



## SERVICE MANUAL

# MA50 / PA50 MA60 / PA60



SAFELIFT®

# CONTENT

|                                                           |           |
|-----------------------------------------------------------|-----------|
| <b>1. Service</b>                                         | <b>3</b>  |
| <b>2. Lift components</b>                                 | <b>4</b>  |
| <b>3. Inspection and service frequency</b>                | <b>6</b>  |
| <b>4. Inspection of lift</b>                              | <b>6</b>  |
| 4.1 Visual inspection                                     | 6         |
| 4.2 Guard railing                                         | 7         |
| 4.3 Gate                                                  | 7         |
| 4.4 Emergency Stop                                        | 7         |
| 4.5 Front wheel                                           | 7         |
| 4.6 Rear wheels (swivel)                                  | 7         |
| 4.7 Emergency lowering                                    | 7         |
| 4.8 Tilt sensor function (MA50 / MA60)                    | 7         |
| 4.9 Tilt indicator function (PA50 / PA60)                 | 7         |
| 4.10 Safety harness anchor point                          | 7         |
| 4.11 Safety signs and decals                              | 7         |
| <b>5. Service</b>                                         | <b>8</b>  |
| 5.1 Dismantling of chassis covers                         | 8         |
| 5.2 Dismantling the front plastic cover                   | 8         |
| 5.3 Dismantling the tool shelf                            | 9         |
| 5.4 Cleaning and lubrication of lifting columns           | 9         |
| 5.5 Lubrication of rollers on the lifting column          | 10        |
| 5.6 Adjustment of rollers on the lifting column           | 10        |
| 5.7 Battery replacement                                   | 11        |
| 5.8 Hydraulic oil level                                   | 12        |
| 5.9 Change of hydraulic oil                               | 12        |
| 5.10 Control of leaking hydraulic oil                     | 12        |
| 5.11 Adjustment drive chains                              | 13        |
| 5.12 Lubrication drive chains                             | 13        |
| 5.13 Inspection of spiral cable rubber guide              | 14        |
| 5.14 Resetting the tilt sensor                            | 14        |
| 5.15 Inspection of lifting column chains                  | 15        |
| 5.16 Inspection of sliding bearing on lifting column      | 15        |
| <b>6. Troubleshooting</b>                                 | <b>16</b> |
| 6.1 The lift is without electricity                       | 16        |
| 6.2 Platform cannot be raised                             | 16        |
| 6.3 Platform cannot be lowered                            | 16        |
| 6.4 The lift cannot be driven (MA50 / MA60)               | 17        |
| 6.5 The lift cannot be driven at high speed (MA50 / MA60) | 17        |
| 6.6 The lift cannot be pushed by hand                     | 17        |
| 6.7 The batteries cannot be charged                       | 17        |
| <b>7. Electrical diagram</b>                              | <b>18</b> |
| <b>8. Hydraulic scheme</b>                                | <b>19</b> |
| <b>9. Spare parts</b>                                     | <b>20</b> |
| 9.1 Platform parts                                        | 20        |
| 9.2 Control panel parts                                   | 22        |
| 9.3 Lift pillar parts                                     | 24        |
| 9.4 Chassis parts                                         | 26        |
| 9.5 Electric parts chassis                                | 28        |
| 9.6 Battery parts                                         | 30        |
| 9.7 Decals                                                | 32        |
| <b>10. Inspection and service notes</b>                   | <b>34</b> |

# 1. SERVICE

This service manual describes how the lift should be maintained to be safe and get a long life span.

For questions regarding service of the lift, please contact: **service@safelift.se**



Service of the lift may only be carried out by trained personnel.



Electrical work may only be carried out by a trained specialist.



Work on live electrical parts is not permitted.



Conversions, repairs and changes to the lift may only be carried out under current safety regulations.



Only original spare parts may be used for repairs.



After completed service, the lift's functions and safety must be checked and tests must verify that the lift is safe to use.

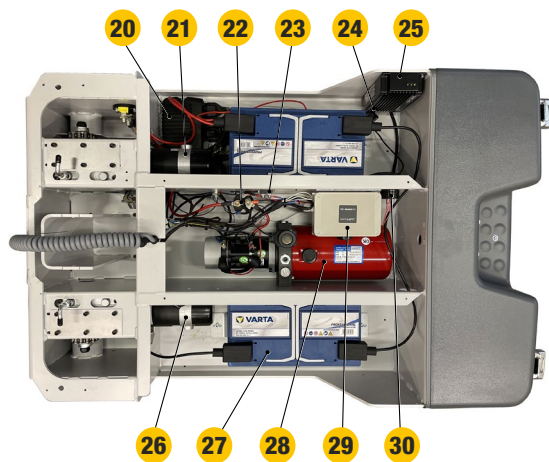
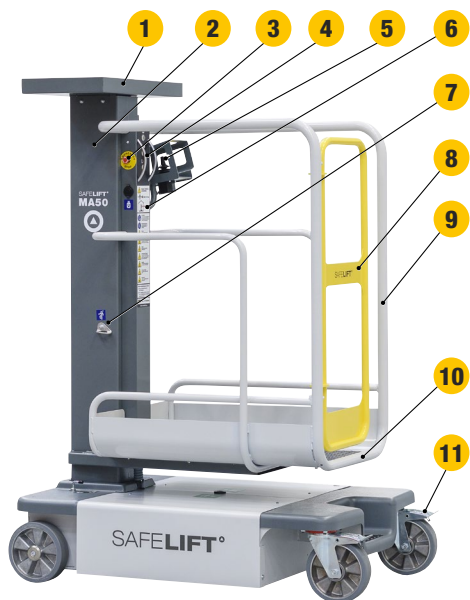


## **NOTE!**

Read the lift's user manual for further understanding of the lift's safety and functions.

## 2. LIFT COMPONENTS

- 1 Tool shelf
- 2 Lifting column
- 3 Emergency Stop
- 4 Control panel platform
- 5 Joystick (MA50 / MA60)
- 6 Information and safety signs
- 7 Anchorage safety harness
- 8 Gate
- 9 Guard railing
- 10 Platform
- 11 Rear wheels (swivel)
- 12 Emergency lowering (mechanical)
- 13 Chassis cover
- 14 Spiral cable
- 15 Connection / disconnection of operation (MA50 / MA60)
- 16 Main switch 24V
- 17 Control panel chassis
- 18 Emergency lowering (electric)
- 19 Front wheel
- 20 Control box driving
- 21 Drive motor right
- 22 Relay
- 23 Protection diode
- 24 Fuse 20A (blade fuse)
- 25 Battery charger
- 26 Drive motor left
- 27 Battery 12V
- 28 Hydraulic unit
- 29 Tilt sensor (MA50 / MA60)
- 30 Signal horn



### 3. INSPECTION AND SERVICE FREQUENCY

| Inspection and service frequency             |        | Daily | Half yearly | Yearly |
|----------------------------------------------|--------|-------|-------------|--------|
| Visual inspection                            | (4.1)  | ■     |             |        |
| Guard railing                                | (4.2)  |       |             |        |
| Gate                                         | (4.3)  | ■     |             |        |
| Emergency Stop                               | (4.4)  | ■     |             |        |
| Front wheel                                  | (4.5)  | ■     |             |        |
| Rear wheels (swivel)                         | (4.6)  | ■     |             |        |
| Emergency lowering                           | (4.7)  | ■     |             |        |
| Tilt sensor function (MA50, MA60)            | (4.8)  | ■     |             |        |
| Tilt indicator function (PA50, PA60)         | (4.9)  | ■     |             |        |
| Safety harness anchor point                  | (4.10) | ■     |             |        |
| Safety signs and decals                      | (4.11) | ■     |             |        |
| Spiral cable rubber guide                    | (5.13) | ■     |             |        |
| Cleaning and lubrication of lifting columns  | (5.4)  |       | ■           |        |
| Lubrication of rollers on the lifting column | (5.5)  |       | ■           |        |
| Adjustment of rollers on the lifting column  | (5.6)  |       | ■           |        |
| Hydraulic oil level                          | (5.8)  |       | ■           |        |
| Adjustment drive chains (MA50, MA60)         | (5.11) |       | ■           |        |
| Lubrication drive chains (MA50, MA60)        | (5.12) |       | ■           |        |
| Inspection of lifting column chains          | (5.15) |       | ■           |        |
| Lubrication gears lifting column             | (5.15) |       | ■           |        |
| Inspection of sliding bearing lifting column | (5.16) |       | ■           |        |
| Change of hydraulic oil                      | (5.9)  |       |             | ■      |



**NOTE!**

In case of intensive use, heavy load and dirty environment, the lift may need to be maintained with more frequent service intervals than indicated in the table.

