

# Technical Manual



## **swingo** 1650/1850



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## 8 Revision

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# Technical Manual



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## 1 Forward

# 1 Foreword

## 1.1 Target

To serve our customers faster and more efficient it is important to achieve a general standard of technical know how with our partners in the market.

Therefore we developed a Technical Training concept which is based on e-spares. The concept consists of a Technical Manual and a Technical Training.

These two tools will be produced for each newly launched machine with a certain complexity. The Technical Manual will be available as PDF file and can be downloaded from e-spares. The Technical Training documentation will be distributed after having attended the technical training.

## 1.2 Technical Training

The Technical Training is addressed as reference book for the technical training sessions and will be distributed to the floor care responsible and/or to the technical training responsible after attending a training session provided by GTS (max. 2 persons per country).

The intension is, that after this session, a technical trainer is able to perform technical training for their local technical staff and in this way to transfer the knowledge to all service technicians.

The Technical Training is not intended as manual for the service technicians and will be distributed only to the training responsible of each country.

## 1.3 Technical Manual

The Technical Manual is addressed to the service technicians and should be translated and distributed after a technical training.

It contains a summary of procedures, hints and suggestions etc. which are helpful and

essential for the daily business. The Technical Manual can be downloaded from e-spares/documents.

## 1.4 Summary

We are convinced that the Technical Manual concept together with the Technical Training are powerful tools, which will help our service organisations to achieve a higher level of quality in repairs and customer satisfaction.

If you have any comments or questions do not hesitate to contact your country responsible.

Sincerely yours

GTS Team

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# Technical Manual



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## 2 Elementary



## 2 Elementary

### 2.1 Health & Safety

Scrubber dryers may be powered by mains electricity or batteries. There are risks associated with both, which call for proper precautions, such as the provision of good ventilation and the elimination of risk of ignition.

All work, carried out on such machines, should only be performed by trained personnel in accordance with local regulations.

Before working on such a machine, isolate it from any electrical power source.

Always wear the required personal protective equipment (including gloves and goggles) that must be worn when potentially exposed to any hazardous material and when carrying out hazardous tasks.

Note that parts may be contaminated with chemical product. If possible flush hoses out with fresh water prior to carrying out any maintenance. For information on chemical products that are used in this machine, please carefully read the product label and Material Safety Data Sheet (MSDS).

Empty water tanks prior to carrying out any maintenance. Ensure contaminated water is emptied into an approved drain. Avoid pollution.

### 2.2 ESD

Static electricity is electricity at rest or the accumulation of electric charge, as opposed to an electric current which is the movement of electricity. The flow or movement of people and/or materials in and through the environment causes separation of electrons and therefore static electricity. A familiar example of static electricity is when a person walks across a carpeted floor. Static electricity/electrostatic charge is generated simply by the contact and separation of the soles of that individual's shoes from the carpeted floor.

Electrostatic Discharge (ESD) occurs when the electrostatic charge is transferred from a material that carries the charge to an electrostatic sensitive device. In the example above, this electrostatic discharge is the „shock“ felt after walking across the carpeted floor and then touching a door knob. It is this electrostatic discharge, which comes in varying de-

grees, that can be most damaging to electronic devices.

Static electricity, is a natural phenomenon and consequently electrostatic discharge is the primary cause of countless problems affecting industry, business and personal life. These problems can be as simple as the shock resulting from walking across a carpet; as costly as the destruction of sensitive electronic components.

Almost any material can generate static electricity. The ability to store or unload the charge depends on the type of material.

Static discharge can damage devices, this can result in immediate product failure or in a latent failure. Latent failures can go undetected for a period of time, the results are product failure in the field.

Electrostatic fields are associated with charged objects.

The degree of severity of ESD events depends on the type of discharge which occurs. The three most common ESD charge transfers are:

- from an external object to the device.
- from a device to another object.
- resulting from electrostatic fields.

### **⚠ CAUTION**

*Please do not store electronics without ESD bags at any time.*

# Technical Manual



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## 3 General

## 3 General

### 3.1 General information

#### 3.1.1 Part reference

##### **⚠ CAUTION**

*Explicitly mentioned parts are defined by references corresponding to the e-spares spare parts list.*

*E.g. Tank axle (02/118) corresponds to the parts list on e-spares, sub assembly 2, position 118.*

#### 3.1.2 Consumable supplies

##### **⚠ CAUTION**

*If you have to remove cable ties then position the new ones at the original place.*

*If you have to remove self locking nuts, you should replace them by new ones.*

#### 3.1.3 Direction description

##### **⚠ CAUTION**

*On the „RH“ always means on the right hand side of the machine in working direction (when you are standing behind the machine).*

*On the „LH“ always means on the left hand side of the machine in working direction (when you are standing behind the machine).*

#### 3.1.4 Power source

*Depending on the work it might be required to remove the power source (mains/batteries) from the machine.*

*The in here mentioned sequences (mechanical and electrical) are based on the assumption that the power source (mains/batteries) were removed from the machine before.*

## 3.2 Required material

### 3.2.1 Tools

- A standard range of tools is required e.g.
  - Fork spanners.
  - Allen keys.
  - Torx keys.

### 3.2.2 Material

- No special tools are required.

#### **⚠ CAUTION**

*The above listings are only a recommendation for the technical training.*

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# Technical Manual



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## 4 Technical data

## 4 Technical data

### 4.1 Machine range

SKU	Description	Version	Series
7515882	TASKI swingo 1650B		01
7515883	TASKI swingo 1650B	BMS EURO	01
7515884	TASKI swingo 1650B	BMS SEV	01
7515885	TASKI swingo 1650B	BMS UK	01
7515890	TASKI swingo 1650B	Seafreight	01
7515891	TASKI swingo 1650B	BMS EURO	01
7516203	TASKI swingo 1650B	BMS UK	01
7517716	TASKI swingo 1650B	BMS NA	01
7518692	TASKI swingo 1650B	R	01
7517717	TASKI swingo 1850B	BMS NA	02
7518085	TASKI swingo 1850B		02
7518086	TASKI swingo 1850B	BMS EURO	02
7518087	TASKI swingo 1850B	BMS SEV	02
7518088	TASKI swingo 1850B	Seafreight	02
7518089	TASKI swingo 1850B	BMS EURO Seafreight	02

Table 1: Machine range

#### Remarks

*SKU's for all TASKI swingo 1650/1850 types are the „naked machine“. The brush has to be ordered separately.*

## 4.2 Technical information

### 4.2.1 Machine profile

Pos.	Unit	Value 1650	Value 1850
Theoretical performance (at 4.5 km/h)	(m <sup>2</sup> /h)	2925	3825
Working width	(mm)	650	850
Squeegee width	(mm)	950	1100
Solution tank	(l)	85	
Recovery tank	(l)	85	

Table 2: Machine profile

### 4.2.2 Technical data

Pos.	Unit	Value 1650	Value 1850
Noise level	(dB(A))	62	
Vibration	(m/s <sup>2</sup> )	0.5	
Approvals		CE; CB Test cert.	
Nominal consumption	(W)	1200	
Power drive motor	(W)	330	
Power suction motor (when cleaning)	(W)	550	
Voltage	(V)	24	
Battery capacity max. (maintenance free/wet)	(Ah)/C5	180/195	
Battery autonomy max. (180 Ah maintenance free battery)	(h)	<4	
Internal charger		only in BMS	
Protection class (BMS)		Class II	
Protection class (non BMS)		Class III	

Table 3: Technical data



### 4.2.3 Machine speed

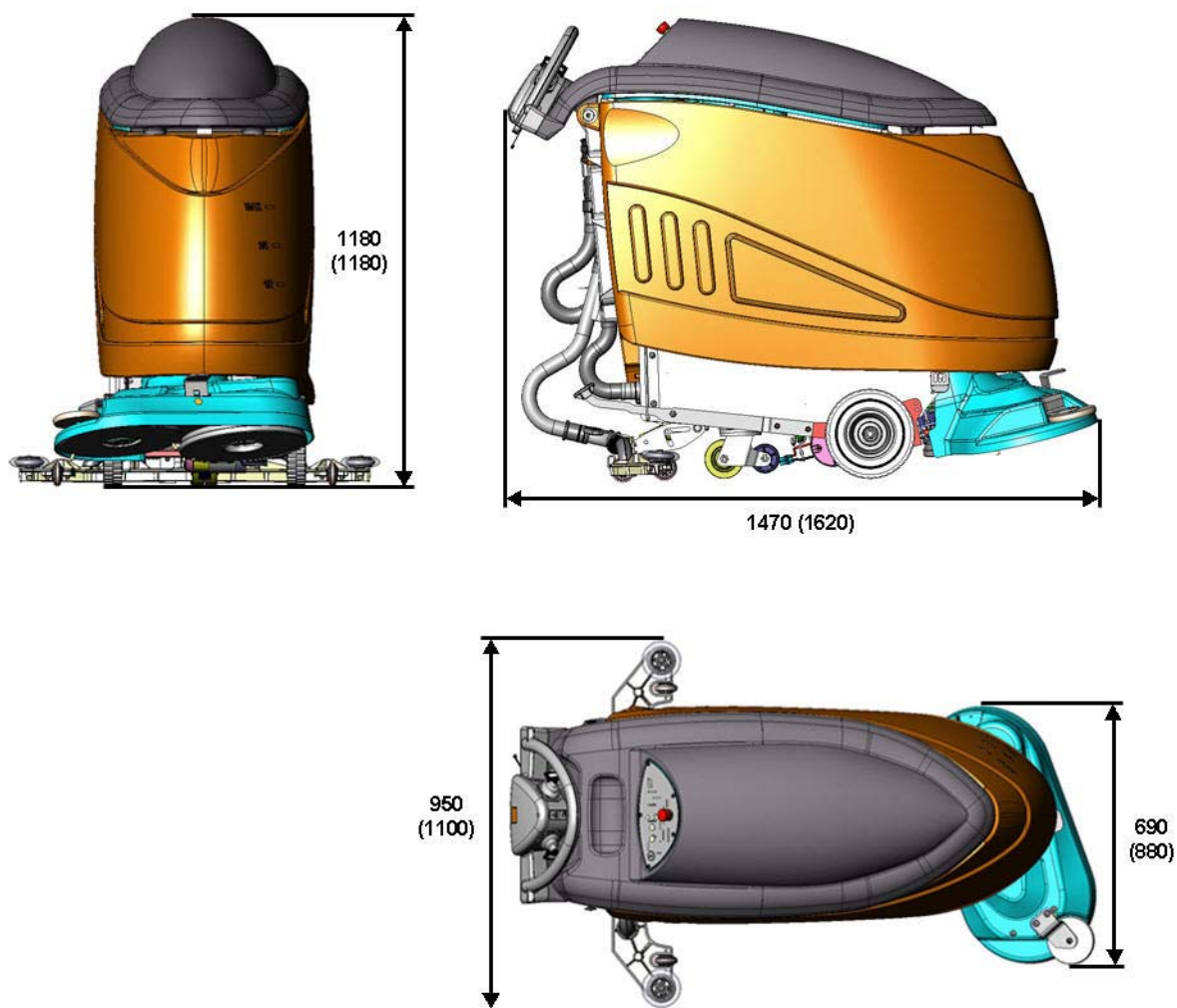
Pos.	Unit	Value 1650	Value 1850
Transportation speed	(km/h)	5.0	
Cleaning speed	(km/h)	4.5	
Reverse speed	(km/h)	2.0	
Ramp max.	(%)	2.0	

Table 4: Machine speed

### 4.2.4 Dimensions and weights

Pos.	Unit	Value 1650	Value 1850
Dimensions	L/W/H (mm)	1470/950/ 1180	1620/1100/ 1180
Door pass through with (without) squeegee	(mm)	950 (690)	1100 (880)
Battery compartment	L/W/H (mm)	540/385/276	
Net weight without batteries; empty tank	(kg)	120	137
Weight, ready to use	(kg)	330	347
Max. floor pressure front	(N/mm <sup>2</sup> )	1.13	–
Max. floor pressure rear	(N/mm <sup>2</sup> )	1.60	
Wheel diameter traction	(mm)	230	
Wheel diameter castor	(mm)	100	

Table 5: Dimensions and weights



04.1 swingo 1650\_1850B - technical data\_V1.00.fm

Picture 1: Dimensions

### Remarks

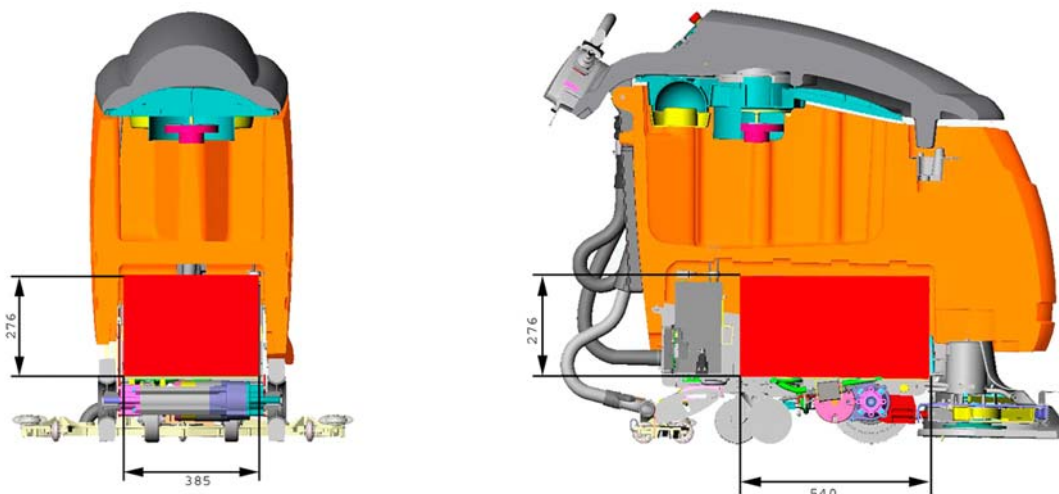
*Values in brackets are for the TASKI swingo 1850*

## 4.2.5 Battery

### 4.2.5.1 Battery compartment

Pos.	Unit	Value 1650	Value 1850
Battery compartment	L/W/H (mm)	540/385/276	

Table 6: Battery compartment



Picture 2: Battery compartment

#### 4.2.5.2 Battery specifications

##### **CAUTION**

*Please use batteries from Exide/Sonnenschein, as this is our preferred partner.*

*For the correct connection of the batteries, pay attention to the voltage of each battery and the correct connection. Therefore refer to e-spares.*

Supplier	Type	Voltage	Ah/C5	Length [mm]	Width [mm]	Height [mm]	Weight [kg]
Exide	Sonnenschein GF106160V2	6	160	264	181	270	33
Exide	Sonnenschein GF106180V	6	180	244	190	275	31

Table 7: Dry (GEL) batteries

## 4.2.6 Charger

Pos.	Unit	Value 1650	Value 1850
Primary	(V)	230–240	
Primary	(Hz)	50 – 60	
Secondary	(V)	24	
Secondary	(A)	27	
Protection class (BMS model)		II	
Approval		CE/CB	
Cable length/BMS cable	(m)	2.8	

Table 8: Charger

## 4.2.7 Brush system

Pos.	Unit	Value 1650	Value 1850
Brush system	(mm)	2 x 330	2 x 430
Brush motor	(W)	750	
Brush speed	(rpm)	160	130
Brush pressure max.	(N/cm <sup>2</sup> )	0.32	0.30

Table 9: Brush system

## 4.2.8 Suction power

Pos.	Unit	Value 1650	Value 1850
Vacuum motor	(W)	550	
Max. air flow	(l/s)	30	
Max. vacuum	(mbar)	120	
Max. vacuum	(kPa)	12.0	

Table 10: Suction power

## 4.2.9 Additional

Pos.	Unit	Value 1650	Value 1850
Cleaning solution dosing			IntelliFlow
Brush lifting			mechanical
Squeegee lifting			mechanical

Table 11: Additional

## 4.3 Accessories & Additional parts

### 4.3.1 Accessories

SKU	Article	Machine
7515515	Pad drive harpoon grip 33 cm	1650
7515516	Scrubbing brush standard 33 cm	1650
7515517	Scrubbing brush washed concrete 33 cm	1650
7515518	Scrubbing brush abrasive 33 cm	1650
4127877	Squeegee blade back 45/4x1060	1650
4124565	Squeegee blade front 45/3x990	1650
7517858	Pad drive harpoon grip 43 cm (grey coupling)	1850
7517859	Scrubbing brush standard 43 cm (grey coupling)	1850
7517861	Scrubbing brush abrasive 43 cm (grey coupling)	1850
4129244	Squeegee blade back 58/4x1218	1850
4129243	Squeegee blade front 54/3x1148	1850

Table 12: Accessories

### 4.3.2 Additional parts

SKU	Article	Machine
4127207	Squeegee blade front 45/3x990 (closed front)	1650
4128156	Squeegee blade front 45/3x990 (larger openings)	1650
4128086	Protection profile set	1650
4130039	Squeegee blade front 54/3x1148 (closed front)	1850
4126955	Wheel 230/50 PU brown	1650/1850
4128054	Wheel 230/50 PU green	1650/1850
4075260	Working hour counter	1650/1850
7516150	Wet battery kit	1650/1850

Table 13: Additional parts

# Technical Manual

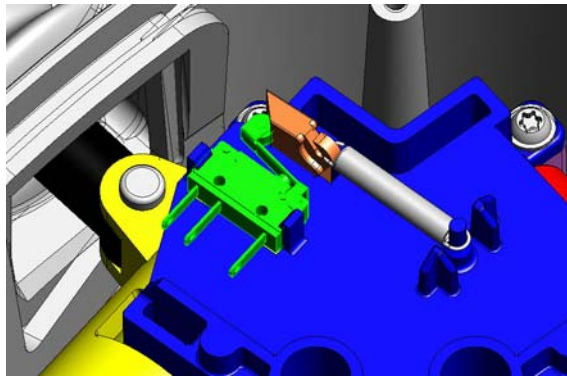


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## 5 Mechanical

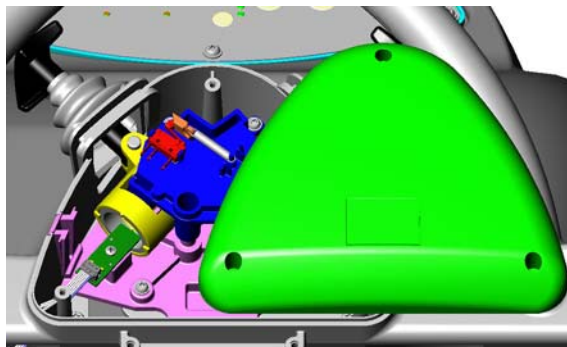
## 5.1 Handle

### 5.1.1 Removing of microswitch



Picture 1: Microswitch

- Remove the 3 screws (755B:01/113, 1255B&1650:01/103) of the cover (755B:01/124, 1255B&1650:01/104).
- Remove the cover.



Picture 2: Remove handle cover

- Unplug the hour counter wires from the cover or the hour counter (755B:01/127, 1255B&1650:01/120).
- Remove the spring for the microswitch (755B:01/108, 1255B&1650:01/141).
- Remove the microswitch from the fixation.

#### **CAUTION**

*Take care that you do not brake of the pins and fixation of the support.*

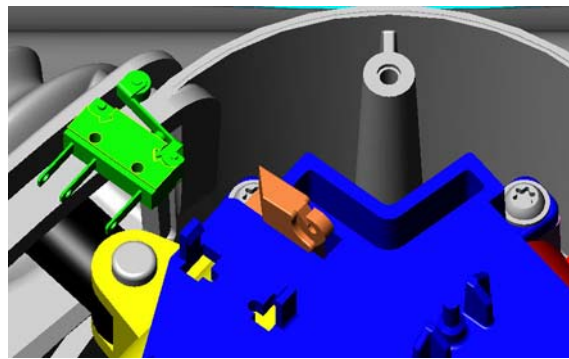
- Disconnect the wires from the microswitch.

05.10.51 handle – microswitch – 755B power\_855B power\_1255B\_1650\_1850\_V1.00.fm



## 5.1 Handle

### 5.1.2 Mounting of microswitch



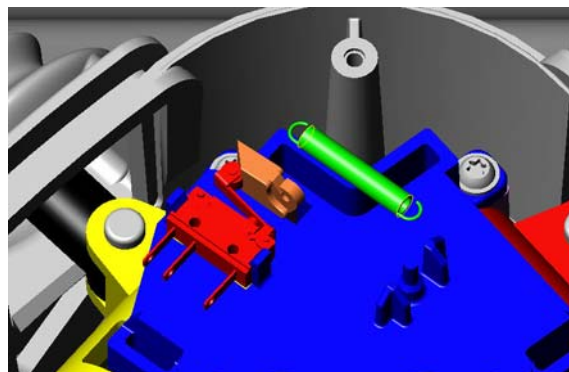
Picture 3: Remove microswitch

- Connect the wires to the new microswitch.
- Position the microswitch on the fixation.

#### **CAUTION**

*Ensure that the microswitch is positioned correctly on the fixation (pins).*

- Assemble the spring for the microswitch.

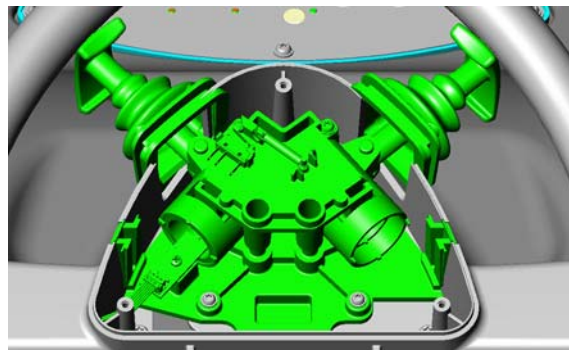


Picture 4: Microswitch spring

- Test if the microswitch is functional when moving the throttle levers.
- Connect the hour counter wires to the cover or the hour counter.
- Assemble the cover.
- Position the 3 screws and tighten them.

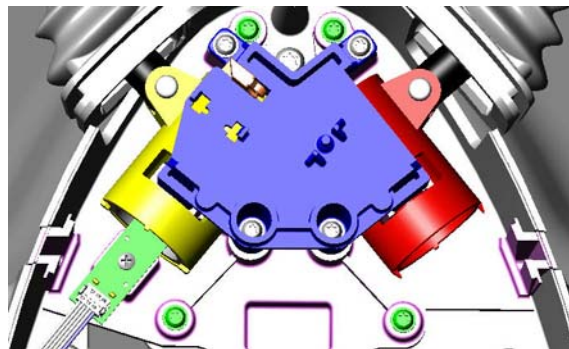
## 5.1 Handle

### 5.1.3 Removing of mechanic hall sensor compl.



Picture 5: Mechanic hall sensor compl

- Remove microswitch according to chapter REMOVING OF MIRCOSWITCH.
- Remove the 5 screws (755B:02/119, 1255B:01/113, 1650:01/111) of the dashboard (755B:02/101, 1255B&1650:01/101).
- Remove dashboard.
- Disconnect hall sensor ribbon cable from dashboard.
- Thread out hall sensor ribbon cable.
- Unscrew the 4 screws (755B:01/107, 1255B&1650:01/103) of mechanic hall sensor compl. fixation.



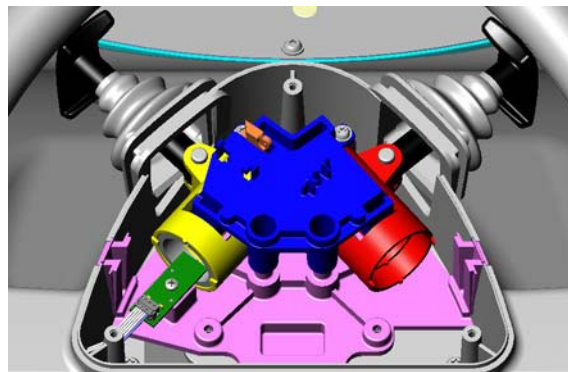
Picture 6: Remove mechanic hall sensor compl

- Remove mechanic hall sensor compl. (755B:01/101, 1255B&1650:01/135).

05.10.53 handle – mechanic hall sensor compl – 755B power\_855B power\_1255B\_1650\_1850\_V1.00.fm

## 5.1 Handle

### 5.1.4 Mounting of mechanic hall sensor compl.



Picture 7: Mount mechanic hall sensor compl

- Built in mechanic hall sensor compl.

#### **CAUTION**

*The hall sensor is configured to the throttle lever magnet in the factory and therefore can only be exchanged as one part. Do not just exchange the hall sensor board as the values can be different and the functionality is not secured.*

*Make sure that the hall sensor board is placed correctly on the pins of the support before tightening the screw.*

- Place and tighten screw of mechanic hall sensor compl.
- Thread in the hall sensor ribbon cable to the dashboard.
- Position dashboard and fix it with the 5 screws.

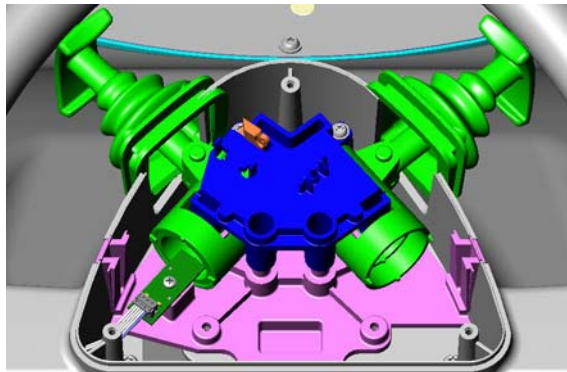


Picture 8: Mount dashboard

- Complete assembling according to the chapter MOUNTING OF MICROSWITCH.

