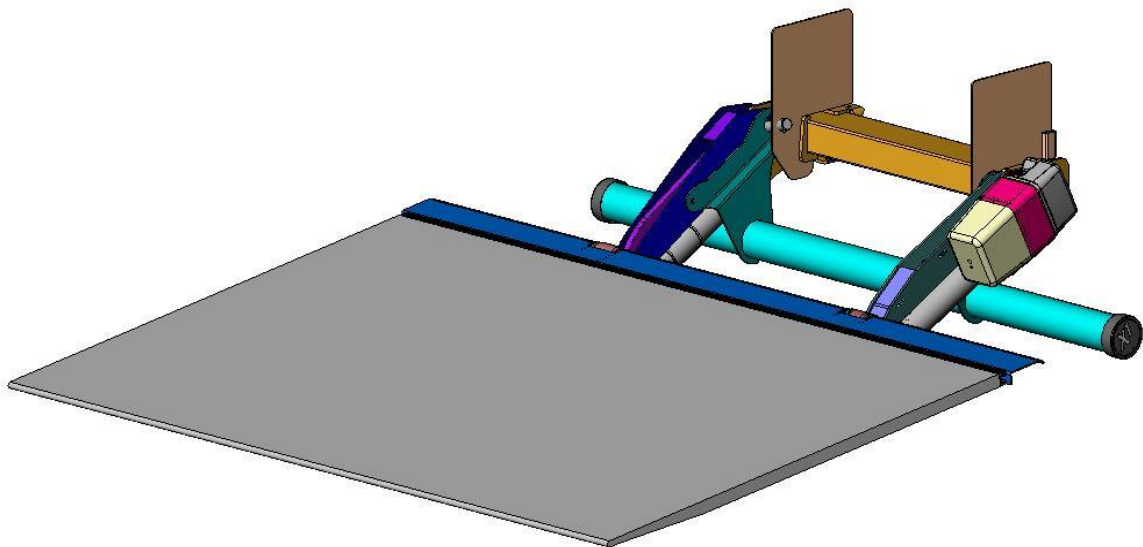


MAXON[®]

GPC 22 X-1 liftgate Installation Manual



MAXON[®]
LIFT CORP.

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X1
TECHNOLOGY

Date 03.2021
Part-no. S 20 912 436

Contact information

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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 (see rating plate). 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 22 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.

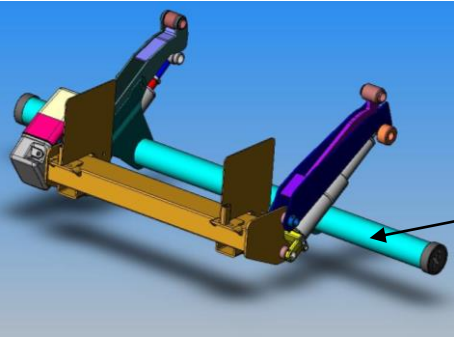
- Always transport the lifting gear in an upright position using suitable lifting points.

IMPORTANT

Dispose of all packing materials in accordance with environmental regulations.

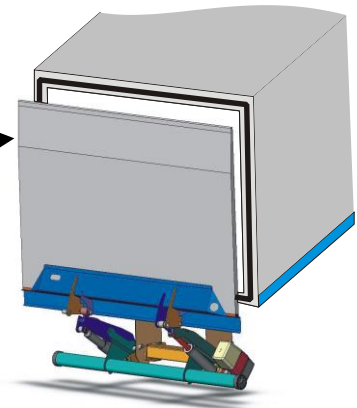
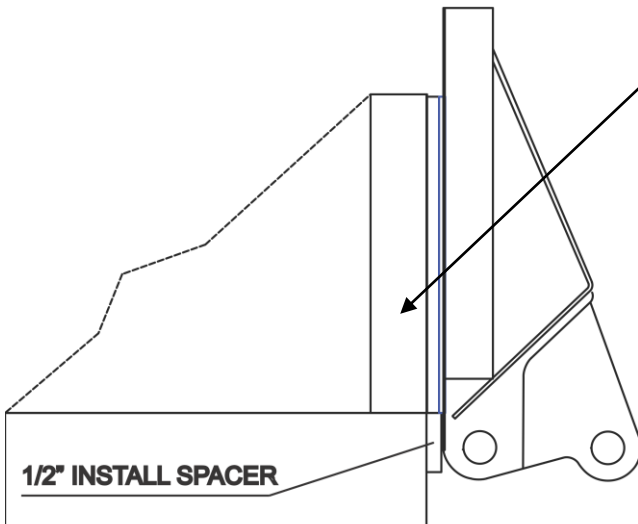
IMPORTANT

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 18 of the installation manual.
3. The Stabilizer bar must be mounted on lift arm before liftgate is installed on the truck body.
4. Install the 1/2" spacer on the body. This spacer bar is always used with exception of liftgate behind swing doors. See page **Error! Bookmark not defined.** for further instructions.

spacer on the body. This spacer bar is always used with exception of liftgate behind swing doors. See page **Error! Bookmark not defined.** for further instructions.



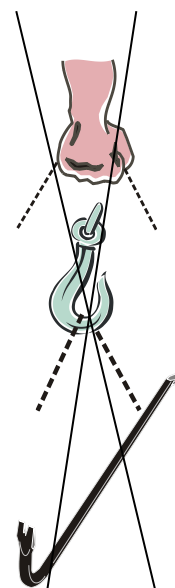
The power pack is pre-filled with oil. If additional oil is required, use recommended oil type found in the chart on page 35 to fill the reservoir.

⚠ CAUTION

Caution with transport. Failure can result in injury.

⚠ Caution!

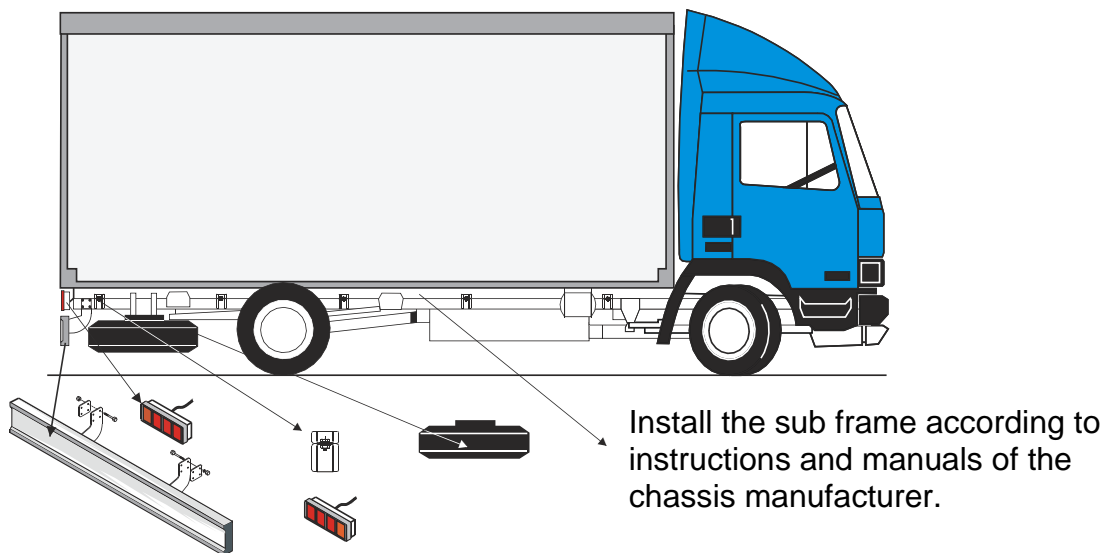
- do not lift at the power pack
- no pressure or shocks
- do not use pry bars



Liftgate GPC 22 X-1, Series 11
Version 2021

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

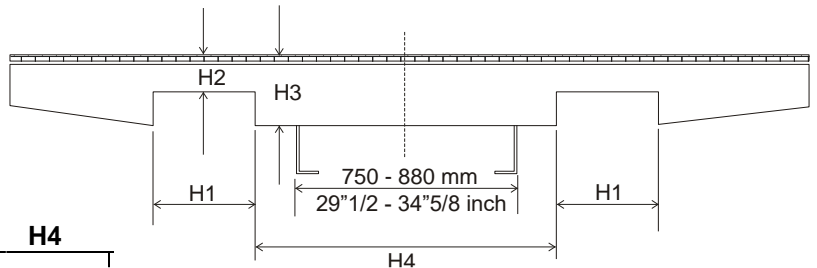
Secure the vehicle in place to prevent unintentional movement.

Cutouts in Rear Sill

If the dimension of the rear sill (H3) in the area of the lift arms is more than H2, then openings need to be cut out according to our recommendations. The minimum height dimension for the rear sill is 1 5/8" - the maximum sill height is 5". If the rear sill is cut out for the arms (H1), reinforce the cut outs to maintain structural integrity of the rear sill.

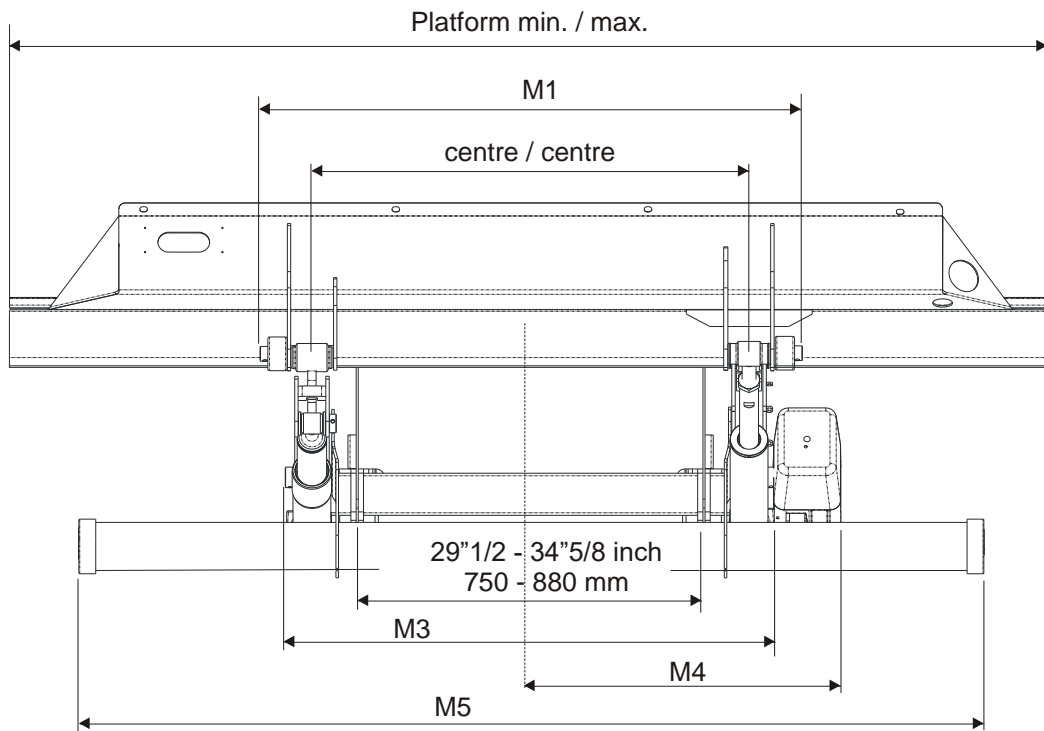
Recommendations for the rear sill cutouts to install the models GPC 22 X-1

Table for GPC 22 X-1



	H1	H2	H3	H4
	8,5"	3.5 when E=20"	5"	35"
	8.5"	4" when E=23.5"	5"	35"

Dimensions GPC 22 X-1

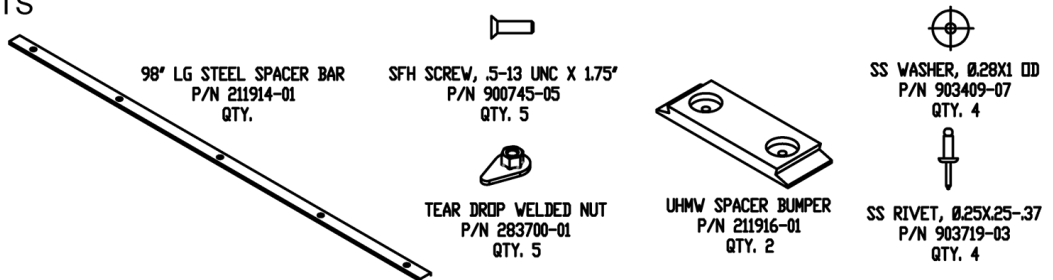


Model	inch/	Platform Min/max	Lift Arm Center/Center	M1	Max M3	Max M4	M5
GPC 22 X-1	inch	92/98	41	51	48	35	84,5

Model	Platform width / height	weight Platform	total weight
GPC 22 X-1	92 and 98 inch / 48, 60, 72 inch	Platform 290 pounds	670 pounds

INSTRUCTION, GPC-X SPACER KIT INSTALLATION KIT P/N 211915-01 (SPACER & DAMPENER BETWEEN PLATFORM AND TRUCK BODY)

1. KIT COMPONENTS 211915-01



2. STEEL SPACER BAR INSTALLATION (BEFORE LIFTGATE INSTALLATION)

FOR 102" WIDE TRUCK USE FULL 98" BAR
FOR 96" WIDE CUT 3" ON EACH SIDE
CENTER BAR ON REAR SILL FLUSH WITH TOP OF FLOOR
USE BAR AS TEMPLATE TO MARK HOLES ON REAR SILL
DRILL 5 EA 17/32" DIAMETER HOLES, REMOVE BURRS
USE PROVIDED NUTS AND BOLTS TO MOUNT SPACER BAR AS SHOWN

