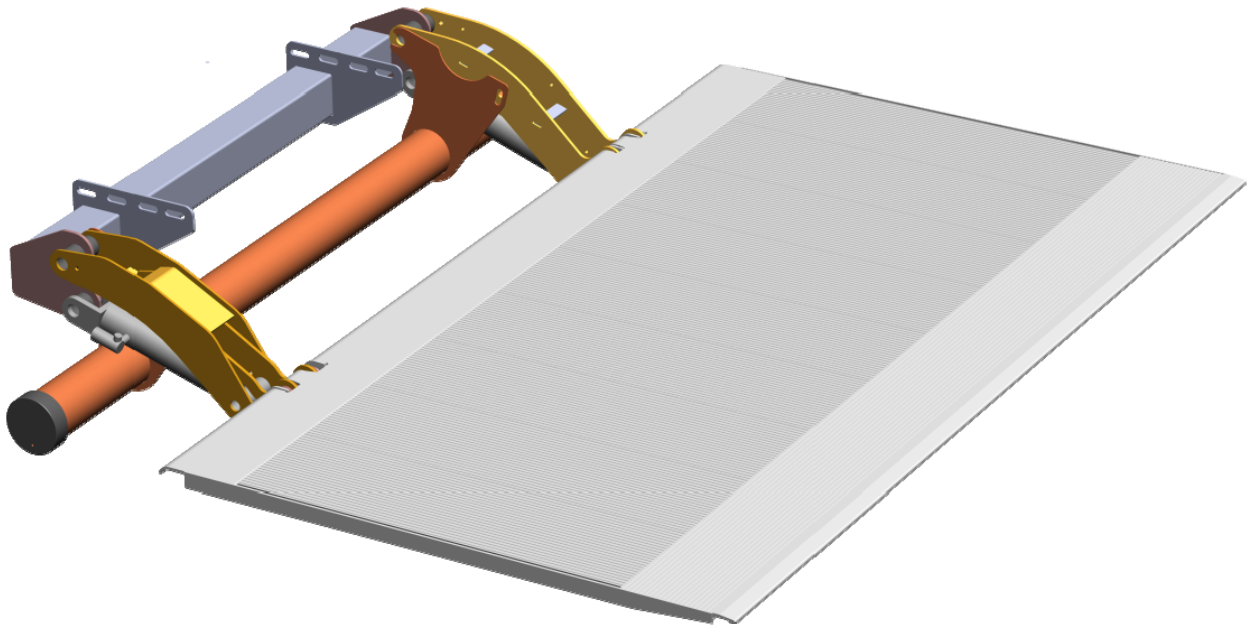


# MAXON®

## GPC 17 X-1 liftgate Installation Manual



**MAXON®**  
**LIFT CORP.**

11921 Slauson Avenue  
Santa Fe Springs, CA 90670-2221  
P 800.227.4116 / 562.464.0099  
F 888.771.7713

**X1**  
TECHNOLOGY

Date 04.2021  
Part-no. S 20 912 678



## Contact information

### MAXON LIFT CORP.

#### Corporate Office

11921 Slauson Avenue  
Santa Fe Springs, CA 90670-2221  
P 800.227.4116 / 562.464.0099  
F 888.771.7713

#### Customer Service / Parts

USA/Canada

Mexico

P 800.227.4116

F 888.771.7713

P 01.664.231.6039

## Contents

Contact information .....	3
Safety .....	6
Intended use .....	6
Requirements for personnel .....	6
Requirements for installation and commissioning .....	7
Check for damages after arrival .....	7
Trailer hitch .....	7
Presentation of warning notices .....	8
Fundamental hazards.....	9
Installation Directions GPC 17 X-1 .....	10
Installation-Safety Precautions .....	10
Unpacking the lifting gear, installation adapters, and accessories kit.....	10
Preparation of the Vehicle .....	12
Cutouts in Rear Sill.....	12
Instruction, GPC-X spacer kit installation, Kit p/n 211915-01 (a spacing dampers between GPC-X platform and truck body) .....	13
Placement of GPC 17 X-1 mount fixture .....	15
Assembly of the lifting gear and the stabilizer / synchronizer bar .....	16
Assembly drawing of lifting mechanism with stabilizer / synchronizer bar .....	17
Assembly the Installation Adapter for the different vehicle types to the lifting mechanism .....	17
Installation Adapter for Mercedes Benz Sprinter .....	18
Installation Adapter for Ford Transit .....	19
Installation Adapter for vehicles with C-Frame .....	20
Position and pin both liftgate arms into the assembly brackets. ....	22
GPC 17 X-1 assembly measurements for lift installation on Mercedes Benz Sprinter .....	23
GPC 17 X-1 assembly measurements for lift installation on Ford Transit .....	25
GPC 17 X-1 assembly measurements for lift installation on a Vehicle with a C-Frame (for example IVECO Daily) .....	27
Weld requirements .....	29
Chart Platform Measurements.....	31
Installation of the platform .....	31
Adjustment of the platform to the vehicle bed .....	32
Adjustment of the platform for installation in a closed position: .....	32
Lifting arm stop at vehicle body .....	33
Function of the adjustment fork .....	34
Connecting the cables.....	35
Assembly of electrical equipment in series 11.....	36
Foot control .....	36
Central power unit .....	36
Cabin switch.....	37
On-Off-Switch diagram.....	38
Power fuse .....	39
Battery capacity.....	39
Assembly of control panel .....	40
Adjusting the platform inclination Series 11 (Tilt sensor programming).....	41
Caution sticker “secure the load” .....	42

Installing supports (vehicle-dependent).....	42
Affixing the danger notice sticker.....	43
Recommendations and instructions regarding the liftgate.....	44
Hydraulic oil recommendations.....	44
Painting the lifting gear.....	44
Entry in inspection record book.....	44
First operation of the liftgate.....	44
Operating sticker (option).....	44
Type label.....	44
Testing the liftgate.....	45
Function test.....	45
Check of operating speeds.....	45
Vertical speed.....	45
Tilting speed (10° to -10°).....	45
Load test.....	46
Static test.....	46
Dynamic test.....	46
Testing against lifting an overload.....	46
Testing the safety devices.....	46
Torque table for all supplied and installed bolts on Maxon liftgates.....	47
Decals.....	48
LED diagnostics in series 11.....	50
Checking the inclination sensor inside the platform.....	50
Checking the pressure switch S4:.....	50
Service Switch in series 11.....	51
Option body lighting in series 11.....	51
Body Seal Kit`s.....	52
Hydraulic circuit diagram.....	53
Electrical circuit diagram.....	54
On- Off-Switch diagram.....	55
Optional food control diagram.....	56

## Safety

### Intended use

These installation directions contain the instructions necessary to install the liftgate and adjust it to those vehicles for which the liftgate was designed. To determine whether the device may be installed on a certain vehicle, please contact us. We will provide the required information.

If the liftgate needs to be modified or if it is necessary to differ from these installation directions, a written approval from Maxon Lift CORP. needs to be obtained first. Unapproved modifications and amendments from these installation directions may lead to failure and to operating interruptions as well as to hazards for the operator.

**The warranty for the device will be voided by "unapproved modifications" and "deviations from the installation directions."**

**The installations guidelines of the chassis manufacturer need to be complied with!**

The liftgate is used for loading and unloading the vehicle and for transferring loads. Any other use is prohibited.

Do not exceed the maximum load carrying capacity, you found **on the rating plate or in the user manual (load diagram)**. Be sure to correctly position the load on the platform.

Do not operate the liftgate with the vehicle in motion.

Do not use the liftgate to lift any person other than the operator.

This manual is intended for the manufacturer who installs the liftgate on the vehicle. It contains information on transport, installation, and commissioning.

Read this manual before working on or operating the liftgate.

Do not deviate from the instructions contained in this manual. By doing so, you risk injury, damage to property, and voiding of the warranty.

Make sure that this manual always remains with the liftgate or vehicle.

### IMPORTANT

**For information on operation, cleaning, maintenance, decommissioning, disassembly, and disposal, refer to the accompanying user manual.**

### Requirements for personnel

The tasks described in this manual may be performed only by qualified and trained personnel.

Use personal safety gear when performing these tasks: protective goggles, work gloves, and protective footwear.

Perform these tasks at an appropriate working height with the body in an appropriate position. Avoid unusual positions.

Comply with valid legal and operational guidelines, such as occupational safety regulations and environmental regulations.

## **Requirements for installation and commissioning**

Follow the vehicle manufacturer's current installation guidelines for the relevant vehicle.

Pay particular attention to safety instructions and warnings.

Changes to the liftgate are prohibited.

Do not modify or remove safety equipment (pressure limiting valves, non-return valves, electrical fuses, and software control routines). By doing so, you risk serious injury.

Do not modify, cover, or remove product labels (warning labels, instructions, rating plates).

## **Check for damages after arrival**

For damages on the liftgate which occurred during transportation, the shipping/forwarding company will be responsible. The lift needs to be checked for damages upon arrival. If any damages occurred during transportation, they need to be recorded on the waybill, so that claims can be raised. Insurance claims can be settled only by Maxon Lift CORP. and the shipping/forwarding company or its insurance.

## **Trailer hitch**

If the vehicle has a trailer hitch, the clearance of the shaft axle to the liftgate and the overall length need to be guaranteed by the installer.

## Presentation of warning notices

The following types of notices are used in this manual to identify hazards and complications:

### **DANGER**

Failure to heed this notice can result in death or serious injury.

### **WARNING**

Failure to heed this notice can result in death or serious injury.

### **CAUTION**

Failure to heed this notice can result in minor or moderate injury.

### **NOTICE**

Failure to heed this notice can result in damage to property or the environment.

### **IMPORTANT**

Important information or useful tip for correct use.



## Fundamental hazards

### DANGER

#### **Electrical system with on-board voltage:**

The liftgate receives electrical power from the vehicle's on-board power supply (max. 48 V DC). The electrical system is designed using state-of-the-art technology.

- Do not damage or modify electrical components or wiring.

Fire and explosion hazard. Excessive current may damage the battery or cable harness. To prevent this, visually inspect the electrical system (maintenance schedule).

### DANGER

#### **High-pressure hydraulic system:**

The liftgate's hydraulic system operates at high pressure max. 3200 PSI (max. 220 bar). The hydraulic system is designed using state-of-the-art technology.

- Do not damage or modify hydraulic components or hoses.

Danger from pressurized liquids and gases.

Hydraulic components/lines can burst and cause injury.

- Inspect hydraulic components/lines at regular intervals (maintenance schedule).
- Install only state-of-the-art hydraulic components/lines.

### DANGER

#### **Moving parts with crushing points:**

All parts that move in close proximity to one another can potentially crush fingers.

- Watch out for the unexpected movement of moving parts.

### DANGER

#### **Moving parts with points where objects can be pulled in and/or trapped:**

Parts of the body, long hair, and clothing are at risk of being caught and pulled in by moving parts. This can result in fatal injuries.

- Always secure long hair
- Do not wear loose-fitting clothing

## Installation Directions GPC 17 X-1

### Installation-Safety Precautions

- Before installing, the battery of the vehicle needs to be disconnected.
- The vehicle needs to be secured against all unintentional shifting.
- The plugs for electronic systems as for example ABS needs to be pulled before welding. Fuel lines, air hoses of the brake system, and cables in the installation area need to be protected against damages.
- Any special safety regulations (if applicable) need to be complied with.
- Safety gear, like protective goggles, work gloves and work boots, need to be made available before installing and are to be used if necessary.
- Safety devices on cranes, forklifts, and other lifting gear necessary for installing are to be checked to see if they are in proper working condition before they are used.

#### CAUTION

#### Unsuitable transport equipment

When transporting and lifting heavy parts, use transport equipment (e.g. cranes, pallet trucks, or other lifting gear) with a sufficient load carrying capacity.

- Verify the correct and reliable functioning of the transport equipment.

#### Unpacking the lifting gear, installation adapters, and accessories kit

#### CAUTION

#### Unsecured, heavy parts

When transport locks are removed, parts may fall or tip over and the platform may tip over. Risk of injury.

- Secure loose parts. Remove transport locks carefully.
- After disposing of packing materials, store all parts in a secured manner.

#### NOTICE

#### Oil leakage

Incorrect positioning of the lifting gear can result in oil leakage. Risk of environmental damage.

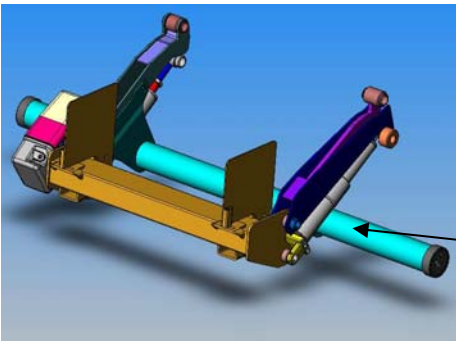
- Always transport the lifting gear in an upright position using suitable lifting points.

#### IMPORTANT

Dispose of all packing materials in accordance with environmental regulations.

## IMPORTANT

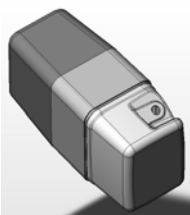
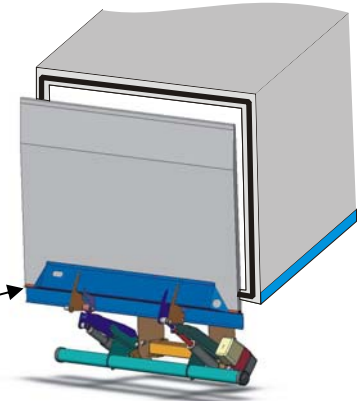
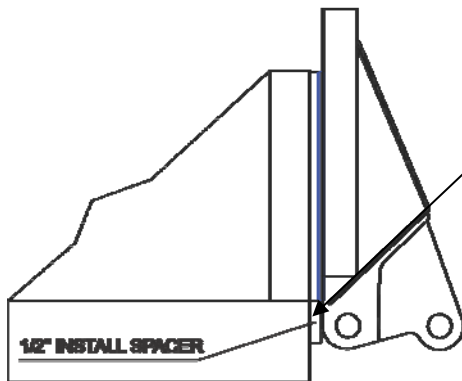
Please follow these important steps before starting installation.



1. Read and fully understand complete installation manual.
2. Check and verify that your vehicle dimensions are correct for the model of liftgate that you are installing. Vehicle mounting data is found on page 23, 25, 27 of the installation manual.

3. The Stabilizer/Synchronizer bar (drawing on page 16) must be mounted before

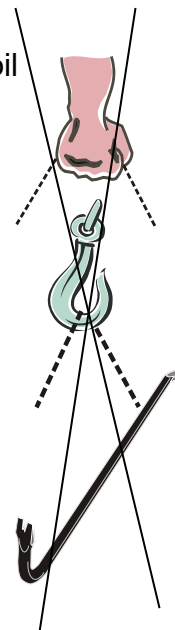
liftgate is installed on the truck body. Install the 1/2" spacer on the body. This spacer bar is always used with exception of liftgate behind swing doors. See page 13 for further instructions.



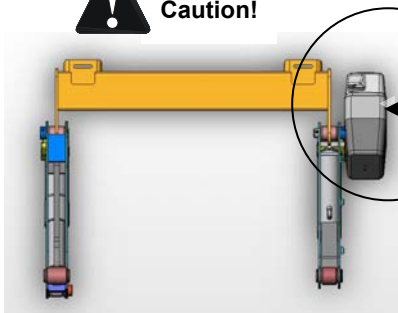
The power pack was already filled with oil in the factory. If oil is required, use recommended oil type found in the chart on page 44 to fill the reservoir.

**CAUTION**

Caution with transport. Failure can result in injury.



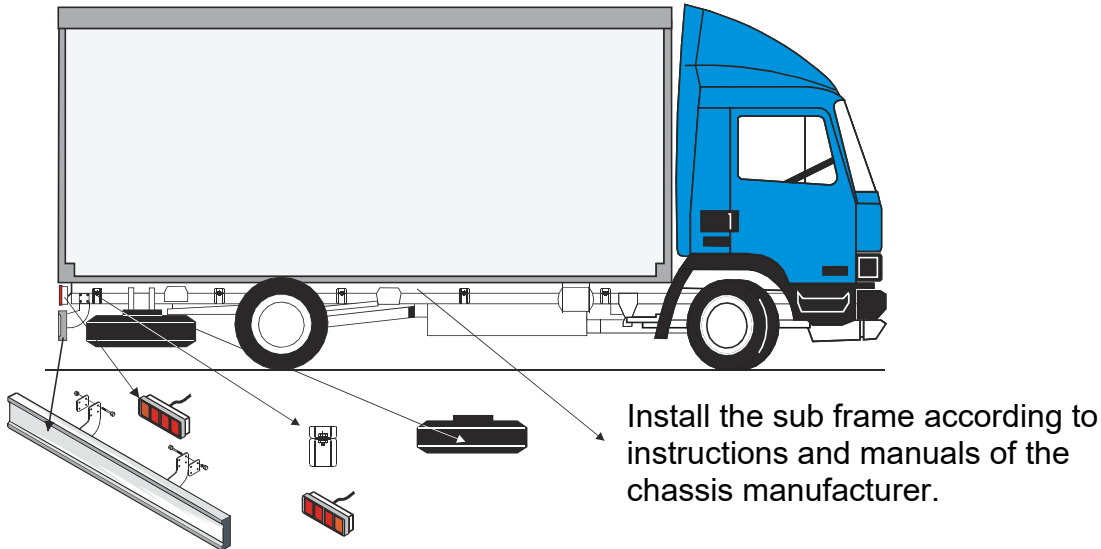
**Caution!**



- do not lift at the power pack
- no pressure or shocks
- do not use pry bars

## Preparation of the Vehicle

Dismantle the synchronizer bar and the tail lights. If there are any U-shaped mounting brackets with threads on both sides, brackets, rivets, spare wheels, or couplings in the installation area of the mounting brackets, they need to be removed. If necessary, remove hinges and locks at the rear end plate of the body floor.



### IMPORTANT

Be careful not to damage the vehicle. We recommend using appropriate coverings.

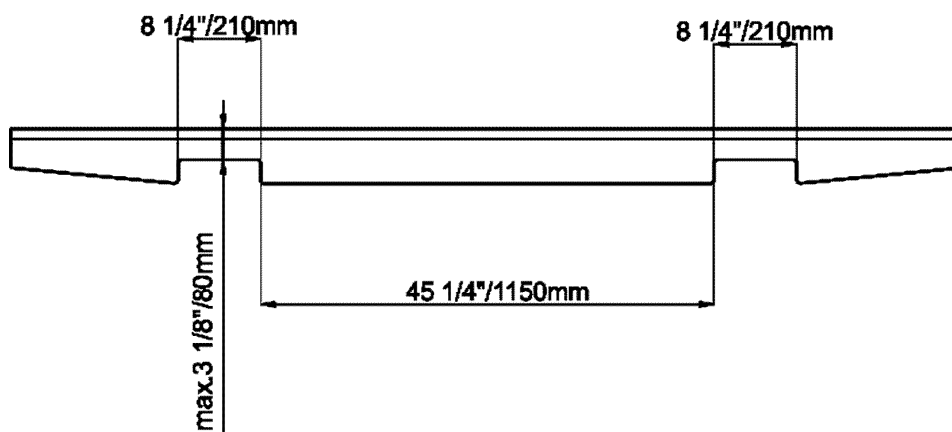
### CAUTION

Secure the vehicle in place to prevent unintentional movement.

