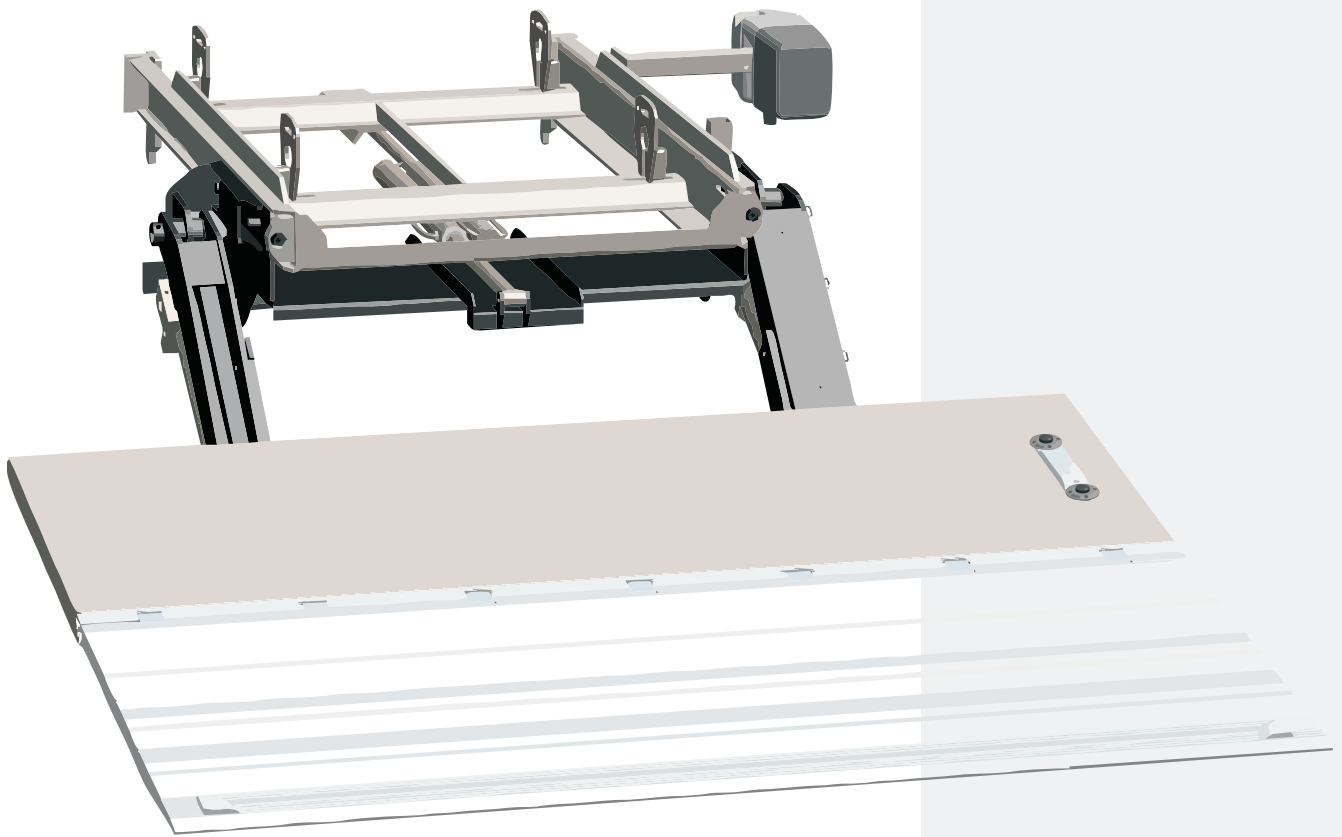


MAXON®

Slidelift



Installation manual

GPST 33 X1
GPST 44 X1
Series up to 10

MAXON®
Lift CORP.

11921 Slauson Avenue.
Santa Fe Springs, CA 90670
(800) 227 - 4116

X1
TECHNOLOGY

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2014

Installation Manual GPST 33 X1, GPST 44 X1

Introduction

This installation manual contains all instructions necessary to install the Slidelift and adjust it to the chassis it was designed for. To determine whether the Slidelift may be installed on a certain vehicle, please contact us. We will provide the necessary information.

If the Slidelift needs to be modified or if it is necessary to deviate from these installation instructions, a written approval from MAXON Lift Corp. needs to be obtained first. Unapproved modifications and deviations from this installation manual may lead to failure and to operating interruptions as well as to hazards for the operator. The warranty for the Slidelift will be voided by "unapproved modifications" and "deviations from the installation directions."

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

Transport damages

The shipping company is responsible for damages on the Slidelift occurring during transportation. The lift needs to be checked for damages immediately after unloading. If any damages occurred during transportation, they must be approved in writing on the waybill, so that claims can be raised. Insurance claims can only be settled between Maxon Lift Corp. and the shipping company, or its insurance company.

Trailer hitch

If the vehicle is equipped with a trailer hitch, the clearance of the shaft axle to the Slidelift and the vehicle overall length need to be guaranteed by the installer.

Installation safety precautions

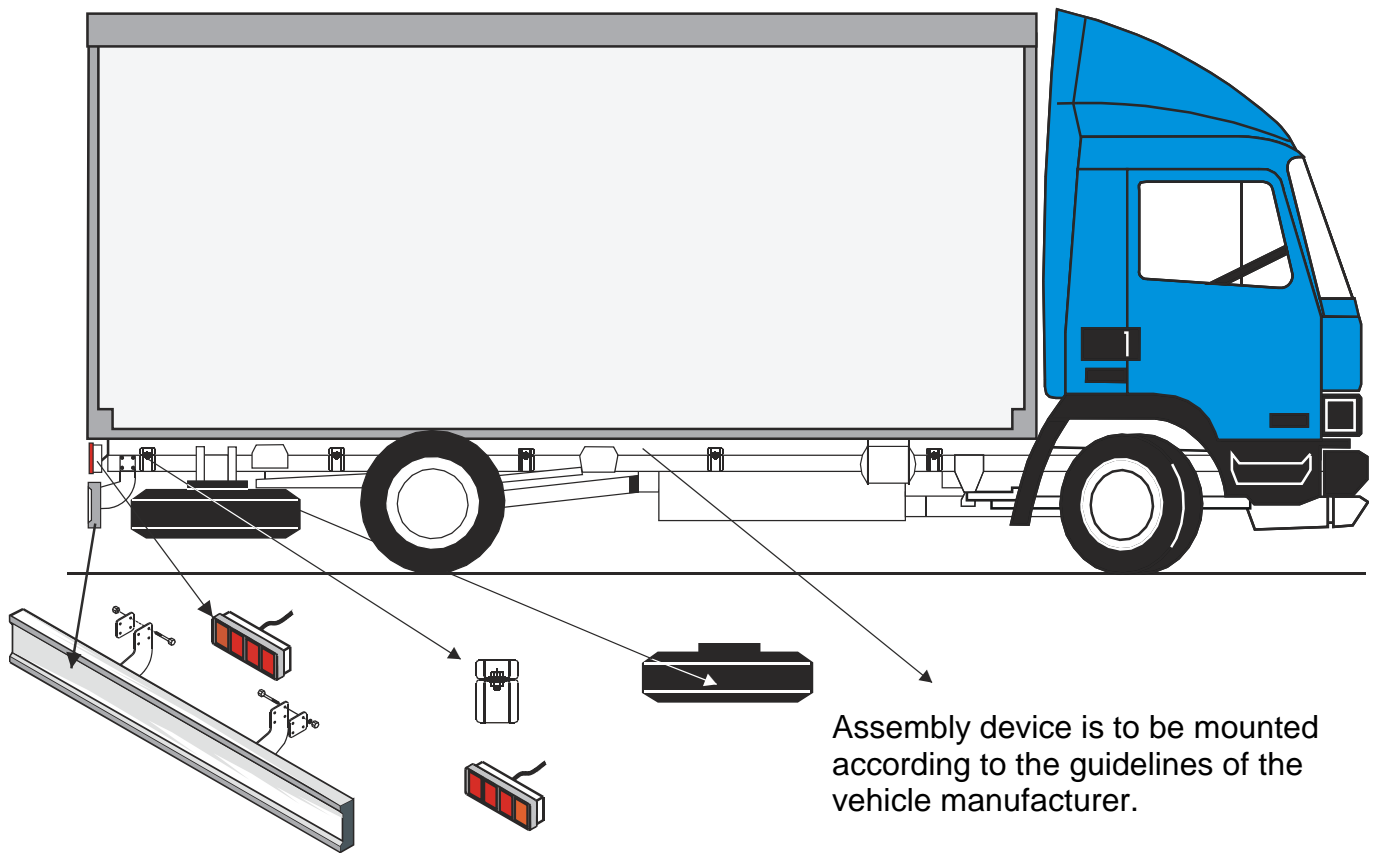
- Before installing the Slidelift, the battery of the vehicle needs to be disconnected. The vehicle needs to be secured against all unintentional shifting.
- The plugs of the antiblock braking system and the electronic power shift need to be pulled before welding. Fuel lines, air hoses of the brake system 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, working gloves and working boots, must be available before installing the Slidelift and are to be used if necessary.
- Safety devices on cranes, forklift trucks, and other lifting gear necessary for installation are to be checked to see if they are in proper working condition before they are used.

