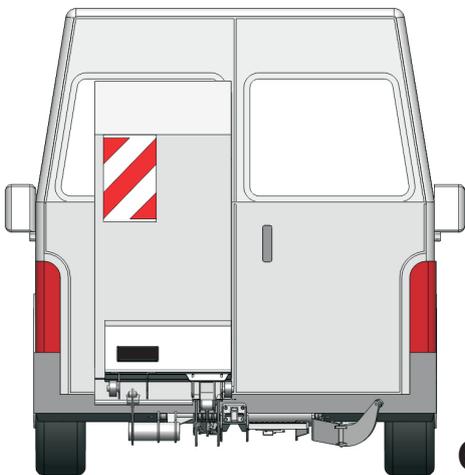
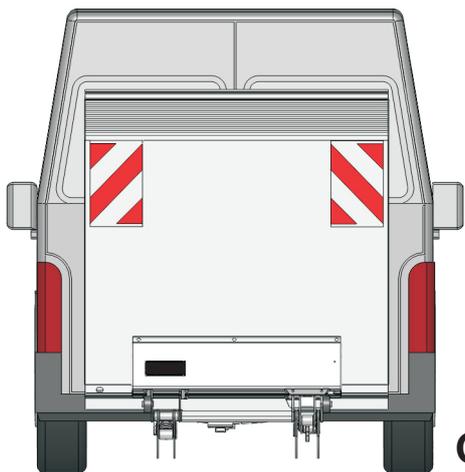


MAXON®

GPC liftgate Operator`s Manual



GPC X1-LDF



GPC X1-LD

MAXON®
Lift CORP.

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Santa Fe Springs, CA 90670
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GPC X1-LDF
GPC X1-LD
Series up to 10

X1
TECHNOLOGY

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2015

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This users manual is valid for the following liftgates:

GPC X1-LD, GPC X1-LDF

General

Read this users manual carefully, before using the liftgate. The hand book shall make you familiar with the way the liftgate is working, and warn for malpractice. The instructions contained therein are issued for security reasons, and for better conservation of the product. The MAXON - liftgate may only be used for lifting and lowering loads, that must be placed according to the loading diagram. The lifting ability of the liftgate can be seen in the loading diagram on page 8.

The liftgate may only be used, maintained and repaired by personal that have an appropriate briefing about the mechanics of the device, and the dangers connected to the use of the device. All regulations for prevention of accidents must be complied to. The essential provisions are printed in the check book of this liftgate. The checkbook is a part of this users manual.

Is the liftgate is operated by untrained personal, hazards for the operator as well as other persons can occur. All safety regulations must be complied to.

It is not allowed to make any changes on the liftgate without prior written approval from the constructing department of MAXON. Only original spare parts are may be used for repair of the liftgate. MAXON is not liable for damages which occur through not compliance with the prescribed directions in the users manual

The users manual shall therefore be kept in the cabin of the vehicle, so it is possible to look into it for instruction. The liftgate production number is necessary for ordering spare parts, to make warranty claims or obtain technical information. You will find the liftgate production number on the name plate located on the tilt arm. A second nameplate is located on the inside of the power pack cover. Further more the number is engraved in the left main mounting flange.

Description of the MAXON liftgate

You have decided to purchase a liftgate of top quality. MAXON liftgates comply with the EG Maschinenrichtlinie 2008/42/EG, as well as DIN EN 1756 – 1.

The MAXON – liftgate is very undemanding. It has maintenance free bushings and must not be greased through out its lifetime.

Electric system/operating unit

The controlling of the different functions are done with the very flat control panel page 15.

Foot controls

With the foot controls located on the platform, the liftgate can be lowered to the ground and can be lifted to the height of the vehicle floor. The tilt-down and tilt-up at the ground are automatic.

Priority controlling

The foot control is a priority controlling. Are the liftgate operated with the foot controls then (the control panel, and the cabled remote) is electrical blocked.

Hydraulic

The liftgate are driven with a power pack unit which are is mounted directly on the tilt cylinder or on the main frame of the liftgate. With this the liftgate can be driven in any wanted position over the lift and tilt cylinder. The cylinder rods are nitrated.

Main frame

The main frame as well as the other steel parts are painted black (RAL 9005). The installation brackets are mounted in the right position for the type of vehicle present. Every new type of liftgate is driven 80.000 cycles in a long time test, before given free for sale.

Platform

The platform is made with aluminum extrusions which are clipped together and welded to a cross extrusion with the platform tip to obtain high stability.

Daily visual inspections

Function and completeness of the operation- and Safety devices

Readability of control and instruction signs

Damages and completeness of pins and pin locks.

Damages and tightness of hydraulic hoses, fittings valves

On the cylinders

Damages and function of event flashlights

Main switch (special equipment) must be tested for function

Any lack must instantly be fixed, and any missing parts must be replaced!

The operator is responsible for the timely maintenance and repair of detected errors!

The users manual must always be available in the vehicle!

Repairs may only be made with original spare parts!

Annual inspection

After taking the liftgate in use, it must be inspected by a expert at least 1 time in a year.

The results must be notated in the check book of the liftgate.

Battery capacity

The battery capacity for the use of liftgates are normally prescribed by the vehicle producer, please always comply to the vehicle manufacturers installation guidelines.

Our recommendation for the battery capacity:

To build in a stronger generator and an extra battery is basically recommended. The user are responsible for the charging level of the battery.

Capacity 1320 lbs (600 kg)	12 Volt - 1 x 88 Ah	
----------------------------	---------------------	--

The electro motor

The Electro motor of the power pack has depending on capacity an input of 0,8 KW till 3KW.

That gives by full voltage:

12 Volt a current of 150 A. Is the voltage lowered to 9 volt, the current will double to 300 A.

This high current at low voltage results in excessive-heating of the copper winding. The result is that the protective lacquer melts, which can lead to a short-circuit and event a burned motor.

Like this you can prevent

You can avoid damages to the motor and the motor relay, if you always have sufficient voltage on the battery. If you experience that the motor has problems lifting a load that normally is no problem, then immediately stop the action and take care that the battery are charged.

If you realize that the batteries are running out of power too soon, than let an expert examine the batteries and the cables leading to the power pack. Possibly the cables + and ground must be changed.

Take care that the charging fazes for the batteries are sufficient between the single loadings or unloading.

Handling and behavior during the operation

- (1) Liftgates may not be loaded with a higher load than its allowed max. load. (Always take care that the loading distance is correct)
- (2) Loads shall be placed in a way, that unwanted position changes do not occur.
- (3) Entering and leaving the platform must be done over the allowed ways..
- (4) Liftgates may only be controlled from the control positions meant be used for controlling.
- (5) The operator must by all movements of the liftgate take care that he/she or other persons are not at any risk.
- (6) Unnecessary stay on or in the range of motion of the platform, are prohibited.

Un-allowed is further more:

1. Stay under the load handling attachments
2. To step on the load handling attachments
3. To be more persons than the operator on the platform by moving.
4. Use of the liftgate for purposes which it is not designed for.
- (7) Moving liftgates are only to be driven with, when the platform is in the driving position.
- (8) The platform may not be put in movements, which may lead to getting thrown off.

Closing down the liftgate

When power driven liftgates are taken out of use, they shall be secured against un-allowed use.