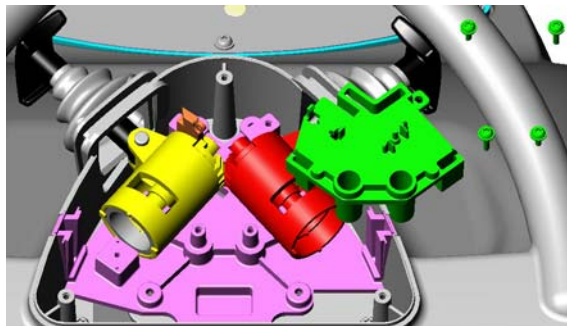
## 5.1 Handle

### 5.1.5 Removing of throttle lever



Picture 9: Throttle lever

- Remove microswitch according to chapter REMOVING OF MIRCOSWITCH.
- Unscrew hall sensor board fixation.
- Remove hall sensor board.
- Unscrew the 4 screws of the switch holder bracket.
- Remove switch holder bracket.

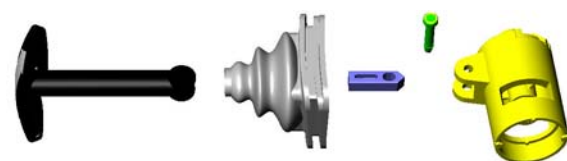


Picture 10: Remove switch holder bracket

- Put the locking lever to the left.
- Remove both throttle levers.

#### Remarks

*The lever parts can be replaced as single pieces according to e-spares.*



Picture 11: Lever parts

05.10.54 handle - throttle lever - 755B power\_855B power\_1255B\_1650\_1850\_V1.00.fm

## 5.1 Handle

### 5.1.6 Mounting of throttle lever



Picture 12: Mount throttle levers

#### Remarks

*Pay attention that the solenoid is placed on the left side (hall sensor side).*

- Assemble both throttle levers.

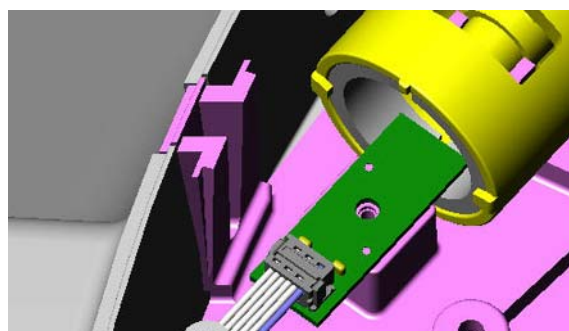
#### ⚠ CAUTION

*Ensure that the lever toothed wheels are positioned in the center of the possible movement.*

- Mount the switch holder bracket.
- Mount the 4 screws of the switch holder bracket.
- Build in the hall sensor board.

#### ⚠ CAUTION

*Make sure that the hall sensor board is placed correctly on the pins of the support before tightening the screw.*



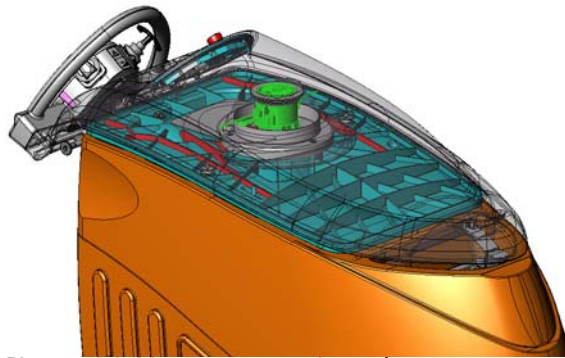
Picture 13: Hall sensor board pins

- Place and tighten the screw for the hall sensor board.
- Complete assembling according to the chapter MOUNTING OF MICROSWITCH.

05.10.54 handle - throttle lever - 755B power\_855B power\_1255B\_1650\_1850\_V1.00.fm

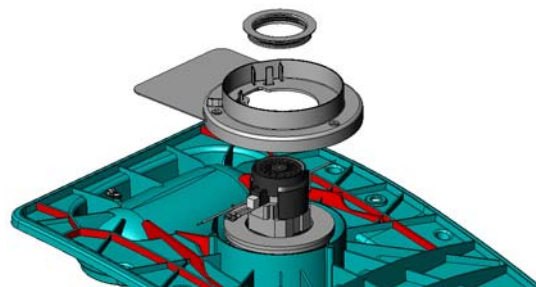
## 5.2 Upper part

### 5.2.1 Removing of vacuum motor



Picture 14: Vacuum motor in tank

- Open tank cover.
- Loosen the screw (01/107) at the base plate (01/116) on the support bar (01/127) side (RH).
- Loosen the screw (01/107) at the base plate on the other side (LH).
- Close the tank cover (01/125).
- Open the tank cover without the base plate.
- Disconnect vacuum motor wires from connection block (01/124).
- Remove sealing (01/123) of vacuum motor to tank cover.
- Unscrew the 3 screws (01/113) of the vacuum protection plate (01/130).



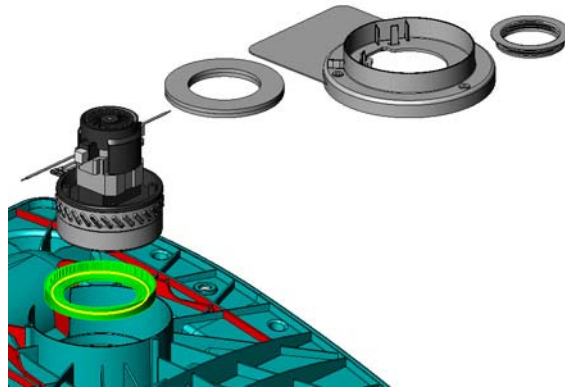
Picture 15: Vacuum motor remove

- Remove vacuum motor fixation sealings (01/132).
- Remove the vacuum motor (01/121).
- Remove bottom sealing (01/112) of the vacuum motor.



## 5.2 Upper part

### 5.2.2 Mounting of vacuum motor



Picture 16: Vacuum motor mount

- Position bottom sealing of the vacuum motor.
- Build in the vacuum motor.
- Position vacuum motor fixation sealings.
- Assemble the vacuum motor protection plate.

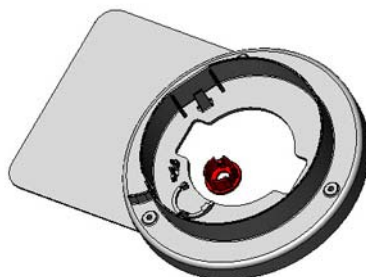
#### Remarks

*Ensure that the vacuum motor sealings are properly positioned before assembling the protection plate.*

- Position and tighten the vacuum motor protection plate.

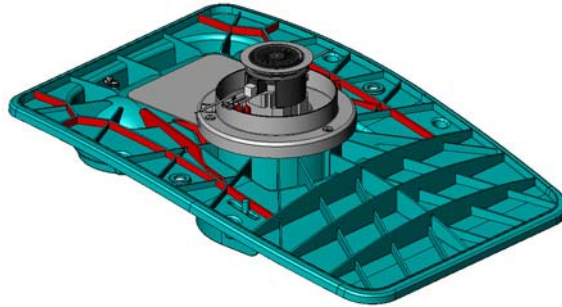
#### Remarks

*Ensure that the pressure washer (01/131) is placed (spin protection).*



Picture 17: Spin protection

- Connect wires of vacuum motor.
- Position top sealing of the vacuum motor.
- Connect vacuum motor wires to connection block.
- Close tank cover and position it on the base plate.
- Open tank cover together with base plate.



Picture 18: Base plate

- Use the tank cover support to hold up tank cover.
- Tighten base plate fixation on the LH side.
- Tighten base plate fixation on the tank support side (RH).

### **CAUTION**

*Tighten the fixation rubbers (01/118) smoothly.*

### **Remarks**

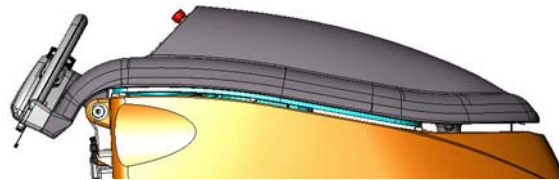
*Check at the end if the vacuum motor top sealing (01/123) is positioned properly. If necessary, unscrew and remove the dashboard and check.*

05.18.13 upper part – vacuum motor – 1650B\_1850B\_V1.00.fm



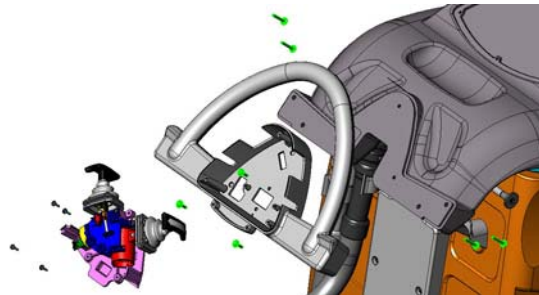
## 5.2 Upper part

### 5.2.3 Removing of tank cover



Picture 19: Tank cover

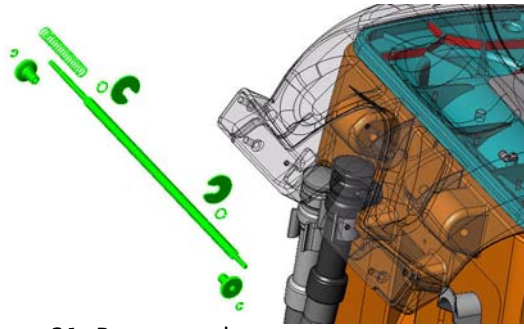
- Remove mechanic hall sensor compl. according to chapter REMOVING OF MECHANIC HALL SENSOR COMPL.
- Unscrew the 7 screws (01/106 and 01/107) for the handle fixation to the tank cover.
- Remove handle (01/105) from tank cover.



Picture 20: Remove handle

- Remove the 6 screws (09/122) of the rear panel (09/121).
- Remove rear panel.
- Remove base plate according to chapter REMOVING OF VACUUM MOTOR.
- Remove cable fixation (01/114) from base plate.
- Thread out cables from tank cover.
- Close tank cover.
- Remove circlip (05/107) and bracket (05/106) of axle (05/105) on RH side.
- Remove retaining ring (05/104).
- Push out axle (05/105).

05.18.19 upper part – tank cover – 1650B\_1850B\_V1.01.fm

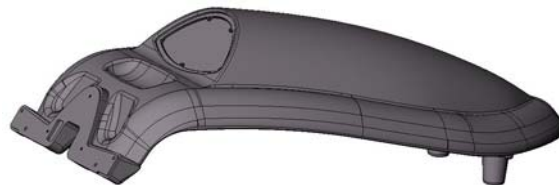


Picture 21: Remove axle

- Remove complete tank cover.
- According to what you need to exchange, remove the existing parts from the tank cover and place it on the new one.

## 5.2 Upper part

### 5.2.4 Mounting of tank cover

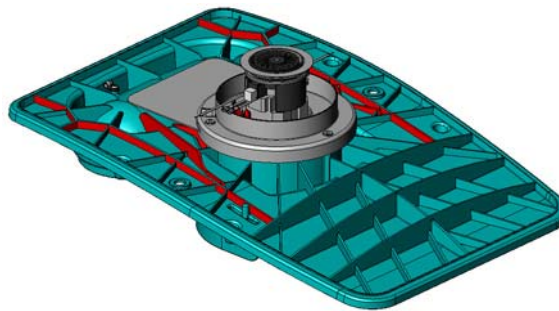


Picture 22: Tank cover single

#### **CAUTION**

*Assemble the tank cover lock (01/126) at the end of this sequence.*

- Position the base plate on the new tank cover.
- Fix the base plate on the tank cover.



Picture 23: Base plate

- Position the tank cover including the base plate correctly on the tank.

#### **CAUTION**

*Make sure that the sealings are nicely positioned.*

- Drill the hole for the tank axle without pressing the tank cover down onto the tank (drill with diameter 12mm).

#### Remarks

*Ensure that the protection shield (01/108) is positioned between the tank and the base plate.*

- Open the tank cover.
- Thread in cable into the tank cover.

#### Remarks

*Ensure that the cables are positioned that way, that they can not be*

05.18.19 upper part – tank cover – 1650B\_1850B\_V1.01.fm

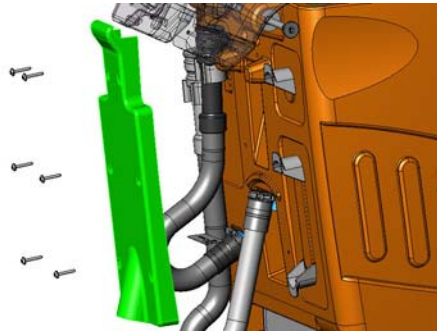
*squeezed by the tank cover.*

- Fix the cable on the base plate.
- Complete assembling according to chapter MOUNTING OF VACUUM MOTOR.
- Open tank cover.
- Assemble tank cover lock.

### Adjustment

*Adjust the tank cover and ensure a proper opening and closing of the cover.*

- Mount the rear panel.
- Mount the 6 screws for the panel.

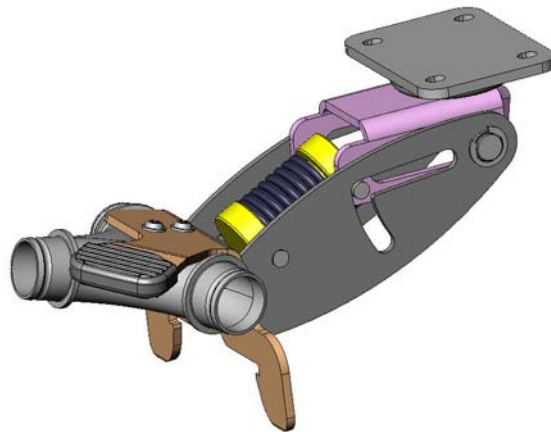


Picture 24: Mount rear panel

- Assemble handle on the tank cover with the 7 screws.
- Complete assembling according to chapter MOUNTING OF MECHANIC HALL SENSOR COMPL.

## 5.3 Squeegee lowering mechanism

### 5.3.1 Removing of bracket spring – old setup

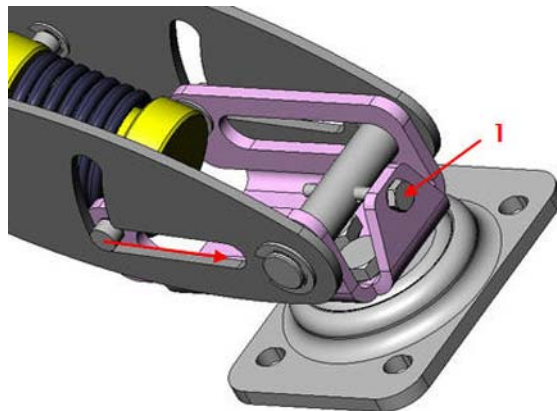


Picture 25: Squeegee lowering unit – old setup

- Remove the squeegee from the fixation.
- Remove the 4 screws (02/102) to dismount the squeegee lowering mechanism from the chassis (05/136).

#### Remarks

*You also could leave the squeegee lowering mechanism mounted and lay the machine on the LH side.*

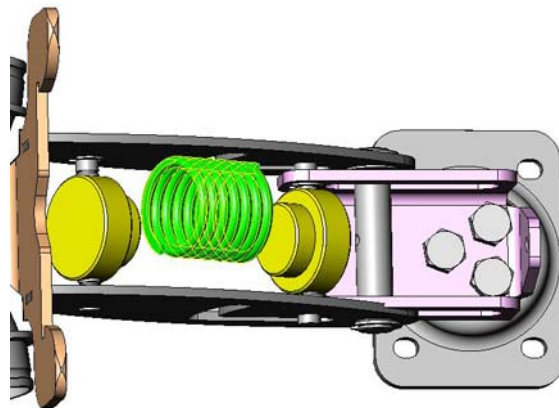


Picture 26: Squeegee lowering remove

- 1 Loosen/remove the screw (02/112) to release tension of pressure spring (02/114).
- Pull squeegee bracket (02/106) and bracket (02/103) apart.
  - Remove pressure spring.

## 5.3 Squeegee lowering mechanism

### 5.3.2 Mounting of bracket spring – old setup



Picture 27: Squeegee lowering pressure spring mount – old setup

- Mount the new pressure spring.

#### Remarks

*Thread spring into the upper spring plate (02/113) first.*

- Push the spring bracket and bracket together.
- Place the screw and tighten it.

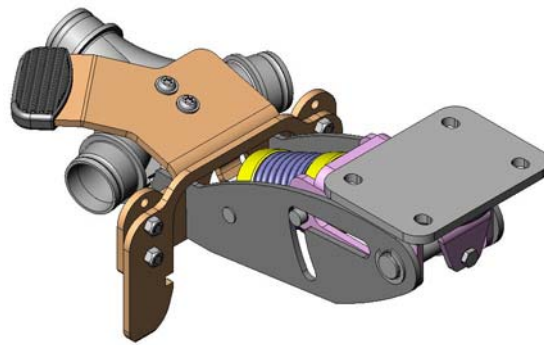
#### **CAUTION**

*Do not tighten the screw too hard. As soon as you feel a resistance stop tightening.*

*Ensure that the axle (02/116) is nicely in the slot of the spring bracket.*

## 5.3 Squeegee lowering mechanism

### 5.3.3 Removing of bracket spring – new setup

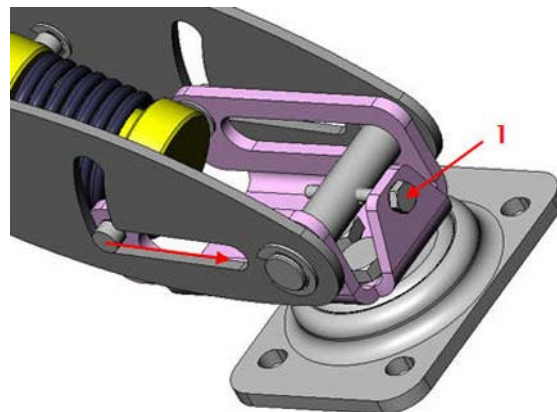


Picture 28: Squeegee lowering unit – new setup

- Remove the squeegee from the fixation.
- Remove the 4 screws (02/102) to dismount the squeegee lowering mechanism from the chassis (05/136).

#### Remarks

*You also could leave the squeegee lowering mechanism mounted and lay the machine on the LH side.*

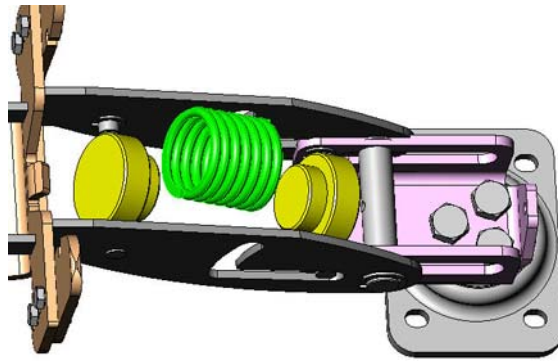


Picture 29: Squeegee lowering remove

- 1 Loosen/remove the screw (02/112) to release tension of pressure spring (02/114).
- Pull squeegee bracket (02/106) and bracket (02/103) apart.
  - Remove pressure spring.

## 5.3 Squeegee lowering mechanism

### 5.3.4 Mounting of bracket spring – new setup



Picture 30: Squeegee lowering mechanism bracket spring – new setup

- Mount the new pressure spring.

#### Remarks

*Thread spring into the upper spring plate (02/113) first.*

- Push the spring bracket and bracket together.
- Place the screw and tighten it.

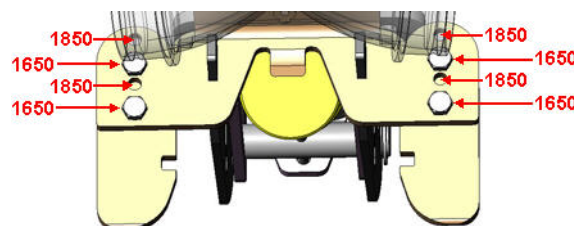
#### **CAUTION**

*Do not tighten the screw to hard. As soon as you feel a resistance stop tightening.*

*Ensure that the axle (02/116) is nicely in the slot of the spring bracket.*

#### Adjustment

*According to which type of machine you work on you need to place the adapter (02/118) on the correct position. See also the spare parts list.*

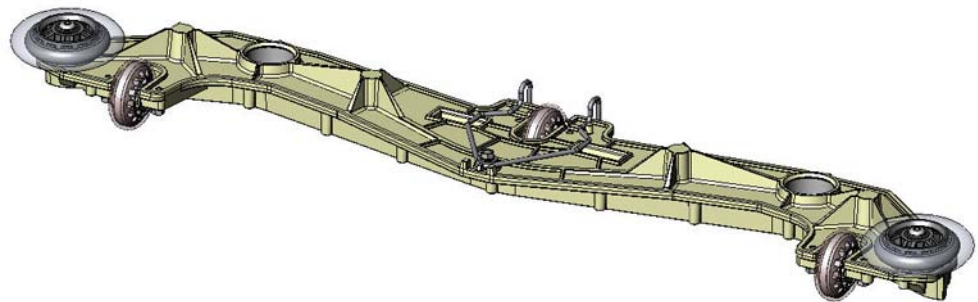


Picture 31: Squeegee lowering unit adjustment – new setup



## 5.4 Squeegee 1650/XP

### 5.4.1 Removing of wire spring

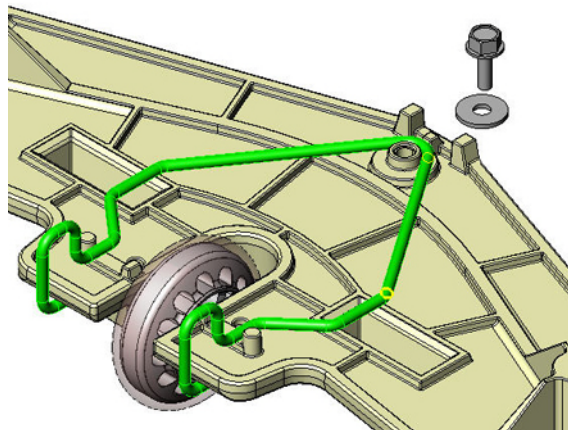


Picture 32: Squeegee without flat spring

- Remove the self threading screw (1650:03/115, XP:06/115).
- According to which type of squeegee you have you need to remove:
  - the washer (1650:03/118)
  - the flat spring (1650:03/106, XP:06/106)

#### Remarks

*Detailed information to the spring you find at the end of the mounting section.*

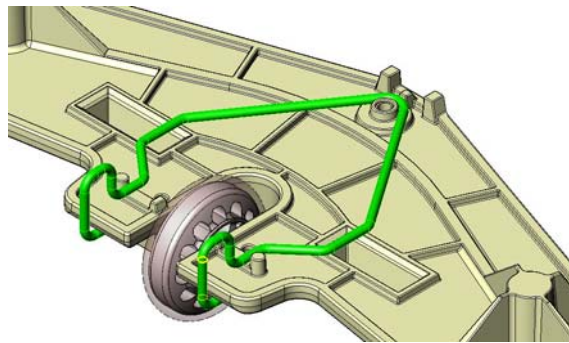


Picture 33: Wire spring without flat spring

- Remove the wire spring (1650:03/107, XP:06/107).

## 5.4 Squeegee 1650/XP

### 5.4.2 Mounting of wire spring



Picture 34: Wire spring mount

- Assemble the new wire spring.

#### Remarks

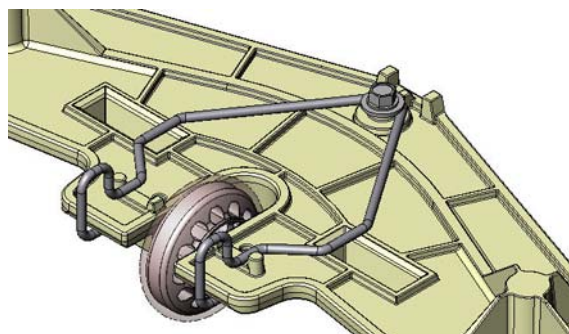
*Please hook in the back part of the wire spring and place it inside the moving way slots.*

#### **CAUTION**

*The squeegees of the TASKI swingo 1650 and XP are different. Please take note of this as the pick up result can be affected.*

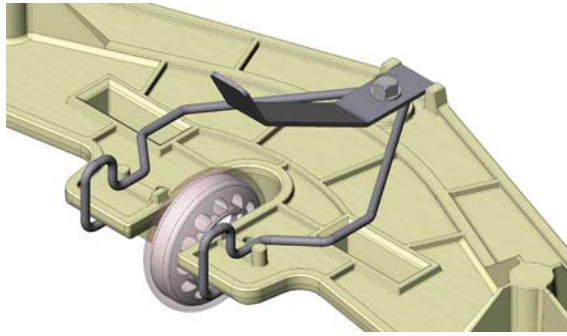
#### Remarks

*The TASKI swingo 1650 squeegee with old squeegee lowering mechanism is in the following picture:*



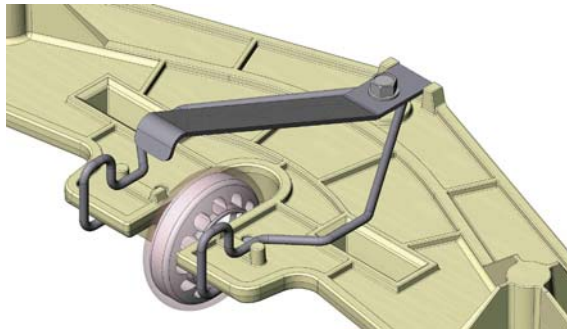
Picture 35: Wire spring 1650 old

*The TASKI swingo 1650 squeegee with new squeegee lowering mechanism is in the following picture:*



Picture 36: Wire spring 1650 new

*The TASKI swingo XP squeegee is in the following picture:*

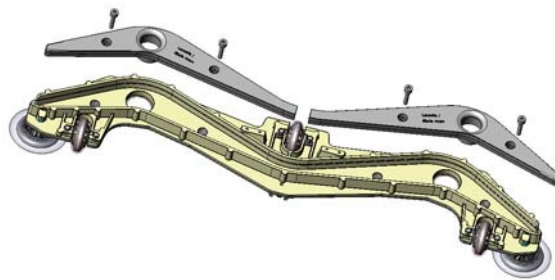


Picture 37: Wire spring XP

05.40.12 squeegee – wire spring – 1650\_XP\_V1.01.fm

## 5.4 Squeegee

### 5.4.3 Removing of front and back blades

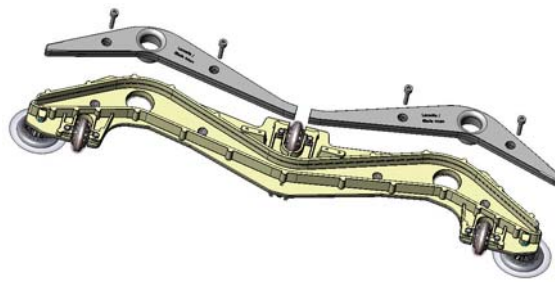


Picture 38: Squeegee blades

- Remove the 4 screws (1650:03/116, XP:06/116) from the blade clamping insert.
- Remove the LH (1650:03/113, XP:06/113) and the RH (1650:03/114, XP:06/114) blade clamping insert.
- Remove the front (1650:03/110, XP:06/110) and/or the back blade (1650:03/111, XP:06/111).