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Assembly instructions GPST 33 X1, GPST 44 X1

Vehicle preparation

Dismantle under ride bumper and rear lights. Make sure that the area for positioning the lift brackets is clear, and remove all screws, rivets, spare wheel etc... Also remove hinges and locks if necessary.



The vehicle cabin must be protected by any appropriate means.

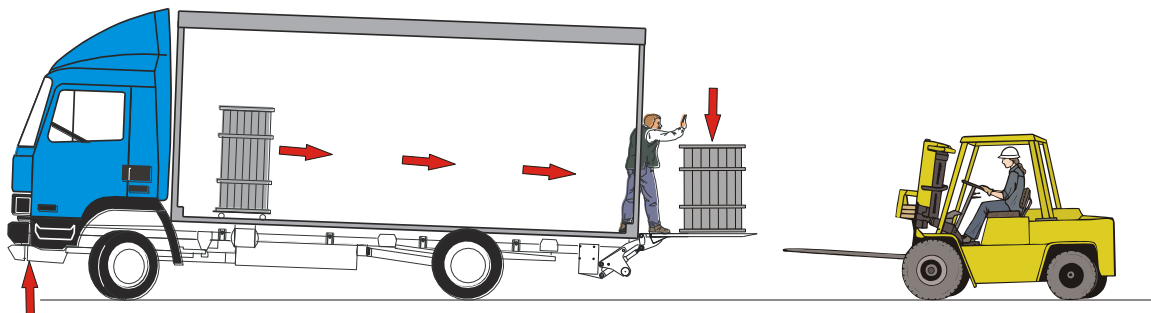
Mechanical support

Please verify with the vehicle manufacturer guidelines if the vehicle must be fitted with mechanical supports. Those delivered with the tail lift are provided with a separate assembly drawing. We do not take warranty for resulting in supports delivered and assembled by a third company if those are not cleared by our technical any damages services.

Caution sticker “secure the load”

This sticker is not included in the delivery of the tail lift. You can purchase it at Maxon Lift under part number 20 904 940.

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 and can be very hazardous to people.



Please affix the sticker on the free space above the controls of the control box. If this spot can not be visualized by the operator, please put the sticker on a place where the operator can see it at all times.

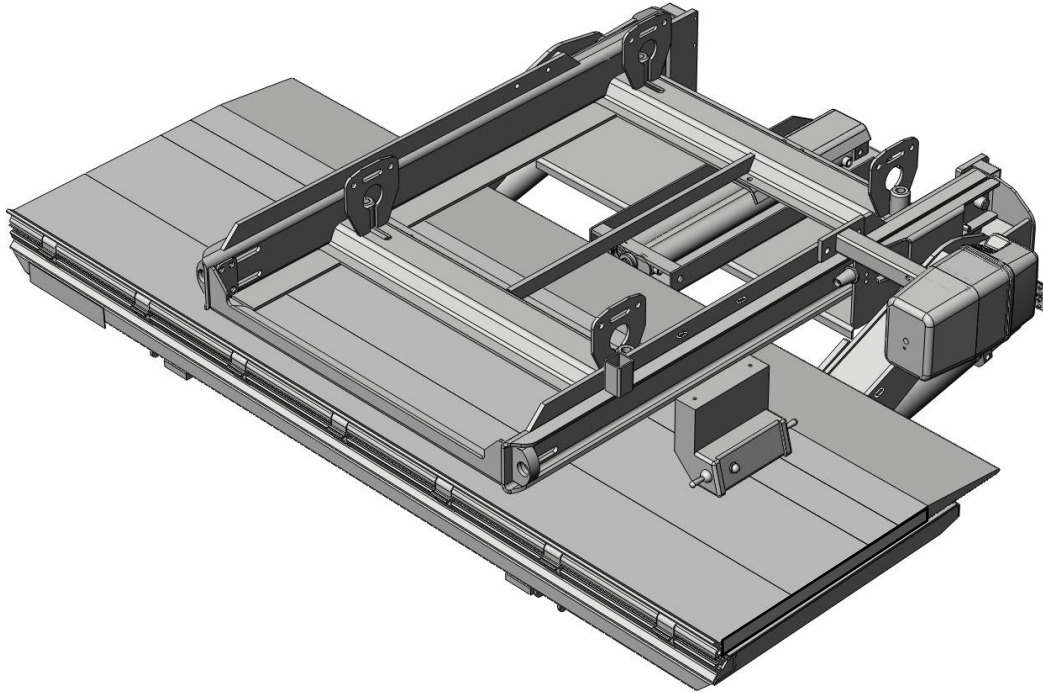
**Caution ! Secure the load against moving
Or use mechanical supports**

© Sørensen Hydraulik GmbH

20 904 940

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Installation of the Slidelift



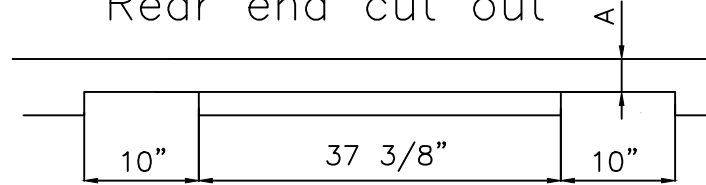
The Slidelift is completely pre-assembled. The installation is fast and easy. Simply load the Slidelift onto a forklift truck or a pallet jack, drive it under the vehicle's chassis and adjust it according to the maximum vehicle measurements (see standard installation drawing) in height and length.

The Slidelift must be installed parallel to the trucks and/or trailers loading platform. If you obtained an installation drawing from Maxon Lift Corp. (serial number of the Slidelift stated on the drawing) the installation must be performed according to the measurements given with that drawing.