### 4. INSPECTION OF LIFT

#### 4.1 Visual inspection

- Inspect the lift for defects that could affect safety.
- Check that components are intact (look for cracks) and that screws and nuts are tight. Check welds.
- Inspect the lift, look for oil leaks (underside of the chassis).

If any of the above defects are discovered on the lift, it must not be used until the defects are rectified.

## **4.2 Guard railing**

Check that the platform railing is stable and undamaged.

## **4.3 Gate**

Check that the platform gate is stable, intact and undamaged. Check that the gate closes automatically. Lubricate the gate hinges if necessary. Ensure that the gate cannot be opened outwards.

## **4.4 Emergency Stop**

Check the function of the emergency stop. The emergency stop shall cut off all power.

## **4.5 Front wheel**

Check that the wheels are in good condition. Check that the lift's levers for drive motors (MA50 / MA60) are activated, then the front wheels are locked automatically.

## **4.6 Rear wheels (swivel)**

Check that the wheels are in good condition and that the brakes are working.

## **4.7 Emergency lowering**

Check the lift's mechanical emergency lowering function of the platform by pressing the button on top of the chassis.

## **4.8 Tilt sensor function (MA50 / MA60)**

Check that the lift's tilt sensor is working by raising the platform approx. 10 cm from the bottom position and then driving the lift up on a surface inclined more than 2°. The tilt sensor then indicates with an audible signal that the lift cannot be driven and the platform cannot be raised. Lower the platform until its bottom position, the buzzer stops and the lift regains all functions.

## **4.9 Tilt indicator function (PA50 / PA60)**

Check that the lift's tilt indicator (spirit level) works by placing the lift on a flat surface.

## **4.10 Safety harness anchor point**

Check that the anchor point is undamaged and firmly mounted.

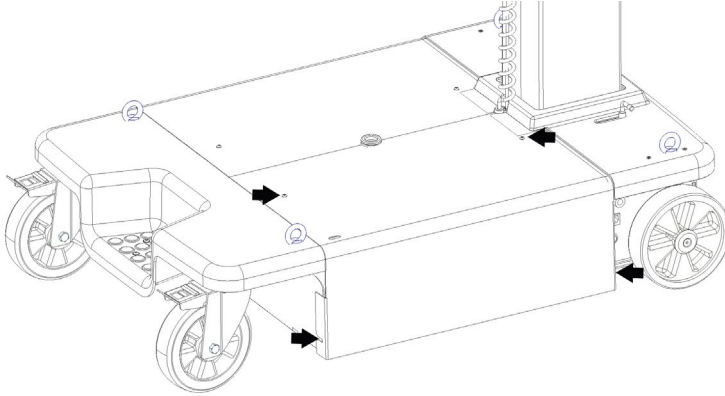
## **4.11 Safety signs and decals**

Check that safety signs and decals are not damaged or missing.

## 5. SERVICE

### 5.1 Dismantling of chassis covers

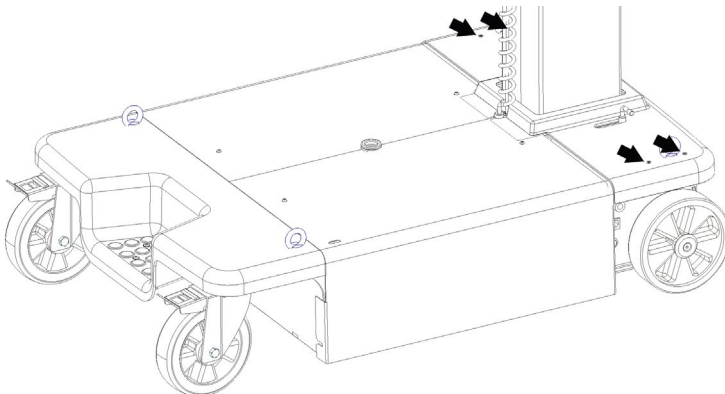
To access the internal components of the chassis, the chassis covers must be removed. Loosen 4 screws, (see picture 1) use a 3 mm Allen key.



Picture 1

### 5.2 Dismantling the front plastic cover

To access chain adjustment of drive motors, the front plastic cover needs to be dismantled. The cover is attached with 4 screws, (see icture 2) use a 3 mm Allen key. Raise the lift column so that the bottom column segment is exposed, making it easier to twist the cover to remove it.

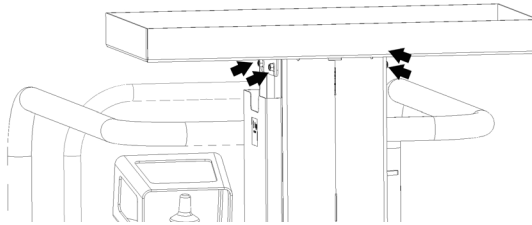


Picture 2



### 5.3 Dismantling the tool shelf

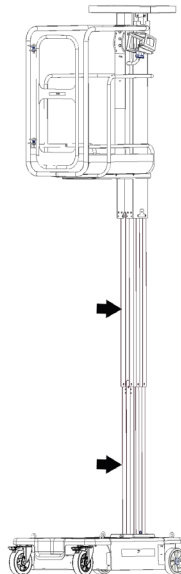
The tool shelf is attached with 4 M6 nuts, (see picture 3), use a 10 mm spanner.



Picture 3

### 5.4 Cleaning and lubrication of lifting columns

To prevent the sliding pads and sliding surfaces of the lifting column from being damaged or worn out prematurely, the surfaces of the column must be kept clean of dirt and dust. Raise the lift to its highest position (see picture 4). Clean the aluminum surfaces of the column with alcohol (or equivalent) and then lubricate the surfaces with oil (Castrol Alpha SP220 or equivalent). Raise and lower the platform at least 3 lifting cycles, to distribute the oil on the sliding surface. Wipe off any excess oil.



Picture 4

### 5.5 Lubrication of rollers on the lifting column

In order to prevent the lifting column's rollers from being worn or damaged, they must always be able to roll easily. Raise the platform so that the floor surface is 1.5 m from the ground. Clean the rollers with alcohol (or equivalent) and then lubricate the rollers with oil (Castrol Alpha SP220 or equivalent). Wipe off any excess oil.



Picture 5

### 5.6 Adjustment of rollers on the lifting column

The pressure of each roller against the lifting column is adjusted with 2 allen screws, use a 2.5 mm allen key. The pressure on the rollers must be such that they can roll easily without backlash. Test the clearance by manually shaking the platform sideways. The platform must then not be loose. If the rollers are set too hard, they can be prevented from rolling and thus wear out.



Picture 6

## 5.7 Battery replacement

The lift has 2 series-connected 12V batteries. The batteries are located inside the chassis covers.

- Each 12V battery is attached to the bottom of the chassis with 2 hex screws, use a 4mm hex key to loosen the fasteners, (see picture 7).
- After the batteries have been charged for at least 12 hours, each battery must have a voltage of at least 12.4V to be healthy.
- Unhealthy batteries must be replaced. If only one battery is healthy, both batteries must still be replaced. Keep the battery terminals clean and free from oxide.

For safe battery removal:

1. Turn off the lift's main switch.
2. First disconnect the negative terminal (-).
3. Then disconnect the positive terminal (+).