## Cutouts in Rear Sill

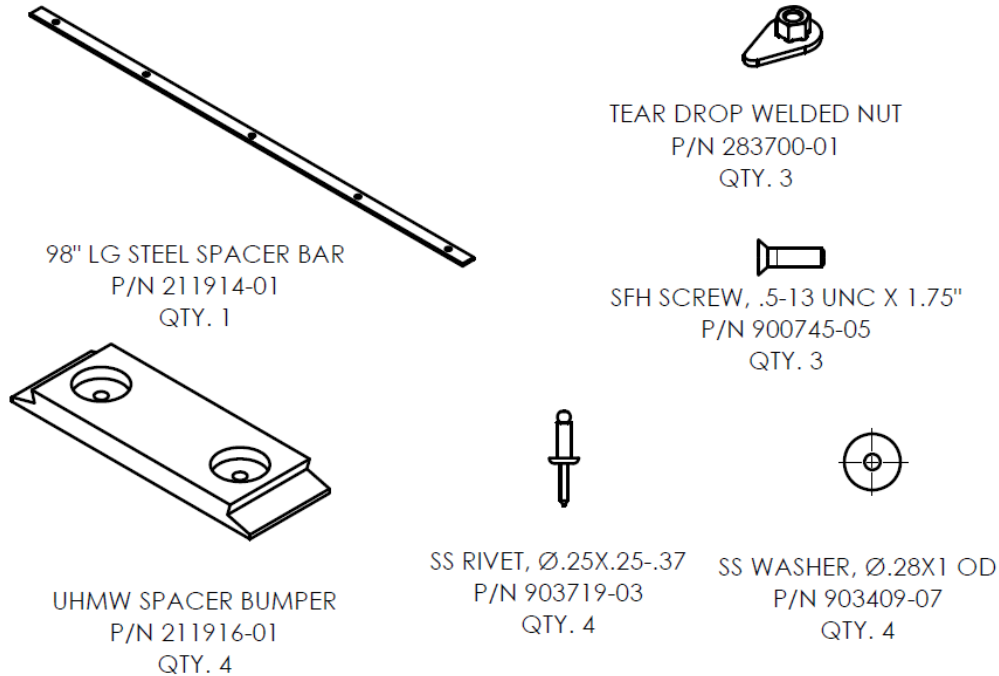
If the dimension of the rear sill in the area of the lift arms is more than 3 1/8", then openings need to be cut out according to our recommendations. The min. demission for the rear sill is 1 4/7". If the rear sill is cut out, proper reinforcement should be put back in to maintain structural integrity of the rear sill.

Recommendations for the rear sill cutouts to install the model GPC 17 X-1



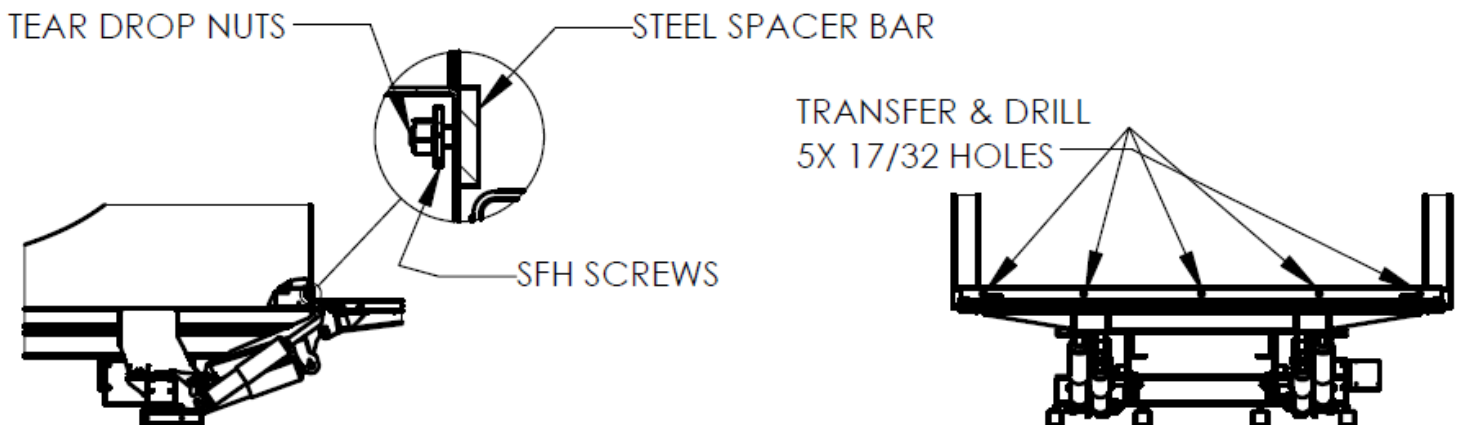
## Instruction, GPC-X spacer kit installation, Kit p/n 211915-01 (a spacing dampers between GPC-X platform and truck body)

### 1. Kit components:



### 2. Steel bar installation (before lift-gate installation)

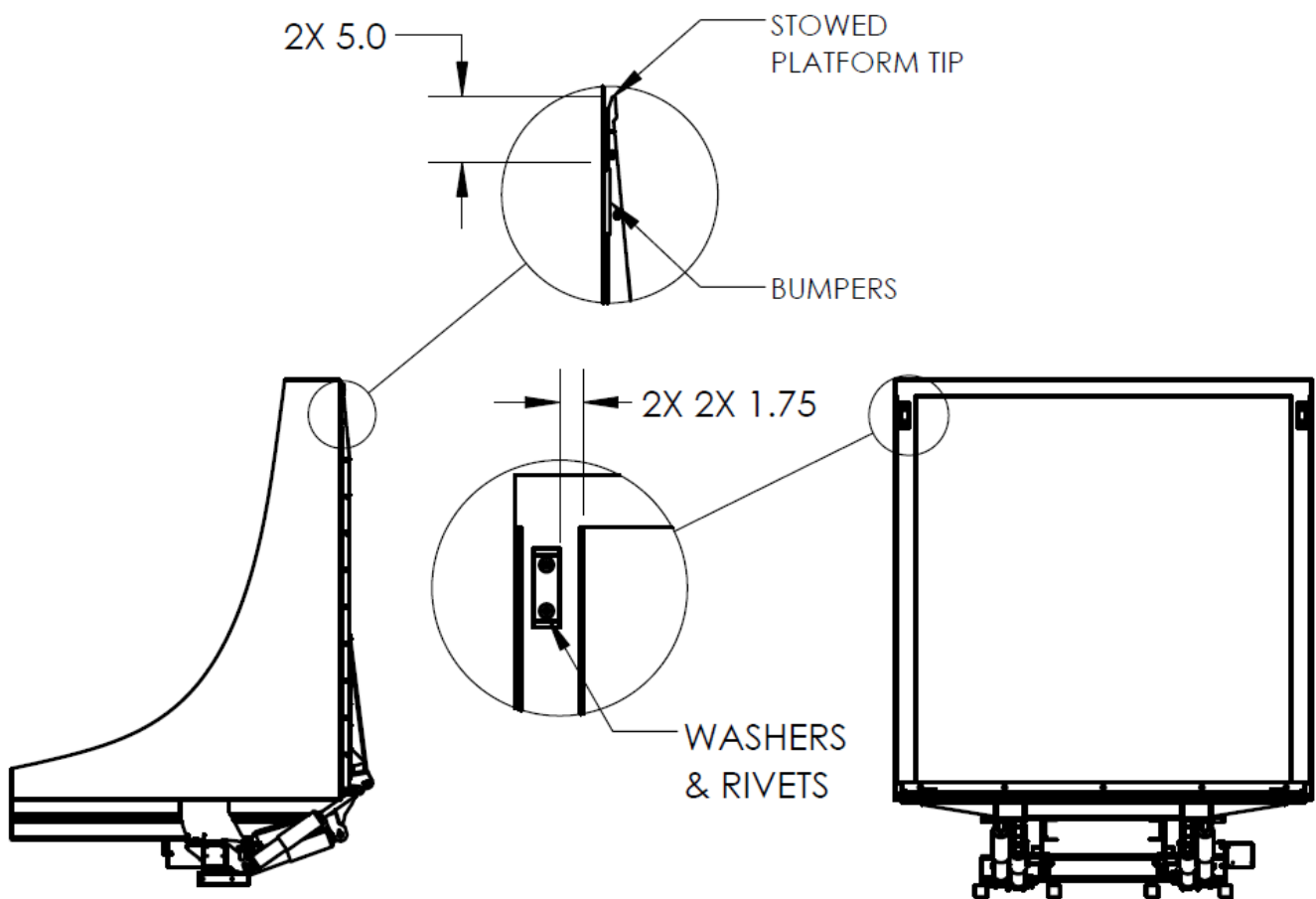
- for 102" wide truck, use full length of the 98" length spacer bar.
- for 96" width truck, shorten spacer bar by 3" equally from two ends.
- place and clamp the spacer bar horizontally at level with bed height.
- use the bar as a template to transfer holes locations on truck rear sill.
- drill 5x 17/32" diameter holes; remove burrs and sharp edges.
- use provided nuts and screws to mount the spacer bar as shown.



**FIGURE 1: STEEL SPACING BAR INSTALLATION**

### 3. Bumpers installation

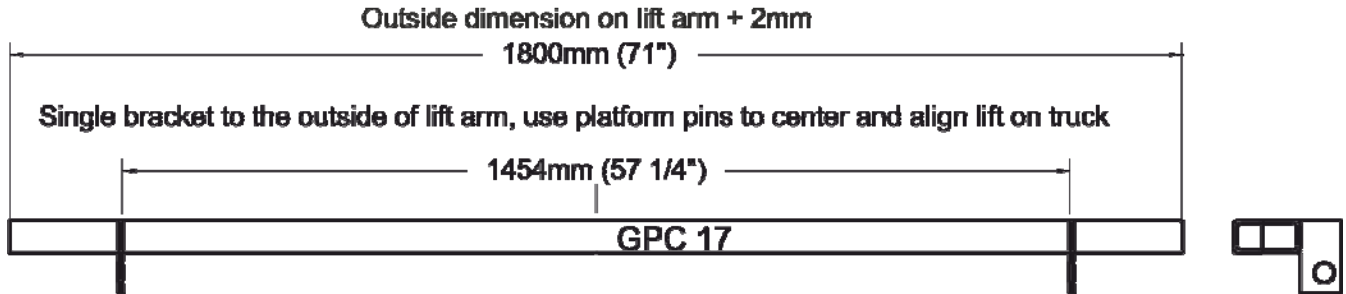
- with platform stowed, mark lines 5.0" platform tip (as shown), both sides.
- with platform unstowed, place bumpers top on lines, 1.75" away from in inside post, both sides.
- use bumper as templates, transfer holes location onto truck sill.
- use the bar as a template to transfer holes locations on truck body.
- drill 4x .26" +/- .005" diameter holes; remove burrs and sharp edges.
- use proper rivet tool to install provided rivet with washers between rivet head and bumper.



## Placement of GPC 17 X-1 mount fixture

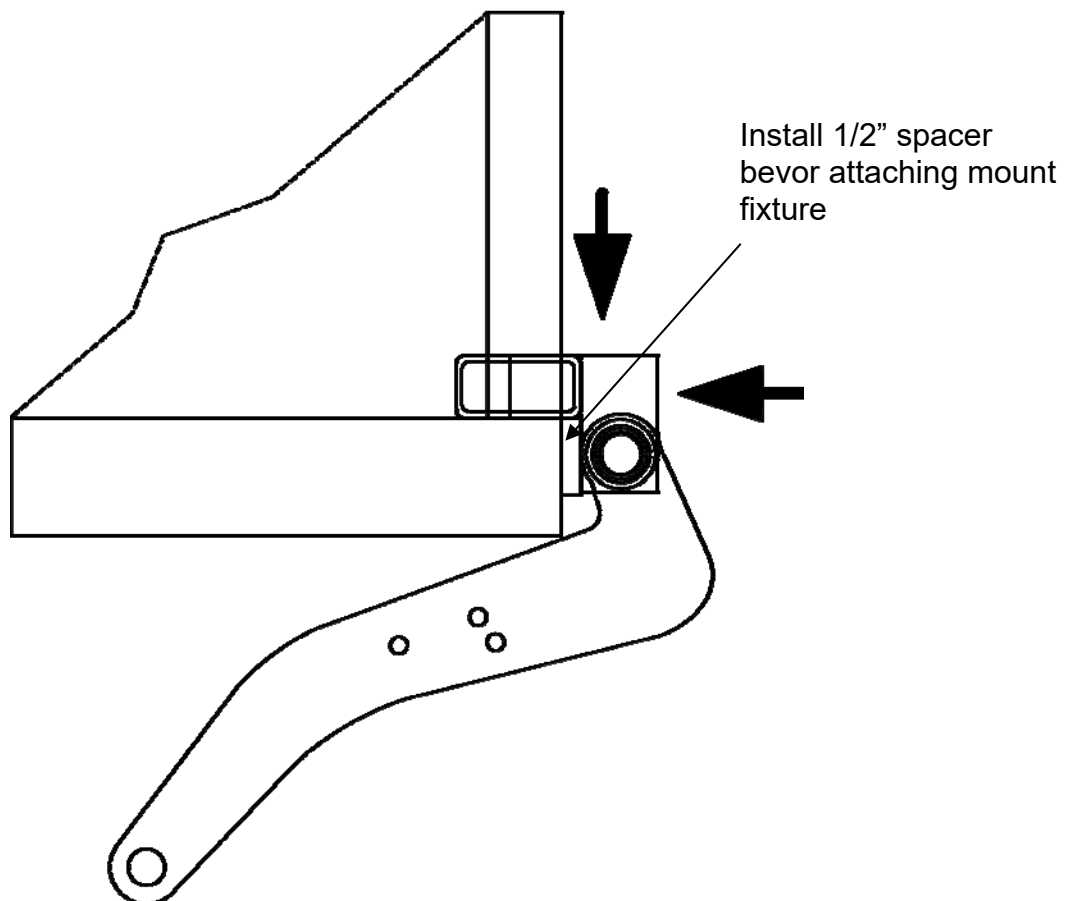
### IMPORTANT

Measure body opening and mark center line. Mark center line on GPC mounting fixture



### IMPORTANT

Place the mount fixture tight against the 1/2" spacer before welding or clamping it in place. Use platform pins to center liftgate on truck body



## Assembly of the lifting gear and the stabilizer / synchronizer bar

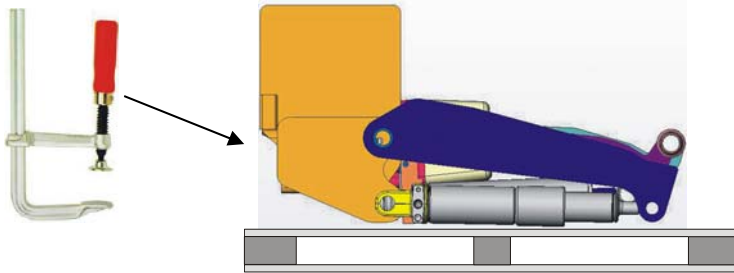
### WARNING

#### Installation at crushing and shearing points

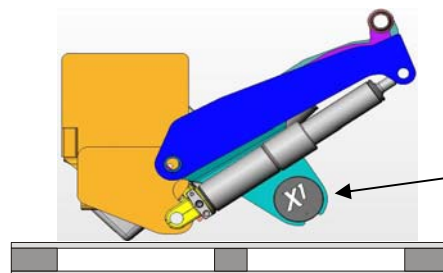
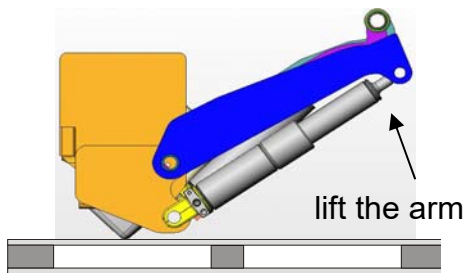
Fingers are at risk of being crushed or sheared when the lifting gear is installed on the vehicle.

- Be careful at the connecting points between the lifting gear and vehicle.

Install the mounting brackets loose, secure lifting mechanism with Bolt clamp, and connect the positive and ground cables at the battery.



Lift up the Lift arms in order and to assemble the synchronizer bar (see drawings at page 17).

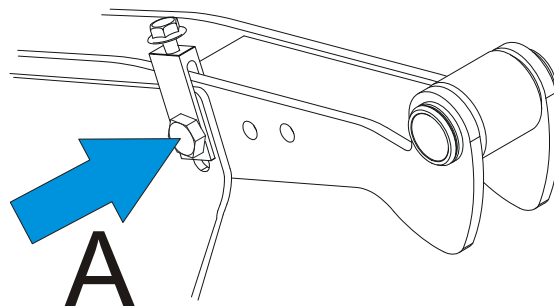


to assembly  
the synchronizer  
bar

**IMPORTANT**  
after assembly  
check and readjust  
if necessary.

#### **IMPORTANT**

Before assembling the lifting gear, it is imperative that the bolt (**A**) is loose. It will be tightened after adjusting the lifting gear. Please refer to page 34

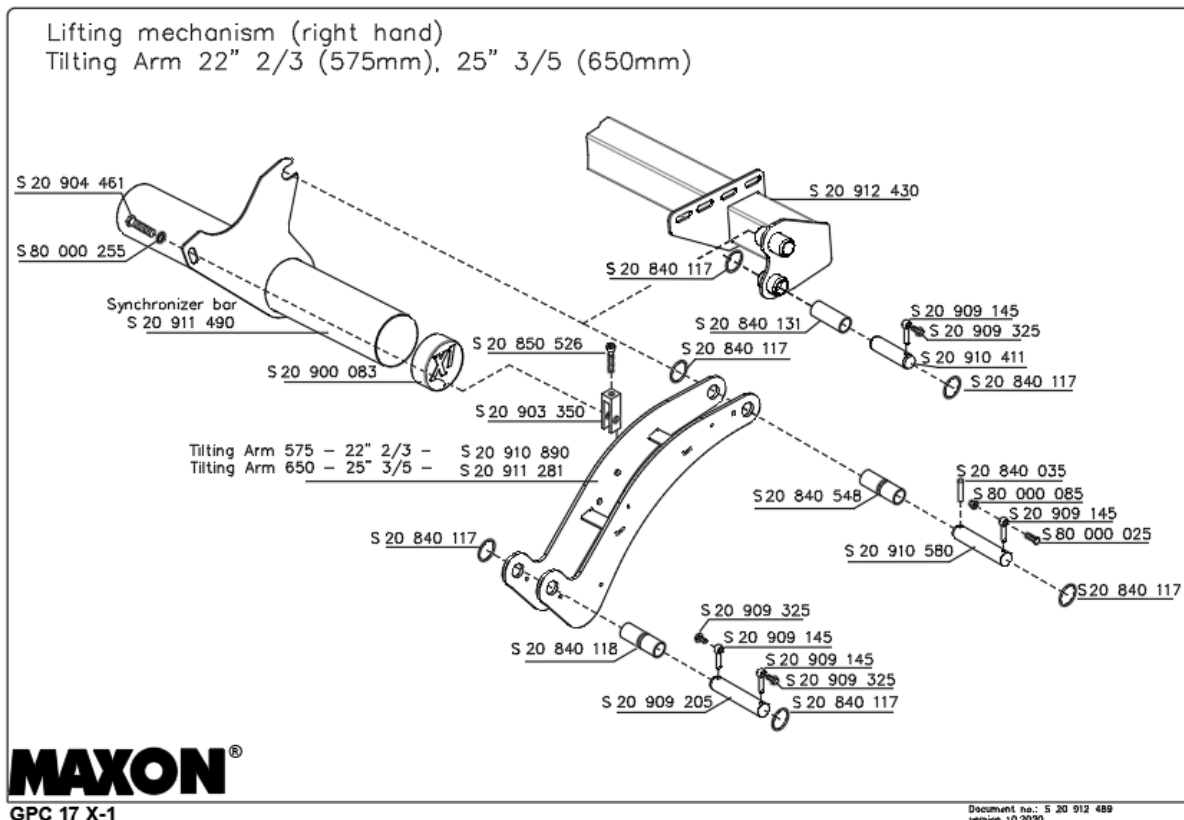
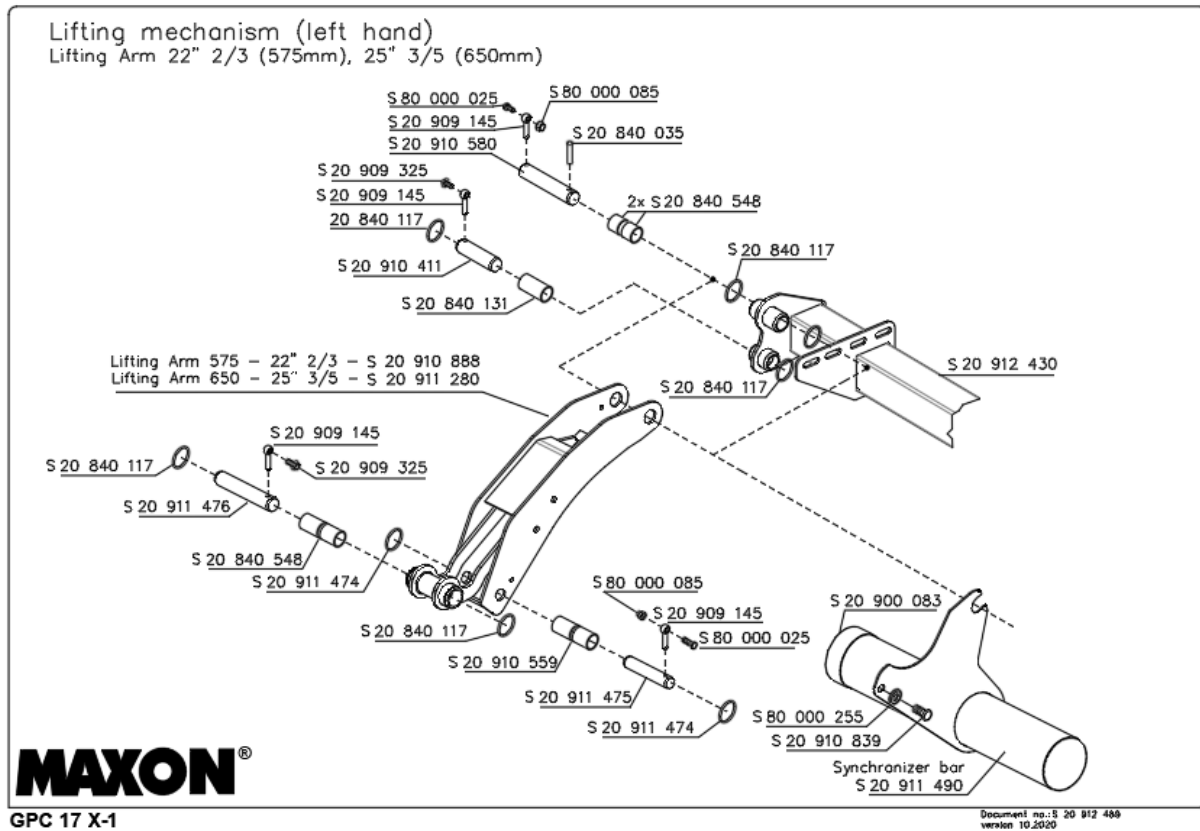


### NOTICE

- Do not damage cables.



