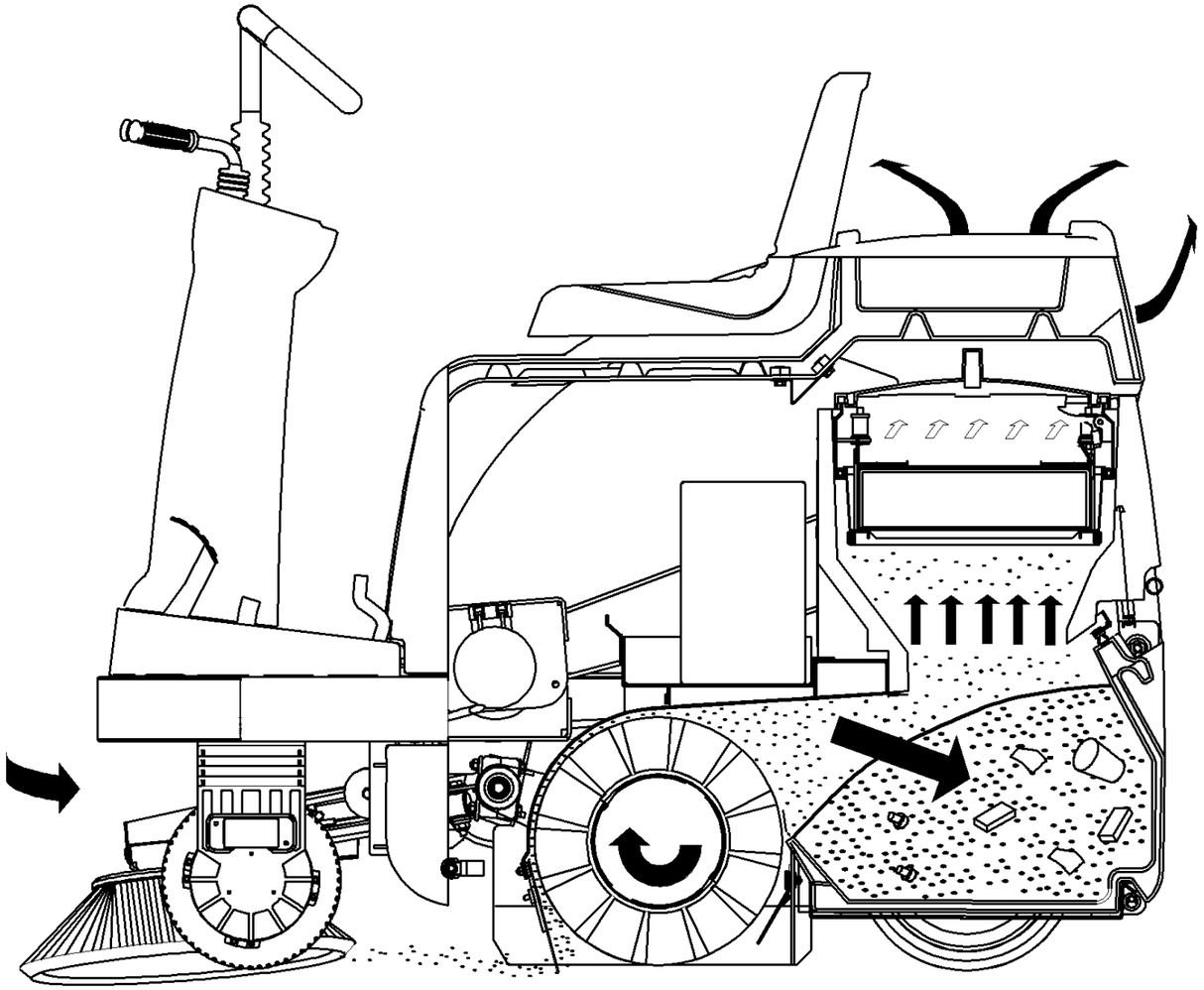
Training Sweepmaster
P/B 900R
6502.10/15/20

As of May 2014, the machine designations have changed. The name Jonas, which was known for ride-on sweepers, became the name Sweepmaster, which applies to all sweepers. The distinction as to which machine is involved is generated by specifying the type of drive, sweeping width and operating concept (similar to that of the old Hakomatics). The old designations will continue to be used in these training documents. Here is a comparison of the "old" and "new" designations for this machine

Jonas 900 V	**Sweepmaster P 900 R**
Jonas 900 E	**Sweepmaster B 900 R**

P stands for petrol, D for diesel and B for battery variant. The R stands for a ride-on variant

1. Working method of Jonas 900



The side brush fetches the dirt from corners and edges into the intake track of the wide broom. This hurls it overhead directly into the collection container. The fine dust that is whirled up is sucked by the suction fan against the free-hanging plate filter, where it is separated. Only clean air leaves the machine.

2. Technical data

Vehicle dimensions and weights		Jonas 900 E/EH	Jonas 900 V/VH
Lenghst with side broom	mm	1520	1520
Width with 1 side broom	mm	1120	1120
Height above driver's seat	mm	1340	1340
Weight – without batteries	kg	320	
Weight – ready to use	kg	450	370

Driving and sweeping performance			
Speed forward / revers	km/h	6,0 / 4,0	6,0 / 4,0
Sweeping speed till	km/h	till 6,0	till 6,0
Sweeping width – without / with 1 / with 2 side brooms	mm	700 / 970 / 1240	700 / 970 / 1240
Theoretical ground coverage with 2 side brooms	m^2/h	till 7450	till 7450
Theoretical ground coverage without side broom	m^2/h	till 4200	till 4200
Climbing ability (max. 1 minute)	%	till 16	till 16

Tires			
Size (standart) front / rear		4.00 – 4 Solid rubber	4.00 – 4 / 6 PR Air
Inflation pressure	bar		6,0

Broom			
Diameter / Lenghst	mm	345 / 700	345 / 700
Diameter (min. by wear)	mm	ca. 290	ca. 290
Revolution speed	^{1}/min	530 ± 20	530 ± 20
Sweeping pattern	mm	50 + 5	50 + 10
Bristle material		PES	PA

Side broom		**Jonas 900 E/EH**	**Jonas 900 V/VH**
Diameter	mm	460	460
Revolution speed	1/min	ca. 90	ca. 90
Bristle material		PES	PA
Dirt container			
Capacity	Liter	2 x 30 / 70	2 x 30 / 70
Dust extraction / Filter system			
Filter surface	m²	2,8	2,8
Filtersystem – Plate filter	Stück	1	1
Underpressure above plate filter	mm/WS	≥ 9	>14
Hydraulic system			
Hydrauliköl, z. B. Mobiloil			DTE 15 M or a equivalent hydraulic oil
Tank capacity	Liter		10
Traction drive	bar		100
Electric system			
Starter – Battery	V / Ah		12 / 45
Light coil current	A		5-6
Operation voltage	DC / V	24	
Traction drive	kW	0,6	
Central motor (Dust fan / Sweeping)	kW	0,75	
Total power consumption	kW	1,9	
Vibration levels			
The weighted effective value of the acceleration determined in accordance with EN 1033 to which the upper limbs (hand-arm) are exposed under normal operating conditions is no more than	m/s²	< 2,5	< 2,5
The effective value of the acceleration determined in accordance with EN 1032 to which the body (feet or seat) is exposed under normal operating conditions is no more than	m/s²	< 0,5	< 0,5

Geräuschemissionswert		**Jonas 900 E/EH**	**Jonas 900 V/VH**
Sound power level measured according to DIN EN ISO 3744 under normal operating conditions and maximum volume flow	dB (A)	86	93

Motor		**Jonas 900 V**	**Jonas 900V** from …2507	**J 900 V** 6502.15
Manufacturer, Type		Briggs&Stratton Intek Pro 6,5HP Typ 122037	Briggs&Stratton Vanguard 6,5 HP Typ 13L337-0002-F8	Briggs&Stratton Vanguard 6,5 HP Typ 12V337-0032-F1
Working/combustion process		4-stroke / Petrol	4-stroke / Petrol	4-stroke / Petrol
Number of cylinders / arrangement		1	1	1
Bore / Stroke	mm	68,27 / 55,88	68,28 / 55,88	68 / 56
Displacement	cm^3	206	205	203
Valve clearance (with a cold engine) inlet/outlet valve	mm	0,15 / 0,28	0,15 / 0,28	0,10 / 0,20
Power at 2500 1/min	KW / PS	3,7 / 5,0	3,3 / 4,5	3,3 / 4,5
Operating speed	1/min	2475 ± 25	2475 ± 25	2475 ± 25
Engine oil	SAE	10W -30 Quality SF or higher	10W -30 Quality SF or higher	10W -30 Quality SF or higher
Capacity incl. filter	Liter	0,6	0,65	0,65
Spark plug		491055	491055S	491055S
Fuel consumption	Liter/h	ca. 1	ca. 1,4	ca. 1,4
Fuel type		Unleaded petrol (min. 87 octane)	Unleaded petrol (min. 87 octane)	Unleaded petrol (min. 87 octane)
Tank capacity	Liter	4	3,3	3,3

3. Structure and mechanics

Dismantling :

- Lower the broom
- Remove left side panel
- Loosen the cross handle (2) and remove the broom swing arm (1) on the left
- Open both toggles (3+5) and remove side panel (4)
- Pull out the broom

Assembly:

Work steps in reverse order

Remark:
Twist the broom as you push it in until it noticeably clicks onto the tooth driver

Check sweeping pattern

- Drive the machine onto a flat concrete or asphalt surface
  (For devices with pneumatic tires, the tire pressure must be checked and corrected if necessary)
- Switch on the broom and let it rotate for a short time
- Raise the broom and switch it off, move the machine forward a little and measure the sweeping pattern

If the broom is adjusted correctly, a parallel sweeping line should appear on the floor (sweeping pattern).

The width of the sweeping pattern should be 50 + 5 mm for the Jonas 900 E and 50 + 10 mm for the Jonas 900 V.

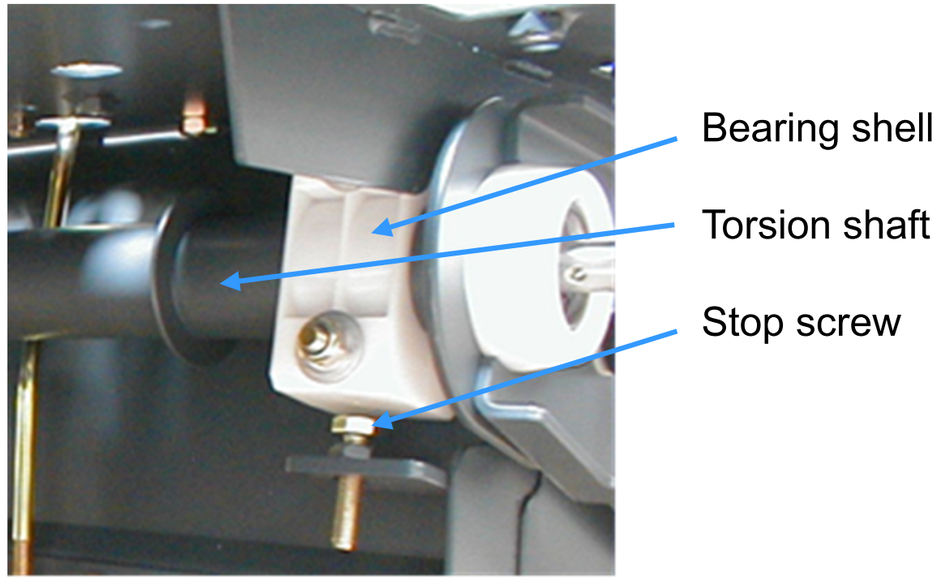
Note: Exceeding the specified sweeping pattern affects the service life of the broom.
The sweeping pattern decreases as soon as the broom diameter becomes smaller due to wear of the bristles.

