedure until correct

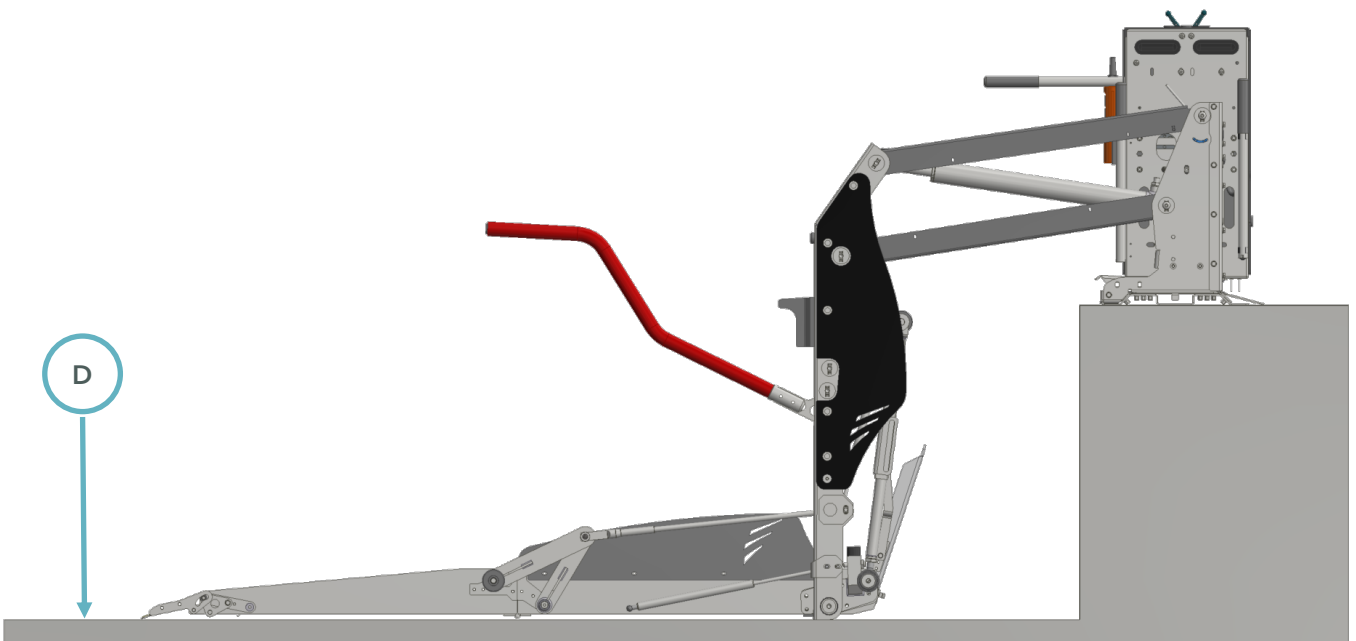
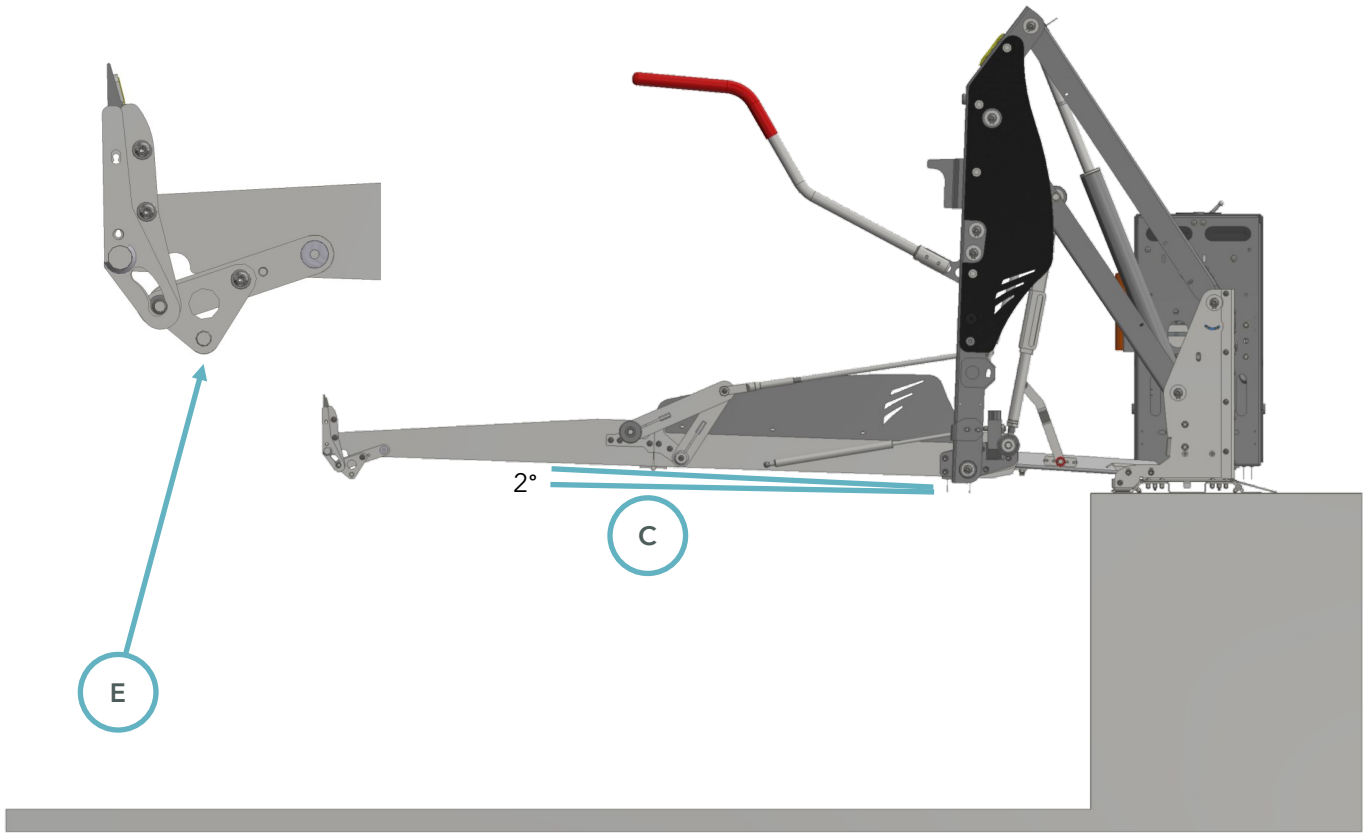
Note: If the L/H and R/H bolts are not equally adjusted / set, the platform may have a side to side twist

