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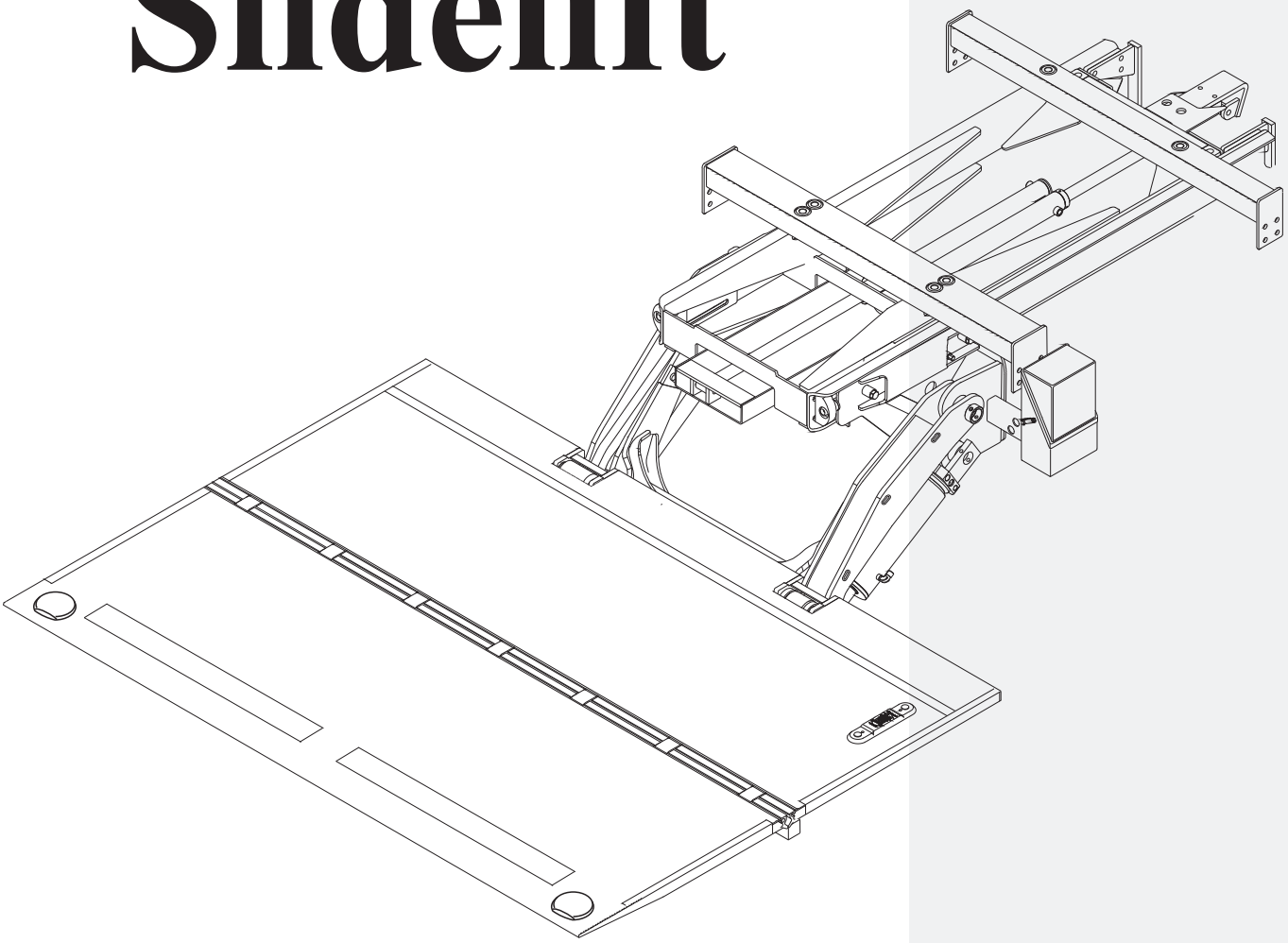
Slidelift



Installation manual

GPS 44 X1
GPS 55 X1

X1 TECHNOLOGY

MAXON® Lift CORP.

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Santa Fe Springs, CA 90670
(800) 227 - 4116

25.03.2013
20 910 562

Installation Manual
GPS 44 X1 and GPS 55 X1

Introduction

This installation manual contains all instructions necessary to install the Slidelift and adjust it to the chassis or trailer 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 occuring during transportation. The lift needs to be checked for damages immediately after unloading. If any damages occured 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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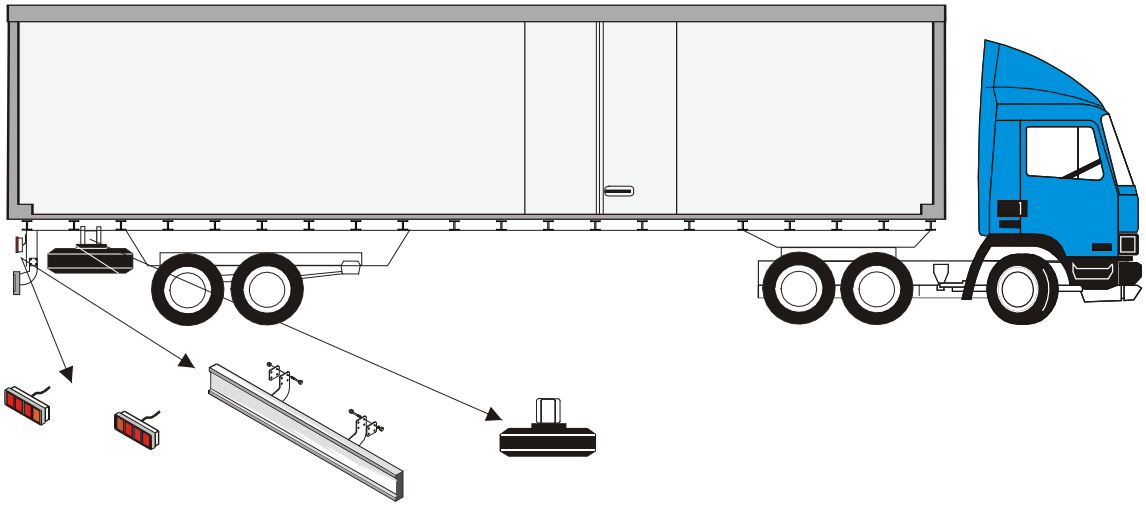
Vehicle preparation

Remove the underride bumper 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 plates, they need to be removed. If necessary, remove hinges and latches. Cut out openings in the rear frame according to our suggestions chapter "openings in the Rear Frame".