Maintenance

- (1) Before doing maintenance on elevated parts of the liftgate, these parts must be secured against unwanted movements.
 - (2) To prevent a falling down or a sinking down of the platform all bearing elements, power pack and safety devices as well as the hydraulic connections are to be examined, and defect parts must be renewed. (3) Hydraulic hoses shall be renewed when necessary – though latest after 6 years.
- The changes of the hydraulic hoses as well as other maintenance made, must be noted in the check book of the liftgate.

Use

The Maxon liftgate are designed for lifting and lowering loads. It may only be operated by one person, and only one person are allowed to drive on the platform.

General instructions

When the liftgate are in use, it must be secured that the vehicle does not make any unwanted movements. The liftgate must be observed during all functions that can be driven from the control system.

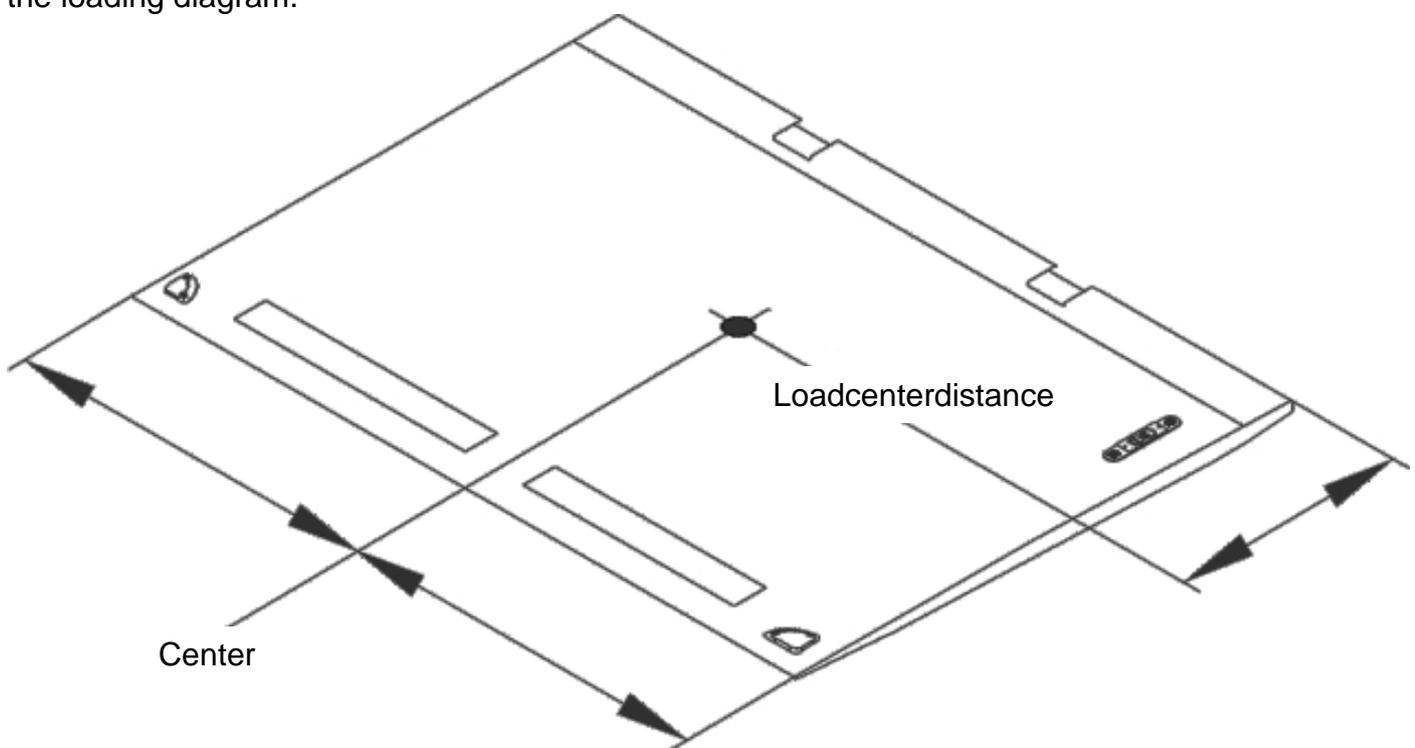
The complete working area of the liftgate must be kept free of persons or objects. Special attention shall be given to the squish and shear area between platform and body, as well the area between the platform and the ground.

Allowed load

The max. load of the liftgate may not be exceeded. Be aware of the loading diagram on the name plate. The one side load is 50 % of the max. load of the liftgate. The load center shall be kept as central as possible between the lifting arms. The bigger the loading distance is. The lower is the allowed load.

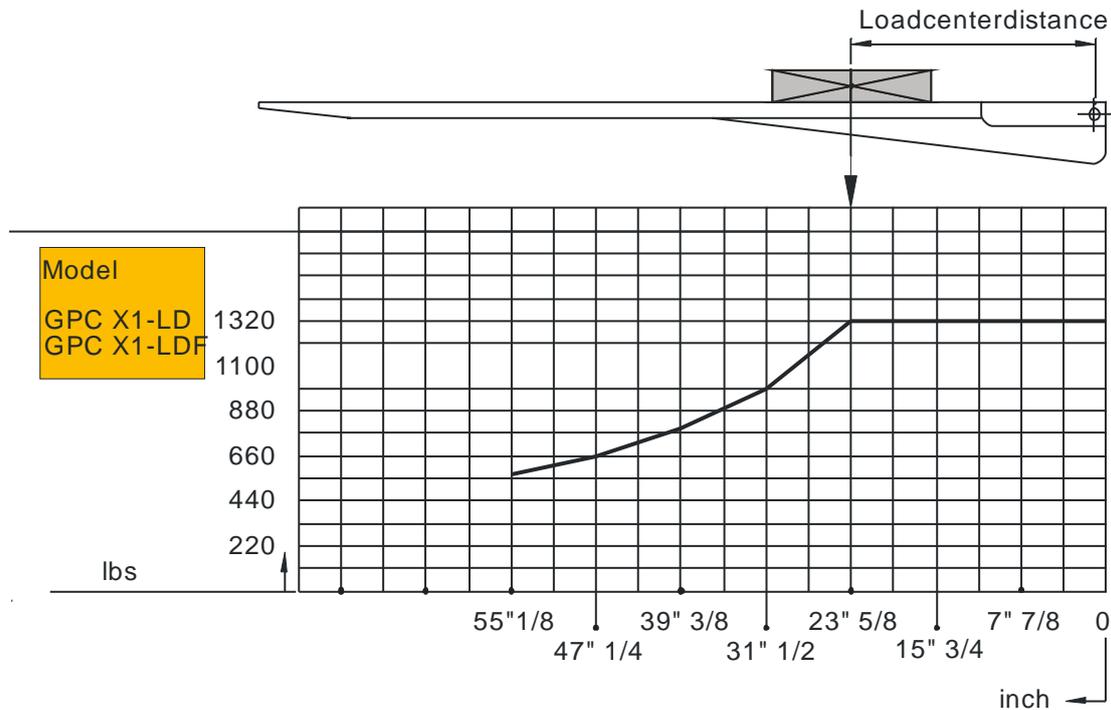
Driving loads on to the platform from the vehicle floor

Safeguarding against loads that are larger than the max. loads or loads which is not placed in the correct loading distance and loads driven from the vehicle to the platform, is impossible. An overload like this can lead to a break down of the platform. It is the operator responsibility that the platform are not loaded with loads, that exceed the allowed loads in the loading diagram.