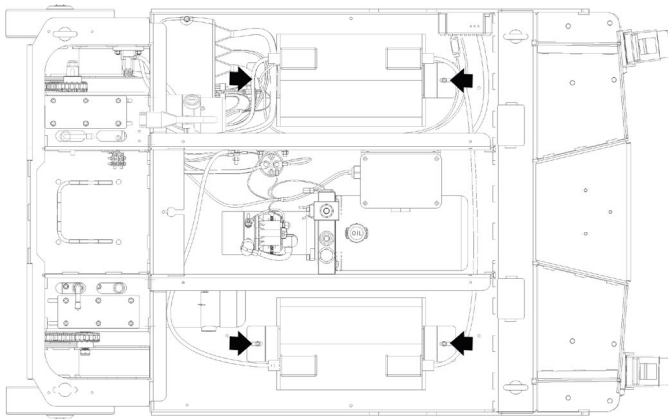
Batteries must be of the correct type. Approved batteries are:

- *Varta Professional Dual Purpose EFB 12V 80 Ah*
- *Varta Professional Dual Purpose EFB 12V 110 Ah*



### NOTE!

The recommendation is that the batteries always should be charged when the lift is not in use, so the batteries always will be fully charged when the lift is about to be used and so the batteries will not risk being damaged. The built-in battery charger maintenance charges the batteries automatically.

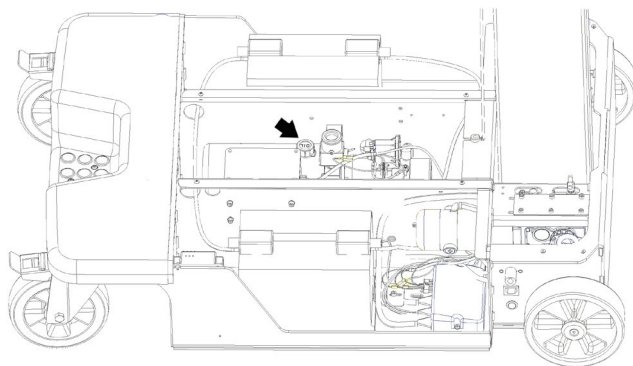


Picture 7

## 5.8 Hydraulic oil level

Check that the hydraulic system has the correct amount of oil by reading the oil dipstick on the hydraulic tank (see picture 8).

- *Hydrauloljemängd MA50 / PA50: 3,0 L*
- *Hydrauloljemängd MA60 / PA60: 3,4 L*



Picture 8



### **NOTE!**

Do not exceed the specified amount of oil.

## 5.9 Change of hydraulic oil

The lift's hydraulic oil should be changed every 12 months.  
Recommended hydraulic oil:

- *Motorex Corex HV46: DIN 51524/-2/-3 EN ISO 6743-4*

## 5.10 Control of leaking hydraulic oil

Check that the hydraulic unit or hydraulic cylinder is not leaking oil. Check that the hydraulic hose has no damage and check that the nipples are tight. Check if hydraulic oil has leaked into the chassis or on the underside.

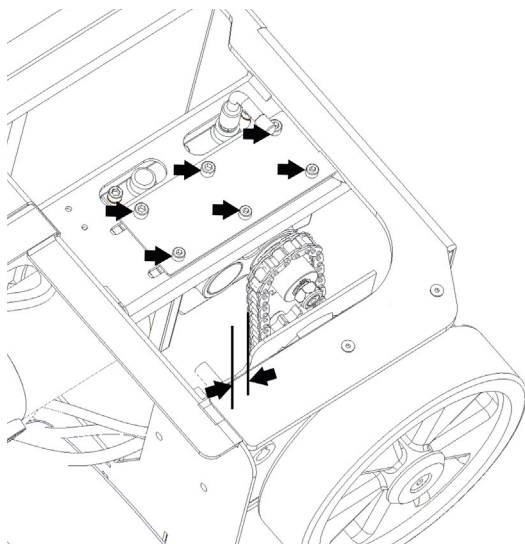


### **WARNING!**

If the lift is leaking hydraulic oil, it must not be used!

### 5.11 Adjustment drive chains

The chains of the drive motors are adjusted by loosening the 6 allen screws for each motor, (see picture 9) use a 5 mm allen key. The drive motor can be pushed forward or backward to tension the chains. For best function, the chains should have a gap of 10-20 mm (see picture 9). Raise the chassis of the lift at least 50 mm from floor level, so that the drive wheels can rotate freely. Allow the chain to rotate one full revolution and check that the slack is maintained throughout the revolution. To prevent the chains from making noise, they must not be too tight. The chains must also not be too loosely tensioned, as this can cause a jerky movement when driving.



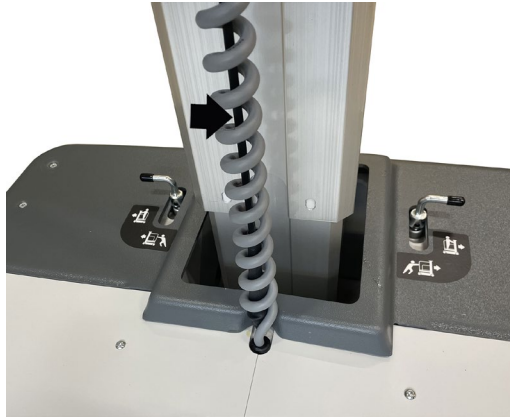
Picture 9

### 5.12 Lubrication drive chains

The chains of the drive motors must be lubricated with chain grease of the type Universal grease, Classification: KP2K-30 according to DIN 51502; ISO-L-XCCIB2 according to ISO 6743 or equivalent.

### 5.13 Inspection of spiral cable rubber guide

Check that the rubber guide that goes inside the spiral cable is intact and not damaged or dried out (see picture 10). If the rubber guide will break, there is a great risk that it will lead to the spiral cable being damaged.



Picture 10



**WARNING!**

If the rubber guide is damaged or dried out, it must be replaced immediately.

### 5.14 Resetting the tilt sensor

If the tilt sensor does not work during normal use (alarms with an audible signal), it can be reset.

1. Place the lift on a flat surface.
2. Remove chassis covers
3. Open the cover of the tilt sensor (see point 29 on page 5).
4. Activate the main power switch.
5. Carefully push in a small black button on the circuit board. Reset occurs when a light on the circuit board flashes.
6. Refit the cover on the tilt sensor.
7. Refit chassis covers
8. Test the function of the tilt sensor according to point 4.8 on page 7.

### 5.15 Inspection of lifting column chains

Start by dismantling the tool shelf (see 5.3). Lower the platform to its lowest position. The lifting column's chains and chain shaft bearing are inside the lifting column (see picture 11). Inspect the inside of the column during a full lifting motion. Check that there is no wear on the chain or on the chain axle bearing, look for iron filings or dust particles. If wear or play is detected on the chains, axle or bearings, the lift must be taken out of service. If necessary, lubricate the chains with chain grease of the Universal grease type.

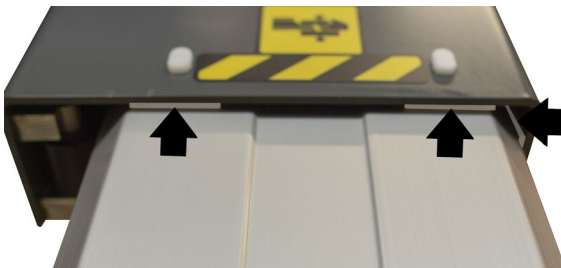
Contact Safelift: **service@safelift.se** for further action.



Picture 11

### 5.16 Inspection of sliding bearing on lifting column

Check that the sliding bearings of the lifting column are not worn out (see picture 12). The thickness of the sliding bearings must not fall below a thickness of 1.0 mm. Dirty and unlubricated surfaces of the aluminum column increase the wear and thus the service life of the sliding bearings.



Picture 12

## 6. TROUBLESHOOTING

If the lift does not work, check the following reasons:

### 6.1 The lift is without electricity

- Main power switch not turned on.
- Emergency stop pressed.
- Batteries discharged (healthy batteries should give at least 12.4 V after 12 hours of charging).
- Spiral cable damaged.
- Foot pedal (accessory) not pressed in.