The cabin of the truck should be protected against dirt using protective cloth material

Rear frame cut outs

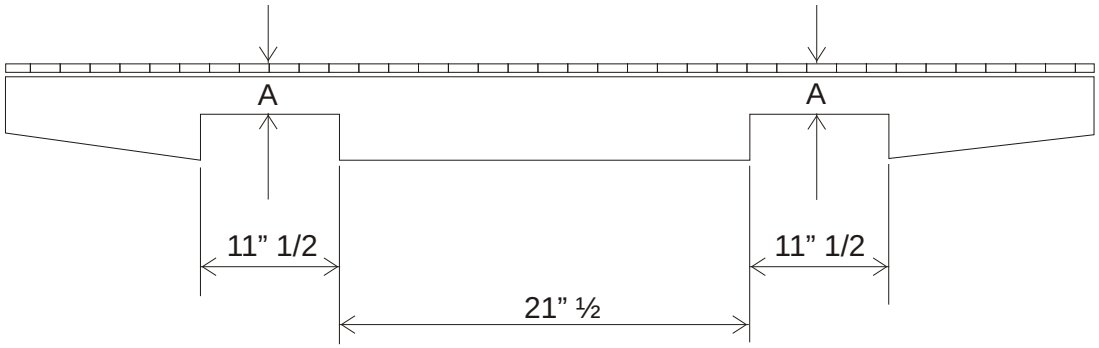


Table rear frame cut outs

short arm 30" ½ version

E1	S1 max.	S1 min.	A max.
7" 7/8	5" 1/2	2"	3" 1/8
9" 1/16	4" 3/4	1" 1/8	3" 1/8
10" 1/4	4" 1/8	9/16"	3" 1/8
11" 4/5	3"	0	3" 3/8
13"	2" 3/16	0	3" 1/2

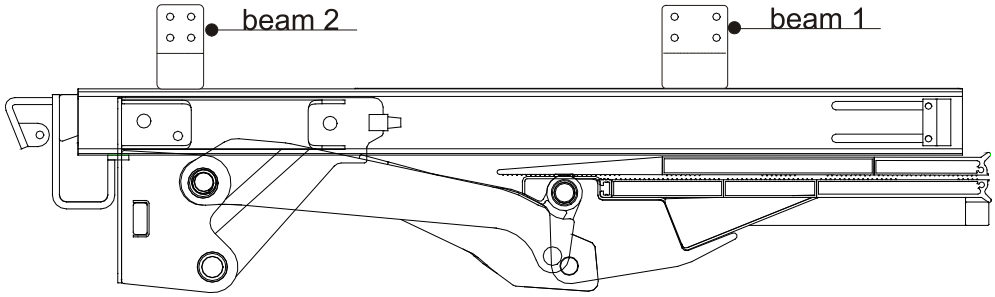
long arm 34" ½ version

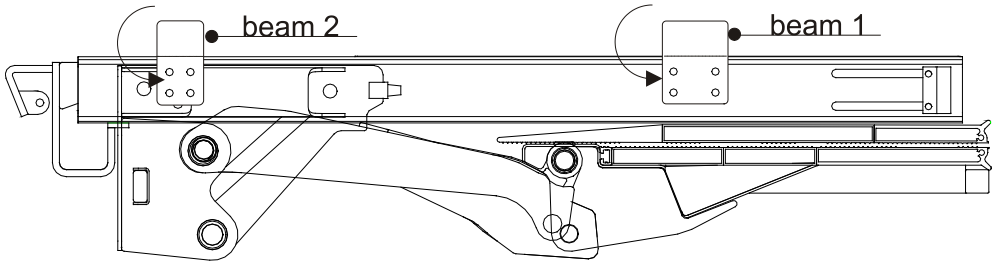
E1	S1 max.	S1 min.	A max.
10" 1/4	8" 2/3	5" 1/8	3" 1/2
11" 4/5	7" 11/16	4" 1/8	3" 1/2
13"	6" 8/9	3" 3/8	4"
14" 3/16	5" 14/16	2" 1/3	4" 5/16
15" 3/4	4" 3/4	1" 1/8	4" 1/2
17"	3" 3/4	3/16"	4" 3/4
18" 1/8	2" 3/4	0	4" 15/16
19" 5/16	1" 3/8	0	5" 1/8

see further dimensioning on the following pages

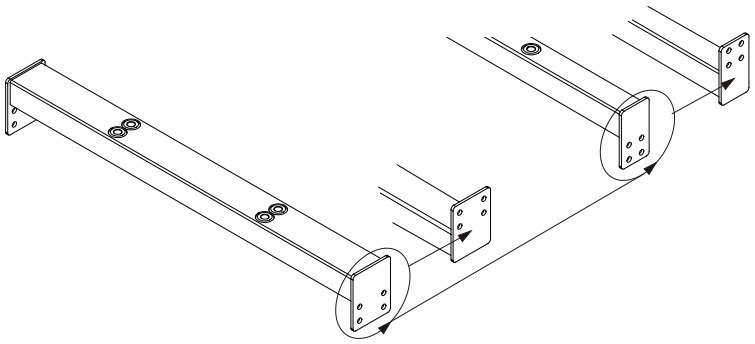
Crossbeam 1 and Crossbeam 2

Both crossbeams can be assembled by turning them at 180°, which gives an additional assembly height.