## Assembly drawing of lifting mechanism with stabilizer / synchronizer bar

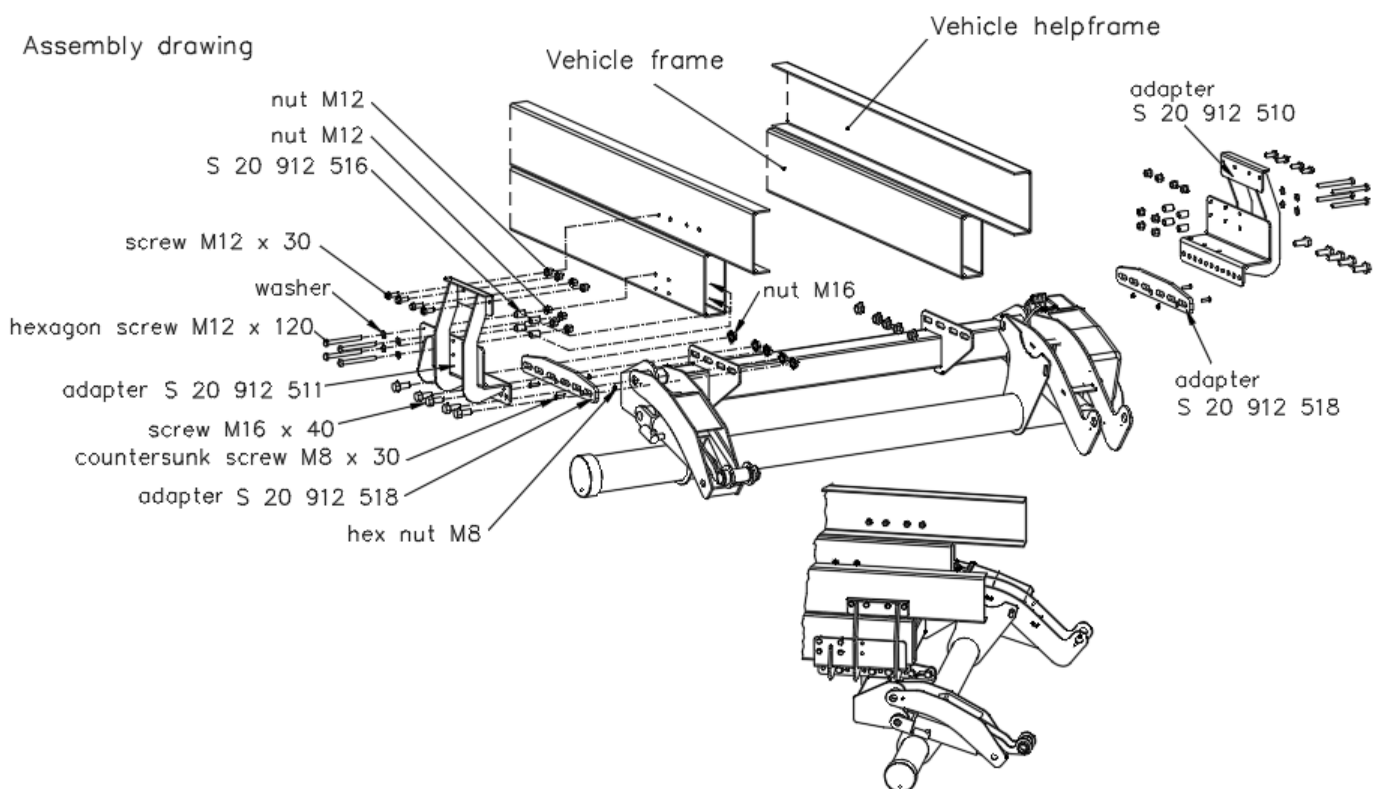


## Assembly the Installation Adapter for the different vehicle types to the lifting mechanism

The GPC 17 X-1 is delivered pre-assembled on a pallet. The assembly adapters can be of different designs, depending on vehicle manufacturer / type.

### Installation Adapter for Mercedes Benz Sprinter

Pre-Install the installation adapters as shown below on the drawing of attachment components arrangement.



### WARNING

#### Installation at crushing and shearing points

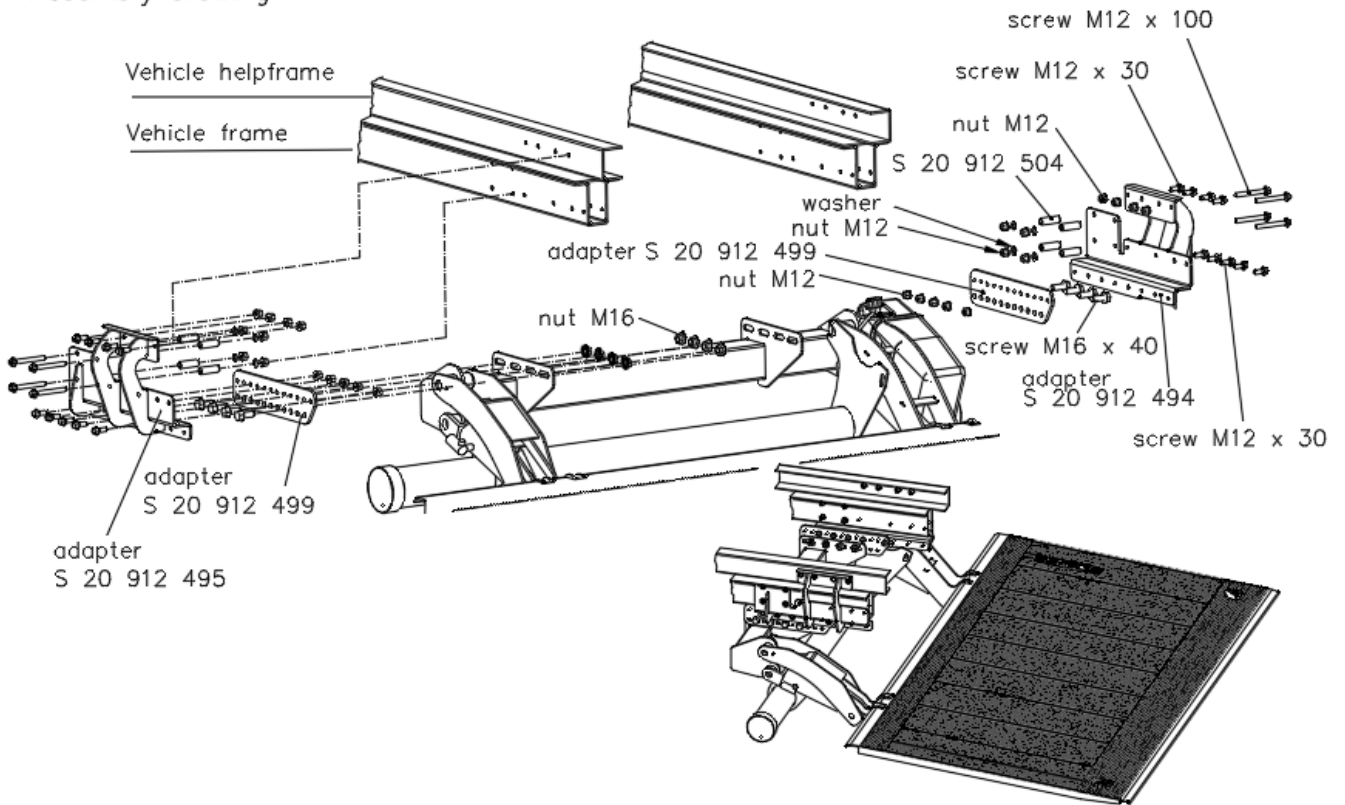
Fingers are at risk of being crushed or sheared when the installation adapters is installed on the lifting gear.

- Be careful at the connecting points between the installation adapters and the lifting gear.

## Installation Adapter for Ford Transit

Pre-Install the installation adapters as shown below on the drawing of attachment components arrangement.

Assembly drawing



### **⚠ WARNING**

#### **Installation at crushing and shearing points**

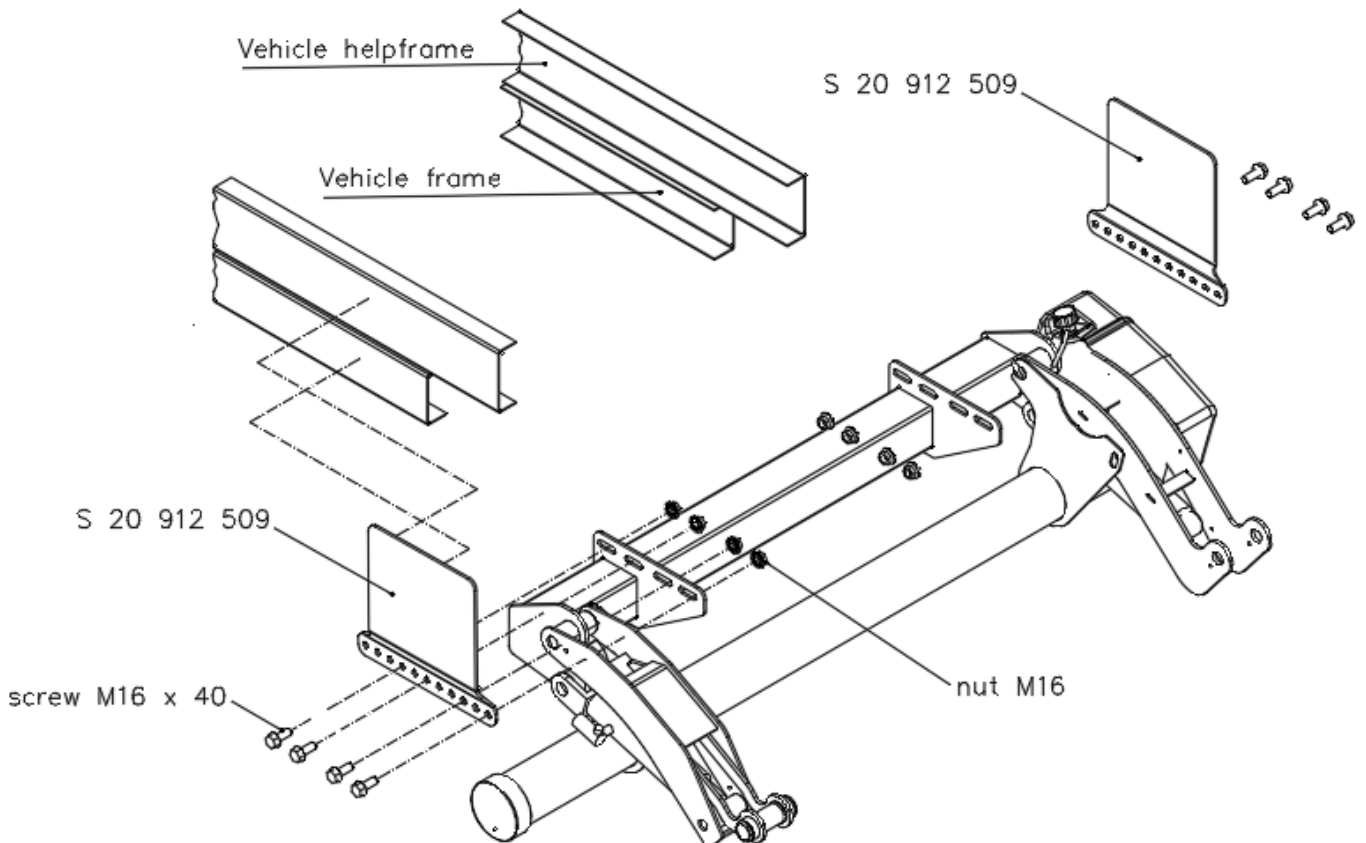
Fingers are at risk of being crushed or sheared when the installation adapters is installed on the lifting gear.

- Be careful at the connecting points between the installation adapters and the lifting gear.

## Installation Adapter for vehicles with C-Frame

Pre-Install the installation adapters as shown below on the drawing of attachment components arrangement.

Assembly drawing



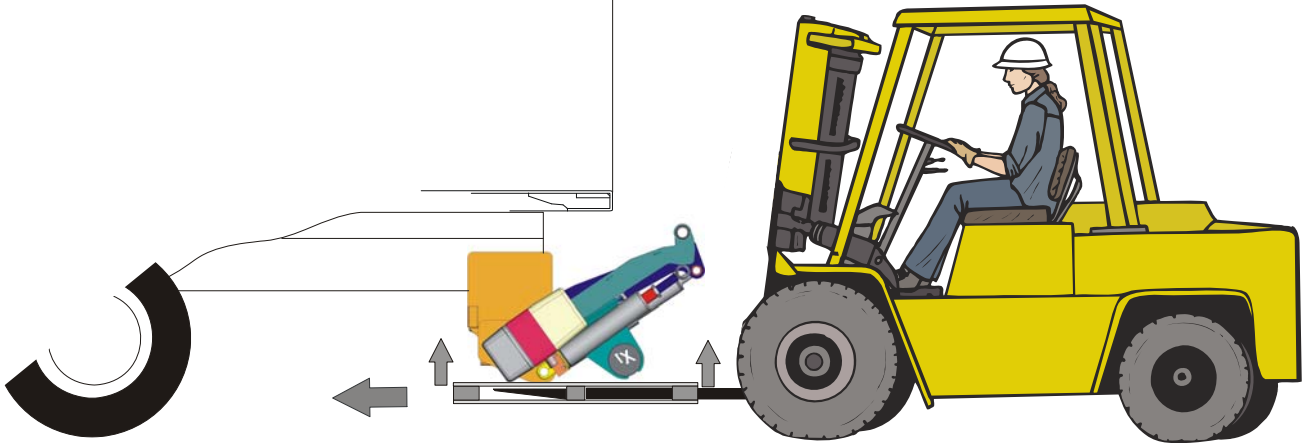
### **⚠ WARNING**

#### **Installation at crushing and shearing points**

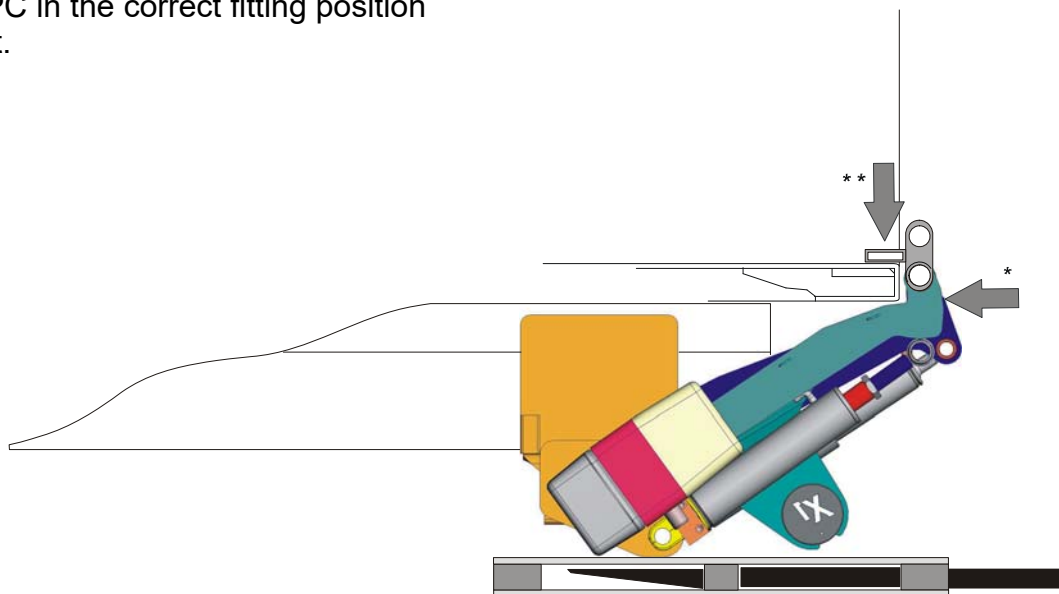
Fingers are at risk of being crushed or sheared when the installation adapters is installed on the lifting gear.

- Be careful at the connecting points between the installation adapters and the lifting gear.

Place the prepared lifting gear of the GPC on a pallet and put it in fitting position under the vehicle with a forklift truck.



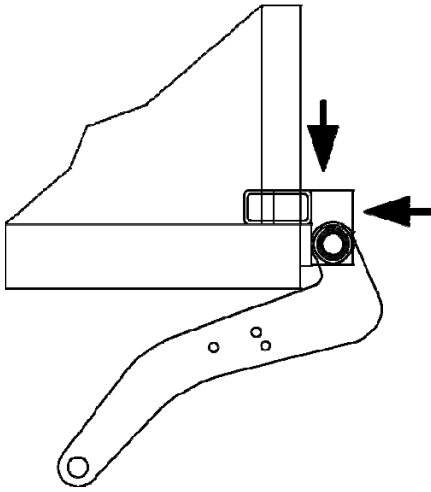
Put the GPC in the correct fitting position and align it.



## IMPORTANT

You will find all needed measurements on page: 23, 25, 27 of these instructions.

**Position and pin both liftgate arms into the assembly brackets.**



Press the lifting arms against the rear frame of the vehicle and secure them against unintentional movement.

Secure the mounting fixture with clamps / weights or by welding it to the rear sill.

**GPC 17 X-1 for C-Frame:** Weld on the installation adapter at the vehicle frame and vehicle help frame according to measurements for lift installation on a Vehicle with a C-Frame (for example IVECO Daily) on page 27.

### **IMPORTANT**

**Weld on the installation adapter according to weld requirements on page 29**

**GPC 17 X-1 for MB Sprinter and Ford Transit:** Bolt / tighten the installation adapter at the vehicle frame and vehicle help frame according to measurements for lift installation MB Sprinter on page 23 and for Ford Transit on page 25. Please use the nuts and bolts delivered with the lift.

