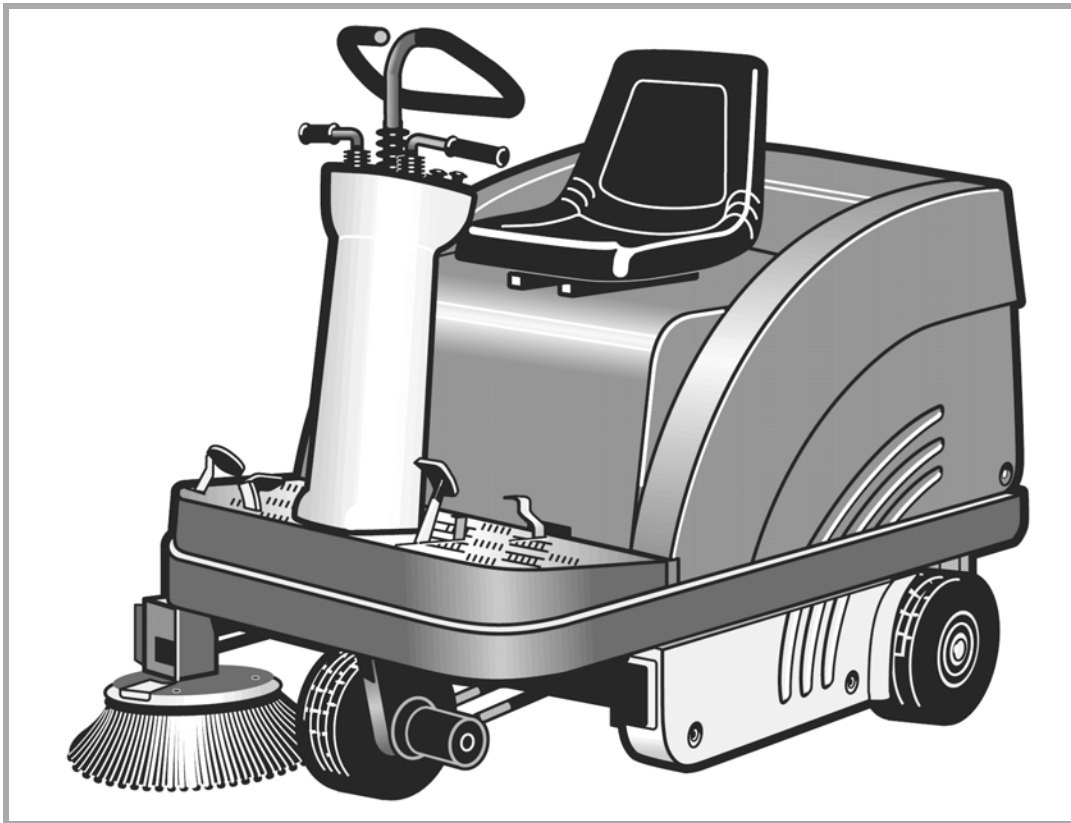


Kleen Sweep 40R/47R

Model: HM40B, HM47B, HM40BQP, HM47BQP, HM40QP, HM50QP

Parts & Instruction Manual



Minuteman[®]

Introduction

Dear customer,

It is our desire that the good characteristics of the Kleen Sweep 40R/47R should justify the confidence you demonstrated by making this purchase. We did our best to supply you with an efficient and dependable machine. Before first operation of your Kleen Sweep 40R/47R, read these instructions carefully. The manual provides valuable information about service and maintenance. The symbol



as used in this manual identifies items relevant to safety. Please make sure to forward all safety instructions to other operators.

Observe the safety information listed in chapter 1.



Before first operation of the machine, read these instructions and safety information carefully and comply with them.

Please be advised explicitly that we cannot accept any legal issues out of the contents of this manual.

If repair work has to be performed make sure that only genuine spare parts are used; only genuine spare parts may guarantee a dependable machine and ill make sure that your rights under current warranty are not affected.

We reserve the right for technical improvement.

Valid as of: January 2005

Proper Use

Proper Use

The Kleen Sweep 40R/47R has been exclusively designed for collecting dry and moist matter from floor surfaces in e.g. factories, storage buildings, parking ground and pedestrian areas. Using the machine beyond this scope of application will be deemed improper use; The manufacturer cannot be held liable for consequential damages. The term of proper use also includes operation, maintenance and repair work to be performed in compliance with the manufacturer's specifications. The Kleen Sweep 40R/47R may be used, serviced and repaired by personnel only that are familiar with the machine and aware of possible hazards involved. Accident Prevention Regulation, Road Traffic Regulations, and aspects of safety and working medicine will have to be complied with. If modifications to the machine are made in absence of the manufacturer's prior consent, the latter cannot be held

liable for damage resulting from such unauthorized modification.



The machine has not been designed for collecting dusts which are detrimental to health or explosive dusts.

Notes on warranty

The terms of the sales contract apply. Damages are not subject to warranty if they are due to non-compliance with the maintenance and service provisions. The maintenance work has to be performed by an authorized service center. The following is excluded from warranty: Natural wear and tear after overload and damages caused by inexperienced handling and unauthorized modification of the machine. Moreover, any claim for warranty cannot be accepted if damages at the machine are caused by fitting parts or accessories without prior and

explicit consent or by non-compliance with the maintenance instructions.

Inspection

Carefully unpack and inspect your Kleen Sweep 40R/47R for shipping damage. Follow unpacking instructions on shipping pallet. Each unit has been tested and thoroughly inspected before shipment. Any damage is the responsibility of the delivery carrier who should be notified immediately.

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1 Safety Information

1.1 General Safety Information

Apart from the instructions contained in this manual, the general safety instructions and accident prevention regulations, as imposed by law will have to be complied with. Do not put the Manual aside without reading it even if you used similar sweepers before. Take the time to read them now and save time later. It will be of essence to make yourself familiar with all accessories and controls, as well as their functions, before you start working. Take time to read now and save time later.

Machines with known defects must not be used.

Prior to operation make yourself familiar with all systems and controls and "where they arrive". Avoid the mess of having to read this book while trying to run the machine.

Using the machine in areas with explosion hazard, on public roads and places is prohibited.

The operator has to use the machine

within its design limits.

Shut the motors down before transporting the machine.



Keep clear of hazard zone!

Before commencing work, the operator has to make sure that the Kleen Sweep 40R/47R and its accessories are in proper and safe condition.

Warning and instruction labels attached to the machine contain important information about safe operation. Illegible or lost labels have to be replaced.



Make sure that all covers are fitted before starting to sweep.



When sweeping in closed rooms, provide for sufficient ventilation.

Safety Information

1.2 Safety and Warning Symbols

All paragraphs in this manual referring to your personal safety, the safety of your machine and the environment protection are attributed one of the following warning symbols:

1.2.1 Generally Applicable Symbols




| Symbol | Hazardous for | Description |
|---|-------------------|--|
| DANGER  | persons and goods | dangerous situation caused by misuse inaccurate adherence of instructions or prescribed work routine |
| CAUTION  | the machine | important information on handling the machine in order to maintain operability |
| Ecological hazard  | the environment | due to use of substances representing an inherent danger to health of environment |

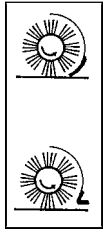
Table 1 Versions of used safety and warning symbols

Safety Information

1.3 Labels at the Machine

The following safety and information signs are legibly attached to the machine. Missing or illegible stickers have to be replaced.

Folding apron (1)



Parking brake(2)

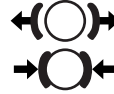


Nameplate, front and rear(3)

Read and observe operator's Manual (5)



Brake (6)



Sound power level (7)
86dB (A) Kleen Sweep 40R/47R

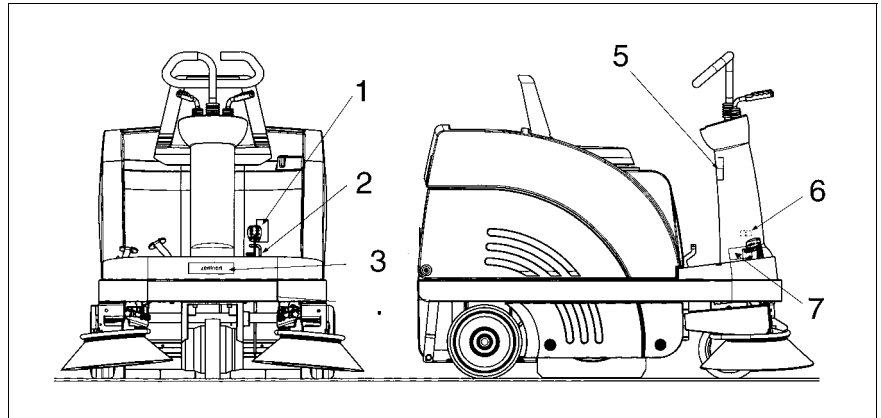


Fig. 1 Safety and information signs

Safety Information

1.3.1 Kleen Sweep 40R/47R Signs

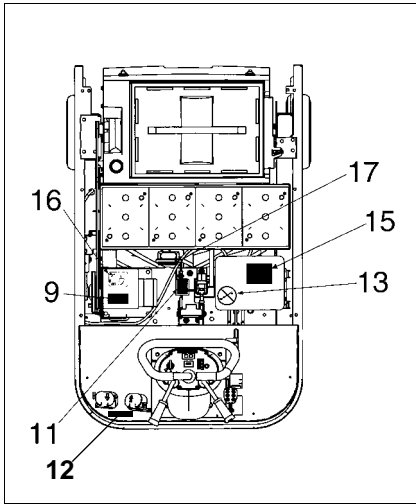
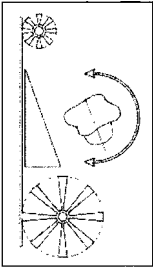


Fig. 2 Safety and information signs

Rotating parts (9)



Cylinder broom wearing take-up (11)

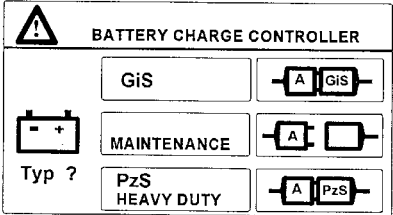


Nameplate (12)

24 V sticker (17)



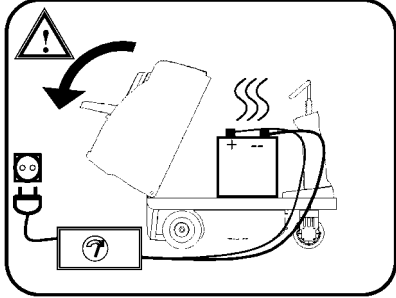
LDS battery setting (15)



Safety Information

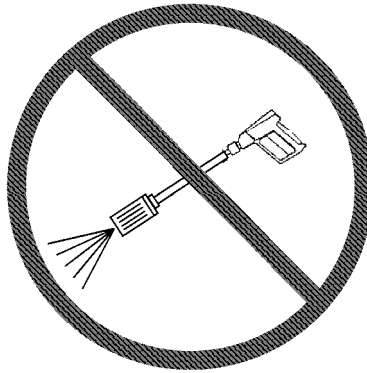
Kleen Sweep 40R/47R Signs Continued

Battery charging (16)



Keep seat hood opened during complete battery charging procedure.

High-pressure cleaner (13)



Do not clean with high-pressure cleaner or vapour jet.

This machine operates on 24 Volt DC.
Batteries:
PN 956740 4 x 6V 275 AH
Charger:
PN 957731 24VDC, 20 Amp 120VAC

1.4 Operation/Safety Information

Vacuum sweepers may be run by qualified personnel only; such personnel will have to have evidenced their qualification for running the machine to the owner or his authorized representative; operators explicitly will have to be instructed by the owner or his authorized representative to use the machine.



The machine may be used for cleaning such surfaces approved by the owner or this authorized representative for operation of vacuum sweepers.