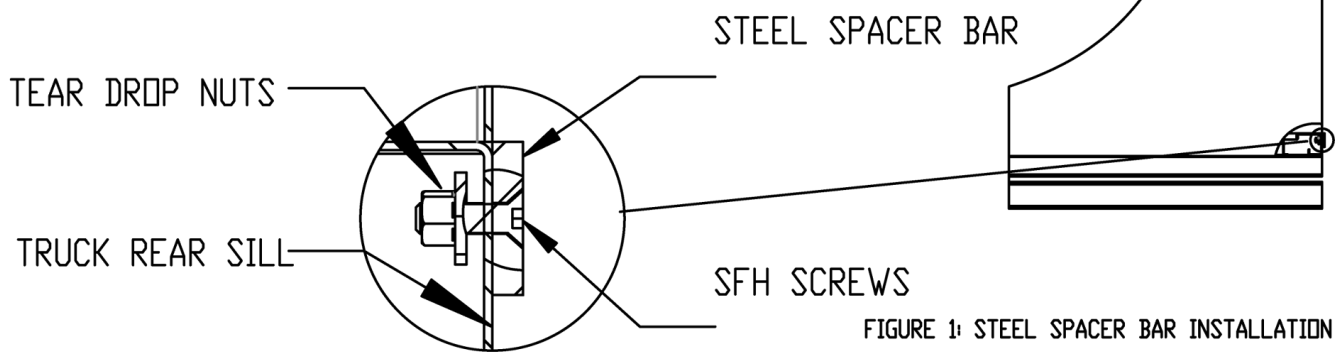
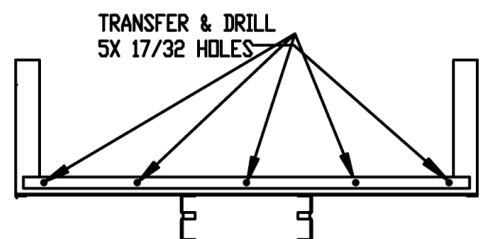


FIGURE 1: STEEL SPACER BAR INSTALLATION

3. BUMPER INSTALLATION (AFTER LIFTGATE INSTALLATION)

FOLD UP PLATFORM, MARK LINES 5" BELOW PLATFORM TIP ON EA. SIDE
UN-FOLD PLATFORM, PLACE BUMPERS TOP EDGE ON LINES AND
1.75" AWAY FROM INSIDE POST ON BOTH SIDES. USE BUMPER AS
TEMPLATES, MARK AND DRILL 4 EA. 0.26" HOLES IN CORNER POSTS
USE PROPER RIVET TOOL AND INSTALL RIVETS WITH WASHERS
BETWEEN RIVET HEAD AND BUMPER

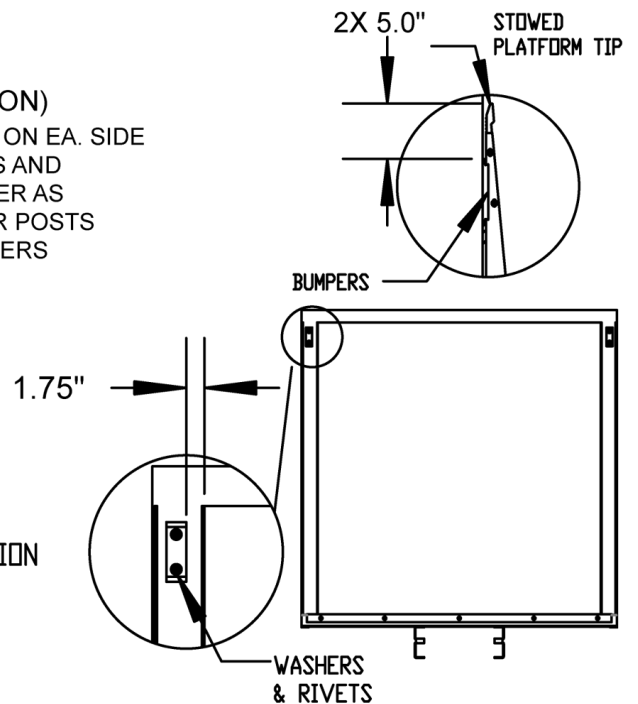
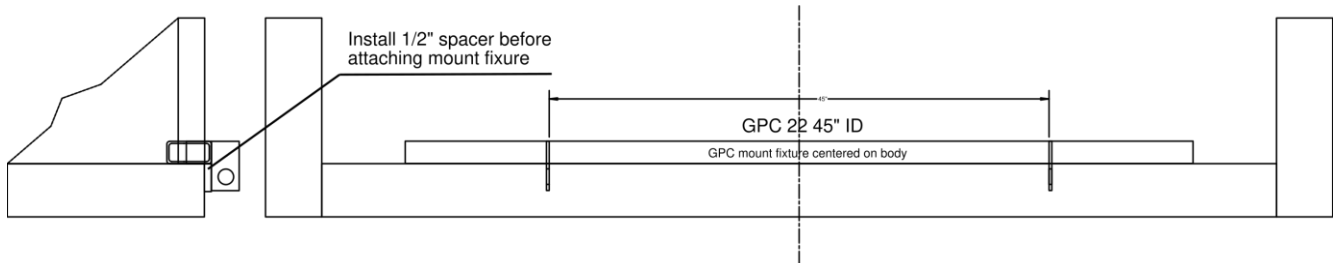


FIGURE 2: BUMPERS INSTALLATION

Placement of GPC 22 X-1 mount fixture

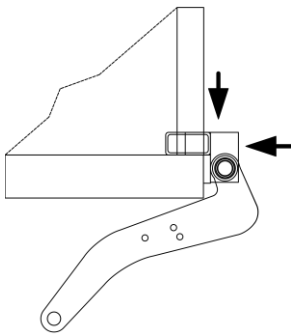
IMPORTANT

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 bar before welding or clamping it in place, centered on rear sill. You will use platform pins to align liftgate arms on truck body mounting fixture



Assembly of the lifting gear and the synchronizer bar (ICC bumper)

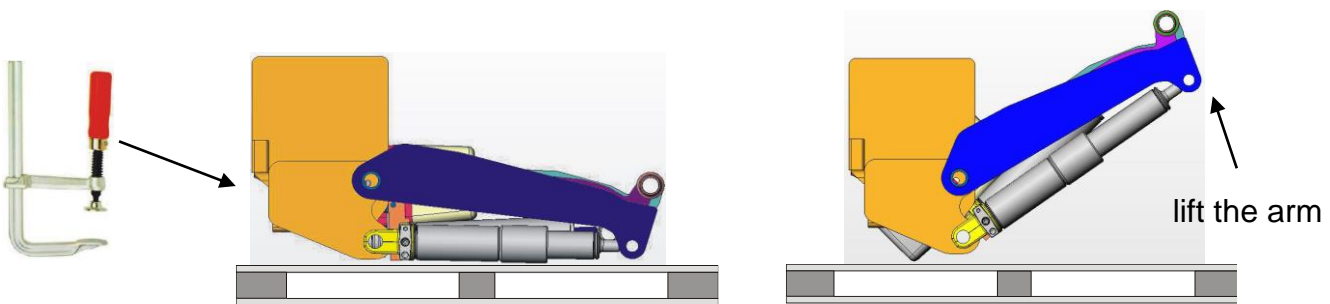
WARNING

Installation at crushing and shearing points

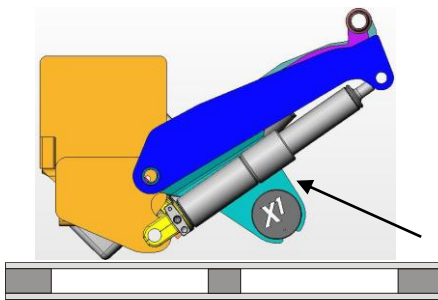
Fingers are at risk of being crushed or sheared when the lifting gear is installed on the vehicle.

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

Install the mounting brackets loose, secure lifting mechanism with clamp against pallet. Connect the positive and ground cables at the battery to power up liftgate



Power up the lift arms in order and to assemble the synchronizer bar (see drawings at page 16).

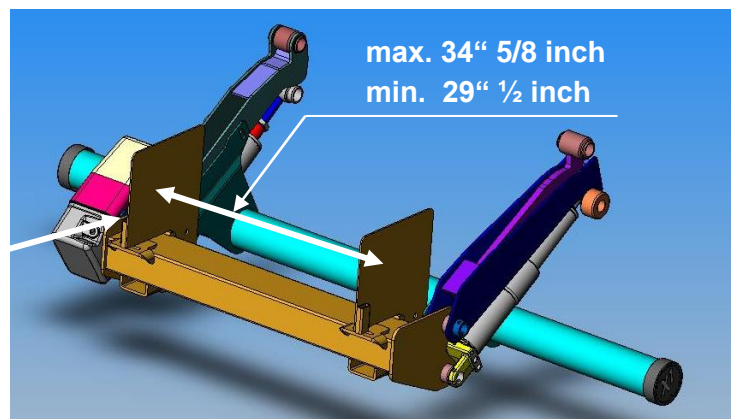
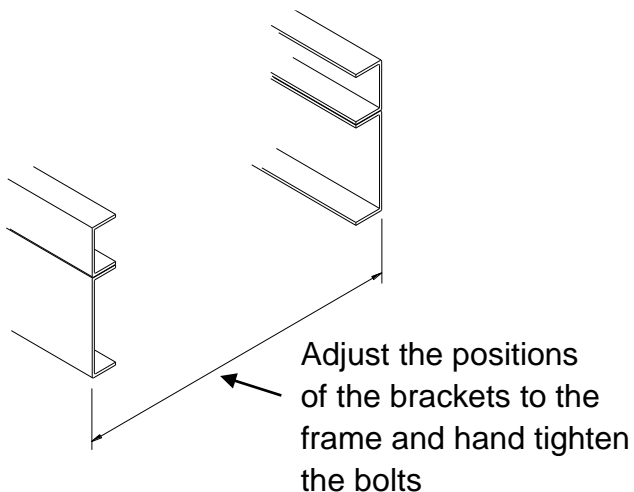


IMPORTANT

Install the synchronizer bar to the lift arm.
After assembly check and readjust the fork
(page 15 A and B) if needed.
Arms should be even on both sides (page 15
B)

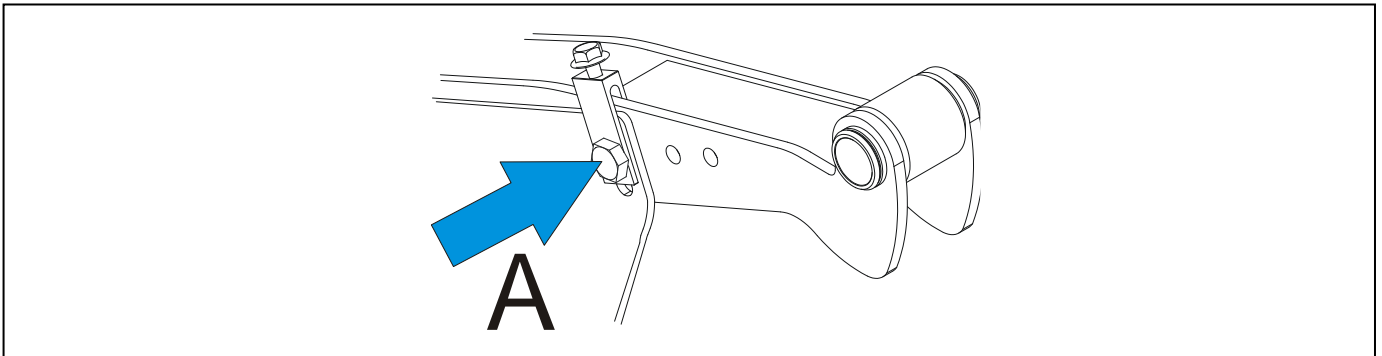
Measure the frame width of the vehicle.

Mounting brackets of GPC positioned on the frame



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 25)



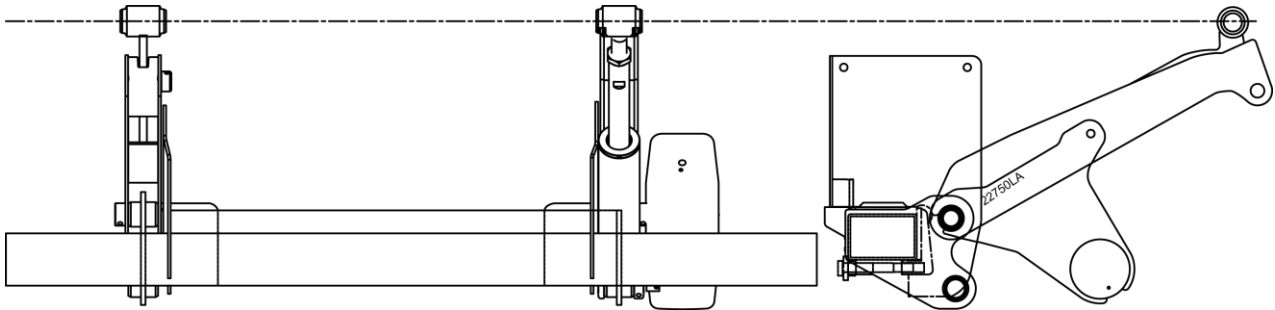
NOTICE

- Do not damage cables.