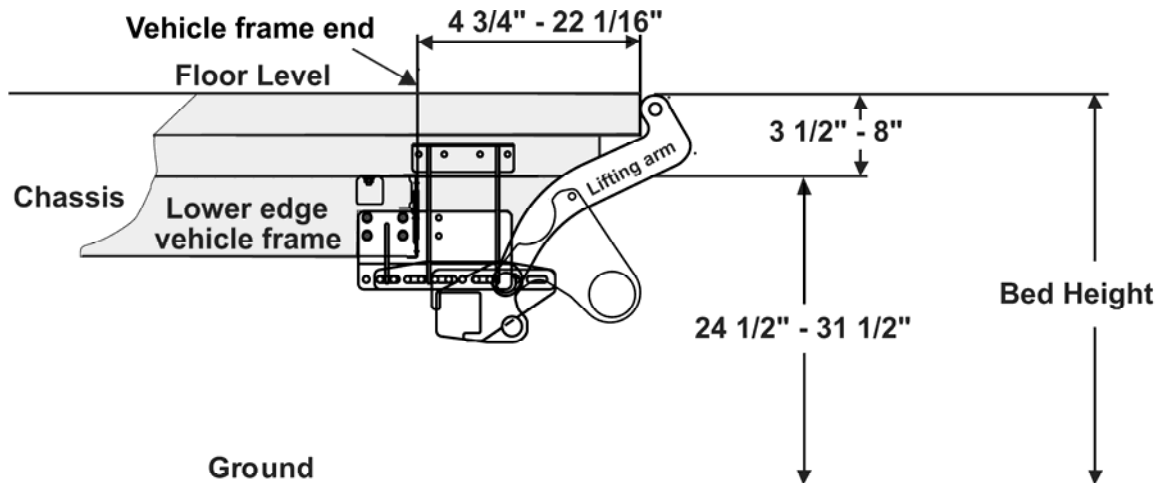
### **IMPORTANT**

**Tighten the bolts according to the torque table on page 47**

### **IMPORTANT**

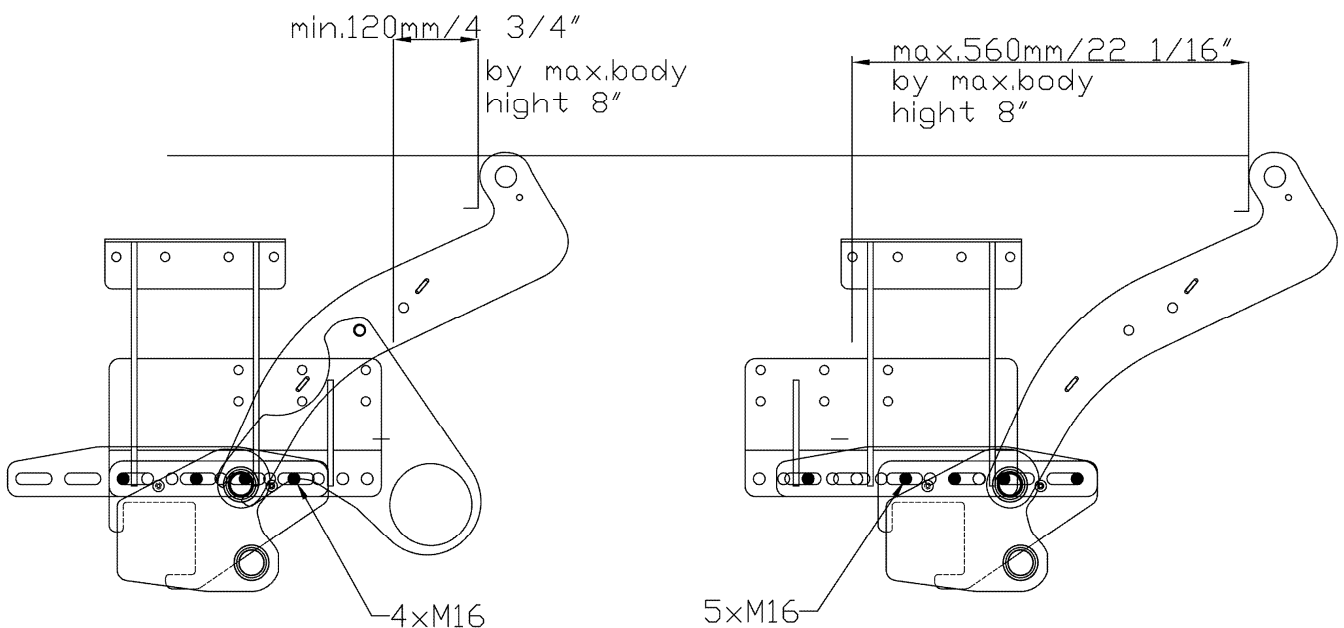
**For all drillings into the vehicle frame, the directives of the vehicle's manufacturer must be complied with.**

## GPC 17 X-1 assembly measurements for lift installation on Mercedes Benz Sprinter

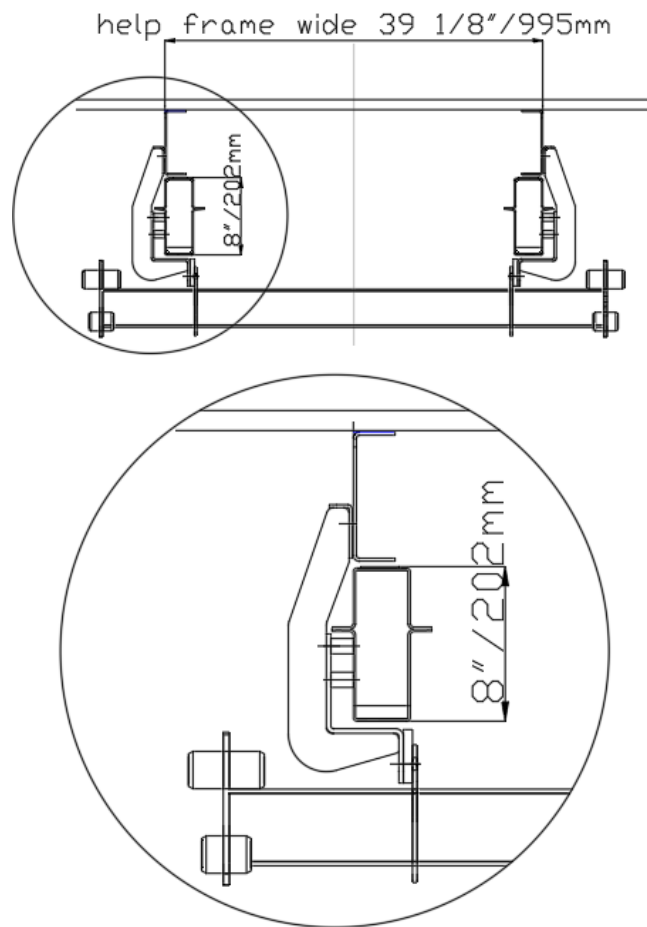


Measurement always as close as possible to the chassis. The dimension min. 24 ½" is by loaden vehicle and the dimension max. 31 ½" by unloaden vehicle. Stay always close to the measurement under the vehicle frame.

Bolt the installation adapter (see torque table on page 45) in depending of the free space, between the vehicle frame end and vehicle help frame end.



Front view of installed lift gate. The wide dimension for the help frame is 39 1/8".



If there is not enough space, please contact the sales / customer service by calling 800-227-4116 department. The sales / customer service will contact the technical department to check whether the installation, considering the dimensions of the vehicle, is possible. If the installation is possible, you will get a special drawing in which the installation situation is shown.

Find technical information online at <https://www.maxonlift.com/support>.

For additional technical information, visit <https://www.maxonlift.com/support/technical-service> or you can send an e-mail to: [techservice@maxonlift.com](mailto:techservice@maxonlift.com).

## IMPORTANT

**Tighten the bolts according to the torque table on page 47**

### **WARNING**

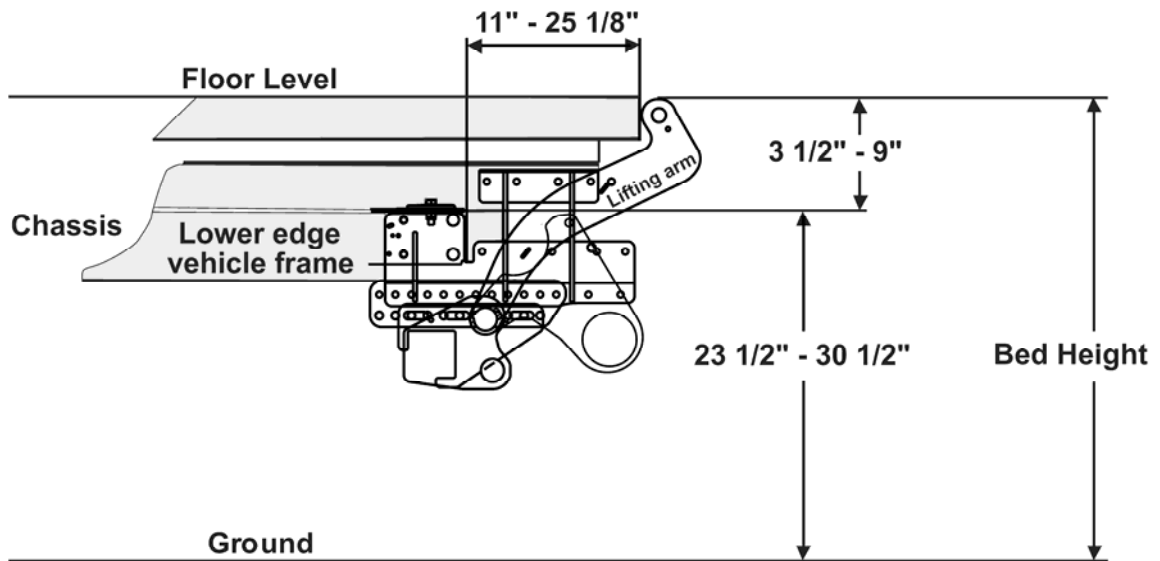
#### **Installation at crushing and shearing points**

Fingers are at risk of being crushed or sheared when the lift gate is installed on the vehicle.

- Be careful at the connecting points between the installation adapters of the lift gate and the vehicle frame and vehicle help frame.

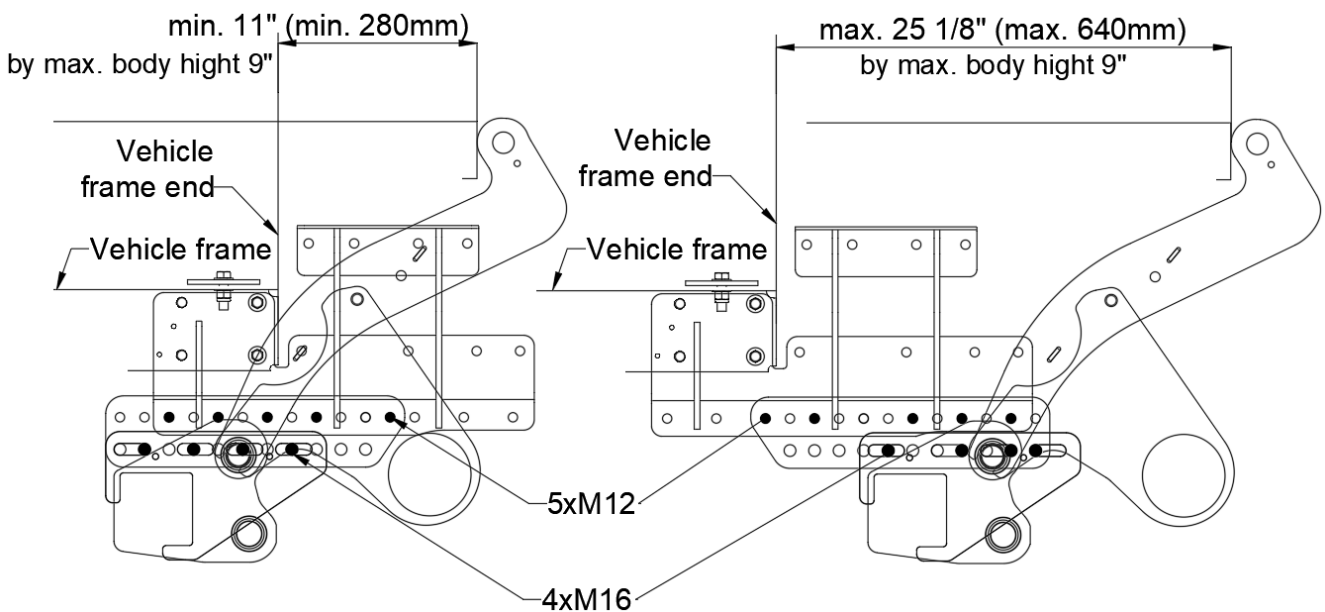


## GPC 17 X-1 assembly measurements for lift installation on Ford Transit

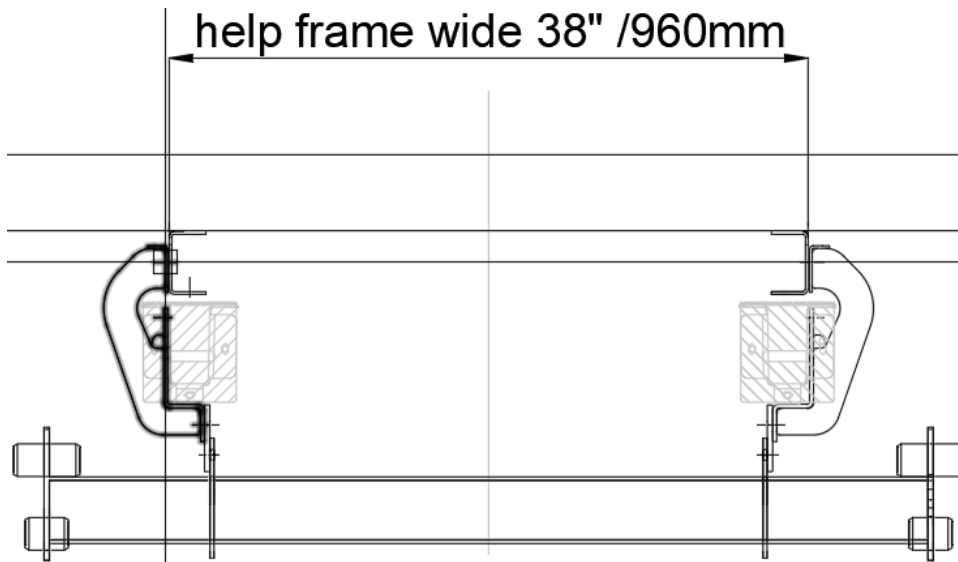


Measurement always as close as possible to the chassis. The dimension min. 23 ½" is by loaden vehicle and the dimension max. 30 ½" by unladen vehicle. Stay always close to the measurement under the vehicle frame.

Bolt the installation adapter (see torque table on page 45) in depending of the free space, between the vehicle frame end and vehicle help frame end.



Front view of installed lift gate. The wide dimension for the help frame is 38“.



If there is not enough space, please contact the sales / customer service by calling 800-227-4116 department. The sales / customer service will contact the technical department to check whether the installation, considering the dimensions of the vehicle, is possible. If the installation is possible, you will get a special drawing in which the installation situation is shown.

Find technical information online at <https://www.maxonlift.com/support>.  
For additional technical information, visit <https://www.maxonlift.com/support/technical-service> or you can send an e-mail to: [techservice@maxonlift.com](mailto:techservice@maxonlift.com).

## IMPORTANT

**Tighten the bolts according to the torque table on page 47**

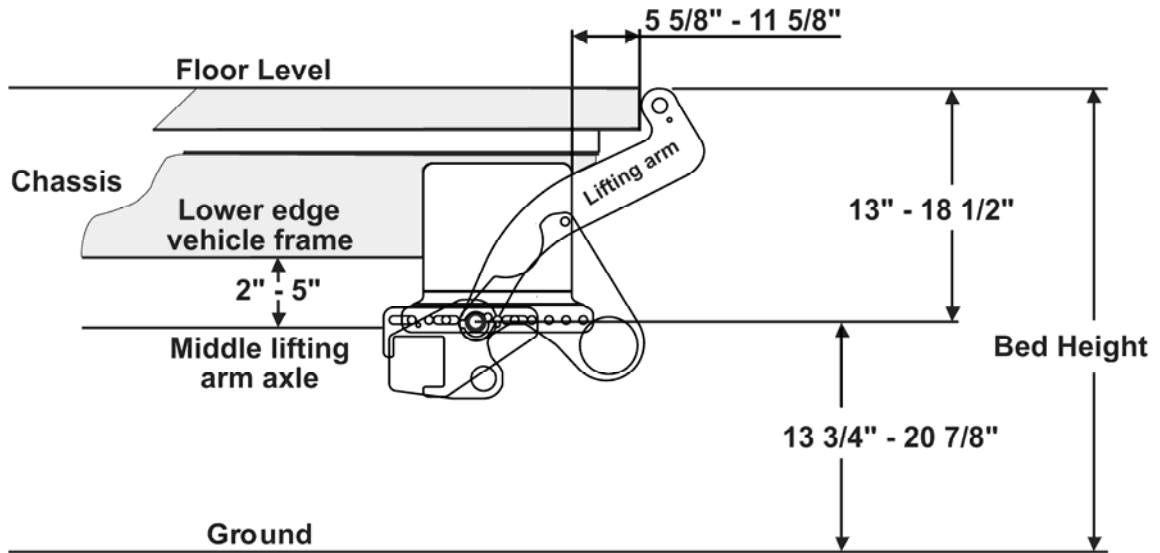
### **WARNING**

#### **Installation at crushing and shearing points**

Fingers are at risk of being crushed or sheared when the lift gate is installed on the vehicle.

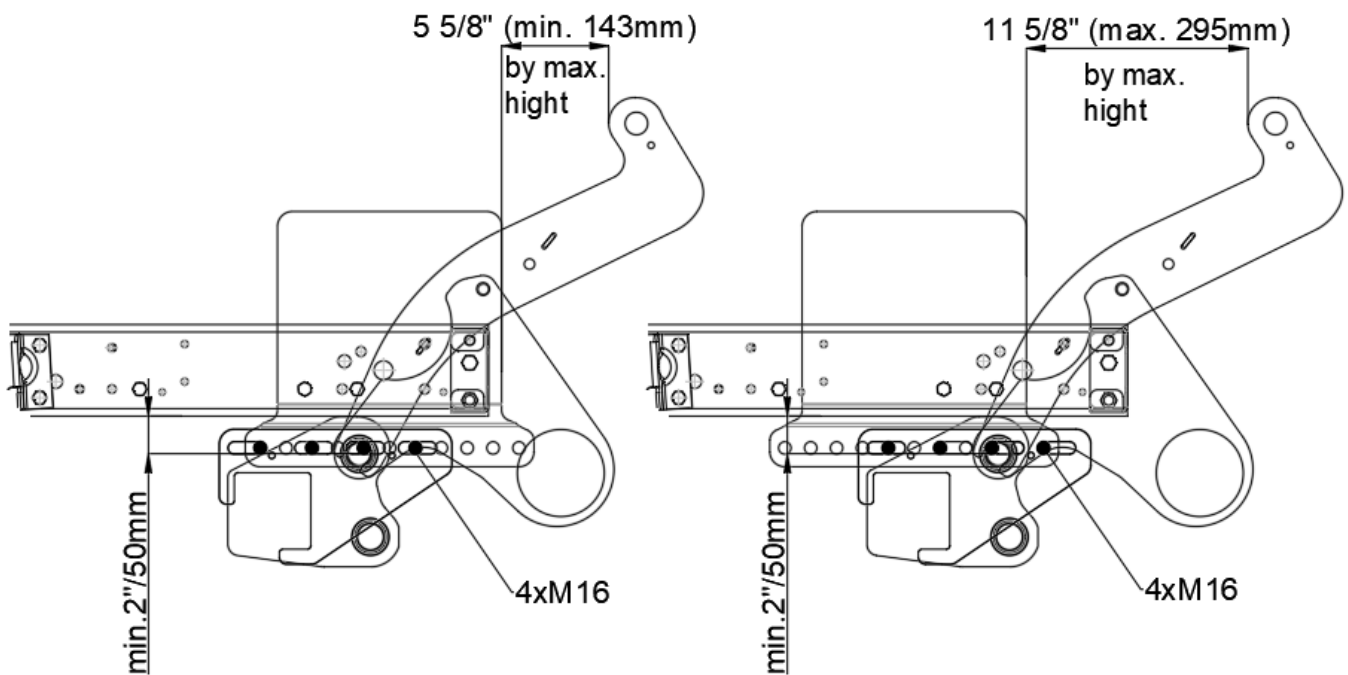
- Be careful at the connecting points between the installation adapters of the lift gate and the vehicle frame and vehicle help frame.

## GPC 17 X-1 assembly measurements for lift installation on a Vehicle with a C-Frame (for example IVECO Daily)

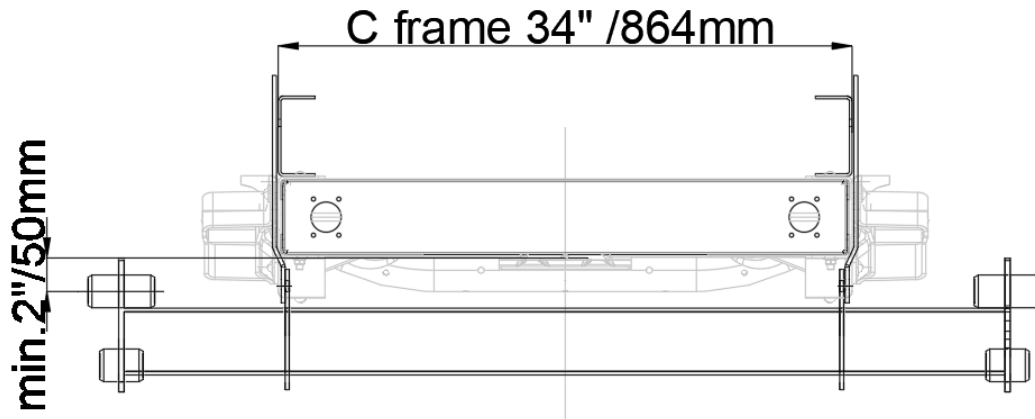


Measurement always as close as possible to the chassis. The dimension min. 13 3/4" is by loaden vehicle and the dimension max. 20 7/8" by unloaden vehicle. Stay always close to the measurement under the vehicle frame.