Before starting the engine, switch off all drives.

Transporting persons on the machine is prohibited. Ride-on machine types are to be started with the driver being sea-

ted.

Never leave the machine unattended before the motors are off and the machine is protected against unintended movements.

To prevent the machine from unauthorized use, pull the control key to block all drives.

Shut down the motors before transport of the machine. During driving the operator has to take account of local conditions and when working he has to watch out for other persons, especially children.



Shut down the engine before opening the hood or fairings.



This machine must not be used as dust-evacuating machine with dust filter insert (separator) to collect dusts which are hazardous to health.



Compared to four-wheeled vehicles, driving stability of three-wheeled vehicles is reduced. We thus recommend:

- **do not negotiate curves at high speed.**
- **do not turn at slopes but on level ground only.**
- **ride up- or downhill straight.**



Warning and instruction labels attached to the machine contain important information about safe operation.



Provide for sufficient ventilation when sweeping indoors.



Proceed to filter shaking only after having closed the dirt hopper.



Do not open the hood with the engine running.

1.5 Cleaning Information

The specific safety instructions for handling drive batteries apply. Before proceeding to cleaning of the machine, pull the ignition key.

The machine is splash-proof (IPX3).



Do not clean the Kleen Sweep 40R/47R with high-pressure cleaner or vapour jet.



Proceed to cleaning of the dirt hopper in regular intervals to preclude formation of bacterial deposits.

1.6 Maintenance Instructions

A good approach to prevention of accidents is proper maintenance of the machine.

Before proceeding to repair or maintenance work remove the ignition key.

Use appropriate tools for maintenance, service, setting etc.

As far as aspects of safety are concerned, spare parts will have to be at least of the same quality as the genuine spare parts.



Before changing wheels protect the machine against rolling by placing blocks. Proceed to wheel changing when the machine is on level and solid ground.



When handling lubricating agents, the applicable regulations for protection of the environment and prevention of fire have to be complied with. Provide for disposal of used oil and grease in accordance with the provisions imposed by law.



Do not repair the pneumatic tires mounted to the machine yourself. Dismount the wheel and take it to repair by professionals.



Collect cleaning agents, oil, fuel oil, grease etc. and provide for adequate disposal. Wipe away spilled substances.



Switch off the motors before maintaining the machine or replacing parts of it.



Use of other than the cylinder brooms and side brushes approved by the manufacturer is not acceptable (see technical data) since use of other cylinder brooms and side brushes may affect your safety.



Check hydraulic lines and hoses for damages and leakage in regular intervals; replace defective hoses and lines immediately!

Safety Information



Before commencing any work on the electrical system disconnect the battery plug of the Kleen Sweep 40R/47R.



Do not place metal objects or tools onto batteries. Short-circuit and deflagration hazard.



Do not keep batteries discharged for a longer period; always recharge them as soon as possible.



Spilled (straight) battery acid must not get into the sewage system before having been neutralised. Comply with the regulations imposed by law and observe local provisions.



protective clothes (e.g. protective gloves or finger-stalls) when handling battery acid. Do not use open flames (explosion hazard).



Top with distilled water only. Never refill battery acid in battery cells of perfect condition.



Battery acid is highly caustic (keep clear of children).

Do not eat, smoke or drink in rooms where batteries are charged to avoid damaging your health. After work with batteries wash your hands thoroughly. Provide for sufficient ventilation.



Open the hood before charging batteries; generation of explosive gas!

When checking the battery acid level, wear safety glasses. If acid splashes get into the eyes rinse with clear water for 15 minutes and contact a doctor immediately.



Keep batteries dry and clean and clear of soiling such as e.g. metallic dust to avoid leakage current.

Wear appropriate pro-

2 Description

2.1 Functional Description

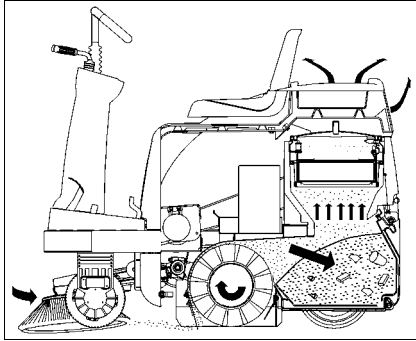


Fig. 3 Principle of Kleen Sweep 40R/47R

The side brushes are used to collect dirt at borders and to enlarge the working width as well as to increase the area performance at large spaces. The cylinder broom transports the debris into the dirt hopper. The suction fan vacuums the fine dirt which is separated by a filter system. The air returned into the environment is clean.



This sweeper operates dust-free.

2.2 Cylinder Broom

The cylinder broom is equipped with six rows of bristles arranged in V-shape.

The cylinder broom width amounts to 27.56 in. (700 mm) and its diameter 13,58 in. (345 mm).

2.3 Side Brush

The standard version, the side brush is located at the front right. The operator lifts and lowers it by hand lever.

The side brush is to have a light inclination.

The pivoting area of the side brush arm is limited by stop screws.

The side brush is driven by V-belt.

For special application, fitting of a second side brush at the left is possible.

Description

2.4 Filter System / Dust Evacuation

The filter system is located in the filter case above the dirt hopper. The suction filter transports the fine dust raised by the cylinder broom to the plate filter and separated there. The fine dusts sets at the outsides of the filter blades.



In case of heavy dusting, check and clean the plate filter at regular intervals.

2.5 Shaking System

Due to normal working vibration the set dust partly falls off into the dirt hopper.

To ensure working in a dust-free environment, however, actuate the shaking system regularly.

2.6 Steering

Steering is controlled from steering wheel to front wheel via fork head.

2.7 Wheels

Front wheel : Solid tires

Rear wheels: Solid tires

2.8 Brake

The Kleen Sweep 40R/47R is equipped with a service brake.

This brake has been constructed as shoe brake and equally serves as parking brake.

It is located at the rear wheels and is actuated via cables.

A special adjustment screw is situated at the right-hand rear wheel.



Works at the braking system have to be executed by qualified persons in a qualified workshop only.

2.9 Traction Drive Assembly

The Kleen Sweep 40R/47R is equipped with an electric drive assembly with continuous regulation.

3 Battery Systems



Before commencing any work on the electrical system disconnect battery plug of the Kleen Sweep 40R/47R. Do not use open flames when handling batteries and especially when checking the battery acid level. Provide for sufficient ventilation in rooms where batteries are charged. Spilled (straight) battery acid must not get into the sewage system before having been neutralised. Comply with the regulations imposed by law and observe local provisions.

3.1 Low Discharge Signal Sender

PzS/PzB: Connection 6-7 closed = low-maintenance wet battery (956740)

GiS: Connection 6-7 bridged with 7.5kΩ = low-maintenance wet battery

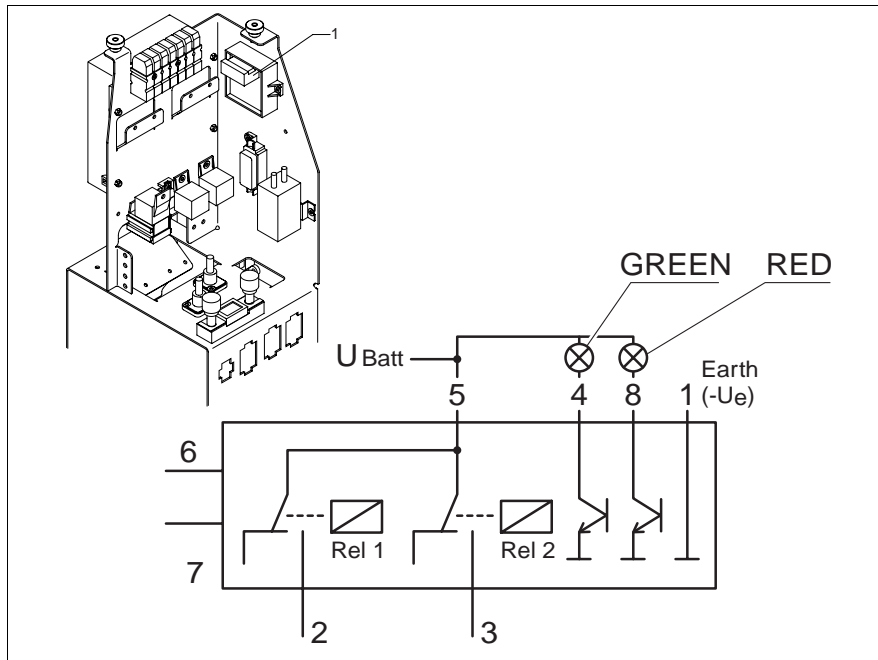


Fig. 4 Low discharge signal sender (LDS)

4 First Operation

Before delivery, the machine has been extensively tested and submitted to a functional check.

Only qualified personnel of your local contract dealer are allowed to proceed to first operation. After shipping of the machine, we advise your contract dealer. He will contact you to make a date for briefing lessons.



Since batteries and charger units are matched, we recommend using batteries and chargers as prescribed by Minuteman. We grant full warranty only for these devices.

4.1 First Operation of Batteries

In order to attain an optimum of performance and service life of the battery, proceed to an initial charging following the filling.

The operating instructions enclosed to each charger unit describe in detail operation and function of the chargers.



Do not use the Kleen Sweep 40R/47R at ambient temperatures of more than 104°F (40°C). Do not start the machine at temperatures of 32°F (0°C) or less.

4.2 Insert Batteries

- Turn engine off and remove key.
- Secure machine by engaging the parking brake.
- Fold back seat hood.
- Insert batteries according to draft into the battery tray:

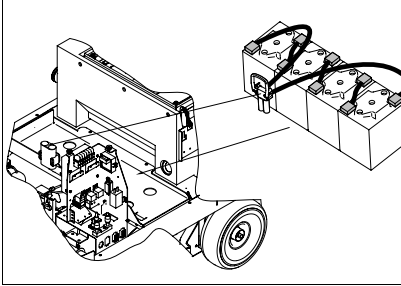


Fig. 5 Insert batteries-A

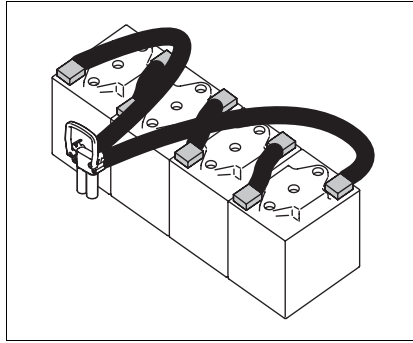


Fig. 6 Insert batteries-B

- Connect batteries and cable set according to terminal diagram.
- Battery type at the low discharge signal sender (see 3.1)
- Connect charging plug of the battery connection cable and cable of the charger unit and proceed to initial charging.
- After charging of the batteries, connect charger plug and device plug for electrical connection.
Now the Kleen Sweep 40R/47R is operable.