Adjust sweeping pattern

The sweeping pattern is adjusted after loosening the toggle and turning the cross handle in the engine compartment.

Adjustment of parallelism

- Loosen the left bearing shell of the torsion shaft
- Adjust parallelism using the stop screw



Check and adjust sealing strips on the broom tunnel

The correct adjustment and perfect condition of the sealing strips on the broom tunnel are absolutely necessary for the good sweeper function, in particular to ensure the prescribed underpressure (Jonas 900 E ≥ 9 mm Ws; Jonas 900 V > 14 mm Ws) in the broom room, a clean sweeping pattern and to achieve minimal wear on the sealing strips.

- The sealing strips at the bottom of the broom tunnel are to be adjusted on a smooth surface. The side and rear sealing strips can be adjusted in elongated holes, the front sealing strip on the actuating rods

- For devices with pneumatic tires, the tire pressure must be checked and corrected if necessary

- The sealing strip at the front of the folding apron must rest on the floor, bent slightly backwards

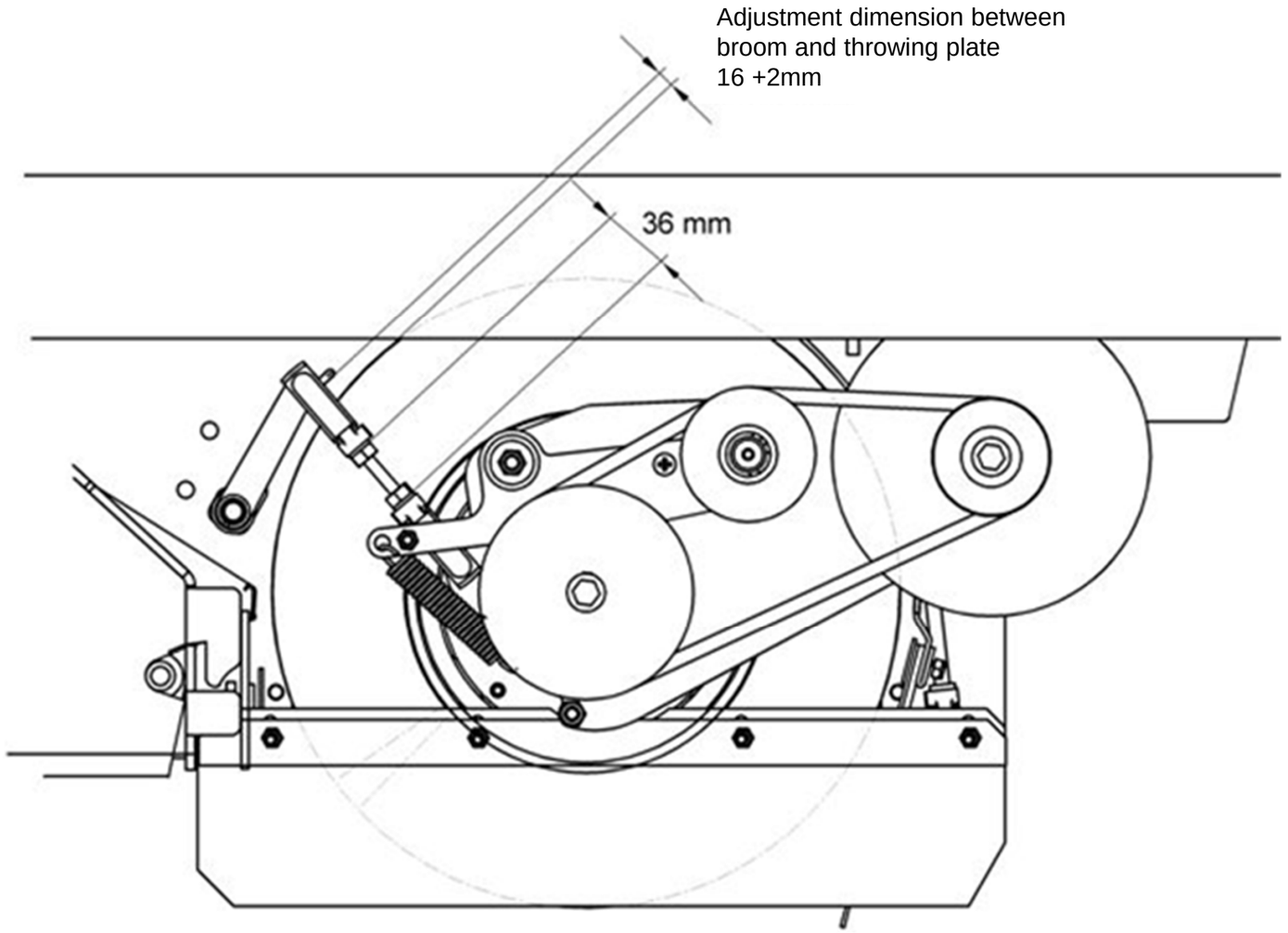
- Sealing strips, left and right, must be at a distance of 2 mm from the floor

- The sealing strip at the rear must have a floor clearance of approx. 5 mm

Note: Defective sealing strips must be replaced as quickly as possible

Broom wear compensation

As wear progresses, the discharge edge of the main broom roller is adjusted



Side broom adjustment

The inclination of the side broom must be adjusted so that the contact surface is approx. $^{2}/_{3}$ of the broom circumference.

In the direction of travel, the ground contact on the right side broom should be between 11 a.m. and 3 p.m
left side broom between 9 a.m. and 1 p.m.

- The inclination can be adjusted by loosening the gear holder and moving it in the area of the slots
- The height of the raised side broom must be adjusted using the cable so that the alignment of the upper edges of the pulleys is approximately 10° less than horizontal. This results in a distance from the upper side of the V-belt to the holder of the side panel of approx. 15 mm
- The V-belt tension is not adjustable and is guaranteed by spring force