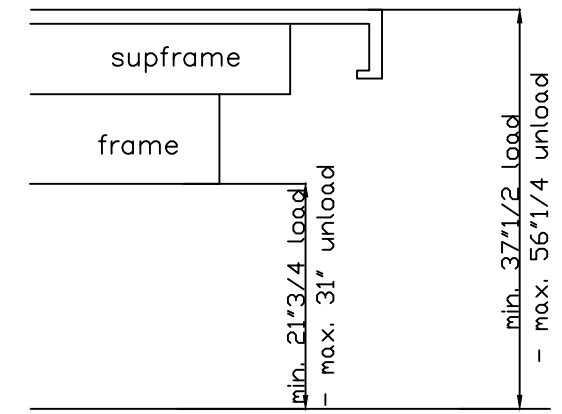
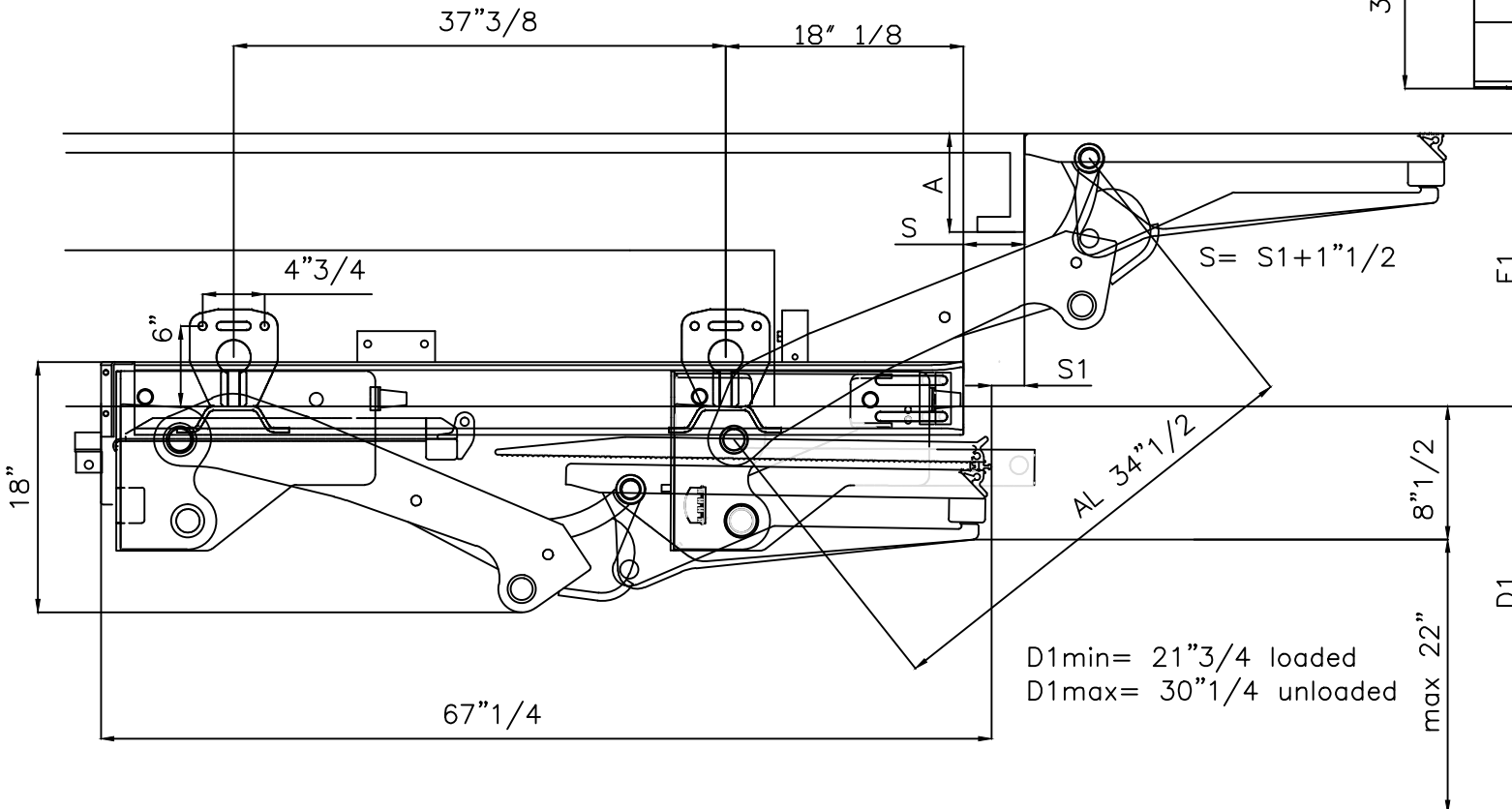
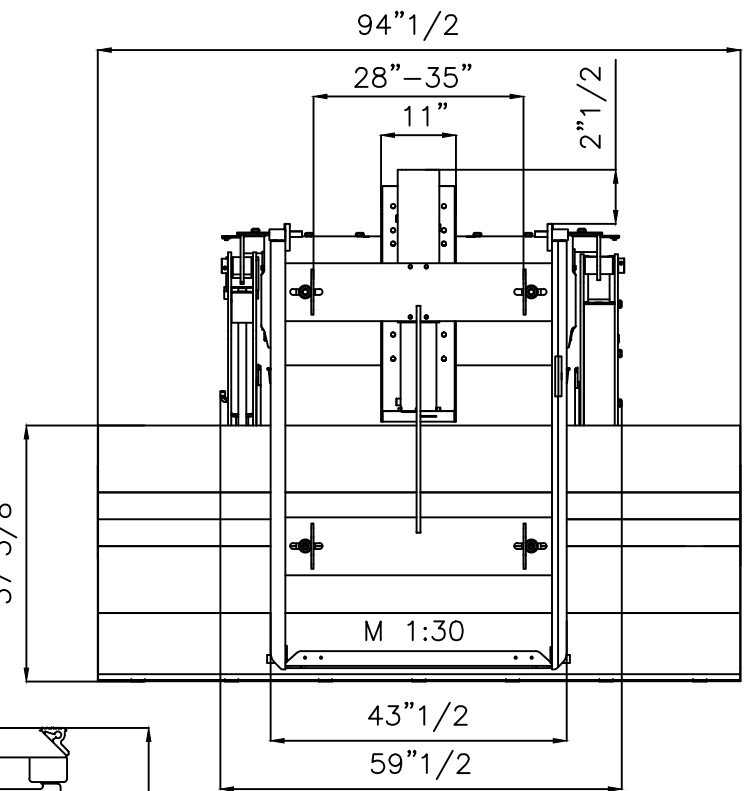
Drill 2 holes (16 mm) through each bracket and through the vehicle frame. Then secure the lift with the 8 nuts and bolts (M16 10.9 DIN 931) provided. Also secure the vertical bolts tightly.

E1	S1min	S1max	A max
15"3/4	3"1/4	6"3/4	6"1/4
17"3/4	2"1/4	5"1/2	7"
19"3/4	3/4"	2"3/4	7"1/2
21"3/4	0	2"3/4	8"
23"1/2	0	3/4"	8"3/4
26"	0	0	9"3/4

Rear end cut out



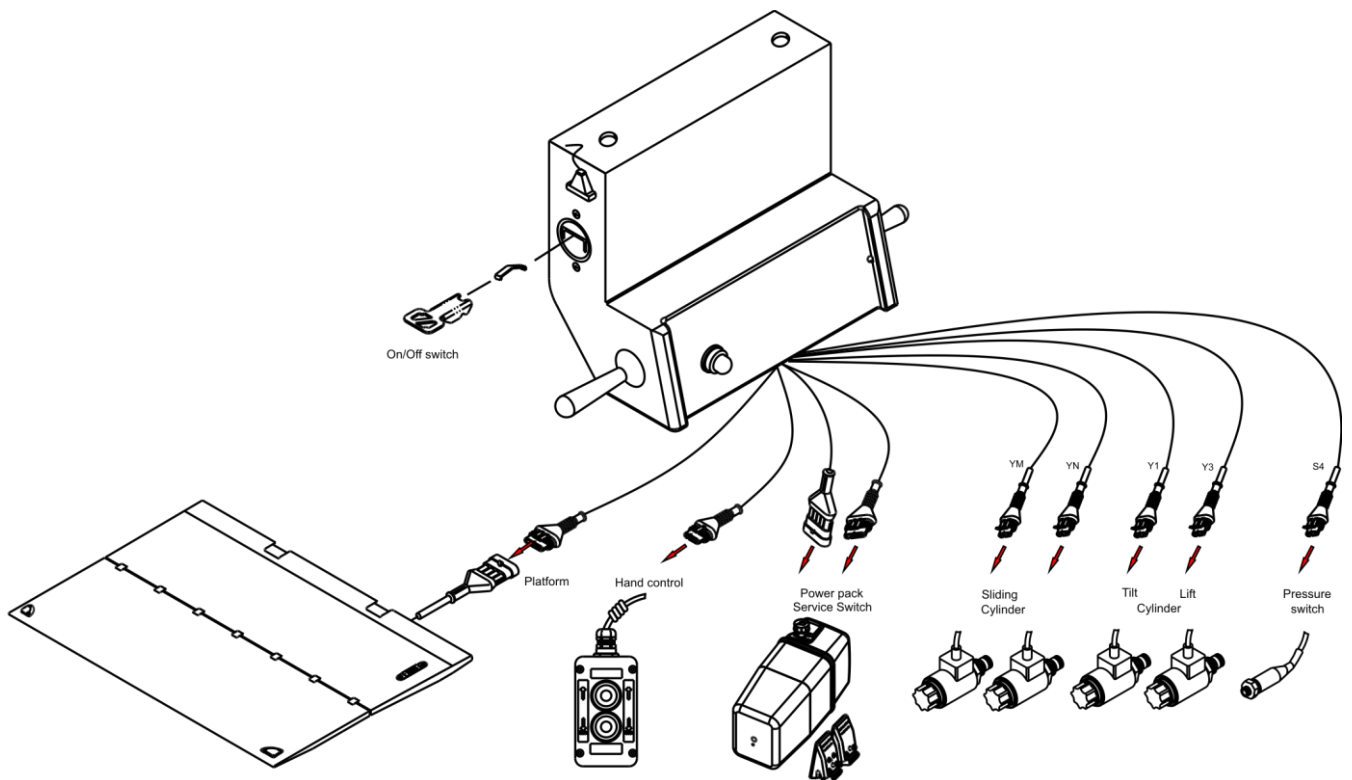
The clearance of the tow bar to the lift and total authorized vehicle length are to be ensured by the assembly company



Assembly of electrical devices up to series 9

Caution!

All operations of the tail lift must only be performed if the battery cables are correctly attached to it, and if there is enough tension available. Never use a battery charger or a starting device, as this can result in damage to the tail lift motor.