### 6.2 Platform cannot be raised

- Main power switch not turned on.
- Emergency stop pressed.
- Batteries discharged.
- Raise button damaged or loose connecting cable.
- The platform is overloaded (more than 180 kg).
- The tilt sensor activated (sound signal).
- Spiral cable damaged.
- Low hydraulic oil level or hydraulic oil leak.
- Foot pedal (accessory) not pressed in.

### 6.3 Platform cannot be lowered

- Obstacles are located under the lift platform.
- Main power switch not turned on.
- Emergency stop pressed.
- Batteries discharged.
- Lowering button damaged or connecting cable loose.
- Spiral cable damaged.
- The chain slack switch inside the lift column has tripped.  
Contact Safelift: **service@safelift.se** for action.
- Foot pedal (accessory) not pressed in.



#### **6.4 The lift cannot be driven (MA50 / MA60)**

- Main power switch not turned on.
- Emergency stop pressed.
- Batteries discharged.
- Joystick not switched on (left button on joystick)
- Joystick or connecting cable damaged.
- The tilt sensor activated (sound signal).
- Spiral cable damaged.
- Drive/freewheel levers not activated.
- Control box driving damaged.
- Defective drive motor.
- Foot pedal (accessory) not pressed in.

#### **6.5 The lift cannot be driven at high speed (MA50 / MA60)**

- Speed indicator on the right joystick button does not light yellow.
- Lift platform not lowered to bottom position.
- Microswitch damaged (located at the mounting of the lifting column in the chassis).

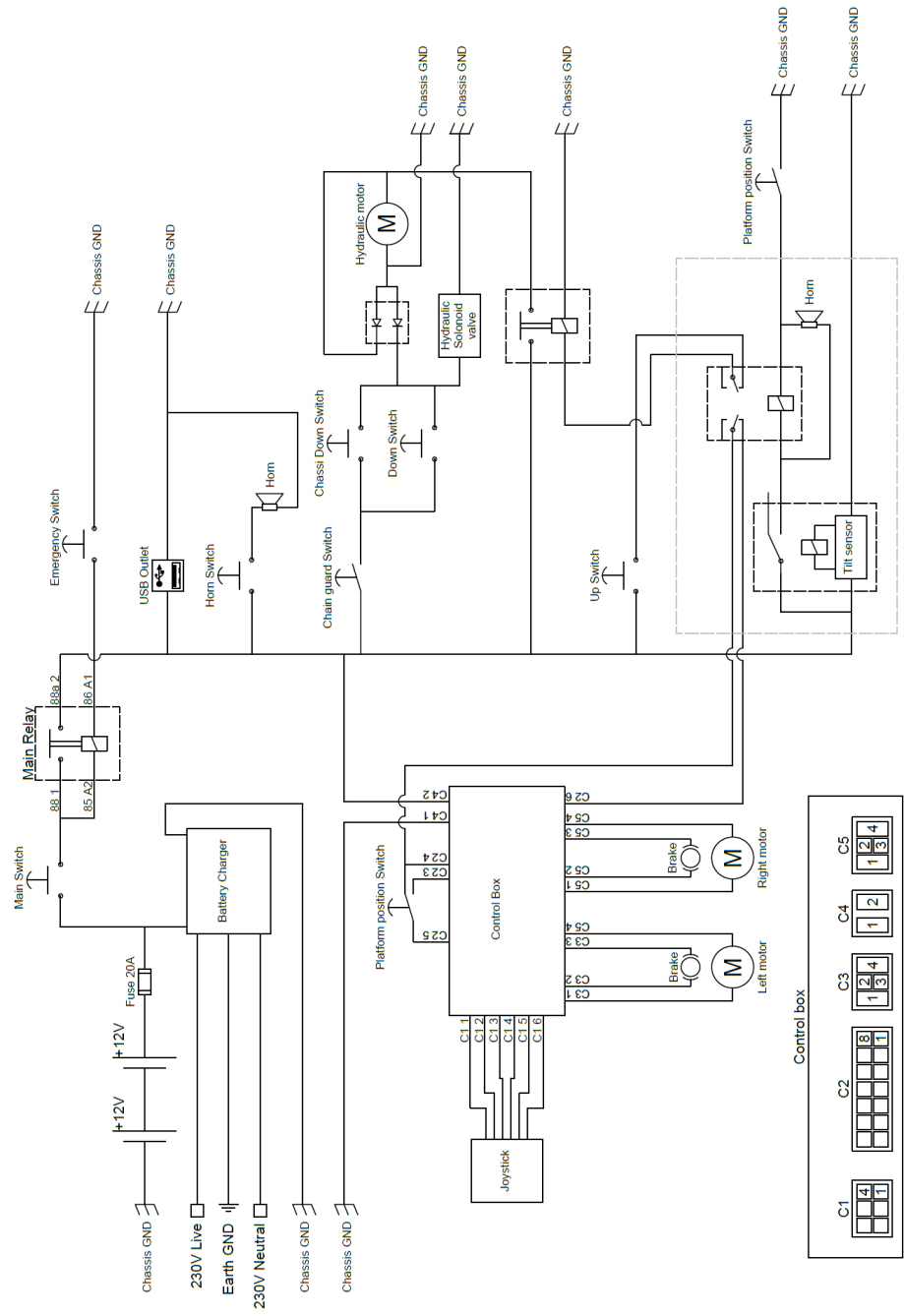
#### **6.6 The lift cannot be pushed by hand**

- Levers for driving/freewheel (MA50 / PA50) in driving mode.
- Rear wheels (swivel) locked.
- Automatic wheel locking out of order (accessory PA50 / PA60).

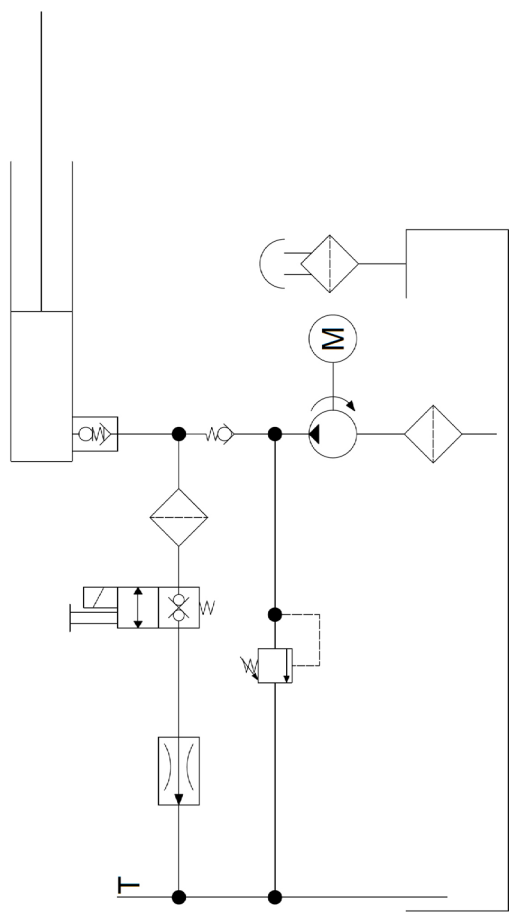
#### **6.7 The batteries cannot be charged**

- Batteries defective (healthy batteries must have a voltage of at least 12.4 V after 12 hours of charging).
- Charging cable not connected to lift or wall outlet 230 V.
- Charging cable damaged.
- The fuse (20 A blade fuse) for the battery charger has tripped.
- Battery charger damaged.
- Smelly batteries (rotten eggs).