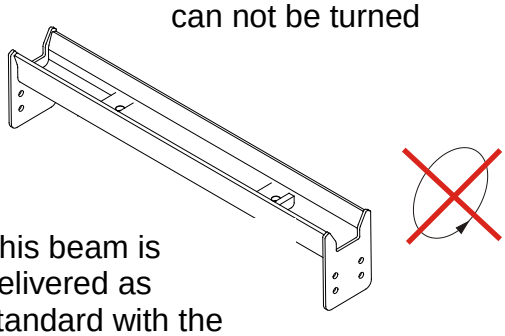




Turning of the beams possible



Beams for Kentucky can not be turned



This beam is delivered as standard with the short lifting arm

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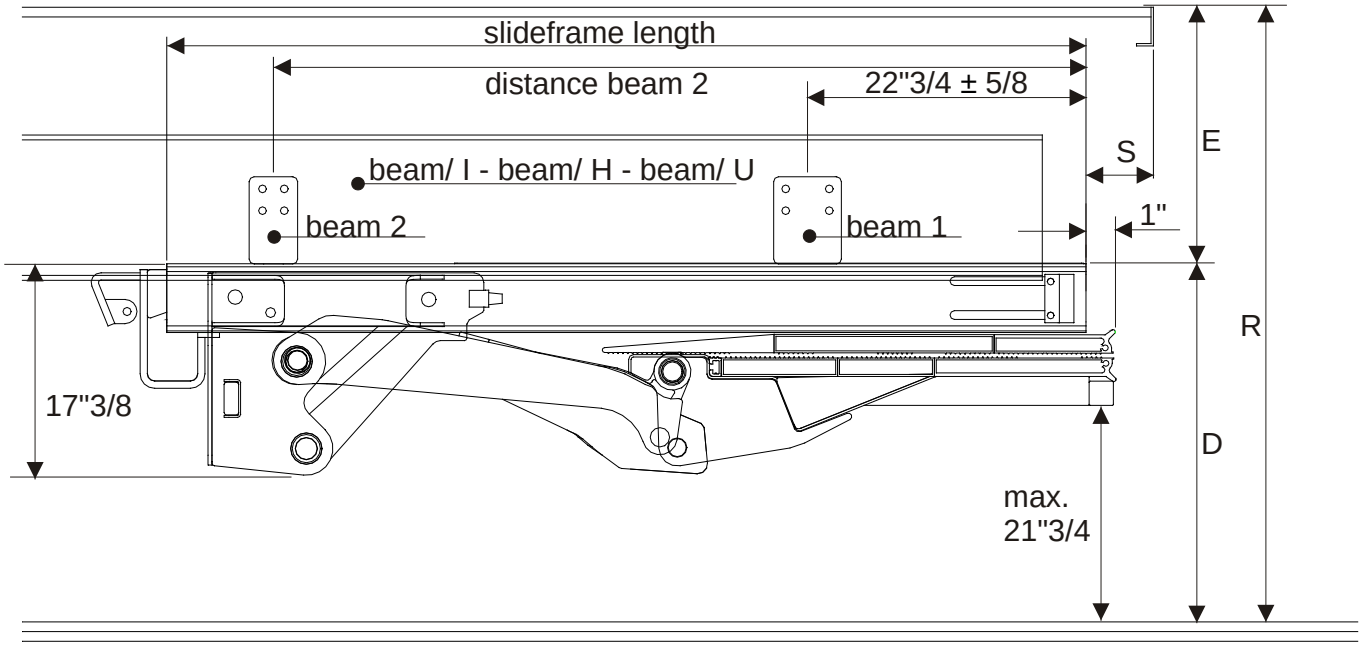
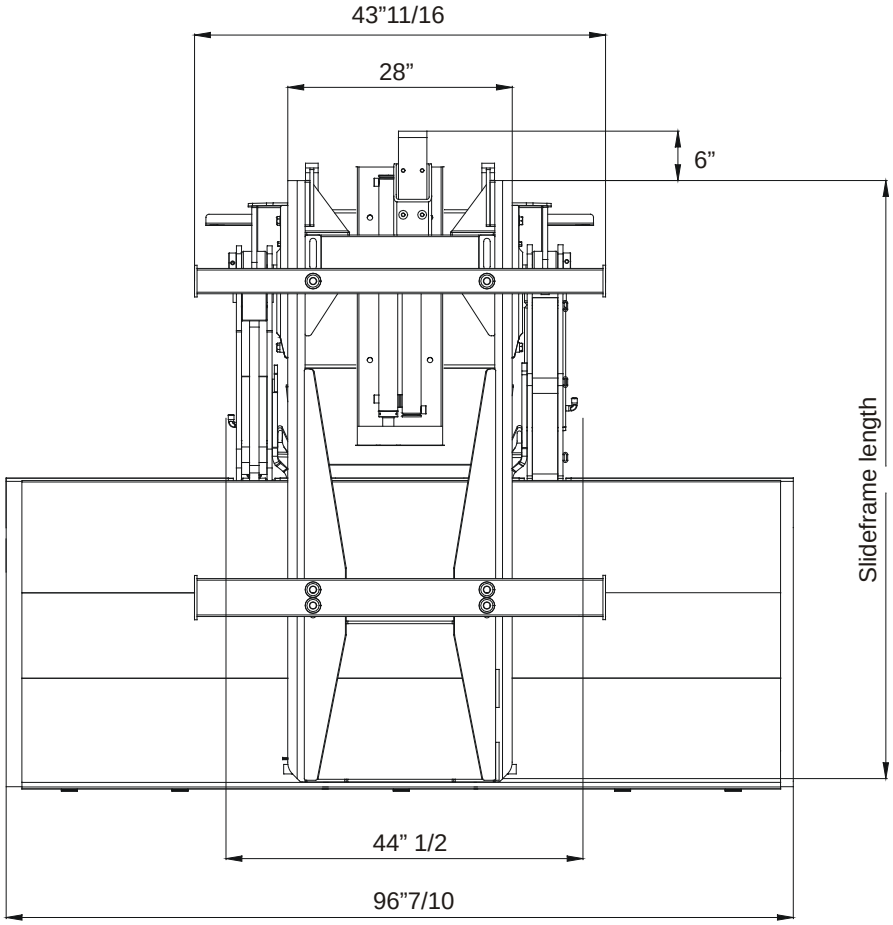
Dimensions of the Slidelift





Installation Table

GPS 44 X1 **short arm 30 ½" version** **Platform depth 72"**			**Platform depth 82"**
Length folding part 37"1/2			Length folding part 42"3/8
Distance beam 2	58"1/16 ± 1"1/2		62"1/4 ± 1"1/2
Length sliding frame	67"		71"
R max.	49"		
E max.	13"	E min. 6"3/4	
D max.	36"	D min. 27"	
S max.	14"3/4	S min. 0	
GPS 44 X1 **long Arm 34 ½" version** **Platform depth 72"**			**Platform depth 82"**
Length folding part 37"1/2			Length folding part 42"3/8
Distance beam 2	62"1/4 ± 1"1/2		66"1/4 ± 1"1/2
Length sliding frame	71"		75"
R max.	55"		
E max.	19"	E min. 10"	
D max.	36"	D min. 27"	
S max.	14"3/4	S min. 0	
GPS 55 X1 **short Arm 30 ½" version** **Platform depth 72"**			**Platform depth 82"**
Length folding part	37"1/2		Length folding part42"3/8
Distance beam 2	62"1/4 ± 1"1/2		66" ± 1"1/2
Length sliding frame	71"		75"
R max.	49"		
E max.	13"	E min. 6"3/4	
D max.	36"	D min. 27"	
S max.	14"3/4	S min. 0	
GPS 55 X1 **long Arm 34 ½" version** **Platform depth 72"**			**Platform depth 82"**
Length folding part 37"1/2			Length folding part 42"3/8
Distance beam 2	68"		72" ± 1"1/2
Length sliding frame	75"		79"
R max.	55"		
E max.	19"	E min. 10"	
D max.	36"	D min. 27"	
S max.	14"3/4	S min. 0	

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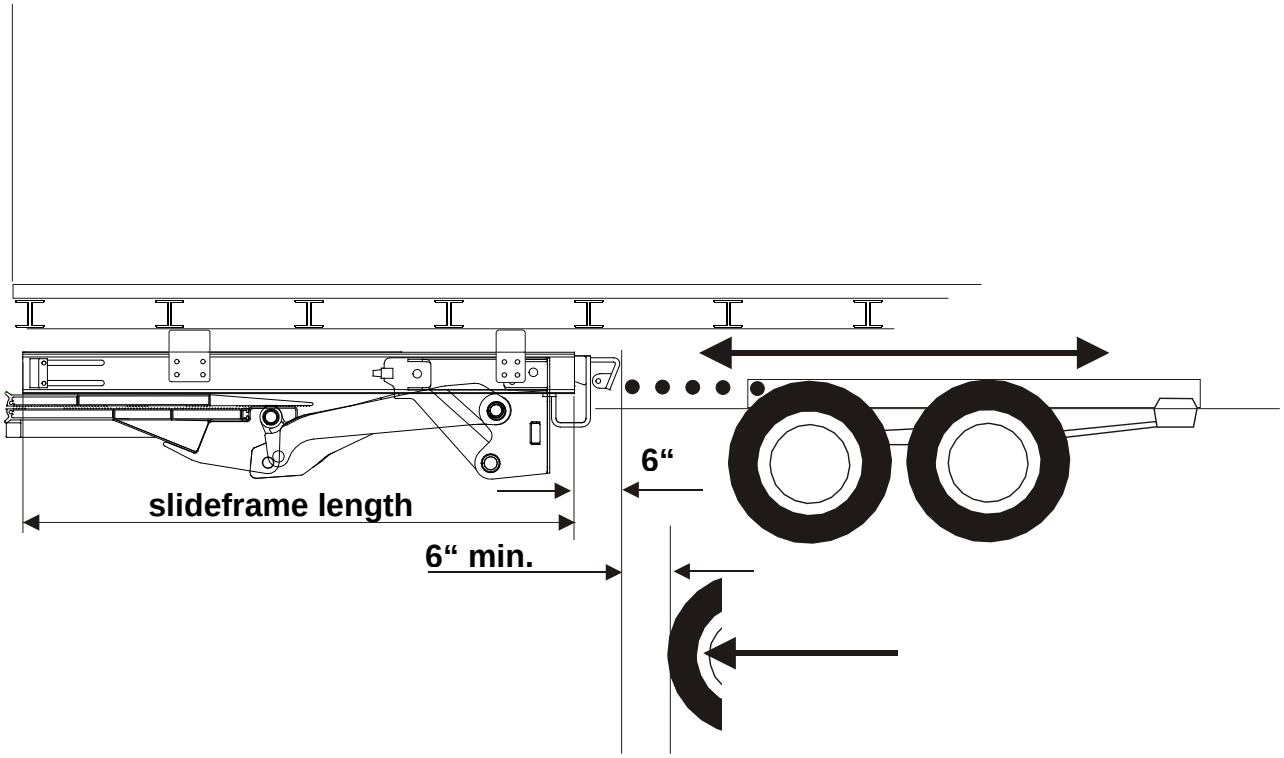
Consider the measures for the achs shift



Assembly of electrical devices

Caution!