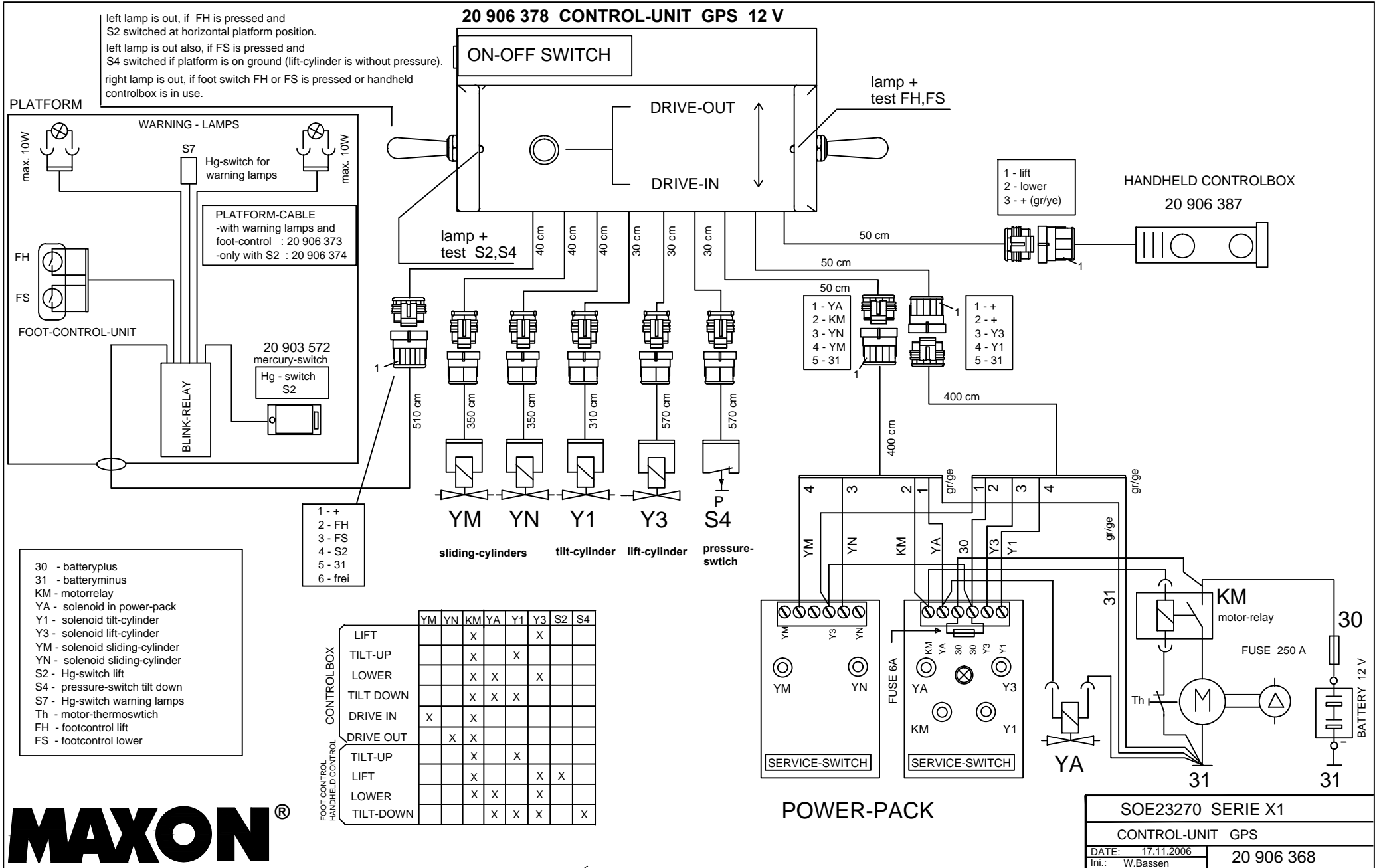


Foot control

The foot control is ready to use from the factory.

Please secure all cables with the delivered looms, to exclude pinching or scrubbing.

20 906 378 CONTROL-UNIT GPS 12 V



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Assembly of electrical devices for series 10

Caution!

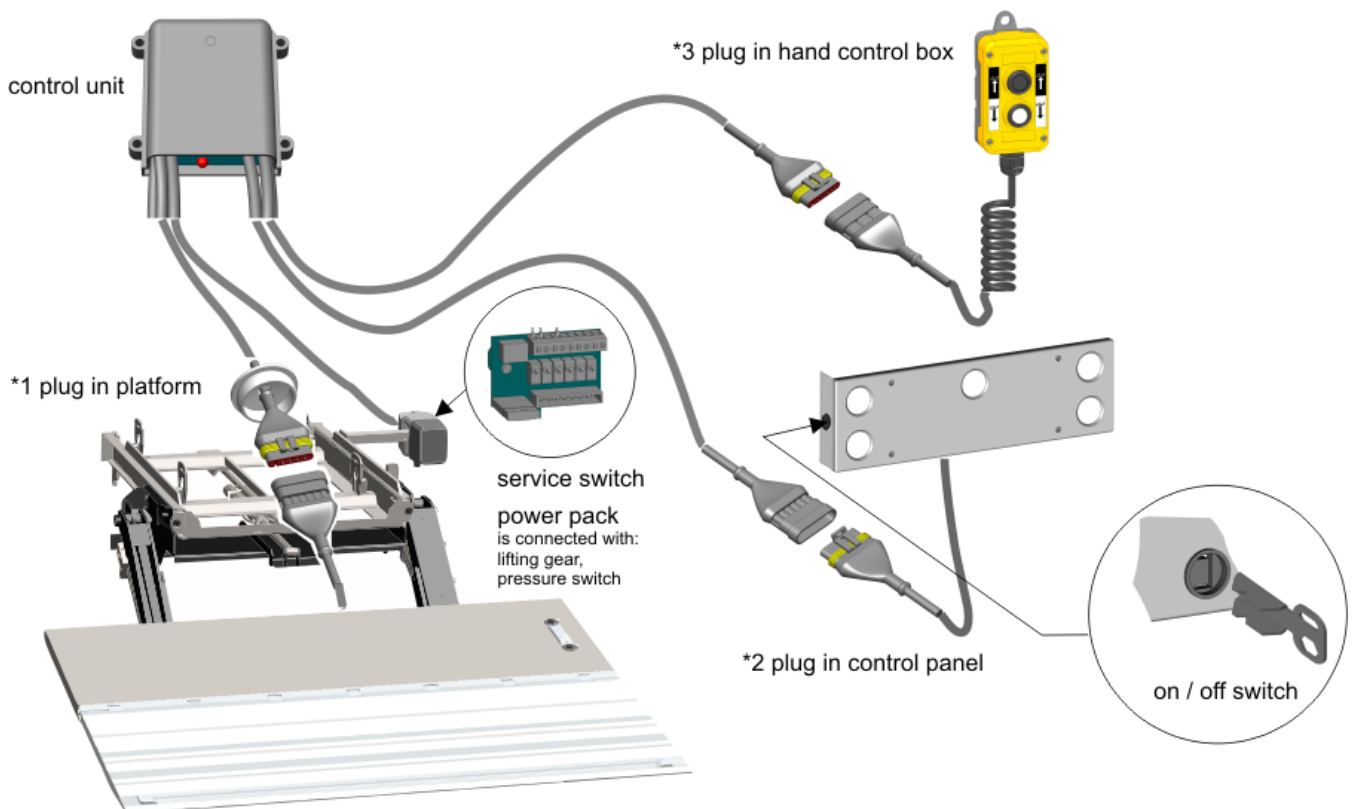
All operations of the tail lift must only be performed if the battery cables are correctly attached to it, and if there is enough tension available. Never use a battery charger or a starting device, as this can result in damage to the tail lift motor.

Control Unit

The control-unit is mounted on the slider from the factory. The connection to the platform *1, to the control panel *2, to cabled remote control *3. Cables that are not preassembled, shall be mounted to the slider with cable strips.

Caution!

The cables must be mounted so that they do not get cuts or any other damage.

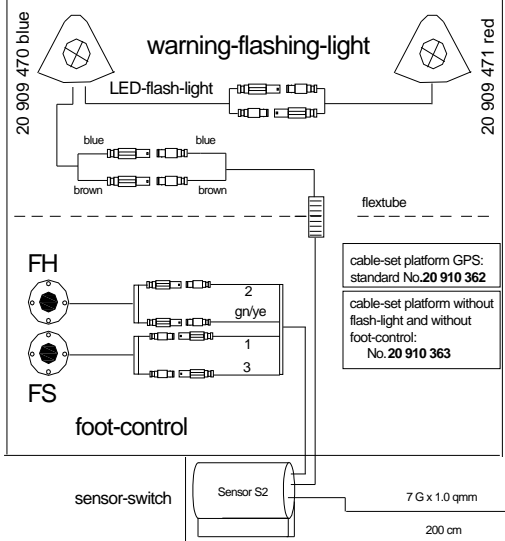


Foot control

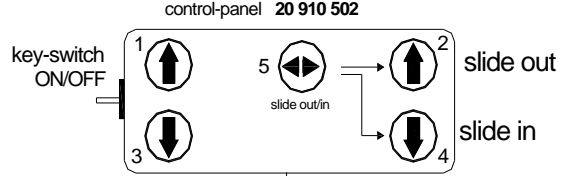
The foot control is ready to use from the factory.

Please secure all cables with the delivered looms, to exclude pinching or scrubbing.

PLATFORM

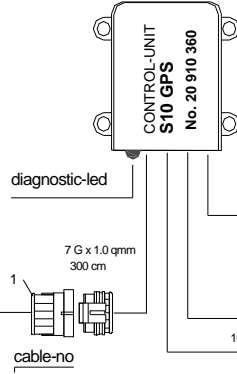


Sensor S2 detects the horizontal position to switch from tilt-up to lift.
 The horizontal position is programmed in the electronic sensor S2 and can be changed.
 Place the platform to the horizontal position and then press button 1 three times and after that button 2 three times. The flashing-light switches off for 5 seconds and indicates the success of the programming.