Weld on the installation adapter (see weld requirements on page 29) in depending of the free space, between the vehicle frame end and vehicle help frame end.



Front view of installed lift gate. The wide dimension for the help frame is 34“.



If there is not enough space, please contact the sales / customer service by calling 800-227-4116 department. The sales / customer service will contact the technical department to check whether the installation, considering the dimensions of the vehicle, is possible. If the installation is possible, you will get a special drawing in which the installation situation is shown.

Find technical information online at <https://www.maxonlift.com/support>.

For additional technical information, visit <https://www.maxonlift.com/support/technical-service> or you can send an e-mail to: [techservice@maxonlift.com](mailto:techservice@maxonlift.com).

## IMPORTANT

**Weld on the installation adapter according to weld requirements on page 29**

### WARNING

#### Installation at crushing and shearing points

Fingers are at risk of being crushed or sheared when the lift gate is installed on the vehicle.

- Be careful at the connecting points between the installation adapters of the lift gate and the vehicle frame and vehicle help frame.

## Weld requirements

### **⚠ WARNING**

#### To prevent injury

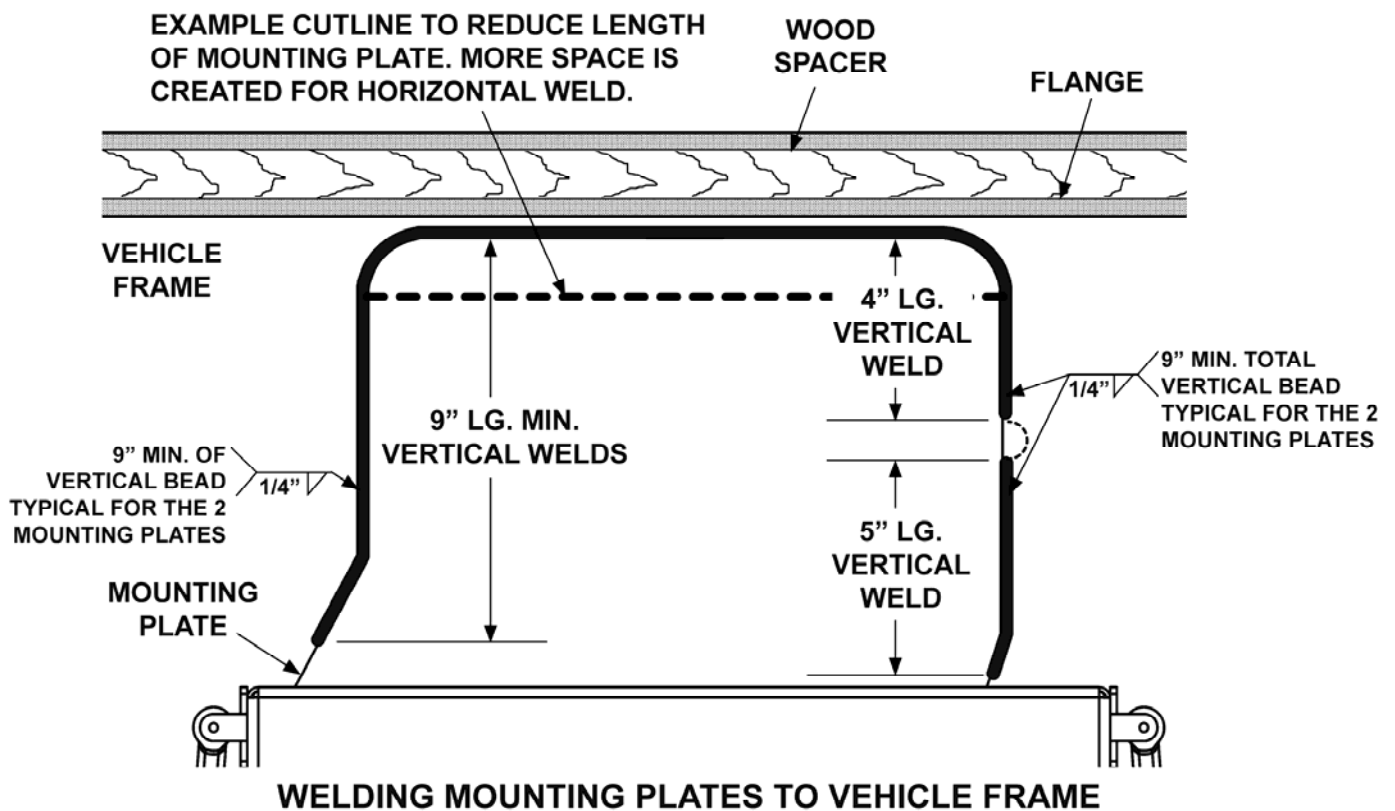
- disconnect power from battery while working under vehicle body.
- Never operate the liftgate with loaded platform until mounting plates are completely welded to the vehicle frame.
- Keep liftgate from moving out of position.

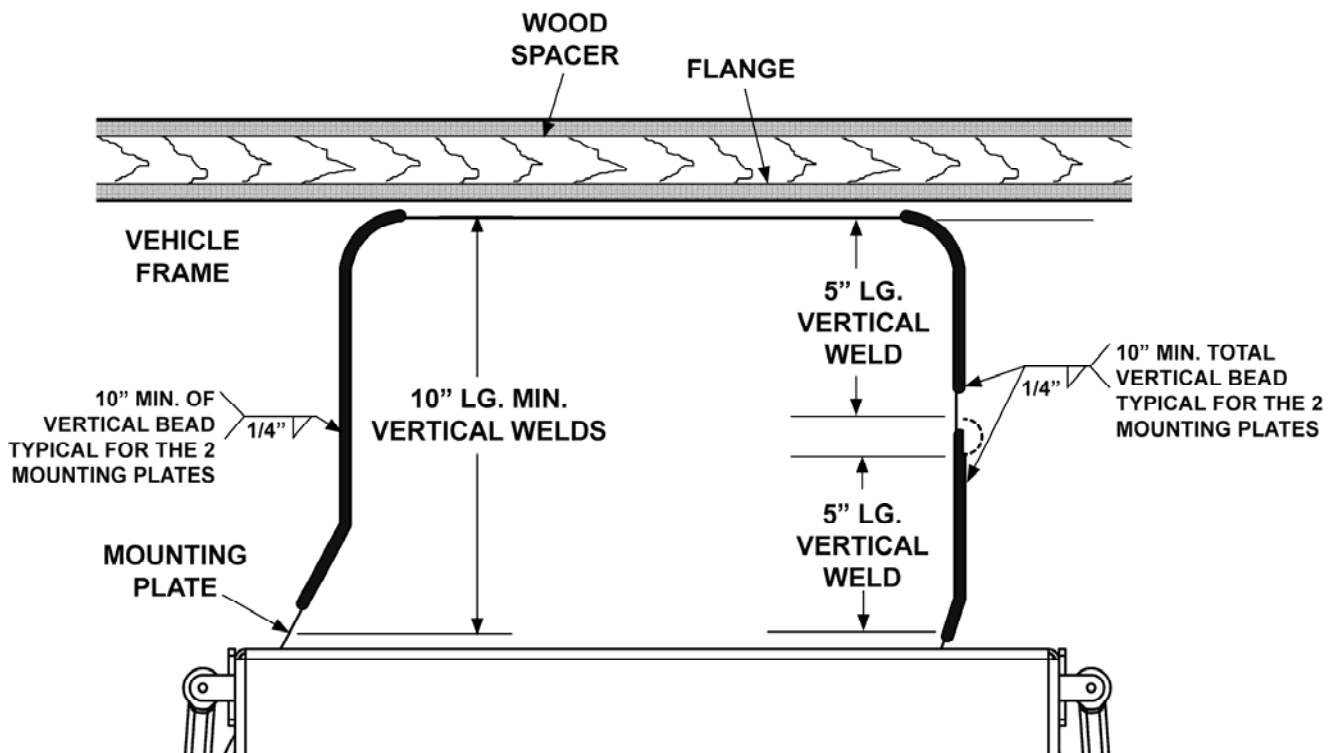
### IMPORTANT

Before mounting Liftgate, see if any modification to the vehicle body is needed to access battery cable from the Main Frame Housing.

A hole in vehicle frame could interfere with welding 1 continuous bead on the vertical edges of mounting plate. The mounting plate can be welded above and below hole. However, the length of the 2 vertical welds must add up to the minimum overall length of 1 continuous vertical weld.

Weld each mounting plate to vehicle frame as shown on picture below or choose the alternate method you can see on picture on next page.





**ALTERNATE METHOD FOR WELDING MOUNTING PLATES TO VEHICLE FRAME**

## IMPORTANT

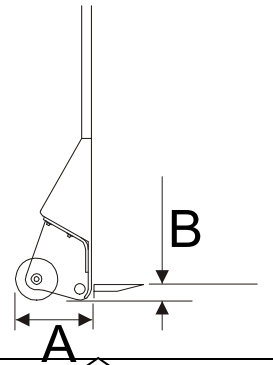
Follow the vehicle manufacturer's installation guidelines and all welding should be done in accordance to AWS welding standards.

Remove underbody coating in the area of the mounting points (contact surfaces between vehicle and installation adapters).

Seal any areas of the vehicle body that are thus exposed (with corrosion protection).

## Chart Platform Measurements

Model GPC 17 X-1	A	B
inch	7 1/16"	2 1/4"

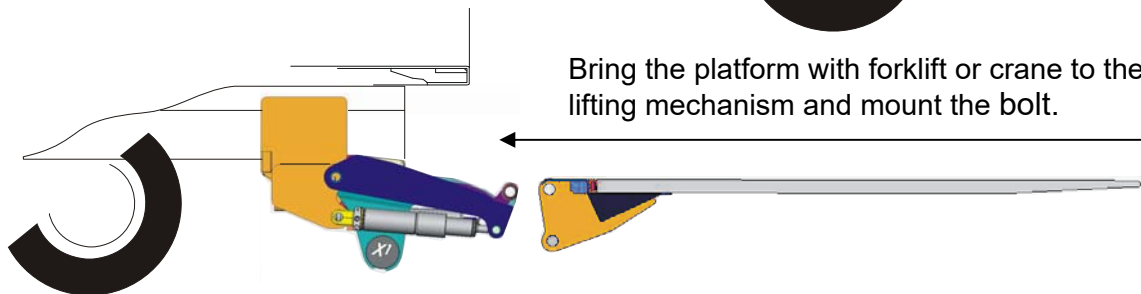
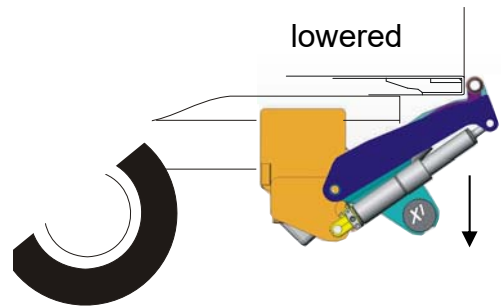
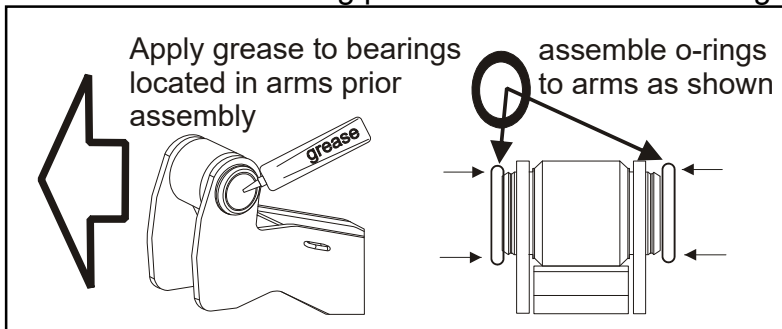


## Installation of the platform

Remove the pins in the lift arm to the installation fixture. Lower the lift arm far enough down so you can install the platform. Grease the upper lift arms and tilt cylinder bearings before installing the pins with the special grease, part no S 20840405 supplied. Install the O-rings before attaching the platform put on the O-rings (see also page 48); place the lift arms and the tilting cylinder; install and secure the bolts.

1/2" spacer +  
body seal (if  
available)

**IMPORTANT** All bearing points are sealed with O-rings



## ⚠ WARNING

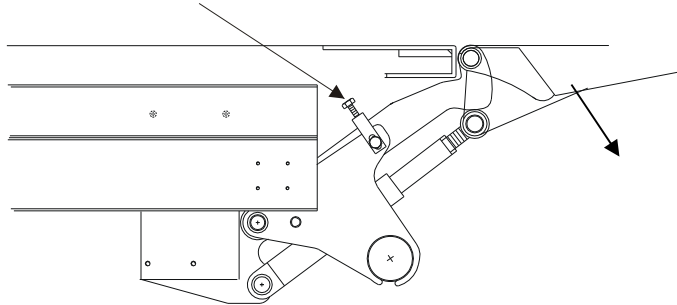
### Installation at crushing and shearing points

Fingers are at risk of being crushed or sheared when the platform is installed on the lifting gear.

- Be careful at the connecting points between the platform and lifting gear.

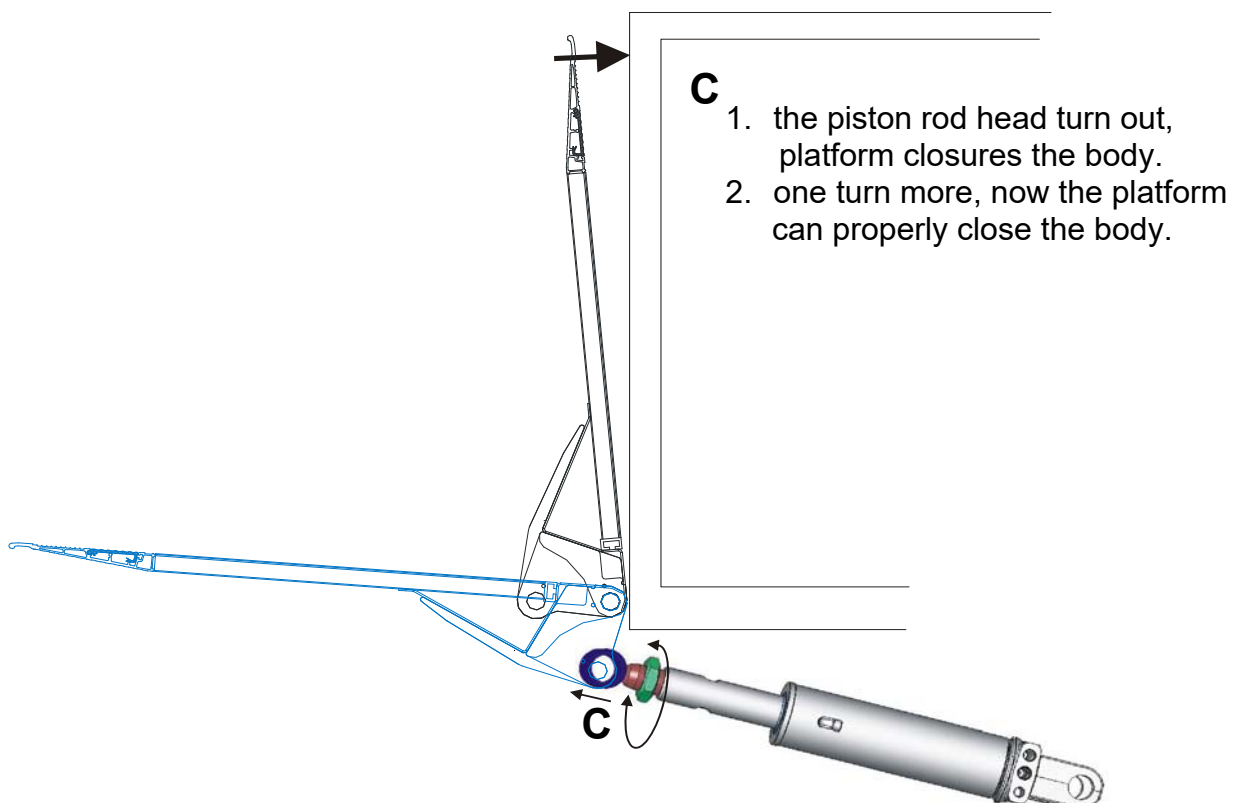
## Adjustment of the platform to the vehicle bed

Move the lifting gear with the opened platform hydraulically behind the body sill. For the adjustment, the lift arms must not touch the body sill. Between the rear frame and lift arms, there should be a space of 3/8" between the body sill and the lift arms. With the adjusting bolts, the lifting gear will be adjusted until the rear frame and the platform are parallel. After the adjustment, both bolts of the synchronizer bar fastening are to be tightened.



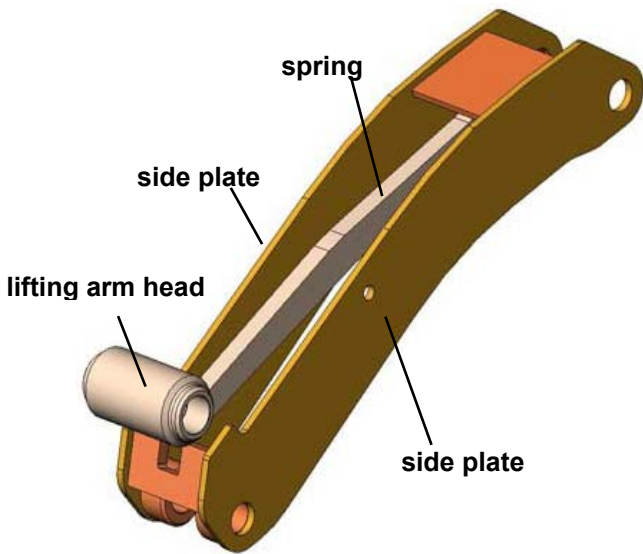
## Adjustment of the platform for installation in a closed position:

Close the platform hydraulically. The cylinder needs to reach its end position when the platform slightly touches the body sill or is set at 90° against the bed of the vehicle. Now rotate the rod eye one more turn out of the cylinder rod; secure it. Now the platform can properly close the body.





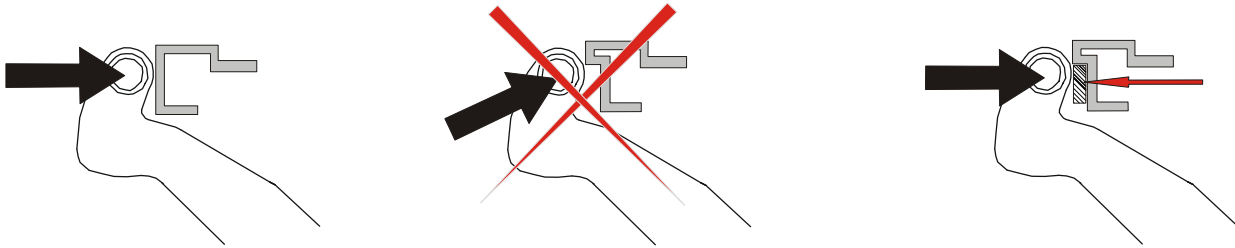
## Lifting arm stop at vehicle body



If you assembled the tail lift correctly, both lifting arms will stop at the same time on the rear vehicle frame.

If this should not be possible due to the assembly configuration, it is essential that the lifting arm stops only with the **head of the spring** against the rear beam and that the **side plates** can be pushed freely against the **lifting arm head**.

Eventually reinforce the rear beam in the area where the lifting arms push against it, so that it is not crushed when lifting with hydraulic pressure.