5 Operation

5.1 Kleen Sweep 40R/47R Controls

1. Actuator for folding apron
2. Service brake/parking brake lock
3. Service brake/parking brake pedal
4. Drive pedal, reverse
5. Drive pedal, forward
6. Control panel
7. Seat adjustment

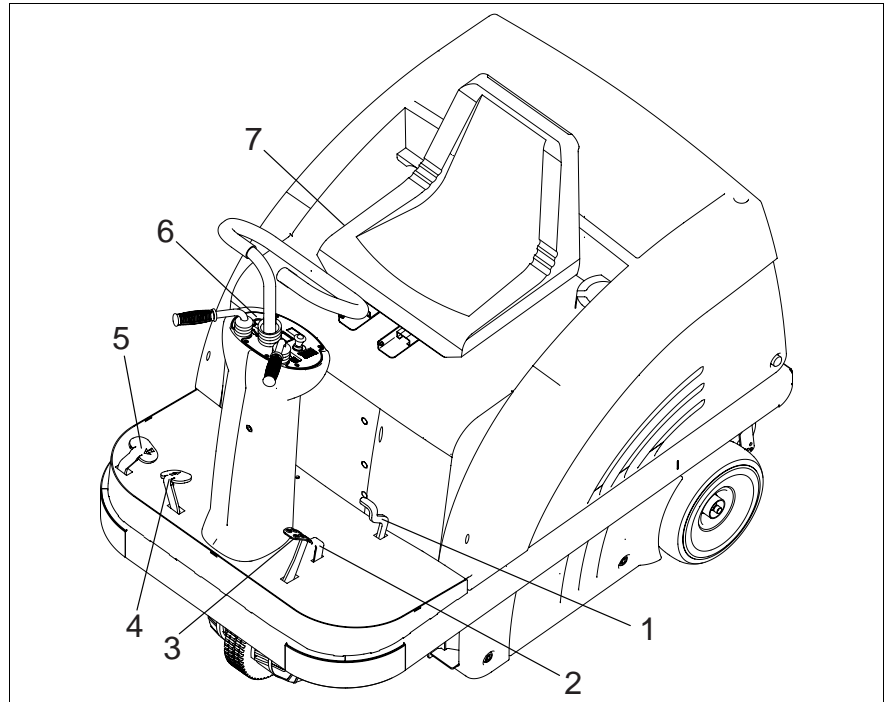


Fig. 7 Controls

- 1 Actuator for folding apron**
to open and close the folding apron for collecting coarse dirt.
- 2 Service brake/parking brake lock**
to lock the service brake. If locked, the service brake works as parking brake. Release the lock by depressing the brake pedal (3).
- 3 Service brake/parking brake pedal**
to actuate the service brake at the rear wheels. Before leaving the machine unattended, engage the service brake and lock.
- 4 Drive pedal, reverse**
to change direction to reverse ride and with continuous regulation of velocity at the same time. If the driver lets the pedal go it returns to initial position and the machine slows down to standstill.
- 5 Drive pedal, forward**
to change direction to forward ride and with continuous regulation of velocity at the same time. If the driver lets the pedal go it returns to initial position and the machine slows down to standstill.
- 6 Control panel**
Refer to chapter "Control panel".
- 7 Seat adjustment**
to adjust the seat position to drivers of different height.

5.2 Kleen Sweep 40R/47R Control Panel

1. Suction fan/shaking system knob
2. Cylinder broom lever
3. Side brush lever
4. Key switch
5. Hourmeter
6. Battery charge status

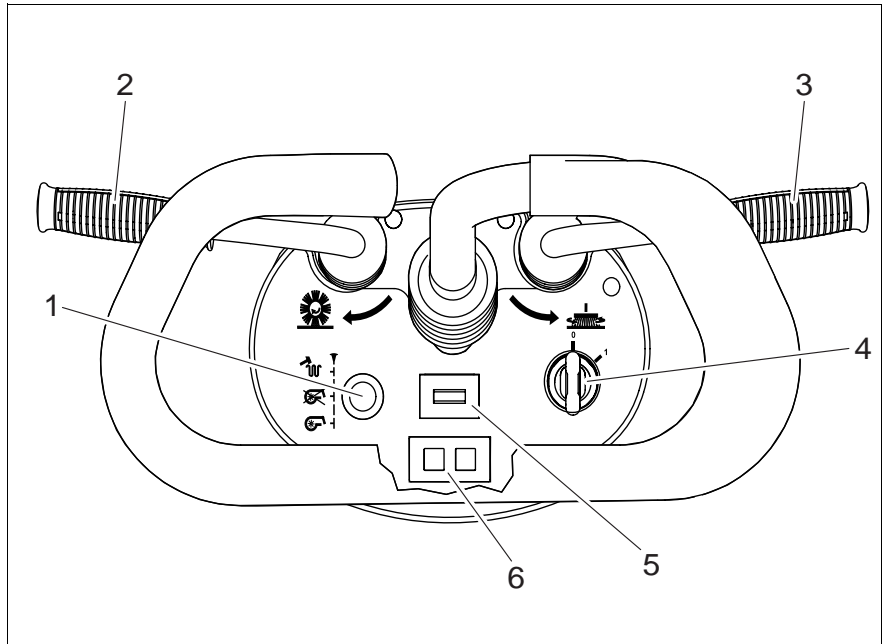
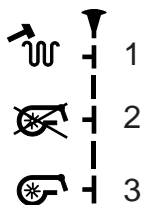


Fig. 8 Kleen Sweep 40R/47R control panel



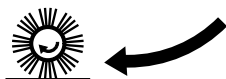
1 Suction fan/shaking system knob

Knob position (from top to bottom position):

- 1 Shaking system ON (hold knob).
- 2 Deactivated vacuuming function (flap has to be opened before sweeping wet surfaces and collecting wet dirt).
- 3 Activated vacuuming function (flap has to be closed before sweeping dry surfaces or collecting dry dirt).

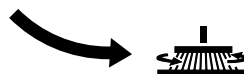


Turn off main broom before jolting. Filter cleaning is improved by interrupting the jolting procedure several times. Turn off the combustion engine of the Kleen Sweep 40R/47R.



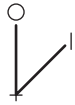
2 Cylinder broom lever

- to lift and lower as well as to switch on and off the cylinder broom and the side brush.
- Lower cylinder broom as well as switch on cylinder broom and side brush = push lever.
 - Lift cylinder broom as well as switch off cylinder broom and side brush = pull lever.



3 Side brush lever

- to lift and lower the side brush.
- Lower side brush = push lever.
 - Lift side brush = pull lever.



4 Key switch

to switch the electric system on and off, to secure the machine against unauthorised use as well as to acknowledge released seat contact switch.



For safety reasons, the Kleen Sweep 40R/47R is equipped with a seat contact switch. Starting the engine is possible only when the driver is seated. If the seat contact opens while the electro-motor runs, the key switch of the Kleen Sweep 40R/47R has to be turned off and on again.



To protect the electro-motors, do not start the Kleen Sweep 40R/47R at ambient temperatures of 32°F (0°C) and less.



5 Hourmeter

to indicate the operating hours. The counter works with the driver being seated and if ignition is switched on.



6 Battery charge status

to indicate the status of battery charge.

Green case:
battery charged, Kleen Sweep 40R/47R is operable

Red case:

- flashing red light: ride the machine to recharging at 50% driving speed. After this delay has elapsed, the rush motor is stopped.
- permanent red light: discharging status of the machine attained; riding is still possible at reduced speed only, but no operation.

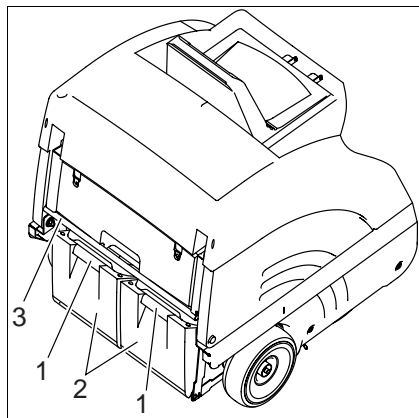


Fig. 9 Emptying dirt hopper

- 1. Recessed grip in dirt hopper
- 2. Dirt hopper
- 3. Bow to lift/lower dirt hoppers

5.3 Empty Dirt Hoppers



Lift cylinder broom before removal of the dirt hoppers.

- Fold bow (Fig. 9/3) up and the dirt hoppers (Fig. 9/2) are lowered.
- Use the recessed grip (Fig. 9/1) of one of the hoppers to lift it lightly and extract it.
- Take the hopper at its bow-type handle to disposal and empty.
- Empty second dirt hopper as described above.
- Re-insert dirt hopper (Fig. 9/2) and fold down the bow (Fig. 9/3).



Clean dirt hoppers at regular intervals.

5.4 Working With the Kleen Sweep 40R/47R

The driver is requested to carefully read this operator's manual. All controls are marked with easy-to-understand symbols that ease familiarization. First driving attempts should be limited to clear areas until you are familiar with all controls and their functions.



Please comply with the following safety provisions:

When working with the Kleen Sweep 40R/47R all safety measures generally applicable for handling vehicles and fuels have to be observed. No passenger transport admitted with the Kleen Sweep 40R/47R. Warning and instruction labels attached to the machine contain important information about safe operation



5.4.1 Switch Electro-Motor On and Off



and guarantee your personal safety. Before commencing work, the operator has to make sure that the machine and its accessories are in proper and safe condition and comply with the provision for safety at work. Do not operate the Kleen Sweep 40R/47R without protective devices.

When leaving the machine unattended, remove ignition key to avoid unauthorized use.

For safety reasons, the Kleen Sweep 40R/47R is equipped with a seat contact switch. Starting the engine is possible only when the driver is

seated. If the seat contact opens while the electro-motor runs, the key switch of the Kleen Sweep 40R/47R has to be turned off and on again.

- Set all levers and switches to neutral.
- Engage parking brake.
- Turn key switch to "I".



Make sure that the drive pedal is in neutral position.

5.4.2 Sweep

- Lower cylinder broom.
- Release parking brake.
- Slowly depress drive pedal until desired speed has been attained.
- Regularly actuate shaking device to clean filter.
- Check contents of the dirt hopper and empty if required.



Initially, the vacuuming function is inactive. Open the flap when sweeping wet surfaces and collecting wet dirt.

5.4.3 Stop and Park

- Release drive pedal (returns automatically into its neutral position and the machine slows down to near standstill) and actuate service brake.
- Actuate parking brake.
- Lift main and side brush.
- Turn key switch to "O".



Remove the key before leaving the machine unattended.

6 Technical Data

| Kleen Sweep 40R/47R | | | |
|--|--------------------------------|--|------------------------|
| Dimensions and weights | | | |
| Length with side brush | in. (mm) | | 59.8 (1520) |
| Width with 1 side brush | in. (mm) | | 44.1 (1120) |
| Height above steering wheel | in. (mm) | | 52.8 (1340) |
| Empty weight – serviceable | lb (kg) | | 992 (450) |
| | | | (acc. to battery type) |
| Empty weight – without batteries | lb (kg) | | 705 (320) |
| Driving and sweeping performance | | | |
| Forward speed | mph (km/h) | | 3.7 (6,0) |
| Reverse speed | mph (km/h) | | 2.5 (4,0) |
| Sweeping speed (recommended: 2,5 mph (4,0 km/h)) | mph (km/h) | | 3.7 (6,0) |
| Sweeping track without side brushes | in. (mm) | | 27.6 (700) |
| - with 1 side brush | in. (mm) | | 38.2 (970) |
| - with 2 side brushes | in. (mm) | | 48.8 (1240) |
| Theoretical sweeping perf. without side brushes | sq. ft./ h (m ² /h) | | 45 210 (4200) |
| - with 1 side brush | sq. ft./ h (m ² /h) | | 62 430 (5800) |
| - with 2 side brushes | sq. ft./ h (m ² /h) | | 80 190 (7450) |
| Gradability, max. (for 1 min.) | % | | 12 |

Technical Data

| | | | |
|---|---|--|--|
| Kleen Sweep 40R/47R | | | |
| Filter system Filtering surface Plate filter | sq. ft. (m ²) piece | | 30.14 (2.8) 1 |
| Cylinder broom Length Diameter Wearing limit (approx.) Speed Sweeping track Quantity of bristle rows Serial bristling | in. (mm) in. (mm) in. (mm) rpm in. (mm) | | 27.6 (700) 13.6 (345) 11.4 (290) 530 ± 20 2.0 + 0.2 (50 + 5) 6 v-shape PES |
| Ground clearance of sealing strips at broom compartment Sealing strips, left right rear Sealing strip, front | in. (mm) in. (mm) in. (mm) | | 0.04 (1) 0.04 (1) 0.16 (4) with contact to the floor |

Technical Data

| | | | |
|--|--------------------------|--|---|
| Kleen Sweep 40R/47R | | | |
| Side brushes Diameter Speed Serial bristling | in. (mm) rpm | | 18.1 (460) 90 PES |
| Dirt hopper Hopper volume | cu. ft. | | 2x1.1 (2x30) |
| Drive wheels Pneumatic tires with tube: tire size Inflation pressure Solid tires Tire | in. in. (mm) | | 4.00 - 4 Ø 9.84 / 2,36 (Ø 250 / 60) |
| Electric drive Service voltage Travel drive assembly Suction fan motor / sweeping motor Total power consumption | DC / V KW KW KW | | 24 0.6 0.75 1.9 |

Technical Data

| | | | |
|---|---|--|----------------|
| Kleen Sweep 40R/47R | | | 9 |
| Noise emission The sound power level according to DIN EN ISO 3744, measured under standard operating conditions and maximum volume flow amounts to | dB (A) | | 86 |
| Vibrations The frequency weighted acceleration measured according to EN 1033 which have an effect upon the lower limbs (hand-arm-system) amounts under normal working conditions The frequency weighted acceleration measured according to EN 1032 which have an effect upon the lower limbs (feet and seat) amounts under normal working conditions | ft / s ² (m / s ²) | | < 8.07 (< 2.5) |
| | ft / s ² (m / s ²) | | < 1.64 (< 0.5) |

7 Maintenance/Service

7.1 Maintenance Instructions

Compliance with our recommendations concerning maintenance work will give you the certitude of having an effective and dependable machine at your disposal.