350 cm

cable-color	
black	- 1 +12V
brown	- 2 button 1
grey	- 3 button 2
blue	- 4 button 3
gn/ye	- 5 button 4
white	- 6 30a
plug-no.	



cable-no	
1	- 1 - +
2	- 2 - FH
3	- 3 - FS
4	- 4 - S2
5	- 5 - S1
gn/ye	- 6 - 31
plug-no.	

CONTROL-PANEL press button:

- 1 + 2 TILT-UP until the horizontal position is reached - then LIFT
- 3 + 4 LOWER until the ground is reached - then TILTDOWN
- 1 + 4 TILT-UP
- 2 + 3 TILT-DOWN
- 5 + 2 SLIDE-OUT
- 5 + 4 SLIDE-IN

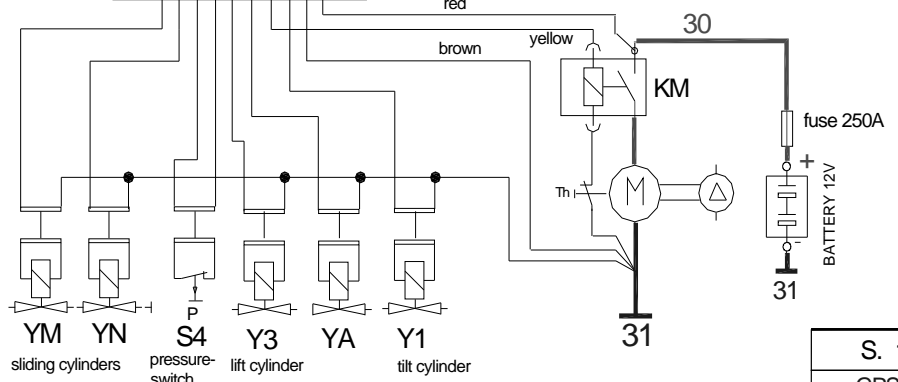
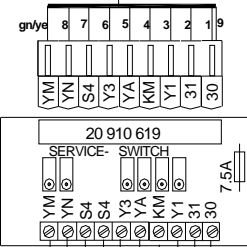
	YM	YN	KM	YA	Y1	Y3
LIFT			X			X
LOWER			X	X		X
TILT-UP			X		X	
TILT-DOWN			X	X	X	
SLIDE-OUT	X	X				
SLIDE-IN	X	X				
tilt-down on ground (S4)				X	X	X

signal S1 ist given from the control-unit when the platform is sliding out. Now the flash-light ist on and the footcontrol and handcontrol is activated

slide out - flasching light is on
 slide in - flasching light is off

sensor-switch S2 cotrols the automatic tilt-up to lift switching at the horizontal position

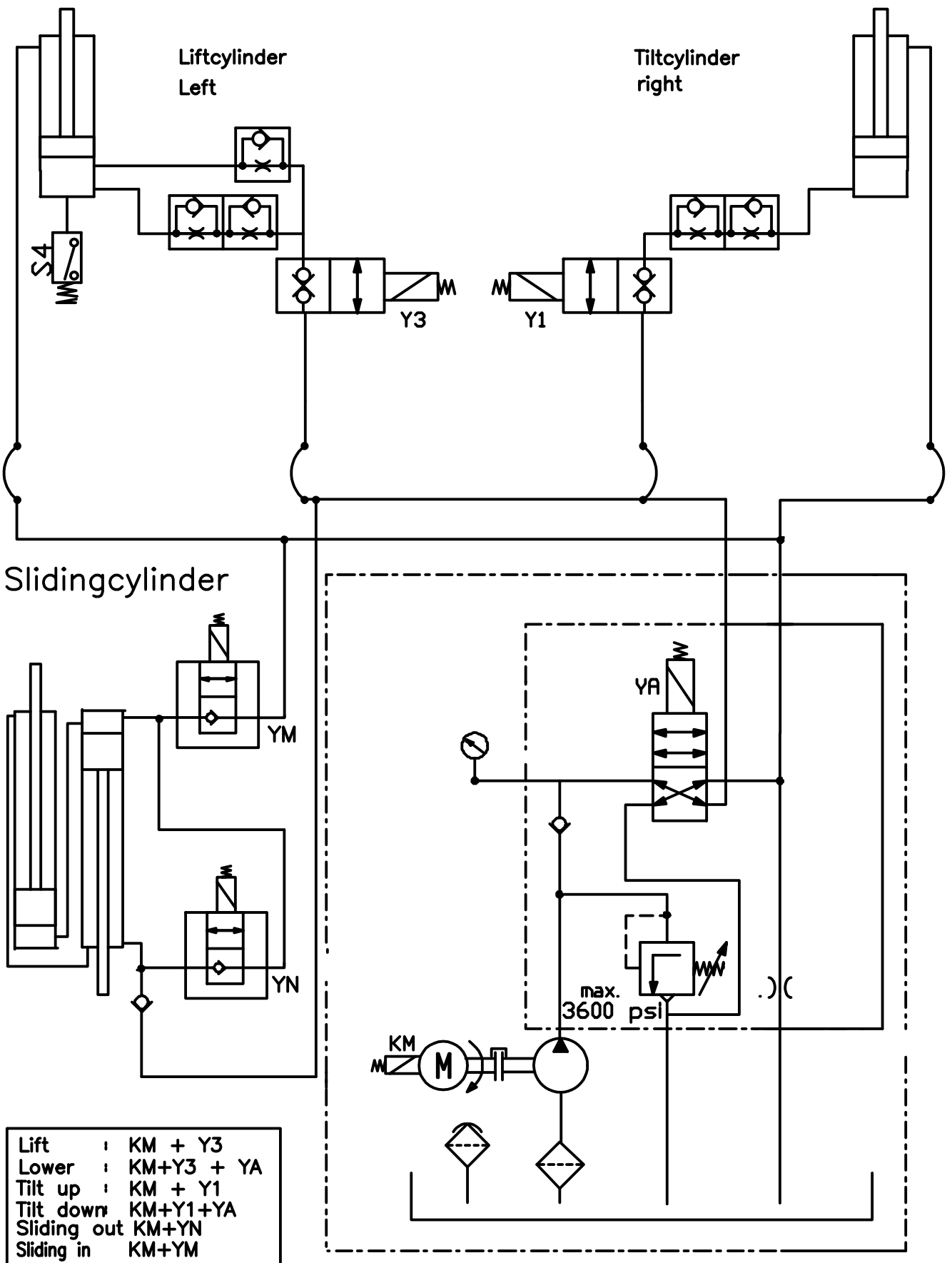
pressure-switch S4 cotrols the automatic lower to tilt-down switching at the ground position.



- 30 - batteryplus
- 30a - batteryplus for the electronic
- +12V - supply-voltage
- 31 - batteryminus
- KM - motorrelay
- YA - solenoid in powerpack
- Y1 - solenoid tilt-cylinder
- Y3 - solenoid-lift-cylinder
- YM - solenoid sliding cylinder
- YN - solenoid sliding cylinder
- FH - switch footcontrol
- FS - switch footcontrol
- S1 - signal warning lights
- S2 - sensor-switch lift
- S4 - pressure-switch
- Th - motor thermo-switch

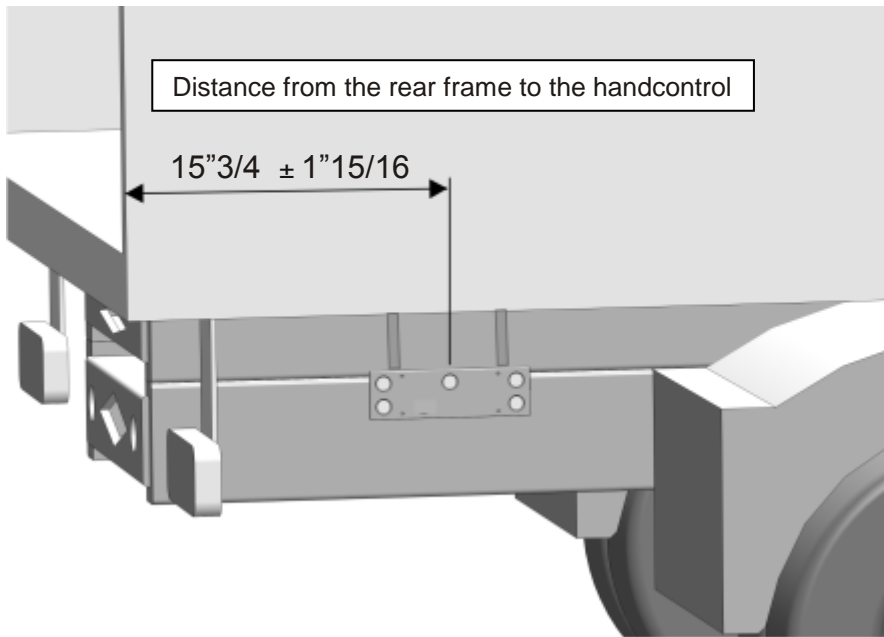


S. 10 (SOE213110)	
GPS	
DAT.: 4.06.2013	No.: 20 910 494
gez.: W.Bassen	



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. **The minimum distance should be $15\frac{3}{4} \pm 1\frac{15}{16}$.**