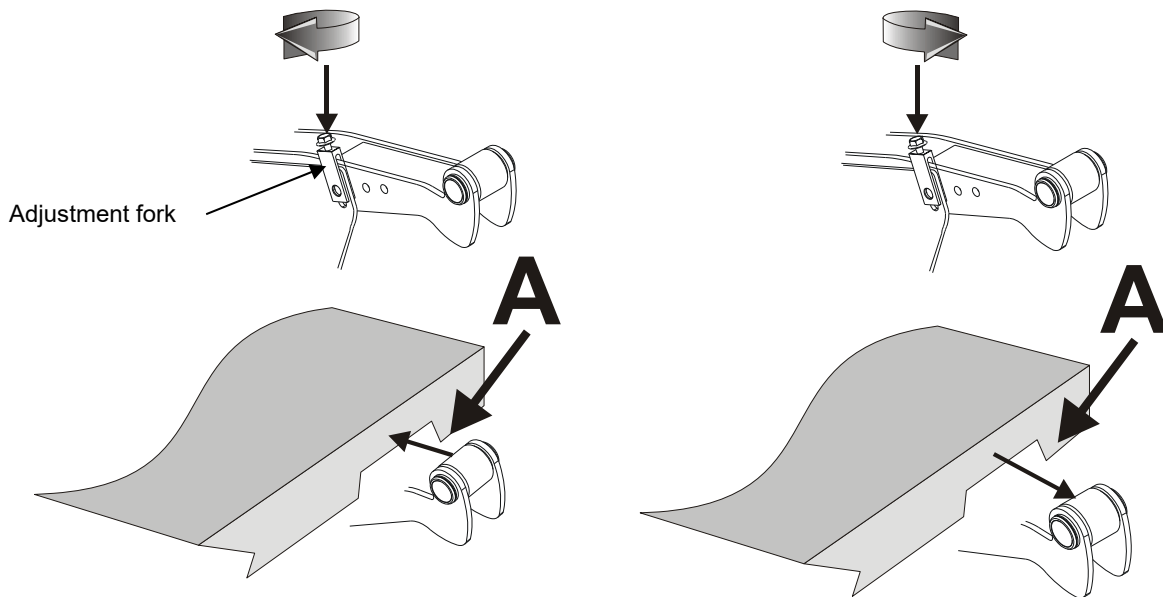


Always push the lifting arms against a plain surface. Fill any edge so that the heads always push against a plain and firm surface. The body could be lifted and the spring of the lifting arm not work properly.

## Function of the adjustment fork

After the installation of the liftgate the two arms must touch the body sill at the same time, and must be touching the body sill also all the time when platform is normally loaded.

This can be done with the adjustment fork on the right lift arm if an adjustment is necessary. If the bolt is turned to the right, the lifting arm is tightened more against the rear beam.

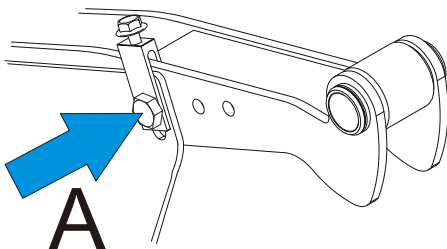


Turning the bolt clockwise the right lift arm will come closer to the body sill.

Turning counter-clockwise the right lift arm will stay further away from the body sill.

### NOTICE

- When finished adjusting or if no readjustment is necessary, make sure that the adjustment fork bolt **A** is securely tightened (see torque table).



## Connecting the cables

### **WARNING**

#### Vehicle battery short-circuit

Improper connection of the device to the vehicle battery can cause a short-circuit and explosion of the battery.

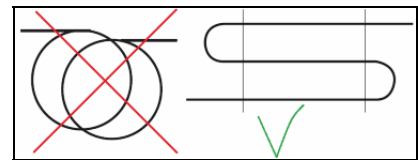
Risk of damage to property, fire, and injury.

- Follow the vehicle manufacturer's instructions for correctly handling the battery.

### **NOTICE**

- When installing cables, make sure they are safe from chafing.
- Do not install cables near heat-dissipating components.

**IMPORTANT** Excess cable must not be wound up in a coil but must be placed in slings. No rubbing or pinching of the cables should occur.



## Assembly of electrical equipment in series 11

### CAUTION

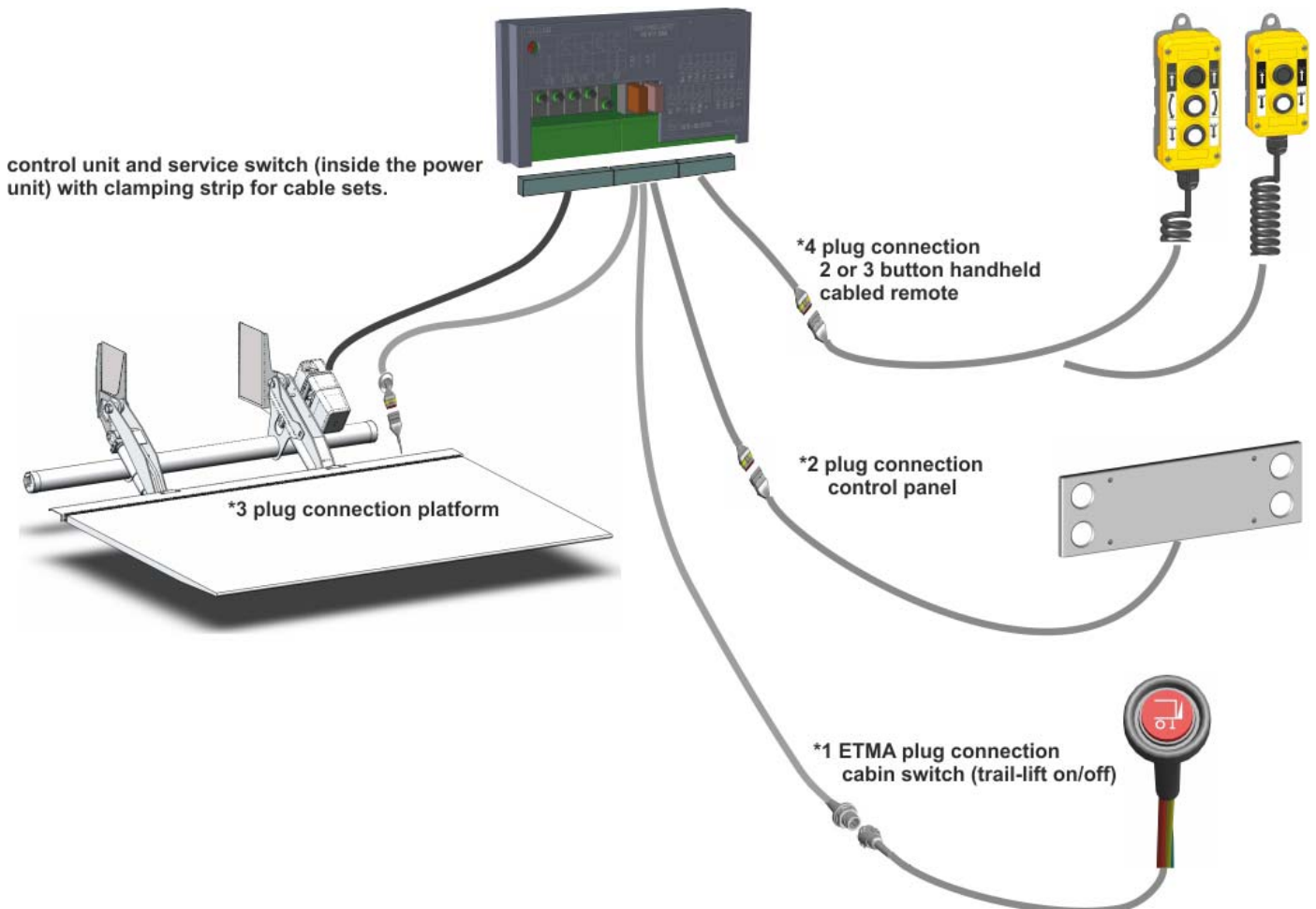
Before starting to connect the electrical equipment, disconnect the vehicle battery. Follow the vehicle manufacturer's instructions for correctly handling the battery.

### Foot control

The foot control is connected to the cable set located inside the platform and has already been factory tested. After assembling the platform, the cable set from the central power unit must be affixed alongside the lifting arm with the delivered cable straps in such a way that no pinching or rubbing is possible.

### Central power unit

The control unit (main controls, main power unit) containing the service-switch is located inside the power unit and was pre-assembled in our factory. The connections from the power unit's clamping strip (see drawing) **to the cabin switch \*1, to the control panel \*2, to the platform \*3, and optional to the cable remote \*4**, are to be made during assembly. All cables must be affixed on to the device using the delivered cable straps.

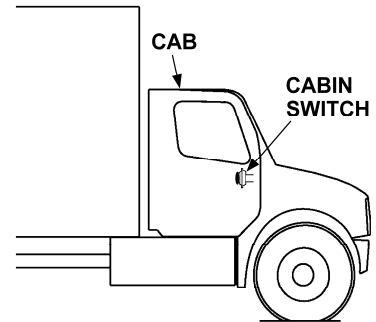


## Cabin switch

### **WARNING**

Before starting to connect the electrical equipment, to prevent accidental personal injury and equipment damage, disconnect (-) battery cable and (+) cable from battery.  
Follow the vehicle manufacturer's instructions for correctly handling the battery.

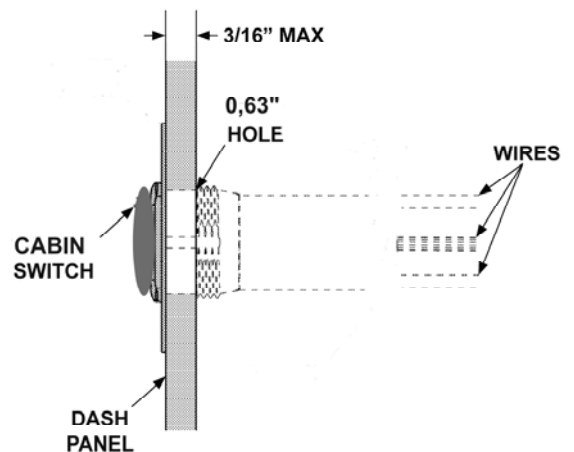
Locate accessible place for cabin on-off-switch on dash panel in vehicle cab. Mark and drill a 0,63" mounting hole in the dash panel for the on-off-switch.



### **NOTICE**

Ensure the dash panel is not thicker than 3/16".

In the cab, feed the cabin on-off-switch wires through the a 0,63" mounting hole until cabin switch are flush against the dash panel.



## On-Off-Switch diagram

See also sketch "Central power unit" on page 36 for

### \*1 Plug connection cabin on-off-switch

connect the cabin on-off-switch according to the wiring diagram on page 55.

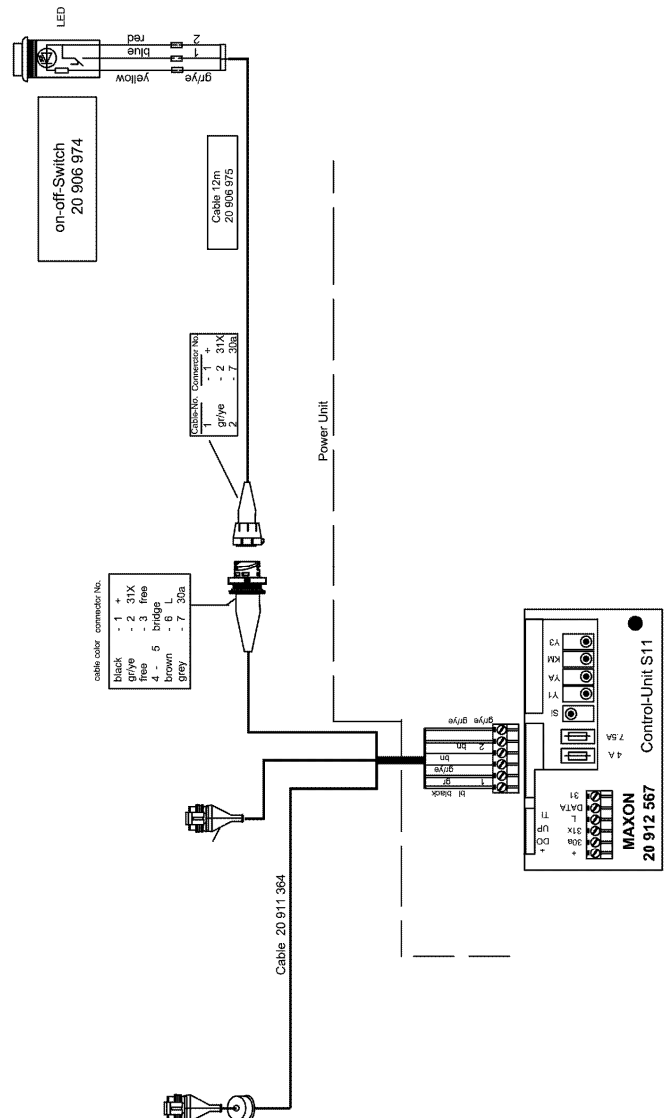
Connect the wires from the cabin on-off-switch 20 906 974 to the wires of the cable 20 906 905 as follows:

**yellow with gray/yellow**  
**blue with 1**  
**red with 2**

Route cable 20 906 905 to cable 20 911 364 and connect both round canon plugs (ETMA plug connection).

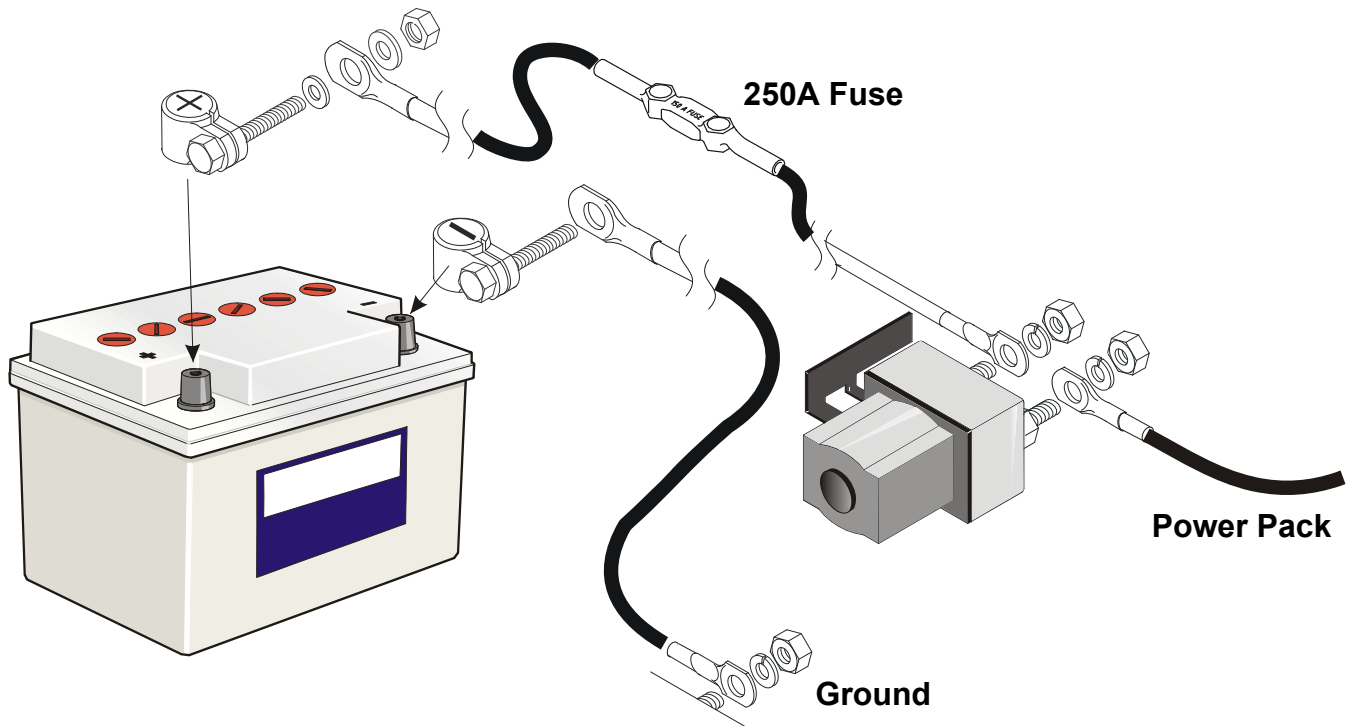
Route cable 20 911 364 to Control-Unit of the liftgate (in Power pack) and connect it.

See also sketch of the electric circuit diagram on page 54, 55 and 56



## Power fuse

Version for 12 Volt devices



Assemble the fuse kit to the battery plus. Lead the plus cable from the battery to the power unit and connect it to the motor relay. Please connect the power unit plus and ground cable directly on the battery.

### **CAUTION**

The guidelines of the vehicle manufacturer must be followed

### **CAUTION**

Only operate liftgate with battery cable fixed to a sufficient charged battery. Never use a charger or start unit even provisional as this can damage relay or motor.

## Battery capacity

The battery capacity necessary for operating liftgates is normally specified by the vehicle manufacturer. Follow the vehicle manufacturer's installation guidelines.

### **WARNING**

Electrical hazard for persons coming into contact with live parts. Risk of short-circuiting the battery when connecting the liftgate to the vehicle battery.

- Use only trained personnel.
- Follow the vehicle manufacturer's instructions when handling the battery.

### **Our recommendation for battery capacity**

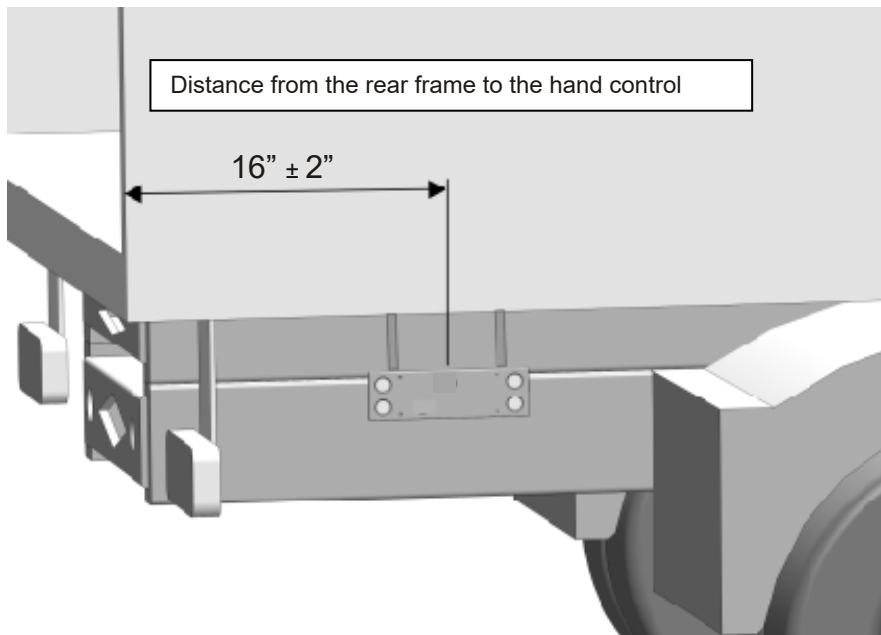
We strongly recommend installing a heavy-duty alternator and an additional battery. The operating company is responsible for the battery capacity and charge status. We recommend for a GPC 17 X-1 a battery capacity of 2 x 66 Ah (24 volts).

## Assembly of control panel

Mount the control panel at the right end of the vehicle so that the platform can be observed from the operating position.

### IMPORTANT

The minimum distance should be  $16'' \pm 2''$



### CAUTION

The mounting guidelines of the chassis manufacturer need to be complied with!