It is better to take precautions than repairing damages – and it saves money!



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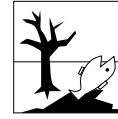
Please contact your local distributor if you cannot do the maintenance works as prescribed in the maintenance schedule in-house. He will have these works done for you and has qualified personnel at disposal.

In case of questions or orders for spare parts, please always have your machine's chassis and engine's serial on hand. You will find the serial on the data plate which is located on the chassis at the left of the air cleaner.



When cleaning or servicing the machine, or replacing parts, have the engine stopped, the key removed and the service brake (parking brake) engaged.

**Kleen Sweep 40R/47R:
disconnect battery plug.**



Wipe away spilled oil and fuel and provide for adequate disposal of these substance.

Use appropriate tools for servicing, maintenance and adjusting work only. Spare parts at least will have to be of the same quality as genuine parts are. Do not remove or install tires or repair a rim. Take the wheel and rim to a service centre where qualified personnel and the required specific tools are available.

Before commencing any work on the electrical system disconnect the negative lead of the battery or disconnect the battery plug.

7.2 Mount/Dismount Cylinder Broom

The cylinder broom is accessible from the left side of the machine and is to be dismantled as follows:

- Lower cylinder broom
- Remove ignition key and protect by engaging parking brake
- Open lateral flap
- Remove cover

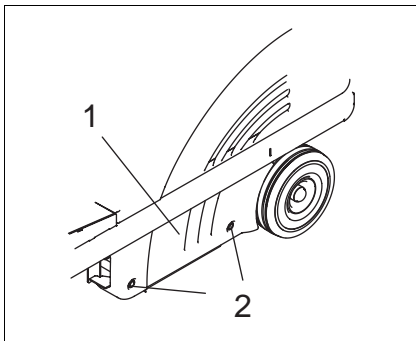


Fig. 10 Remove cover

Key for side cover
Part # 00071900

- Open locks (Fig. 10/2) by enclosed square spanner (counter-clockwise)
- Remove cover (Fig. 10/1)

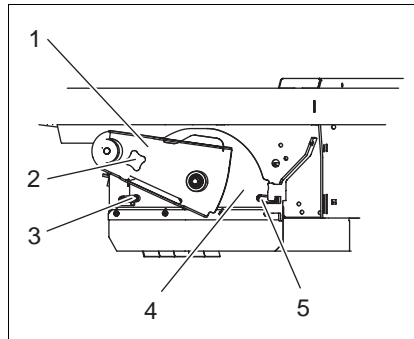


Fig. 11 Dismount Cylinder broom

- Loosen star knob (Fig. 11/2) and remove
 - Remove cylinder broom seating (Fig. 11/1)
 - Turn handle (Fig. 11/3 + 5) upwards and unlock
 - Remove plate with sealing strip (Fig. 11/4)
 - Remove cylinder broom by pulling.
- For mounting the cylinder broom pro-

ceed in inverse order.

7.3 Adjust Sweeping Track

An adjustment device allows adaptation to the different sweeping conditions.

The cylinder broom is to adjust according to normal use and with regard to a low degree of wearing as described in the following.

Check the broom adjustment on level ground as described in the following:



Before checking:

- Mark level surface for broom adjustment check by chalk.

- Lower cylinder broom and let it run dry.
- Lift cylinder broom and forward the Kleen Sweep 40R/47R a bit.
- With the correct broom adjustment the parallel sweeping marks have to appear on the floor (sweeping track).

The sweeping track width is to be 1.97 in. (50 mm) with the Kleen Sweep 40R/47R.

The sweeping track width can be adjusted by the star knob (Fig. 12/1) as follows:

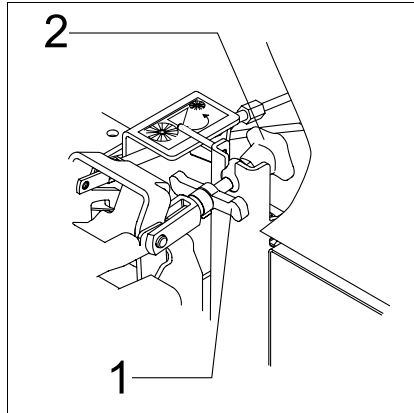


Fig. 12 Broom adjustment

- Open seat hood
- Loosen handle (Fig. 12/1)
- Turns star knob (Fig. 12/2)
- Fix handle (Fig. 12/1)
- to the left = wider sweeping track
- to the right = smaller sweeping track



With one turn of the knob, the track widens or broadens by approx.



**0.37 in. (10 mm).
When exceeding the sweeping track width, the engine protection may be activated.**

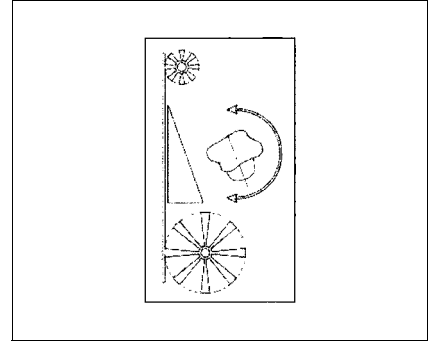


Fig. 13 Sweeping track adjustment

7.4 Sealing Strips for Broom Compartment

In order to assure good function of the sweeper, a perfect condition of the sealing strips is required, especially in order to attain the prescribed vacuum in the broom compartment, a clean sweeping result and the less possible wear of the sealing strips (check the sealing strips of the broom compartment for wearing and damages in regular intervals).

Replace defective sealing strips.

The ground clearance of the lateral and of the rear sealing strips is adjustable (oblong holes in the sealing strips).

Ground clearance =

sides: approx. 0.04 in. (1mm)

rear: approx. 0.16 in. (4mm).

Proceed to adjustment at the Kleen Sweep 40R/47R with the battery set being mounted

Height of the front sealing strip (at folding apron) cannot be adjusted. Being dragged, it has contact with the floor.

7.4.1 Folding Apron Adjustment

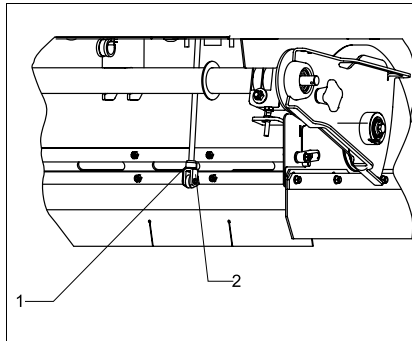


Fig. 14 Adjust folding apron

- Turn engine off and remove key
- disconnect battery plug
- Remove cover (as described in the paragraph "Mount/Dismount Cylinder Broom").
- Remove bolt (Fig. 14/2).
- Modify adjustment by turning the fork head (Fig. 14/1).

Modify adjustment such that the cylinder broom does not retract the sealing strip of the folding apron during operation.

7.5 Replace Side brush

The side brush is located at the front right of the machine (standard version). Use the lever (Fig. 10/2) to lift and lower the side brush. The side brush is to be lightly inclined in forward and in outward direction. The pivoting area of the side brush arm is limited by stop screws. The side brush is driven by a V-belt. Fitting of a second side brush for specific appliances is possible.

Proceed as follows for dismounting of the side brush:

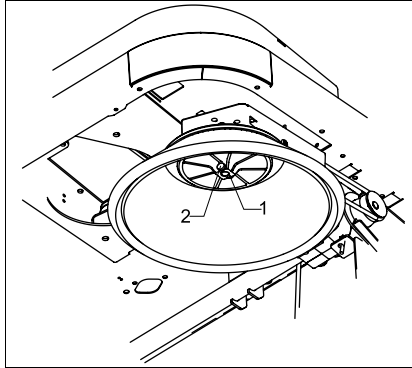


Fig. 15 Replace side brush

- Turn engine off and remove key.
- Secure machine by engaging parking brake
- disconnect battery plug
- Remove right-hand cover (as described in the paragraph "Dismount/ Mount Cylinder Broom").
- Side brush lifted
- Loosen hexagonal nut (Fig. 15/1) und remove together with washer
- Remove bolt (Fig. 15/2)
- Remove side brush

Proceed in inverse order for mounting of the side brush.

7.6 Dismount Plate Filter

Proceed as follows for dismounting of the plate filter:

- Open seat hood.
- Remove cover.
- Loosen fillister head screws (Fig. 16/2) and remove.
- Fold back frame with electro-motor (Fig. 16/3).
- Hook frame at indicated position (Fig. 16/4).
- Remove plate filter (Fig. 16/5).

For mounting of plate filter proceed in inverse order.

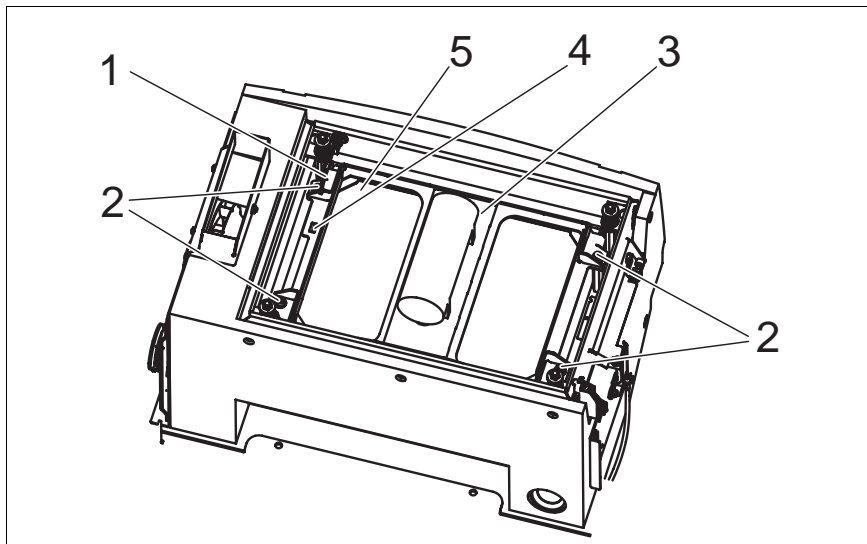


Fig. 16 Plate filter

1. Detent hook
2. Fillister head screws
3. Frame with electro-motor
4. Opening holding the detent hook
5. Plate filter

7.7 Basic Cleaning of Plate Filter

Hold the plate filter (Fig. 17/1) in vertical position and let it fall down from a height of 3 ft. (1 m) to the even floor as represented in Fig. 19.