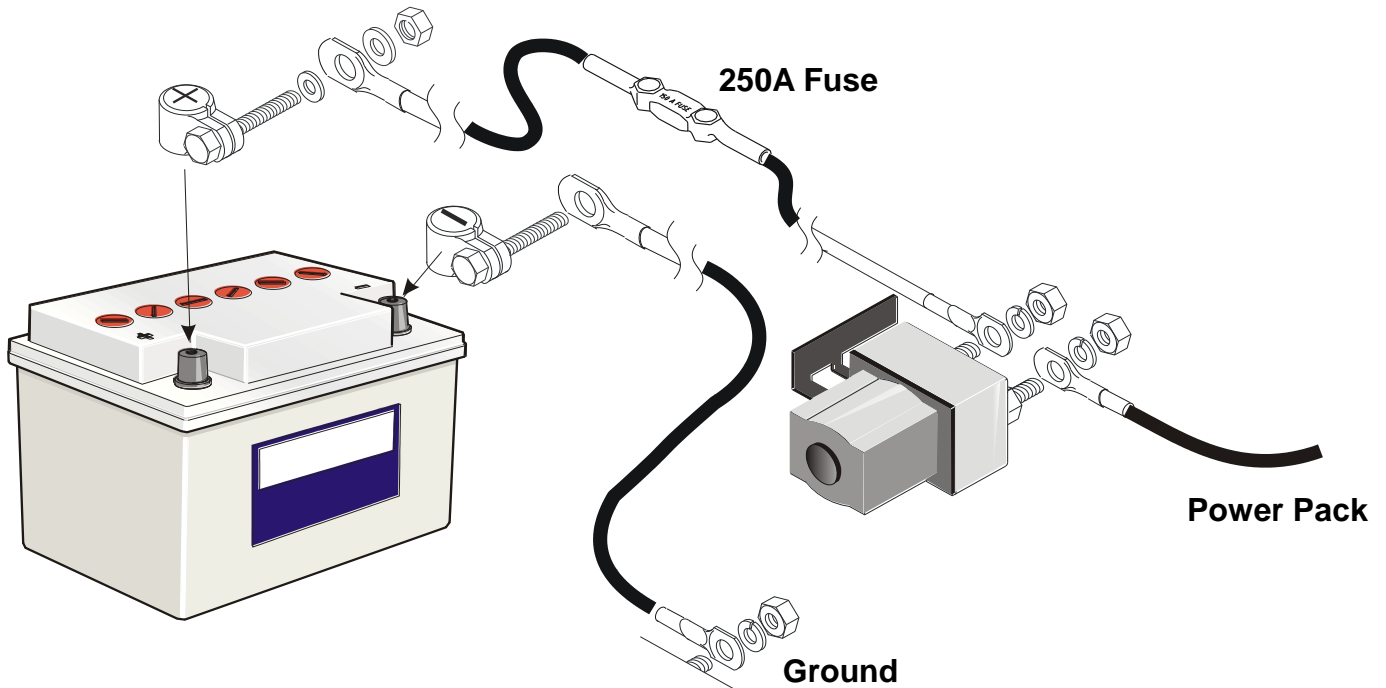
Connect the set "main circuit fuse" to the battery terminal clip at the positive pole of the battery. Connect the main circuit cable (positive from the main circuit fuse) to the pump box of the Slidelift. Connect it to the power relay. Connect the earth cable from the motor to the negative pole of the battery or, if authorized by the vehicle manufacturer, to the chassis at a scraped clean spot. Take the platform foot control cable along the lifting arm to the pump box and connect it according to the wiring diagram.

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

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Power fuse

Version for 12 Volt devices



Connect the cable with the fuse to the battery plus. Lead the plus cable from the battery to the power unit and connect it to the motor relay.

Lead the minus cable directly from the motor to the battery minus, or if authorized by the vehicle manufacturer, affix it to a blank spot on the vehicle frame.

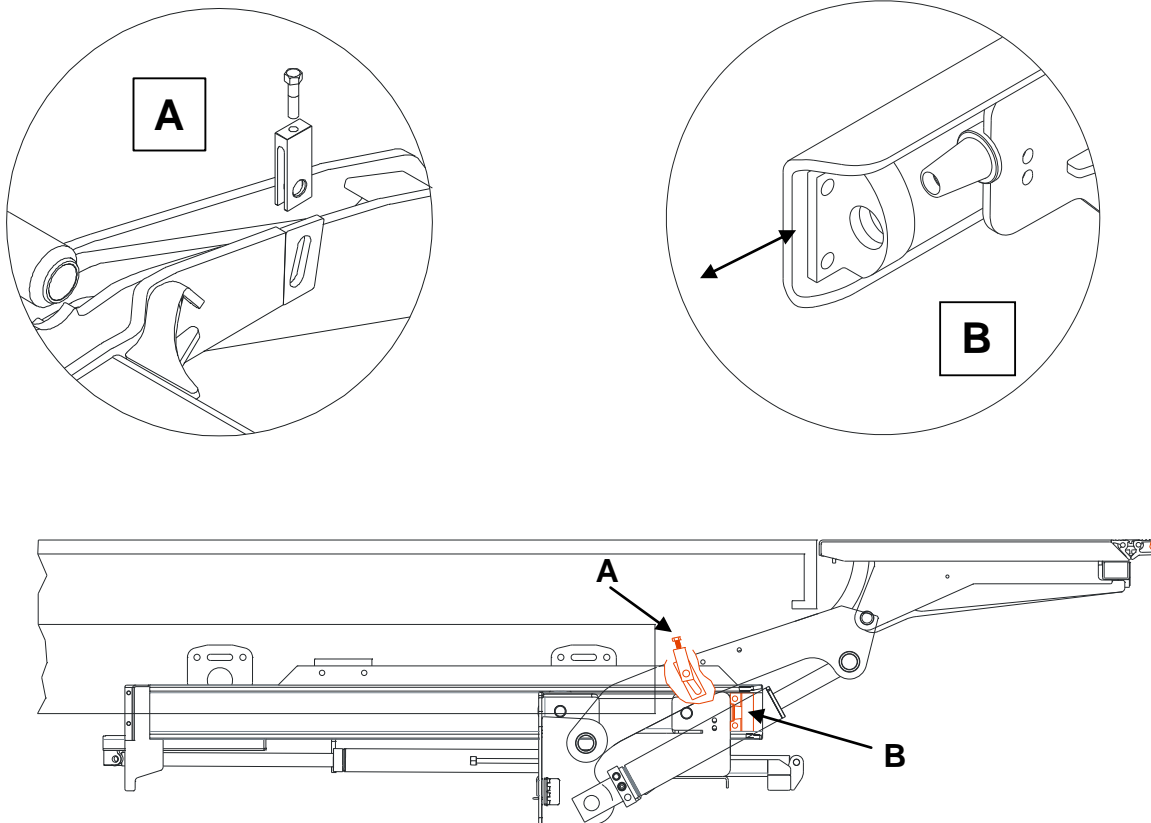
Battery capacity

Model	GPST 33 X1, GPST 44 X1
Size	2 group 31 - 12VDC - parallel

The guidelines of the vehicle manufacturer must be followed

Final adjustments of the platform to the vehicle bed (A):

Move the hoisting gear with the opened platform hydraulically behind the rear frame. For the adjustment, the lift arms are not to touch the rear frame. Between the rear frame and lift arms, there should be a space of 3/8". With the adjusting screws, the hoisting gear will be adjusted until the vehicle floor and the platform are parallel. After the adjustment, both screws of the anti-under ride fastening are to be tightened.