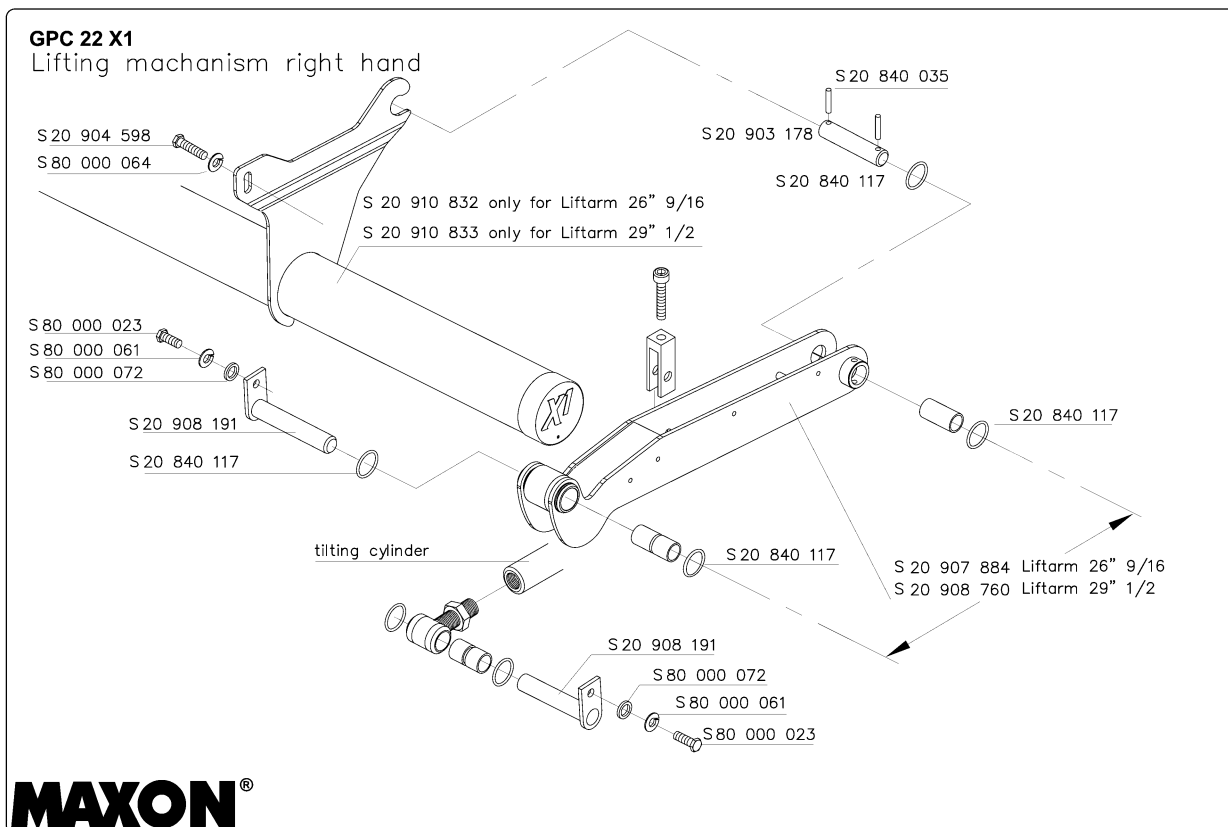
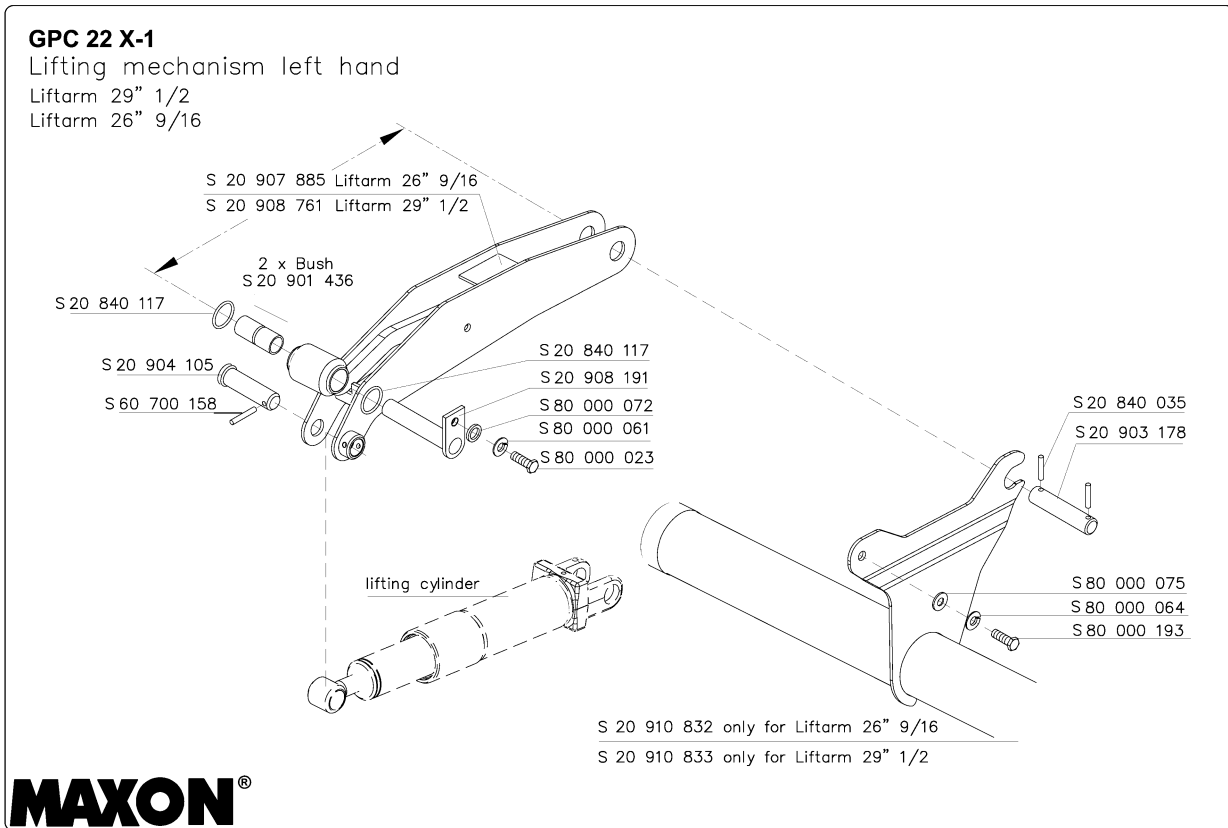
IMPORTANT

after assembly check and readjust the fork (page 15 A) if needed. Arms should be even on both sides.

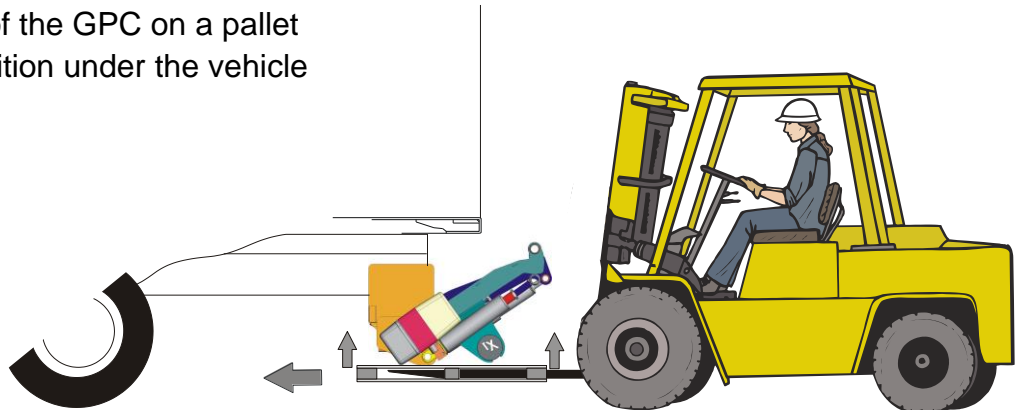
15B



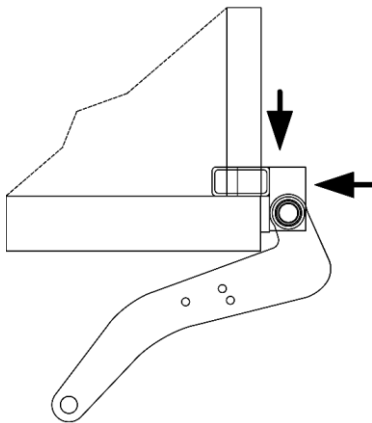
Assembly drawing of lifting mechanism with synchronizer bar



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



Position and pin both liftgate arms into the install fixture using the platform pins.



Lift the liftgate assembly into place observing the correct E and D dimensions on page 19. You might have to operate the lift cylinders to achieve that mount frame is placed at 90 degrees to the truck frame and with the correct dimensions for your bed height. You should have the same E dimensions on both sides. (Use shim spacer plates under frame rails when positioning the mount frame, then remove them)

As a rule maximize ground clearance (D) staying within allowed (E) dimensions

Install the mount plates to the lift frame with frame square and positioned correctly according to page 18.

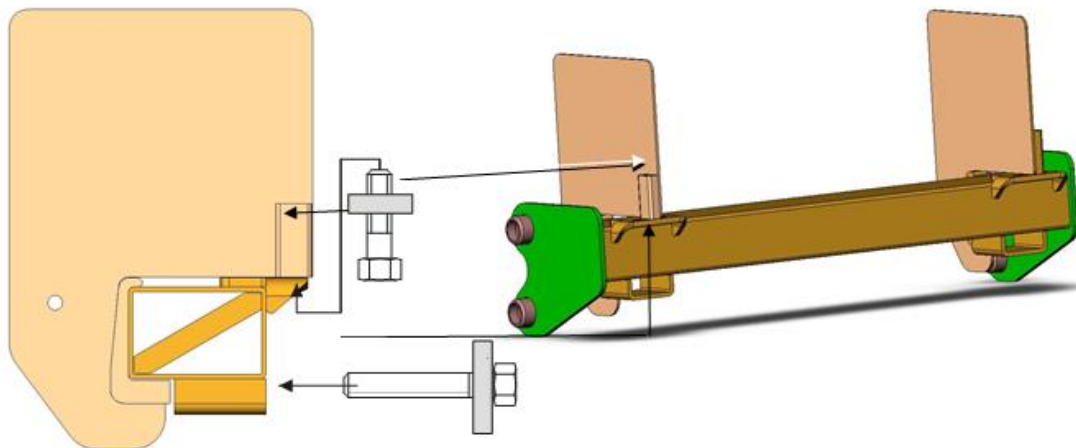
Tack weld both mount plates to the truck frame using a minimum of 2 ea. 2.5" long ¼" welds on each plate.

Fully weld mount plates after the lift has been tested in the full motion for alignment without powering it against the rear sill or placing weight on the platform.

Weld the brackets to the vehicle frame, according to table at page 20 after the alignment test has been performed

IMPORTANT

**You will find all needed measurements on page 19 of these instructions.
Tighten the bolts according to the torque table on page 38**



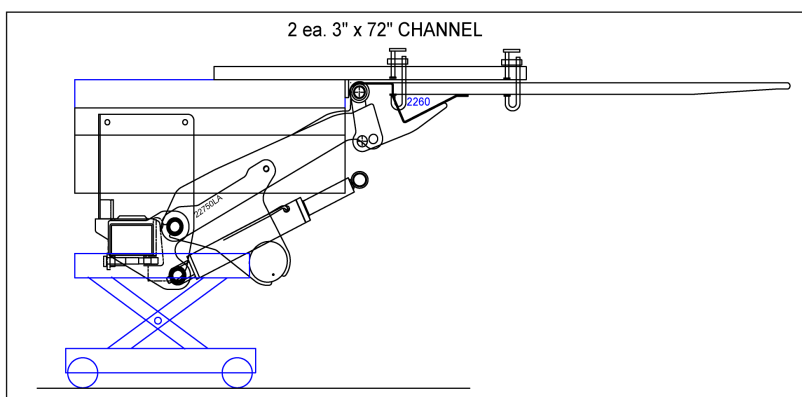
Tighten the bolts according to the torque table on page 38

Alternative Installation without mount fixture-Make sure all other directions are followed

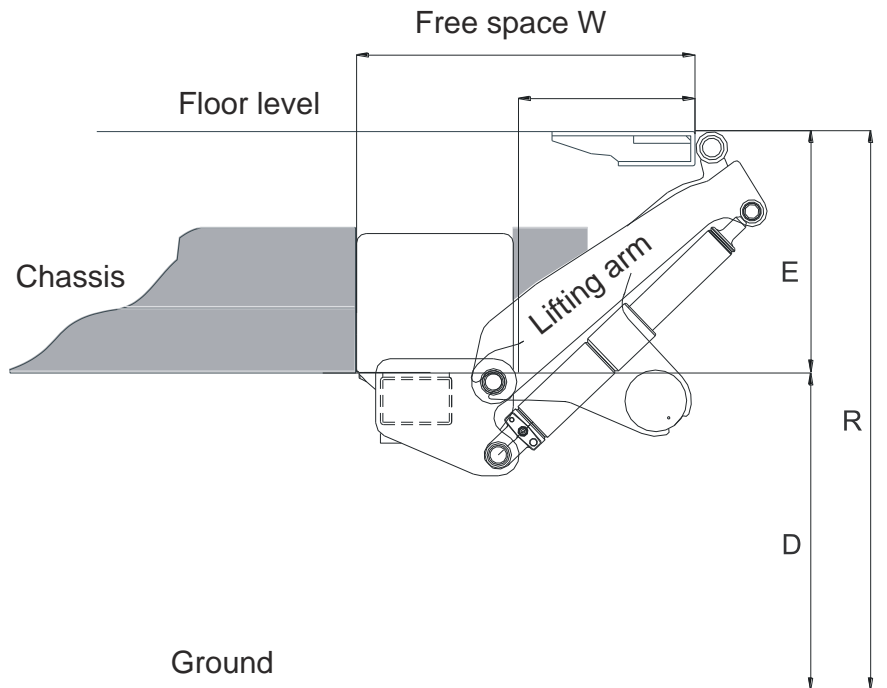
1. Connect platform to lift arms using platform pins. Make sure to apply grease and the O-rings before assembly.
2. Do not connect upper tilt cylinder pin. Tie tilt cylinders to lift arm to avoid dragging on the ground.
3. Support platform with forklift, overhead crane or similar device.
4. Lift platform up and support mount frame with adjustable lift table or similar.
5. Clamp 3" channel or equivalent to top surface of platform which will rest on top floor surface.
6. Slide platform and mount frame assembly under the vehicle frame.
7. Set platform so it is centered level and flush with body floor and tight against the 1/2" spacer bar or rear sill. Weld to rear sill or place weights on the channels inside the body to secure it in place.