The soiled side of the filter has to point to the bottom.

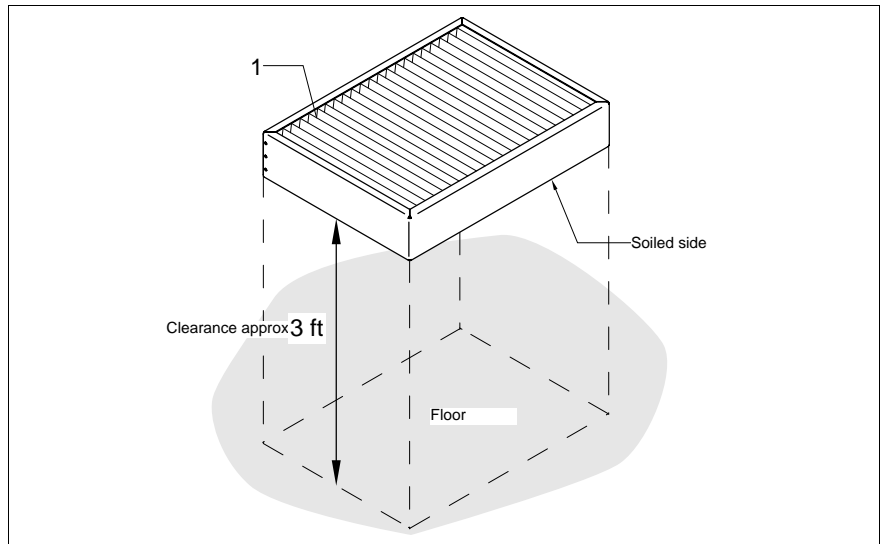


Fig. 17 Basic cleaning of plate filter

7.8 Electrical System

Circuit-breakers and fuses

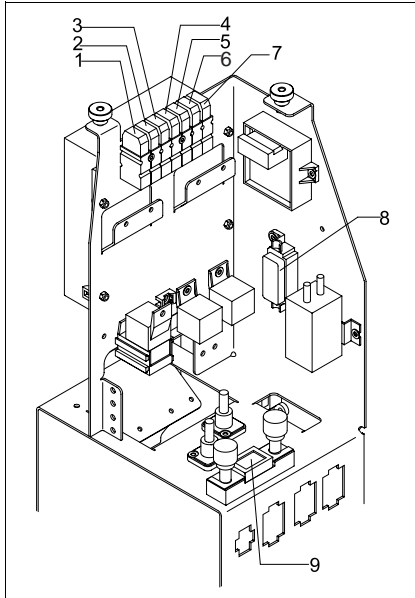


Fig. 18 Fuses

1. F2 Pre-fuse (20A)
2. F3 Travel drive assembly control

3. F4 Shaking function control voltage (10A)
4. F5 not assigned
5. F6 LDS indication (5A)
6. F7 LDS (5A)
7. F11 Shaking motor (30A)
8. F12 Brush motor (60A)
9. F1 Drive control power module (63A)



Before leaving the machine unattended, engage the parking brake and remove key.

7.9 Brake

It is located in the rear wheels and is actuated via cables.

A special adjustment screw is situated at the right-hand rear wheel.

7.10 V-belt drive

- 1. Tension roller
- 2. Suction fan V-belt (20Hz)
- 3. V-belt pulley
- 4. V-belt for brushes (130 Hz)
- 5. Side brush V-belt
- 6. Pulley
- 7. Cylinder broom V-belt
- 8. Tensioning roller follower
- 9. Pulley
- 10. Tension spring
- 11. Hexagonal nut
- 12. Hexagon socket screw
- 13. Screws

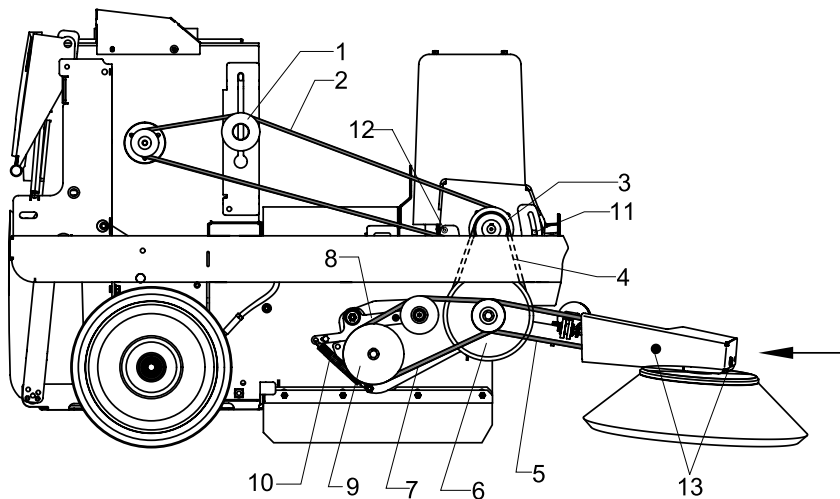
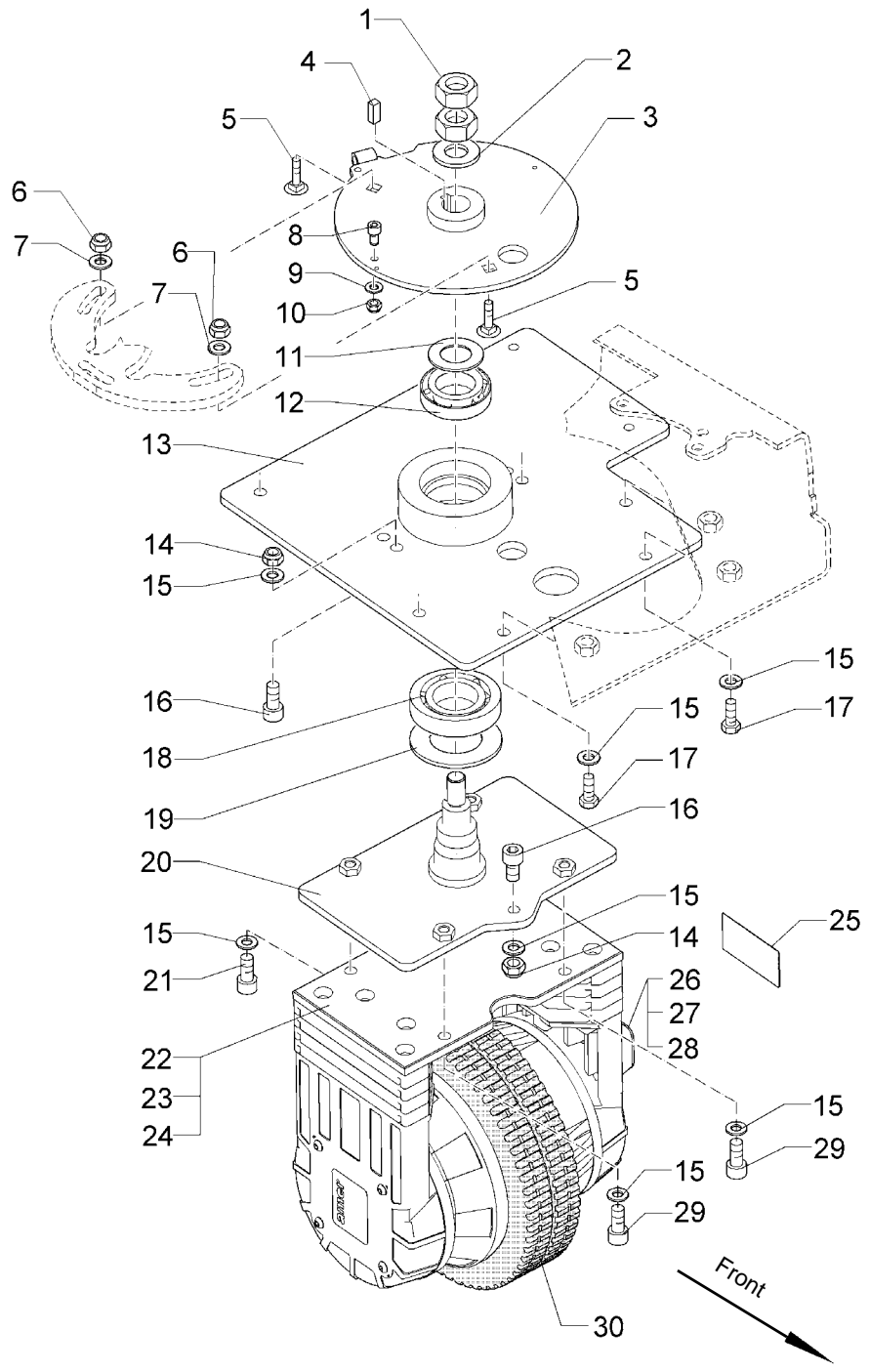
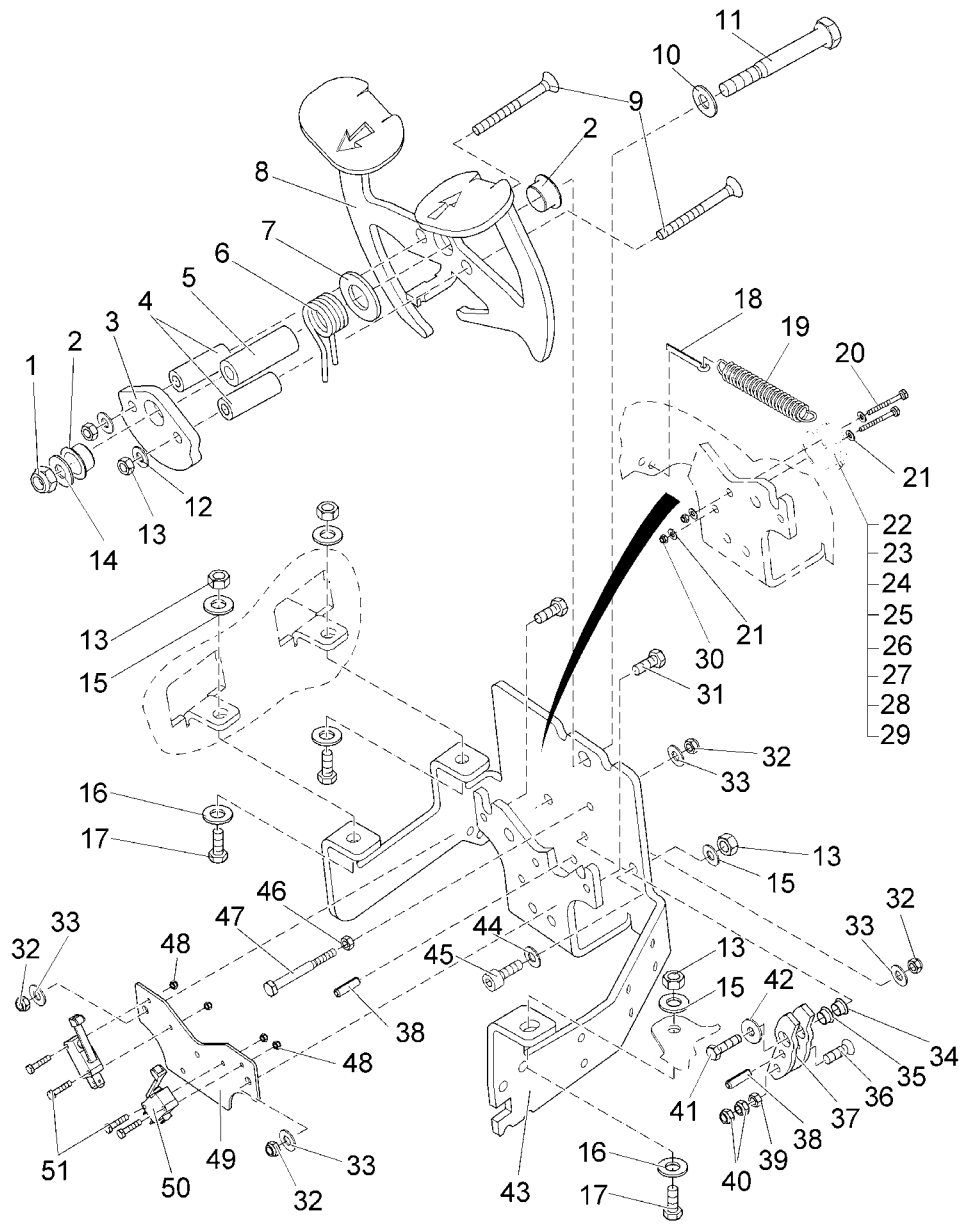