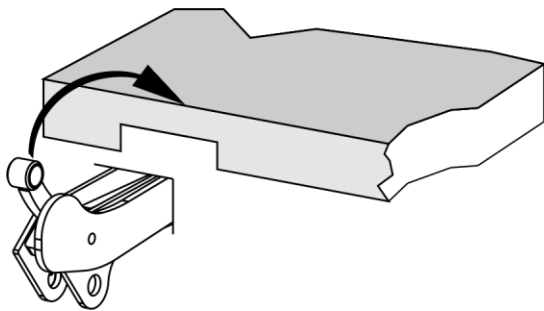
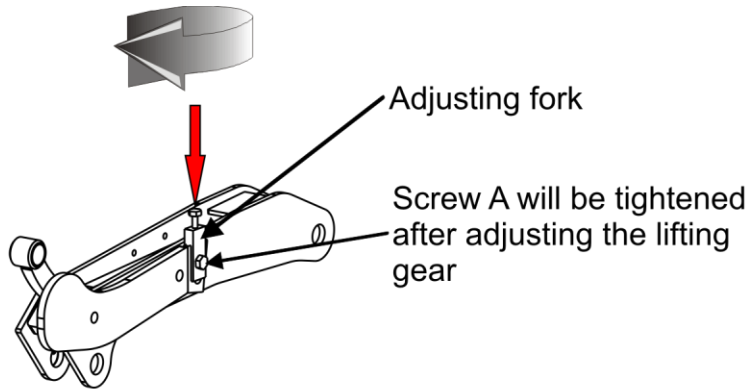


Adjusting the lift height (B)

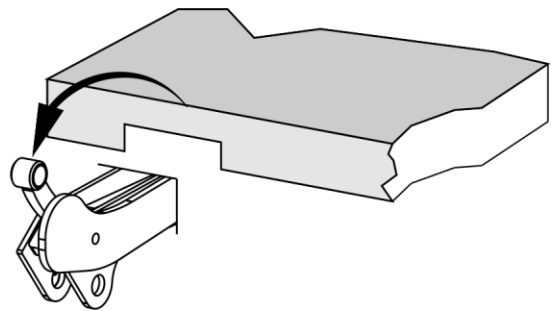
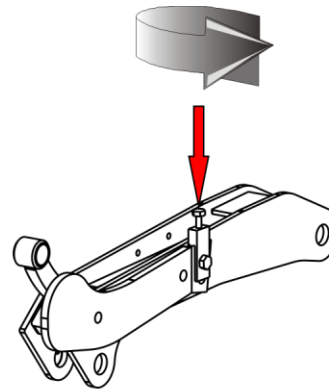
After the installation of the Slidelift, please slide out the frame completely, lift the platform to the same height than the vehicle floor and in that position, slide it back against the chassis frame of the vehicle. Then slide the stops on both sides against the sliding frame of the lift and secure them.

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Adjusting the platform horizontally



When turning the screw to the right, the lifting arm goes closer to the rear frame.



When turning the screw to the left, the lifting arm goes away from the rear frame.

Warning

Welding

Prior to any welding operations, the battery and additional equipment such as anti-blocking and anti-slide controls are to be disconnected (see instructions given by the vehicle manufacturer). For steel, please use E 5153 B 10 DIN 1913 as additional welding material.

Model	Joint thickness a min
GPST 33-44 X1	1/4"

Warning

The ground clamp of the welding device must be attached directly to one of the parts to be welded. Otherwise, the hydraulic cylinders may be damaged.

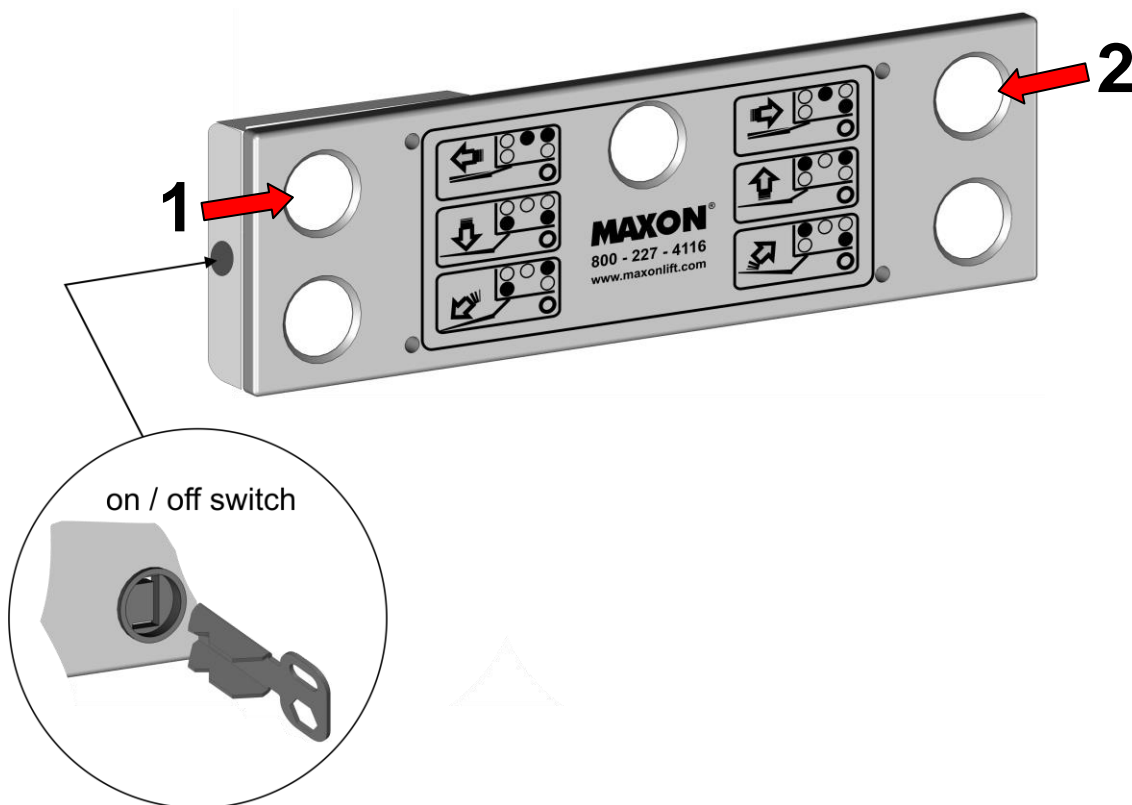
Programming of the horizontal position of the platform (devices for series 10)

After the tail lift installation or repair:

With the control-panel

- Place the platform to the horizontal position
- press button 1 three times and after that
- press button 2 three times

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



The programmed adjustment will be active until another programming are made.

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Operating the Slidelift

First operation

Check operation readiness. Check all moving parts for free move (no abrasion on hoses, cables, etc.).
Check the hydraulics for leaks.

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

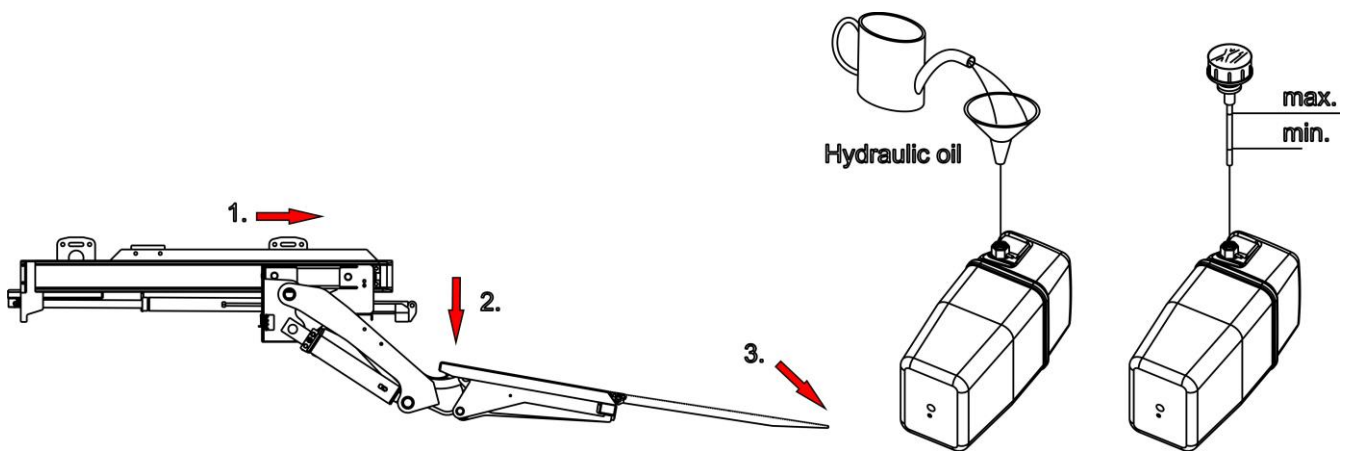
@ 100 Degrees C - 6.2 cSt

VISCOSITY INDEX - 154 VI

Flash Point, F - 325 Degrees

Oil fill up or change

1. sliding out
2. lower
3. tilt down
4. oil fill up



Painting the lift gear

The lift gear is powder-coated black. If another color is required, the bodybuilder or installer needs to provide for this. (Note that the powder-coated surface needs to be roughened before it can be painted.)

Warning

Please observe that the black cylinder rods need to be covered before they can be painted; remove color paint and covering material from the cylinder rods after painting. Otherwise, the Cylinder seals get damaged and the warranty will be void.

Operating information's

Stick "Operating Information" decal on the hand control box.

For problems please contact our Technical Service Department.

First operation of the sliding lift

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

Suggestions for hydraulic oil

HLPD 22 (ISO-VG 22) "deterging", to emulsify free water (avoids freezing in winter) and to improve oil film thickness.