Loading diagram / capacity

In addition to the operating instructions, the liftgate loading diagram is also shown on its identification plate. The load's centre of gravity should be in the middle between the lift arms. The greater the distance of the load from the end of the flatbed, the lower the loading capacity.

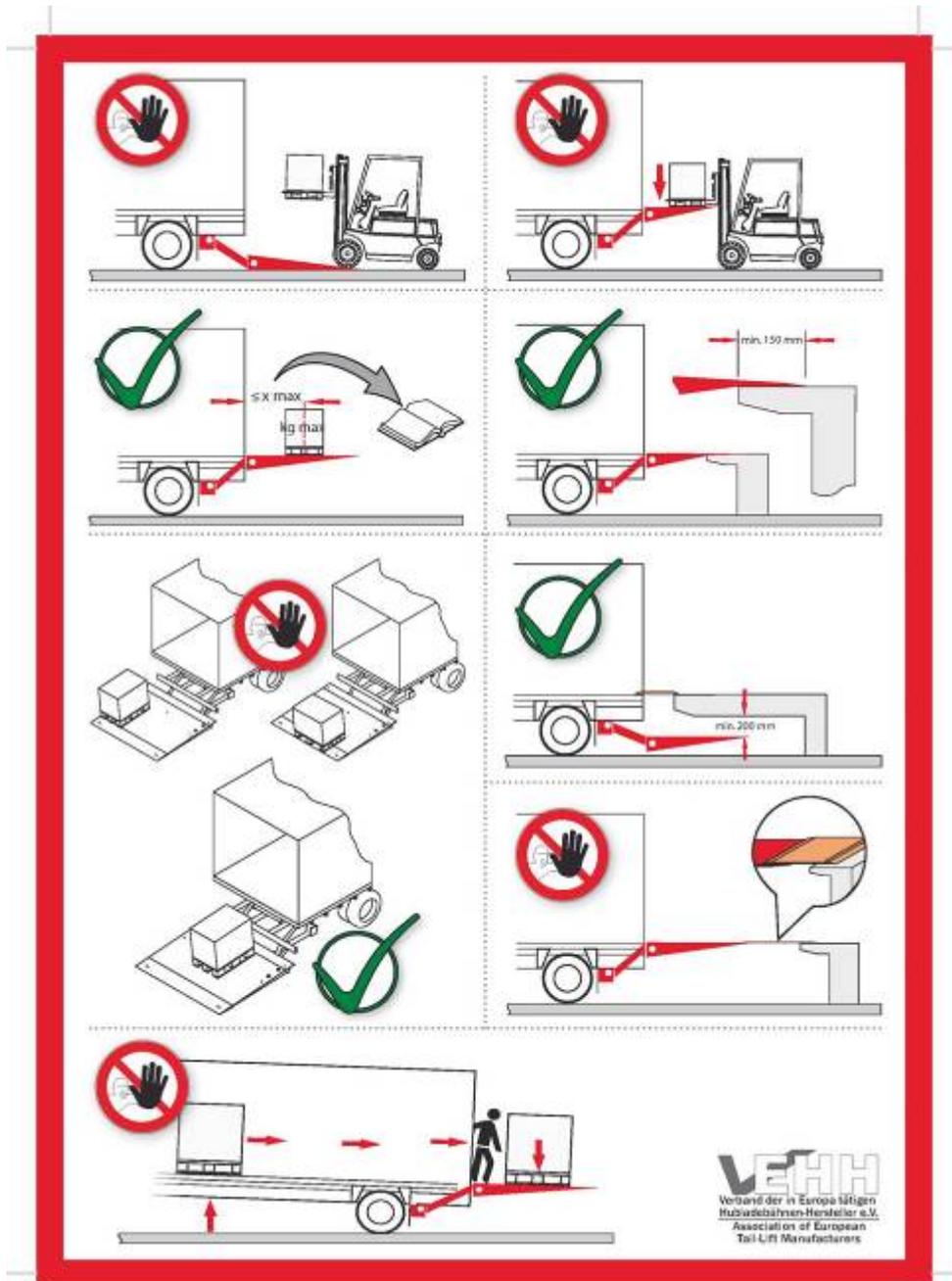


The maximum loading capacity specified in the loading diagram must not be exceeded. The platform may not be used as a bridge plate.

Drive only the functions lifting and lowering when the platform is horizontal. The platform may not be tilted down, when loaded and in elated condition.

Danger clue – Sticker “safe handling of the liftgate”

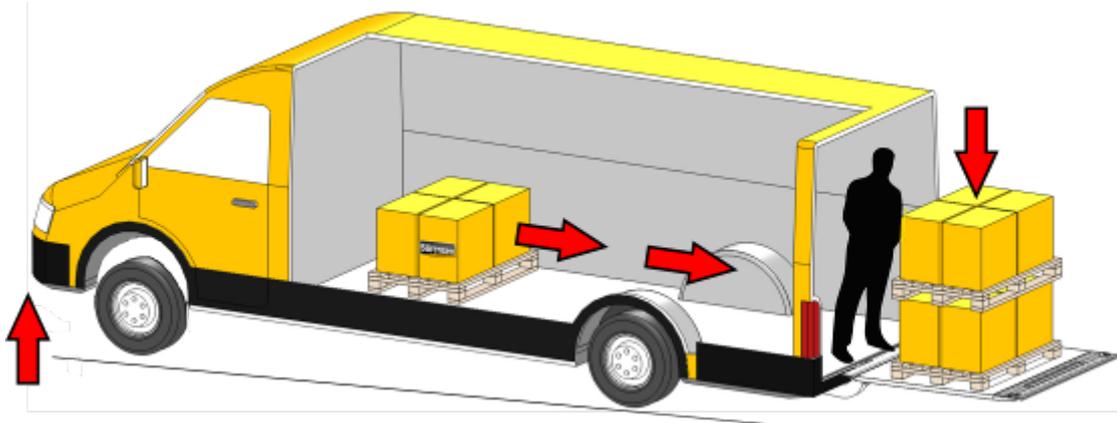
The sticker is delivered with all new liftgates and must be placed on a visible place on the inside of the rear part of the vehicle. The danger clue – sticker shows possible falls actions and right actions in the single pictograms.



This sticker can be ordered under the part number S 20 909 238.

Danger instruction about unsecured load

Under very unfavorable conditions there is by loading and unloading over a liftgates platform, a risk that the front axes are lifted. The sloping of the vehicle can lead to movements of not secured loads, which can lead to personal risks.



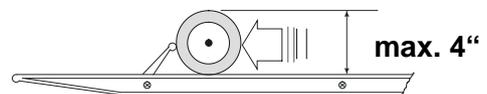
Rolling loads

Rolling or slippery goods must be secured on the platform. Without cart-stops it is not allowed to have rolling loads on the platform.

MAXON liftgates can if wanted be equipped with cart-stops, (wheels with maximum diameter 4") are safely secured.



Be aware of the safety instruction about unsecured load, by especially liftgates without support legs.



Description of the safety

Hose break valves

If a hose bursts, or a tube or a fitting breaks, the liftgate will, according to valid norm, lower the platform in a controlled way, with the allowed speed, as long as one of the functions on the controls are activated. Are no function then activated anymore the liftgate will stop immediately.