The installation of the electrical equipment should be done before the mounting of the Slidelift it self because at this stage it will be easier to do so (more space available).

Caution!

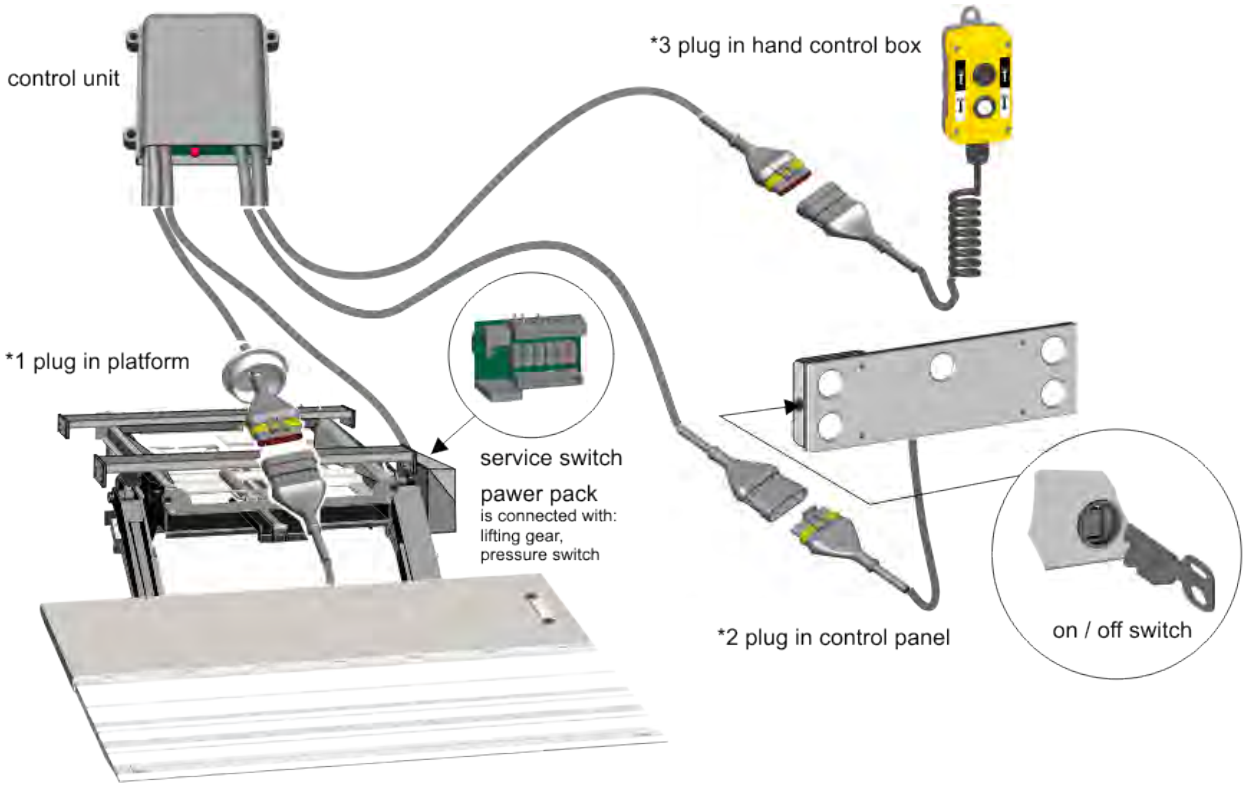
All operations of the tail lift must only be performed if the battery cables are correctly attached to it, and if there is enough tension available. Never use a battery charger or a starting device, as this can result in damage to the tail lift motor.

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.



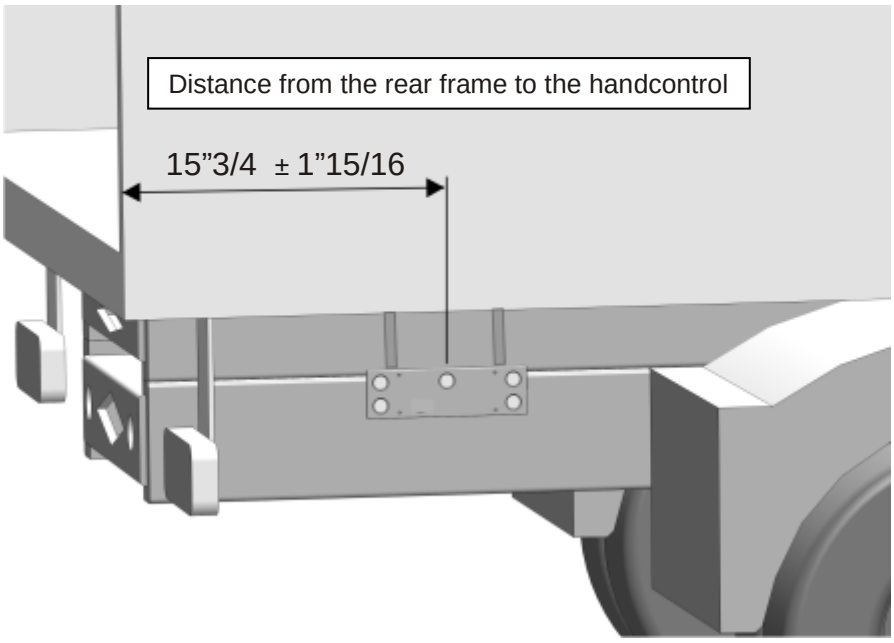
Foot control

The foot control is ready to use from the factory.

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

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”3/4 ± 1”15/16.**

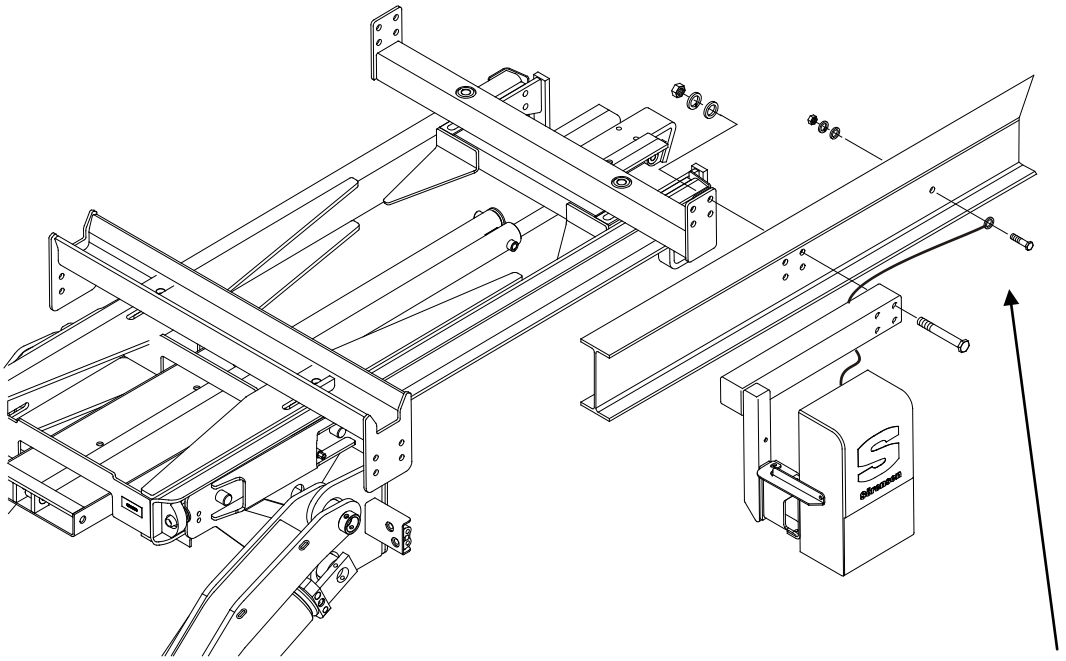


Connect the set "main circuit fuse" to the battery terminal clip at the positive pole of the battery. Connect the main circuit cable (positive from the main circuit fuse) to the pump box of the Slidelift. Connect it to the power relay. Connect the earth cable from the motor to the negative pole of the 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!