Sörensen Hydraulic oil Part.-no. 60 700 283

Sörensen Biological-oil Part.-no. 20 858 811

Aral	Vitam DE 22	Shell	Hydrol DO 2
BP	Energol H LPD 22	Panolin	HLP SYNTH (Bio-Öl)
BP	Biohyd 32 (Bio-Öl)	DEA	Actis HLPD22
DEA	Econa E 22 (Bio-Öl)	Mobil Oil	H-LPD 22
Esso	Hydraulic Oil H-LPD 22	Fuchs	Rhenolin MR 5

Painting the lifting gear

The lifting gear is delivered from the factory treated with black epoxy powder. If another color is wished, this has to be done by the bodybuilding company. (please note that the powder must be abraded prior to painting). Please note that the black piston rods must be covered before painting. Remove all rests of paint and tape before operating the cylinders, otherwise you will damage the seals, which is also a warranty exclusion.

Operating sticker

Stick the operating label to the control box

Note in the test book

In the test book, the part „check before first operation“ must be filled out and signed by a skilled person

Check of operating speeds

Vertical speed

The 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.

Please call our after sales department in both cases

Tilting speed

The angle speed while tilting must not exceed 4°/second. The platform tilting must be limited to 10°

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Load test

Static test

Drive the platform horizontally between the vehicle floor and the ground. Put a test gauge up to 125% of the nominal lift capacity on the platform, at the distance given by the load diagram. The distance is marked permanently on the platform. Within 15 minutes, the lift must not lower more than 5/8" or tilt more than 2°

The assembler must check the lift for any deformation after this test.

Dynamical 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. CAUTION: 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 on the type label.

After the statically and dynamical tests, please check the hydraulic system for leaks.

Test against overloading

This test is made to ensure that the device can not lift a load greater than 125% of the nominal capacity of the tail lift

Safety device check

Let all functions reach their maximum points until the safety devices respond.

Prior to delivery to customer, make sure the platform carriage moves smoothly out without side to side interference and locks into the Quick Lock position.

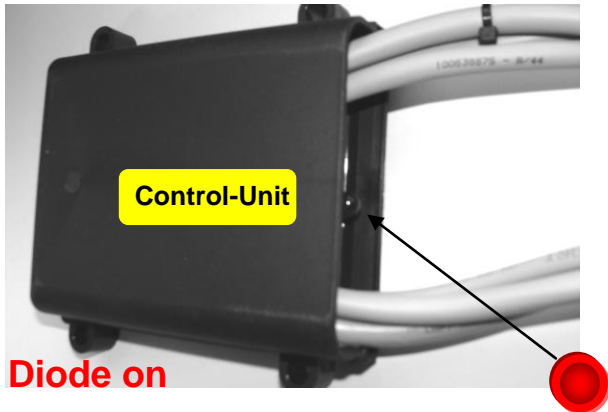
Torque table for all supplied and installed screws on Maxon lift gates

Screw Size	Tightening Torque in ft. lb	Screw Connections	Tightening Torque in ft. lb
8.8			
M4	2	G1/4"	29
M6	7	G3/8"	70
M8	17	G1/2"	96
M10	33	Connection Nuts	
M12	59	M16 x 1.5	44
M14	96	M18 x 1.5	44
M16	143	Plugs	
M20	283	G1/8"	11
10.9		G1/4"	24
M12	85	G3/8"	51
M14	132		
M16	202		
M20	398		
Y1 – Y3 – YA - YN - YM	18		
Starter Solenoid			
M8	8		

Diagnostics Diode

Explanation of the diagnostics diode on the Control-Unit.

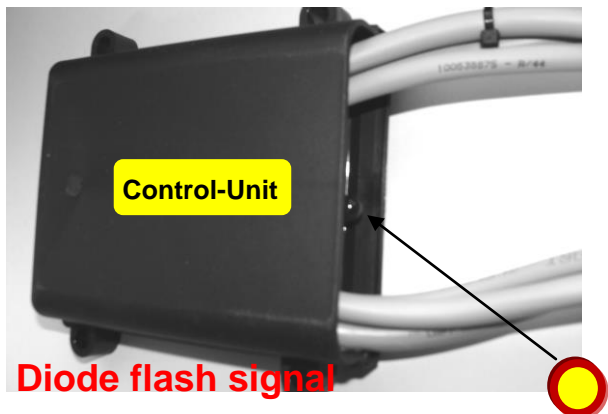
Control-Unit series 10



Diode lights constantly on when:

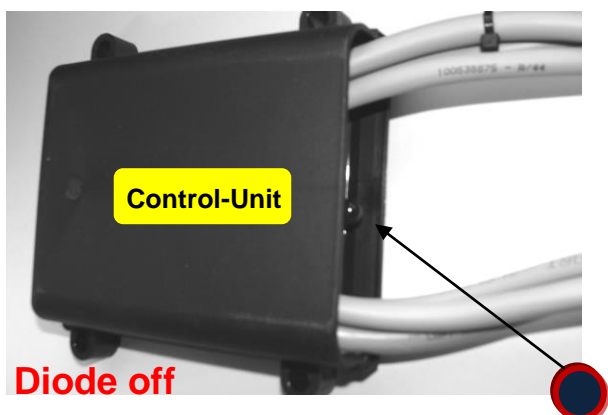
Key switch are activated
or
Platform position 0° to -10°

explanation:
Platform (horizontal) 0°
Platform tilted down -10°



Diode flash signal, when:

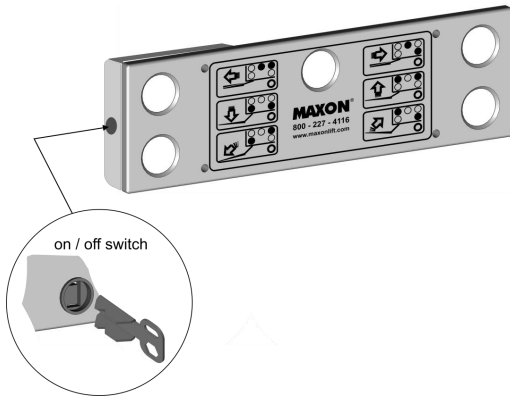
Control panel are activated
or
Foot control are activated
or
Cabled remote are activated



Diode off when:

Key switch are deactivated
or
Platform position 0° to 10°

control panel



Test of platform sensor:

Platform closed and control unit on:

Diode lights

Voltage Ok

Platform position 0 ° to ca. 10 °:

Diode off

Sensor-switch S1 OK.

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

Diode lights

Sensor-switch S2 OK.

Switch over at horizontal position.

With this the automatic tilt down can be adjusted.

Test of pressure switch S4:

With the two foot controls for lowering- >> Activate lowering.
Diode flashes.

As soon as the platform has reached the ground the flashing
changes into solid light – diode lights and the Platform tilts down.

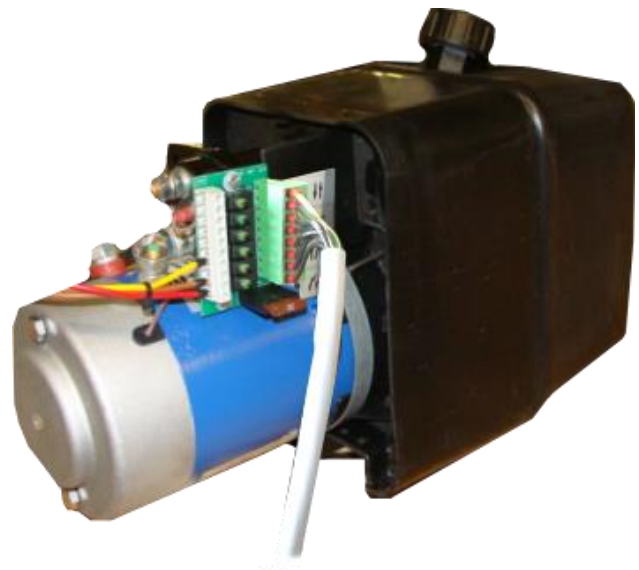
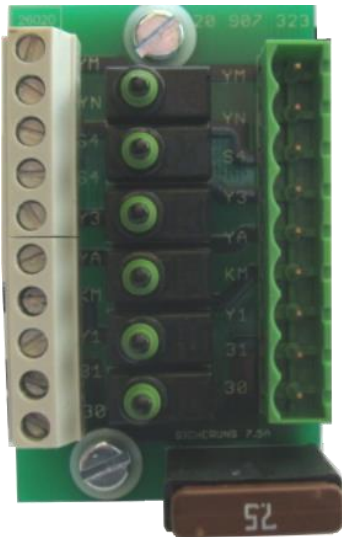
This shows, that the pressure switch has switched . When not, the pressure switch is defect.

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Service Switch

With the service switch (positioned in the power Pack) (**Service Switch**) educated service personal are allowed directly to switch the functions of the Tailgate/Slidelift.

In case of defect on Hand- or foot controls of the tailgate, educated personal are able to use the Service Switch as (**Emergency control**), to drive the tailgate/slider in any wanted position.



Function	YM	YN	YA	Y1	Y3	KM
Lift					•	•
Lower			•		•	•
Open /tilt down			•	•		•
Close / tilt up				•		•
Slide out		•				•
Slide in	•					•
Tilt down on ground			•	•	•	

Always keep order of activation, activate KM at last. →