Safety valve

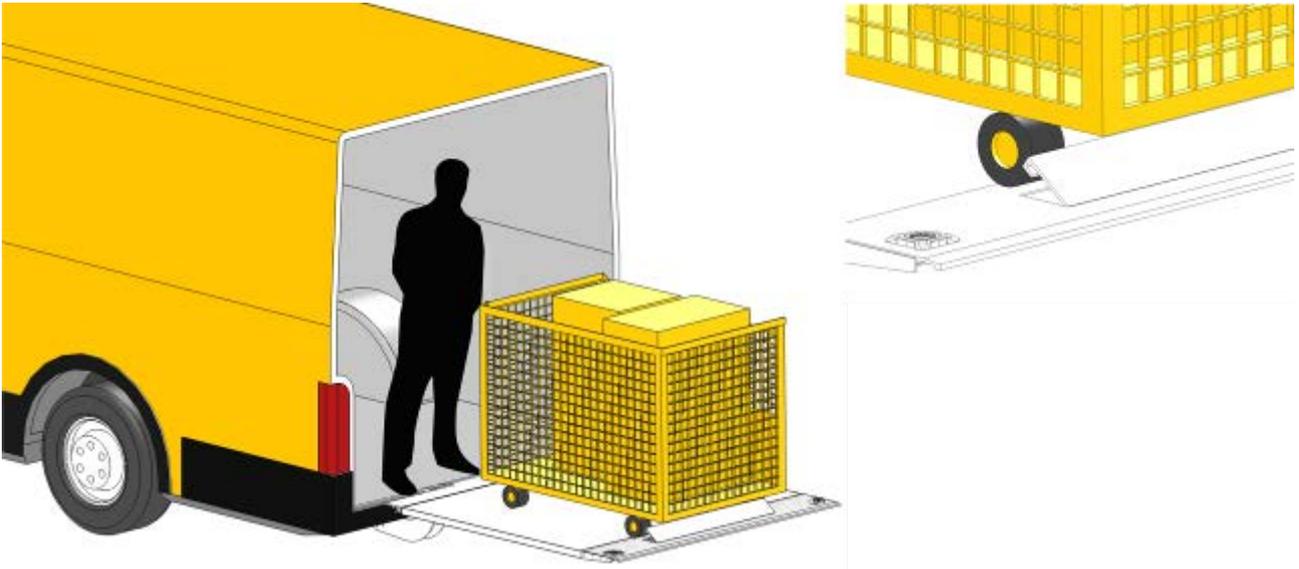
The liftgate is limited with a safety valve to lift only the max. permitted load. This valve is pre-adjusted from the factory, and adjustment of it is only permitted for experts by using a test weight and a manometer.

Electric fuses

Defect fuses are only to be renewed with fuses that have the values defined in the wiring diagram, and the on control unit. Larger fuses can lead to cable fire.

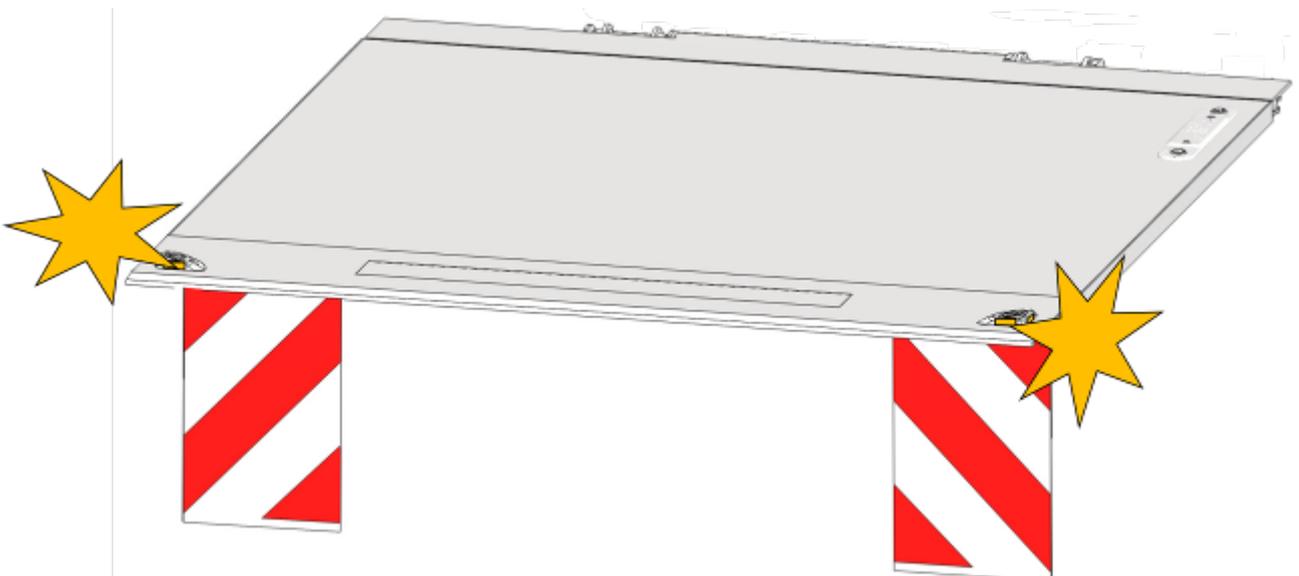
Cart stops

Are roll-container used, the liftgate must be equipped with cart stops. The function of the cart stops can be limited by dirt. The operator shall always keep these safety devices clean.



Warning markings and flashlights

The liftgates platform can be equipped with warning marks and/or with flashlights. These safety devices must always be functionally and be kept clean.



Safety instructions for the function Driving on the platform

By loading the platform it must be secured that there are sufficient room left on the platform so that the operator can drive along on the platform and operate the liftgate.

Only the operator are permitted to drive on the platform.