Fig. 19 V-belt drive

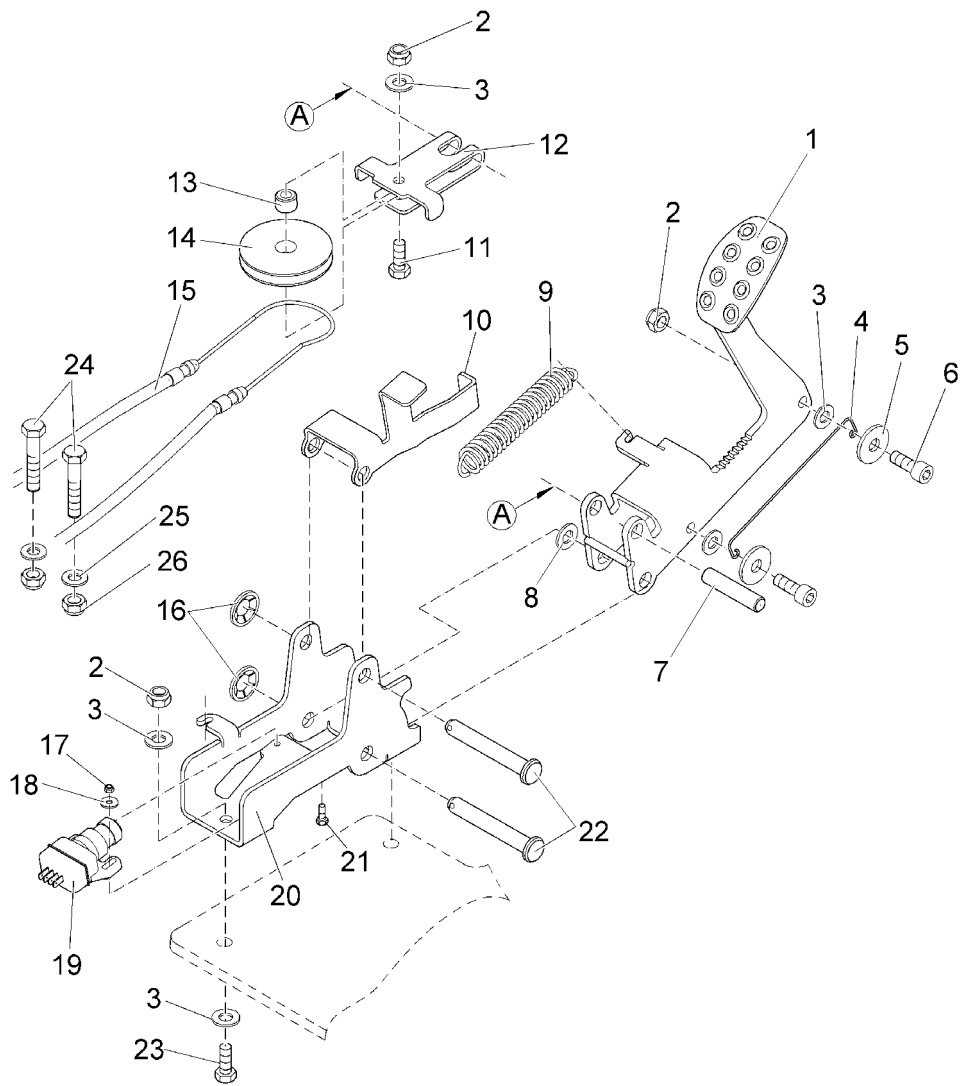
| Side brush | | | |
|------------|----------|------|-------------------|
| Item | PN | Qty. | |
| 1 | 00557600 | 4 | Hex. bolt |
| 2 | 00042900 | 10 | Washer |
| 3 | 01130610 | 4 | Bearing |
| 4 | 00041810 | 1 | Hex. bolt |
| 5 | 00046520 | 3 | Washer |
| 6 | 00053750 | 8 | Washer |
| 7 | 00051510 | 6 | Hex. nut |
| 8 | 01130620 | 1 | Holder |
| 9 | 00855380 | 5 | Washer |
| 10 | 00132880 | 1 | Hex. nut |
| 11 | 00054690 | 1 | Hex. bolt |
| 12 | 00695300 | 2 | Washer |
| 13 | 00974400 | 3 | Bushing |
| 14 | 00521270 | 3 | Sheave |
| 15 | 00537390 | 1 | Cylinder screw |
| 16 | 01130630 | 1 | Holder |
| 17 | 00553690 | 4 | Hex. bolt |
| 18 | 00152850 | 1 | Plug |
| 19 | 00041600 | 2 | Hex. bolt |
| 20 | 00029170 | 1 | Spacer sleeve |
| 21 | 01130640 | 1 | Rope |
| 22 | 00054020 | 1 | Wing nut |
| 23 | 00053330 | 1 | Hex. nut |
| 24 | 01130650 | 1 | Decal |
| 25 | 00853730 | 1 | Hand wheel |
| 26 | 01130660 | 1 | Side brush holder |
| 27 | 01071480 | 2 | Hose clamp |
| 28 | 01130670 | 1 | Bellows |
| 29 | 00701250 | 1 | Pressure spring |
| 30 | 01130680 | 1 | Holder |
| 31 | 00740090 | 4 | Detent washer |
| 32 | 01130690 | 1 | Holder |
| 33 | 00740280 | 4 | Detent washer |
| 34 | 00104500 | 4 | Hex. bolt |
| 35 | 00157690 | 3 | Hollow disc |
| 36 | 00154680 | 3 | Countersunk screw |
| 37 | 01131400 | 1 | Cover |
| 38 | 00954200 | 1 | Washer |
| 39 | 01130700 | 1 | Shaft |
| 40 | 00072940 | 1 | Adjusting spring |
| 41 | 01130710 | 1 | Belt |
| 42 | 01130720 | 1 | Bush |
| 43 | 01130730 | 1 | Belt pulley |
| 44 | 01130740 | 1 | Gear |
| 45 | 00020610 | 1 | Back-up disc |
| 46 | 00022440 | 1 | Retaining ring |
| 47 | 01131530 | 1 | Cap |
| 48 | 00053350 | 3 | Hex. nut |
| 49 | 00156720 | 1 | Washer |
| 50 | 00740930 | 1 | Guide roller |
| 51 | 00855240 | 1 | Bushing |
| 52 | 00138180 | 1 | Hex. bolt |



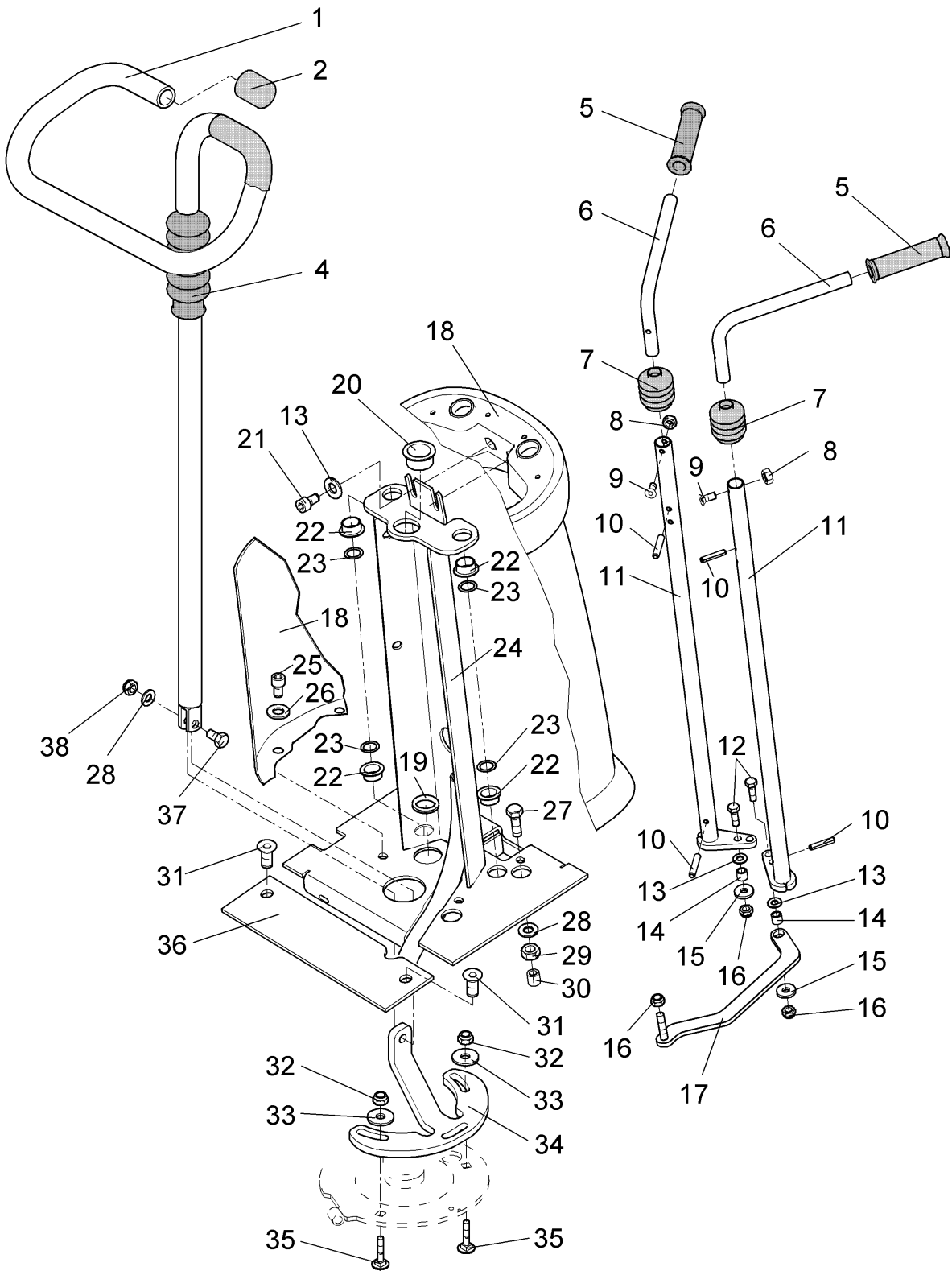
| Front wheel drive | | | |
|-------------------|----------|------|---------------------------|
| Item | PN | Qty. | |
| 1 | 00137290 | 2 | Hex. nut |
| 2 | 00053790 | 1 | Washer |
| 3 | 01130010 | 1 | Guidance disk |
| 4 | 00747530 | 1 | Adjusting spring |
| 5 | 01130020 | 2 | Cup head square neck bolt |
| 6 | 00051500 | 2 | Hex. nut |
| 7 | 00046520 | 2 | Washer |
| 8 | 00136910 | 1 | Socket head cap screw |
| 9 | 00053730 | 1 | Washer |
| 10 | 00051520 | 1 | Hex. nut |
| 11 | 01130030 | 1 | Nilos ring |
| 12 | 00048410 | 1 | Tapered roller bearing |
| 13 | 03002980 | 1 | Front wheel bearing plate |
| 14 | 00053360 | 3 | Hex. nut |
| 15 | 00870090 | 13 | Detent washer |
| 16 | 00135030 | 3 | Socket head cap screw |
| 17 | 00053310 | 6 | Hex. bolt |
| 18 | 00137930 | 1 | Taper roller bearing |
| 19 | 00746270 | 1 | Nilos ring |
| 20 | 03002990 | 1 | Wheel carrier |
| 21 | 00053650 | 2 | Socket head cap screw |
| 22 | 01130040 | 1 | Wheel hub drive |
| 23 | 01073950 | 4 | Plug |
| 24 | 01073960 | 4 | Carbon brush |
| 25 | 03003000 | 1 | Decal |
| 26 | 01131690 | 2 | Carbon brush |
| 27 | 01131680 | 2 | Holder for carbon brush |
| 28 | 01131700 | 1 | Plug |
| 29 | 00125430 | 2 | Socket head cap screw |
| 30 | 01073970 | 1 | Wheel |