## 5.4 Squeegee

### 5.4.4 Mounting of front and back blades



Picture 39: Squeegee blades

- Insert the new blades into the squeegee body (1650:03/105, XP:06/105).

#### **CAUTION**

*Ensure that the middle marking of the blades are placed in the middle of the squeegee body.*

*Ensure that the 4 pressure springs (03/112) are placed nicely in the inlet of the squeegee body.*

*Ensure that the front and/or back blades are nicely fitted into the squeegee body before inserting the blade clamping inserts.*

- Place the LH and the RH blade clamping inserts into the squeegee body.
- Insert the four screws for the blade clamping inserts.

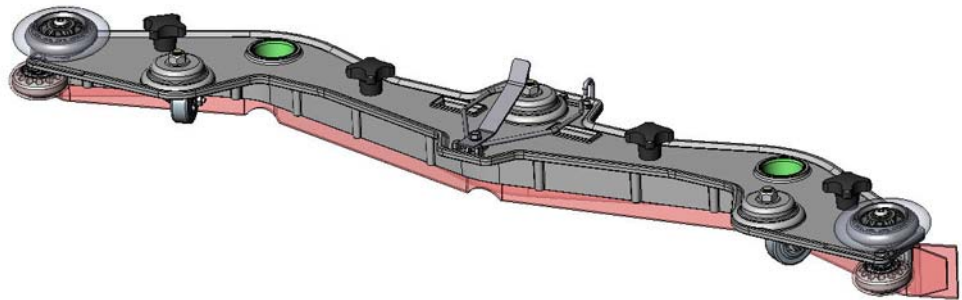
#### **Service**

*Please use wear resistant spray (1650:03/117, XP:06/117) for the screws.*

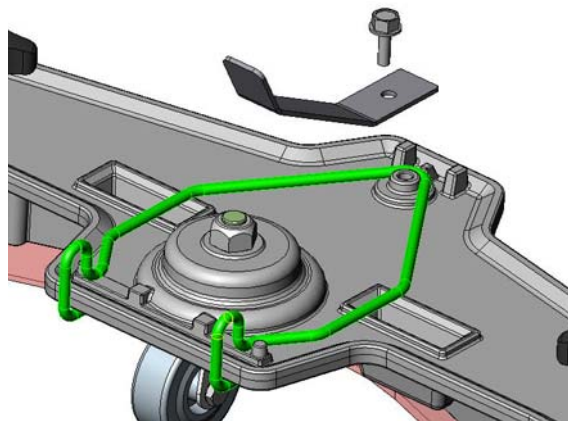
- Tighten the screws evenly so the blade clamping is not angled.

## 5.5 Squeegee 1850/4000

### 5.5.1 Removing of wire spring



Picture 40: Squeegee 1850/4000



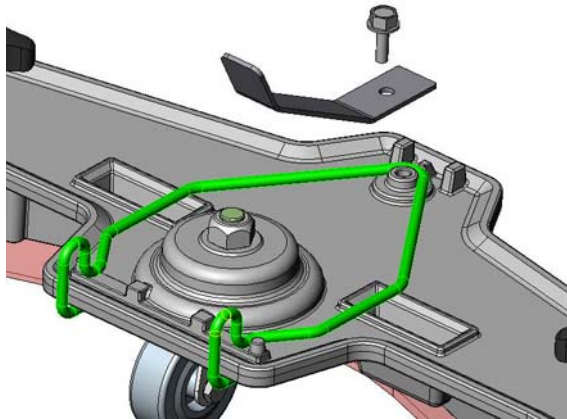
Picture 41: Wire spring

- Remove the self threading screw (1850:04/114, 4000:10/114) and the flat spring (1850:04/113, 4000:10/113).
- According to which type of squeegee you have you also need to remove the two screws (1850:04/114, 4000:10/114) for the holder (1850:04/125, 4000:10/125).
- Remove wire spring (1850:04/112, 4000:10/112).

05.40.13 squeegee - wire spring - 1850\_4000\_V1.01.fm

## 5.5 Squeegee 1850/4000

### 5.5.2 Mounting of wire spring



Picture 42: Wire spring

- Mount the new wire spring.

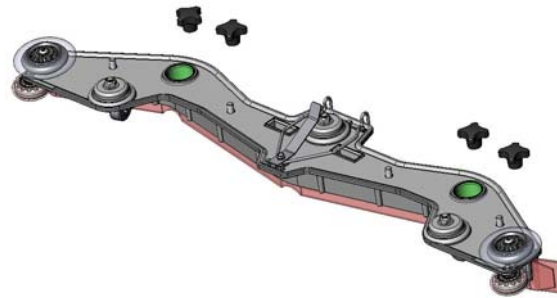
#### Remarks

*Please hook in the back part of the wire spring and place it inside the moving way slots.*

- According to which type of squeegee you have, mount also the holder and the two screws.
- Mount the flat spring and the screw.

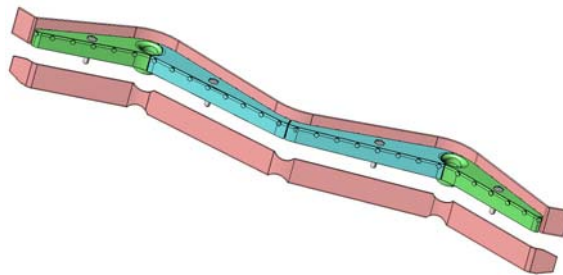
## 5.5 Squeegee 1850/4000

### 5.5.3 Removing of front blade



Picture 43: Squeegee 1850/4000 star knob

- Remove the 4 star knobs (1850:04/115; 4000:10/115).
- Push/pull out the blade holders (1850:04/102,103,104,105, 4000:10/102,103,104,105) of the squeegee body (1850:04/108, 4000:10/108).



Picture 44: Squeegee 1850/4000 front blade

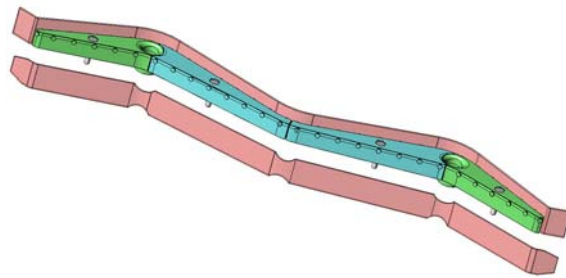
- Remove the front blade (1850:04/106, 4000:10/106) by tearing it off from the blade holders.

05.40.18 squeegee - front blade - 1850\_4000\_V1.00.fm



## 5.5 Squeegee 1850/4000

### 5.5.4 Mounting of front blade

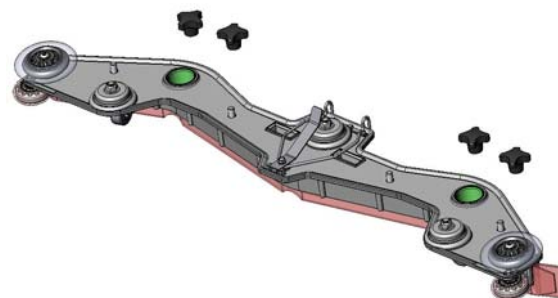


Picture 45: Squeegee 1850/4000 front blade

- Position new front blade nicely on the pins of the squeegee holders.

#### Remarks

*Take notice of the middle sign on the blade.*



Picture 46: Squeegee 1850/4000 star knob

- Insert all 4 squeegee holders together into the squeegee body.
- Mount the star knobs.

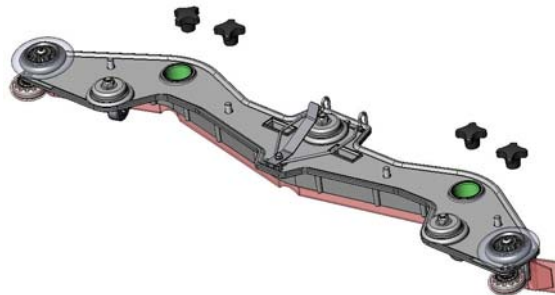
#### **CAUTION**

*Ensure that the front blade is nicely fitted into the squeegee body before tightening the star knobs.*

05.40.18 squeegee - front blade - 1850\_4000\_V1.00.fm

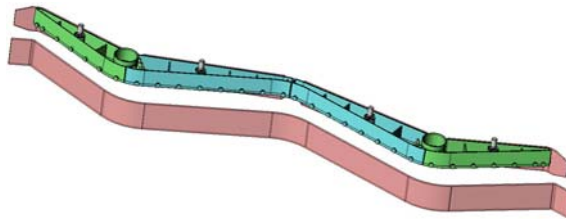
## 5.5 Squeegee 1850/4000

### 5.5.5 Removing of back blade



Picture 47: Squeegee 1850/4000 star knob

- Remove the 4 star knobs (1850:04/115, 4000:10/115).
- Push/pull out the blade holders (1850:04/102,103,104,105, 4000:10/102,103,104,105) of the squeegee body (1850:04/108, 4000:10/108).



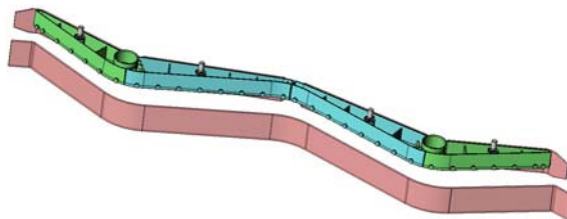
Picture 48: Squeegee 1850/4000 back blade

- Remove the back blade (1850:04/107, 4000:10/107) by tearing it off from the blade holders.

05.40.22 squeegee - back blade - 1850\_4000\_V1.00.fm

## 5.5 Squeegee 1850/4000

### 5.5.6 Mounting of back blade

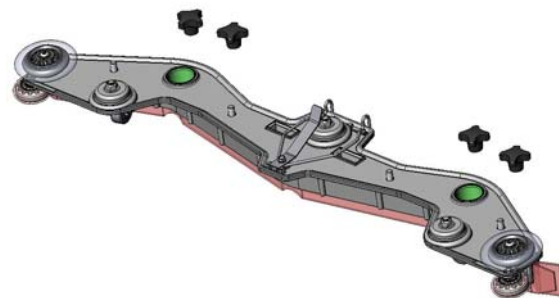


Picture 49: Squeegee 1850/4000 back blade

- Position new back blade nicely on the pins of the squeegee holders.

#### Remarks

*Take notice of the middle sign on the blade.*



Picture 50: Squeegee 1850/4000 star knob

- Insert all 4 squeegee holders together into the squeegee body.
- Mount the star knobs.

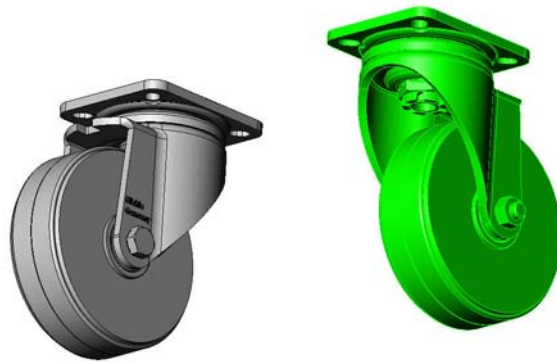
#### **CAUTION**

*Ensure that the front blade is nicely fitted into the squeegee body before tightening the star knobs.*

05.40.22 squeegee - back blade - 1850\_4000\_V1.00.fm

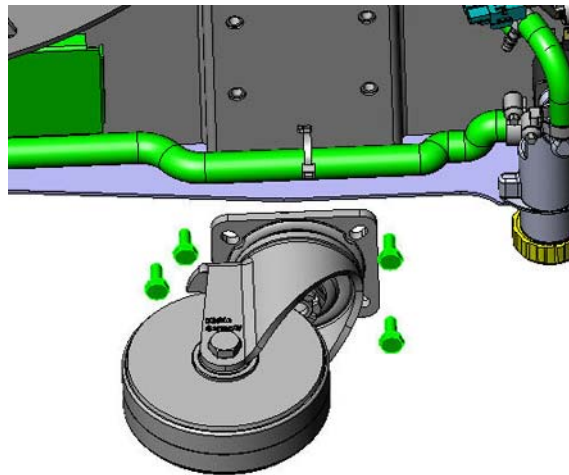
## 5.6 Lower part

### 5.6.1 Removing of castor wheel TASKI swingo 1650 – old setup



Picture 51: Castor wheel 1650 – old setup

- Lay the machine on the LH side.
- Loosen the 4 fixation screws (05/127) with a 10mm fork spanner/nut.

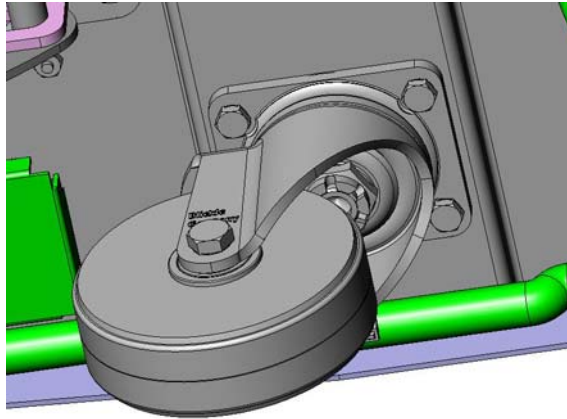


Picture 52: Castor wheel screw – old setup

- Remove the complete castor wheel (05/126).

## 5.6 Lower part

### 5.6.2 Mounting of castor wheel TASKI swingo 1650 – old setup



Picture 53: Castor wheel detail – old setup

- Assemble castor wheel.
- Tighten the 4 fixation screws with a 10 mm fork spanner/nut.
- Lift up the machine.

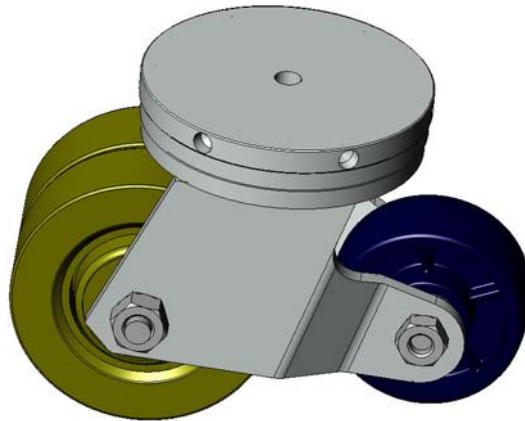
#### Remarks

*There are two castor wheels on the TASKI 1650. The upper mentioned procedure is the same for both.*

05.42.12 lower part – castor wheel old setup – 1650B\_V1.00.fm

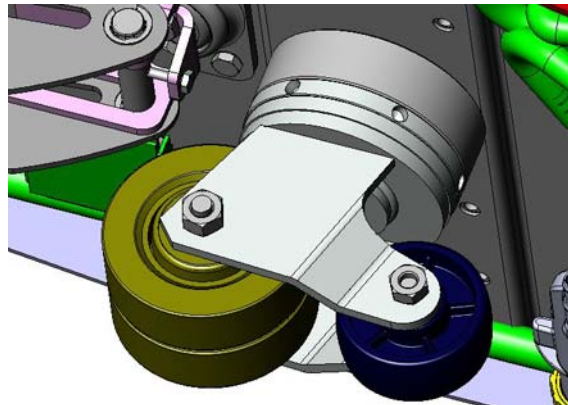
## 5.6 Lower part

### 5.6.3 Removing of castor wheel TASKI swingo 1650/1850



Picture 54: Castor wheel 1650/1850

- Lay the machine on the LH side.
- Unlock battery compartment by removing the screw (05/127) of the locking system.
- Open the battery compartment.
- Loosen the fixation screws (05/143) with a 19mm fork spanner/nut.

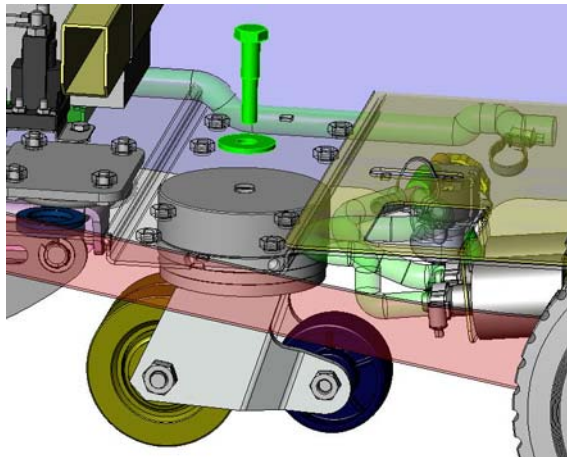


Picture 55: Castor wheel screw

- Remove the complete castor wheel (05/140).

## 5.6 Lower part

### 5.6.4 Mounting of castor wheel TASKI swingo 1650/1850



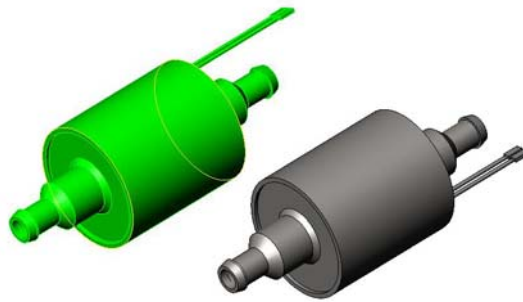
Picture 56: Castor wheel detail

- Assemble castor wheel.
- Tighten the fixation screws with a 19 mm fork spanner/nut.
- Lock battery compartment with the screw of the locking system.
- Lift up the machine.

05.42.13 lower part – castor wheel – 1650B\_1850B\_V1.00.fm

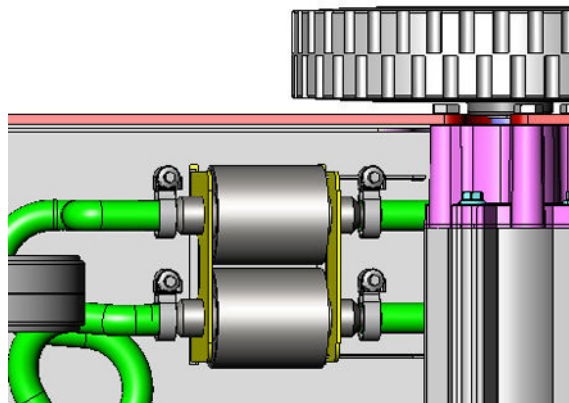
## 5.6 Lower part

### 5.6.5 Removing of pump



Picture 57: Pump

- Lay the machine on the LH side.
- Disconnect the pump wires at connections.
- Loosen the hose clamps (09/101) on both sides of the pump (05/130).
- Remove the fresh water hoses from the pump.
- Thread out pump from the holder (05/131).



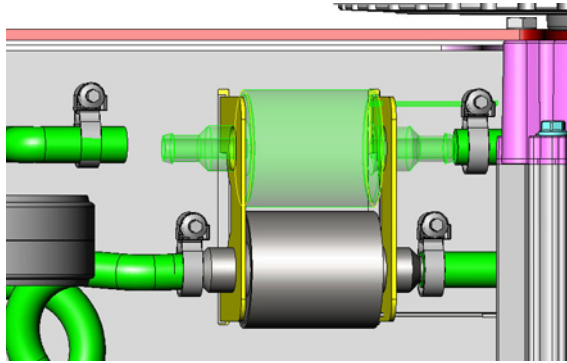
Picture 58: Pump detail

- Thread out pump from the holder.



## 5.6 Lower part

### 5.6.6 Mounting of pump



Picture 59: Pump mount

- Position new pump into holder.

#### **CAUTION**

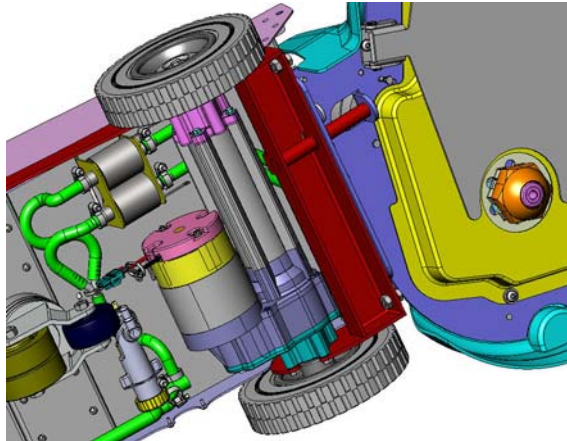
*Ensure that the pump is build in according to the water flow. The arrow on the pump indicates the water flow direction.*

- Connect fresh water hoses to the pump.
- Tighten the hose clamps on both sides.
- Connect the pump wires.
- Lift up the machine.

05.42.16 lower part – pump – 1650B\_1850B\_V1.00.fm

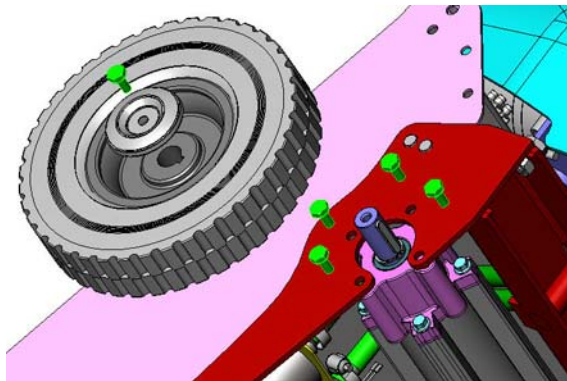
## 5.7 Drive & Tool lowering unit

### 5.7.1 Removing of traction unit



Picture 60: Traction unit

- Unlock battery compartment by removing screw (05/127) of locking system.
- Open battery compartment.
- Disconnect traction unit wires from electronics (05/123).
- Thread out the wires from battery compartment.
- Close battery compartment.
- Remove screw (06/101), cover (06/102) and the traction wheel (06/103) on the LH side.
- Remove the 4 screws (06/106) for the traction unit (06/104) on the LH side.
- Lay the machine on the LH side.
- Remove screw (06/101), cover (06/102) and the traction wheel (06/103) on the RH side.
- Remove the 4 screws (06/106) for the traction unit (06/104) on the RH side.

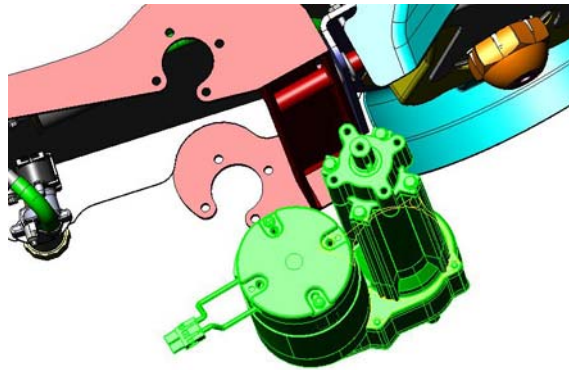


Picture 61: Traction unit remove

- Remove the traction unit from the brush lever (06/117).

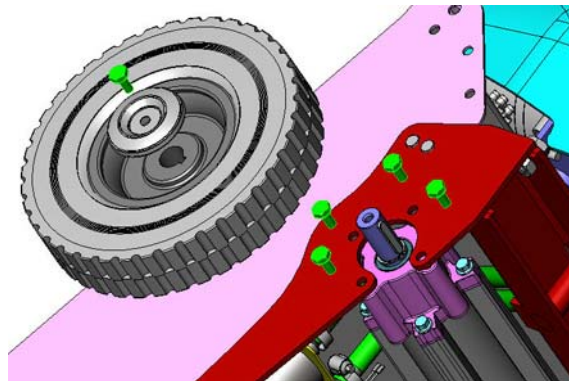
## 5.7 Drive & Tool lowering unit

### 5.7.2 Mounting of traction unit



Picture 62: Traction unit mount

- Position new traction unit into brush lever.
- Mount the 4 screws of the traction unit on the RH side.
- Position the wheel, cover and mount the screw RH side.
- Lift up the machine.
- Mount the 4 screws of the traction unit on the LH side.
- Position the wheel, cover and mount the screw LH side.

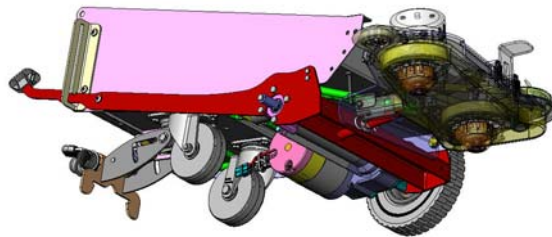


Picture 63: Traction unit remove

- Open the battery compartment.
- Thread in the wires of the traction unit.
- Connect the traction unit wires to the electronics.
- Close the battery compartment.
- Lock the battery compartment with the screw of the locking.