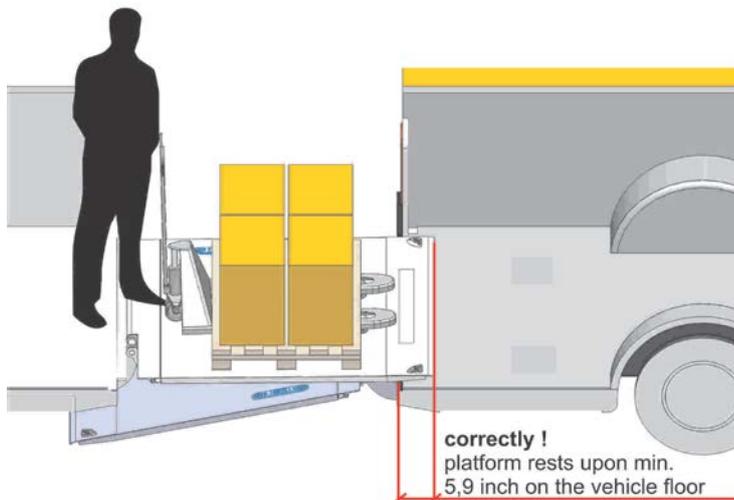
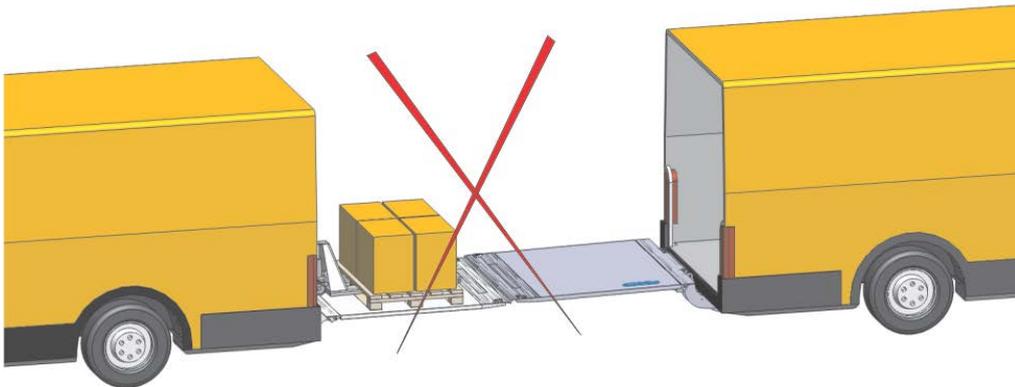
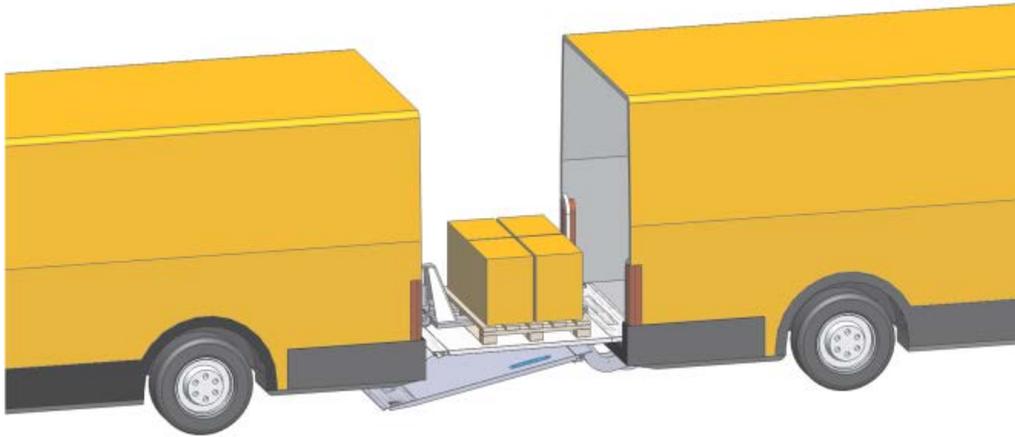
Securing load

Make sure that the load are secured against slipping and tipping!

An elevated platform may not be tilted down.

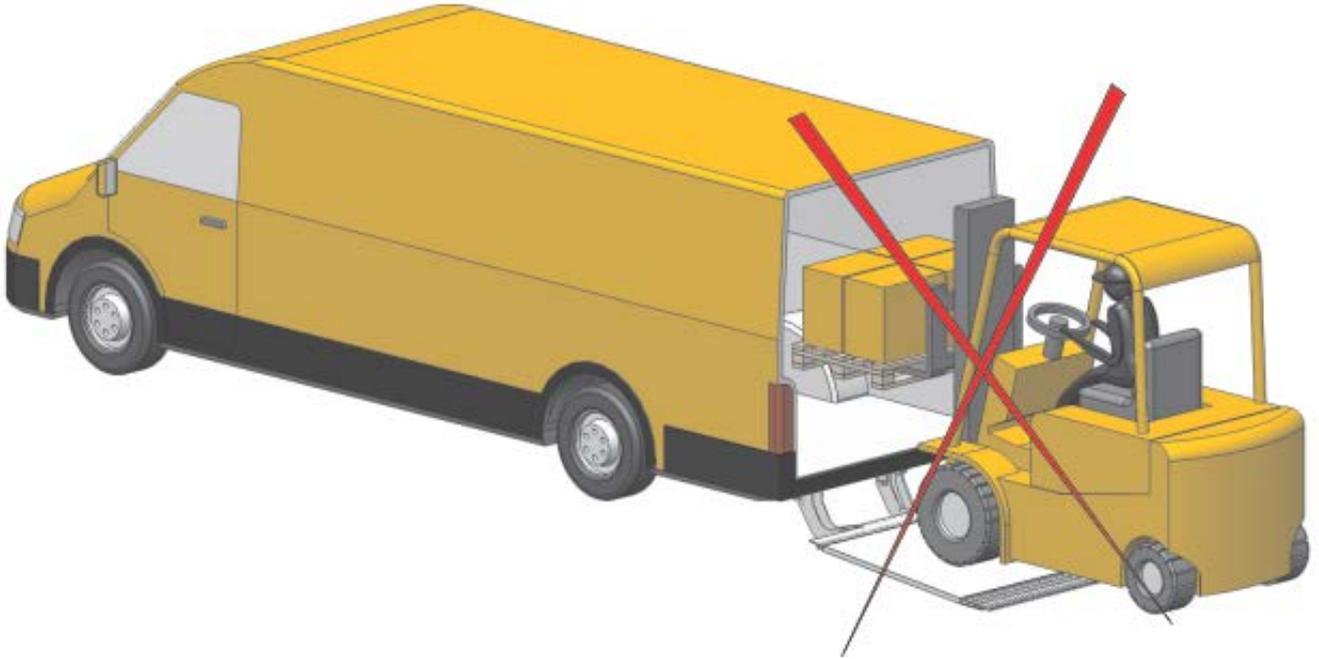
Transshipping from one vehicle to another

By transshipping from one vehicle to another, only one of the two platforms can be used. The platform used must have the platform tip resting on the floor of the other vehicle overlapping **min. 5,9 inch** and can only be driven over with allowed max. load.



Driving with a fork lift on the platform lying on the ground

It is not allowed to drive on the platform with a fork lift! (exception: The combined weight of the fork lift and the load are smaller than the allowed max. load of the liftgate). Doing this the platform must rest firmly on the ground – (also the platform tip).



By any loading or unloading the vehicle must be secured, so it does not roll away. (Activate parking brake).

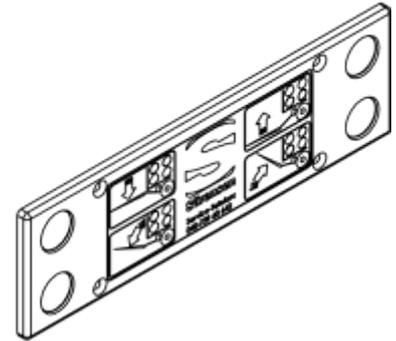
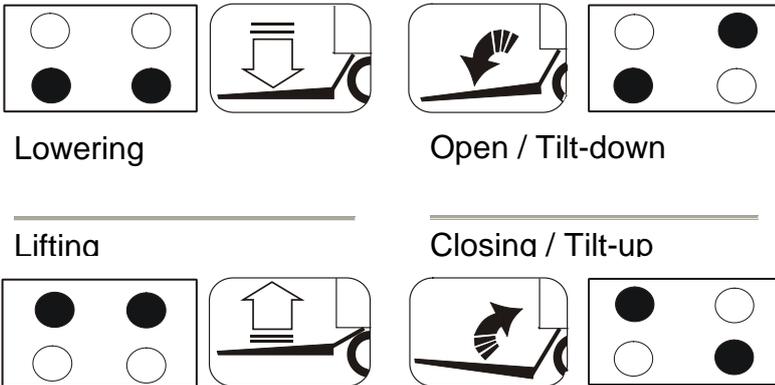
Turning on the liftgate

With the switch in the cabin you switch on the control system of the liftgate. When the red control lamp is lights up, the liftgate is ready for operation.