Warning: Never work or place yourself under unsupported Platform

8. Place the mount frame in the pre-determined position, keeping the given maximum and minimum D-and E-Dimensions in mind.
9. You might have to power the lift cylinder to get the lift in correct position and in a 90-degree angle to truck bed.



Assembly measurements



* Stay always close to the measurement under the vehicle frame

Measurement always as close as possible to the chassis, without exceeding the max. D. Please refer to page 11 and 19 in the installation manual for correct mounting dimensions.

Installation Chart GPC 22 X-1 (verify arm length for correct dimensions)

Model	inch	Liftgate arm length 750 mm=29.5"	R Vehicle Max Floor height	R Vehicle Min Floor height	D Top of main beam to ground	E Top of main beam to top of floor	W Space requirement from rear of body
GPC 22 X-1	inch	29,5	51	39,5	19,5 - 28	20 – 23,5	28 – 31.5

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.

Weld requirements

⚠ WARNING

To prevent injury

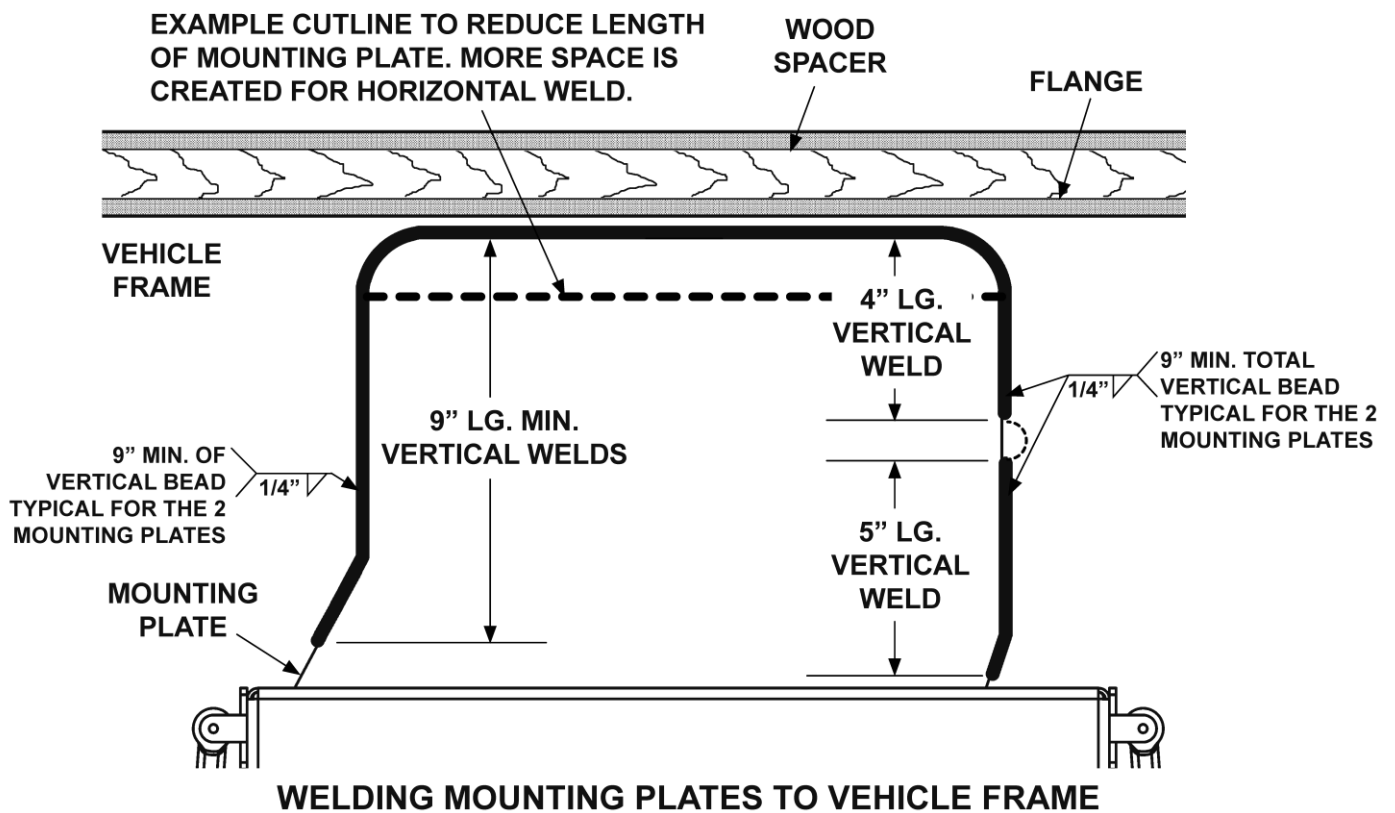
- disconnect power from battery while working under vehicle body.
- Never operate the liftgate with loaded platform until mounting plates are completely welded to the vehicle frame.
- Keep liftgate from moving out of position.

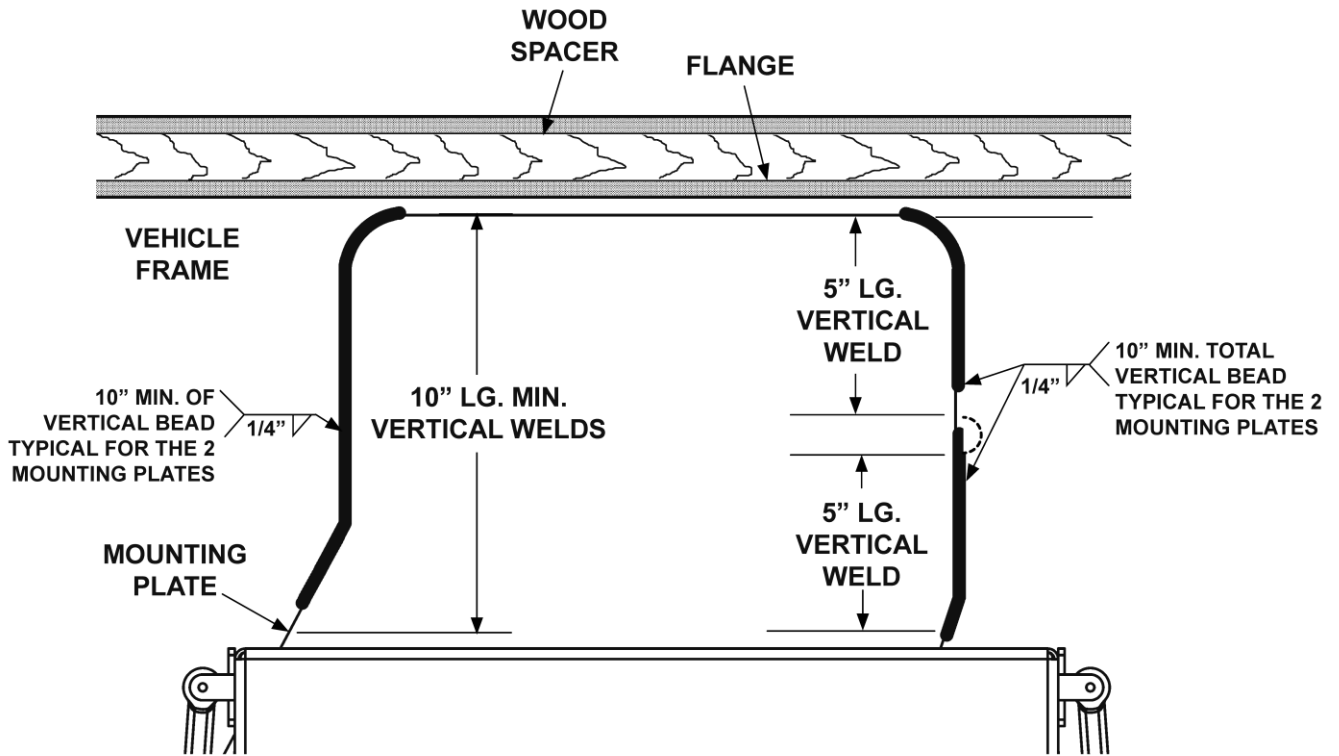
IMPORTANT

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:

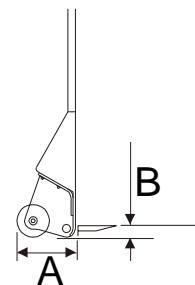
Follow the vehicle manufacturer's installation guidelines and all welding should be done in accordance to AWS welding standards.

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 22 X-1	A	B
inch	9	2 5/16

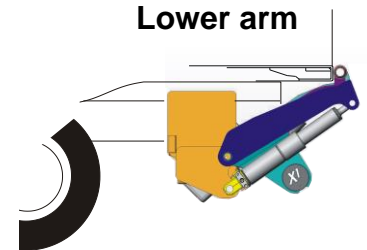
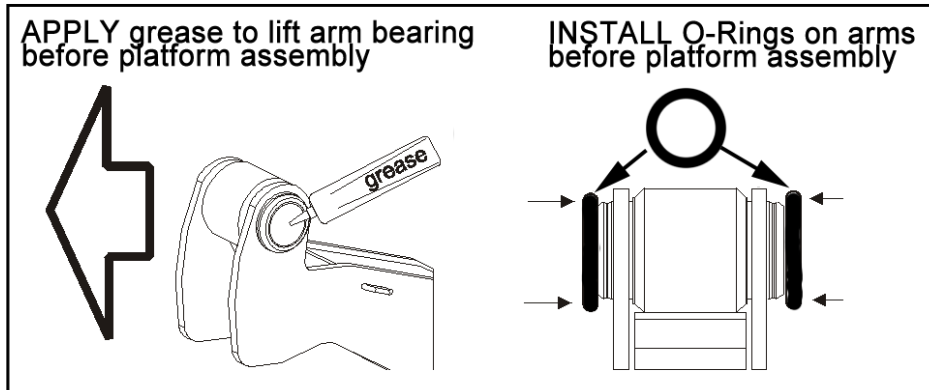


Installation of the platform

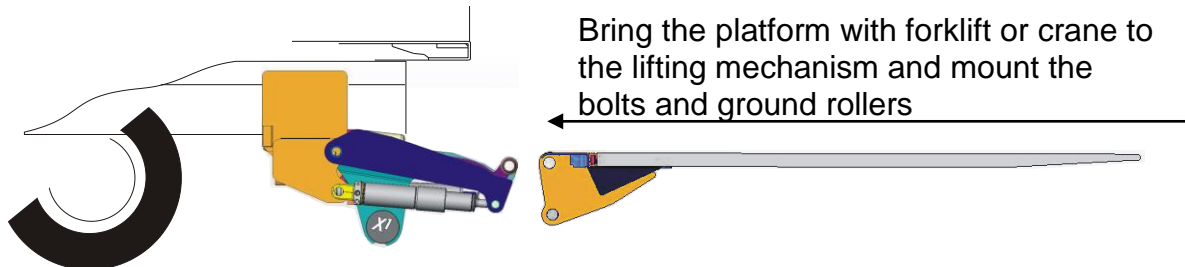
Remove the pins in the liftarm to the installation fixture. Lower the lift arm far enough down so you can install the platform.

IMPORTANT:
GREASE AND INSTALL O-RINGS
ON LIFT AND TILT CYLINDER
PIVOT POINTS

Grease the upper lift arm and tilt cylinder bearings before installing the platform pins with the special grease, part no S 20840405 supplied in the parts box



Install the O-rings before attaching the platform on the lift arm and tilt cylinders (see also page 39); Install the lift arm and the tilting cylinder bolts and platform roller assy. Torque down the fasteners (see page 38)



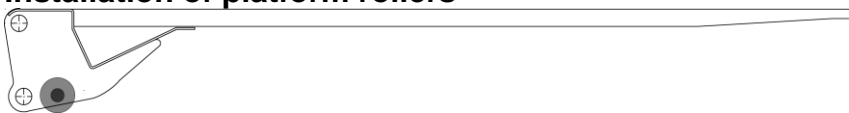
⚠ WARNING

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.