## 5.7 Drive & Tool lowering unit

### 5.7.3 Removing of brush lever – old setup

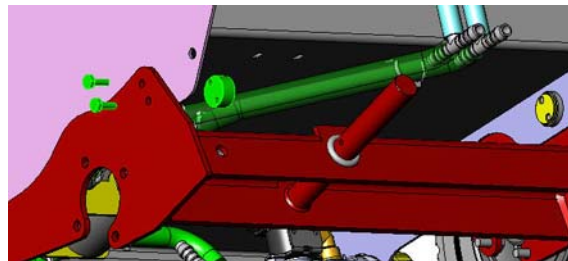


Picture 64: Brush lever old setup

- Remove brush unit according to chapter REMOVING OF BRUSH UNIT.
- Remove traction unit according to chapter REMOVING OF TRACTION UNIT.

#### Remarks

*Remove the two screws (06/118) of the bolt (06/122) on the LH side so the brush lever (06/117) is released from the chassis before you lay the machine on the LH side.*



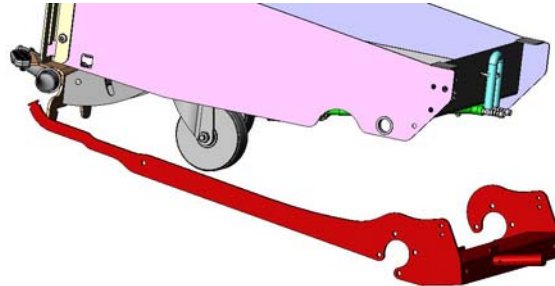
Picture 65: Brush lever remove old setup

- Remove the two screws (06/118) of the bolt (06/122) on the RH side so the brush lever (06/117) is released from the chassis.
- Remove the pedal pad (06/111) so you can thread the brush lever out of the gate (06/113).
- According to what you need to exchange, remove the existing parts from the brush lever and place it on the new one.

05.52.11 drive, tool lowering unit – brush lever old setup – 1650B\_V1.00.fm

## 5.7 Drive & Tool lowering unit

### 5.7.4 Mounting of brush lever – old setup

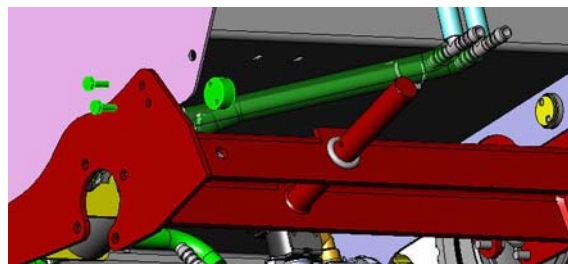


Picture 66: Brush lever mount old setup

- Thread the new brush lever into the gate.
- Mount the pedal pad.
- Position the brush lever onto the chassis and mount the two screws on the RH side.
- Assemble the traction unit according to chapter MOUNTING OF THE TRACTION UNIT.

#### Remarks

*Mount the two screws of the bolt on the LH side for the brush lever after you lifted up the machine.*



Picture 67: Brush lever remove old setup

- Assemble the brush unit according to chapter MOUNTING OF THE BRUSH UNIT.

#### Service

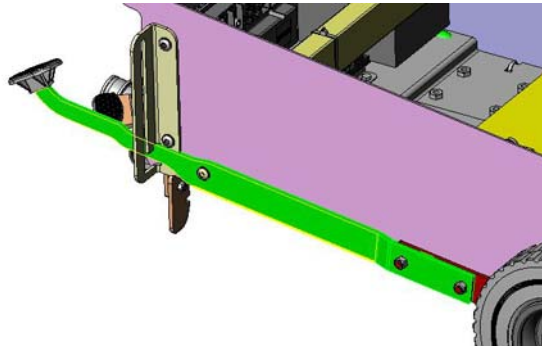
*Ensure that the gate (06/113) is lubricated (06/130) in the slot where the brush lever is moving.*

#### Adjustment

*When you are finished with the exchange, test the functionality of the brush lowering sequence.*

## 5.7 Drive & Tool lowering unit

### 5.7.5 Removing of brush lever – new setup



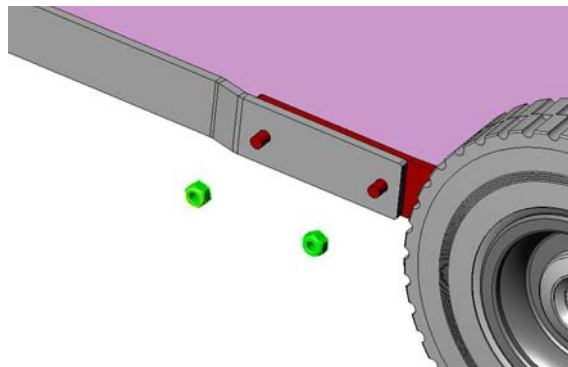
Picture 68: Brush lever new setup

- Remove the pedal pad (06/111).

#### Remarks

*To work on the brush lever, leave tools on brush unit and keep the brush unit lowered.*

- Remove the two self locking nuts (06/124).

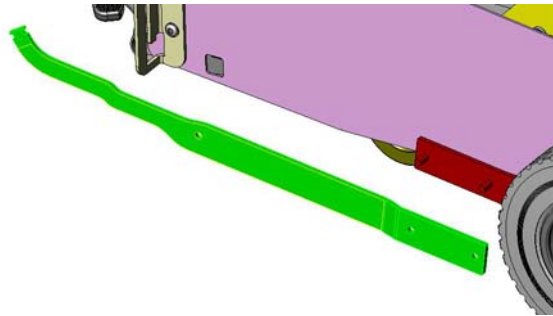


Picture 69: Brush lever remove new setup

- Remove the screw (06/112) and the bolt (06/116) for the brush switch (06/115).
- Thread out the brush lever (06/123).

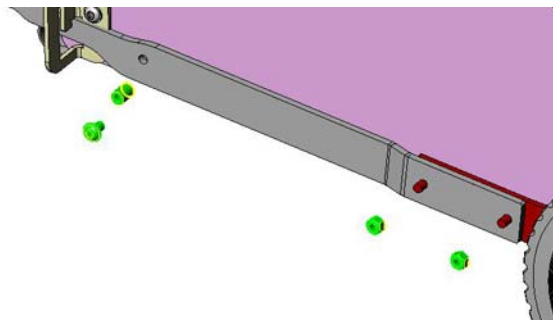
## 5.7 Drive & Tool lowering unit

### 5.7.6 Mounting of brush lever – new setup



Picture 70: Brush lever single new setup

- Thread the new brush lever into the gate.
- Mount the bolt for the brush switch.
- Mount the two self locking nuts.



Picture 71: Brush lever mount new setup

- Mount the pedal pad.

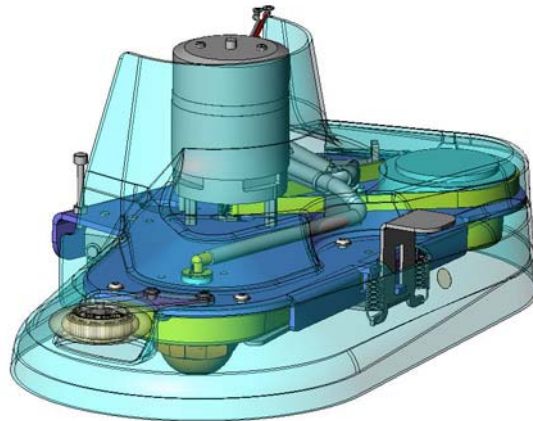
#### Adjustment

*When you are finished with the exchange, test the functionality of the brush lowering sequence.*



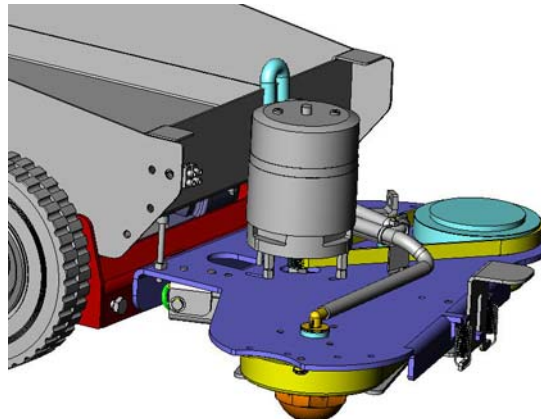
## 5.8 Brush drive 1650

### 5.8.1 Removing of brush drive 1650 old setup



Picture 72: Brush drive 1650 old setup

- Unlock the battery compartment by removing screw (05/127) of the locking system.
- Open battery compartment.
- Remove the two screws (07/123) for the fixation of the deflection wheel (07/103).
- Remove the holder (07/101) of the deflection wheel.
- Unscrew the 4 screws (07/123) for the brush housing (07/106).



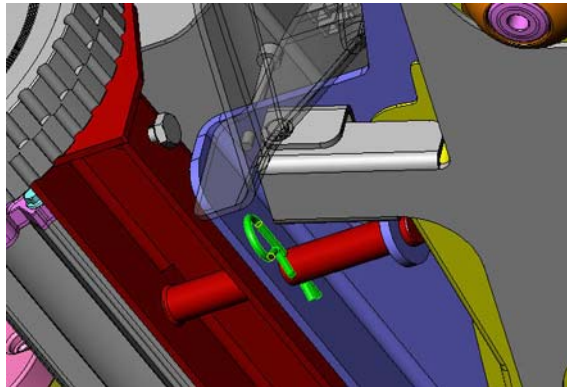
Picture 73: Brush drive mounting 1650 old setup

- Remove the brush housing.
- Disconnect brush motor wires from connection block (05/139).
- Remove the cable ties (07/151) to release the hoses.
- Remove the angle nipple (07/136) and hose nipple (07/145).
- Pull the stop pin (06/119) off to one side.
- Remove the whole brush unit by pulling it off from the brush lever (06/117).



## 5.8 Brush drive 1650

### 5.8.2 Mounting of brush drive 1650 old setup



Picture 74: Brush drive stop pin 1650

- Position the brush drive onto the brush lever.
- Push the stop pin into the correct position.
- Insert the angle nipple and the hose nipple into the brush drive.
- Place the cable ties onto the holder (07/147).

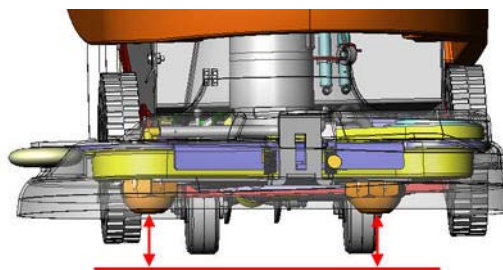
#### **CAUTION**

*Ensure that the cable ties are placed correctly and do not interfere with the motor belt (07/113).*

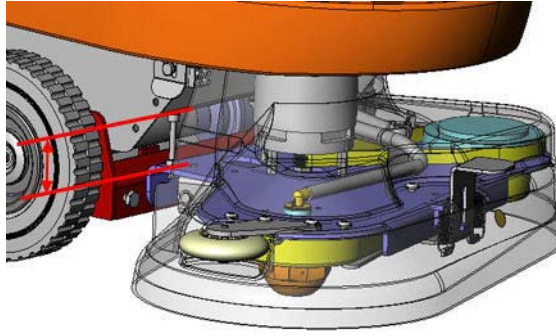
- Connect the wires to the connection block.
- Place the brush housing and mount the screws.
- Place the holder for the deflection wheel and mount the screws.
- Close the battery compartment.
- Lock the battery compartment with the screw of the locking system.

#### **Adjustment**

*Adjust the socket head cap screw (07/128) to ensure that the brush drive is positioned horizontal (coupling hub compared to ground).*



Picture 75: Adjustment brush drive 1650



Picture 76: Adjustment brush drive screw 1650 old setup

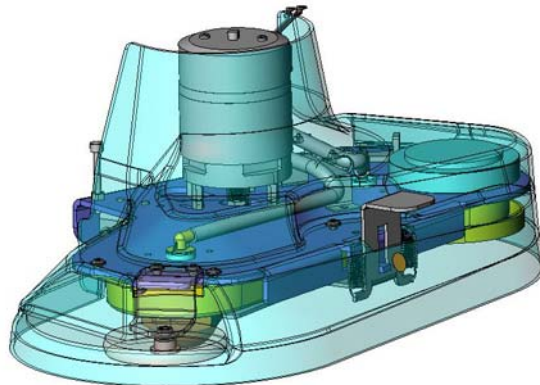
**⚠ CAUTION**

*The upper explained adjustment is only for transportation position. During cleaning (brush unit lowered) it has no affect.*

05.66.13 brush drive – brush drive unit old setup – 1650B\_V1.00.fm

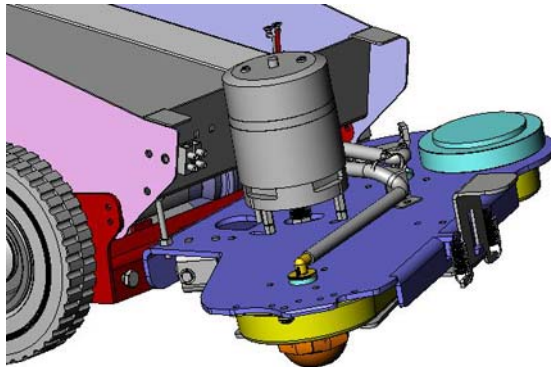
## 5.8 Brush drive 1650

### 5.8.3 Removing of brush drive 1650 new setup



Picture 77: Brush drive 1650 new setup

- Unlock the battery compartment by removing screw (05/127) of the locking system.
- Open battery compartment.
- Remove the two screws (07/102) for the fixation of the deflection wheel (07/103).
- Remove the holder (07/101) of the deflection wheel.
- Unscrew the 4 screws (07/123) for the brush housing (07/106).

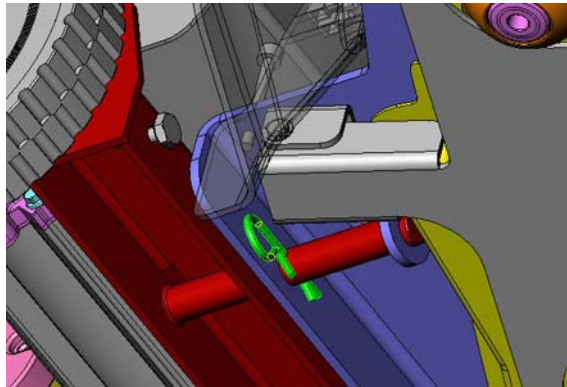


Picture 78: Brush drive mounting 1650 new setup

- Remove the brush housing.
- Disconnect brush motor wires from connection block (05/139).
- Remove the cable ties (07/151) to release the hoses.
- Remove the angle nipple (07/136) and hose nipple (07/145).
- Pull the stop pin (06/119) off to one side.
- Remove the whole brush unit by pulling it off from the brush lever (06/117).

## 5.8 Brush drive 1650

### 5.8.4 Mounting of brush drive 1650 new setup



Picture 79: Brush drive stop pin 1650

- Position the brush drive onto the brush lever.
- Push the stop pin into the correct position.
- Insert the angle nipple and the hose nipple into the brush drive.
- Place the cable ties onto the holder (07/147).

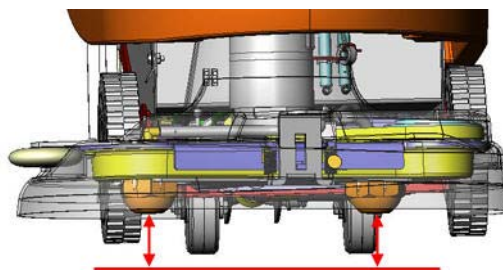
#### **CAUTION**

*Ensure that the cable ties are placed correctly and do not interfere with the motor belt (07/113).*

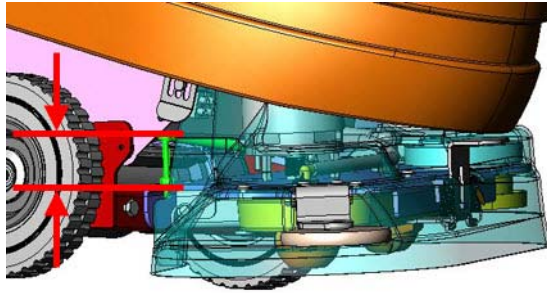
- Connect the wires to the connection block.
- Place the brush housing and mount the screws.
- Place the holder for the deflection wheel and mount the screws.
- Close the battery compartment.
- Lock the battery compartment with the screw of the locking system.

#### **Adjustment**

*Adjust the socket head cap screw (07/128) to ensure that the brush drive is positioned horizontal (coupling hub compared to ground).*



Picture 80: Adjustment brush drive 1650



Picture 81: Adjustment brush drive screw 1650 new setup

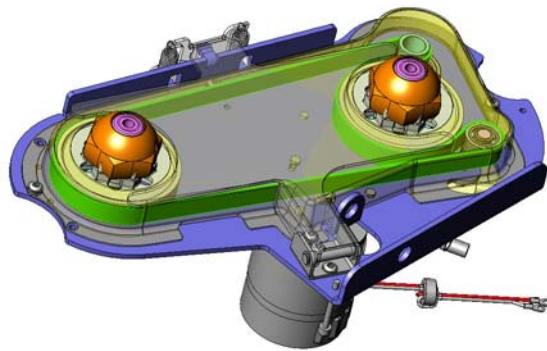
**⚠ CAUTION**

*The upper explained adjustment is only for transportation position. During cleaning (brush unit lowered) it has no affect.*

05.66.19 brush drive – brush drive unit new setup – 1650B\_V1.00.fm

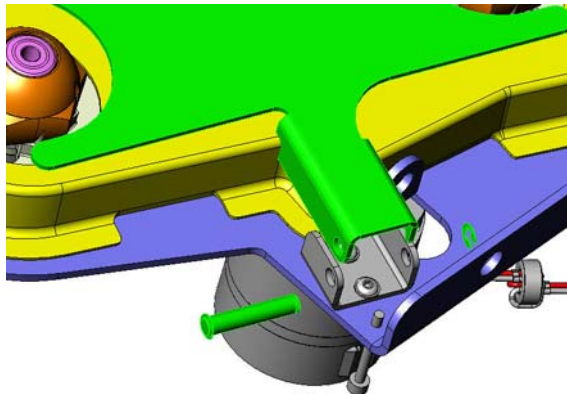
## 5.8 Brush drive 1650

### 5.8.5 Removing of brush belt 1650



Picture 82: Brush belt 1650

- Remove the brush drive according to chapter REMOVING OF BRUSH DRIVE 1650 OLD SETUP or NEW SETUP.
- Remove the two tension springs (07/143) of decoupling bow (07/142).
- Remove one circlip (07/150) from the axle (07/149).
- Pull out the axle and remove the decoupling bow.



Picture 83: Decoupling bow 1650

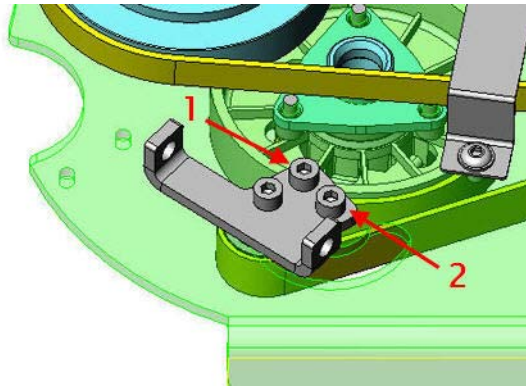
- Remove the 4 screws (07/123) of the protective cover (07/144).
- Remove the protective cover.

#### Remarks

*Further numbering refers to following picture.*

- 1 Remove fixation screw (07/122) of the clamping piece (07/138).
- 2 Loosen the center screw (07/122) to turn the clamping piece.

05.68.14 brush drive – brush belt – 1650B\_V1.00.fm



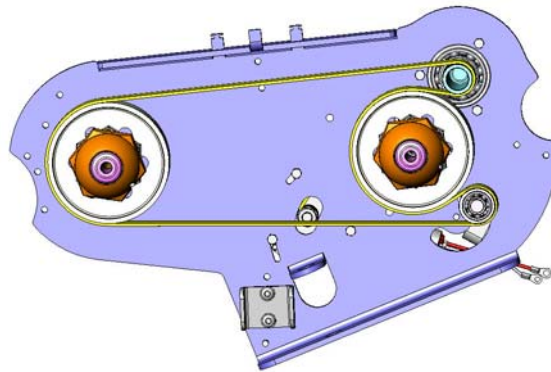
Picture 84: Clamping piece 1650

- Turn the clamping piece with a screw driver to release the tension of the brush belt (07/121).
- Remove the brush belt.



## 5.8 Brush drive 1650

### 5.8.6 Mounting of brush belt 1650

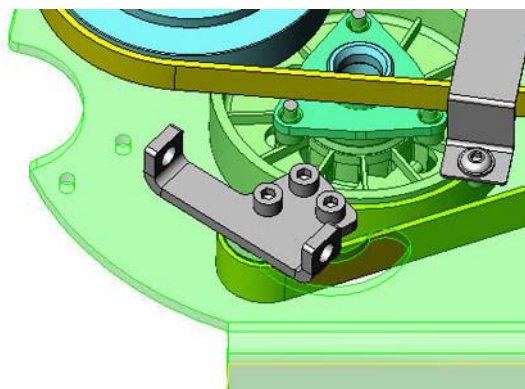


Picture 85: Brush belt mounting 1650

- Position the brush belt carefully.
- Turn the clamping piece with a screw driver to tension the brush belt.
- Position the fixation screw and tighten the center screw of the clamping piece.

#### Adjustment

*Turn the coupling hubs (07/129) by hand in opposite direction to ensure that the belt is correctly mounted and stays in the middle of the pulley.*



Picture 86: Adjustment brush drive 1650

- Position the protective cover onto the brush unit.
- Position and tighten the 4 screws of the protective cover.

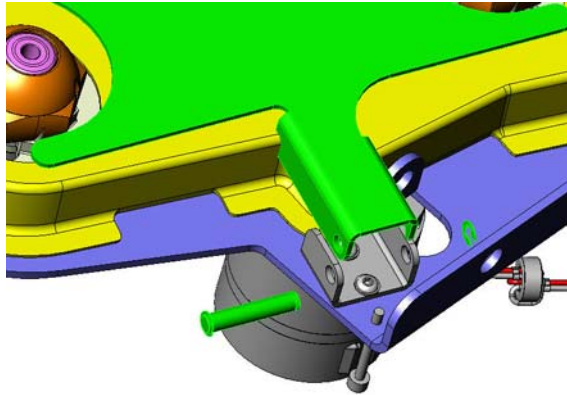
05.68.14 brush drive – brush belt – 1650B\_V1.00.fm



**⚠ CAUTION**

*Ensure that the brush belt does not touch the cover.*

- Position the decoupling bow.
- Mount the axle and position the circlip.



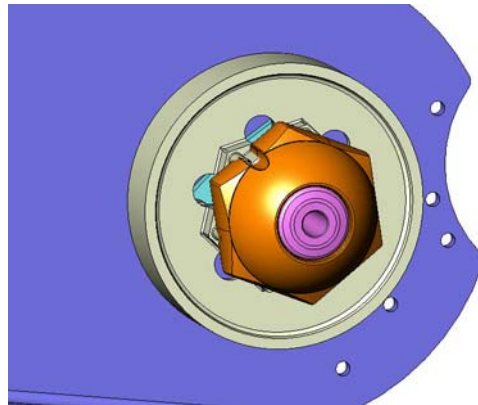
Picture 87: Decoupling bow 1650

- Mount the tension springs of the decoupling bow.
- Complete assembling according to chapter MOUNTING OF BRUSH DRIVE 1650 OLD SETUP or NEW SETUP.

05.68.14 brush drive – brush belt – 1650B\_V1.00.fm

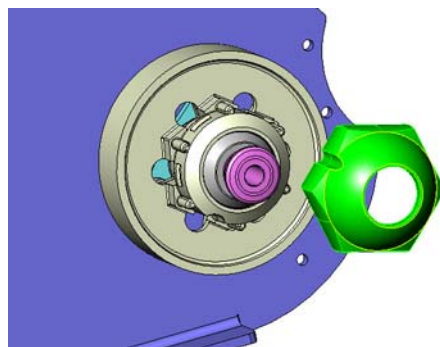
## 5.8 Brush drive 1650

### 5.8.7 Removing of brush pulley 1650



Picture 88: Brush pulley 1650

- Remove the brush drive according to chapter REMOVING OF BRUSH DRIVE 1650 OLD SETUP or NEW SETUP.
- Remove the brush belt according to chapter REMOVING OF BRUSH BELT 1650.
- Remove the brush coupling (07/129) carefully with a screw driver.



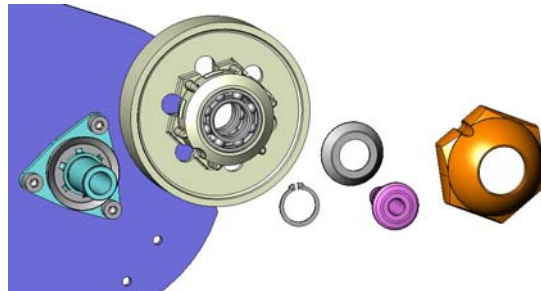
Picture 89: Brush pulley removing 1650

- Remove the centre plug (07/131) and the sealing ring (07/126).
- Remove the retaining ring (07/127).
- Pull off the pulley (07/124 or 152) from the support (07/125).

05.68.34 brush drive – pulley – 1650B\_V1.00.fm

## 5.8 Brush drive 1650

### 5.8.8 Mounting of brush pulley 1650



Picture 90: Brush pulley mounting 1650

- Mount the pulley onto the axle.