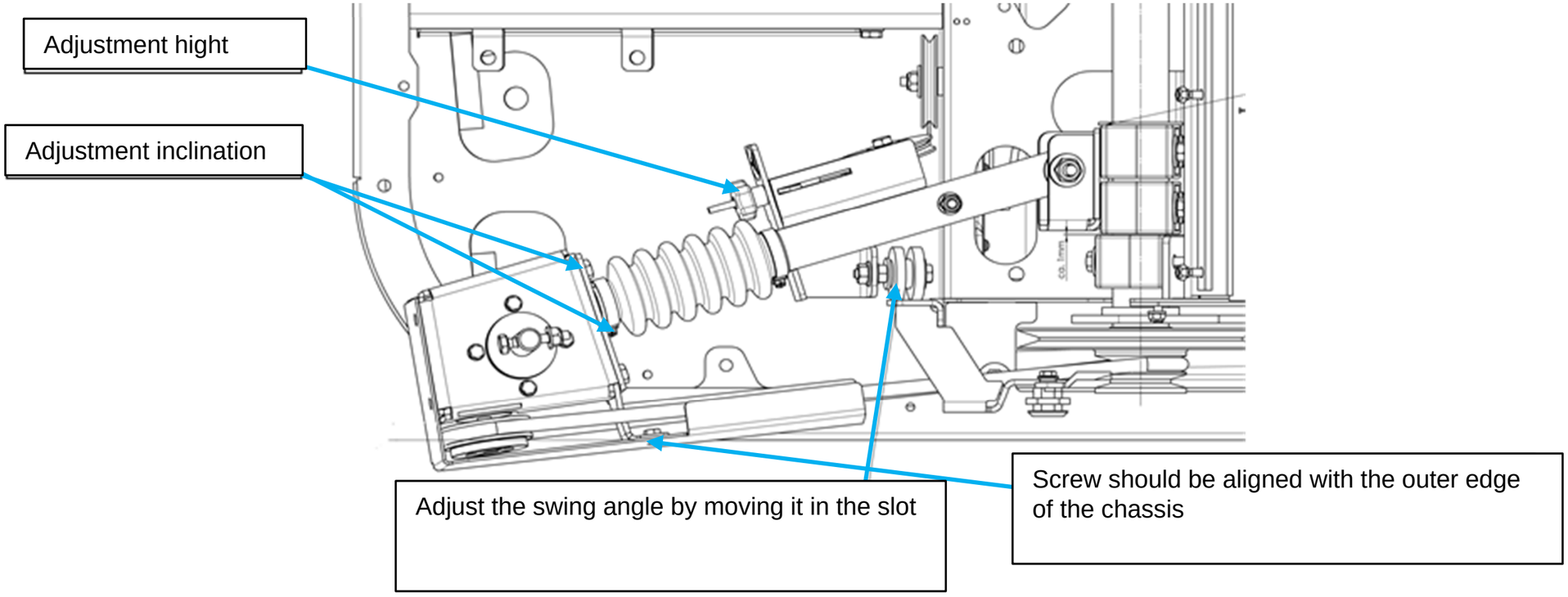


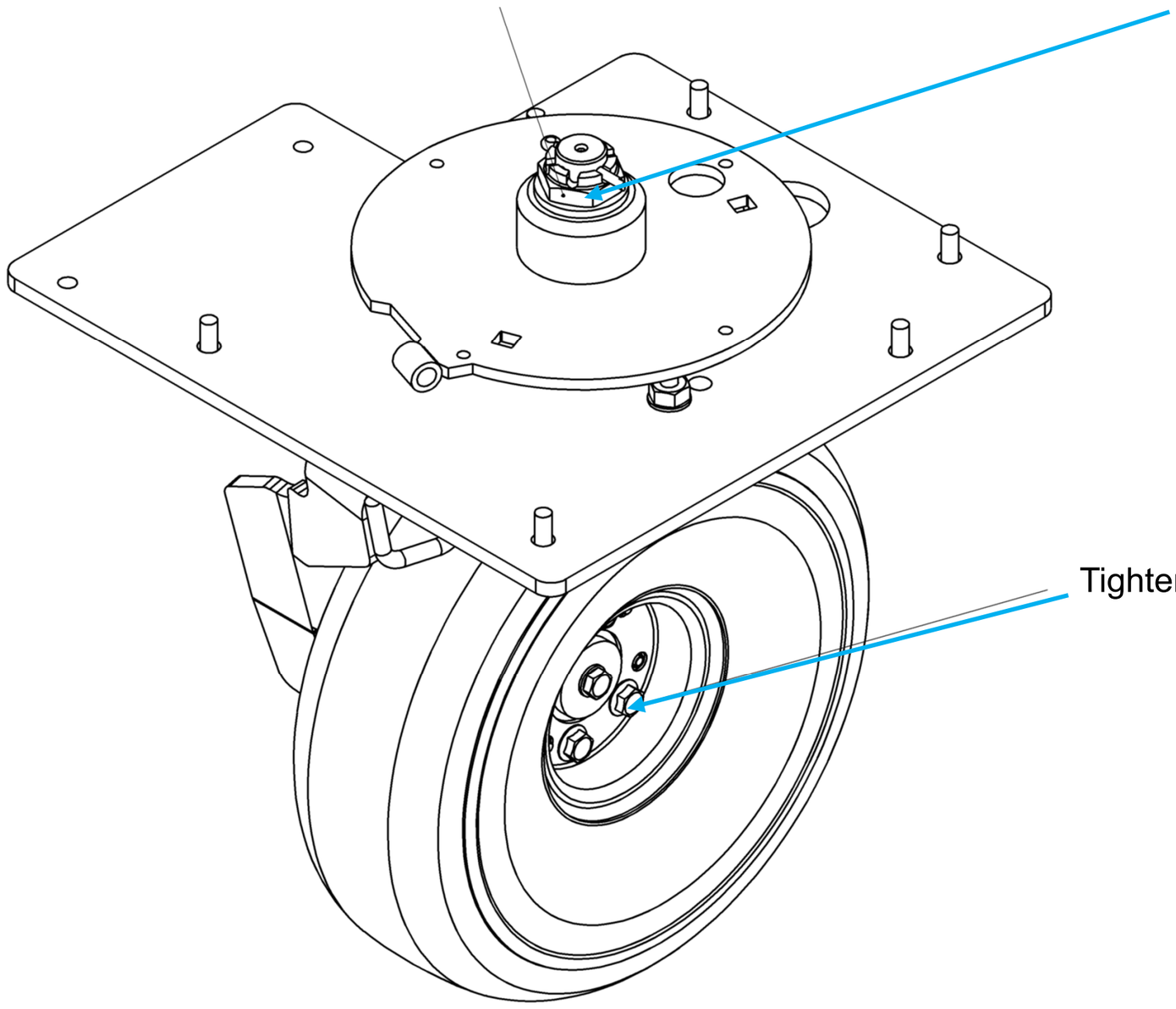
Plate filter changing and cleaning

- Stop the engine and remove the key
- Open the seat hood
- Filter box – remove cover
- Loosen and remove the wing screws at the corner points
- Fold up the vibrating frame and hook it in
- Remove the plate filter upwards

Dust extraction fan flap

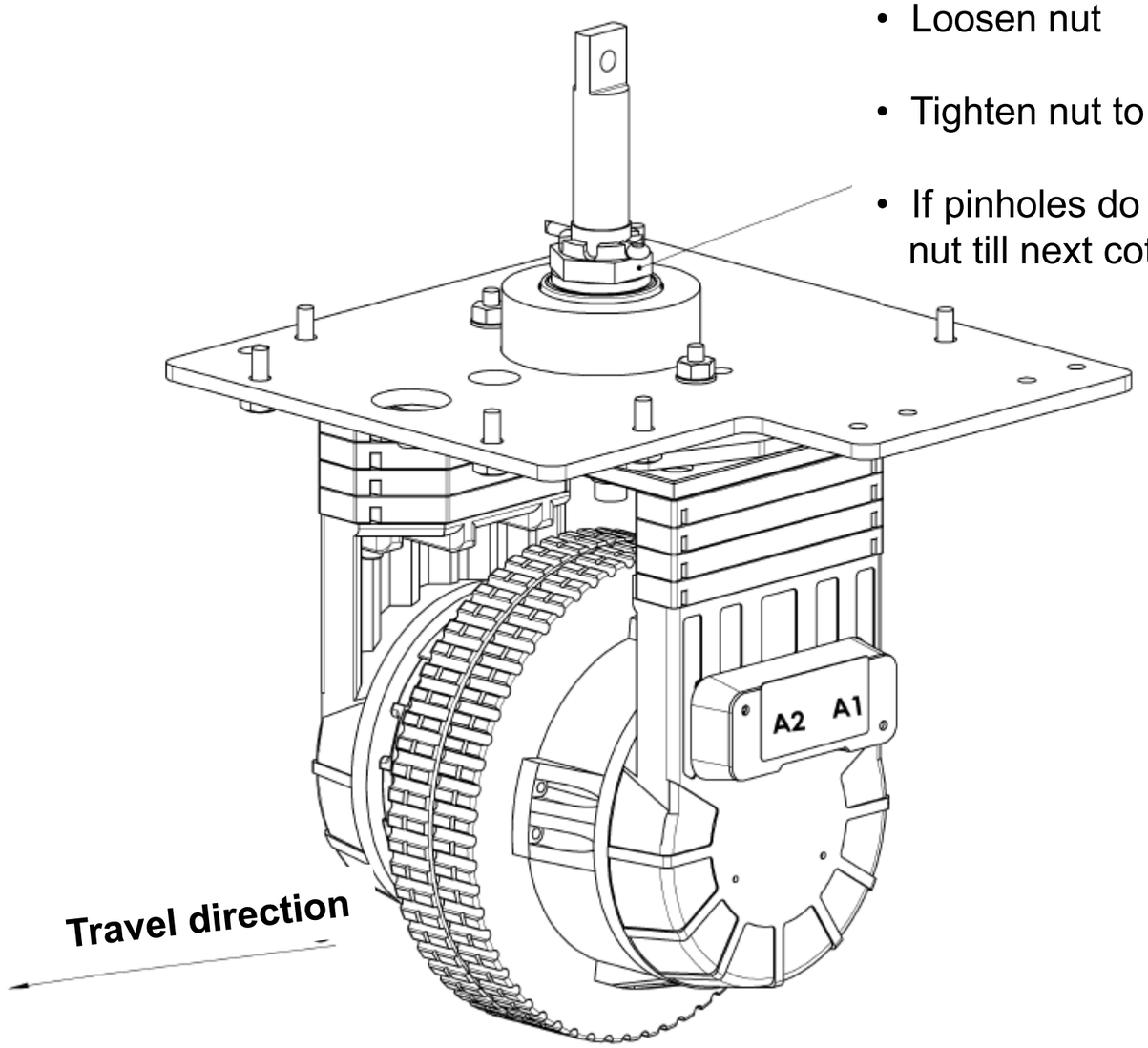
- If the sweepings and surfaces are wet, the bypass flap must be opened
- The shaking motor is operated via the micro switch (S10) on the control cable under the dashboard.
  The micro switch (S11) on the bypass flap switches the indicator light for the opened flap.

Front wheel drive (petrol) bearing plate



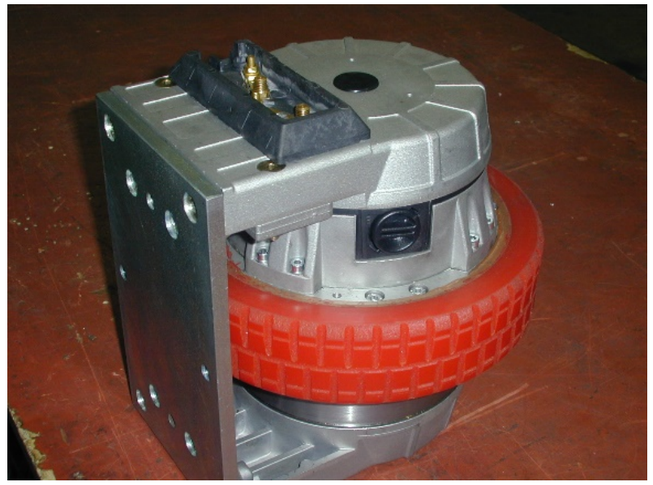
- Tighten nut with 60 Nm, while pivoting the wheel at the same time
- Loosen nut
- Tighten nut to 5 Nm
- If pinholes do not fit,tighten nut till next cotter pin hole

Front wheel drive (electric) bearing plate

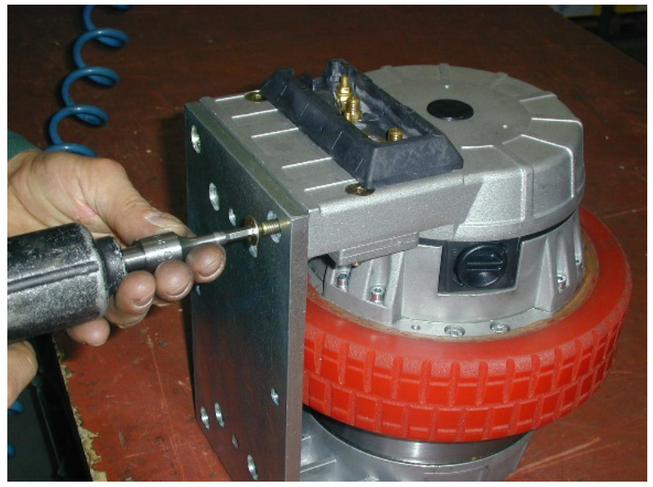


- Tighten nut with 60 Nm, while pivoting the wheel at the same time
- Loosen nut
- Tighten nut to 5 Nm
- If pinholes do not fit,tighten nut till next cotter pin hole

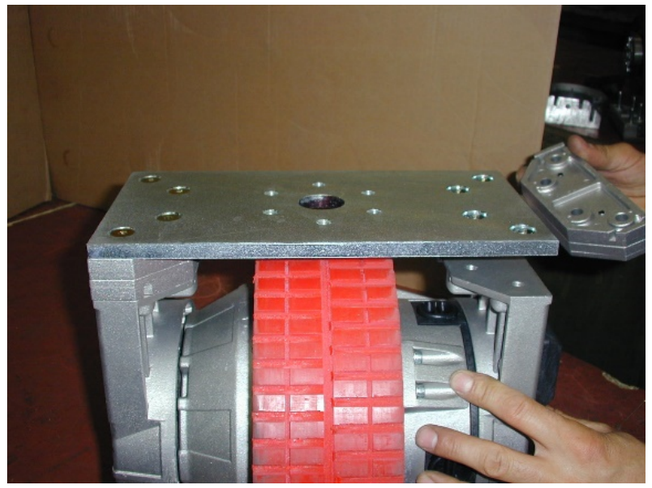
Removal and installation steps required for tire replacement