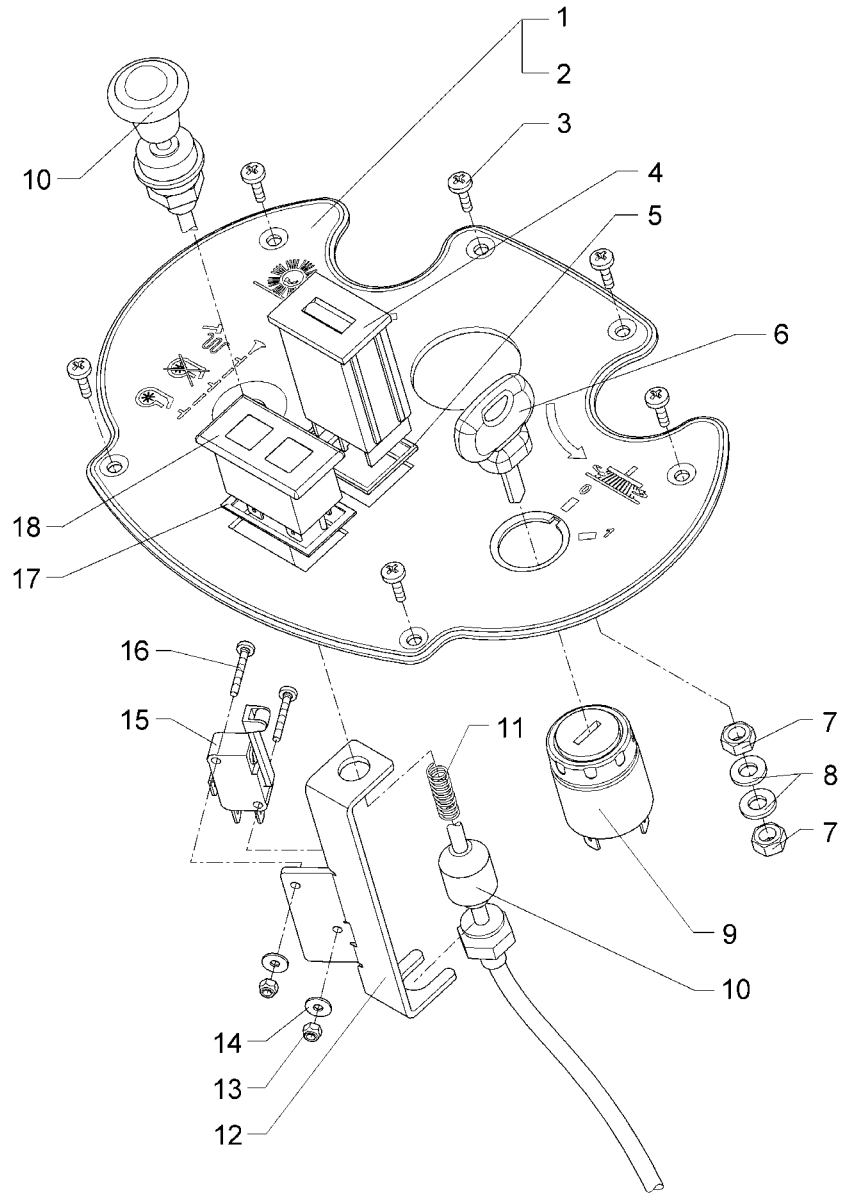
| Accelerator | | | |
|--------------------|----------|------|------------------------|
| Item | PN | Qty. | |
| 1 | 00051490 | 1 | Hex.nut |
| 2 | 01130490 | 2 | Bush |
| 3 | 01130500 | 1 | Plate |
| 4 | 01130510 | 2 | Bush |
| 5 | 01130520 | 1 | Bush |
| 6 | 01130530 | 1 | Spring |
| 7 | 00154550 | 1 | Washer |
| 8 | 01130540 | 1 | Accelerator |
| 9 | 01130550 | 2 | Countersunk screw |
| 10 | 00875950 | 1 | Detent washer |
| 11 | 00105390 | 1 | Hex.bolt |
| 12 | 00740090 | 2 | Detent washer |
| 13 | 00053350 | 7 | Hex.nut |
| 14 | 00053770 | 1 | Washer |
| 15 | 00740310 | 5 | Detent washer |
| 16 | 00053750 | 3 | Washer |
| 17 | 00077110 | 3 | Hex.bolt |
| 18 | 00054890 | 1 | Cotter pin |
| 19 | 01130560 | 1 | Pull spring |
| 20 | 01130570 | 2 | Hex.bolt |
| 21 | 00874720 | 4 | Washer |
| 22 | 00975500 | 1 | Turn angle transmitter |
| 23 | 01073530 | 1 | Transparency |
| 24 | 01006210 | 6 | Pin contact |
| 25 | 01006190 | 6 | Gasket |
| 26 | 03003250 | 1 | Pin housing |
| 27 | 00559670 | 4 | Flat connector sleeve |
| 28 | 00083640 | 4 | Socket housing |
| 29 | 03003260 | 1 | Line |
| 30 | 00133830 | 2 | Hex.nut |
| 31 | 00053020 | 2 | Hex.bolt |
| 32 | 00051520 | 4 | Hex.nut |
| 33 | 00053730 | 1 | Washer |
| 34 | 01130580 | 1 | Bush |
| 35 | 01130590 | 1 | Bush |
| 36 | 01073650 | 1 | Countersunk screw |
| 37 | 01130600 | 2 | Plate |
| 38 | 00046440 | 1 | Tightening sleeve |
| 39 | 00053320 | 1 | Hex.nut |
| 40 | 00051340 | 2 | Hex.nut |
| 41 | 00053040 | 1 | Hex.bolt |
| 42 | 00135120 | 1 | Washer |
| 43 | 03003270 | 1 | Angle |
| 44 | 00924700 | 2 | Washer |
| 45 | 00045540 | 2 | Socket head cap screw |
| 46 | 00053330 | 1 | Hex.nut |
| 47 | 00737680 | 1 | Hex.bolt |
| 48 | 00022200 | 4 | Hex.nut |
| 49 | 03003280 | 1 | Plate |
| 50 | 00975510 | 2 | Micro switch |
| 51 | 00022180 | 4 | Hex.bolt |



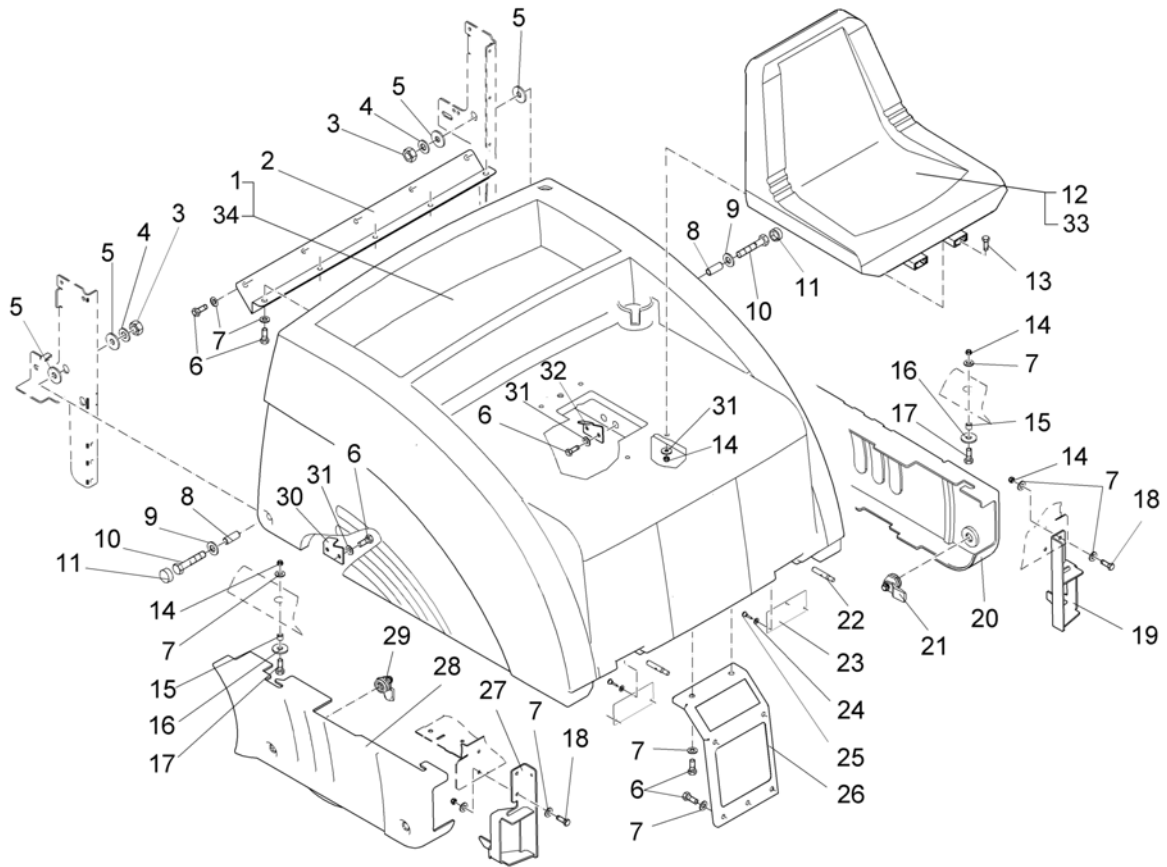
| Pedal brake | | | |
|--------------------|----------|------|-----------------------|
| Item | PN | Qty. | |
| 1 | 01130320 | 1 | Pedale brake |
| 2 | 00051510 | 5 | Hex.nut |
| 3 | 00053750 | 7 | Washer |
| 4 | 00854270 | 1 | Bow |
| 5 | 00042900 | 2 | Washer |
| 6 | 00124290 | 1 | Socket head cap screw |
| 7 | 01130330 | 1 | Bolt |
| 8 | 00555130 | 1 | Packing ring |
| 9 | 01055930 | 1 | Pull spring |
| 10 | 01130340 | 1 | Barrier lever |
| 11 | 00053110 | 1 | Hex.bolt |
| 12 | 03003170 | 1 | Bow |
| 13 | 00974400 | 1 | Bushing |
| 14 | 00521270 | 1 | Pulley |
| 15 | 01130350 | 1 | Brake bowden cable |
| 16 | 00706180 | 2 | Retaining washer |
| 17 | 00133830 | 2 | Hex.nut |
| 18 | 00557150 | 2 | Washer |
| 19 | 00927610 | 1 | Switch |
| 20 | 03003180 | 1 | Bracket |
| 21 | 00108490 | 2 | Hex.bolt |
| 22 | 00879630 | 2 | Bolt |
| 23 | 00053100 | 2 | Hex.bolt |
| 24 | 00074500 | 2 | Hex.bolt |
| 25 | 00740090 | 2 | Detent washer |
| 26 | 00053350 | 2 | Hex.nut |