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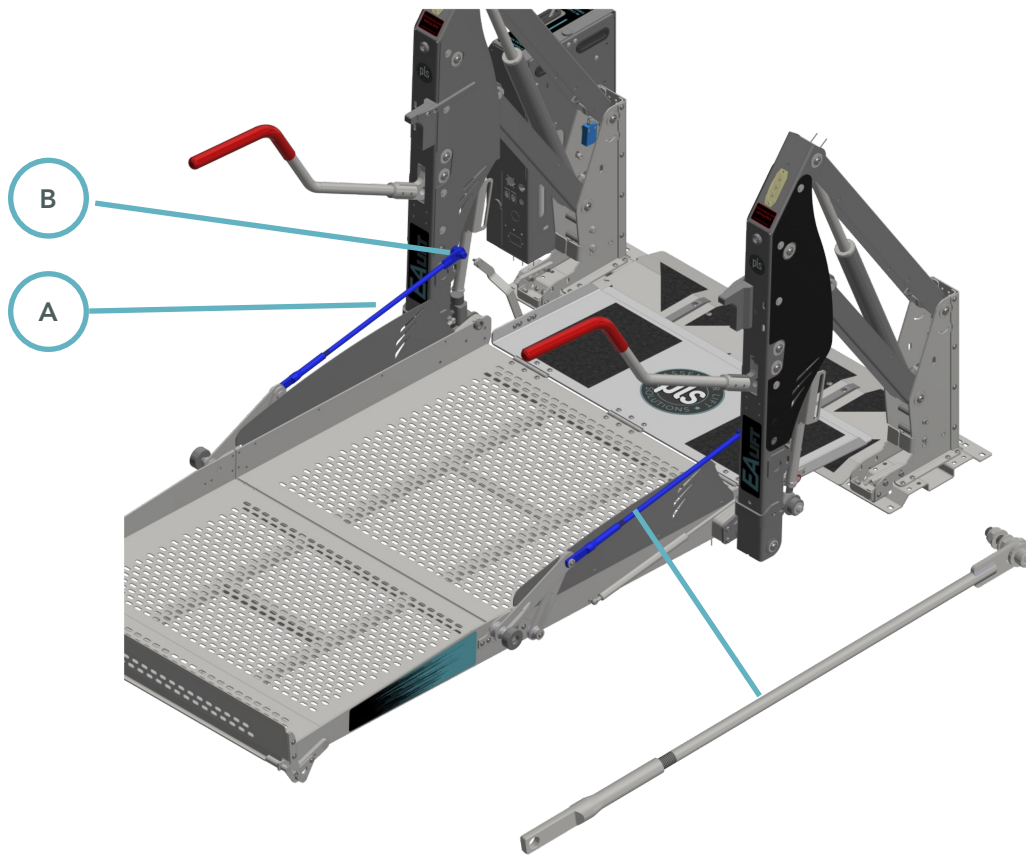
# Adjustments—Horizontal Adjustment