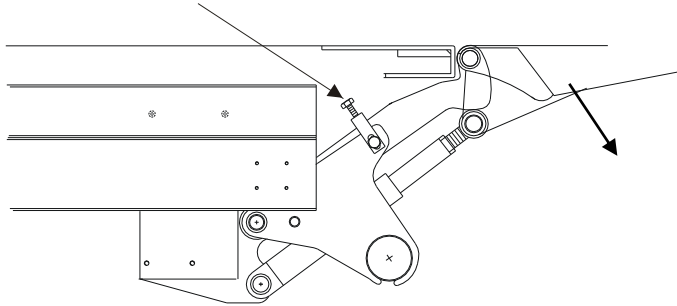
Installation of platform rollers



Install the ground rollers after lift arm and tilt cylinder pins are secured

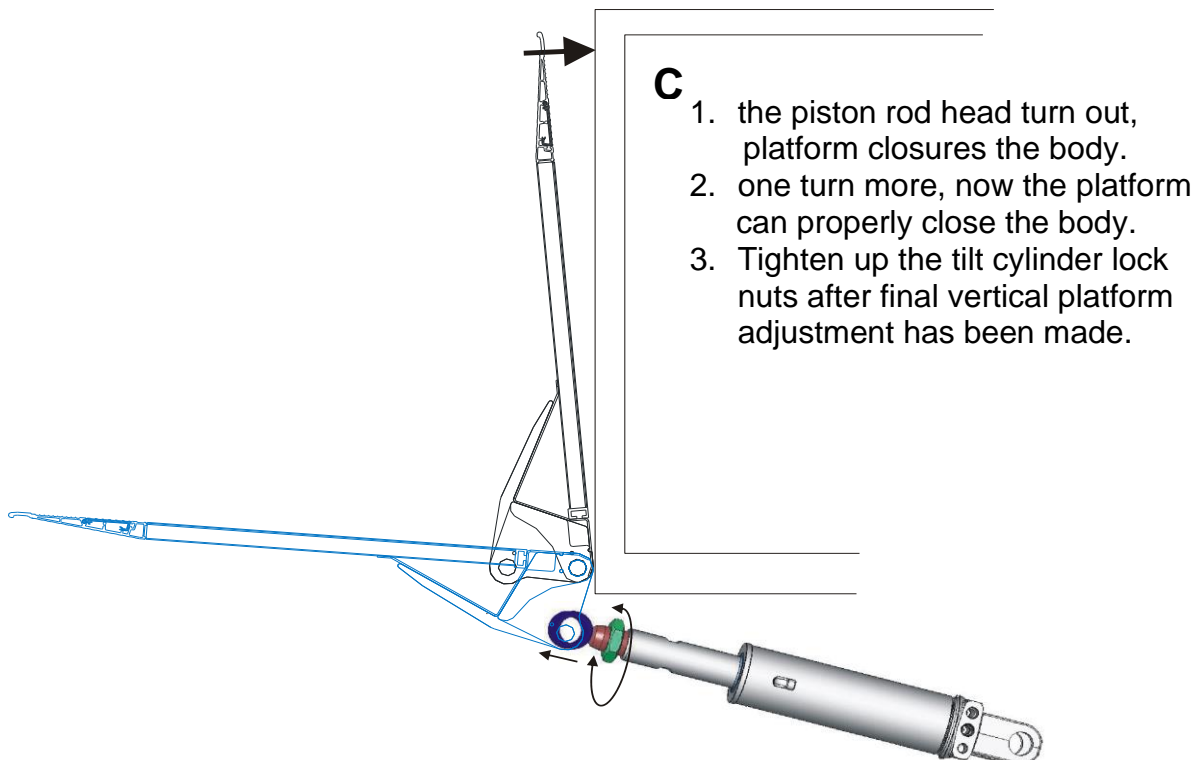
Adjustment of the platform to the vehicle bed

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.

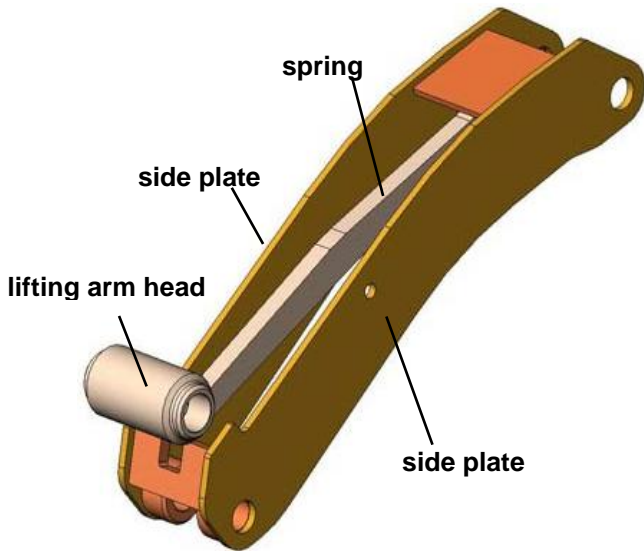


Adjustment of the platform for installation in a closed position:

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.



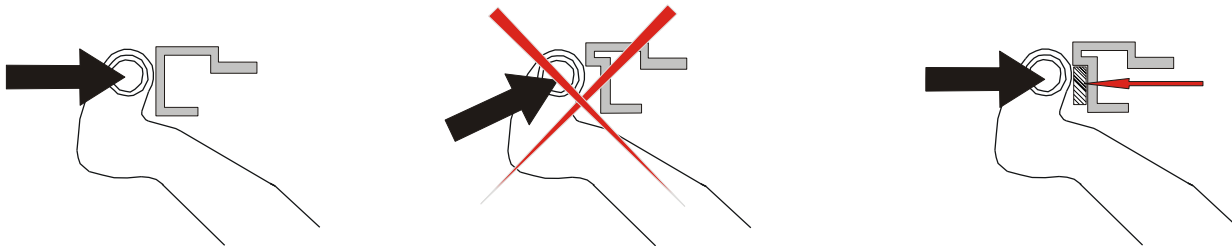
Lifting arm stop at vehicle body



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**.

Finally 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. The 0.5" x 2.5" spacer fills this purpose

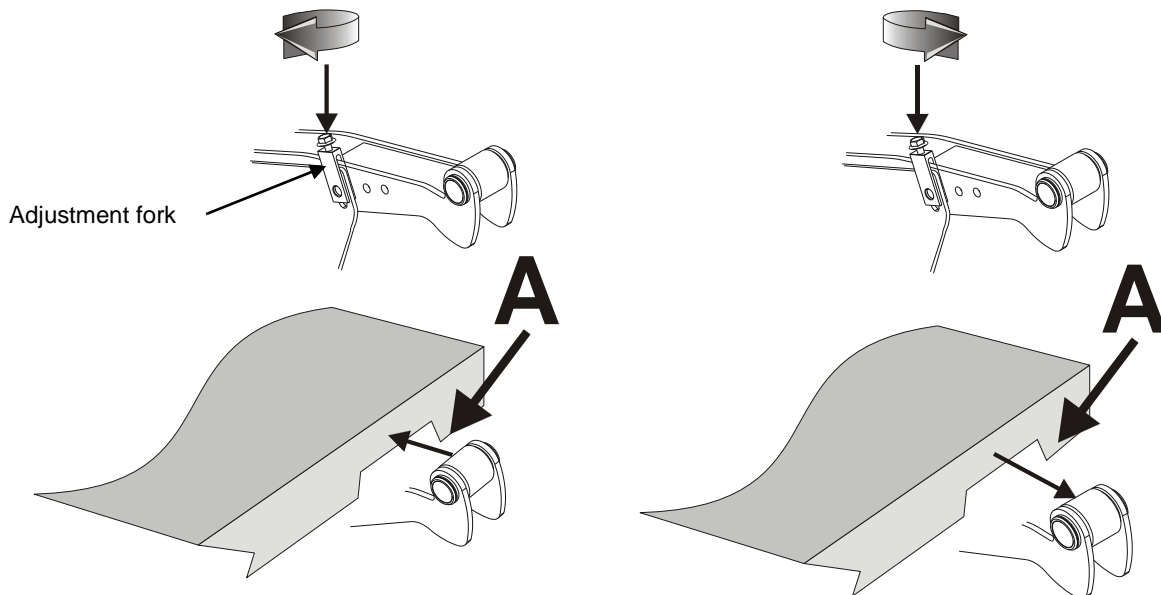


Always push the lifting arms against a plain surface. Fill any edge so that the heads always push against a plain and firm surface. The body could be lifted and the spring of the lifting arm not work properly.

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.

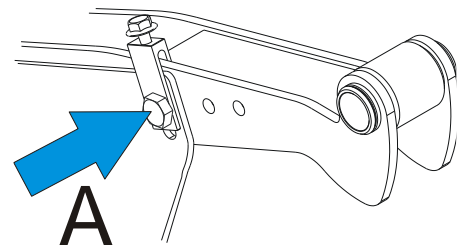


Turning the bolt clockwise the right lift arm will come closer to the body sill.

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 page 38).



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.

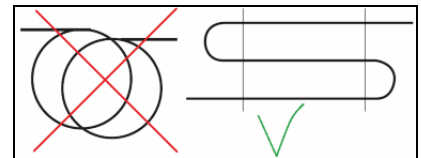
- Follow the vehicle manufacturer's instructions for correctly handling the battery connections.

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.

Battery cables can be shorten to the proper length.
12m 40' Cab shut of cable S20906975 can be shorten.



Do not cut and splice any other cables harnesses of the liftgate. Secure all cables and harnesses well using the tie supplied tie straps.

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.

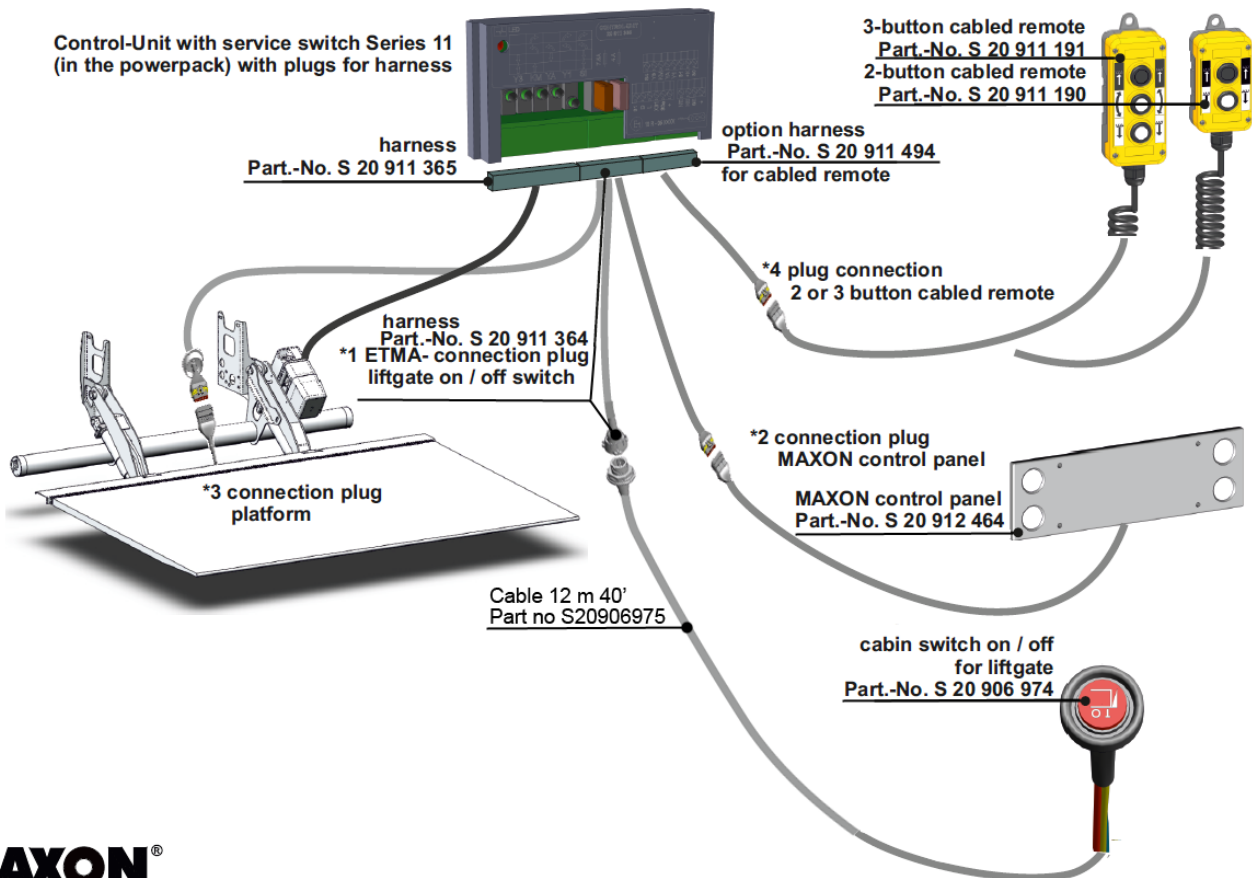
Foot control

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.