1. Removal of drive on the separation point between plates of the wheel carrier



2. Loosen the fastening screw the plate and the holder

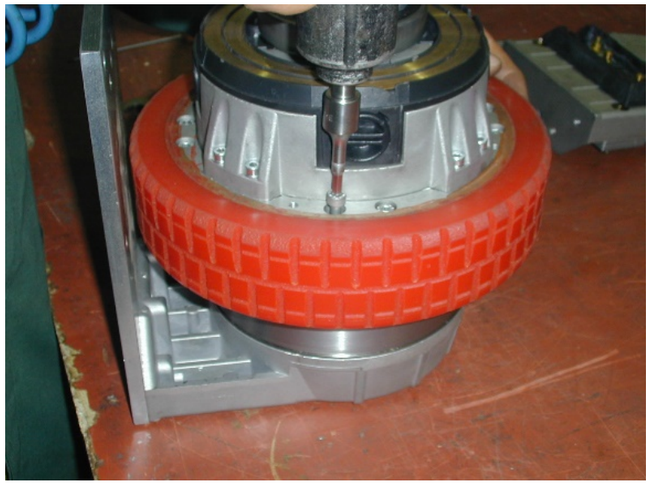


3. Pulling off the holder between the plate and the brush flange

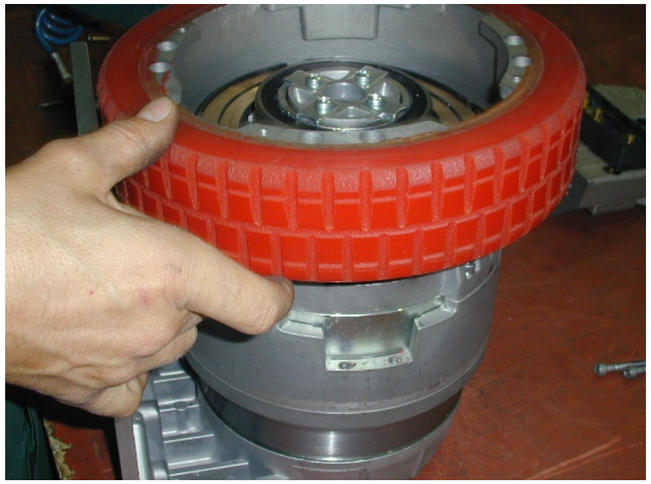
4. Pulling off the lateral closure stuffing

5. Pull brush flange from the motor axle

6. Remove brush flange



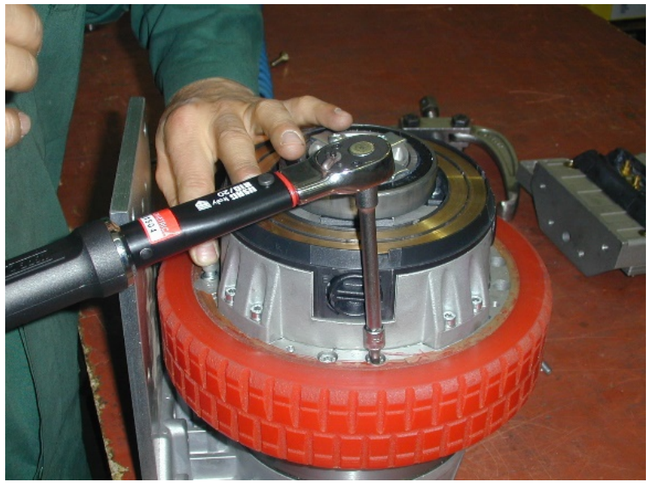
7. Loosen wheel bolts (8x)



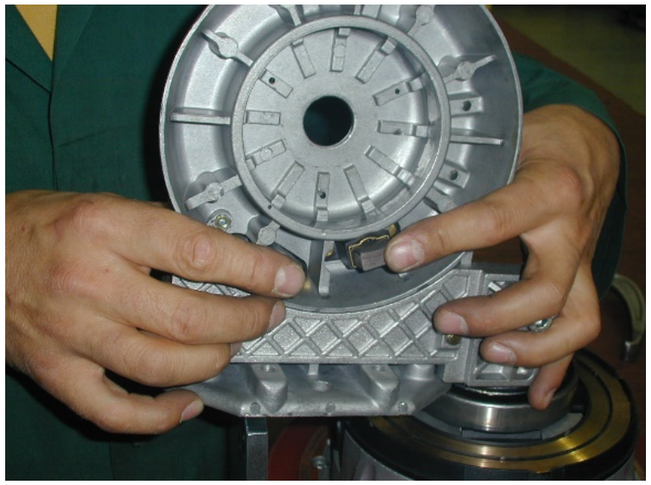
8. Pull of the wheel tyre

9. Check slip ring for condition and cleanliness

10. Put new wheel tyre on. Screw cross-wise the wheel bolts, hand tight

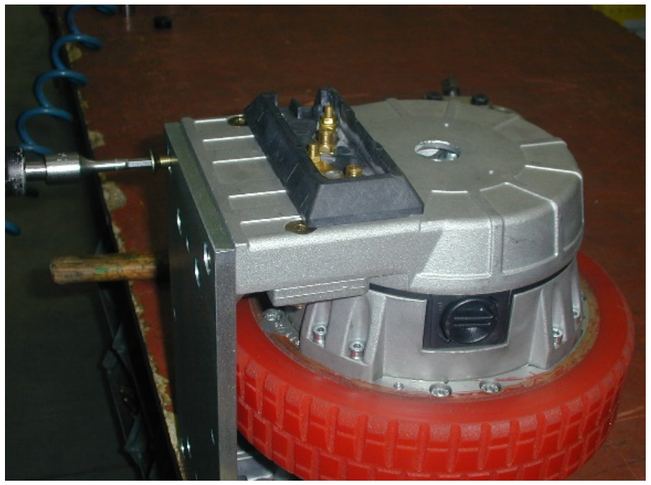


11. Fasten the wheel bolts crosswise with 16Nm



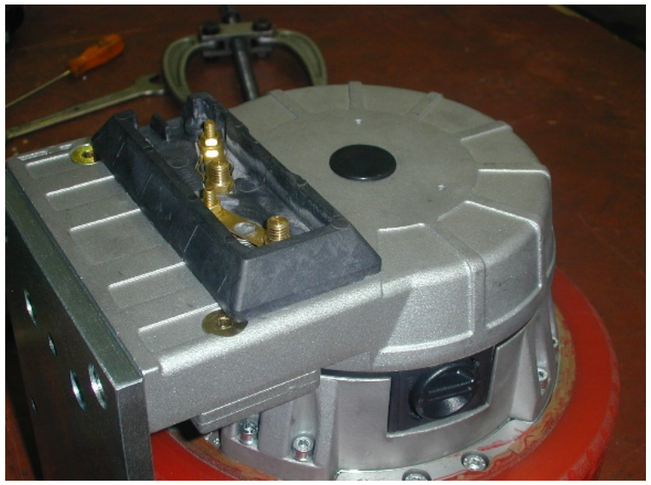
12. Check carbon brushes for wear and easy mobility in the brush holder

13. Put on brush flange straight to the drive motor shaft



14. Thighten fastening plate

15. Verschlußstopfen in die Bohrung setzen



16. The maintenance is completed. The drive could be assembled to the machine

4. Drive

Engine variation 900 V (6502.10)

Till S/N 650210525062

Air-cooled single-cylinder 4-stroke petrol engine with 3.7 kW at 2800 $^{1}/_{min}$ with electric starter

Manufacturer:	Briggs & Stratton
Type:	Intek Pro 6,5 HP Typ 122037 0168 Trim B8

from S/N 650210525073

Air-cooled single-cylinder 4-stroke petrol engine with 3.3 kW at 2500 $^{1}/_{min}$ with electric starter

Hersteller:	Briggs & Stratton
Typ:	Vanguard 6,5 HP Typ 13L337 0002 Trim F8

Nominal speed :	(with the broom, side broom and extraction fan switched on) 2475 ± 25 $^{1}/_{min}$

Engine variation 900 V (6502.15)

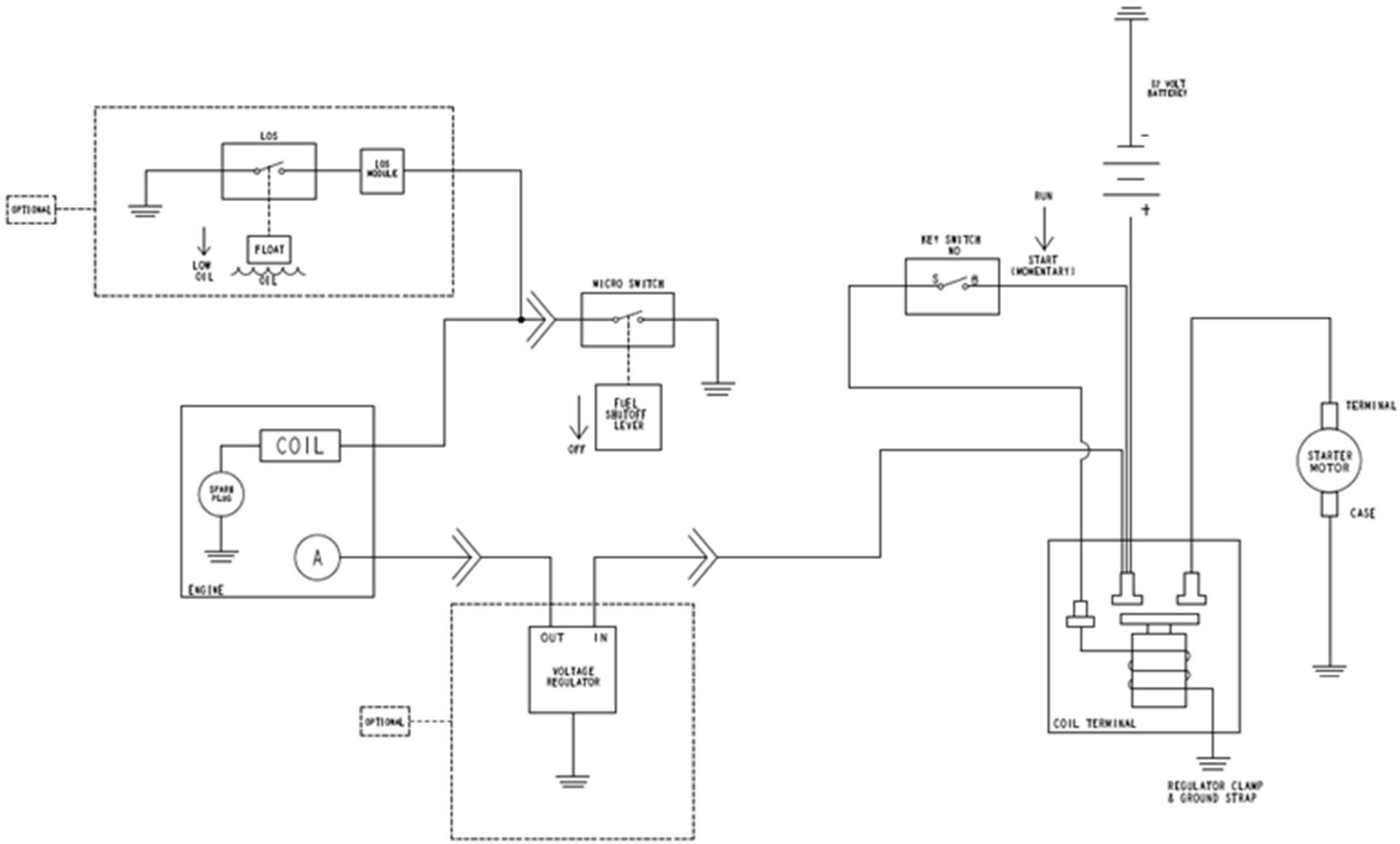
Air-cooled single-cylinder 4-stroke petrol engine with 3.7 kW at 2800 $^{1}/_{min}$ with electric starter