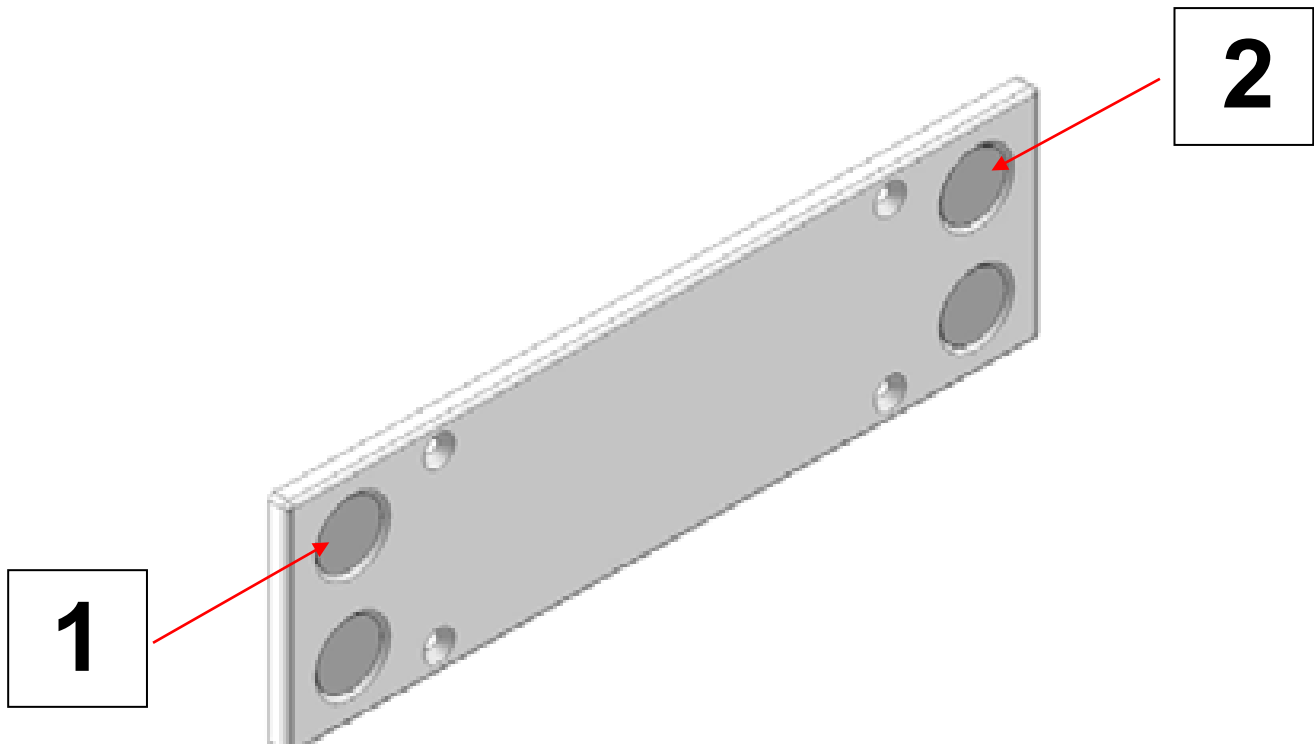


## Adjusting the platform inclination Series 11 (Tilt sensor programming)

Platform tilt is adjusted by programming the tilt sensor. The tilt sensor is programmed by pressing a combination of buttons on the control panel

### NOTICE

This version of platform harness is not compatible with former versions.



### IMPORTANT

After installation or repair of the liftgate:

- drive the platform the horizontal position
- press button 1 (upper left) three times, then
- press button 2 (upper right) three times

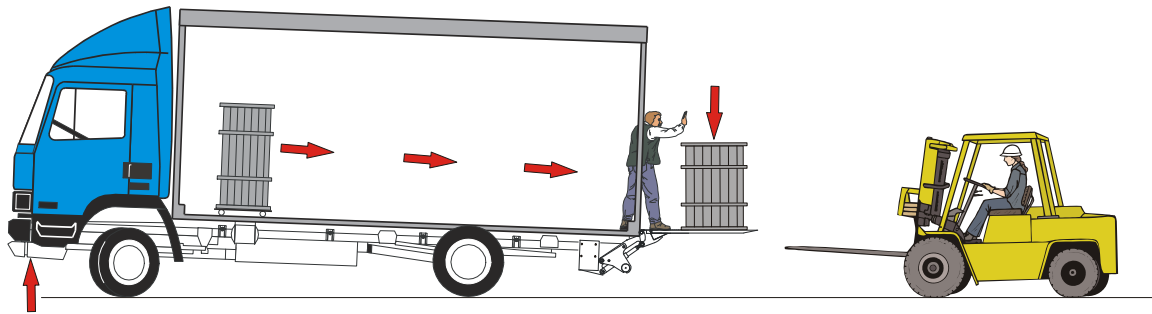
### IMPORTANT

Each of the programming sequences with button 1 and then button 2 must be completed within a period of 2 seconds. The flashing-light switches off for 5 seconds and indicates the success of the programming.

The selected position will continue to be used each time the liftgate is operated until the sensor is reprogrammed.

## Caution sticker “secure the load”

This sticker is not included in the delivery of the liftgate. This sticker is an information that there are situation during loading and unloading that may be a hazard, when the front truck axle is coming up. On the resulting ramp, the load may start to move, it can be very hazardous to people.



Please apply the sticker on the free space above the controls of the control box. This spot should be in area that is visible to the operator at all times.

**Caution ! Secure the load against moving  
Or use mechanical supports**

©Sörensen Hydraulik GmbH

20 904 940

## Installing supports (vehicle-dependent)

With some vehicle types and installation versions, maximum loading of the platform can cause the front of the vehicle to lift up.

### **⚠ WARNING**

#### **Shift in center of gravity and lifting up of front end of the vehicle**

Unexpected movements of the vehicle can result in the severe injury or death of bystanders.

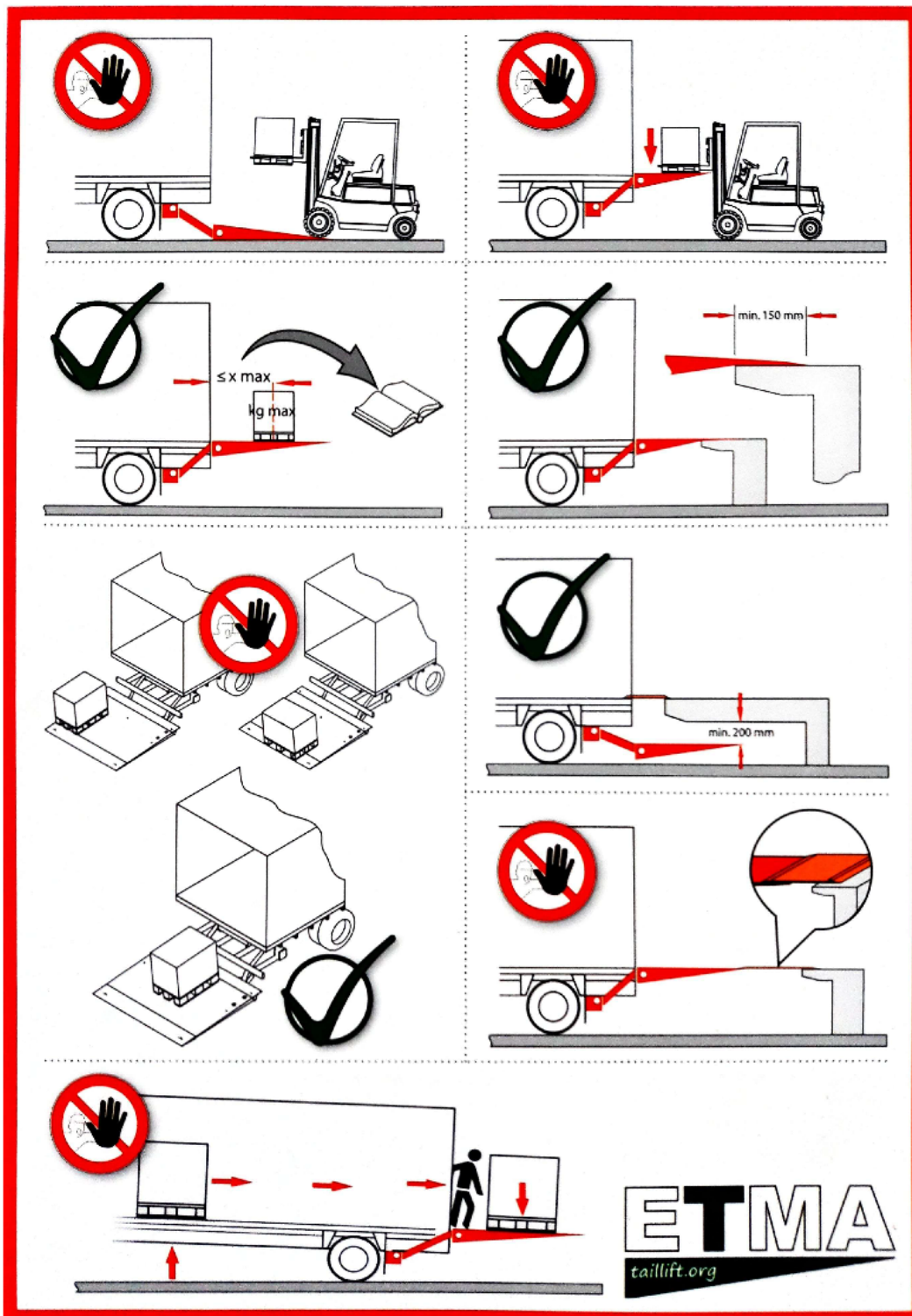
- Follow the vehicle manufacturer’s installation guidelines. If necessary, install supports.

## Affixing the danger notice sticker

Affix the danger notice sticker "Safe handling of the liftgate."

**IMPORTANT:** This sticker is supplied with all new liftgates. The installing company must place it in an easily visible location on the inside of the vehicle cargo area.

The danger notice sticker uses pictograms to indicate potential incorrect and correct use of the liftgate.



## Recommendations and instructions regarding the liftgate



### IMPORTANT:

To ensure safe operation of the liftgate read the safety instructions and warnings in the accompanying user manual.

### Hydraulic oil recommendations

HLPD 22 (ISO-VG 22) “detergent” so that free water remains emulsified (e.g. to prevent ice formation in winter) and to improve oil film adhesion.

In colder regions, we use HLPD 10 grade hydraulic oil.

Sörensen hydraulic oil HLPD 10                      Part No. S 20 841 181

Sörensen hydraulic oil HLPD 22                      Part No. S 60 700 283

Sörensen bio oil    Part No. S 20 858 811

### Painting the lifting gear

The lifting gear is powder-coated black ex-works. If another color is desired, painting must be performed by the vehicle manufacturer.

### IMPORTANT:

- Roughen the powder-coated surface before painting.
- Mask the black connecting rods before painting.
- Carefully remove extra paint and masking material from the connecting rods after painting to avoid damaging the seals and voiding the warranty.

### Entry in inspection record book

- Once the liftgate has been assembled, installed on the vehicle, adjusted, and has passed the function test, a qualified specialist must fill out and sign the section of the inspection record book entitled “Results of test performed by specialist before first operation.”

### First operation of the liftgate

Check if the lift is ready to be operated. Check if all moving parts can move freely (no rubbing or pinching on hoses or cables). Check hydraulic system for leaks

### Operating sticker (option)

Stick the operating label to the control box (option)

### Type label

The type label with load diagram has to be affixed permanently on the lift.

## Testing the liftgate

### Function test

Test: opening, lifting, lowering, tilting down, tilting up, closing

#### CAUTION

#### Platform at ground level

In the fully lowered position, the platform is easily overlooked and may cause people to trip, resulting in injury.

- If leaving the platform in this position for a longer period of time, secure the area.

## Check of operating speeds

### Vertical speed

Test: vertical speed (lifting and lowering) must not exceed 6"/second. If lifting and lowering are too fast, please compare the battery voltage and amperage with the values of the power unit. These values must be identical.

If lifting and lowering are too slow, please check the valves for dirt.

#### WARNING

#### Permissible vertical speed exceeded

Risk of injury when operating the liftgate.

- Contact customer service.

### Tilting speed (10° to -10°)

Test: angular velocity when tilting up and down

The angular velocity when tilting up and down must not exceed 4°/sec.

The platform tilting must be limited to 10°

#### WARNING

**Permissible angular velocity exceeded.** Risk of injury when operating the liftgate.

- Contact customer service.

## Load test

### Static test

- Operate the horizontal platform to the height of the vehicle floor.
- Place a test load weighing 125% of the rated capacity on the platform within the loading distance.
- During a test period of 15 minutes, the platform must not lower more than 3/5" (15 mm) and must not tilt down more than 2°.

**IMPORTANT:** The permissible loading distance and the rated capacity are engraved on the liftgate's rating plate. The loading diagram on the rating plate shows the permissible loads when the loading distance is changed.

**IMPORTANT:** After the static test, the installer must inspect the liftgate for deformation.

### WARNING

### High loading of components

Incorrect installation or defective components may cause components to fail and break.

Risk of injury when operating the liftgate.

- Perform all the load tests specified here.

### Dynamic test

The functions lifting, lowering, tilt up and tilt down must be tested with a nominal load placed at nominal load distance. If necessary, the pressure valve must be adjusted so that the load can be lifted securely.

### IMPORTANT

The pressure valve is adjusted in the factory, a correction is generally not necessary.

If it has to be done anyway, please note the following:

- The pressure valve can only be adjusted if a manometer for reading the pressure is provided. The maximum allowed pressure is engraved on the type label.
- After the static and dynamical tests, please check the hydraulic system for leaks.
- After performing the static and dynamic tests, visually inspect the hydraulics system for tightness.

### Testing against lifting an overload

- Perform a test to guarantee that a load of more than 125% of the maximum rated capacity cannot be lifted off the ground.

### Testing the safety devices

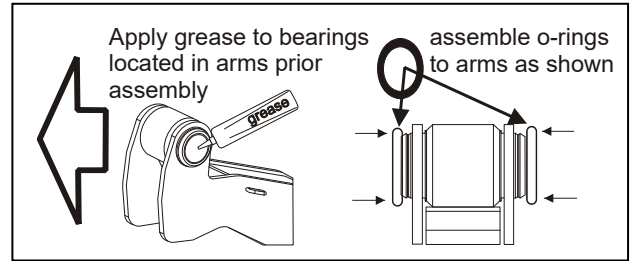
Operate all the functions to their end positions until all the safety devices respond.

## Torque table for all supplied and installed bolts on Maxon liftgates

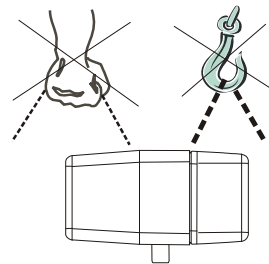
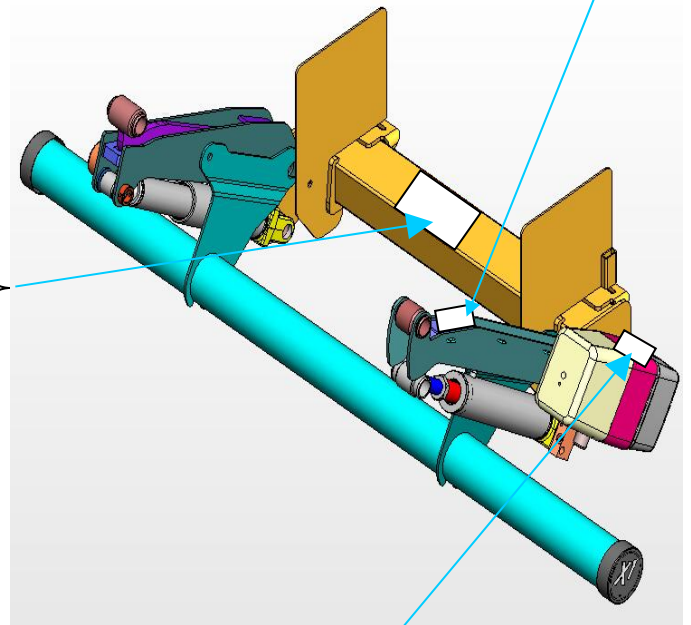
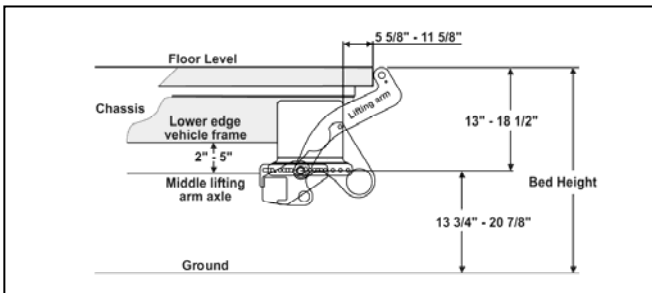
Bolt Size	Tightening Torque		Bolt Connections	Tightening Torque	
	in ft.lb	/ Nm		in ft.lb	/ Nm
<b>8.8</b>					
M4	2	2.7	G1/4"	29	40
M6	7	9.5	G3/8"	70	95
M8	17	23	G1/2"	96	130
M10	33	46	<b>Connection Nuts</b>		
M12	59	80	M16 x 1.5	44	60
M14	96	130	M18 x 1.5	44	60
M16	143	195	<b>Plugs</b>		
M20	283	385	G1/8"	11	15
<b>10.9</b>			G1/4"	24	33
M12	85	115	G3/8"	51	70
M14	132	180			
M16	202	275			
M20	398	542			
<b>Solenoid valve</b>					
YM, Y1, Y2	20	27			
<b>Starter solenoid</b>					
KM	6	8			

## Decals

These Decals should be read and completely understood before operating the unit. They should also be kept clean and readable at all times. If any decals should become detached from the vehicles, or defaced, it must be replaced. Free replacement is available from: MAXON Lift Corp., Parts Department.



## max. bed height



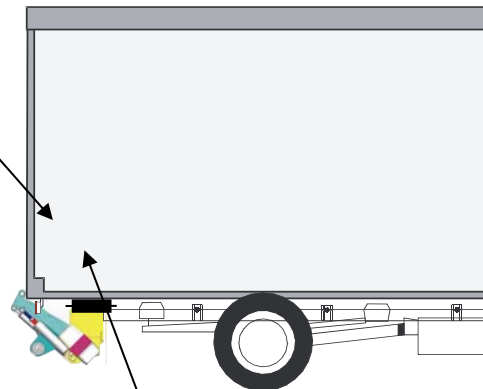
### Caution!

Do not lift on power pack with hands, ropes or chains. Do not use pry bars.



## GPC 17 X-1

THE MAXIMUM CAPACITY OF  
THIS LIFT IS  
**1700 POUNDS**



**CAUTION**  
STAND CLEAR  
WHEN OPERATING

50092

**WARNING**

TILT THE PLATFORM TO  
LEVEL POSITION PRIOR  
TO RAISING

### IMPORTANT

All liftgate warning, capacity, and caution decals should be affixed to the truck body in plain view of the operator near the main lift gate Control Station.

### IMPORTANT

The main liftgate Control Station is normally mounted on right rear corner of the truck body.

**WARNING**  
READ CAREFULLY

- Improper operation of this Lift can result in serious personal injury. Do not operate unless you have been properly instructed and have read, and are familiar with the operating instructions. If you do not have a copy of the instructions, please obtain them from your employer, distributor, or lessor, before you attempt to operate Lift.
- Be certain that the vehicle is properly and securely braked before using the Lift.
- Always inspect this Lift for maintenance or damage before using it. If there are signs of improper maintenance, damage to vital parts, or slippery Platform surface, do not use the Lift until these problems have been corrected.
- Do not overload the Lift. The load limit is based on evenly distributed cargo over the entire Platform surface. If you are using a pallet jack, be sure it can be maneuvered safely. Do not operate a forklift on the Platform or travel with the platform in an open position at any time.
- Load should be placed in a stable position close to the edge of the Platform nearest the truck. The heaviest portion of the load should never be placed beyond the center of the Platform away from the truck.
- Never allow yourself, a helper, or bystander to stand in a position where a falling load could land on either of you. Also do not allow any part of yours or your helper body to be placed under, within, or around any portion of the moving liftgate, or it's mechanisms, or in a position that would trap them between the platform and the ground or truck when the liftgate is operated.
- If a helper is riding the Platform with you, make sure you are both doing so safely and that you are not in danger of coming in contact with any moving or potentially moving obstacles. USE GOOD COMMON SENSE. If load appears to be unsafe, do not lift or lower it.

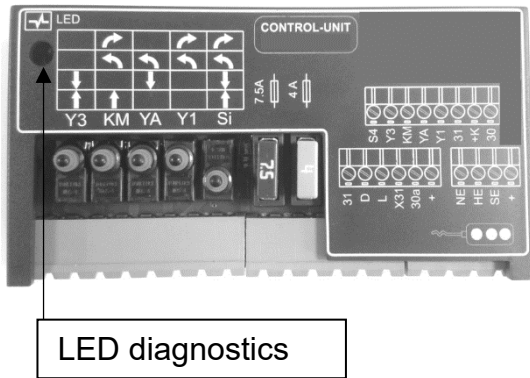
MAXON LIFT CORP.

PART NO.  
264081

## LED diagnostics in series 11

Explanations for LED diagnostics of the control unit with service switch on series 11 main electrical system, main control unit with service-switch)

### Series 11 control-unit



#### LED stays on when:

cabin switch is on or  
platform position 60° to 90°  
platform position 0° to -10°  
Explanation: platform CLOSED (vertical) 90°  
platform OPEN (horizontal) 0°  
platform tilted down -10°

#### LED tilting when:

hand buttons are triggered  
or  
foot control is used  
or  
remote is used

#### LED off when:

cabin or key switch is off  
or  
platform position 0° to 60°

### Checking the inclination sensor inside the platform

platform closed and liftgate switched on:

LED on

electrical supply OK

platform position 0° to about 60°

LED off

inclination sensor S1 triggered and OK

corner lights are activated

platform position 0° to -10° (platform tilted down)

LED on

inclination sensor S2 activated and OK

The switch occurs in horizontal position. This allows adjusting the automatic lifting inclination

### Checking the pressure switch S4:

Start lowering with both foot control buttons.