Control panel

To drive the different functions on the control panel, you must always activate two different keys simultaneously. The key combination for every single function is shown in the graphics.

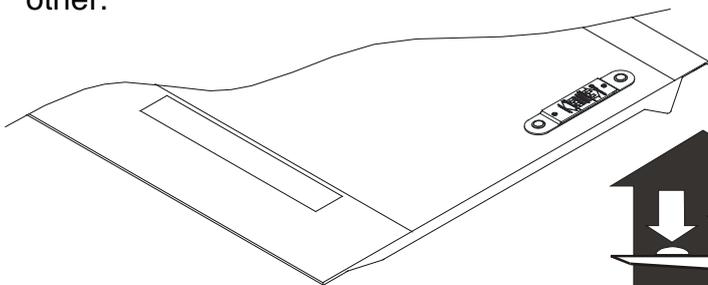


Controlling the liftgate from the platform

From the platform the operator may only drive the liftgate with the foot controls, or with a handheld remote, that are operated from a marked space on the platform.

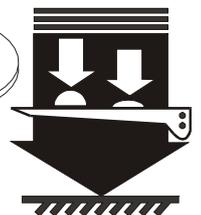
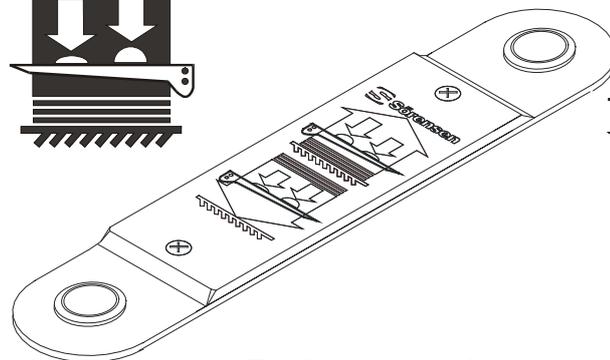
Foot controls

The foot controls is designed so that both has to be activated – one at the time after each other.



For tilt-up and lifting

1. Activate button (lower nearest body)
2. Begin lifting/tilt-up (button lift)

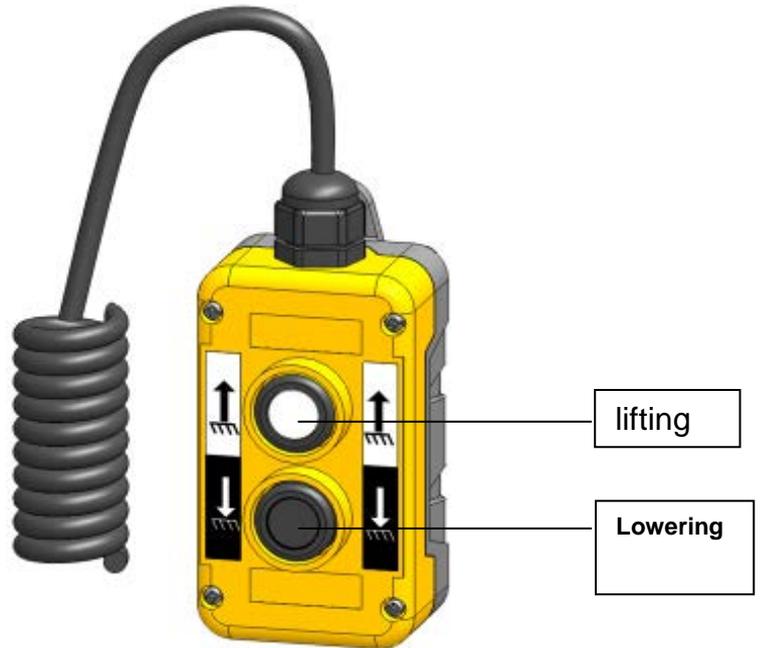


For lowering tilt-down

1. Activate button lift
2. Begin lowering/tilt-down (button lower)

Option handheld remote with spiral cable

With the 2-button handheld remote the functions lifting and lowering can be operated, after the platform has been opened with the control panel.



With the 3-button handheld remote the functions lifting, lowering be driven. Additionally the tilt functions tilt-up and tilt-down be driven.



Users manual for the liftgate GPC X1-LDF

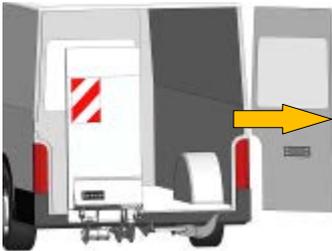


Open the platform

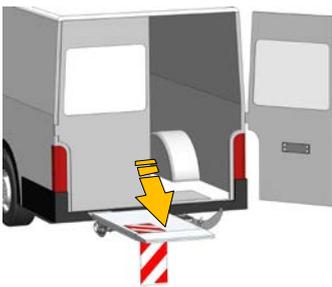
1. Turn on the liftgate.
(cabin switch page 14).



Manual for operating: operating panel, foot control and the option handheld cabled remote page 15, 16.



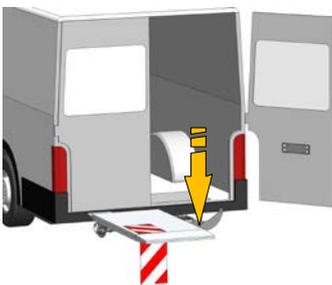
2. Open the right rear door to get access to the operating panel or to the option 3-button handheld cabled remote.



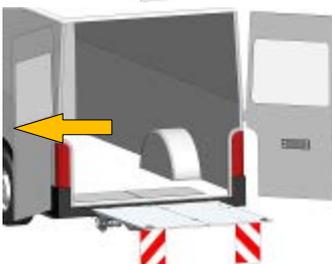
3. Open the platform with the operating panel (open/tilt-down) or on the option 3-button handheld (tilt) + (lowering).



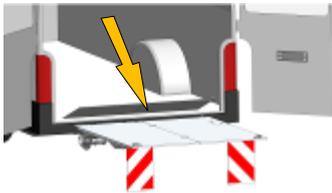
4. Flip open the right side of the platform.



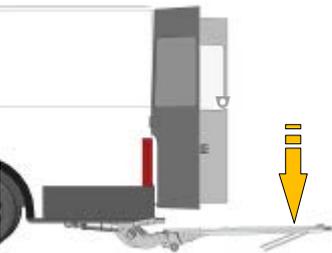
5. Lower the liftgates platform with the operating panel (lowering), or if you are on the platform - the foot control or the option handheld remote (lowering), so it gets possible to open the left door.



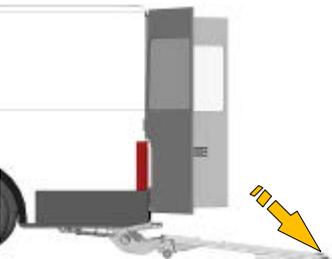
6. Open the left rear door.



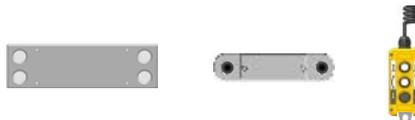
7. Flip over the bridge plate.



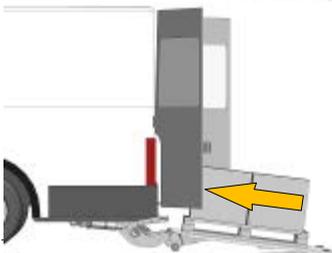
8. Lower the platform to the ground with the operating panel (lowering), or if you are on the platform with the foot controls or the option handheld remote (lowering).