Manufacturer: Briggs & Stratton

Type: Vanguard 6,5 HP Typ 12V337 0032 Trim F1

The engine is equipped with an oil deficiency switch, which switches off the engine if the engine oil level is too low

Circuit diagram electric Briggs&Stratton



5. Hydraulic

General

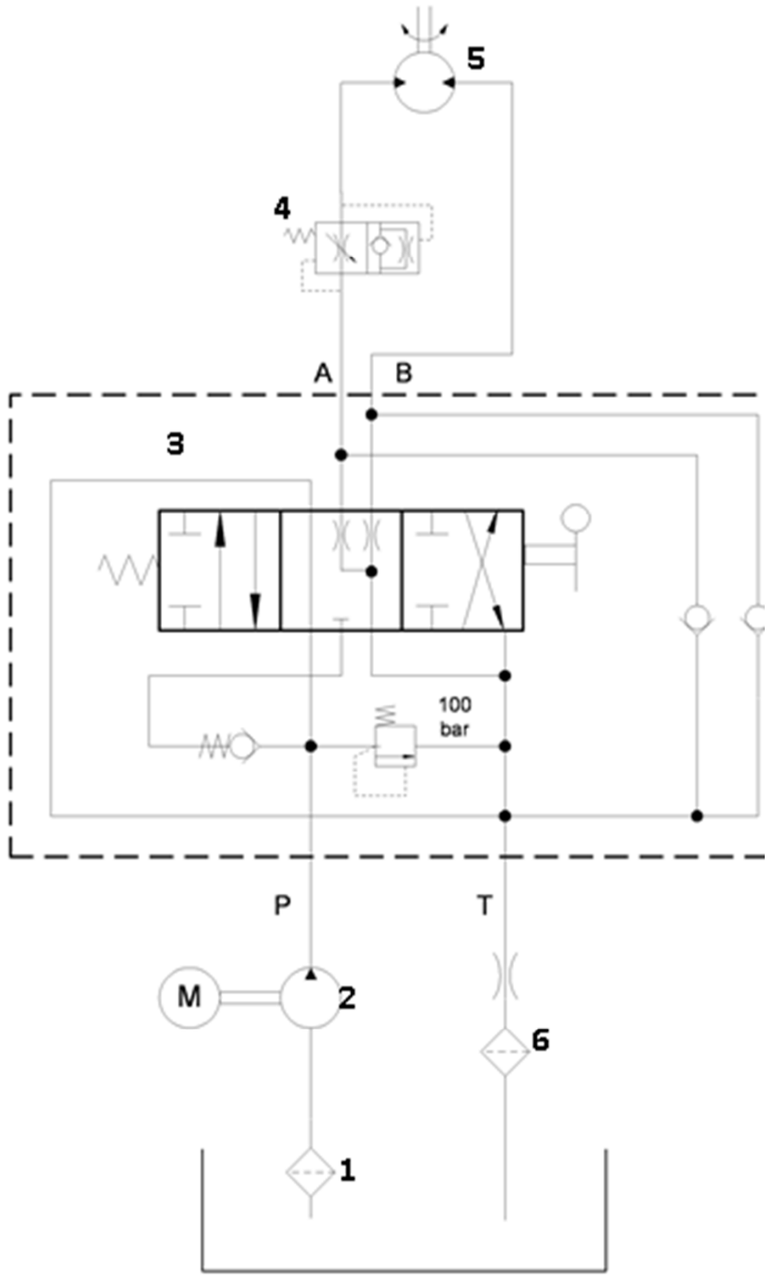
The hydraulic units are maintenance-free.
Maintenance work focuses on oil and filter changes to keep the system clean.
With regular monitoring and periodic maintenance, premature failures can be prevented.

Brief description of travel drive Jonas 900 V/VH

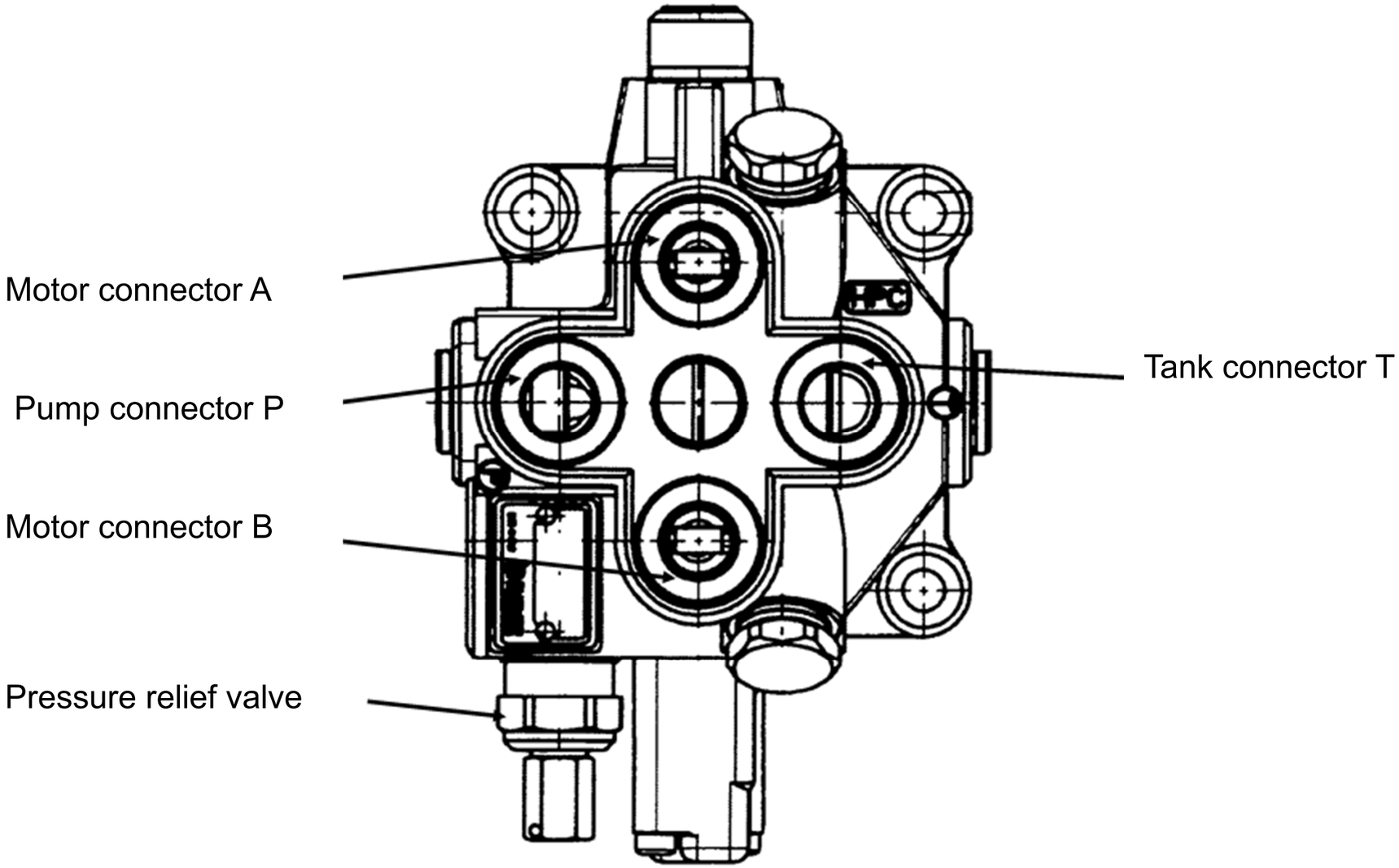
The machine is equipped with a hydrostatic drive system that works in an open system. The driving speed is continuously adjustable forward and backward by the accelerator pedal. It is mechanically to a directional control valve with integrated flow divider connected. The automatic reset to the zero position results in a dynamic braking and self-locking to prevent the machine from rolling unintentionally.
If it becomes necessary to move the machine while the engine is stopped, the accelerator pedal must be pressed in the direction of movement.
To protect the pump, the pressure limitation is factory set to 100 bar.

Hydraulic schematic travel drive

1. Suction filter
2. Fixed displacement pump
3. Valve block
4. Pipe break device
5. Travel motor
6. Return filter



Travel pump


Motor connector A
Pump connector P
Motor connector B
Pressure relief valve
Tank connector T

6. Electric

Safety notes

Always disconnect the battery (negative pole) when working on the engine and the electrical system

Notes for the three-phase alternator

1. Only run the engine with the battery connected

2. Do not use a charger to jump start

3. Disconnect the battery from the device when recharging or performing electric welding

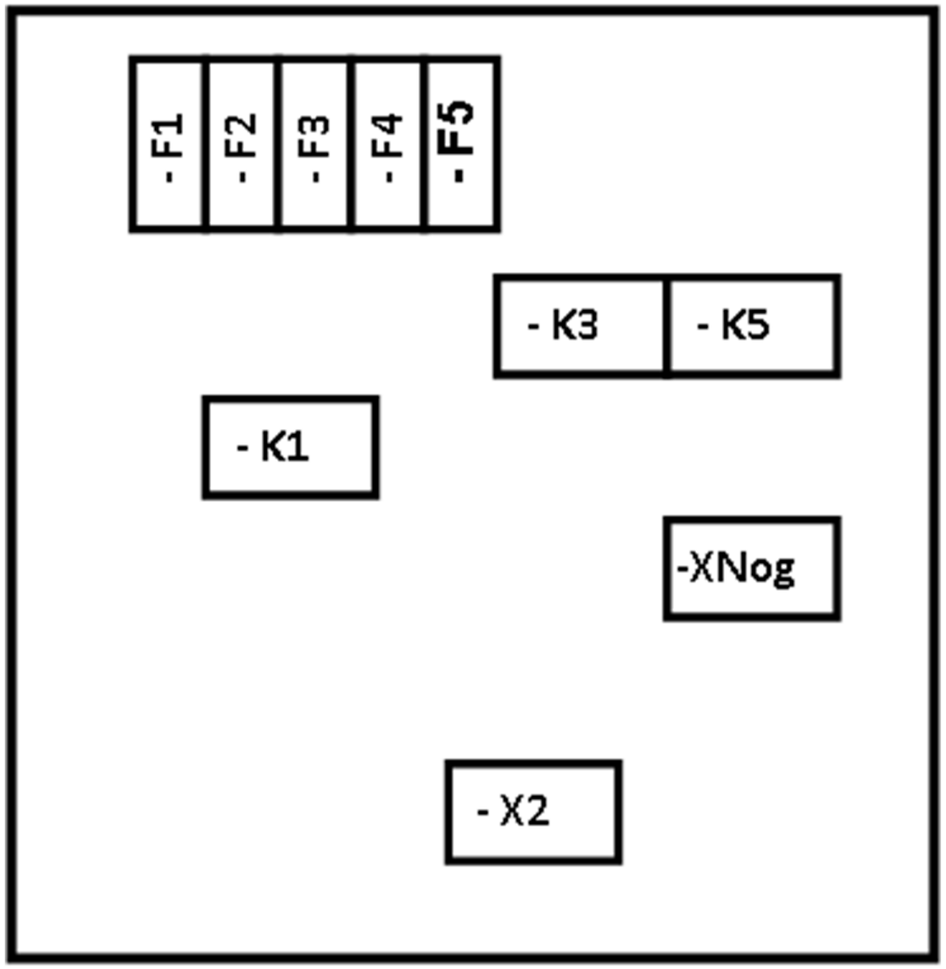
View relay board 900 V

The relay board with the components listed below is located under the seat hood

F1 : 30 A Shaker motor
F2 : 20 A Starter; Pre-fuse (F3, F4, F5)
F3 : 5 A Engine switch off; hour meter
F4 : 5 A Controller, shaker
F5 : not used