Electrical connection GPC X-1 and X-4 standard liftgate at series 11

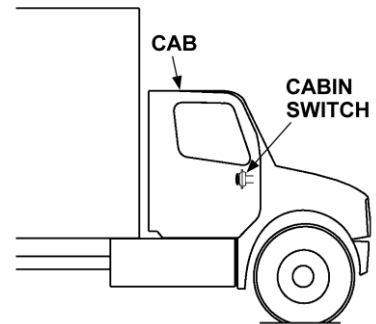


Cabin switch

⚠ 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.

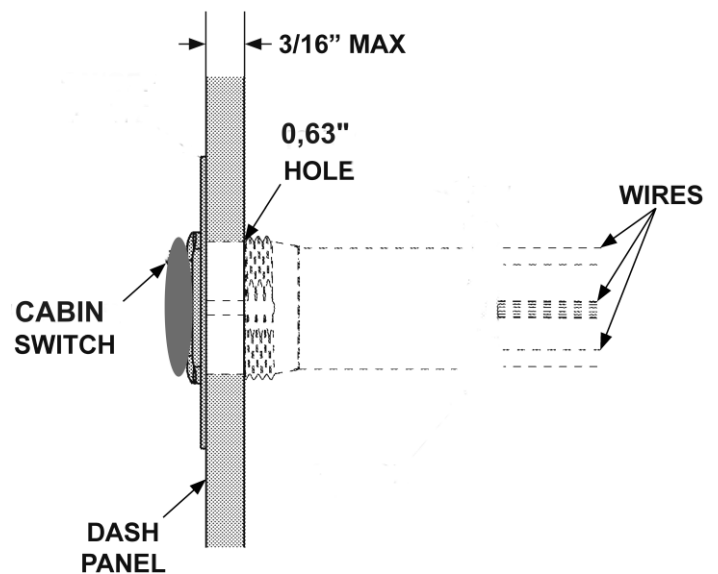
Locate accessible place for cabin on-off-switch on dash panel in vehicle cab. Mark and drill a 0,63" mounting hole in the dash panel for the on-off-switch.



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 on page 27

*1 Plug connection cabin on-off-switch

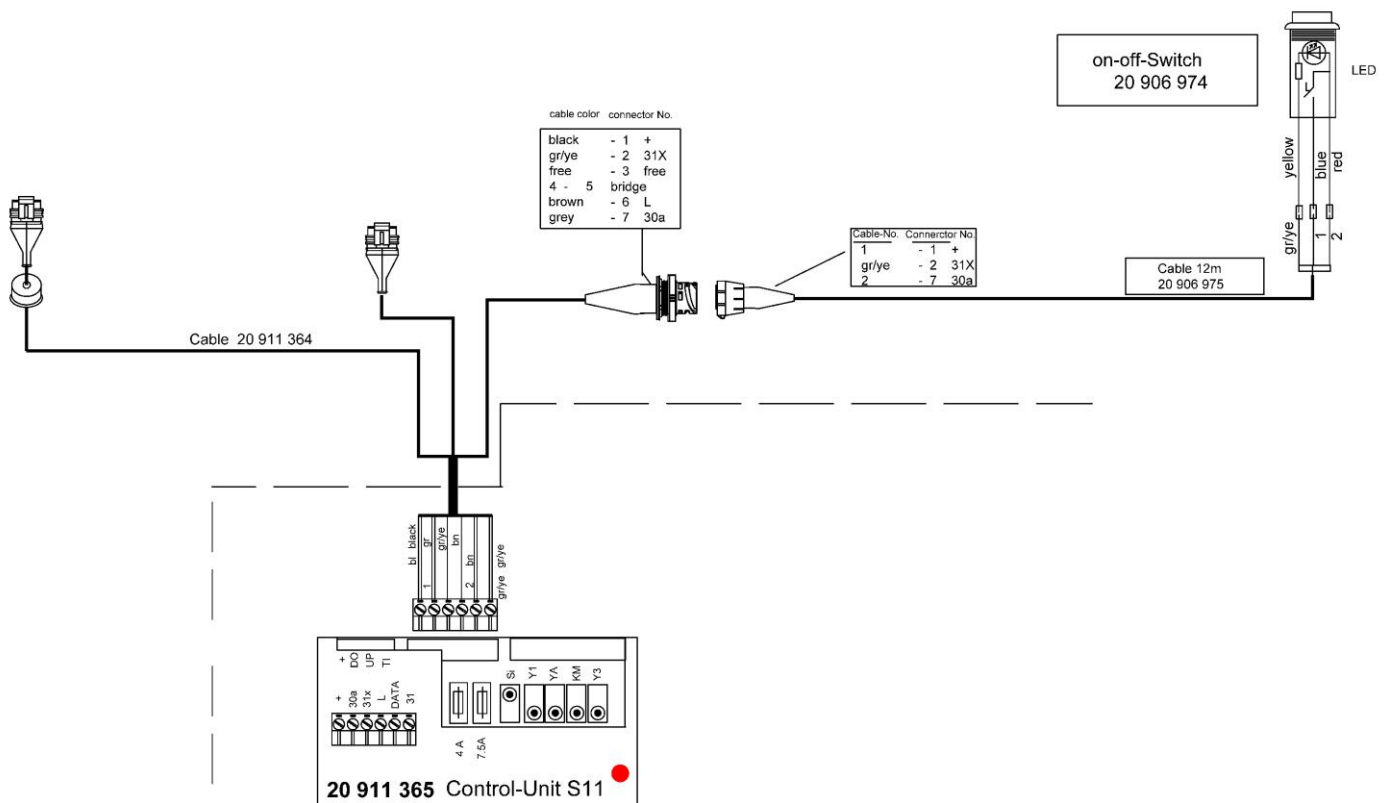
connect the cabin on-off-switch according to the wiring diagram on page 45 and 47.

Connect the wires from the cabin on-off-switch S20 906 974 to the wires of the cable S20 906 975 as follow:
 yellow with gray/yellow
 blue with 1
 red with 2

Route cable 20 906 975 to cable 20 911 364 and connect both round canon plugs (ETMA plug connection).

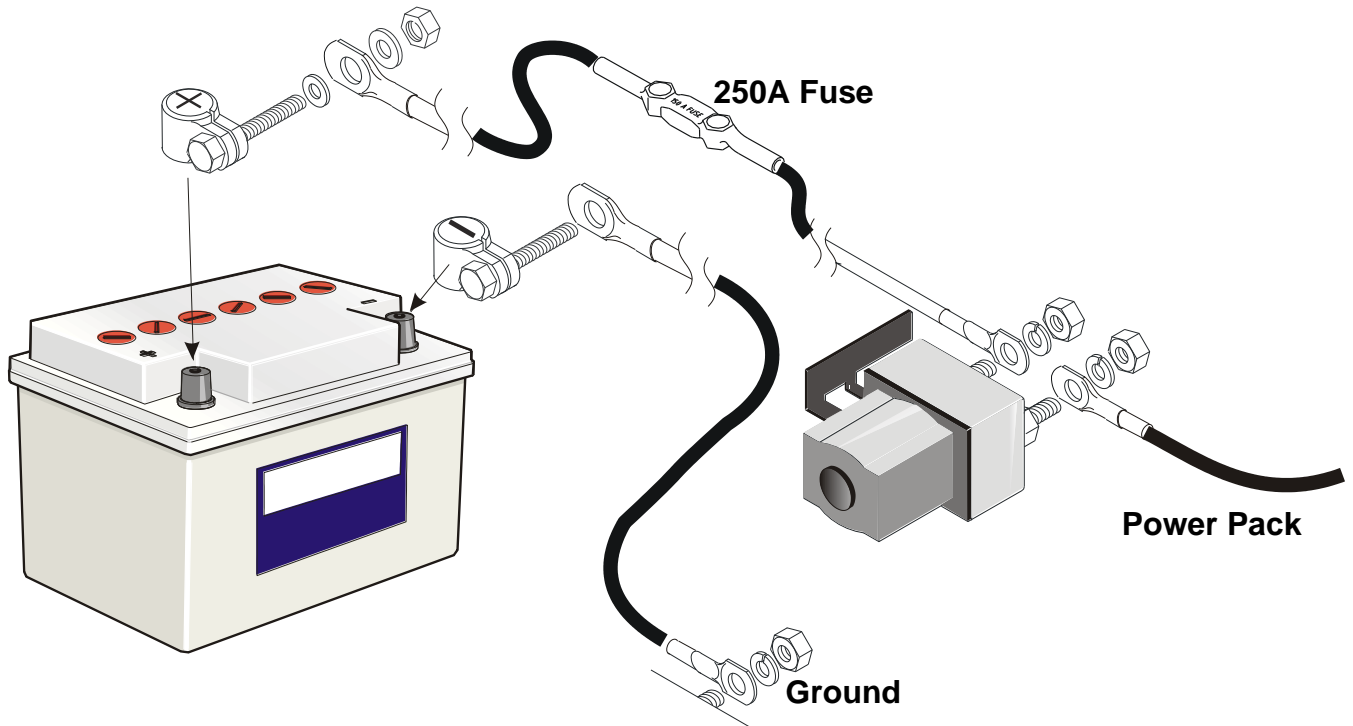
Route cable 20 911 364 to Control-Unit of the liftgate (in Power pack) and connect it. Also connect 20 911 364 to Platform sensor (Platform wire is stored inside platform large extrusion)

See also sketch of the electric circuit diagram page 45-47



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.

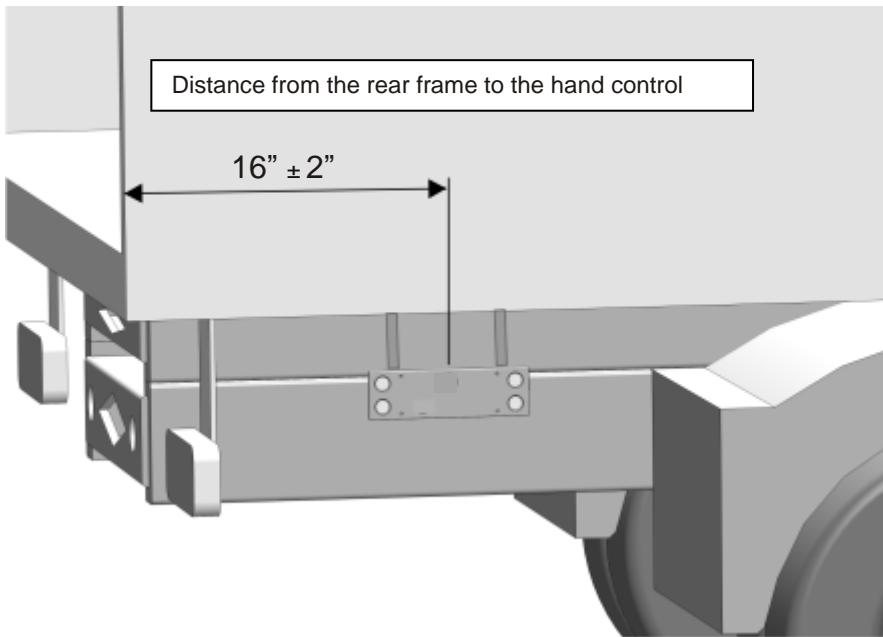
Never use a charger or start unit even provisional as this can damage relay or motor.

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

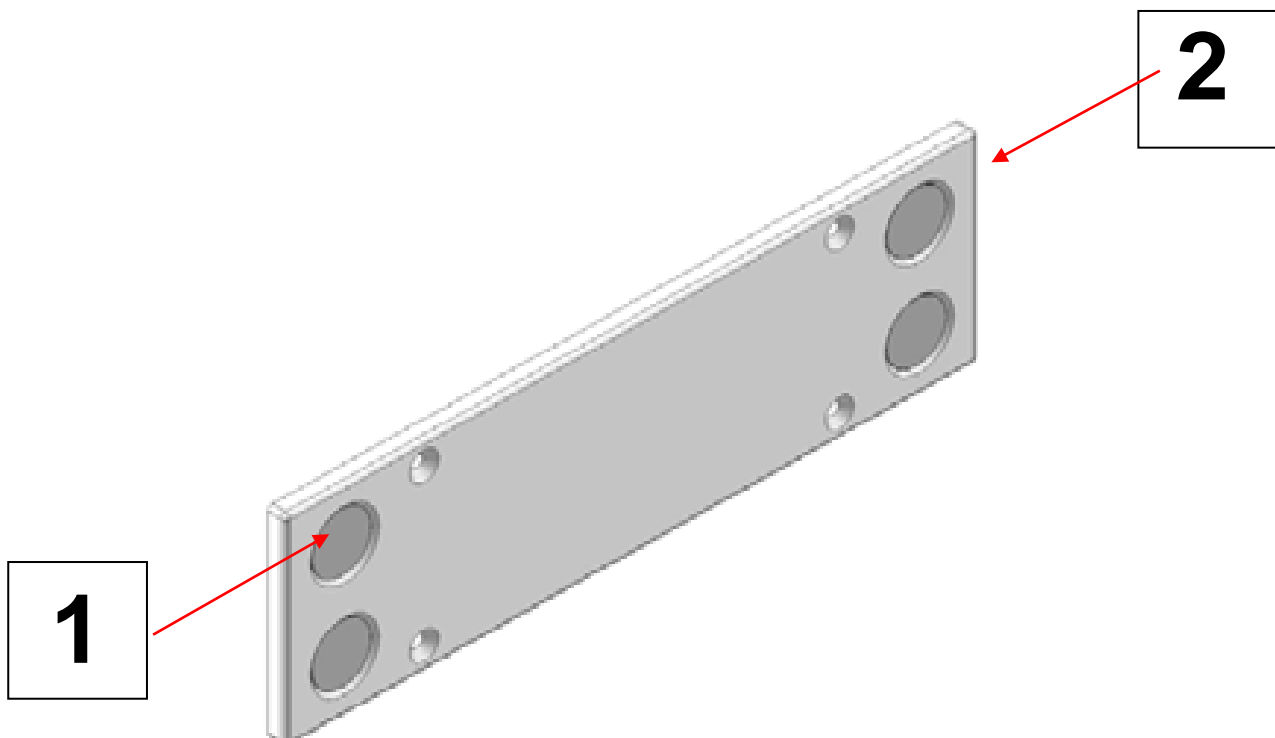
The mounting guidelines of the chassis manufacturer need to be complied with!