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## Adjustments–Horizontal Split Lift Platform Angle Adjustments



Open Vehicle Doors, deploy lift to vehicle floor level:

1. After performing platform angle adjustment:
2. Using a straight edge, make sure both the inner platform and outer platform are at the same level (angle)
3. If the angles are different then the tie rods **A** require adjustment as follows:

Tie Rod adjustment procedure:

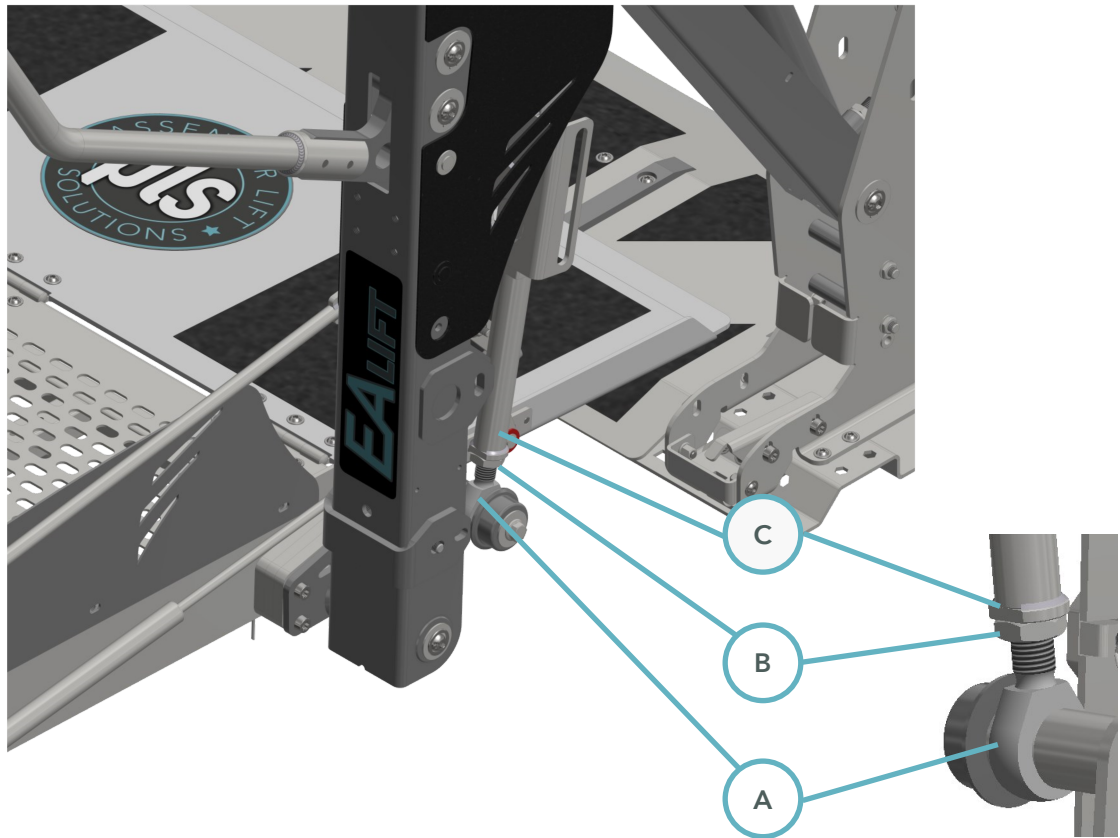
1. Place a work stand under the outer platform
2. Disconnect the tie rods at the **inboard** end **B**
3. Make adjustments to the tie rods by screwing / unscrewing the tie rod as necessary
4. Reconnect the tie rods, then re check inner / outer level (angle)
5. If not equal, repeat as above