# 7. ELECTRICAL DIAGRAM

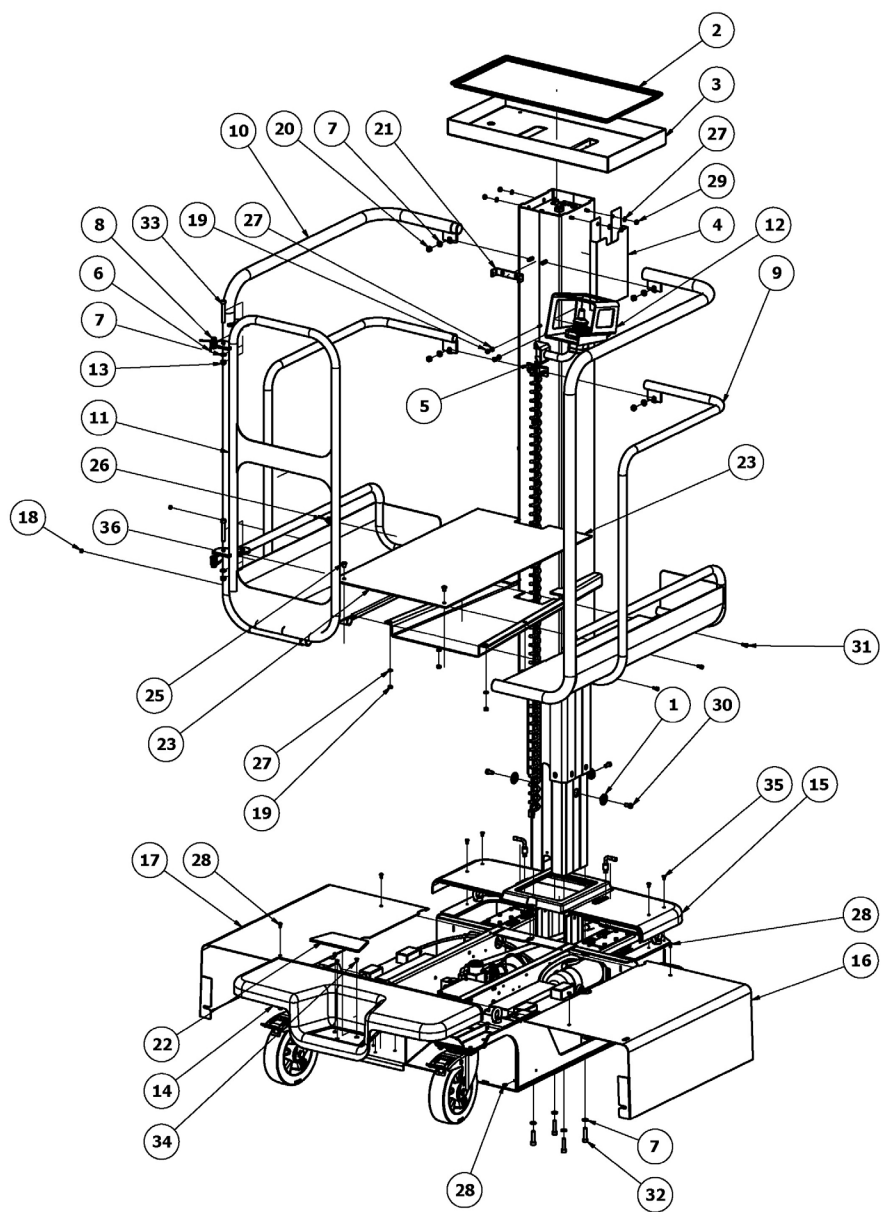


8. HYDRAULIC SCHEME



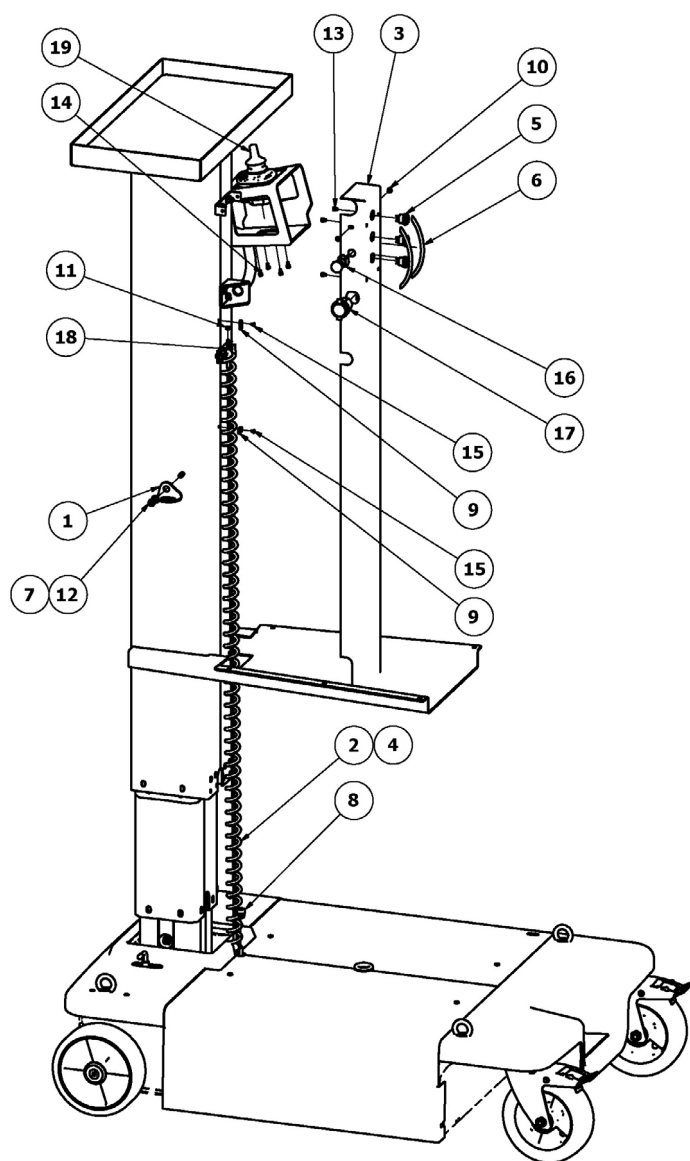
## 9.1 PLATFORM PARTS

| ITEM | QTY | PART NUMBER      | DESCRIPTION                   |
|------|-----|------------------|-------------------------------|
| 1    | 3   | 5010-002-050     | Washer                        |
| 2    | 1   | 5010-200-005     | Tray insert                   |
| 3    | 1   | 5010-200-009     | Tray                          |
| 4    | 1   | 5010-200-010     | Documet holder A5             |
| 5    | 1   | 5010-200-011     | Spiral cable bracket          |
| 6    | 2   | 5010-300-002     | Spring                        |
| 7    | 11  | BRB 8,4x16x1,6   | Washer HV140 ISO 7089         |
| 8    | 2   | 5010-300-003     | Sleeve hinge                  |
| 9    | 1   | 5010-301         | Platform right side           |
| 10   | 1   | 5010-302         | Platform left side            |
| 11   | 1   | 5010-303         | Gate                          |
| 12   | 1   | 5010-309         | Joystick bracket              |
| 13   | 3   | M8 Nylock DIN985 | Locking nut M8                |
| 14   | 1   | 5010-400-004     | Plastic cover entry           |
| 15   | 1   | 5010-400-006     | Pastic cover pillar           |
| 16   | 1   | 5010-400-010H    | Cover Right                   |
| 17   | 1   | 5010-400-010V    | Cover Left                    |
| 18   | 5   | M6M - M5         | Nut M5                        |
| 19   | 8   | M6M - M6         | Nut M6                        |
| 20   | 4   | M6M - M8         | Nut M8                        |
| 21   | 1   | 5010-400-012     | Cover bracket                 |
| 22   | 1   | 5010-400-013     | Rubber carpet entry           |
| 23   | 1   | 5010-400-014     | Rubber carpet                 |
| 25   | 2   | 093017059902     | Push Rivet                    |
| 26   | 1   | STAR1622-258G    | Foot - Grupp SC-STAR          |
| 27   | 12  | BRB 6,4x12x1,6   | Washer HV140 ISO 7089         |
| 28   | 8   | K6S - M5 x 10    | Screw K6S 10.9 FZB ISO 7380-1 |
| 29   | 4   | M6 Nylock DIN985 | Lock nut M6                   |
| 30   | 3   | MC6LS - M8x16    | Screw low M8 x16              |
| 31   | 3   | MC6S - M5x12     | Screw M5                      |
| 32   | 4   | MC6S - M8x40     | Screw M8x40 12.9              |
| 33   | 2   | MC6S - M8x60     | Screw M8                      |
| 34   | 3   | MF6S - M5 x 8    | Screw M5 x 8                  |
| 35   | 4   | MF6S - M5 x 10   | Screw M5 x 10                 |