#### Service

*Apply lubricant (07/160) on the pulley (07/124 or 152), the support (07/125) and sealing ring (07/140).*

- Position the retaining ring.
- Mount the sealing ring and the centre plug.

#### Service

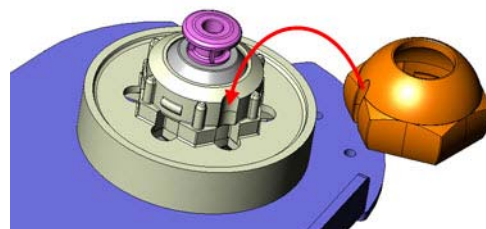
*Apply lubricant (07/160) onto the sealing ring (07/126).*

- Mount the brush coupling.

#### **CAUTION**

*The brush coupling is coded and has to match to the pulley.*

*Use a wooden piece and a hammer to mount the brush coupling onto the pulley.*

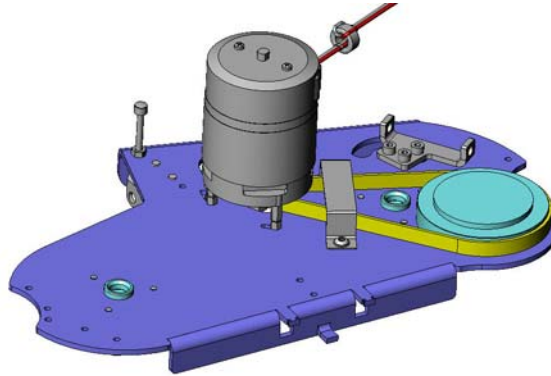


Picture 91: Brush pulley code 1650

- Complete assembling according to chapter MOUNTING OF BRUSH BELT 1650.
- Complete assembling according to chapter MOUNTING OF BRUSH DRIVE 1650 OLD SETUP or NEW SETUP.

## 5.8 Brush drive 1650

### 5.8.9 Removing of motor & motor belt 1650



Picture 92: Motor belt 1650

- Remove the brush drive according to chapter REMOVING OF BRUSH DRIVE 1650 OLD SETUP or NEW SETUP.
- Remove the protective cover according to chapter REMOVING OF BRUSH BELT 1650.
- Remove the three screws (11/124) and the washers (11/123) from the brush base plate (07/120).

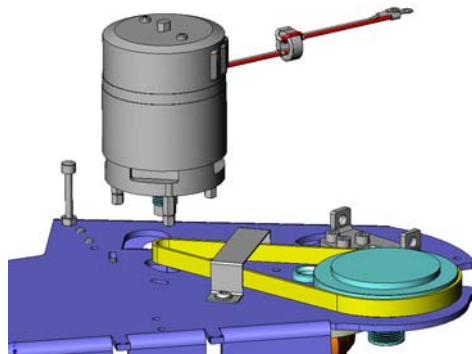


Picture 93: Motor belt removing 1650

- Remove the motor (11/120).
- Remove the motor belt (07/113).

## 5.8 Brush drive 1650

### 5.8.10 Mounting of motor & motor belt 1650



Picture 94: Motor belt mounting 1650

- Position the new motor/motor belt.

#### **CAUTION**

*Take care that the belt is positioned correctly.*

- Position the three screws.

#### Service

*Apply adhesive locking (11/127) onto the screws (11/124).*

- To tension the motor belt move the motor in position.

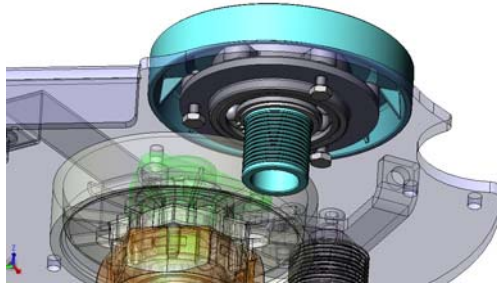


Picture 95: Motor belt adjustment 1650

- Tighten all screws.
- Complete assembling according to chapter MOUNTING OF BRUSH BELT 1650.
- Complete assembling according to chapter MOUNTING OF BRUSH DRIVE 1650 OLD SETUP or NEW SETUP.

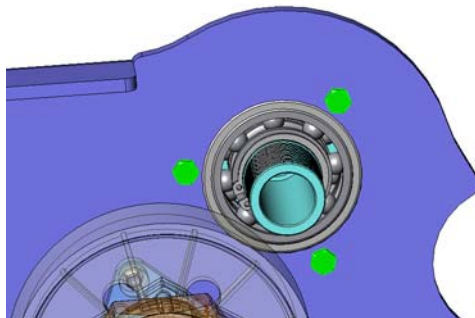
## 5.8 Brush drive 1650

### 5.8.11 Removing of intermediate wheel 1650



Picture 96: Intermediate wheel 1650

- Remove the brush drive according to chapter REMOVING OF BRUSH DRIVE 1650 OLD SETUP or NEW SETUP.
- Remove the brush belt according to chapter REMOVING OF BRUSH BELT 1650.
- Remove the motor belt according to chapter REMOVING OF MOTOR & MOTOR BELT 1650.
- Remove the 3 screws (07/117) for the intermediate wheel (07/153).

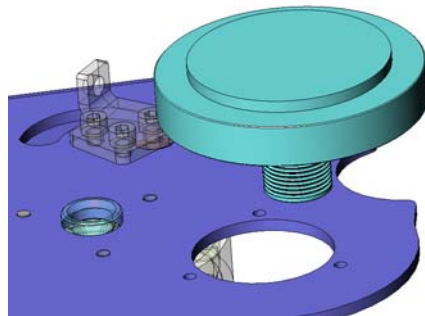


Picture 97: Intermediate wheel removing 1650

- Remove the complete intermediate wheel.

## 5.8 Brush drive 1650

### 5.8.12 Mounting of intermediate wheel 1650



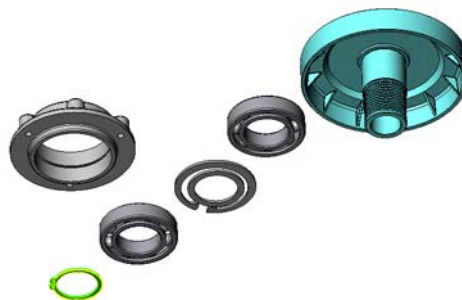
Picture 98: Intermediate wheel mounting 1650

- Mount the new intermediate wheel.
- Position and tighten the three screws.
- Complete assembling according to chapter MOUNTING OF MOTOR & MOTOR BELT 1650.
- Complete assembling according to chapter MOUNTING OF BRUSH BELT 1650.
- Complete assembling according to chapter MOUNTING OF BRUSH DRIVE 1650 OLD SETUP or NEW SETUP.

#### Remarks

*It is possible to get the intermediate wheel as an assembly and as single parts. For details refer to the spare parts list.*

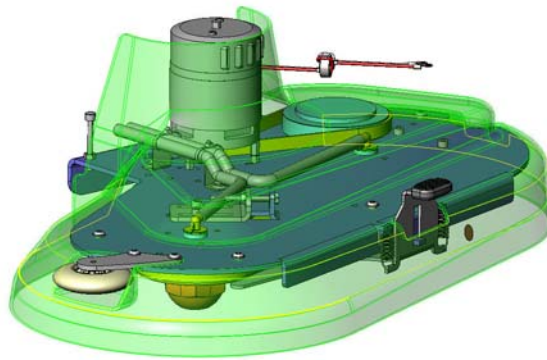
*We recommend to exchange the whole assembly.*



Picture 99: Intermediate wheel details 1650

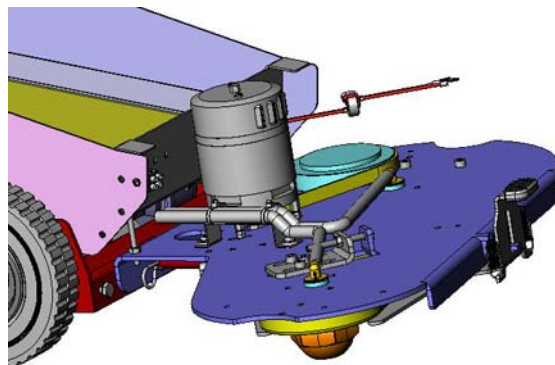
## 5.9 Brush drive 1850

### 5.9.1 Removing of brush drive 1850 old setup



Picture 100: Brush drive 1850 old setup

- Unlock the battery compartment by removing screw (05/127) of the locking system.
- Open battery compartment.
- Remove the two screws (08/126) for the fixation of the deflection wheel (08/103).
- Remove the holder (08/101) of the deflection wheel.
- Unscrew the 4 screws (08/126) for the brush housing (08/106).



Picture 101: Brush drive mounting 1850 old setup

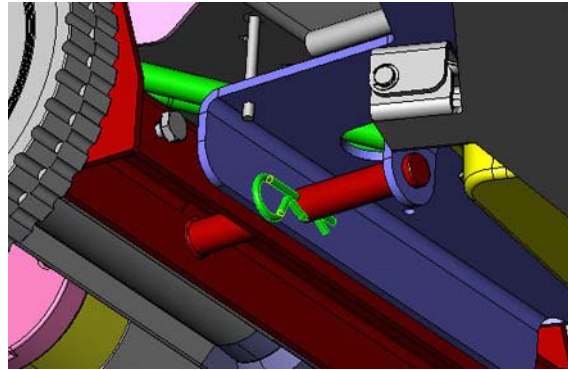
- Remove the brush housing.
- Disconnect brush motor wires from connection block (05/139).
- Remove the cable ties (08/143) to release the hoses.
- Remove the two angle nipples (08/148).
- Pull the stop pin (06/119) off to one side.
- Remove the whole brush unit by pulling it off from the brush lever (06/117).

05.66.14 brush drive – brush drive unit old setup – 1850B\_V1.00.fm



## 5.9 Brush drive 1850

### 5.9.2 Mounting of brush drive 1850 old setup

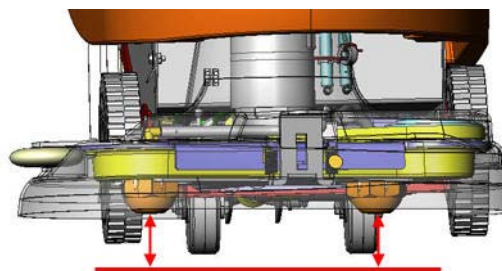


Picture 102: Brush drive stop pin 1850

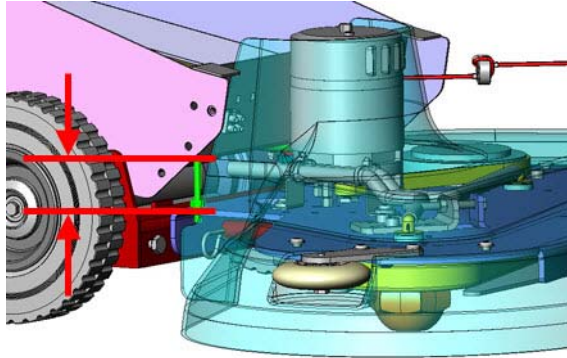
- Position the brush drive onto the brush lever.
- Push the stop pin into the correct position.
- Insert the two angle nipples into the brush drive.
- Place the cable ties onto the holder (08/144).
- Connect the wires to the connection block.
- Place the brush housing and mount the screws.
- Place the holder for the deflection wheel and mount the screws.
- Close the battery compartment.
- Lock the battery compartment with the screw of the locking system.

#### Adjustment

*Adjust the socket head cap screw (08/146) to ensure that the brush drive is positioned horizontal (coupling hub compared to ground).*



Picture 103: Adjustment brush drive 1650



Picture 104: Adjustment brush drive screw 1850 old setup

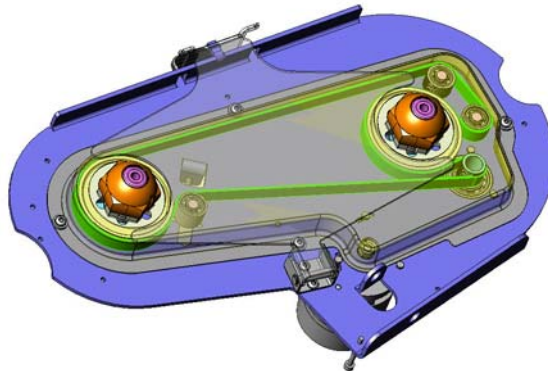
**⚠ CAUTION**

*The upper explained adjustment is only for transportation position. During cleaning (brush unit lowered) it has no affect.*

05.66.14 brush drive – brush drive unit old setup – 1850B\_V1.00.fm

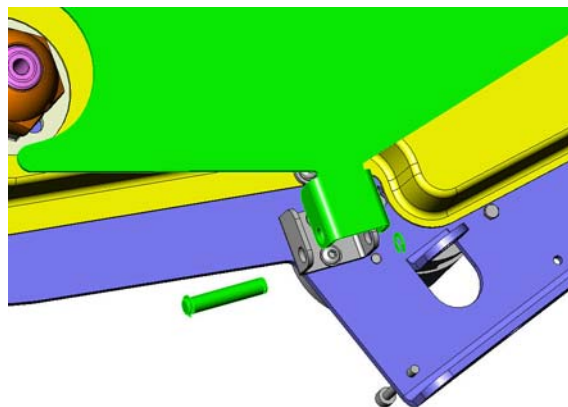
## 5.9 Brush drive 1850

### 5.9.3 Removing of brush belt 1850 old setup



Picture 105: Brush belt 1850 old setup

- Remove the brush drive according to chapter REMOVING OF BRUSH DRIVE 1850 OLD SETUP.
- Remove the two tension springs (08/152) of decoupling bow (08/138).
- Remove one circlip (08/141) from the axle (08/140).
- Pull out the axle and remove the decoupling bow.



Picture 106: Decoupling bow 1850 old setup

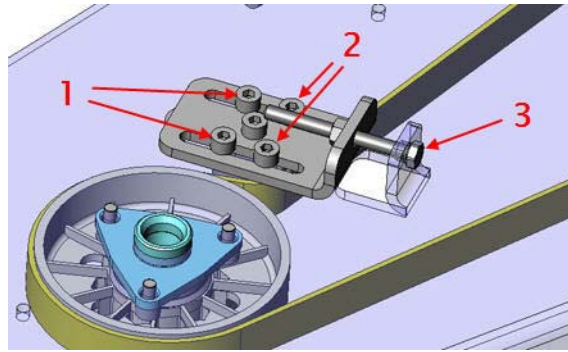
- Remove the 4 screws (08/126) and the 4 washers (08/142) of the protective cover (08/137).
- Remove the protective cover.

05.68.15 brush drive – brush belt old setup – 1850B\_V1.00.fm

**Remarks**

*Further numbering refers to following picture.*

- 1 Loosen the two fixation screws (08/124) in the slots of the angle.
- 2 Remove the two fixation screws (08/124) in the slots of the angle.
- 3 Untighten the screw (08/151) to release the tension of the brush belt (08/125).

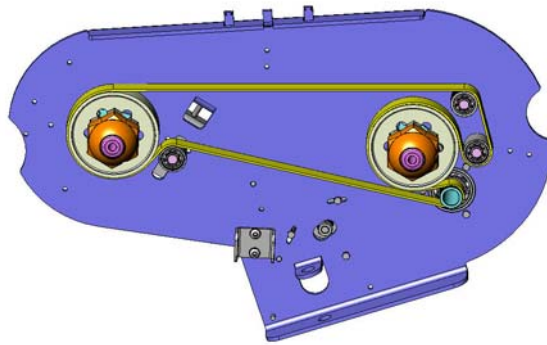


Picture 107: Angle 1850

- Remove the brush belt.

## 5.9 Brush drive 1850

### 5.9.4 Mounting of brush belt 1850 old setup

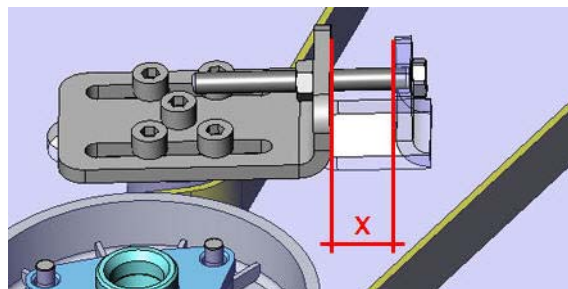


Picture 108: Brush belt mounting 1850 old setup

- Position the brush belt carefully.
- Tighten the screw of the angle to tension the brush belt.

#### Adjustment

*Position the angle as a pre adjustment to value  $x=20\text{mm}$  according to picture.*



Picture 109: Angle adjustment 1850 old setup

- Tighten the fixation screws.

#### Adjustment

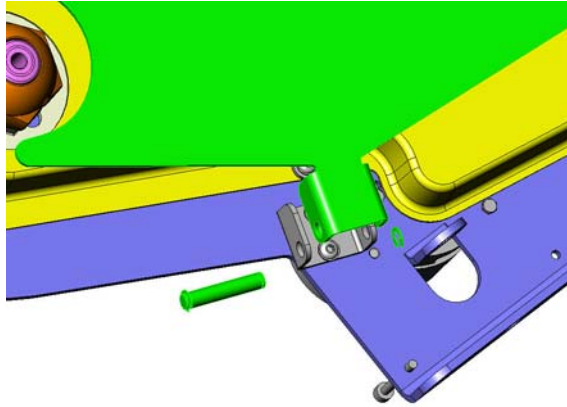
*Turn the coupling hubs (08/131) by hand the opposite direction to ensure that the belt is correctly mounted and stays in the middle of the pulley.*

- Position the protective cover onto the brush unit.
- Position and tighten the 4 screws and washers of the protective cover.

**⚠ CAUTION**

*Ensure that the brush belt does not touch the cover.*

- Position the decoupling bow.
- Mount the axle and position the circlip.



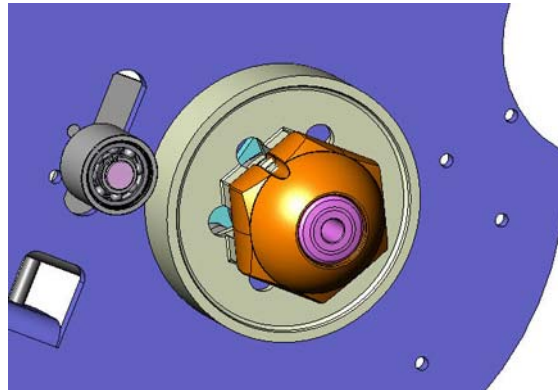
Picture 110: Decoupling bow 1850 old setup

- Mount the tension springs of the decoupling bow.
- Complete assembling according to chapter MOUNTING OF BRUSH DRIVE 1850 OLD SETUP.

05.68.15 brush drive – brush belt old setup – 1850B\_V1.00.fm

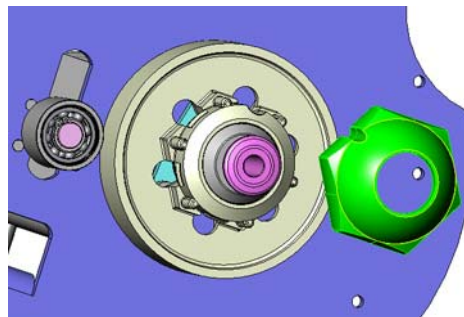
## 5.9 Brush drive 1850

### 5.9.5 Removing of brush pulley 1850 old setup



Picture 111: Brush pulley 1850 old setup

- Remove the brush drive according to chapter REMOVING OF BRUSH DRIVE 1850 OLD SETUP.
- Remove the brush belt according to chapter REMOVING OF BRUSH BELT 1850 OLD SETUP.
- Remove the brush coupling (08/131) carefully with a screw driver.



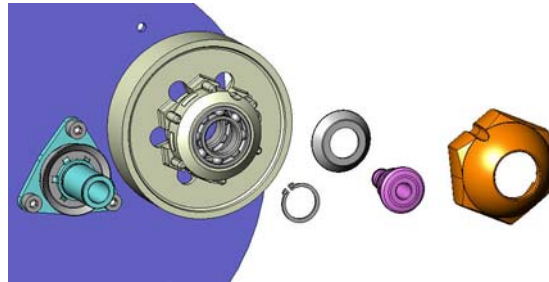
Picture 112: Brush pulley removing 1850 old setup

- Remove the centre plug (08/132) and the sealing ring (08/130).
- Remove the retaining ring (08/129).
- Pull off the pulley (08/128) from the support (08/123).

05.68.35 brush drive – pulley old setup – 1850B\_V1.00.fm

## 5.9 Brush drive 1850

### 5.9.6 Mounting of brush pulley 1850 old setup



Picture 113: Brush pulley mounting 1850 old setup

- Mount the pulley onto the axle.

#### Service

*Apply lubricant (07/160) on the pulley (08/128), the support (08/123) and sealing ring (08/127).*

- Position the retaining ring.
- Mount the sealing ring and the centre plug.

#### Service

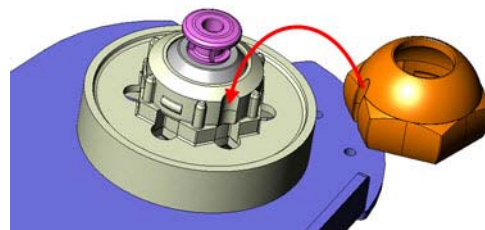
*Apply lubricant (07/160) onto the sealing ring (08/130).*

- Mount the brush coupling.

#### **CAUTION**

*The brush coupling is coded and has to match to the pulley.*

*Use a wooden piece and a hammer to mount the brush coupling onto the pulley.*



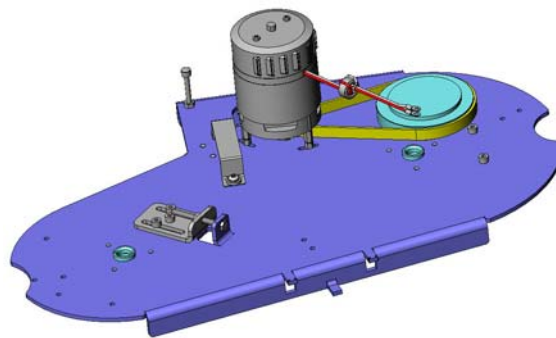
Picture 114: Brush pulley code 1650

- Complete assembling according to chapter MOUNTING OF BRUSH BELT 1850 OLD SETUP.
- Complete assembling according to chapter MOUNTING OF BRUSH DRIVE 1850 OLD SETUP.



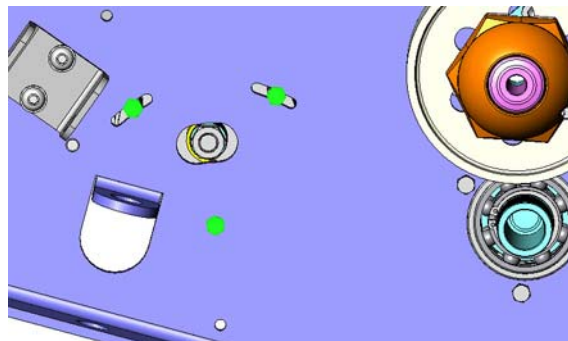
## 5.9 Brush drive 1850

### 5.9.7 Removing of motor & motor belt 1850 old setup



Picture 115: Motor belt 1850 old setup

- Remove the brush drive according to chapter REMOVING OF BRUSH DRIVE 1850 OLD SETUP.
- Remove the protective cover according to chapter REMOVING OF BRUSH BELT 1850 OLD SETUP.
- Remove the three screws (08/109) from the brush base plate (08/122).

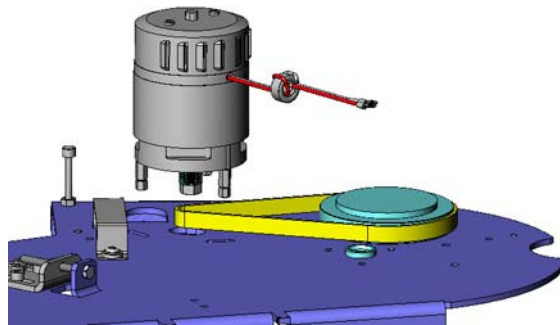


Picture 116: Motor belt removing 1850 old setup

- Remove the motor (08/107).
- Remove the motor belt (08/113).

## 5.9 Brush drive 1850

### 5.9.8 Mounting of motor & motor belt 1850 old setup



Picture 117: Motor belt mounting 1850 old setup

- Position the new motor/motor belt.

#### **CAUTION**

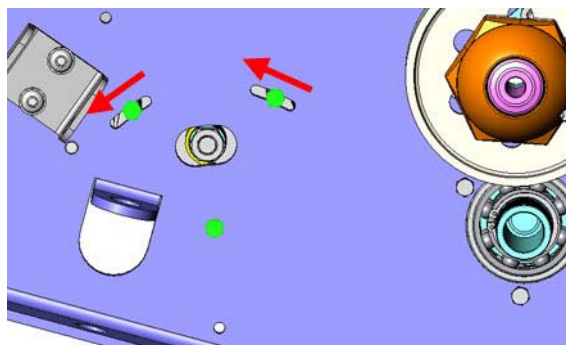
*Take care that the belt is positioned correctly.*

- Position the three screws.

#### Service

*Apply adhesive locking (08/110) onto the screws (08/109).*

- To tension the motor belt move the motor in position.

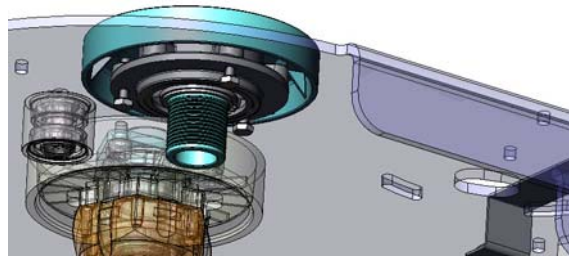


Picture 118: Motor belt adjustment 1850 old setup

- Tighten all screws.
- Complete assembling according to chapter MOUNTING OF BRUSH BELT 1850 OLD SETUP.
- Complete assembling according to chapter MOUNTING OF BRUSH DRIVE 1850 OLD SETUP.