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## Adjustments–Horizontal Split Lift



### Horizontal Split Lift Stow Adjustment

1. If the lift platform is not stowing fully / correctly, adjustments to the rod end bearings **A** is required

### Rod End Bearing adjustment procedure:

1. Place a work stand under to support the platform
2. Loosen the lock nuts holding the rod ends in place **B**
3. Loosen or tighten the adjustment tubes **C** (there is no need to remove the rod end bearings themselves)
4. Make adjustments to the tie rods by screwing / unscrewing the tie rod as necessary
5. Tighten the lock nuts and check that the lift stows correctly
6. If not, repeat the above procedure until correct

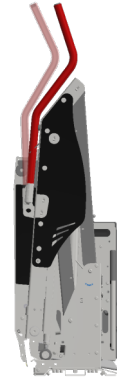
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## Adjustments—Handle Stow Angle—All Platform Types

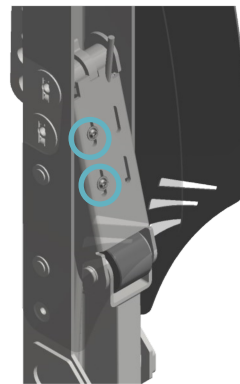
Adjustment may be required to adjust the handle stow angle  
Follow the next steps to do so



Deploy the lift to vehicle floor level to enable access to adjustment points

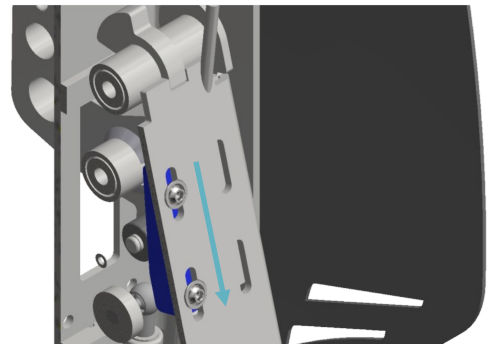
The adjustment fasteners are shown

Slacken the fasteners to allow the wedge to move position



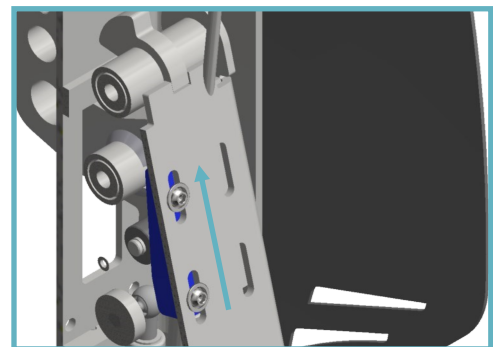
Moving the wedge in this direction will move the handle toward the outer arm

Tighten fasteners after adjustment to 12Nm and cycle lift to check. Re-adjust as necessary



Moving the wedge in this direction will move the handle away from the outer arm

After adjustment, tighten fasteners to 12Nm and cycle lift to check. Re-adjust as necessary