## 9.2 CONTROL PANEL PARTS

| ITEM | QTY | PART NUMBER        | DESCRIPTION                          |
|------|-----|--------------------|--------------------------------------|
| 1    | 1   | 166                | Ancorage point                       |
| 2    | 1   | 5010-SPARE-010     | Spiral cable incl. rubber guide MA50 |
|      | 1   | 5050-SPARE-010     | Spiral cable incl. rubber guide MA60 |
| 3    | 1   | 5010-400-009-8     | Cover                                |
| 4    | 1   | 5010-SPARE-011     | Rubber guide for spiral cable MA50   |
|      | 1   | 5050-SPARE-011     | Rubber guide for spiral cable MA60   |
| 5    | 3   | 701979             | Push button                          |
| 6    | 2   | 10151808           | Handle                               |
| 7    | 11  | BRB 8,4x16x1,6     | Washer HV140 ISO 7089                |
| 8    | 1   | 155-01-168         | Pull relief DM 6                     |
| 9    | 2   | FTH-1-01-M         | Pull Relief                          |
| 10   | 2   | K6S - M5x8         | Screw                                |
| 11   | 2   | M5 - Nylock DIN985 | Lock nut M5                          |
| 12   | 3   | M8 - Nylock DIN985 | Locking nut M8                       |
| 13   | 4   | MC6S - M4x6        | Screw M4                             |
| 14   | 4   | MC6S - M4x8        | Screw M4                             |
| 15   | 2   | MF6S - M4x6        | Screw M4x6 10.9                      |
| 16   | 1   | S618001            | Emergency button                     |
| 17   | 1   | SCIA13-194BPS      | USB connector double                 |
| 18   | 5   | M6M - M5           | Nut M5                               |
| 19   | 1   | 378712002          | Joystick                             |



### 9.3 LIFT PILLAR PARTS

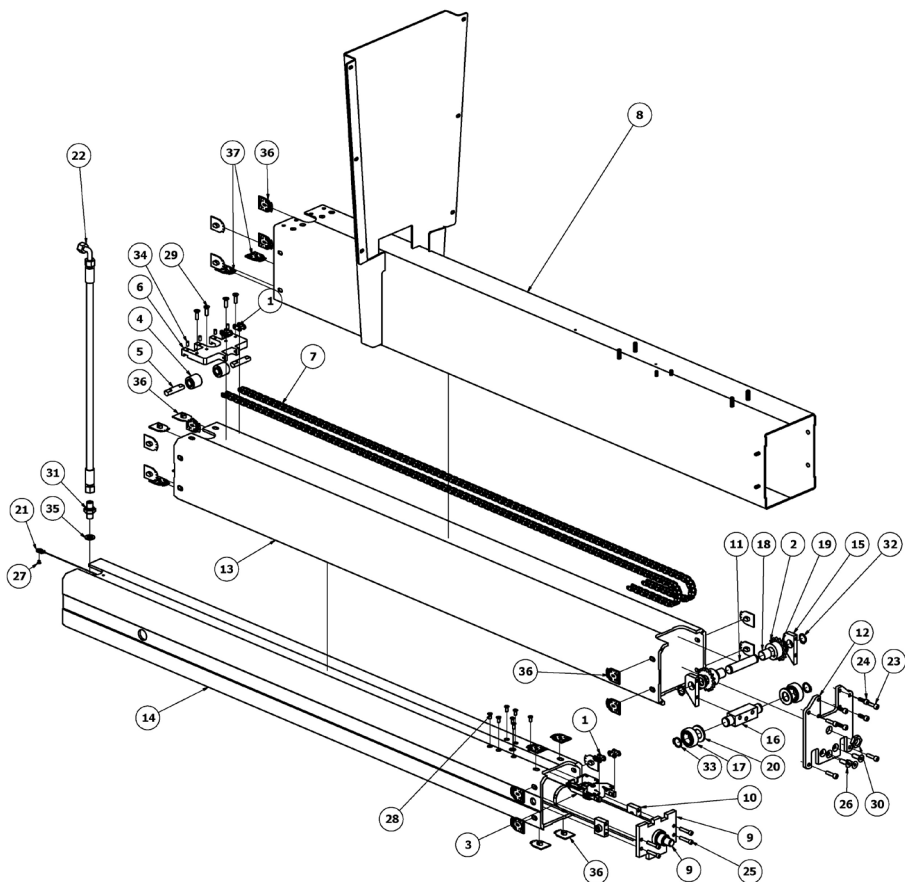
| ITEM | QTY | PART NUMBER       | DESCRIPTION                 |
|------|-----|-------------------|-----------------------------|
| 1    | 4   | 24RS06B1          | Chain lock                  |
| 2    | 2   | 1250-001-020      | Sprocket wheel              |
| 3    | 1   | 1010-DEL-035      | Inner chain bracket         |
| 4    | 2   | 5010-002-221      | Support roller              |
| 5    | 2   | 5010-002-222      | Shaft support roller        |
| 6    | 1   | 5010-002-225      | Outer chain bracket         |
| 7    | 2   | 5010-167          | Chain MA50                  |
| 8    | 1   | 5010-200          | Pillar MA50                 |
| 9    | 1   | 5010-500          | Hydraulic cylinder MA50     |
| 10   | 2   | 5010-500-006      | Pivot bracket               |
| 11   | 1   | 5011-001-016      | Shaft                       |
| 12   | 1   | 5100-001-001      | Plate outer profile segment |
| 13   | 2   | 5100-001-002      | Outer profile segment MA50  |
| 14   | 2   | 5100-001-003      | Inner profile segment MA50  |
| 15   | 2   | 5100-001-004      | Support shaft               |
| 16   | 1   | 5100-001-030      | Bearing holder              |
| 17   | 2   | 6004-ZZ           | Ball bearing                |
| 18   | 2   | 40300001          | Bushing PCM 182020 E        |
| 19   | 2   | BRB 18x30x4       | Washer                      |
| 20   | 2   | BRB 21x37x3       | Washer                      |
| 21   | 1   | FTH-1-01-M        | Pull relief                 |
| 22   | 2   | 5200-810-025      | Hydraulic hose              |
| 23   | 4   | MC6S - M6 x 25    | Screw M6x25 12.9            |
| 24   | 4   | MC6S - M6x20      | Screw M6x20 12.9            |
| 25   | 4   | MC6S - M6x30      | Screw M6x30 12.9            |
| 26   | 3   | MF6S - M8 x 25    | Screw M8 x 25 10.9          |
| 27   | 1   | MF6S - M4x6 Screw | M4x6 10.9                   |
| 28   | 7   | MF6S - M5x12      | Screw M5x12 10.9            |
| 29   | 4   | MF6S - M6x20      | Screw M6x20 10.9            |
| 30   | 1   | MLM - M16         | Nut low M16                 |
| 31   | 1   | 5200-810-046      | Hydraul Nipple G1/4"-G1/4"  |
| 32   | 2   | SGA 18            | Retaining ring              |
| 33   | 2   | SGA 20            | Retaining ring              |
| 34   | 4   | SK6SS - M5x10     | Screw M5                    |
| 35   | 1   | 5200-810-047      | Tredo bricka 1/4"           |
| 36   | 24  | X2 - 38x2,0       | Sliding Bearing             |
| 37   | 2   | X2 - 38x1,7       | Sliding Bearing             |