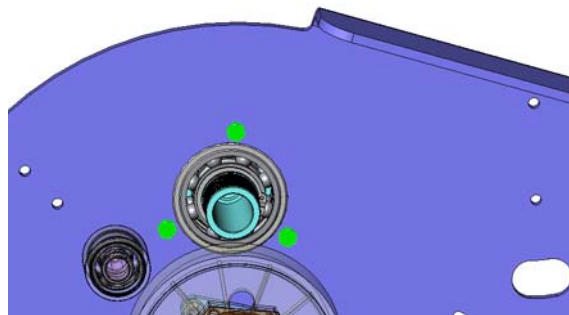
## 5.9 Brush drive 1850

### 5.9.9 Removing of intermediate wheel 1850 old setup



Picture 119: Intermediate wheel 1850 old setup

- Remove the brush drive according to chapter REMOVING OF BRUSH DRIVE 1850 OLD SETUP.
- Remove the brush belt according to chapter REMOVING OF BRUSH BELT 1850 OLD SETUP.
- Remove the motor belt according to chapter REMOVING OF MOTOR & MOTOR BELT 1850 OLD SETUP.
- Remove the three screws (08/121) from the intermediate wheel set (08/154).

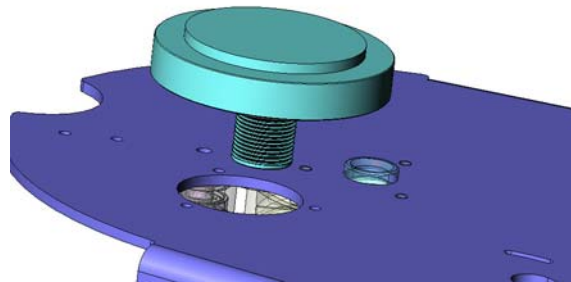


Picture 120: Intermediate wheel removing 1850 old setup

- Remove the complete intermediate wheel.

## 5.9 Brush drive 1850

### 5.9.10 Mounting of intermediate wheel 1850 old setup



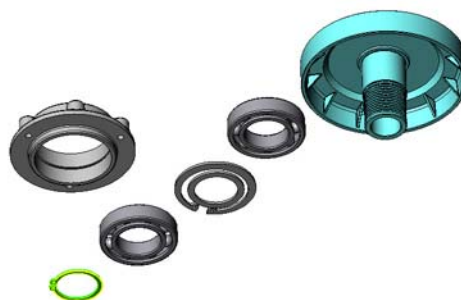
Picture 121: Intermediate wheel mounting 1850 old setup

- Position the new intermediate wheel.
- Position and tighten the three screws.
- Complete assembling according to chapter MOUNTING OF MOTOR & MOTOR BELT 1850 OLD SETUP.
- Complete assembling according to chapter MOUNTING OF BRUSH BELT 1850 OLD SETUP.
- Complete assembling according to chapter MOUNTING OF BRUSH DRIVE 1850 OLD SETUP.

#### Remarks

*It is possible to get the intermediate wheel as an assembly and as single parts. For details refer to the spare parts list.*

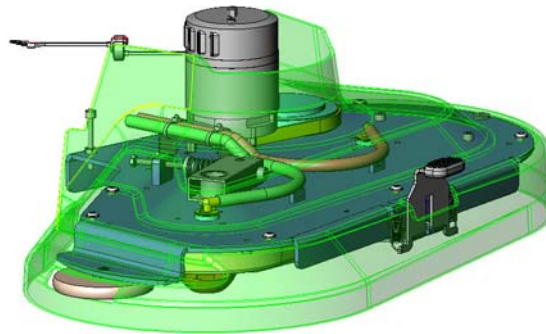
*We recommend to exchange the whole assembly.*



Picture 122: Intermediate wheel details 1850

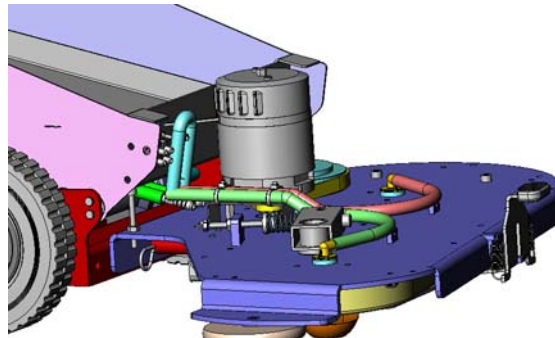
## 5.9 Brush drive 1850

### 5.9.11 Removing of brush drive 1850 new setup



Picture 123: Brush drive 1850 new setup

- Unlock the battery compartment by removing screw (05/127) of the locking system.
- Open battery compartment.
- Unscrew the 6 screws (08/126) for the brush housing (08/101).



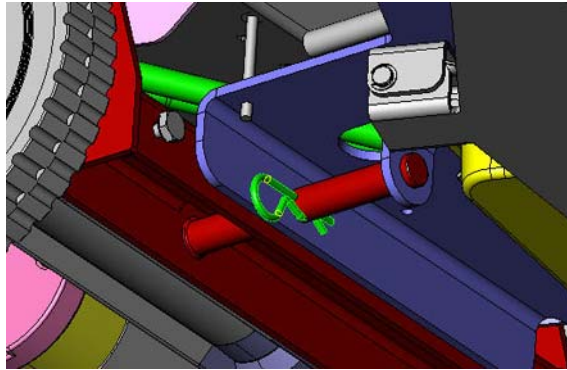
Picture 124: Brush drive mounting 1850 new setup

- Remove the brush housing.
- Disconnect brush motor wires from connection block (05/139).
- Remove the cable ties (08/108) to release the hoses.
- Remove the two angle nipples (08/110).
- Pull the stop pin (06/119) off to one side.
- Remove the whole brush unit by pulling it off from the brush lever (06/117).

05.66.15 brush drive – brush drive unit new setup – 1850B\_V1.00.fm

## 5.9 Brush drive 1850

### 5.9.12 Mounting of brush drive 1850 new setup

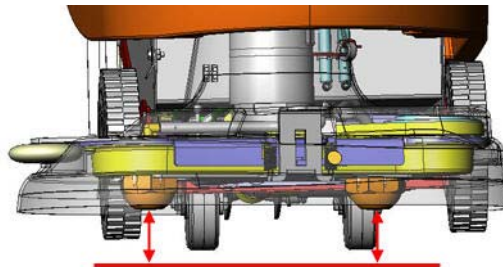


Picture 125: Brush drive stop pin 1850

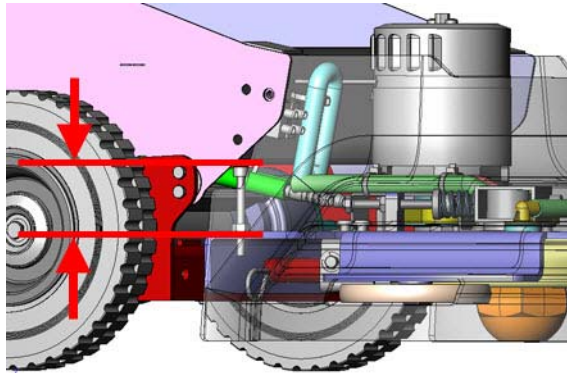
- Position the brush drive onto the brush lever.
- Push the stop pin into the correct position.
- Insert the two angle nipples into the brush drive.
- Place the cable ties onto the holder (08/109).
- Connect the wires to the connection block.
- Place the brush housing and mount the screws.
- Place the holder for the deflection wheel and mount the screws.
- Close the battery compartement.
- Lock the battery compartment with the screw of the locking system.

#### Adjustment

*Adjust the socket head cap screw (08/106) to ensure that the brush drive is positioned horizontal (coupling hub compared to ground).*



Picture 126: Adjustment brush drive 1650



Picture 127: Adjustment brush drive screw 1850 new setup

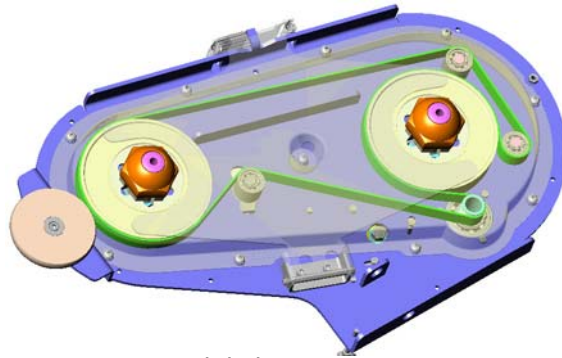
**⚠ CAUTION**

*The upper explained adjustment is only for transportation position. During cleaning (brush unit lowered) it has no affect.*

05.66.15 brush drive – brush drive unit new setup – 1850B\_V1.00.fm

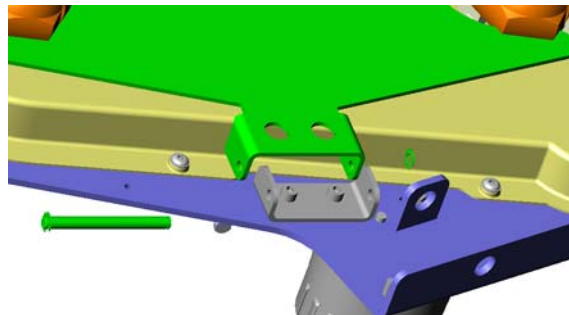
## 5.9 Brush drive 1850

### 5.9.13 Removing of brush belt 1850 new setup



Picture 128: Brush belt 1850 new setup

- Remove the brush drive according to chapter REMOVING OF BRUSH DRIVE 1850 NEW SETUP.
- Remove the two tension springs (08/140) of decoupling bow (08/138).
- Remove one circlip (08/112) from the axle (08/111).
- Pull out the axle and remove the decoupling bow.



Picture 129: Decoupling bow 1850 new setup

- Remove the 10 screws (08/126) of the cover (08/137).
- Remove the cover.

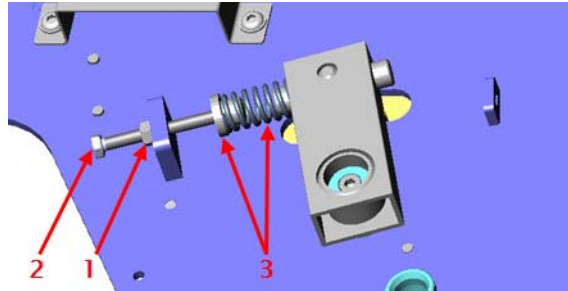
05.68.16 brush drive – brush belt new setup – 1850B\_V1.00.fm



**Remarks**

*Further numbering refers to following picture.*

- 1 Loosen the hexagon nut (11/112) at the support.
- 2 Loosen the screw (11/111) until the tension of the tension spring (11/114) is released.
- 3 Remove the spring and bolt (11/113).

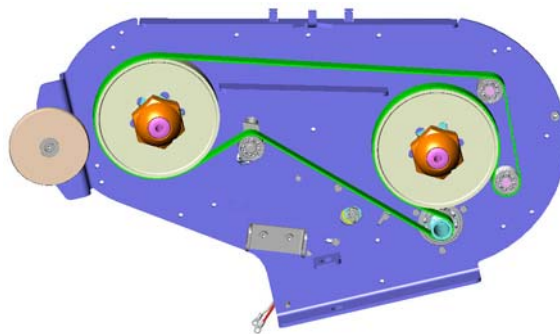


Picture 130: Lever 1850

- Remove the brush belt (08/125).

## 5.9 Brush drive 1850

### 5.9.14 Mounting of brush belt 1850 new setup

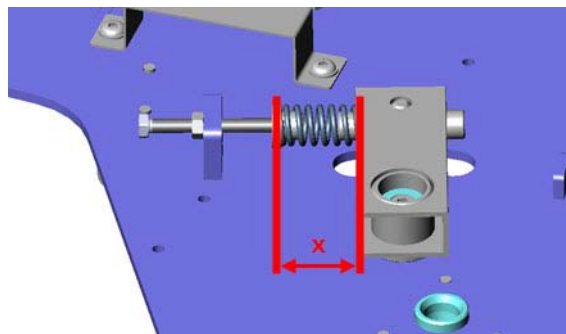


Picture 131: Brush belt mounting 1850 new setup

- Position the brush belt carefully.
- Tighten the screw of the lever to tension the brush belt.

#### Adjustment

*Tension the lever until the distance of the spring has the value  $x=30\text{mm}$  according to picture.*



Picture 132: Lever adjustment 1850 new setup

- Tighten the hexagon nut.

#### Adjustment

*Turn the brush coupling (08/131) by hand the opposite direction to ensure that the belt is correctly mounted and stays in the middle of the pulleys.*

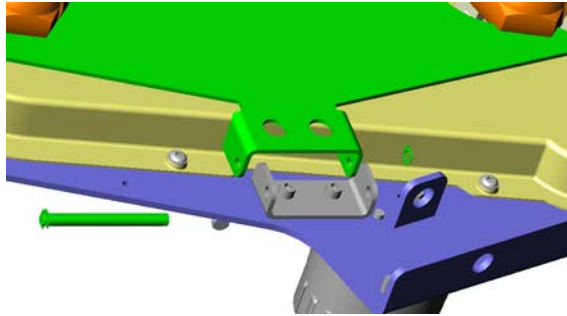
- Position the cover onto the brush unit.
- Position and tighten the 10 screws of the cover.

05.68.16 brush drive – brush belt new setup – 1850B\_V1.00.fm

**⚠ CAUTION**

*Ensure that the brush belt does not touch the cover.*

- Position the decoupling bow.
- Mount the axle and position the circlip.



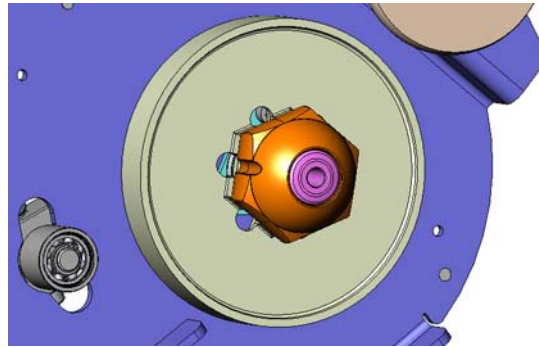
Picture 133: Decoupling bow 1850 new setup

- Mount the tension springs of the decoupling bow.
- Complete assembling according to chapter MOUNTING OF BRUSH DRIVE 1850 NEW SETUP.

05.68.16 brush drive – brush belt new setup – 1850B\_V1.00.fm

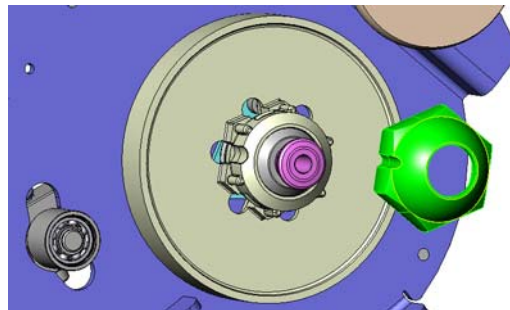
## 5.9 Brush drive 1850

### 5.9.15 Removing of brush pulley 1850 new setup



Picture 134: Brush pulley 1850 new setup

- Remove the brush drive according to chapter REMOVING OF BRUSH DRIVE 1850 NEW SETUP.
- Remove the brush belt according to chapter REMOVING OF BRUSH BELT 1850 NEW SETUP.
- Remove the brush coupling (08/131) carefully with a screw driver.

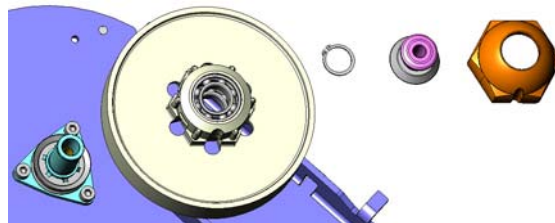


Picture 135: Brush pulley removing 1850 new setup

- Remove the centre plug (08/132) and the sealing ring (08/130).
- Remove the retaining ring (08/129).
- Pull off the pulley (08/128) from the support (08/123).

## 5.9 Brush drive 1850

### 5.9.16 Mounting of brush pulley 1850 new setup



Picture 136: Brush pulley mounting 1850 new setup

- Mount the pulley onto the axle.

#### Service

*Apply lubricant (07/160) on the pulley (08/128), the support (08/123) and sealing ring (08/127).*

- Position the retaining ring.
- Mount the sealing ring and the centre plug.

#### Service

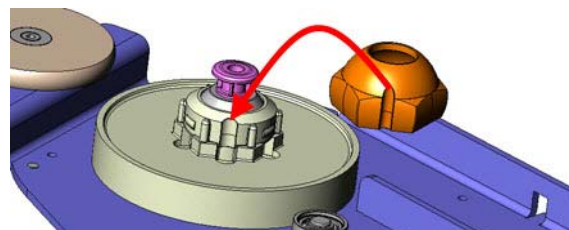
*Apply lubricant (07/160) onto the sealing ring (08/130).*

- Mount the brush coupling.

#### **CAUTION**

*The brush coupling is coded and has to match to the pulley.*

*Use a wooden piece and a hammer to mount the brush coupling onto the pulley.*

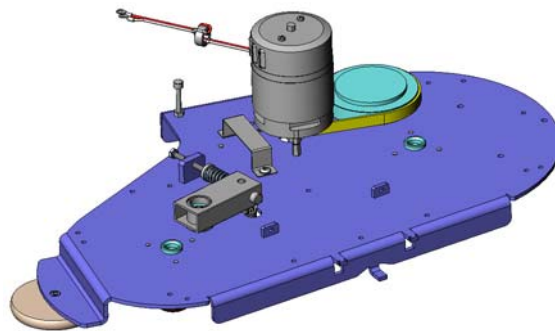


Picture 137: Brush pulley code 1850 new setup

- Complete assembling according to chapter MOUNTING OF BRUSH BELT 1850 NEW SETUP.
- Complete assembling according to chapter MOUNTING OF BRUSH DRIVE 1850 NEW SETUP.

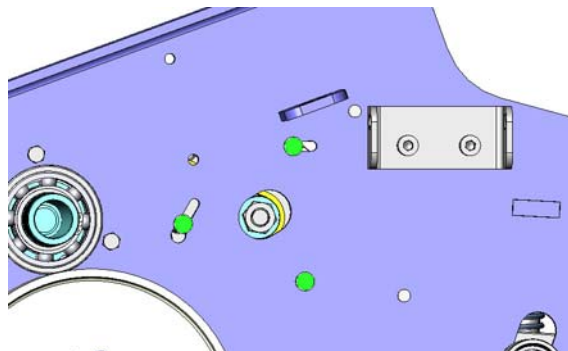
## 5.9 Brush drive 1850

### 5.9.17 Removing of motor & motor belt 1850 new setup



Picture 138: Motor belt 1850 new setup

- Remove the brush drive according to chapter REMOVING OF BRUSH DRIVE 1850 NEW SETUP.
- Remove the protective cover according to chapter REMOVING OF BRUSH BELT 1850 NEW SETUP.
- Remove the 3 screws (11/124) and washers (11/123) from the brush base plate (08/122).

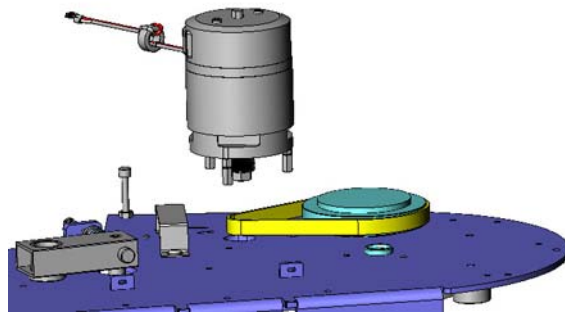


Picture 139: Motor belt removing 1850 new setup

- Remove the motor (11/120).
- Remove the motor belt (08/113).

## 5.9 Brush drive 1850

### 5.9.18 Mounting of motor & motor belt 1850 new setup



Picture 140: Motor belt mounting 1850 new setup

- Position the new motor/motor belt.

#### **CAUTION**

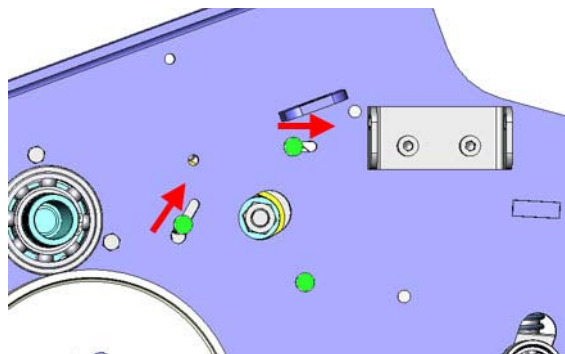
*Take care that the belt is positioned correctly.*

- Position the 3 screws and washers.

#### Service

*Apply adhesive locking (11/127) onto the screws (11/124).*

- To tension the motor belt move the motor in position.

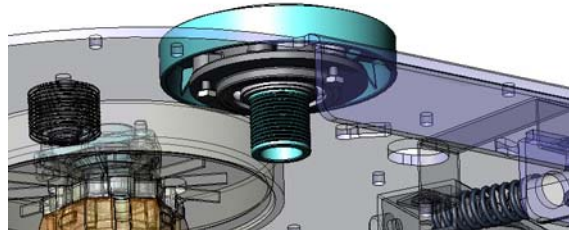


Picture 141: Motor belt adjustment 1850 new setup

- Tighten all screws.
- Complete assembling according to chapter MOUNTING OF BRUSH BELT 1850 NEW SETUP.
- Complete assembling according to chapter MOUNTING OF BRUSH DRIVE 1850 NEW SETUP.

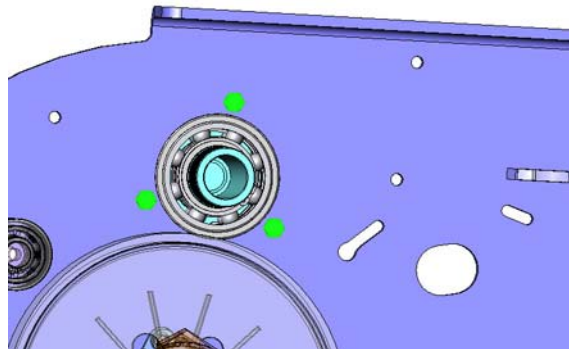
## 5.9 Brush drive 1850

### 5.9.19 Removing of intermediate wheel 1850 new setup



Picture 142: Intermediate wheel 1850 new setup

- Remove the brush drive according to chapter REMOVING OF BRUSH DRIVE 1850 NEW SETUP.
- Remove the brush belt according to chapter REMOVING OF BRUSH BELT 1850 NEW SETUP.
- Remove the motor belt according to chapter REMOVING OF MOTOR & MOTOR BELT 1850 NEW SETUP.
- Remove the three screws (08/121) from the intermediate wheel set (08/142).



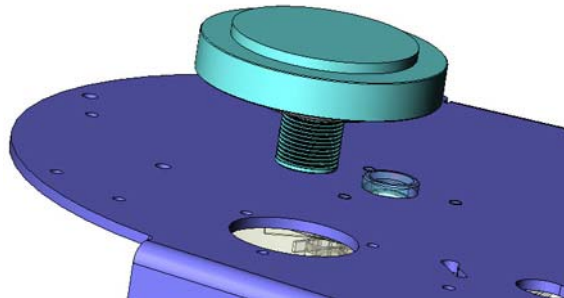
Picture 143: Intermediate wheel removing 1850 new setup

- Remove the complete intermediate wheel.



## 5.9 Brush drive 1850

### 5.9.20 Mounting of intermediate wheel 1850 new setup



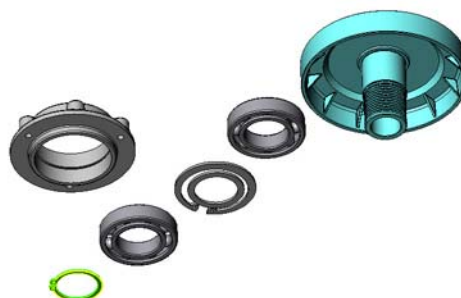
Picture 144: Intermediate wheel mounting 1850 new setup

- Position the new intermediate wheel.
- Position and tighten the three screws.
- Complete assembling according to chapter MOUNTING OF MOTOR & MOTOR BELT 1850 NEW SETUP.
- Complete assembling according to chapter MOUNTING OF BRUSH BELT 1850 NEW SETUP.
- Complete assembling according to chapter MOUNTING OF BRUSH DRIVE 1850 NEW SETUP.

#### Remarks

*It is possible to get the intermediate wheel as an assembly and as single parts. For details refer to the spare parts list.*

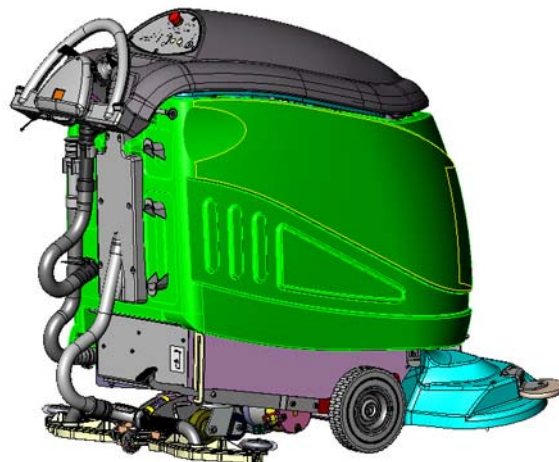
*We recommend to exchange the whole assembly.*



Picture 145: Intermediate wheel details 1850

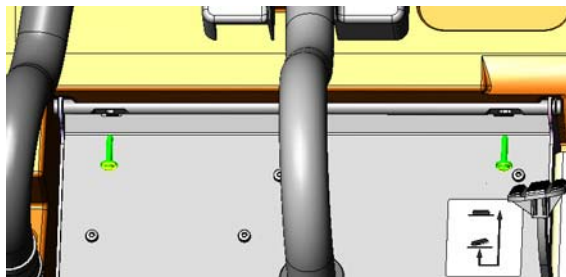
## 5.10 Tank

### 5.10.1 Removing of tank



Picture 146: Tank

- Remove tank cover according to chapter REMOVING OF TANK COVER.
- Remove hose clamp (09/101) from the fresh water hose (09/102).
- Remove fresh water hose from tank body (05/101).
- Unlock battery compartment by removing screw (05/127) of locking system.
- Open battery compartment.
- Thread out wiring and hoses to the battery compartment.
- Close the battery compartment.