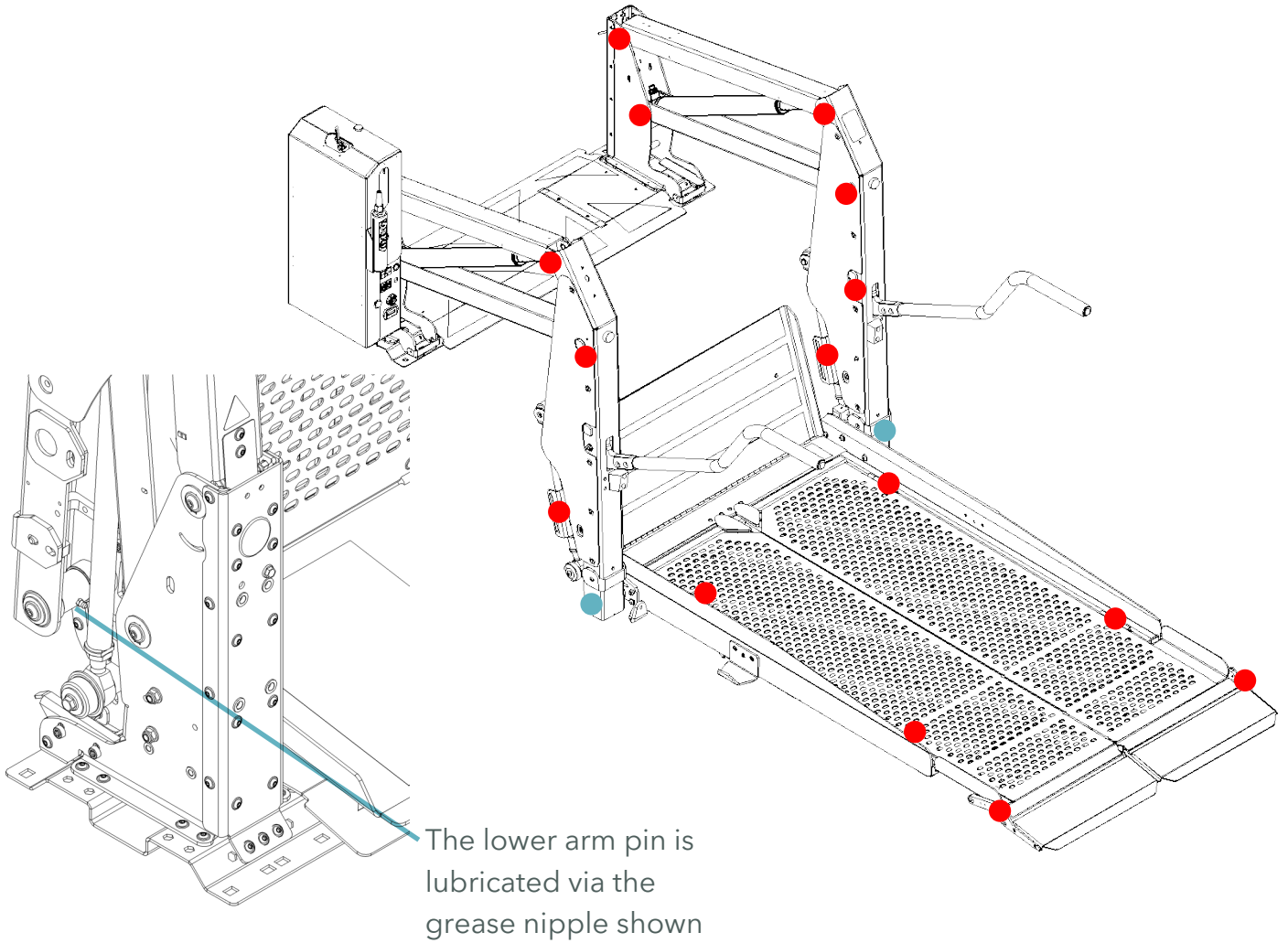


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# Lubrication



●	Lower Arm Pins	Moly Grease
●	All Other Moving parts Including folding lift and gate hinges	ACF-50

NOTE: Do NOT lubricate the power pack

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