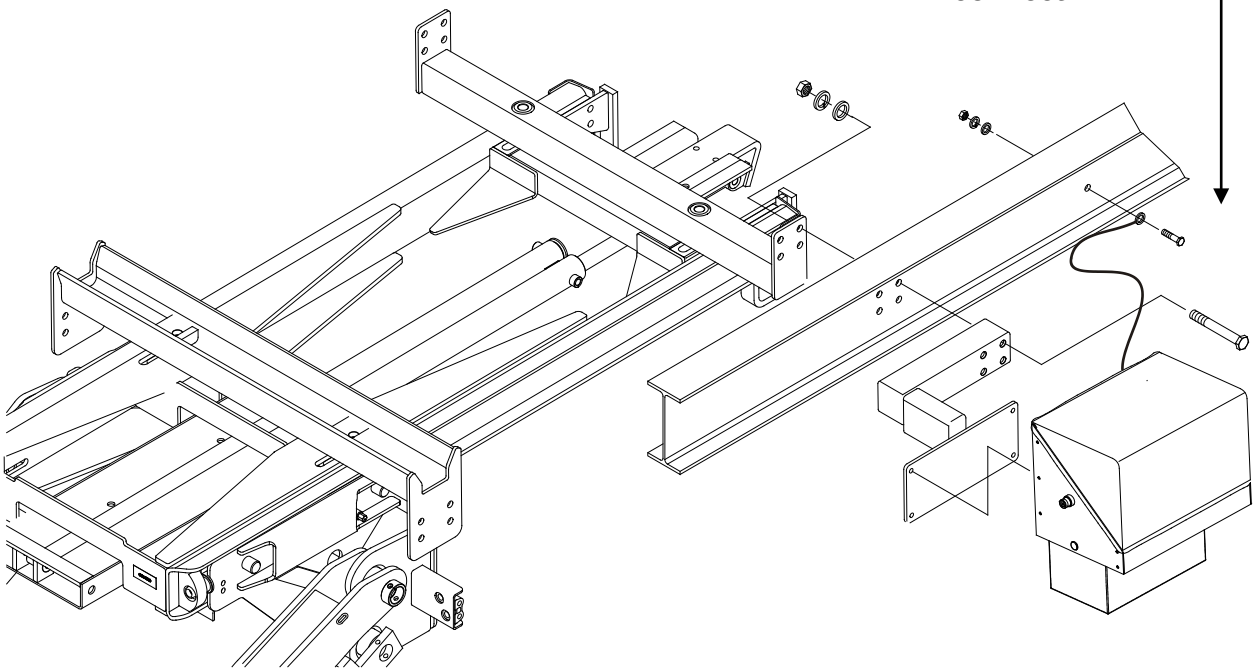
Installation Power Pack

Single Power Pack



Ground cable by the vehicle frames connect.

Twin Power Pack

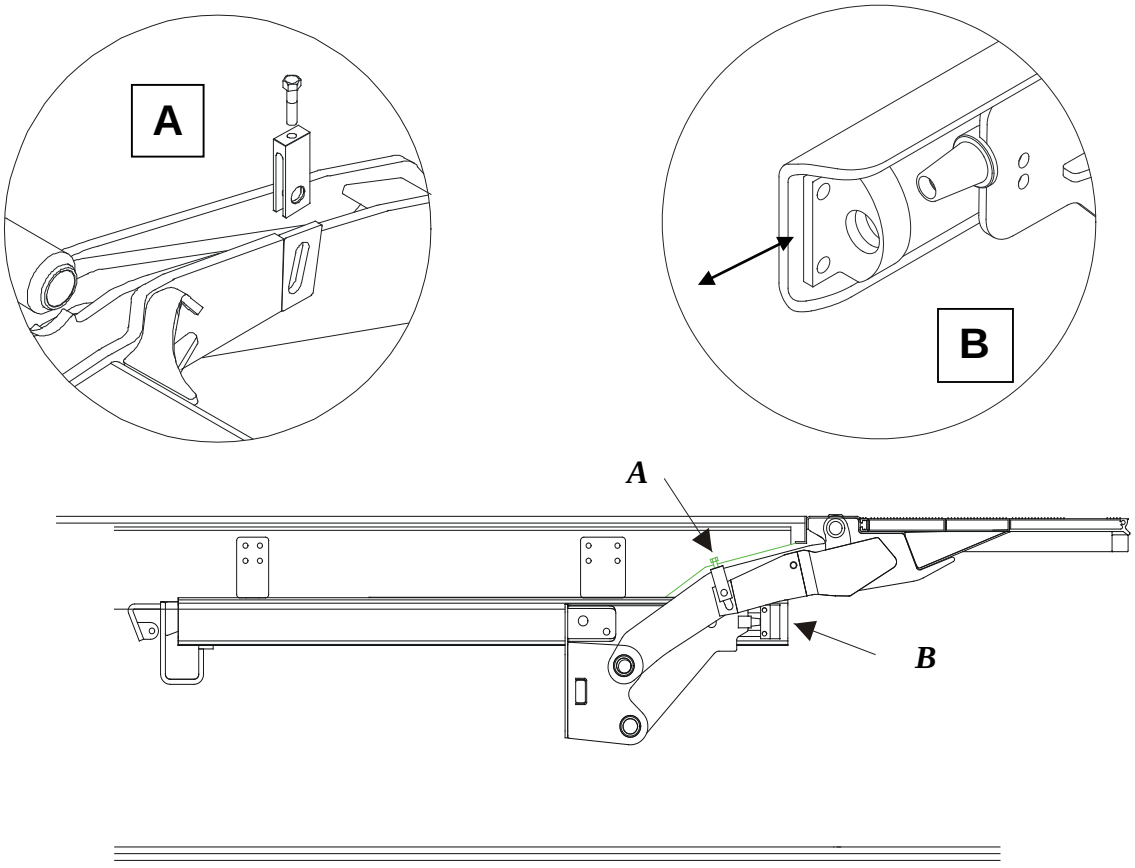


Slidelift Installation

The Slidelift is completely pre-mounted. 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 installation table underneath) in height and length.
The Slidelift must be installed parallel to the truck's and/or trailers loading platform.
Weld the mounting plates located on beam 1 and 2 on both sides and in addition from underneath or from above on their full length.
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.