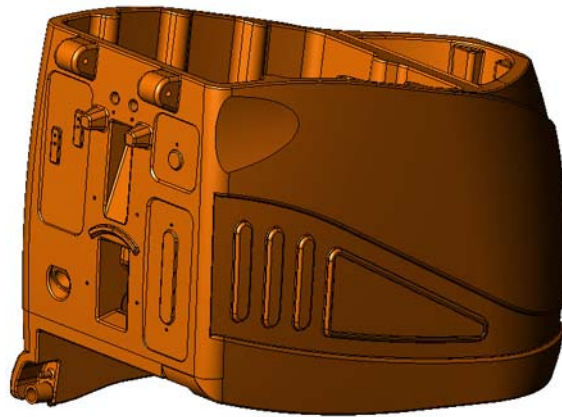


Picture 147: Tank axle

- Remove water tank fixation screws (05/110).
- Remove water tank from axle (05/108).
- Remove the existing parts from the tank and place them on the new one.

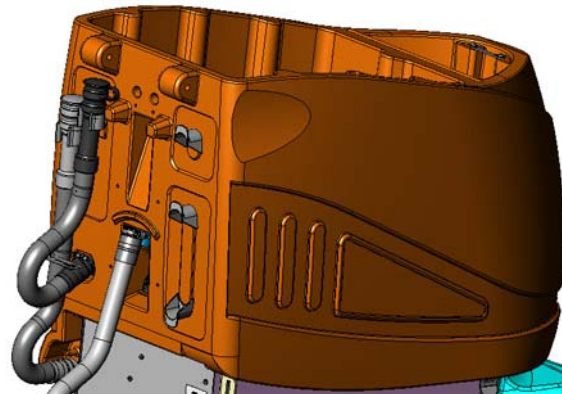
## 5.10 Tank

### 5.10.2 Mounting of tank



Picture 148: Tank single

- Position the new water tank on the axle.
- Fix the water tank onto the axle with the two screws.
- Open the battery compartment.
- Thread in cables from the battery compartment.
- Close battery compartment.
- Connect fresh water hose to the tank body.
- Mount the hose clamp.



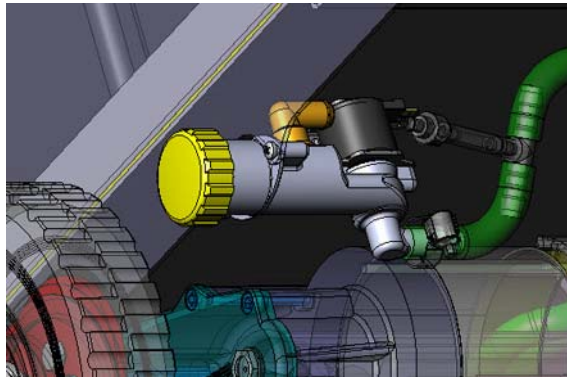
Picture 149: Tank mounting

- Complete assembling according to chapter MOUNTING OF TANK COVER.

05.70.13 tank – tank – 1650B\_1850B\_V1.00.fm

## 5.11 Tubes, valves, filters

### 5.11.1 Removing of filter 24V



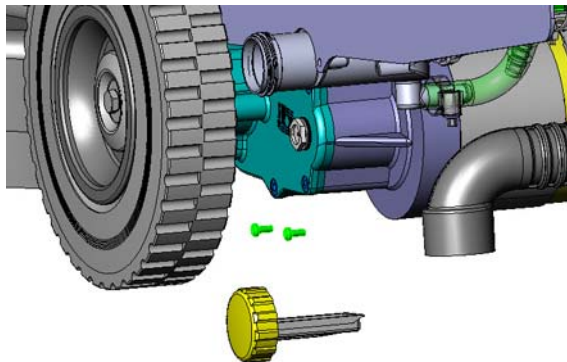
Picture 150: Filter 24V

- Remove the filter set (09/104) of filter 24V (09/103).

#### **CAUTION**

*Ensure that no water is in the fresh water system before you disconnect the hoses or remove the filter set.*

- Remove the two fixation screws (09/107) from the chassis (05/136).
- Thread out the filter 24V from the chassis.

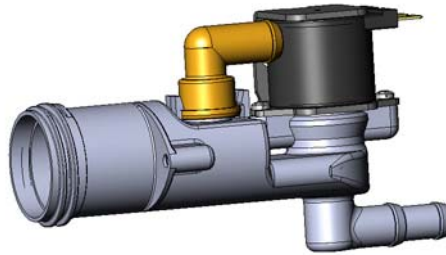


Picture 151: Filter 24V removing

- Remove the two hose clamps (09/101) from the fresh water hoses.
- Disconnect the fresh water hoses (09/102&108).
- Disconnect the wires from the coil.
- Remove the filter 24V.

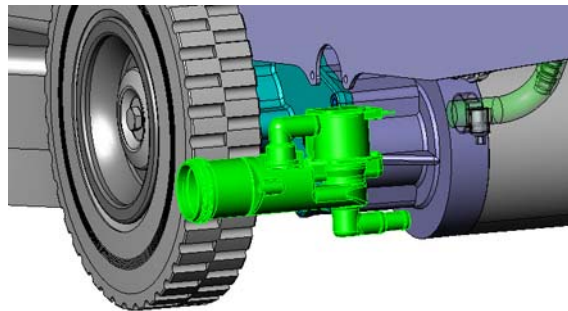
## 5.11 Tubes, valves, filters

### 5.11.2 Mounting of filter 24V



Picture 152: Filter 24V single

- Take a new filter 24V.
- Connect the wires to the coil.
- Connect the fresh water hoses to the filter 24V and mount the two clamps.



Picture 153: Filter 24V mounting

- Thread in the filter 24V on the chassis.
- Position the fixation screws and tighten them.
- Position the filter set on the filter 24V.

# Technical Manual



**swingo** 1650/1850

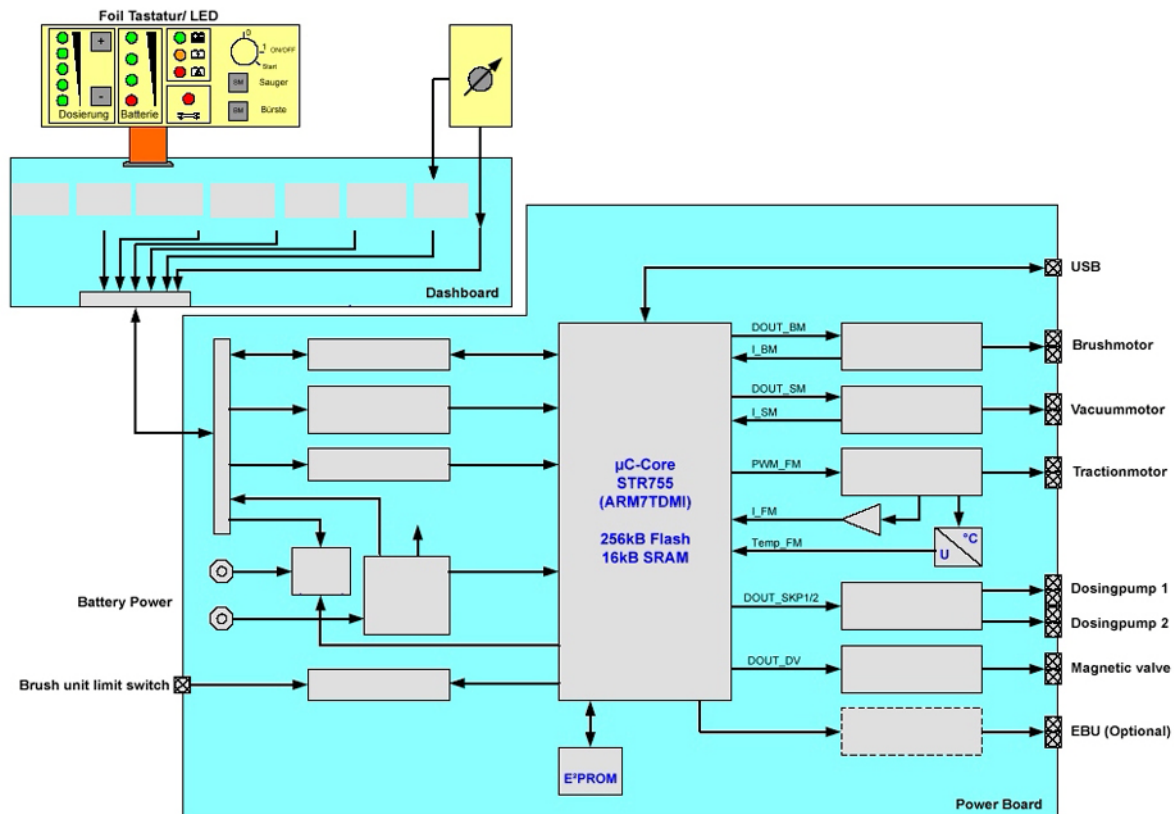
## 6 Electrical

## 6.1 System architect

### 6.1.1 General

- The firmware is memorised only on the power electronics.
- The dashboard visualises the states of the machine. It also functions as a connection between the power electronics and the devices (e.g. hall sensor, key switch and foil keyboard).
- Applying the correct torque where required is essential for a safe operation of the machine.
- ESD can harm the electronic boards and therefore reduce the life time of the machine. Use always an ESD bag to protect them.

### 6.1.2 System overview



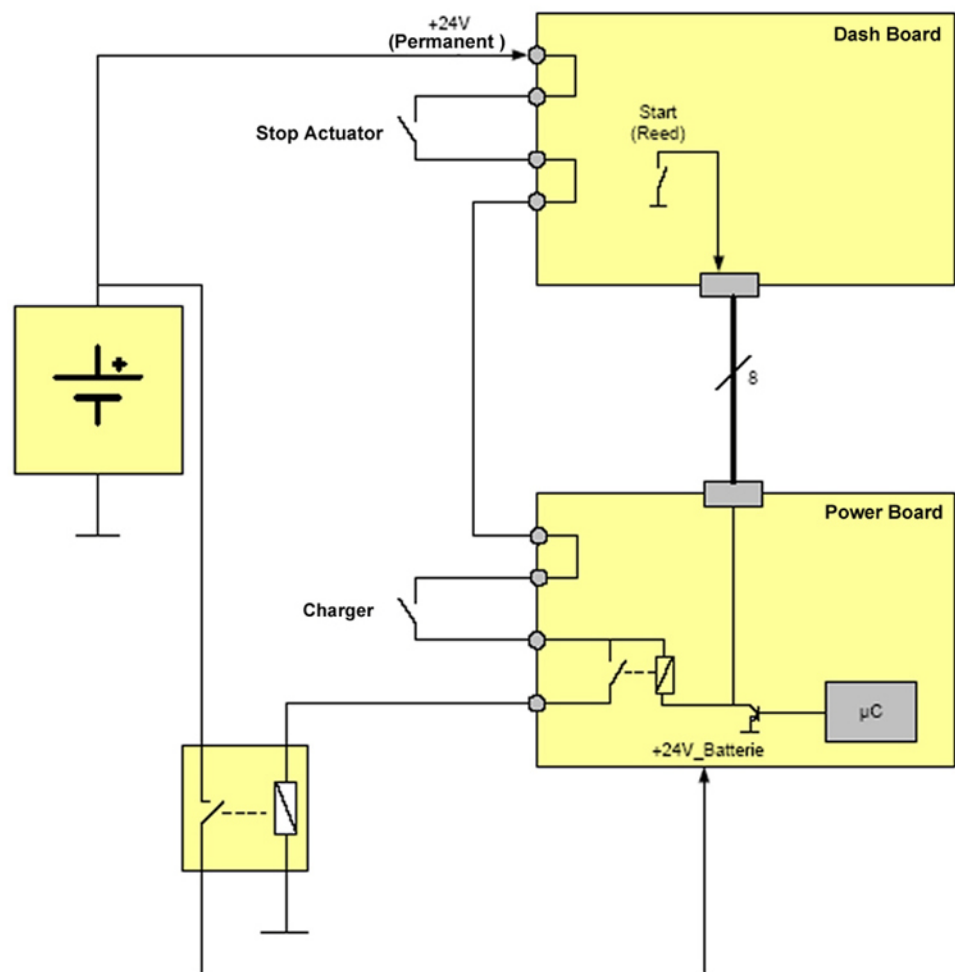
Picture 1: System overview

### 6.1.3 Start up/Self holding

The TASKI swingo 1650B/1850B has an emergency loop. This includes a separate power relay (05/122), which switches the complete power of the machine. In an emergency situation you shut down the machine by pressing the stop actuator (01/102).

The machine is switched ON by turning the key (10/113) to the „Start“ position, similar known as with cars. When the key switch is turned to the „Start“ position the magnet passes over a reed contact and feeds the power electronics with power. The power electronics get power and it enables the processor to start and go into the self holding. Afterwards the key falls back into the position „1“ and the magnet activates the hall sensor. The power electronics stays on as long it is:

- Not switched OFF by the key switch.
- The switch-off timer does not reach 5 minutes.
- The charger is not connected to main OR battery plug is not connected to charger jack housing (10/102).
- The stop actuator is pressed.



Picture 2: Start up/Self holding



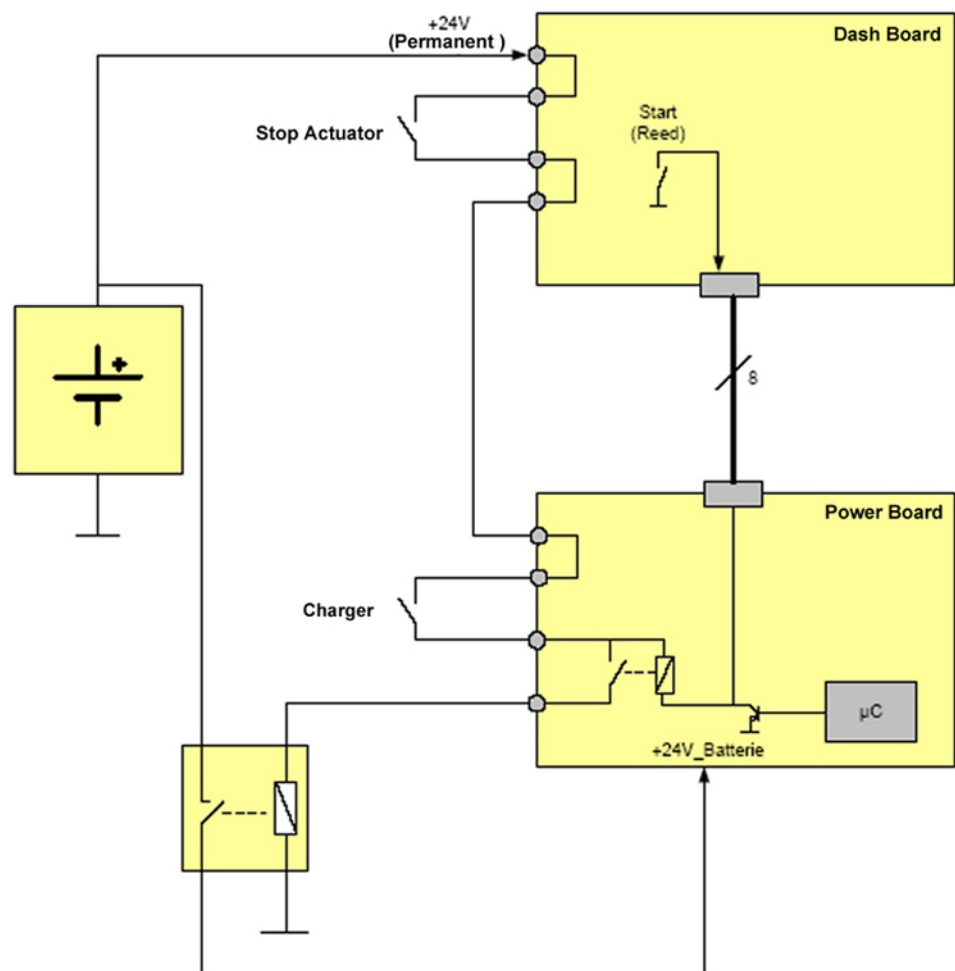
## 6.1.4 Emergency loop

The machine has a separate emergency loop, which contains following elements:

- Stop actuator.
- Charger (internal switch) OR battery connector switch (10/116).
- Start up/Self holding.

The emergency loop controls the power relay (05/122). Only when the complete emergency loop is closed the relay is active and the power supply is ensured.

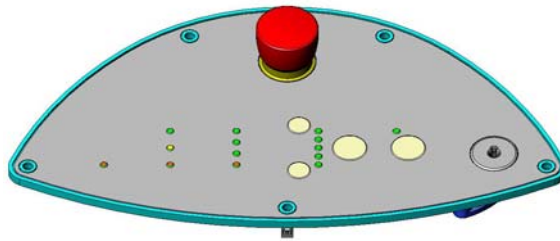
06.10.14 system architecture - 1650B\_1850B\_V1.00.fm



Picture 3: Start up/Self holding

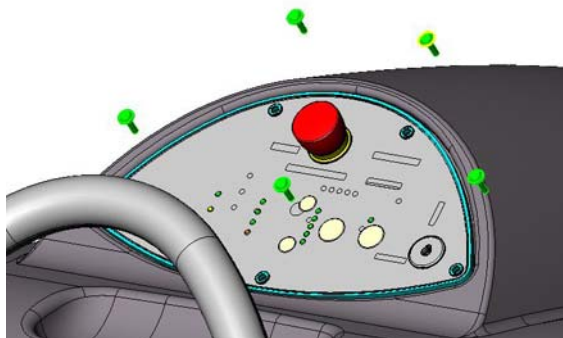
## 6.2 Dashboard

### 6.2.1 Removing of dashboard



Picture 4: Dashboard

- Remove the 5 screws (01/111) of the dashboard (01/101).



Picture 5: Dashboard removing

- Remove the dashboard from the tank cover (01/125).
- Disconnect all electrical connections.

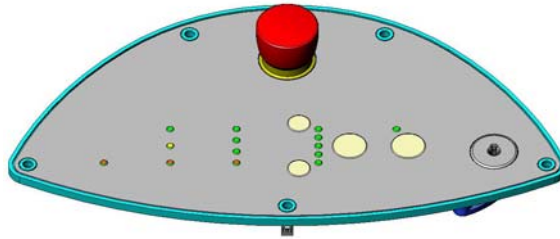
#### **CAUTION**

*Be cautious when removing the dashboard as you can damage the wires or the ribbon cables of the dashboard. Disconnect all electrical connections to dashboard.*

06.14.16 dashboard – 1650B\_1850B\_V1.00.fm

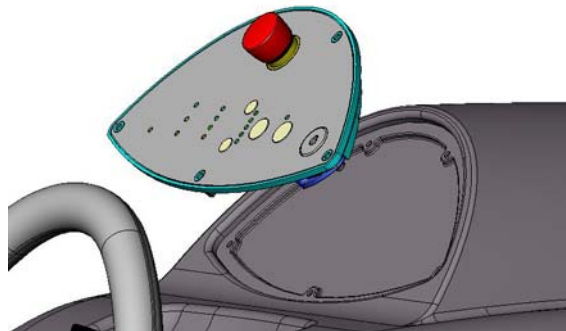
## 6.2 Dashboard

### 6.2.2 Mounting of dashboard



Picture 6: Dashboard

- Connect all electrical connections to dashboard.
- Mount dashboard onto the tank cover.



Picture 7: Dashboard mounting

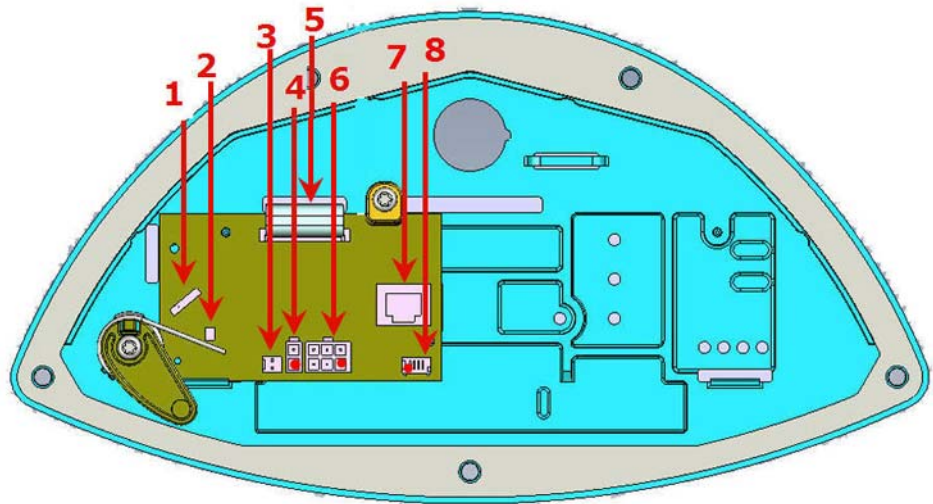
#### **CAUTION**

*Ensure that you do not damage the wires and especially the ribbon cable to the key foil when inserting the dashboard into the steering column.*

- Fix the dashboard with the 5 screws to the tank cover.

## 6.2 Dashboard

### 6.2.3 Connections



Picture 8: Dashboard connections

Please find description of the connections on the following table. The connections are marked in the upper picture (Dashboard connections) with numbers and the pin 1 of the connections is marked with a red dot.

Pos.	Plug	Description [plug]	Pin	Description [pin]
1	S1	Reed element - Start	1	Reed element - Start
2	S2	Hall sensor - Working	1	Hall sensor - Working
3	X6	Stop actuator	1	Emergency loop - Charger
3	X6	Stop actuator	2	Emergency loop - Power electronics
4	X5	Emergency loop	1	Plus (+) 24VDC (plus) permanent
4	X5	Emergency loop	2	Emergency loop - Power electronics
5	X8	Membrane keypad	1	Plus (+) 5VDC
5	X8	Membrane keypad	2	Plus (+) 5VDC
5	X8	Membrane keypad	3	SW OUT 0
5	X8	Membrane keypad	4	SW OUT 1
5	X8	Membrane keypad	5	SW OUT 2
5	X8	Membrane keypad	6	SW OUT 3
5	X8	Membrane keypad	7	LED OUT 2
5	X8	Membrane keypad	8	LED OUT 3
5	X8	Membrane keypad	9	LED OUT 4
5	X8	Membrane keypad	10	LED OUT 5
5	X8	Membrane keypad	11	LED OUT 6
5	X8	Membrane keypad	12	LED OUT 7
5	X8	Membrane keypad	13	LED OUT 8

Table 1: Dashboard connections

Pos.	Plug	Description [plug]	Pin	Description [pin]
5	X8	Membrane keypad	14	LED OUT 9
5	X8	Membrane keypad	15	LED OUT 0
5	X8	Membrane keypad	16	LED OUT 1
5	X8	Membrane keypad	17	LED Charger – charge – yellow
5	X8	Membrane keypad	18	LED Charger – charged – green
5	X8	Membrane keypad	19	LED Charger – charge failed – red
5	X8	Membrane keypad	20	GND
6	X7	Charger Communication	1	Information charge – yellow
6	X7	Charger Communication	2	Information charged – green
6	X7	Charger Communication	3	Information charge failed – red
6	X7	Charger Communication	4	Emergency loop IN (Jumper for NON BMS)
6	X7	Charger Communication	5	Emergency loop OUT (Jumper for NON BMS)
6	X7	Charger Communication	6	GND
7	X1	Communication	1	Throttle signal
7	X1	Communication	2	Serial – OUT
7	X1	Communication	3	Serial – CLK
7	X1	Communication	4	Serial – Latch
7	X1	Communication	5	Serial – IN
7	X1	Communication	6	Start signal
7	X1	Communication	7	Plus (+) 5VDC

Table 1: Dashboard connections

Pos.	Plug	Description [plug]	Pin	Description [pin]
7	X1	Communication	8	GND
7	X1	Communication	9 (Housing)	GND
7	X1	Communication	10 (Housing)	GND
8	X3	Throttle hall sensor	1	Throttle signal
8	X3	Throttle hall sensor	2	GND
8	X3	Throttle hall sensor	3	Plus (+) 5VDC
8	X3	Throttle hall sensor	4	Microswitch throttle

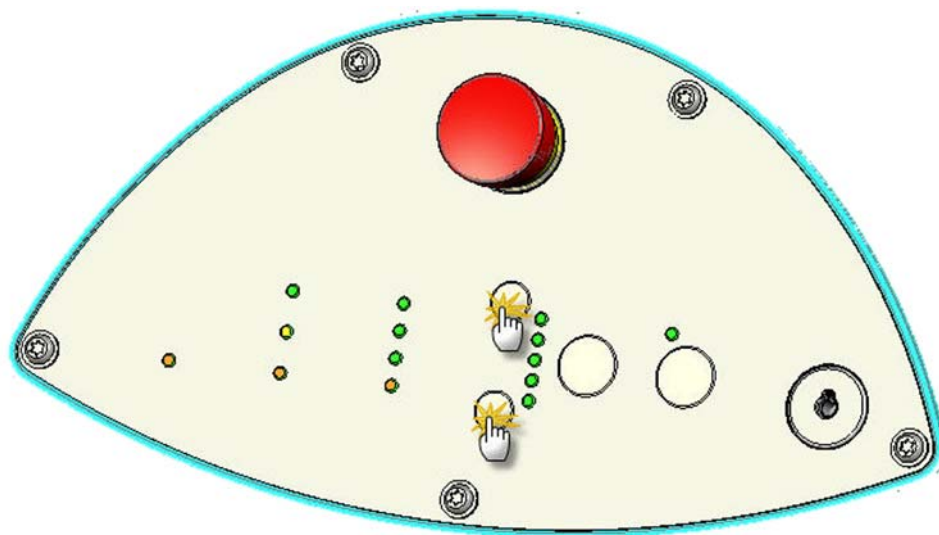
Table 1: Dashboard connections

## 6.2 Dashboard

### 6.2.4 Reset service hour counter

The TASKI swingo 1650B/1850B has no dashboard service functionality. There is one exception: reset of the service hour counter.