K1 : Relay, starter
K3 : Relay, engine switch off (off delayed)
K5 : Relay, power shaker motor

X2 : Connector 15 pin
Xnog: Connector 1 pin



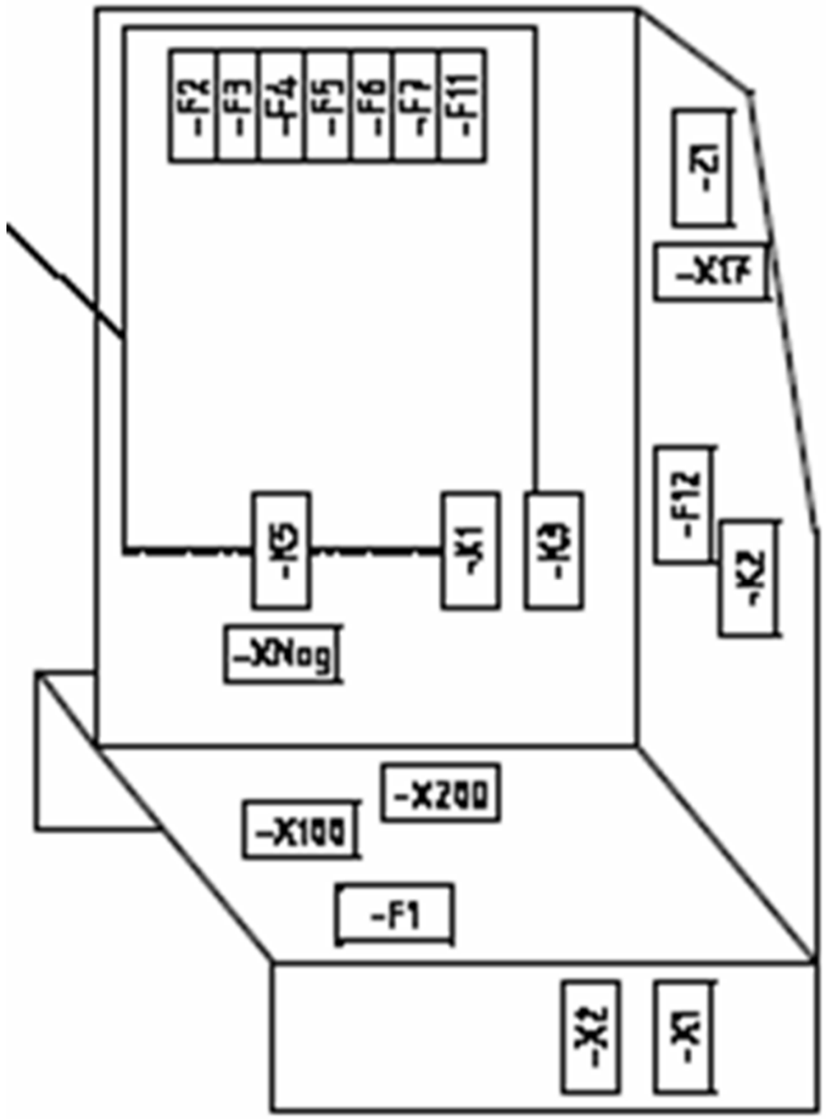
View relay board 900 E

The relay board with the components listed below is located under the seat hood

F1 : 63 A Power section drive controller
F2 : 20 A Pre-fuse (F3, F4, F5, F6)
F3 : 10 A Drive controller
F4 : 5 A Controller shaker
F5 : not used
F6 : 5 A Display LDS
F7 : 5 A Speed reduction; Controller central motor
F11: 30 A Shaker motor
F12: 60 A Central motor

K1 : Relay, speed reduction (Multimode)
K2 : Relay, power central motor
K3 : Relay, controller central motor; controller shaker
K5 : Relay, power shaker motor

Z1 : LDS



LDS description for Jonas 900 E till SN 650220121681

The task of the device is to protect the battery from deep discharge while making full use of the available capacity. The battery voltage is constantly monitored and compared with the resting voltage. It is necessary to set the correct characteristic curve on the battery using the plug contacts 6 and 7.

Connection 6 – 7 open =

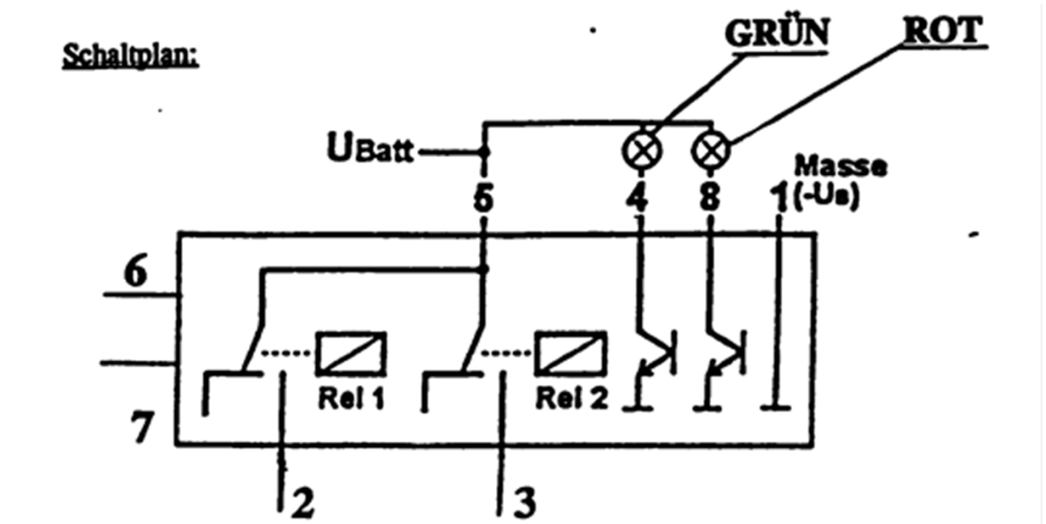
- maintenance-free sealed battery (Gel)

Connection 6 – 7 closed =

- low-maintenance closed battery (wet, PzS)

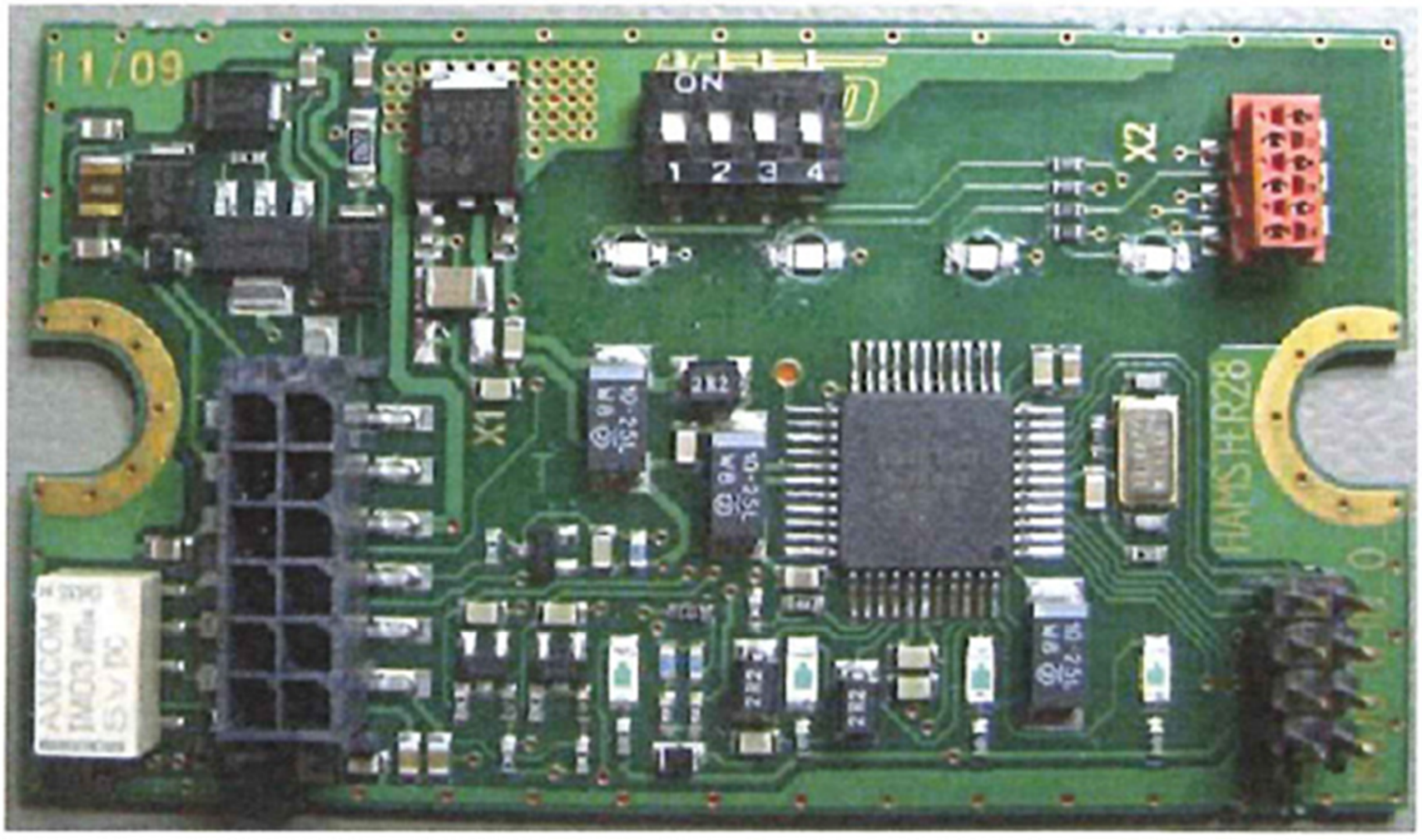
Connection 6 – 7 bridged with 7,5 kΩ =

- low-maintenance closed battery (wet, GiS)



When the battery is properly charged, relays 1 and 2 are closed

LDS description for Jonas 900 E from SN 650220121691



The TSG is mounted below the control panel at the steering column. The battery type can be programmed using the DIP switches. Since currently only one type of battery is offered, it is pre-programmed at the factory.