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:

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

IMPORTANT

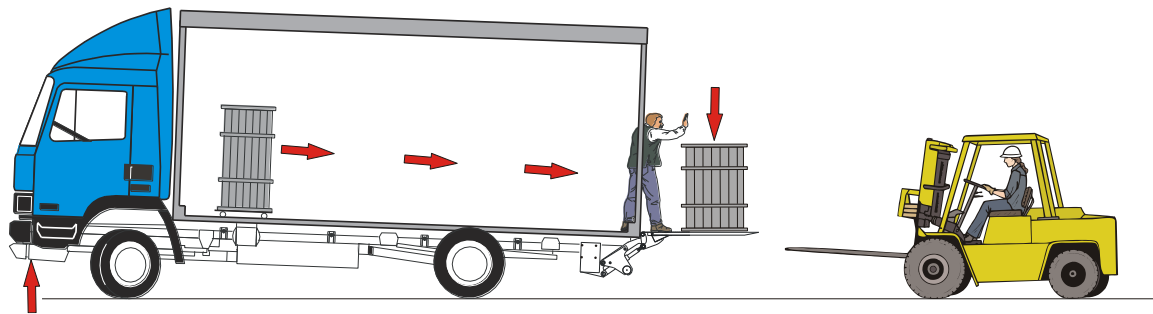
Each of the programming sequences with button 1 and then button 2 must be completed within a period of 2 seconds.

The flashing-light switches off for 5 seconds and indicates the success of the programming.

The selected platform 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**

©Sørensen 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.

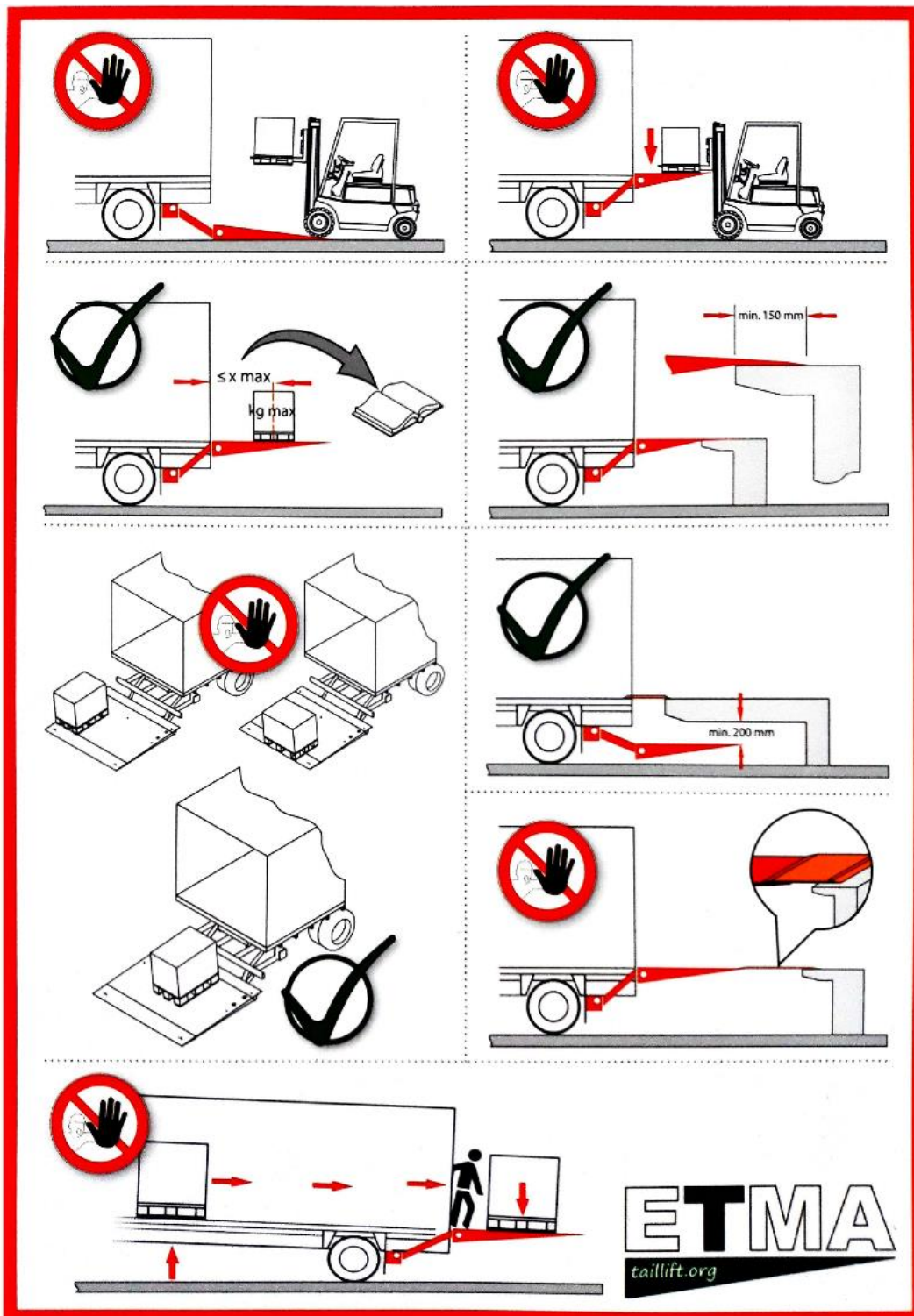
- Follow the vehicle manufacturer's installation guidelines. If necessary, install supports.

Affixing the danger notice sticker

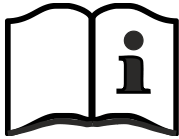
Affix the danger notice sticker "Safe handling of the liftgate."

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 15 grade hydraulic oil.

Cold weather

ISO 15 OR MIL-H-5606 HYDRAULIC FLUID	
RECOMMENDED BRANDS	PART NUMBER
CHEVRON	FLUID A, AW-MV-15
KENDALL	GLACIAL BLU
SHELL	TELLUS S2 VX 15
EXXONMOBIL	UNIVIS HVI-13

Warm weather

ISO 32 HYDRAULIC FLUID	
RECOMMENDED BRANDS	PART NUMBER
CHEVRON	HIPERSYN 32
KENDALL	GOLDEN MV
SHELL	TELLUS S2 VX 32
EXXONMOBIL	UNIVIS N-32, DTE-24

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 cylinder 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

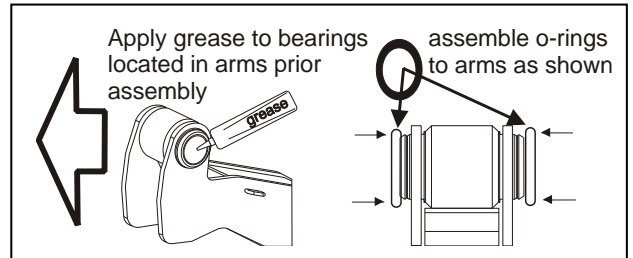
Operate all the functions to their end positions until all the safety devices respond.

Torque table for all supplied and installed bolts on Maxon liftgates

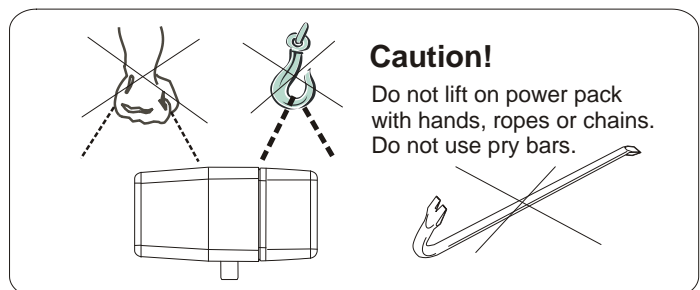
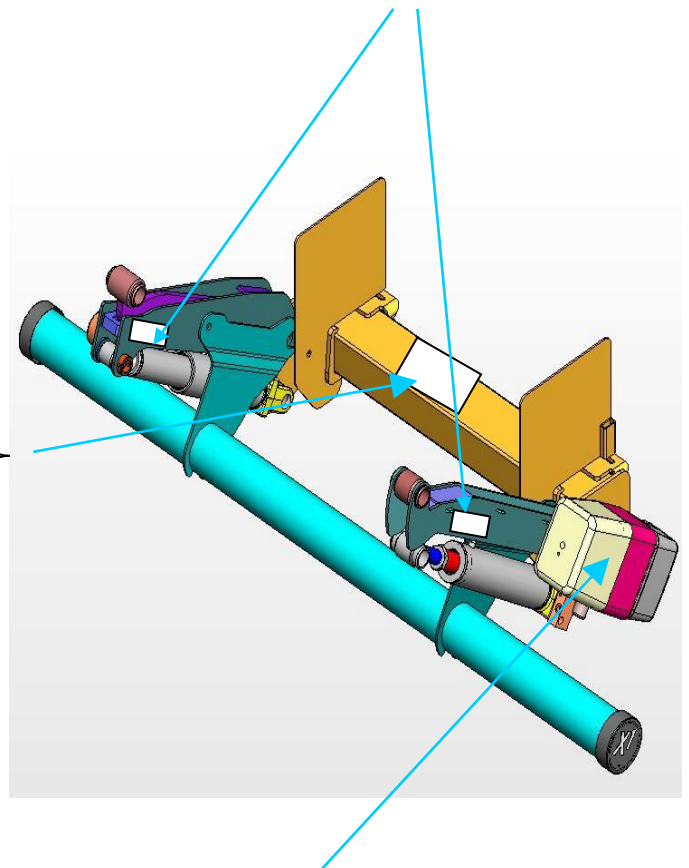
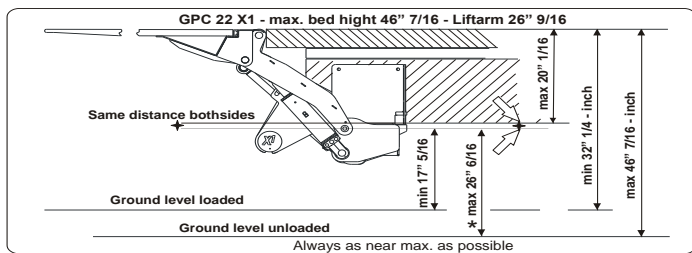
Bolt Size	Tightening Torque		Bolt Connections	Tightening Torque	
	in ft.lb	/ Nm		in ft.lb	/ Nm
8.8					
M4	2	2.7	G1/4"	29	40
M6	7	9.5	G3/8"	70	95
M8	17	23	G1/2"	96	130
M10	33	46	Connection Nuts		
M12	59	80	M16 x 1.5	44	60
M14	96	130	M18 x 1.5	44	60
M16	143	195	Plugs		
M20	283	385	G1/8"	11	15
10.9			G1/4"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

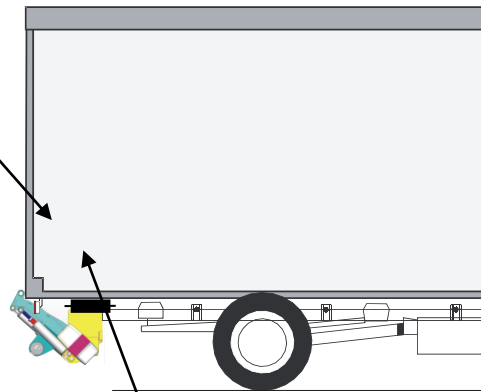


max. bed height



GPC 22 X-1

THE MAXIMUM CAPACITY OF
THIS LIFT IS
2200 POUNDS



CAUTION
STAND CLEAR
WHEN OPERATING

50092

WARNING

TILT THE PLATFORM TO
LEVEL POSITION PRIOR
TO RAISING

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

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

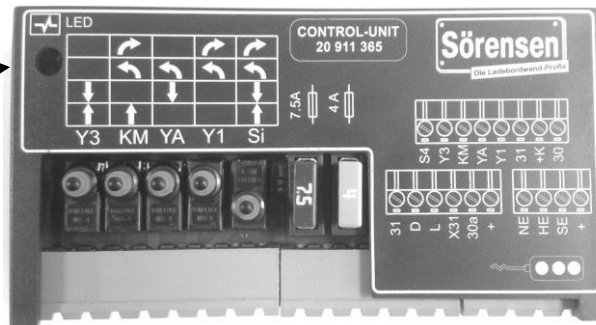
The main liftgate Control Station is normally mounted on right rear corner of the truck body.