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

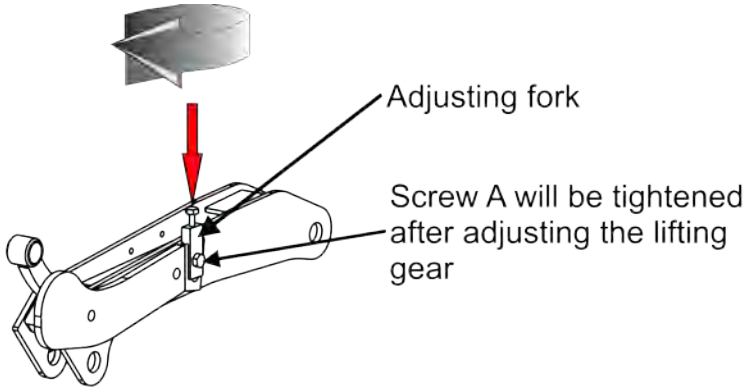
Move the hoisting gear with the opened platform hydraulically behind the rear frame. For the adjustment, the lift arms are not to touch the rear frame. Between the rear frame and lift arms, there should be a space of 3/8”. With the adjusting screws, the hoisting gear will be adjusted until the vehicle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

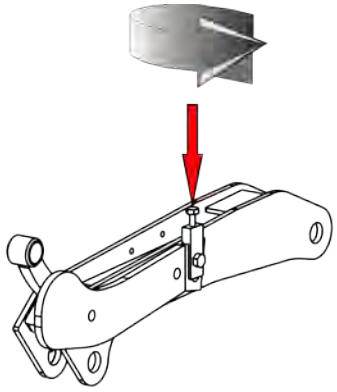


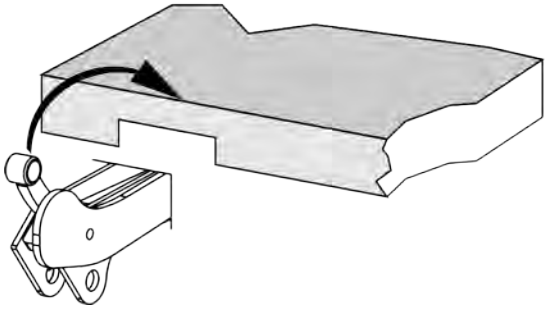
Adjusting the lift height (B).

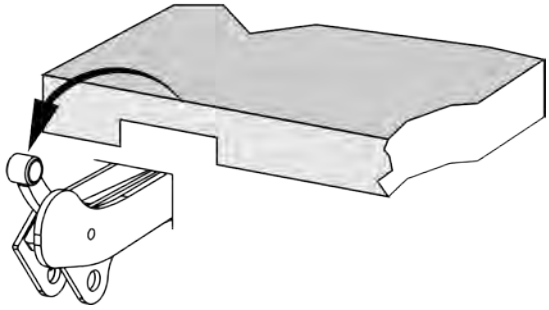
After the installation of the Slidelift, please slide out the frame completely, lift the platform to the same height than the vehicle floor, and in that position, slide it back against the chassis frame of the vehicle. Then slide the stops on both sides against the sliding frame of the lift and secure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

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
GPS 44 X1	¼”
GPS 55 X1	¼“

Warning

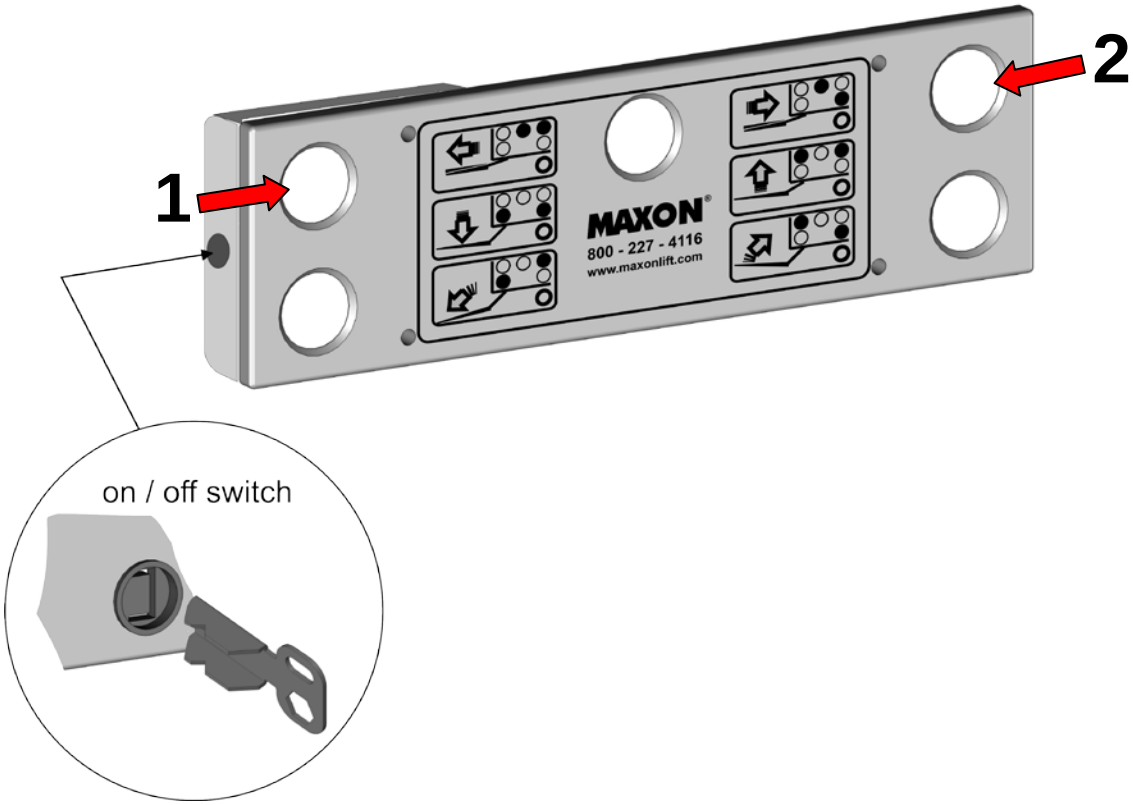
The ground clamp of the welding device must be attached directly to one of the parts to be welded. Otherwise, the hydraulic cylinders may be damaged.

Programming of the horizontal position of the platform

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.

Operating the Slidelift

First operation

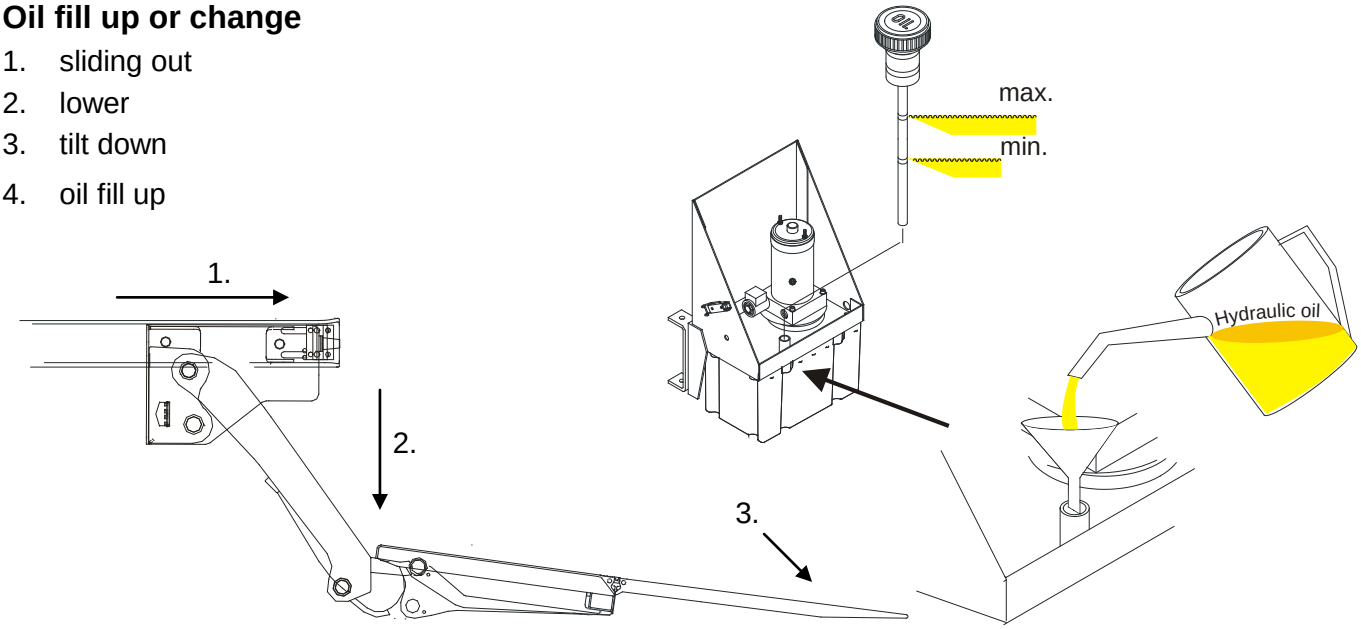
Check operation readyness. Check all moving parts for free move (no abrasion on hoses, cables, etc.). Check the hydraulics for leaks.