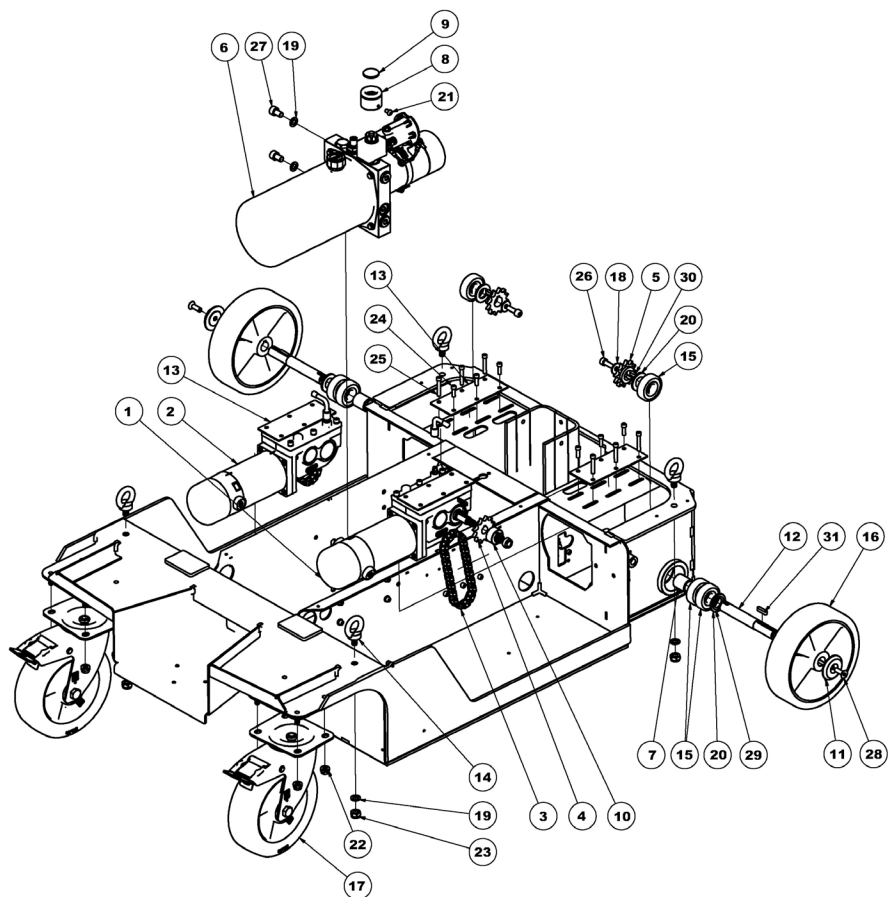
### WARNING!

Service of the lift pillar may only be carried out by authorized personnel.  
Contact Safelift at [service@safelift.se](mailto:service@safelift.se) for assistance.



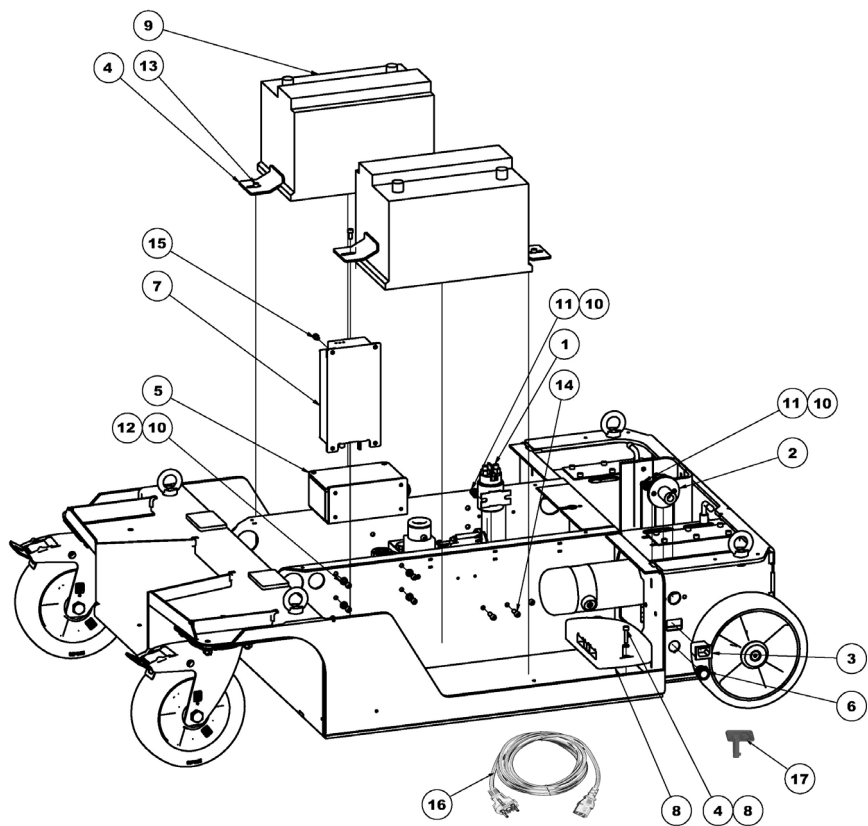
## 9.4 CHASSIS PARTS

| ITEM | QTY | PART NUMBER        | DESCRIPTION               |
|------|-----|--------------------|---------------------------|
| 1    | 1   | 5010-DEL-040       | Motor and gear right side |
| 2    | 1   | 5010-DEL-045       | Motor and gear left side  |
| 3    | 2   | 08B1-RULLKEDJA-1   | Chain                     |
| 4    | 2   | 08B112 1/2         | Sprocket wheel            |
| 5    | 2   | 08B112_20          | Sprocket wheel            |
| 6    | 1   | 8WEBCSPN02         | Hydraulic Power Pack      |
| 7    | 2   | 5010-100-108       | Bearing spacer            |
| 8    | 1   | 5010-100-109       | Sleeve emergency lowering |
| 9    | 1   | 5010-100-110       | Rubber membrane           |
| 10   | 2   | 5010-400-002       | Spacer sprocket wheel     |
| 11   | 2   | 5010-400-020       | Wheel washer              |
| 12   | 2   | 5010-400-102       | Drive shaft               |
| 13   | 4   | 5010-600-001       | Washer                    |
| 14   | 4   | 5200-810-020       | Lifting Eye Bolt DIN 580  |
| 15   | 6   | 6304ZZ             | Bearing                   |
| 16   | 2   | 241509             | Drive Wheel grey          |
| 17   | 2   | 245664             | Rear wheel grey           |
| 18   | 2   | BRB 8x22x1,5       | Washer                    |
| 19   | 6   | BRB 10,5x18x1,6    | Washer HV140 ISO 7089     |
| 20   | 4   | BRB 21x37x3        | Washer                    |
| 21   | 1   | K6S M6x10          | Screw                     |
| 22   | 8   | M6MF M8            | Nut flange M8             |
| 23   | 4   | M10 Nylock DIN985  | Locking nut M10           |
| 24   | 6   | MC6S - M6x18       | Screw M6x18 12.9          |
| 25   | 6   | MC6S - M6x35       | Screw M6x35 12.9          |
| 26   | 2   | MC6S - M8x25       | Screw M8x25 10.9          |
| 27   | 2   | MC6S - M10x16      | Screw M10x16              |
| 28   | 2   | MF6S - M8 x 25     | Screw M8 x 25 10.9        |
| 29   | 4   | PB Shims 20x28x0,2 | Shims                     |
| 30   | 2   | RK 6x6x14          | Wedge 6x14                |
| 31   | 2   | RK 6x6x25          | Wedge 6x25                |