To reset the service hour counter LED you have to perform the following steps:



Picture 9: Reset service hour LED

- Switch ON the machine.
- Service hour counter LED has to be ON.
- Press the buttons dosing (+) and dosing (-) until the service LED switches OFF.
  - After approximately 3 seconds it starts flashing.
  - Flashing stops after approximately 2 seconds.
  - Service hour counter is reset.

#### Remarks

*You also can reset the service hour counter with the Service Tool online. Please refer to the Service Tool Manual for this and additional explanations.*

#### **CAUTION**

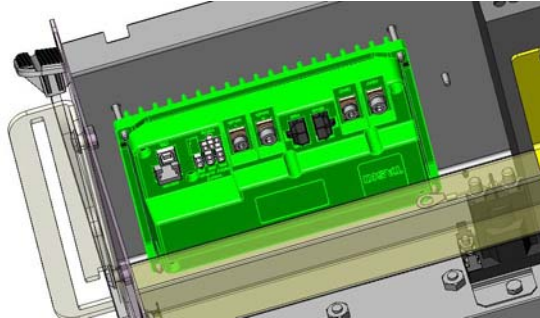
*If the service LED is not ON and you follow this procedure, then you reset the service hour counter.*

*The reason for this: if you carry out a service, even if the LED is not ON, then you have the possibility to reset the service hour counter.*



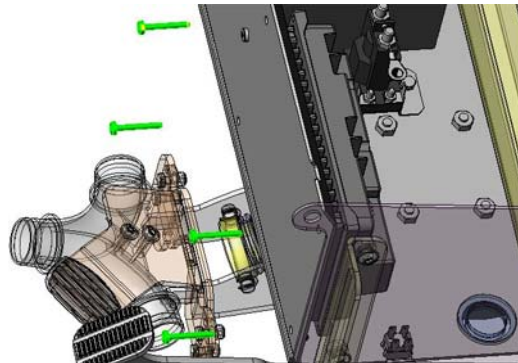
## 6.3 Electronics

### 6.3.1 Removing of electronics



Picture 10: Electronics

- Unlock the battery compartment by removing the screw (05/127) of the locking system.
- Open the battery compartment.
- Loosen the four self threading screws (05/124) that fix the electronics to the chassis (05/136).



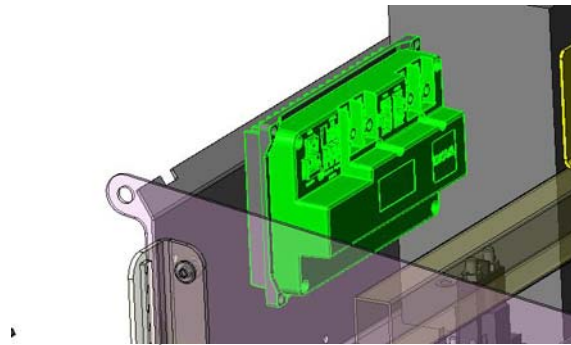
Picture 11: Electronics removing

- Disconnect the wires and connectors.
- Remove the electronics (05/123).

06.18.14 electronics -1650B\_1850B\_V1.00.fm

## 6.3 Electronics

### 6.3.2 Mounting of electronics



Picture 12: Electronics

- Take a new electronics and position it onto the chassis.
- Position and tighten the 4 screws.
- Connect wires and connectors to the electronics.

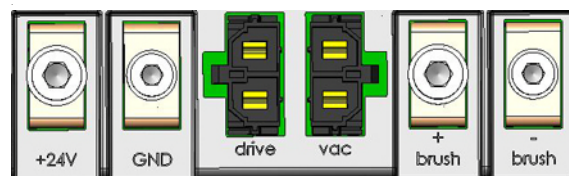
#### **CAUTION**

*Tighten the connectors with the correct torque. Refer to Adjustment or spare parts list.*

- Close and lock the battery compartment with the screw of the locking system.

#### Adjustment

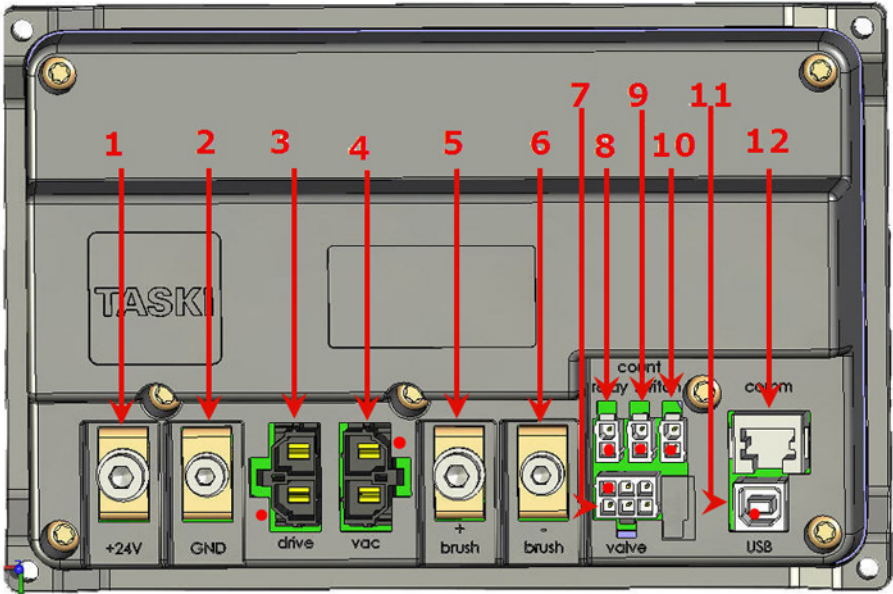
- M5 with 6 Nm
  - GND
  - brush – (minus)
- M6 with 8 Nm
  - +24V
  - brush + (plus)



Picture 13: Electronics adjustment

6.3 Electronics

6.3.3 Connections



Picture 14: Electronic connections

Please find description of the connections on the following table. The connections are marked in the upper picture (Electronic connections) with numbers and the pin 1 of the connections is marked with a red dot.

06.18.24 electronics – connections – 1650B\_1850B\_V1.00.fm

Pos.	Plug	Description [plug]	Pin	Description [pin]
1	X14	Battery – 24V	1	Plus (+) 24VDC
2	X16	Battery – GND	1	GND
3	X1	Drive motor	1	Plus (+)
3	X1	Drive motor	2	Minus (-)
4	X2	Vacuum motor	1	Plus (+)
4	X2	Vacuum motor	2	Minus (-)
5	X13	Brush motor – Plus (+)	1	Plus (+)
6	X15	Brush motor – Minus (-)	1	Minus (-)
7	X4	Pumps/Filter 24V	1	Duty cycle pump 1
7	X4	Pumps/Filter 24V	2	Duty cycle pump 2
7	X4	Pumps/Filter 24V	3	Plus (+)
7	X4	Pumps/Filter 24V	4	GND (pump 1)
7	X4	Pumps/Filter 24V	5	GND (pump 2)
7	X4	Pumps/Filter 24V	6	GND (valve)
8	X8	Emergency loop	1	Emergency loop – IN
8	X8	Emergency loop	2	Emergency loop – OUT
9	X12	External hour counter (optional) IntelliDose (optional)	1	Plus(+)
9	X12	External hour counter (optional) IntelliDose (optional)	2	Minus (-)

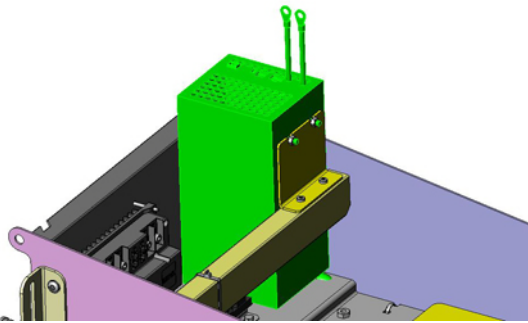
Table 2: Electronics connections

Pos.	Plug	Description [plug]	Pin	Description [pin]
10	X6	Brush lever limit switch	1	Brush position switch (transport = closed)
10	X6	Brush lever limit switch	2	Minus (-)
11	X9	USB port	1	VCC USB
11	X9	USB port	2	Minus (-)
11	X9	USB port	3	Plus (+)
11	X9	USB port	4	GND
11	X9	USB port	5 (housing)	GND
12	X7	Communication	1	Throttle
12	X7	Communication	2	Serial – OUT
12	X7	Communication	3	Serial – CLK
12	X7	Communication	4	Serial – LATCH
12	X7	Communication	5	Serial – IN
12	X7	Communication	6	Start signal
12	X7	Communication	7	Plus (+)
12	X7	Communication	8	GND
12	X7	Communication	9	GND
12	X7	Communication	10	GND

Table 2: Electronics connections

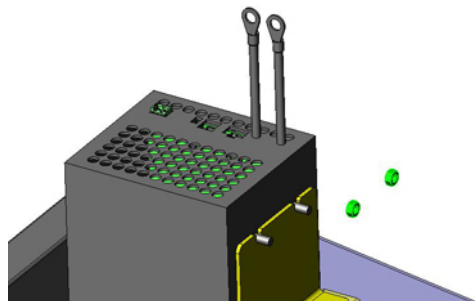
## 6.4 Charger

### 6.4.1 Removing of charger



Picture 15: Charger

- Unlock the battery compartment by removing the screw (05/127) of the locking system.
- Open the battery compartment.
- Disconnect the wires.
- Disconnect the plug of communication and mains.
- Remove the two nuts (05/132).



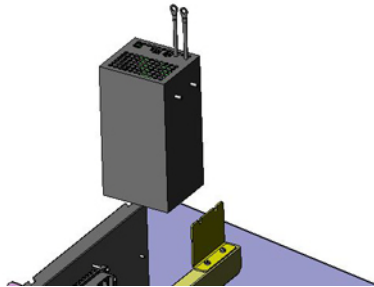
Picture 16: Charger removing

- Remove the charger (05/119).

06.20.13 charger – 1650B\_1850B\_V1.00.fm

## 6.4 Charger

### 6.4.2 Mounting of charger



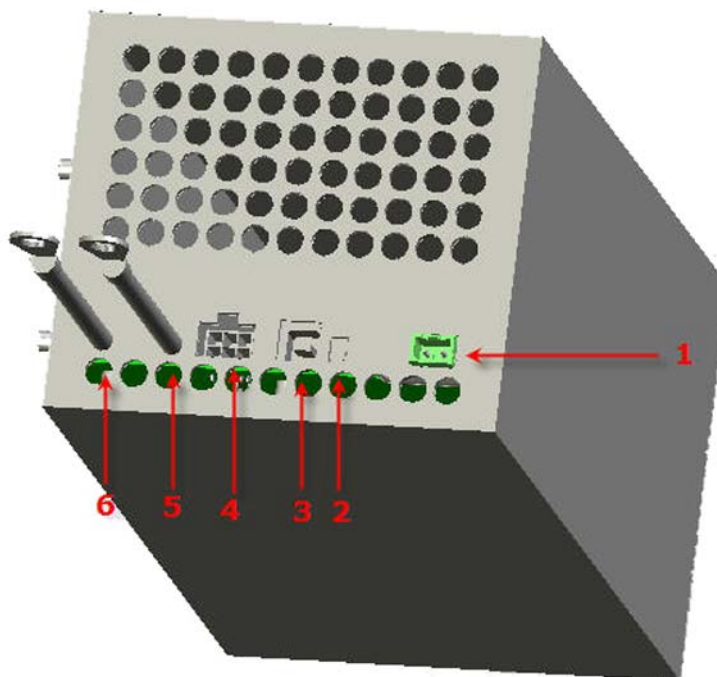
Picture 17: Charger mounting

- Position the new charger.
- Mount the two nuts.
- Connect the plug for communication and mains.
- Connect the wires.
- Close and lock the battery compartment with the screw of the locking system.

06.20.13 charger – 1650B\_1850B\_V1.00.fm

## 6.4 Charger

### 6.4.3 Charger connections



Picture 18: Charger connections

Please find description of the connections on the following table. The connections are marked in the upper picture (Charger connections) with numbers.

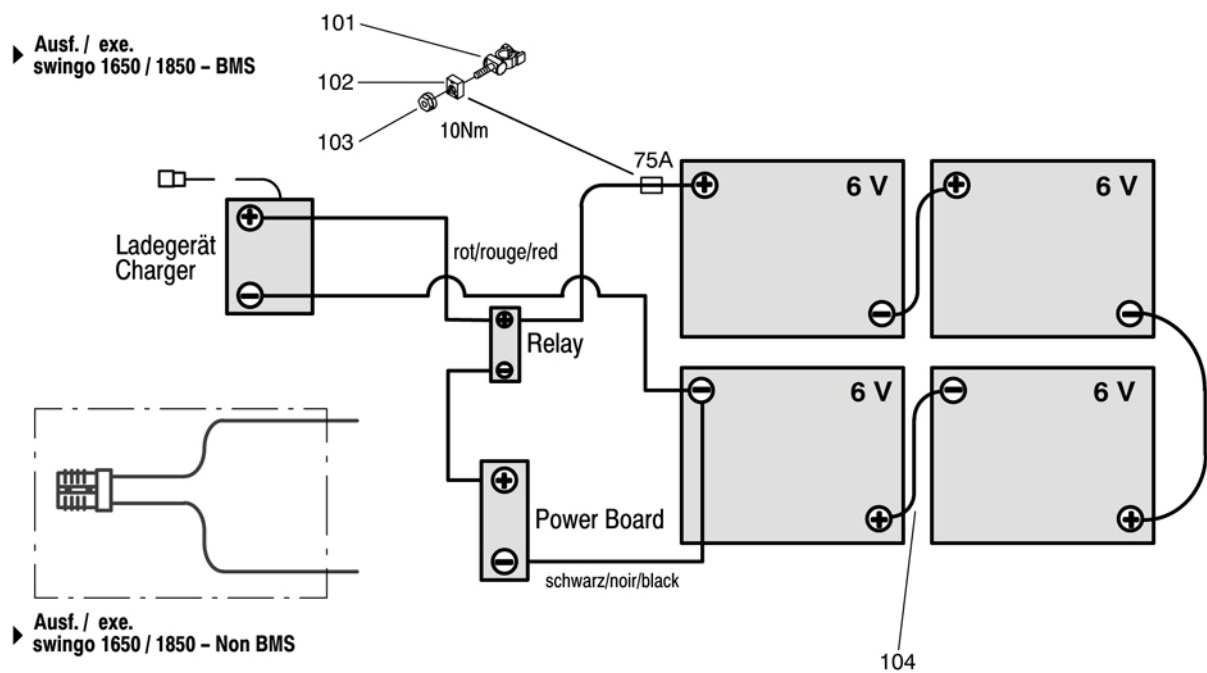


Pos.	Plug	Description [plug]	Pin	Description [pin]
1	SV4G1	Main power	1	Main power
1	SV4G2	Main power	2	Main power
2	S01	Switch (Charging curve)	–	Default = 1 Please leave the switch on default
3	SV USB	Service port (USB)	1	VCC (No software available for the charger)
3	SV USB	Service port (USB)	2	USB (–) (No software available for the charger)
3	SV USB	Service port (USB)	3	USB (+) (No software available for the charger)
3	SV USB	Service port (USB)	4	PC minus (–) (No software available for the charger)
4	SV11	Charger	1	Signal LED charge
4	SV12	Charger	2	Signal LED charged
4	SV13	Charger	3	Signal LED charge failure
4	SV14	Charger	4	Emergency loop In
4	SV15	Charger	5	Emergency loop Out
4	SV16	Charger	6	GND
5	H01	Battery supply	–	Battery (+) (red wiring)
6	H02	Battery supply	–	Battery (–) (black wiring)

Table 3: Charger connections

## 6.5 Schematics

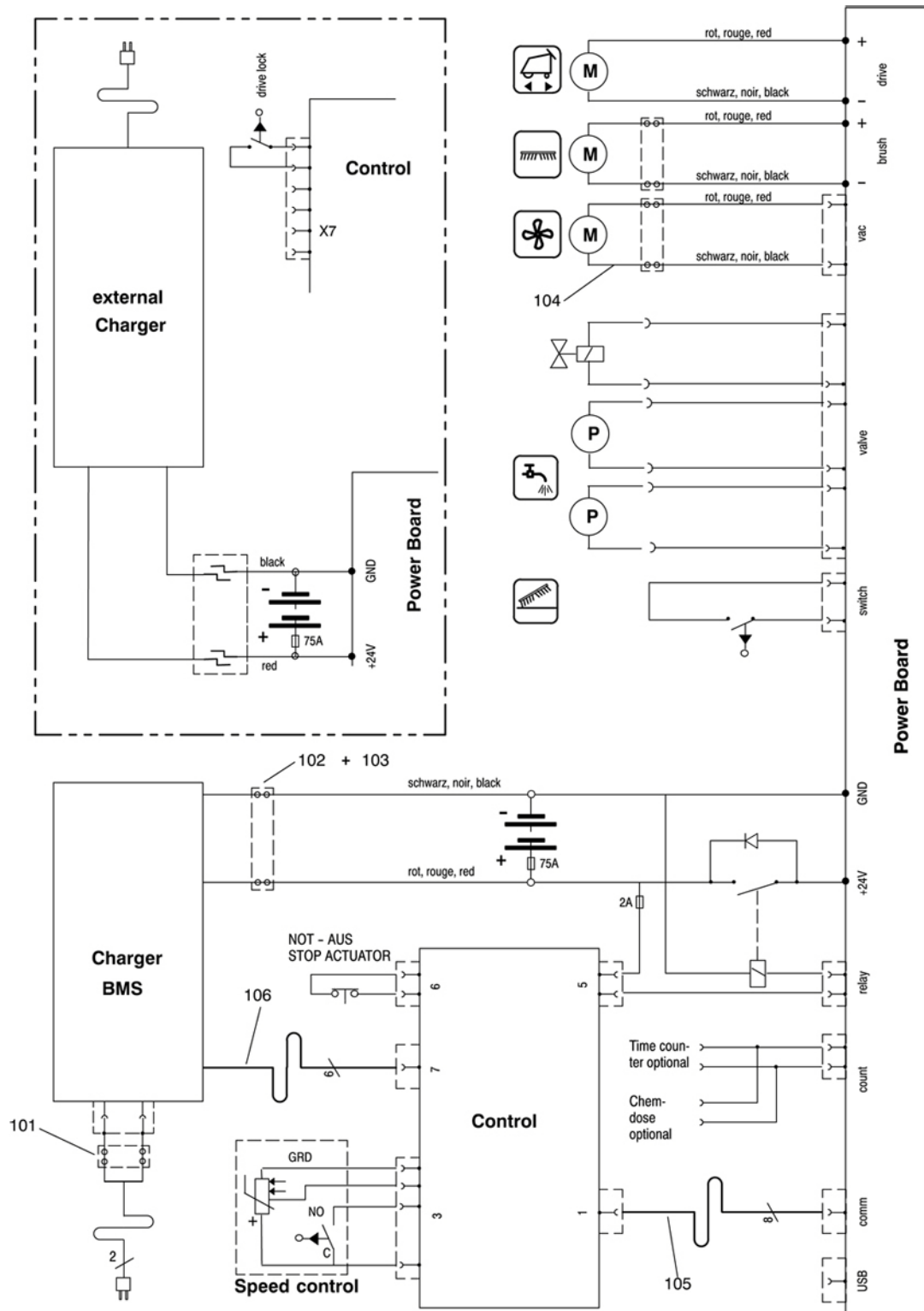
### 6.5.1 Battery connections



Picture 19: Battery connections

## 6.5 Schematics

### 6.5.2 Electrical schematics



Picture 20: Electrical schematics

# Technical Manual



**swingo** 1650/1850

## 7 Additional information

## 7 Additional information

### 7.1 Available GTS Newsletter/Instructions

**⚠ CAUTION** *To find the up to date available GTS Newsletters and instructions refer to e-spares.*

Newsletter	Date of issue	Machine	Subassembly	Topic/Modification	Serial number
2008/15	23.10.2008	TASKI swingo series	Vacuum motors	Harmonisation of vacuum motors	immediately
2008/18	14.11.2008	TASKI swingo 1650	Squeegee mechanism	Squeegee bracket	1150
2008/20 v1	11.12.2008	TASKI swingo 1650, XP, 2500	Squeegee	Wheel 64/24	1258
2009/03	25.03.2009	TASKI swingo 1650	Electronic	New firmware version 1.03	1469
2009/07	08.05.2009	TASKI swingo 750, 1650, XP	Fresh water circulation	Pump 24V	Q3/09
2009/13	10.09.2009	TASKI swingo 1650	Hoses, valves	Squeaky check valve	1791
2010/06	03.05.2010	TASKI swingo 1650	Suction hose	New suction hose	2242
2010/13	01.09.2010	TASKI swingo 1650	Draining hose	New draining hose	2450
2010/20	02.12.2010	TASKI swingo 755, 855, 1255, 1650, 1850	Dashboard	Modification on key switch	2746

Table 1: Newsletters/Instructions

Newsletter	Date of issue	Machine	Subassembly	Topic/Modification	Serial number
2011/02	26.01.2011	TASKI swingo 1650/1850	Electronic	New firmware version 1.04	2931
2011/03	04.02.2011	TASKI swingo 350, 450, 750, 755, 855, 1250, 1255, 1650, 1850	Upper part	Float modification	2971
2011/05	21.04.2011	TASKI swingo 450, 750, 755, 855, 1250, 1255, 1650, 1850	Filter/Valve	New 24 V magnetic valve	3317
2011/11	22.06.2011	TASKI swingo 1250B, 1255, 1650, 1850, 4000	Brush unit	Pulley set	
2011/13	19.07.2011	TASKI swingo 1650, 1850	Drive	New wheels	3716
2011/20	06.12.2011	TASKI	Driving disc	Adjustment of driving disc	
2011/21	07.12.2011	TASKI swingo 1650, 1850	Electronic	New firmware version 1.05	3951
2012/03	31.01.2012	TASKI swingo 1650, 1660, 1850	Brush lowering device	New lowering mechanism	1650: Q2/12 1850: 4031
2012/06	11.02.2012	TASKI swingo 755, 760, 855, 1255, 1260, 1650, 1660, 1850	Handle	New cover for working hour meter	Q1,Q2/12
2012/10	09.03.2012	TASKI swingo 1650, 1660	Chassis	Harmonisation of castor wheel concept between TASKI swingo 1650, 1660 and TASKI swingo 1850	1650: 4344
2012/11	12.03.2012	TASKI swingo 1650, 1660, 1850	Squeegee lowering	Adjustment of the squeegee bracket TASKI swingo 1650, 1660 and 1850	1650: 4344 1850: 4031

Table 1: Newsletters/Instructions

Newsletter	Date of issue	Machine	Subassembly	Topic/Modification	Serial number
2012/15	11.06.2012	TASKI swingo 1650, 1660, 1850	Squeegee lowering	Modification fixation of Y-pipe	1650: 4480 1850: 4480
2012/18	30.07.2012	TASKI swingo 1650, 1660, 1850	Hoses, Tubes	Suction hose	1650: 4821 1850: 4821
2012/21	20.08.2012	TASKI swingo 1650, 1660	Brush drive	Pulley	1650: 4836
2012/33	17.12.2012	TASKI swingo 1650, 1660, 1850	Electronic	New firmware version 1.08	1650: 5063 1850: 5063
2013/07	15.03.2013	TASKI swingo 1650, 1660, 1850	Hoses, Tubes	New drain tubes	1650: 5204 1850: 5204

Table 1: Newsletters/Instructions

# Technical Manual



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## 8 Revision



## 8 Revision

Date	Chapter	Content	Description	Revision
21.12.2010	Title pages	Title pages of all chapters	Added the swingo 1850 and adjusted naming	V2.00
06.01.2011	Technical Data	Technical information	Adjusted the values and picture for swingo 1650 and added swingo 1850	V2.00
10.01.2011	Additional information	GTS Newsletter/Instruction	Added the GTS Newsletter until date of release.	V2.00
20.01.2011	Mechanical	The whole chapter	Modified the swingo 1650 to new procedures and added swingo 1850	V2.00
14.01.2011	Electrical	The whole chapter	Modified the swingo 1650 to new procedures and added swingo 1850	V2.00
12.05.2011	Mechanical	5.1.8.2 Replacing of brush belt	Corrected adjusting value	V2.01
12.05.2011	Additional information	GTS Newsletter/Instruction	Added the GTS Newsletter until date of release.	V2.01
17.12.2012	All	All	New structure with removing and mounting	V3.00
11.01.2013	Mechanical	Brush unit swingo 1850	Added new brush unit	V3.00
11.01.2013	Mechanical	Tool lowering	Added new tool lowering	V3.00

Table 1: Revision

# Technical Manual



**swingo** 1650/1850

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# Technical Manual



**swingo** 1650/1850

## 10 Notes