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 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.

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 control panel.

For problems please contact our Technical Service Department.

Load trial run

Static test

Move the platform vertically to the ground. Place a test load of up to 50% of the rated capacity within the loading distance onto the platform. The loading distance and the rated capacity are engraved on the identification plate which should be fixed to the Slidelift. The loading diagram shows the possible load when changing the loading distance. Test to capacity additional 5 times.

The installer must check the Slidelift for deformation after the static test.

Dynamic test

The functions lifting, lowering, and tilting are to be checked using loads as indicated in the loading diagram.

For problems please contact our Technical Service Department.

Check against lifting an overload

A test needs to guarantee that a load of more than 125% of the maximum rated capacity can not be lifted off the ground.

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 liftgates

Screw Size 8.8	Tightening Torque in ft. lb
M4	2
M6	7
M8	17
M10	33
M12	59
M14	96
M16	143
M20	283
10.9	
M12	85
M14	132
M16	202
M20	398
Y1 – Y3 – YA - YN - YM	18
Starter Solenoid	
M8	8

Screw Connections	Tightening Torque in ft. lb
G1/4“	29
G3/8“	70
G1/2“	96
Connection Nuts	
M16 x 1.5	44
M18 x 1.5	44
Plugs	
G1/8“	11
G1/4“	24
G3/8”	51

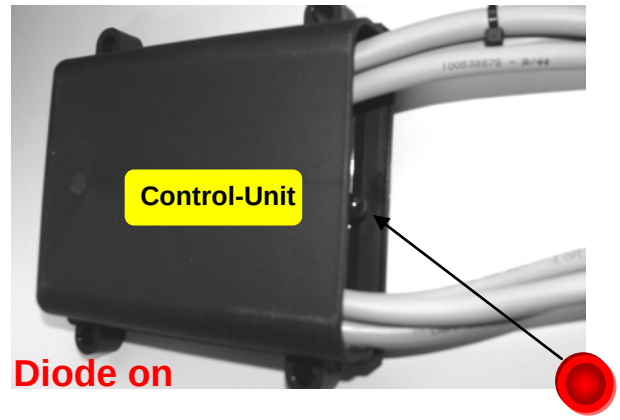
Battery Capacity

Model	GPS 44 X1	GPS 55 X1
Size	2 group 31 - 12VDC - parallel	

Diagnostics Diode

Explanation of the diagnostics diode on the control-unit.

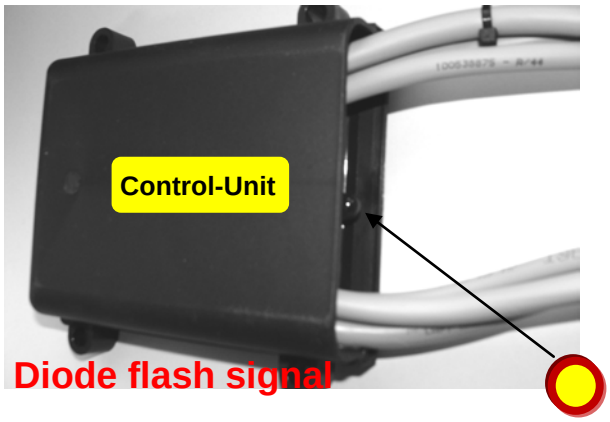
Control-Unit Serie 10



Diode lights constantly on when:

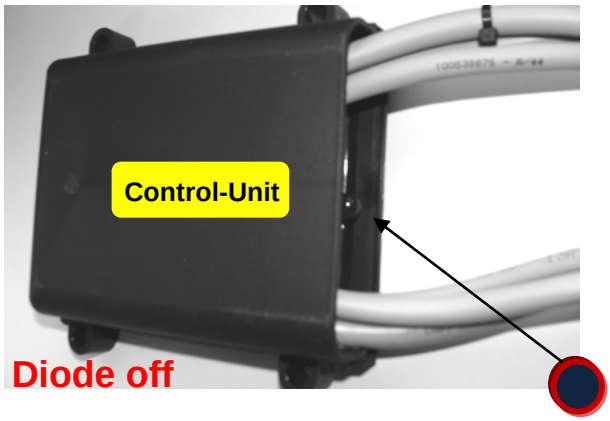
Key switch are activated
or
Platform position 0° to -10°

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



Diode flash signal, when:

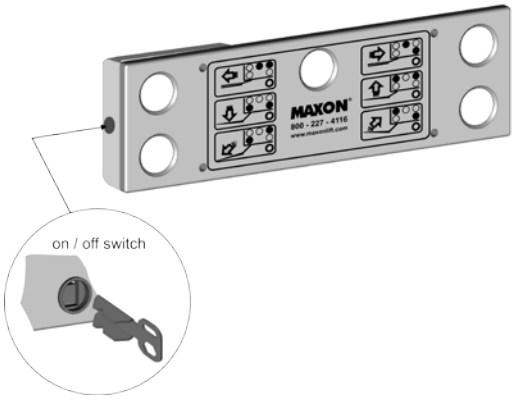
Control panel are activated
or
Foot control are activated
or
Cabled remote are activated



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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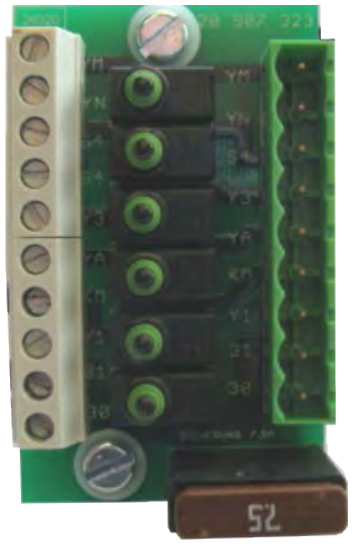
Service Switch