## 9.5 ELECTRIC PARTS CHASSIS

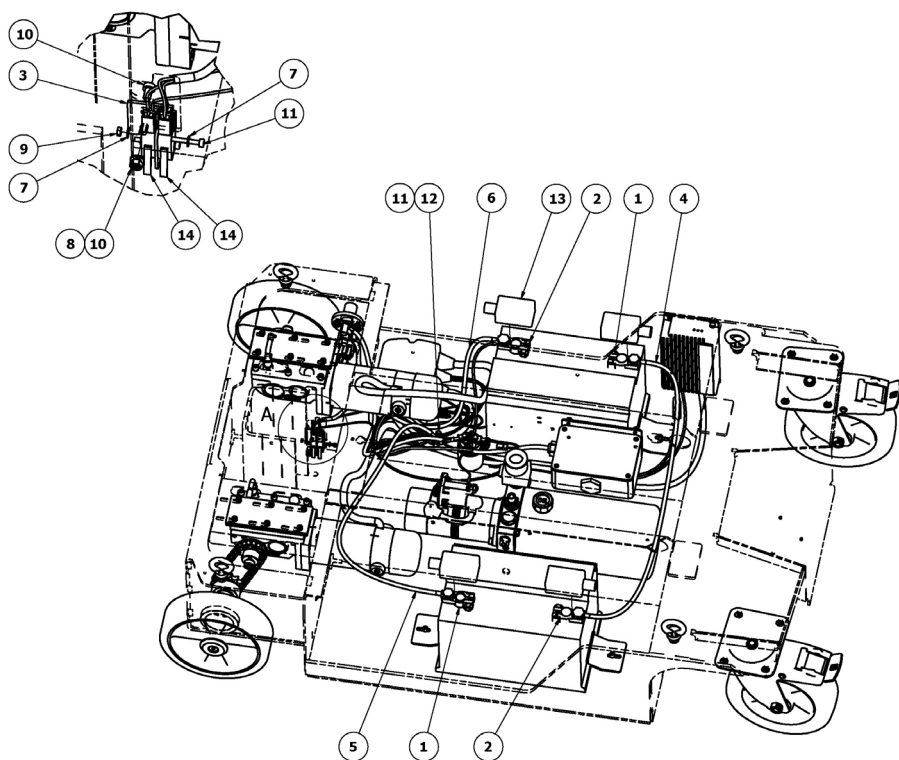
| ITEM | QTY | PART NUMBER      | DESCRIPTION           |
|------|-----|------------------|-----------------------|
| 1    | 1   | 4RA377504011     | Relay                 |
| 2    | 1   | 6 EK 002 843 011 | Main switch           |
| 3    | 1   | 143-21-147 IEC   | Connector C14         |
| 4    | 4   | 5010-100-015     | Clamp battery         |
| 5    | 1   | 5010-100-060     | Tilt sensor T1        |
| 6    | 1   | 701979           | Push button           |
| 7    | 1   | 924216-507       | Battery charger       |
| 8    | 1   | 378662001        | Control box           |
| 9    | 2   | 930080080B912    | Batteri DC 12V 80 Ah  |
| 10   | 8   | BRB 6,4x12x1,6   | Washer HV140 ISO 7089 |
| 11   | 6   | M6M - M6         | Nut M6                |
| 12   | 4   | MC6S - M6x8      | Screw M6x8            |
| 13   | 4   | MC6S - M6x12     | Screw M6x12           |
| 14   | 3   | MC6S - M6x16     | Screw M6x16           |
| 15   | 2   | MC6S - M6x10     | Screw M6x10           |
| 16   | 1   | 290100072        | Power Cable           |
| 17   | 2   | 9SL706729011     | Main Key              |



## 9.6 BATTERY PARTS

| ITEM | QTY | PART NUMBER         | DESCRIPTION                 |
|------|-----|---------------------|-----------------------------|
| 1    | 2   | 8KX707913001        | Battery terminal -          |
| 2    | 2   | 8KX707913011        | Battery terminal +          |
| 3    | 1   | 5010-100-070        | Bracket double micro switch |
| 4    | 1   | Batterikabel_MA50-1 | Battery cable - to +        |
| 5    | 1   | Batterikabel_MA50-2 | Battery to ground           |
| 6    | 1   | Batterikabel_MA50-3 | Battery cable + to switch   |
| 7    | 4   | BRB 3,3x6,6x0,5     | Washer HV140 ISO 7089       |
| 8    | 3   | BRB5,3x10x1         | Washer                      |
| 9    | 2   | M6M - M3            | Nut M3                      |
| 10   | 1   | M6M - M5            | Nut M5                      |
| 11   | 2   | MC6S - M3x30        | Screw M3x30                 |
| 12   | 1   | MC6S - M6x25        | Screw M6x25                 |
| 13   | 4   | TB5005              | Terminal cover              |
| 14   | 2   | XGG2-88-J26Z1       | Micro switch                |

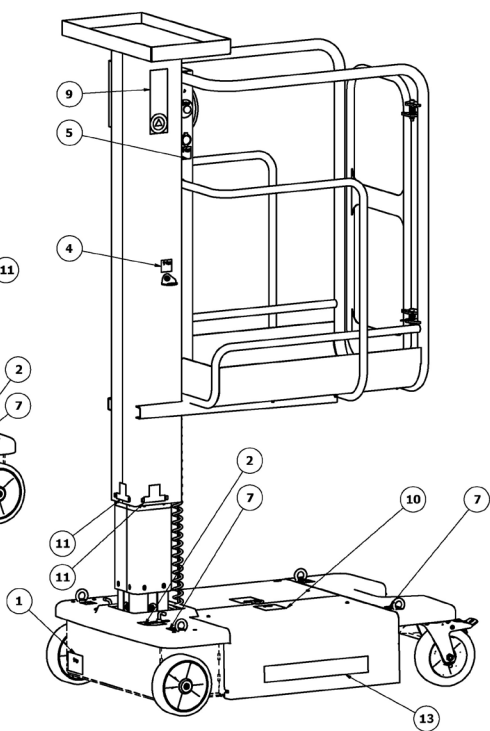
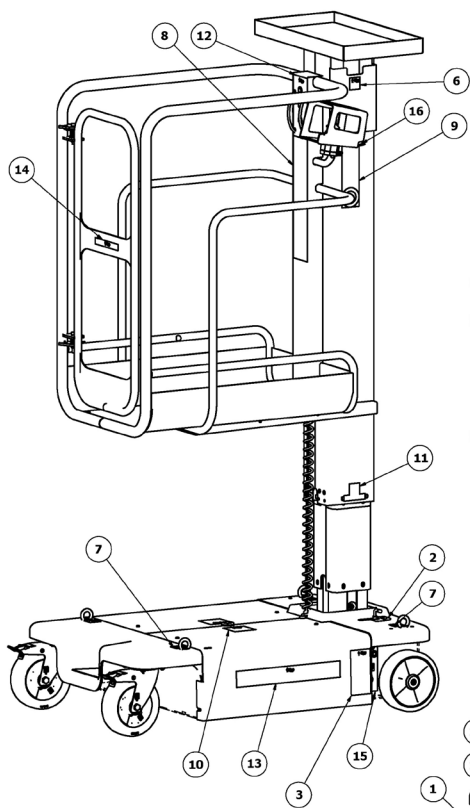
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## 9.7 DECALS

| ITEM | QTY | PART NUMBER  | DESCRIPTION                           |
|------|-----|--------------|---------------------------------------|
| 1    | 1   | 5010-100-001 | Decal CE and serial number            |
| 2    | 2   | 5010-100-021 | Decal Connecting/disconnecting motors |
| 3    | 1   | 5010-100-026 | Decal (Expired)                       |
| 4    | 1   | 5010-100-028 | Decal Safety harness                  |
| 5    | 1   | 5010-100-029 | Decal USB                             |
| 6    | 1   | 5010-100-030 | Decal Original instructions           |
| 7    | 4   | 5010-100-031 | Decal Lifting loops                   |
| 8    | 1   | 5010-100-033 | Decal Warning sign platform ENGLISH   |
| 9    | 2   | 5010-100-041 | Decal MA50                            |
| 9    | 2   | 5010-100-071 | Decal MA60                            |
| 10   | 2   | 5010-100-050 | Decal Emergency lowering              |
| 11   | 3   | 5010-100-054 | Decal Pinching hand and foot          |
| 12   | 1   | 5010-100-055 | Decal Control panel platform          |
| 13   | 2   | 5010-100-056 | Decal Logo Safelift                   |
| 14   | 1   | 5010-100-057 | Decal Logo Safelift                   |
| 15   | 1   | 5010-100-058 | Decal Control panel chassis           |
| 16   | 1   | 5010-100-061 | Decal Joystick                        |





## 10. INSPECTION AND SERVICE NOTES

[illegible]





**SAFE LIFT°**

 Made in Sweden

**ADDRESS**

Safelift Sweden AB  
Kvarnvägen 14  
SE-352 41 Växjö  
Sweden

**WEBSITE**

[www.safelift.se](http://www.safelift.se)

**E-MAIL**

[info@safelift.se](mailto:info@safelift.se)