Description travel drive 900 E

The drive motor is powered by the electronic traction control.
With the accelerator pedal, the driver selects the direction of travel using the corresponding microswitch in the first section of the lever travel. The driving speed is subsequently entered into the driving control using the continuously variable potentiometer that is common to forward and reverse travel.
The speed for reversing is reduced to 60% even when the potentiometer in the driving electronics is fully deflected.
The thermally monitored traction motor and the TSG cause the travel speed to be reduced by 50% if the battery overheats or has a low charge level. Further emptying causes this function to be switched off.
When driving on inclines, please remember that the system is designed for trips lasting 1 minute and an incline of 12%.
Larger inclines or longer trips on less steep passages also lead to overloading and thus to the drive being switched off.

Driving control diagnostics

If an error occurs when commissioning the control or during operation, some errors are recognized by the control and indicated via the display or the flashing code of the LED (new control).

For diagnosis, the seat switch must be bypassed, as the unactivated switch displays the error code “A12”.

Alarm Code	Alarm description	Description	Wiring	Troubleshooting
1x flash	Forward switch closed at power-ON	Controller has detected the forward switch ON while the key-switch is switched ON	A1.X1PIN14 to X1PIN14 to X3PIN4 at S3PIN1 Switch.fct. S3 PIN1 to 2 (OPEN); PIN1 to 4 (CLOSED) S3PIN4 to X3PIN5 to X1 PIN12 at A1.X1PIN12	Check the forward switch Check the wiring of the forward switch
2x flash	Backward switch closed at power-ON	Controller has detected the backward switch ON while the key-switch is switched ON	A1.X1PIN14 to X1PIN14 to X3PIN4 at S2PIN1 Switch.fct. S2 PIN1 to 2 (OPEN); PIN1 to 4 (CLOSED) S2PIN4 to X3PIN6 to X1 PIN13 at A1.X1PIN13	Check the backward switch Check the wiring of the backward switch
3x flash	Potentiometer fault	Controller has detected that the potentiometer (signal) voltage is higher than maximum range	A1.X1PIN1 (5V) to X1PIN1 to X3 PIN1 at R1PIN1 (Power) and A1.X1PIN3 (GND) to X1PIN3 to X3 PIN3 at R1PIN3 (GND) R1PIN1 (0,5 - 4,5V) to X3PIN2 to X1 PIN2 at A1.X1PIN2 (Signal)	Check potentiometer for correct wiring
4x flash	Potentiometer out of neutral position at power-ON	Controller has detected the potentiometer (signal) voltage is out of neutral position while the key-switch is switched ON	A1.X1PIN1 (5V) to X1PIN1 to X3 PIN1 at R1PIN1 (Power) and A1.X1PIN3 (GND) to X1PIN3 to X3 PIN3 at R1PIN3 (GND) R1PIN1 (not equal to calibration value) to X3PIN2 to X1 PIN2 at A1.X1PIN2 (Signal)	Move the potentiometer to neutral position or if it is in neutral position, calibrate the potentiometer neutral setting
5x flash	Thermal protection	Heatsink temperature is higher than 85°C	/	Power-off, wait few minutes Check motor power consumption (90A (B900R) or 120A (B980R/RH))
6x flash	Controller's power stage damaged	Controller's self-check has detected a failure on internal power-stage	/	If the controller repeats this alarm, change it

Alarm Code	Alarm description	Description	Wiring	Troubleshooting
7x flash	Overcurrent (short circuit)	Controller has protected itself, cause of an external short circuit	A1.M(PIN1) at M1.PIN(A2) and A1.M2(PIN2) at M1.PIN(A1)	Check the motor's wires Check internal motor resistance If ok and the controller repeats this alarm, change it
8x flash	Power fuse or on-board contactor damaged	Controller detects a failure on the external power fuse or power connections	G1.PIN(P) to X0PIN(P) to F1.PIN1/PIN2 at A1.PIN (B+) and A1.PIN(B-) to X200 to X0PIN(N) at G1.PIN(N)	If the controller repeats this alarm and the power connections are o.k., change it
9x flash	Undervoltage	Battery voltage lower than value set by parameter (< 18V)	G1.PIN(P) to X0PIN(P) to F1.PIN1/PIN2 at A1.PIN (B+) and A1.PIN(B-) to X200 to X0PIN(N) at G1.PIN(N)	Check battery's charge. Check your parameter settings: if the controller repeats this alarm, change it
10x flash	Overvoltage	Battery voltage higher than 45V	/	Check the battery status
11x flash	Overload protection	/	A1.M(PIN1) at M1.PIN(A2) and A1.M2(PIN2) at M1.PIN(A1)	Check the motor power consumption (25A max. 60s long)
12x flash	Disable switch on	Controller is disabled	A1.X1PIN8 (only if A1.X1PIN5 (24V)) to K3.PIN86 and K3.PIN85 to A1.X1PIN7 Required feedback: X200 to K3.PIN30 Switch.fct. K3.PIN30 to 87a (not switched => GND = deactivated); PIN30 to 87 (switched => A1.PIN6 OPEN)	Check wiring to A1.X1PIN6 Eliminate reason for deactivation. Then reset with key switch OFF-ON
13x flash	Key-off sequence detected	Key switch was opened	G1.PIN(B+) to X0PIN(B+) to X100 to F2PIN1/2 to X2PIN1 to S1PIN(BAT) Switch.fct. S1 PIN(BAT) ... (OPEN); PIN(BAT) to PIN1+2(CLOSED) S1 to X2PIN3 to F3PIN1/2 at A1.X1PIN15	Check the key switch wiring
14x flash	Internal memory fail	/		If the controller repeats this alarm, change it
15x flash	No release	No signal from seat contact	G1.PIN(B+) zu X0PIN(B+) zu X100 zu F2PIN1/2 zu X2PIN1 zu S1PIN(BAT) Schaltfkt. S1 PIN(BAT) … (OFFEN); PIN(BAT) zu PIN1+2(GESCHLOSSEN) S1 zu X2PIN zu F3PIN1/2 zu X1PIN4 zu X5PIN1 an S5… (OFFEN); (GESCHLOSSEN) zu X5PIN2 zu X1PIN5 an A1.X1PIN5	Check wiring of seat contact switch and seat contact switch

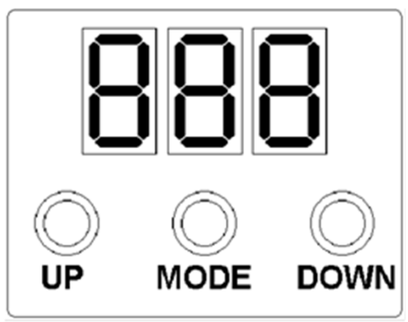
Driving control settings

From February 2022 to October 2023, the new driving control 01116810 only needs to be installed. It can only be calibrated with an additional tool (03503540). It normally does not require any parameterization or calibration!
From October 2023, “on-board” calibration will be possible again. Parameterization is still not necessary.

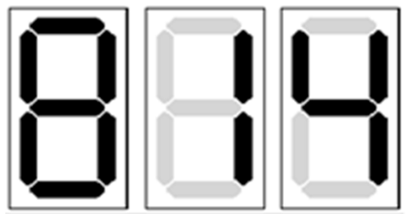
The control parameterization may only be carried out by trained, authorized Hako employees. An incorrect setting can lead to a defect in the control system and significant machine malfunctions, which can result in uncontrolled driving behavior.

Driving control settings (valid till Februar 2022)

There are 3 buttons below the 7-segment LED display. Programming is initiated by pressing the “**MODE**” button and the first parameter “F0” appears on the display. The “**UP**” key is used to select the next larger parameter (F1, F2 ...), and the “**DOWN**” key is used to select the next smaller one. If the parameter to be adjusted is selected, it must be activated by pressing the “**MODE**” button. The setted numerical value of the selected parameter can be read on the display.
If you are not yet in programming mode, when you press the “**UP**” or “**DOWN**” buttons, the display jumps immediately to the password entry level with the display “**F00**” or “**100**” and the left digit flashing.



Password only for potentiometer setting :

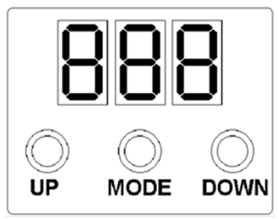


The first flashing digit of the 3-digit password can be selected with the “**UP**” and “**DOWN**” buttons and confirmed with the “**MODE**” button. The flashing middle digit is entered and confirmed in the same way. After entering and confirming the right number, the display returns to the last parameter or to “**F0**” if the password is entered correctly.
If one of the 3 digits has been entered incorrectly, the process must first be completed totally until the “**Err**” display appears briefly after confirming the last digit with “**MODE**”. In this case, the entire procedure must be repeated

In order to be able to program the control, the seat contact must be bridged. In some cases, the 5-pin plug from relay K3 in the machine must also be removed beforehand.

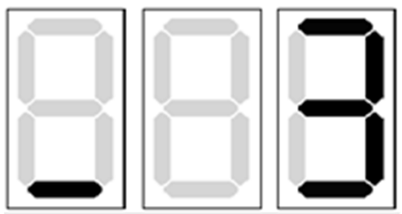
The previously selected parameter “**F..**” appears in the display after the correct password has been entered. By pressing the “**MODE**” button, the numerical value of the parameter is called up.
The numerical value of the selected parameter can now be increased or reduced using the “**UP/DOWN**” buttons.
The change to the parameter must be confirmed by pressing the “**MODE**” button. The display then returns to the selected parameter “**F..**”.

The parameter mode can be exited immediately by pressing the “**MODE**” and “**UP**” buttons simultaneously. After about 20 seconds, it will end automatically without pressing a button. The control is then in operating mode.

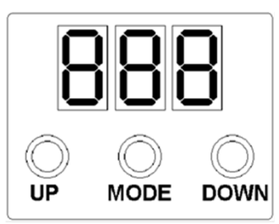


If the control or the drive potentiometer is replaced, the control must be adapted to the potentiometer

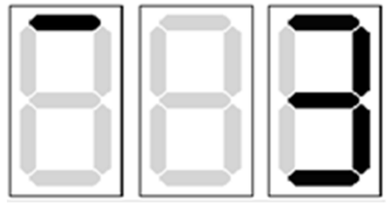
1. Press the “**MODE**” key and select the parameter “**F20**” using the “**UP**” key and confirm with “**MODE**”
   (Attention: if you are not yet in the programming level, the display switches to password mode)
2. Set the numerical value of “**F20**” to the value “**1**” using the “**UP**” key
3. Use the “**DOWN**” button to select parameter “**F10**” and confirm with the “**MODE**” button
4. The value “**0**” must then appear on the display. Otherwise, use the “**UP/DOWN**” button to set the value to “**0**” and confirm with “**MODE**”
5. “**F10**” appears on the display again
6. While “**F10**” appears on the display, press the “**UP**” and “**DOWN**” buttons simultaneously for a few seconds until the display changes.