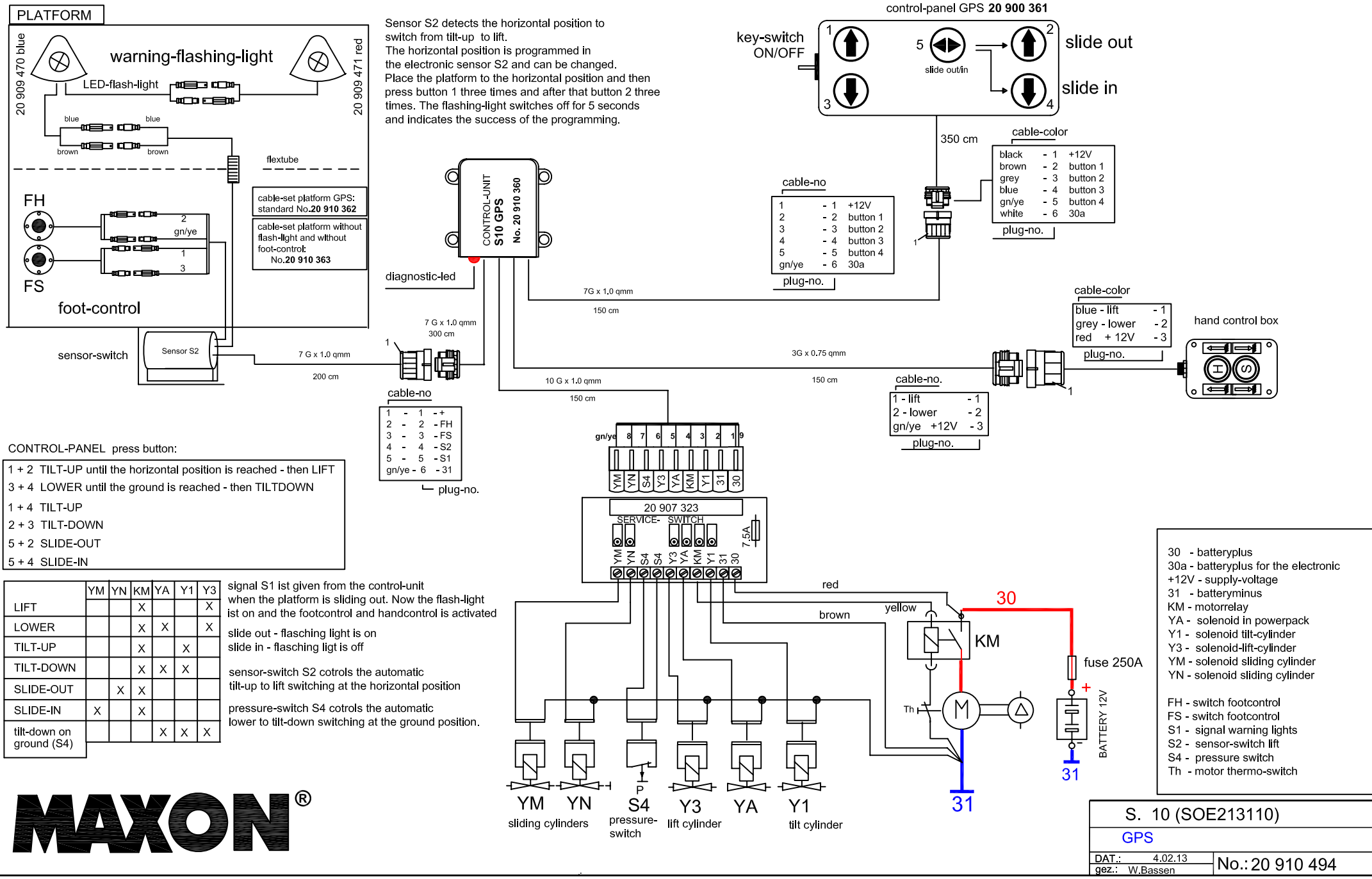
With the service switch (positioned in the power Pack) **(Service Switch)** educated service personal are allowed directly to switch the functions of the tailgate/slider.

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. ⟶



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 ligt 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

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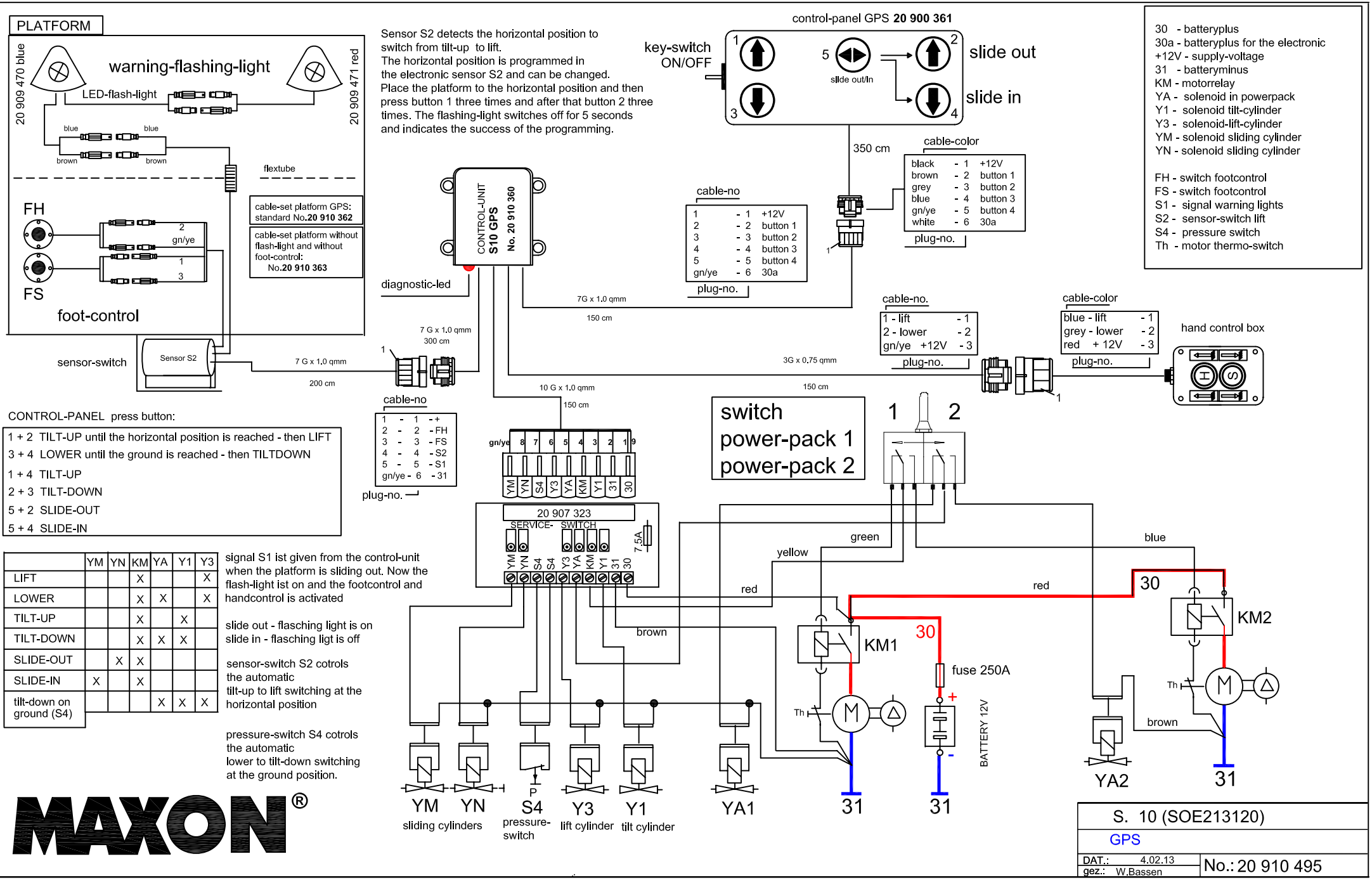
S. 10 (SOE213110)

GPS

DAT.: 4.02.13
gez.: W.Bassen

No.: 20 910 494



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 ligt 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.

MAXON®

S. 10 (SOE213120)

GPS

DAT.: 4.02.13
gez.: W.Bassen

No.: 20 910 495