LED blinks

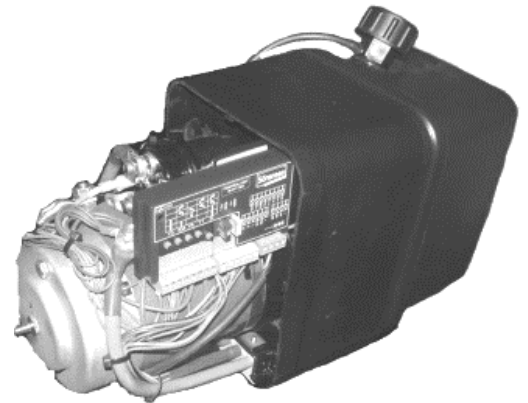
As soon as the platform reaches the ground, and the pressure switch is triggered, the blinking stops and the LED stays on. LED is on and the platform tilts down.

This shows that the pressure switch was triggered. If not, the pressure switch is defective.

## Service Switch in series 11

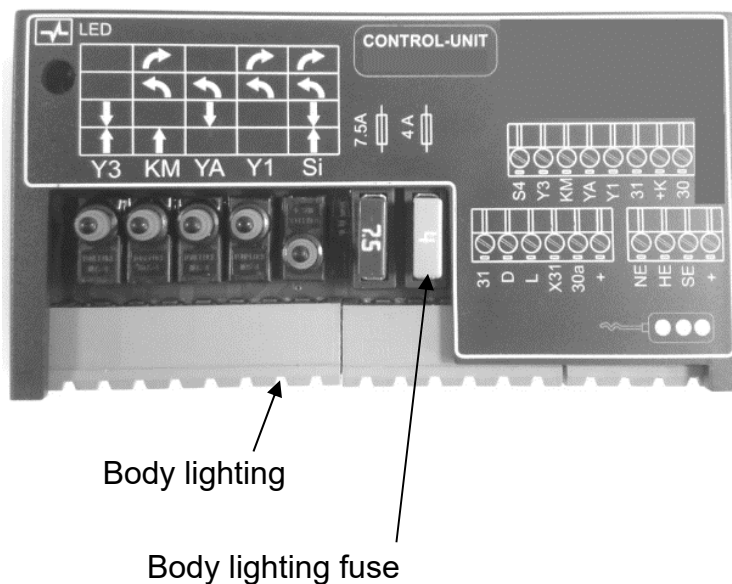
Authorized personal can use and test all liftgate functions directly with the service switch located in the power unit.

In case of failure of the hand or foot controls, the liftgate can be driven into any position by authorized personal (emergency function)



## Option body lighting in series 11

The clamping strip located on the service switch can be used to connect the body lighting. To connect the body lighting, connect the lightning cable on the clamp "K+" and the clamp "31" on the clamping strip or on chassis instead clamp "31". It is turned on and off with the cabin switch together with the liftgate and is protected by a 4 Ampere fuse.

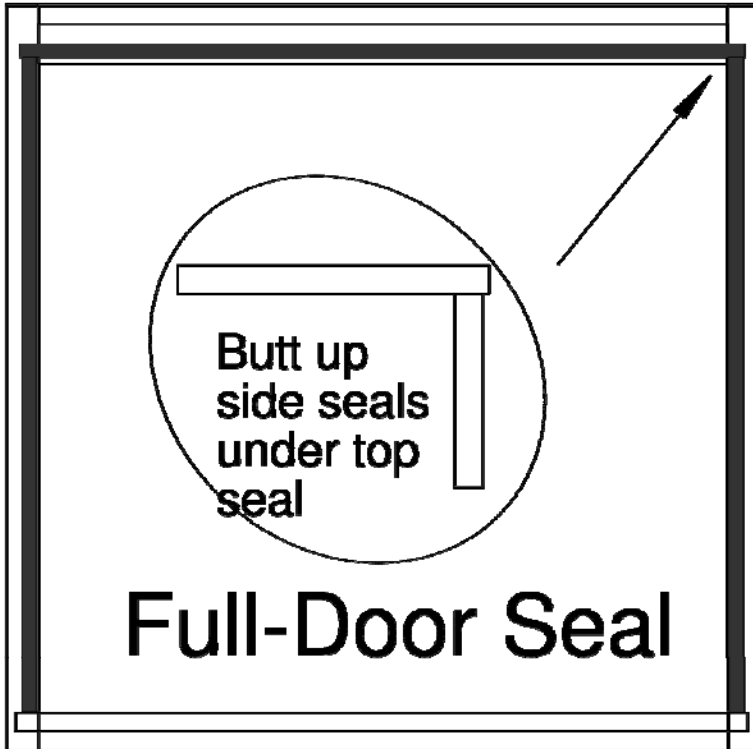


Fonction	Y3	KM	YA	Y1	Si
Lifting	•	•			•
Lowering	•		•		•
Open / tilting down		•	•	•	•
Closing / tilting up		•		•	•

Please respect the sequence, KM always last

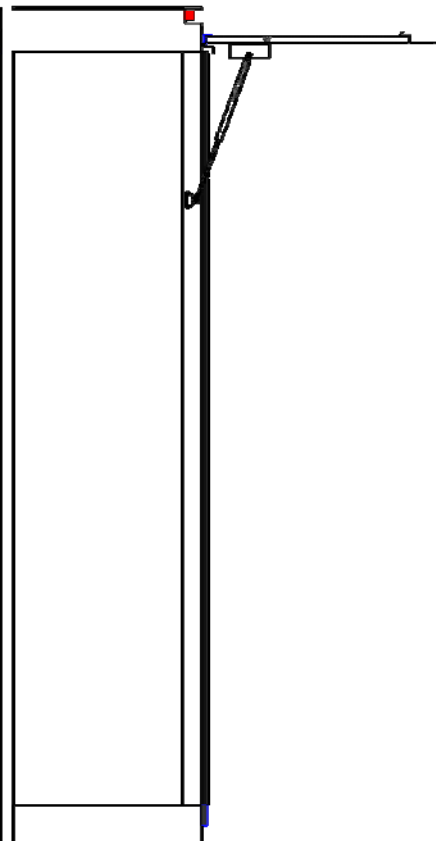
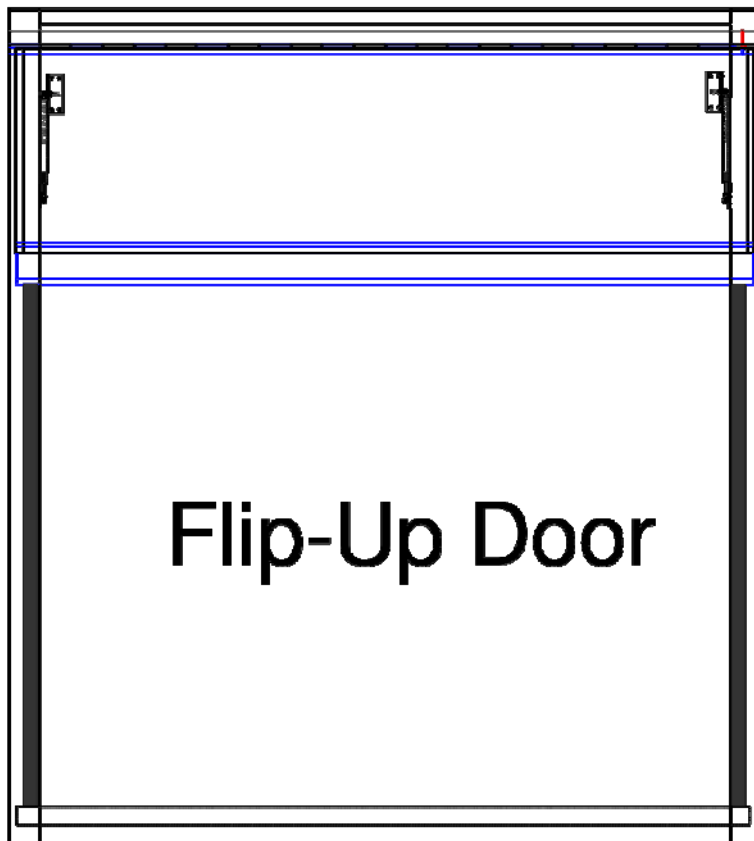
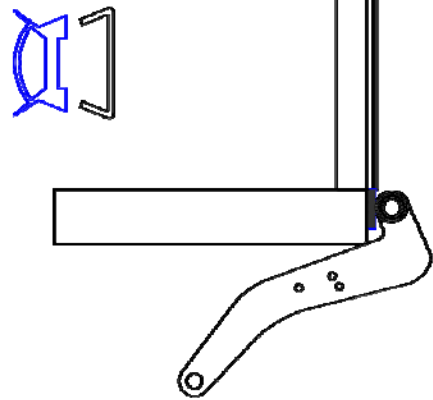
## Body Seal Kit's

### BODY SEAL KIT'S

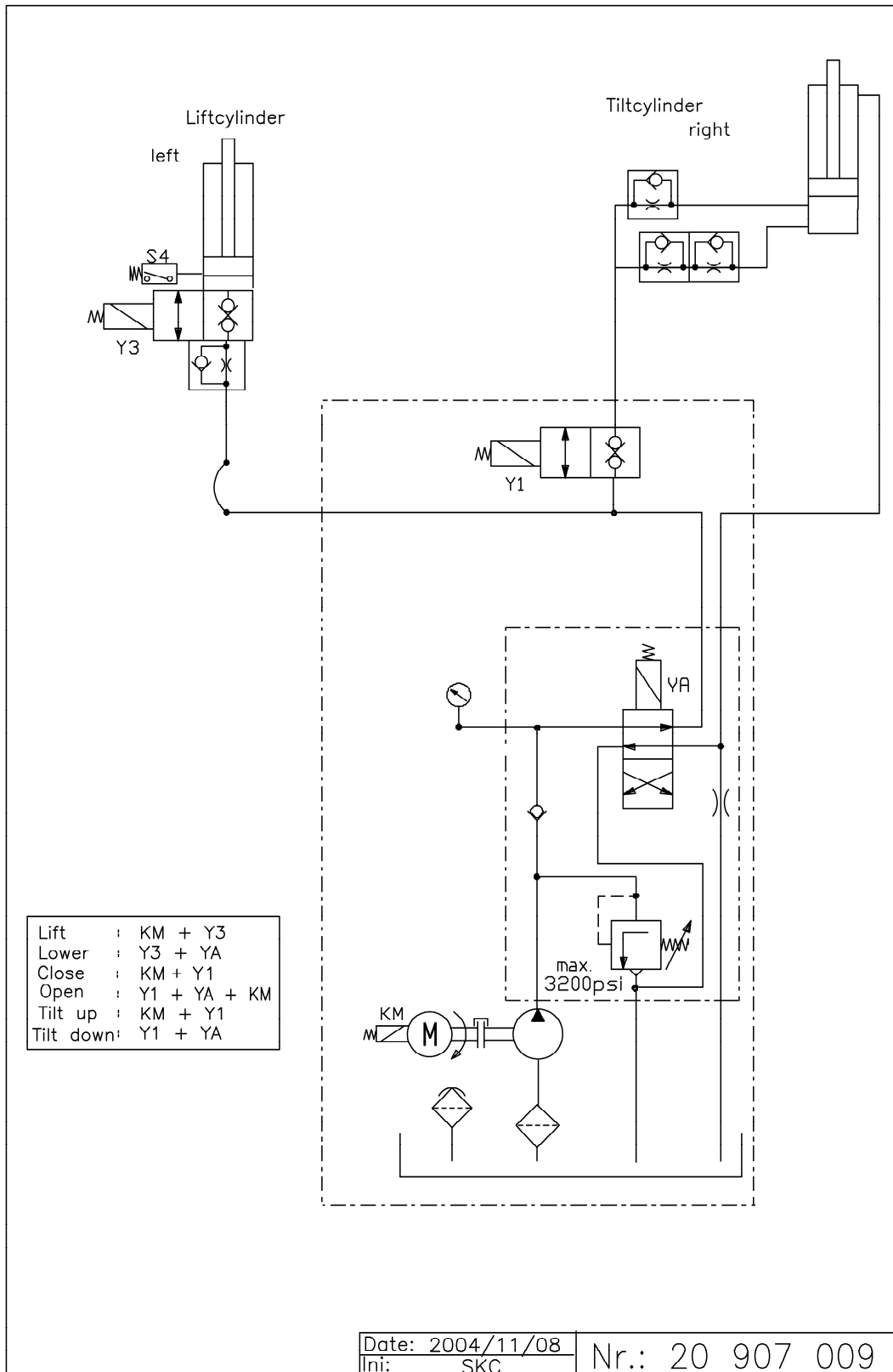


Flip-Up Door kit  
2 ea. 108" steel channels  
2 ea. 108" side seals  
1 ea Door Panel with  
gas shocks and hardware

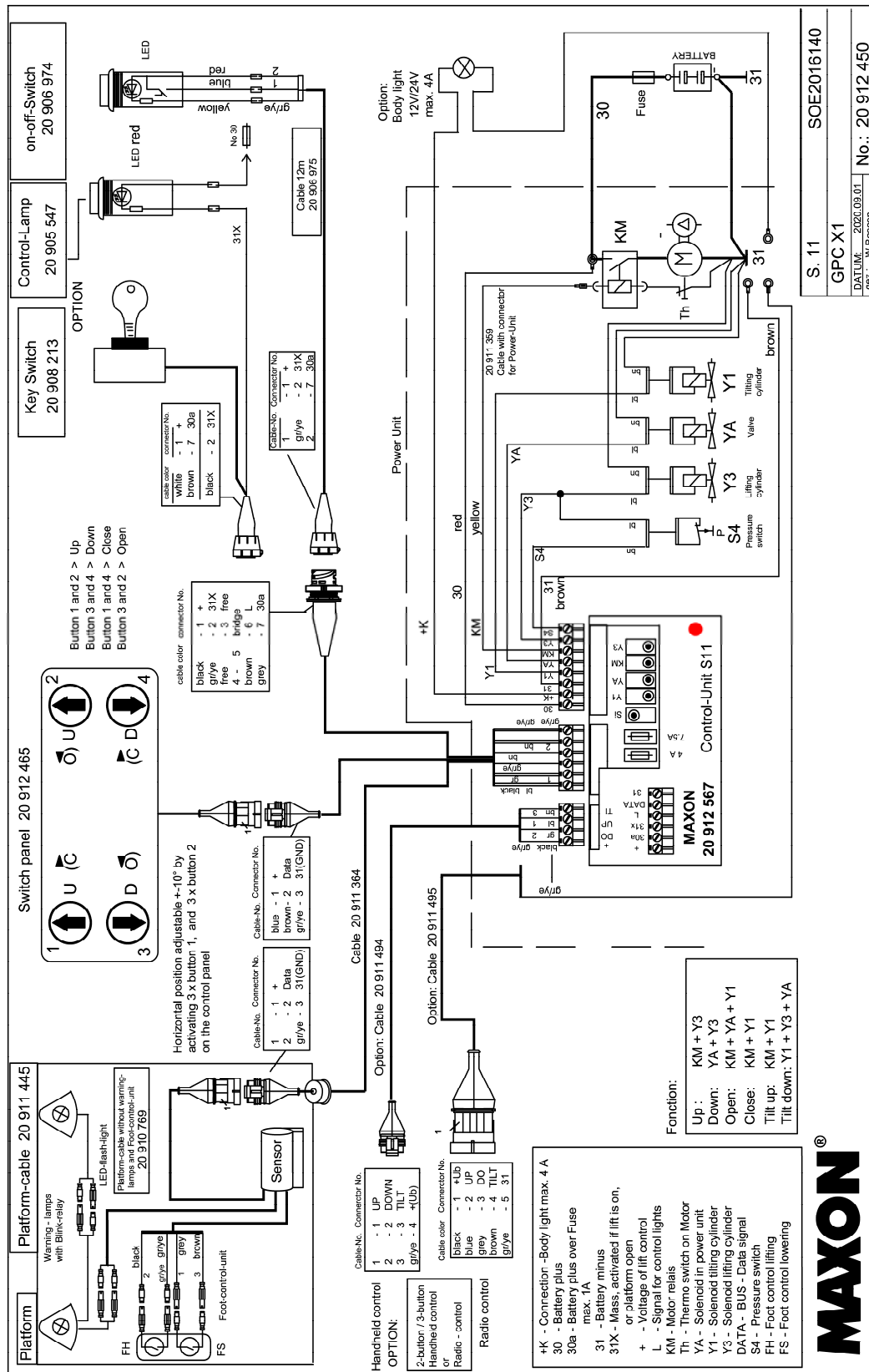
Full Door Seal Kit  
3 ea. 108" steel channels  
3 ea. 108" top and side seals



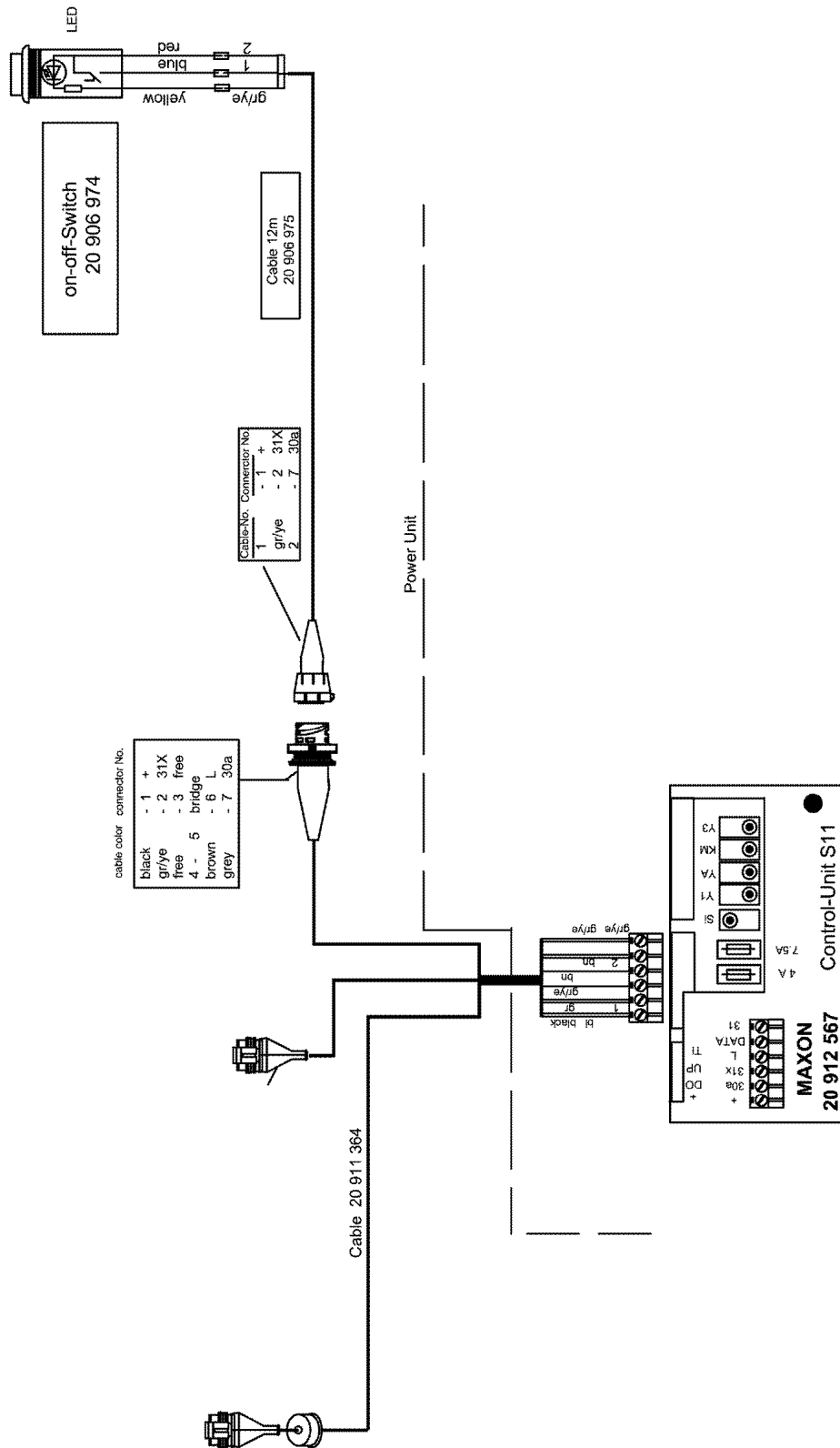
## Hydraulic circuit diagram



## Electrical circuit diagram



## On- Off-Switch diagram



## Optional food control diagram