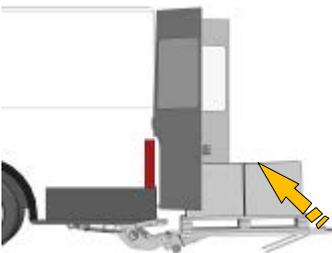
9. Tilt-down the liftgates platform with the operating panel (open/tilt-down), or if you are on the platform the foot controls or the option 3-button handheld remote (tilt) + (lowering).



Loading and unloading the liftgate

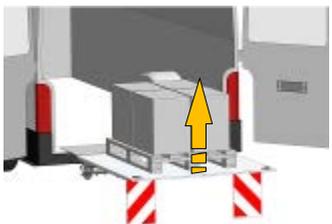
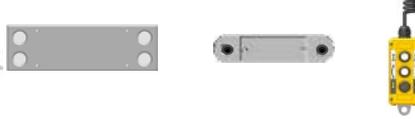


10. The liftgates platform is now ready for loading/unloading.



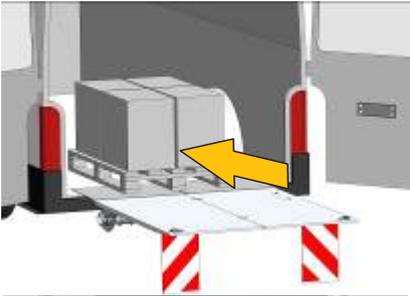
Loading the vehicle

11. Tilt-up the liftgates platform with the operating panel (tilt-up), or when you are on the platform with the foot controls or with the option 3-button handheld remote (tilt) + (lifting).



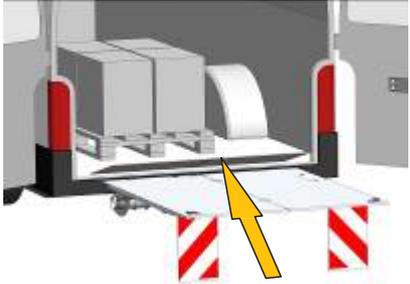
12. Lift the platform of the liftgate till it reaches the stop (up to marking of vehicle height) with the operating panel (lifting), or if you are on the platform with the foot controls or the option handheld remote (lifting).



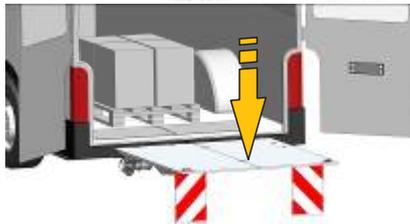


13. Load your vehicle.

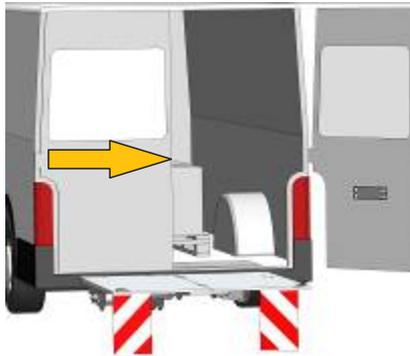
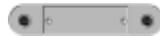
Closing the liftgate and getting it into driving position



14. Flip the bridge plate back.



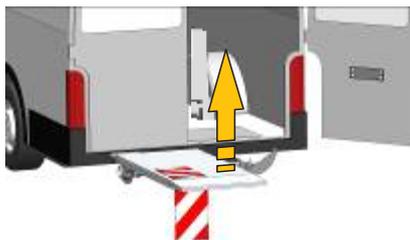
15. Lower the liftgates platform with the operator panel (lowering), or if you are on the platform with the foot controls or the option handheld remote (lowering), so much that it is possible to close the left door.



16. Close the left door.



17. Flip the right foldable platform part back by hand.



18. Lift the platform of the liftgate up till stop with the operators panel (lifting), or if you are on the platform with the foot controls or the option handheld remote (lifting).





19. Close the platform with the operating panel (tilt-up) or the option 3-button handheld remote (tilt) + (lifting).



20. Close the right rear door of the vehicle.



21. Turn off the liftgate.
(cabin switch page 14).

Care, maintenance, inspection and repair

Before starting any maintenance work, the liftgate must be secured against unforeseen movement.

Check that all screw connections are tight. Check that cables and hoses are able to move freely. Correct shearing and chafing points on cables and hoses. Immediately replace damaged hydraulic hoses with ones of the same quality. Note down the replacement in the control book.

During cleaning it should be ensured that no moisture penetrates the power pack or the control box. The bearing areas should not be cleaned with high pressure or steam jets, as this may allow dirt and moisture to penetrate into the bearing. Check all hydraulics for leaks. With the liftgate platform completely lowered, check the oil level in the unit's tank (dipstick on the oil filler neck cover). If necessary, top up with hydraulic oil of class HLPD 22 (temperature range 5°F to +122°F).

The maximum oil level has been reached when the dipstick dips 3/8 " into the oil.

Carry out an annual oil change and clean the suction filter. Carry out the oil change before any period of frost, in order to prevent the hydraulic unit from freezing up.

Hydraulic oil - recommendations

OIL SPECIFICATIONS

Grade ISO - (32)

Gravity, API - 29.5 Degrees

Pour Point, F - (-54 Degrees)

VISCOSITY

@ 40 Degrees C - 31.2 cSt

@ 100 Degrees C - 6.2 cSt

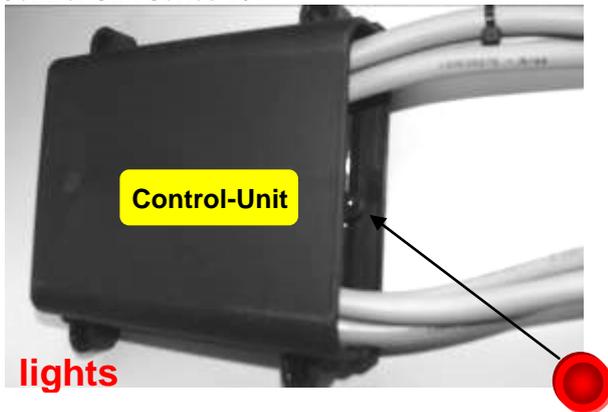
VISCOSITY INDEX - 154 VI

Flash Point, F - 325 Degrees

Diagnosis diode

Explanation of the diagnosis diode on the control unit

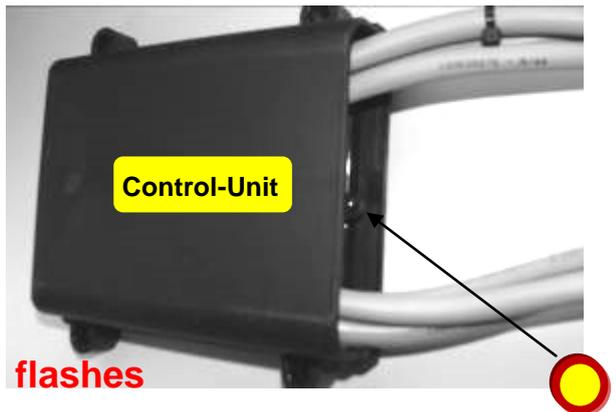
Control-Unit Series 10



diode lights constantly. If:

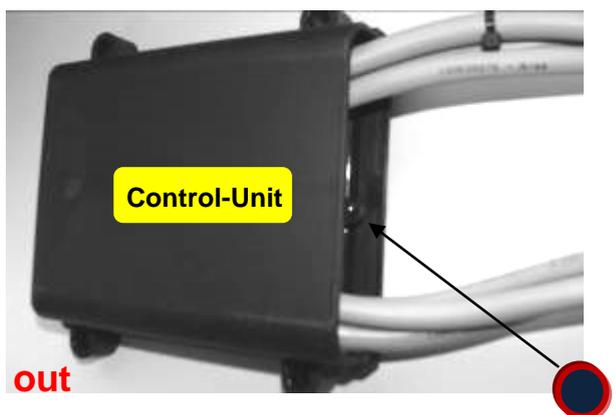
Cabin switch is on
or
platform position 60° till ca. 90 °
or
platform position 0° till -10°

Explanation: platform closed (vertical) 90°
platform open (horizontal) 0°
platform tip tilted down -10°



diode flash signal, if:

Control key operated
or
foot control operated
or
key on cabled operated



diode out, if:

Main switch off
or
platform position 0° till 60°

control panel



Test of the sensor-switch in the platform:

platform closed and lift on:

LED lights.

Power supply Ok.

platform position 0° till ca. 60°:

LED out

Sensor-switch S1 is Ok.

platform lights are activated.

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

LED lights.

Sensor switch S2 is Ok.

The switch over occurs by horizontal position.

Making it possible to set the automatic tilt- function.

Test of the pressure switch S4:

With the foot control keys for lowering – >> begin lowering.

LED flashes.

As soon as the platform has reached the ground and the pressure switch switches, the flashing changes into constant light - **LED lights** and the platform tilts down.

This indicates, that the pressure switch has switched. If not, the pressure switch is defect.

Repairs to load bearing components

Repairs to load bearing components are only to be carried out in an authorized repair shop, and are to be inspected by a competent person and entered in inspection records.

Problem	Possible cause
1. Motor of power pack Does not work	Battery cable or ground cable not connected or defective. Or empty battery
	Cable to cabin switch disconnected
	Main fuse defect Fuse in power pack defect
	Battery main switch not on. Cabin switch not on.
	The motor relay is defective and doesn't switch
Motor defect	
2. Motor doesn't run when a key is operated	Motor relay defect
	Connection from control unit to power pack defect
	Control line in the power pack defect
	Control unit defect
3. the liftgate will not open or if – very slow	The platform is squishes on body Motor of power pack doesn't run
	Cable to solenoid defect
	Solenoid of tilt cylinder is defect Valve YA doesn't switch Throttle valve in tilt cylinder defect or clogged
4. Liftgate will not lower, or if, then slow	Solenoid Y3 are not powered or is defect Valve YA doesn't switch
	Throttle valve in the lift cylinder defect or clogged

5. Tilt down function doesn't work by operating foot control or handheld remote	Pressure switch S4 doesn't switch
	Cable defect
	Mechanical damage on lift cylinder
6. The platform tilts down without operating any functions	Solenoid on tilt cylinder defect
7. platform doesn't tilt down by ground contact	Cable to pressure switch defect
	Pressure switch defect
8. Liftgate doesn't lift	Power pack doesn't run
	Too little oil in the tank
	Voltage too low
9. The liftgate doesn't lift the max. allowed weight	Load is out of loading distance
	Load too big
	Relief valve incorrect adjusted
	Pump defect
	Voltage too low
10. The platform doesn't tilt up from ground	Control unit defect
	Micro switch doesn't switch
11. The platform doesn't tilt up from ground with load	Load out of loading distance
	Load too big
	Relief valve incorrect adjusted
12. The platform tilts up higher than horizontal	Sensor switch S2 defect or incorrect adjusted
	Cable to sensor switch S2 defect
13. The liftgate will not tilt up/close	Control unit defect
	Not enough hydraulic oil

If the motor does not stop "liftgate can not be turned off at all"

Disconnect the cable to the battery plus or disconnect using battery main switch. In case of an emergency please contact the nearest authorized service dealer or our customers service.

Failure on the liftgate in open position

If the liftgate in an emergency situation are lifted or closed by hand or mechanical means, the hydraulic cylinders will be filled with air. The safety valves will hereby be out of function. So by careless opening and lowering of the platform acute danger to life occurs, as the platform can fall uncontrolled to the ground. In a case like this be sure that the platform is secured by robes or chain, for example:

Attention! The liftgate is unsecured and may only be opened by trained technical personnel. By opening occurs danger to life!

Operation failure

In case of failure, please contact our customers service or the next authorized service dealer. We will provide an up-to-date list of service dealers on request
Contact Maxon Technical Service at 1-800-227-4116 or fax 888-771-7713

Warranty

MAXON LIFT CORP.

11921 Slauson Ave.

Santa Fe Springs, CA. 90670

CUSTOMER SERVICE:

(562) 464-0099

(800) 227-4116

FAX: (888) 771-7713

TECHNICAL SERVICE:

(800) 8-MAXTEK (862-9835)

WARRANTY POLICY & PROCEDURE

NEW LIFTGATE WARRANTY

Term of Warranty: 2 Years from Date of In-Service

Type of Warranty: Full Parts and Labor

MAXON agrees to replace any components which are found to be defective during the first 2 years of service, and will reimburse for labor based on Maxon's Liftgate Warranty Flat Rate Labor Schedule.

All claims for warranty must be received within 30 Days of the repair date, and include the following information:

1. Liftgate Model Number
2. Liftgate Serial Number
3. Description of Problem
4. Corrective Action Taken, and Date of Repair.
5. Parts used for Repair, Including MAXON Part Number(s).
6. MAXON R.M.A. # and/or Authorization # if applicable (see below).
7. Person contacted at MAXON if applicable.



PURCHASE PART WARRANTY

Term of Warranty: 1 Year from Date of Purchase Type of Warranty: Part Replacement and Replacement Labor

MAXON will guarantee all returned genuine replacement parts upon receipt, and inspection of parts and invoice. All Warranty repairs must be performed by an authorized MAXON warranty station.

For major repairs, Maxon's Warranty Department must be notified, and an "Authorization Number" received. Major repairs would generally be considered repairs made to the structural assembly of the liftgate and/or repairs not outlined in the Maxon liftgate Warranty Flat Rate Schedule.

Major components (i.e. hydraulic pumps, cylinders, valves, or failed structural parts) must be returned, freight pre-paid, prior to the claim being processed. To ensure timely processing of these warranty claims, an R.G.A. (Returned Goods Authorization) number must be obtained from Maxon's Warranty Department prior to the return of any defective part. Defective Parts must be returned within 60 days of the claim date for consideration to:

Warranty Department, MAXON Lift Corp.

5920 Alameda St., Huntington Park, CA. 90255

Maxon's warranty policy does not include the reimbursement for travel time; towing; vehicle rental; service calls; fabrication of parts which are available from MAXON; oil; defects due to misuse or abuse; loss of income due to downtime.

Maxon's Flat Rate Labor Schedule times takes into consideration time required for diagnosis of problem.

Warranty and Technical Information is available by calling Maxon's Customer Service Department.

NOTE: Check with Customer Service Department for updated versions of Manuals on an annual basis.

Liability exclusions

Our liability excludes: damages assigned to wrong installation or operation of the liftgate, as well as overloading, improper use, insufficient battery charge or capacity, accidents or damages do to ground contact (e.g. rough terrain at building sites).