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 diagnostics

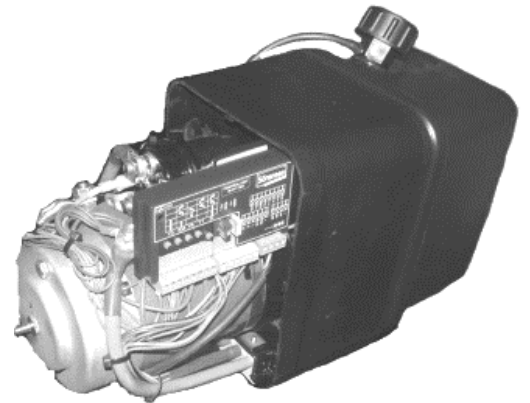


LED DIAGNOSTICS IN GPC SERIES 11 CONTROL SYSTEM ON PC-BOARD			
Checking the platform inclination sensor	LED DIAGNOSTIC LIGHT	STATUS	IF NOT PROBLEM /SOLUTION
platform closed and liftgate switched on:	ON	ELECTRIC SUPPLY OK	CHECK FUSES / BATTERY POWER
platform position 0° to about 60°	OFF	PLATFORM SENSOR S1 TRIGGERED & OK PLATFORM CORNER LIGHTS FLASHING	CHECK HARNESS / SENSOR S1
platform position 0° to -10° (platform tilted down)	ON	INCLINATION SENSOR S2 ACTIVATED & OK	
The switch occurs in horizontal position. This allows adjusting the automatic tilt inclination			
Checking the pressure switch S4:	LED DIAGNOSTIC LIGHT	STATUS	IF NOT PROBLEM /SOLUTION
lowering platform with any control buttons, but not on ground yet	BLINKING	SWITCH S4-OK	
Platform on ground, the pressure switch is triggered and the platform tilts down.	ON	SWITCH S4-OK	
Platform on ground, LED is off, then pressure switch is defective.	OFF	SWITCH S4- NOT OK	CHECK CONNECTIONS / REPLACE P-SWITCH
LED stays on when:	CAB SWITCH IS ON	PLATFORM POSITION 60° to 90°	PLATFORM POSITION 0° to -10°
LED blinking when:	CONTROLS ARE PRESSED		
LED off when:	CAB SWITCH IS OFF	PLATFORM POSITION 0° to 60°	
Platform Position Explanation:			
platform CLOSED	VERTICAL-90°		
platform OPEN	HORIZONTAL-0°		
platform tip tilted down	-10°		
Platform opened more than 30 degrees	0° to 60°		

Service Switch in series 11

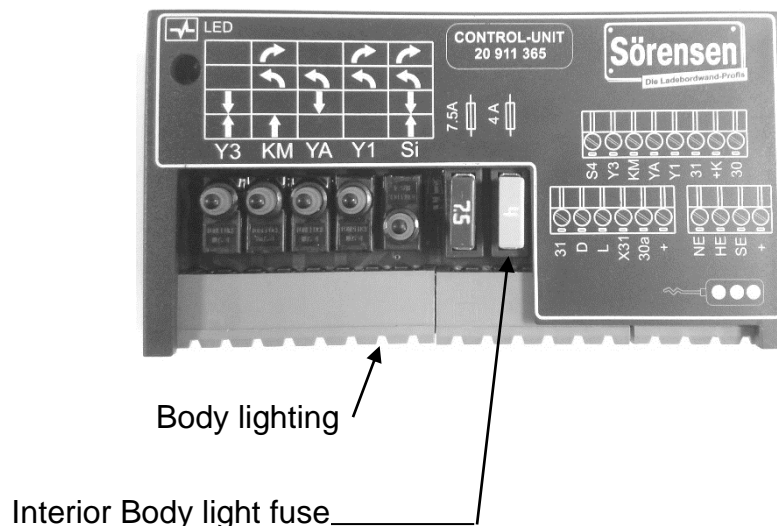
Authorized personal can use and test all liftgate functions directly with the service switch located in the power unit.

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 Amp fuse.

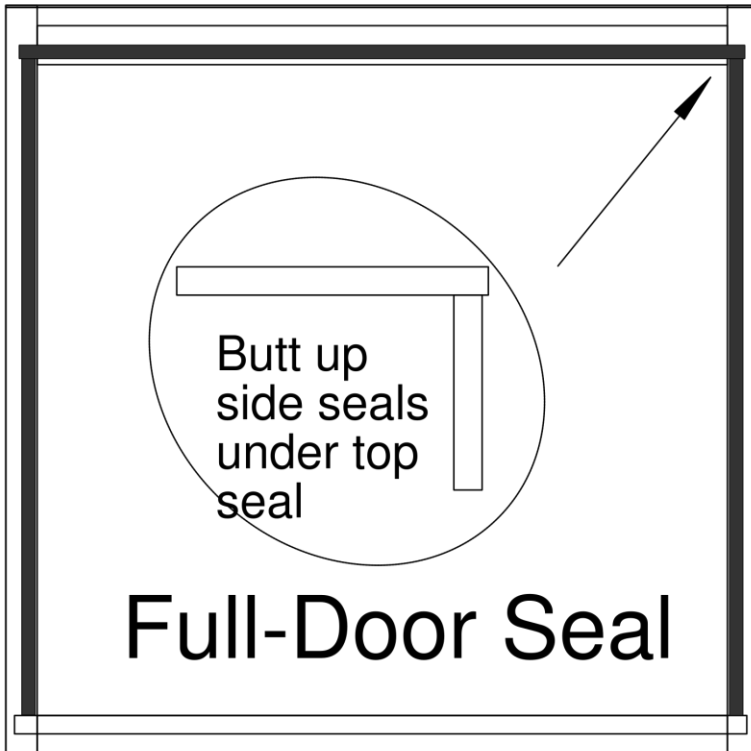


Fonction	Y3	KM	YA	Y1	Si
Lifting	•	•			•
Lowering	•		•		•
Open / tilting down		•	•	•	•
Closing / tilting up		•		•	•

Please respect the sequence, KM always last

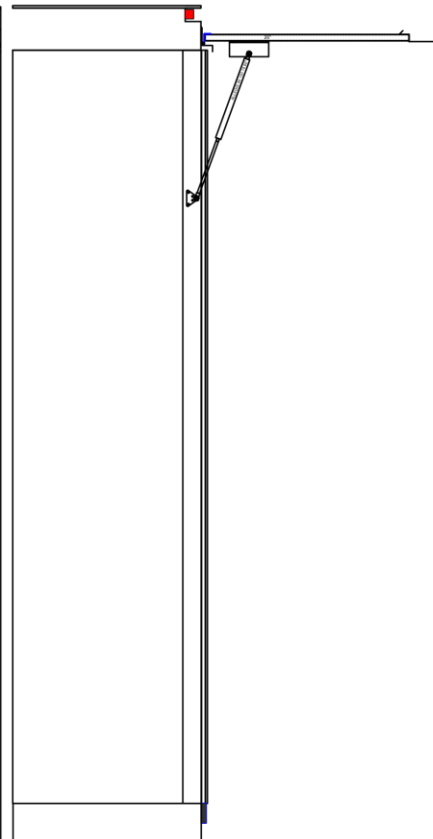
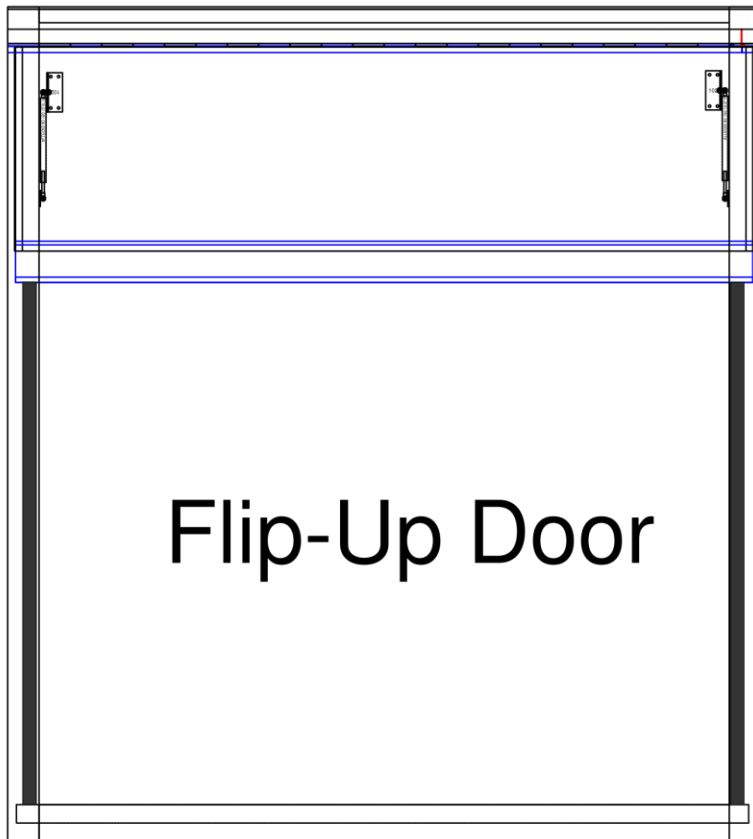
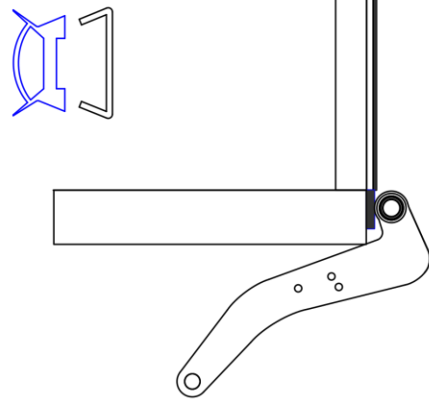
Body Seal Kit's

BODY SEAL KIT'S

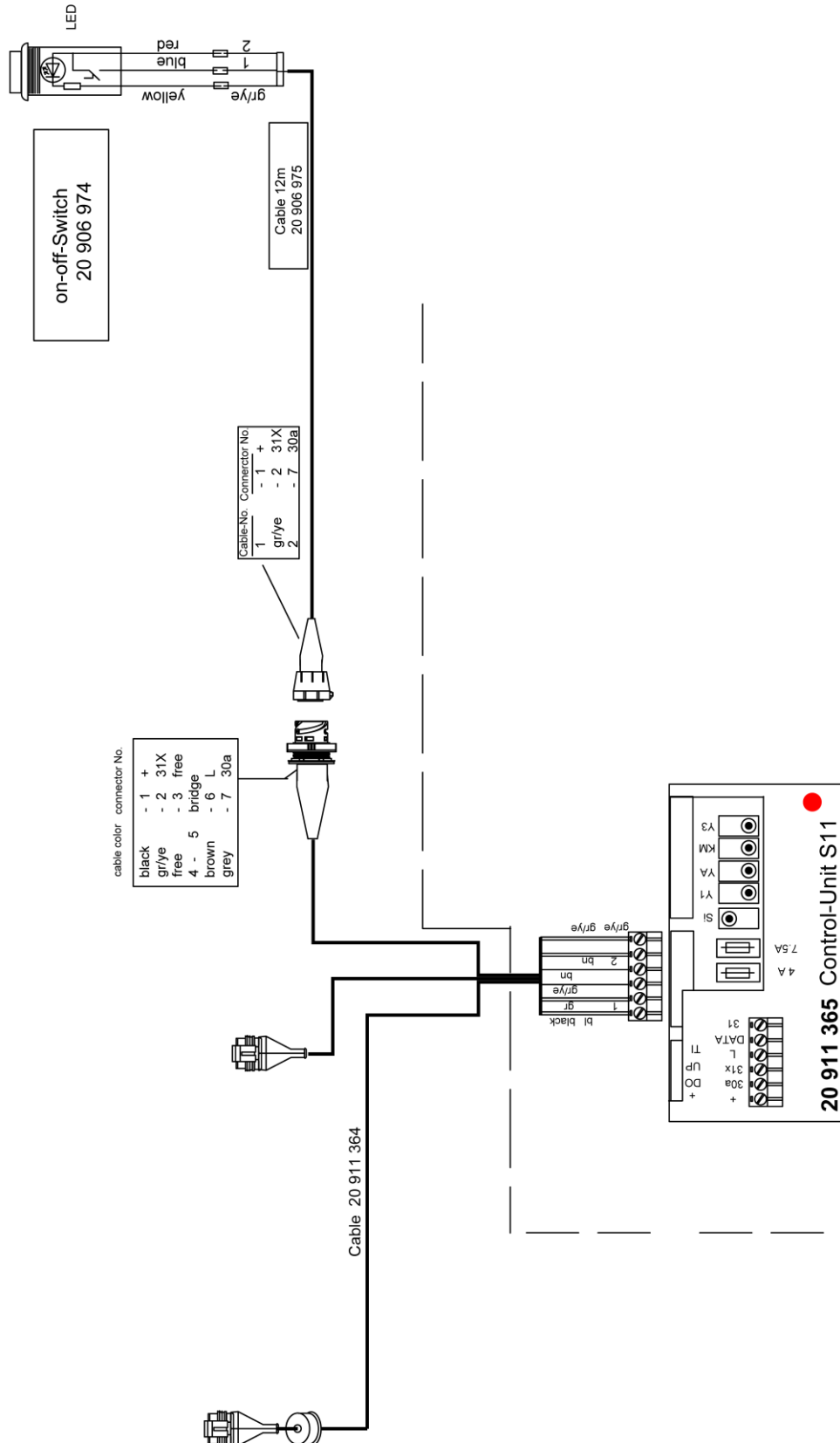


Flip-Up Door kit
2 ea. 108" steel channels
2 ea. 108" side seals
1 ea Door Panel with
gas shocks and hardware

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



On- Off-Switch diagram



Optional foot control diagram