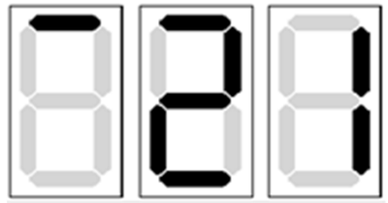
A "**-**" (Minus) is displayed in the lower area of the left LED segment display, and the potentiometer voltage between "**0...5**" is displayed in the right LED segment display.Diesen Wert bei Neutralstellung des Fahrpedal mit der „**MODE**“ – Taste bestätigen.



7. Display changes. A "**-**" (Minus) is displayed in the upper area of the left LED segment display. The right LED segment display shows the potentiometer voltage between “**0...5**”.



8. Deflect the accelerator pedal in the forward direction as far as it will go. The display now shows a value between “**10...30**” displayed. When the accelerator pedal is at maximum deflection, confirm with the “**MODE**” button

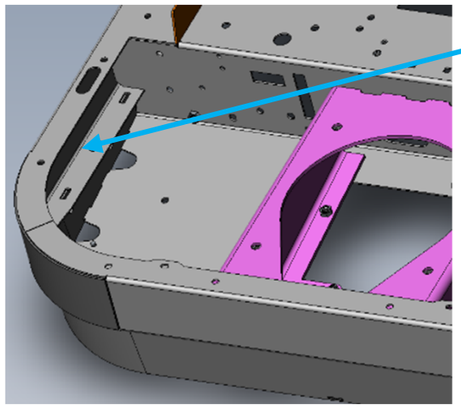


9. Display automatically switches back to “**F0**”. The potentiometer has been read in.
10. The programming mode is automatically deactivated after 20 seconds, or can be left immediately by pressing simultaneously using the “**UP**” and “**MODE**” buttons. (if necessary, plug the 5-pin plug back into relay K3)
11. Switch the machine off and on again, check the function of the direction of travel and speed

*If parameters have been changed unintentionally, the parameter “**F0” = “2**” can be used to reset the control to the delivery status. The driving potentiometer needs to be read in again.*

Driving control settings (valid from Oktober 2023)

- Insert the adapter plug 03026580 into the cable set W8 plug between X3.

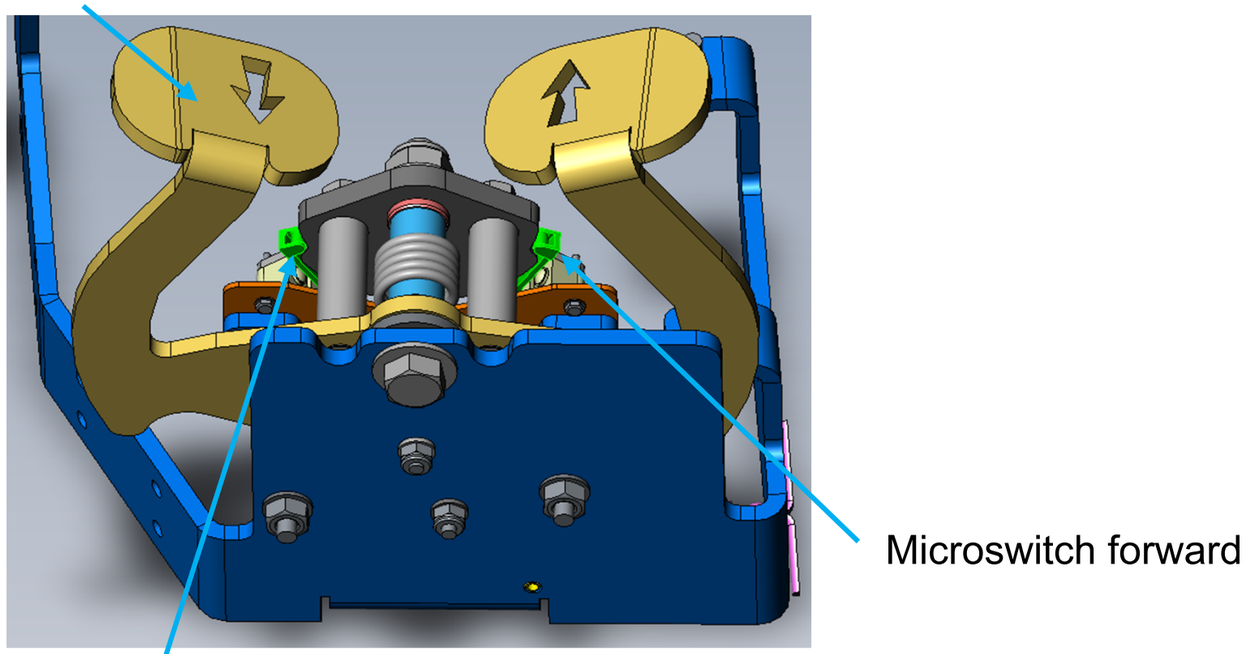


- Press the pedal forward “fully”
- Key switch to “ON”
- The “max speed parameter” is set automatically
- Release pedal forward. The value of the neural position is set
- Key switch to “OFF”. The two values are saved
- Remove the adapter plug between X3 and plug directly X3 together.

For operator information only, when the pedal value is read and refers to “Maximum Speed”, the red alarm LED will start flashing rapidly until the process is complete (power off).

Alternative driving control settings (valid from Oktober 2023)

- Press the pedal forward “full” (the microswitch is actuated forward)



- Operate the reverse microswitch manually
- Key switch to “ON”
- The “max speed parameter” is set automatically
- Additionally hold the forward microswitch with your hand
- Release pedal forward. The value of the neural position is set
- Key switch to “OFF”. The two values are saved

For operator information only, when the pedal value is read and refers to “Maximum Speed”, the red alarm LED will start flashing rapidly until the process is complete (power off).

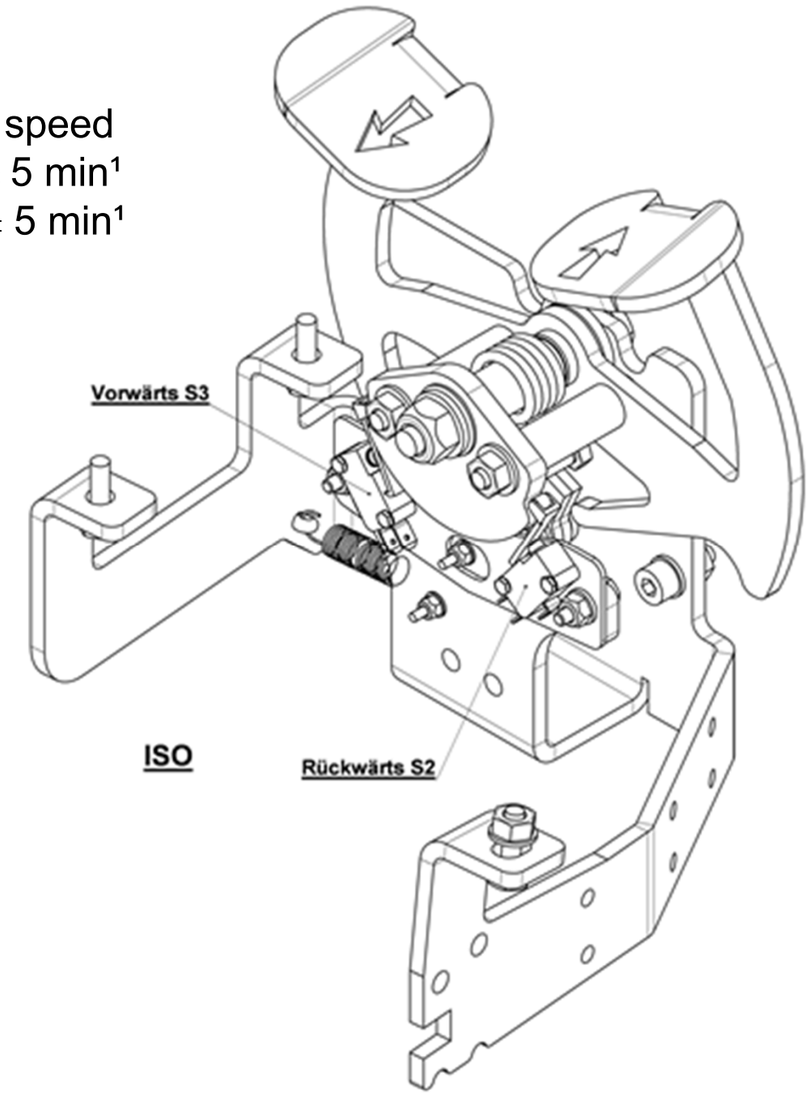
Drive pedal

Drive motor:

		nominal current	wheel speed
Blocking current	target:	90 ± 5 A	
forward	target:	17 ± 3 A	110 ± 5 min¹
revers	target:	12 ± 2 A	65 ± 5 min¹

Central motor:

Nominal current target: ≤ 40 A
(Main- and side broom switched on)



7. Service

See the following pages:

- SWM P900R
- SWM B900R

SWM P900R

Work step	once after 5h	once after 100h	every 100h	add. every 200h	add. every 500h
Change engine oil	X		X		
Check engine for oil leakage			X		
Check engine rpm				X	
Clean air filter element			X		
Change air filter element				X	
Check v-belt tension	X				
Check v-belt for wear and tension			X		
Change fuel filter				X	
Check spark plug			X		
Change spark plug				X	
Check valve clearance				X	
Check battery			X		
Check service and parking brake			X		
Check the treads of the wheels				X	
Check hydraulic oil level			X		
Check hydraulic system for leakage			X		
Check hydraulic hoses				X	
Change hydraulic oil		X			X
Change hydraulic oil filter					X
Check main broom for wear and damage			X		
Check sweeping pattern			X		
Check broom aprons (sealing strips) for clearance, wear and damage			X		
Check side broom for wear and damage			X		
Check filter system for leak-tightness			X		
Basic cleaning of plate filter			X		
Change plate filter					X
Check wires and plug connections for ease of movement, wear and corrosion				X	
Check function of seat contact				X	
Function test of machine			X		

SWM B900R

Work step	once after 5h	once after 100h	every 100h	add. every 200h	add. every 500h
Clean machine		n.a.	X		
Check LDS adjustment	X	n.a.			
Check charger adjustment	X	n.a.			
Check battery charging status		n.a.	X		
Clean and grease battery terminals		n.a.	X		
Check the carbon brushes of the electric motors for ease of movement and wear. Remove carbon dust		n.a.			X
Check wires and plug connections for ease of movement, wear and corrosion		n.a.		X	
Check v-belt tension	X	n.a.			
Check v-belt for wear and tension		n.a.	X		
Visual inspection of wheel tyre		n.a.		X	
Check service and parking brake		n.a.	X		
Check main broom for wear and damage		n.a.	X		
Check sweeping pattern		n.a.	X		
Check broom aprons (sealing strips) for clearance, wear and damage		n.a.	X		
Check side broom for wear and damage		n.a.	X		
Check filter system for leak-tightness		n.a.		X	
Basic cleaning of plate filter		n.a.	X		
Change plate filter		n.a.			X
Check function of seat contact		n.a.		X	
Function test of machine		n.a.	X		