| Steering | | | |
|----------|----------|------|-----------------------|
| Item | PN | Qty. | |
| 1 | 01130360 | 1 | Steering bar |
| 2 | 01130370 | 1 | Protective cap |
| 4 | 01130390 | 1 | Bellows |
| 5 | 01130400 | 2 | Handle |
| 6 | 01130410 | 2 | Arc |
| 7 | 01130420 | 2 | Bellows |
| 8 | 00051520 | 3 | Hex. nut |
| 9 | 01093180 | 2 | Countersunk screw |
| 10 | 00044160 | 4 | Tightening pin |
| 11 | 01130430 | 2 | Lever |
| 12 | 00054690 | 2 | Hex. bolt |
| 13 | 00053750 | 4 | Washer |
| 14 | 00733400 | 2 | Spacer bushing |
| 15 | 00695300 | 2 | Washer |
| 16 | 00051510 | 3 | Hex. nut |
| 17 | 01130440 | 1 | Supporting plate |
| 18 | 01130450 | 1 | Steering column |
| 19 | 00521100 | 1 | Grommet |
| 20 | 01130460 | 1 | Slide bearing bush |
| 21 | 00154410 | 2 | Cylinder head stud |
| 22 | 01130470 | 4 | Slide bearing bush |
| 23 | 00046430 | 4 | Adjusting shim |
| 24 | 03003230 | 1 | Carrier |
| 25 | 00045540 | 4 | Socket head cap screw |
| 26 | 00740090 | 4 | Detent washer |
| 27 | 00053160 | 2 | Hex. bolt |
| 28 | 00053760 | 2 | Washer |
| 29 | 00132880 | 2 | Hex. nut |
| 30 | 01090960 | 2 | Stop buffer |
| 31 | 00535840 | 2 | Countersunk screw |
| 32 | 00051500 | 2 | Hex. nut |
| 33 | 00046520 | 2 | Washer |
| 34 | 01130480 | 1 | Hold plate |
| 35 | 01130020 | 2 | Saucer head screw |
| 36 | 03003240 | 1 | Plate |
| 37 | 00123690 | 1 | Hex. bolt |
| 38 | 00132880 | 1 | Hex. nut |

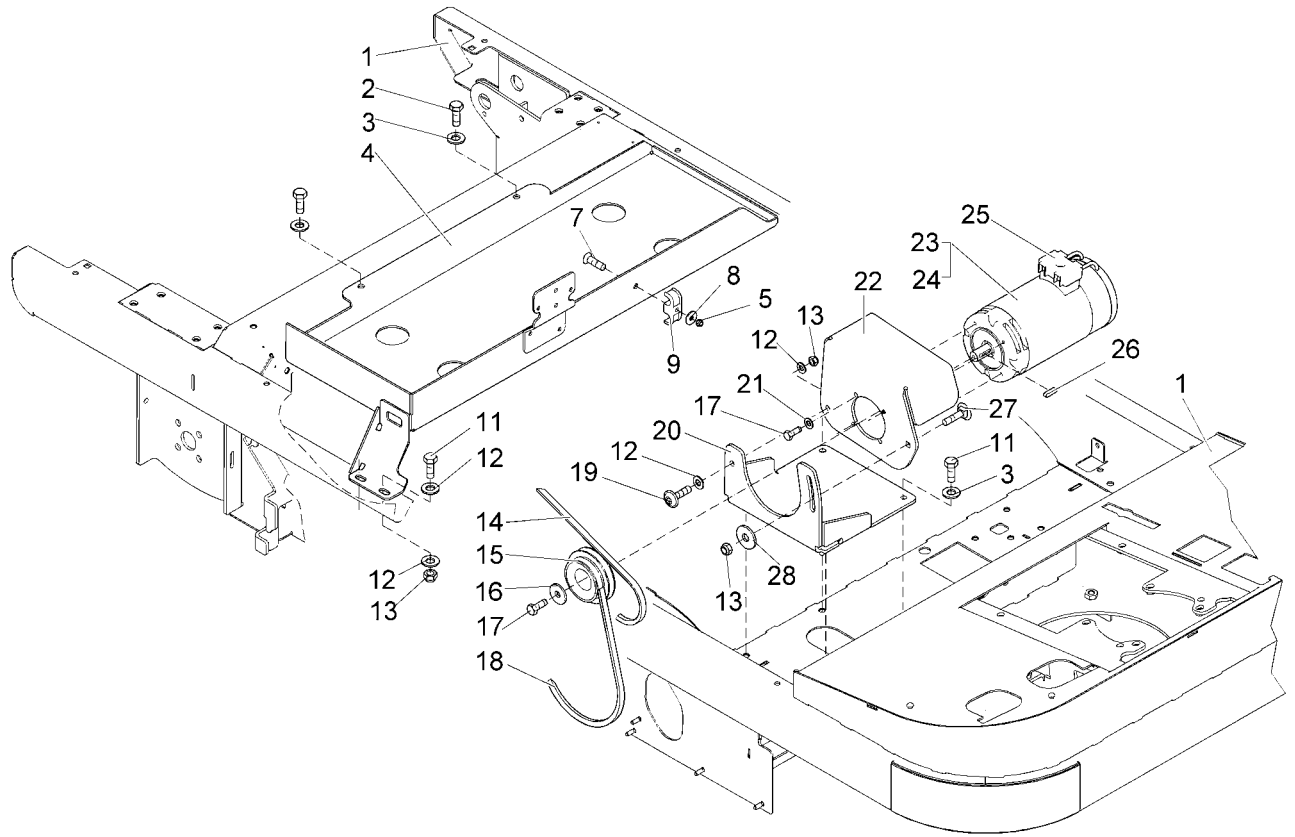


| Control panel | | | |
|----------------------|----------|------|--------------------------|
| Item | PN | Qty. | |
| 1 | 00131610 | 1 | Control panel, tin plate |
| 2 | 01131620 | 1 | Control panel, foil |
| 3 | 00052620 | 5 | Filister head screw |
| 4 | 01131640 | 1 | Hour meter |
| 5 | 01092720 | 1 | Gasket |
| 6 | 00745890 | 1 | Key |
| 7 | 00053330 | 2 | Hex. nut |
| 8 | 00053730 | 2 | Washer |
| 9 | 00021710 | 1 | Key switch |
| 10 | 01131520 | 1 | Actuating cable |
| 11 | 00902200 | 1 | Compression spring |
| 12 | 03003450 | 1 | Holder |
| 13 | 00022200 | 2 | Hex. nut |
| 14 | 00747400 | 2 | Washer |
| 15 | 00975510 | 1 | Micro switch |
| 16 | 00955220 | 2 | Screw |
| 17 | 01131640 | 1 | Gasket |
| 18 | 01131650 | 1 | Control light |

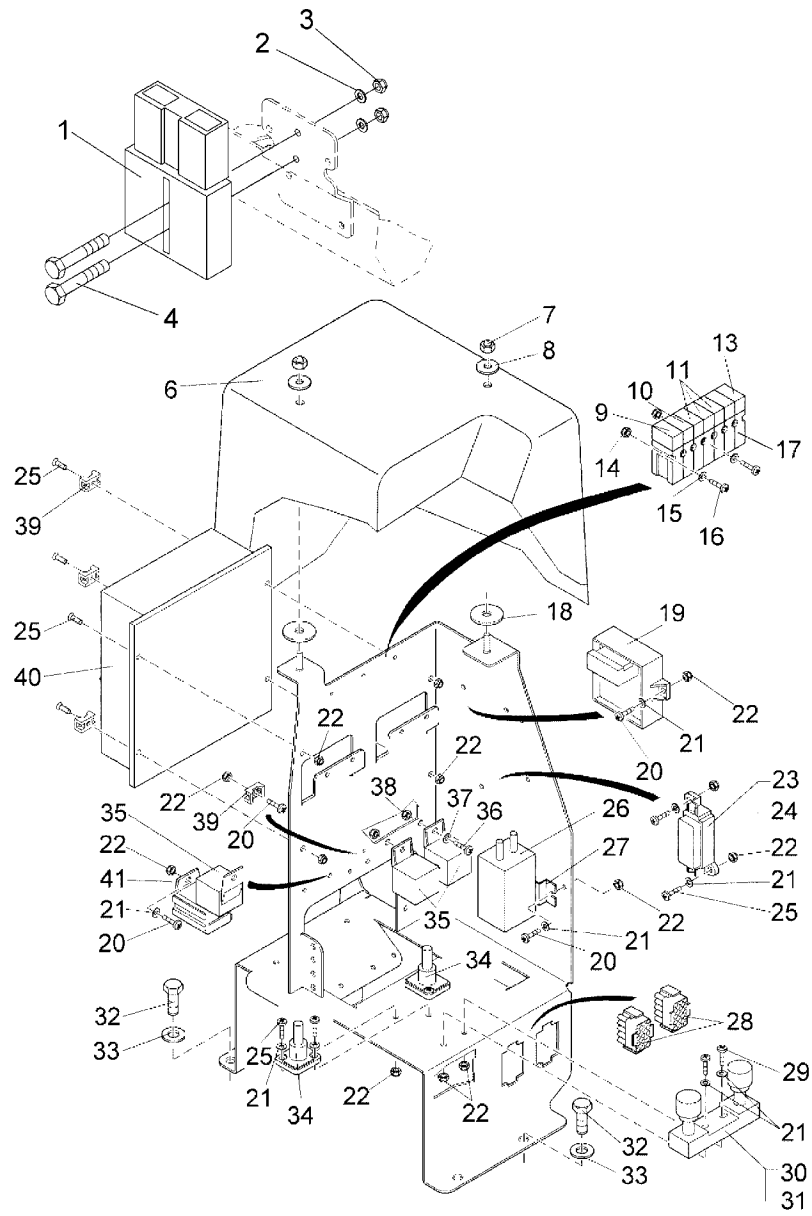


Key for side covers
part number 00071900

| Covering - Seat | | | |
|------------------------|----------|------|---------------------|
| Item | PN | Qty. | |
| 1 | 01075610 | 1 | Covering |
| 2 | 03003290 | 1 | Carrier seat |
| 3 | 00053370 | 2 | Hex. nut |
| 4 | 00875950 | 2 | Detent washer |
| 5 | 00132610 | 4 | Washer |
| 6 | 00536320 | 17 | Hex. bolt |
| 7 | 00053750 | 24 | Washer |
| 8 | 01130230 | 2 | Bush |
| 9 | 00127290 | 2 | Washer |
| 10 | 00693010 | 2 | Hex. bolt |
| 11 | 01031540 | 2 | Protective cap |
| 12 | 01130240 | 1 | Seat |
| 13 | 00133700 | 4 | Hex. bolt |
| 14 | 00051510 | 12 | Hex. nut |
| 15 | 00733400 | 4 | Spacer bushing |
| 16 | 00042900 | 4 | Washer |
| 17 | 00053110 | 4 | Hex. bolt |
| 18 | 00053090 | 4 | Hex. bolt |
| 19 | 03003140 | 1 | Holder, l.h. |
| 20 | 01130250 | 1 | Covering, l.h. |
| 21 | 00121730 | 2 | Casement fastener |
| 22 | 00853700 | 2 | Bolt |
| 23 | 03003110 | 2 | Plate |
| 24 | 00053710 | 6 | Washer |
| 25 | 00961490 | 13 | Screw |
| 26 | 03003300 | 1 | Holder seat |
| 27 | 03003150 | 1 | Holder, r.h. |
| 28 | 01130260 | 1 | Covering, r.h. |
| 29 | 01130270 | 2 | Casement fastener |
| 30 | 01130280 | 1 | Holder, r.h. |
| 31 | 00740310 | 8 | Detent washer |
| 32 | 01130290 | 1 | Holder, l.h. |
| 33 | 01134330 | 1 | Seat contact switch |
| 34 | 01134810 | 1 | Insulation mat |

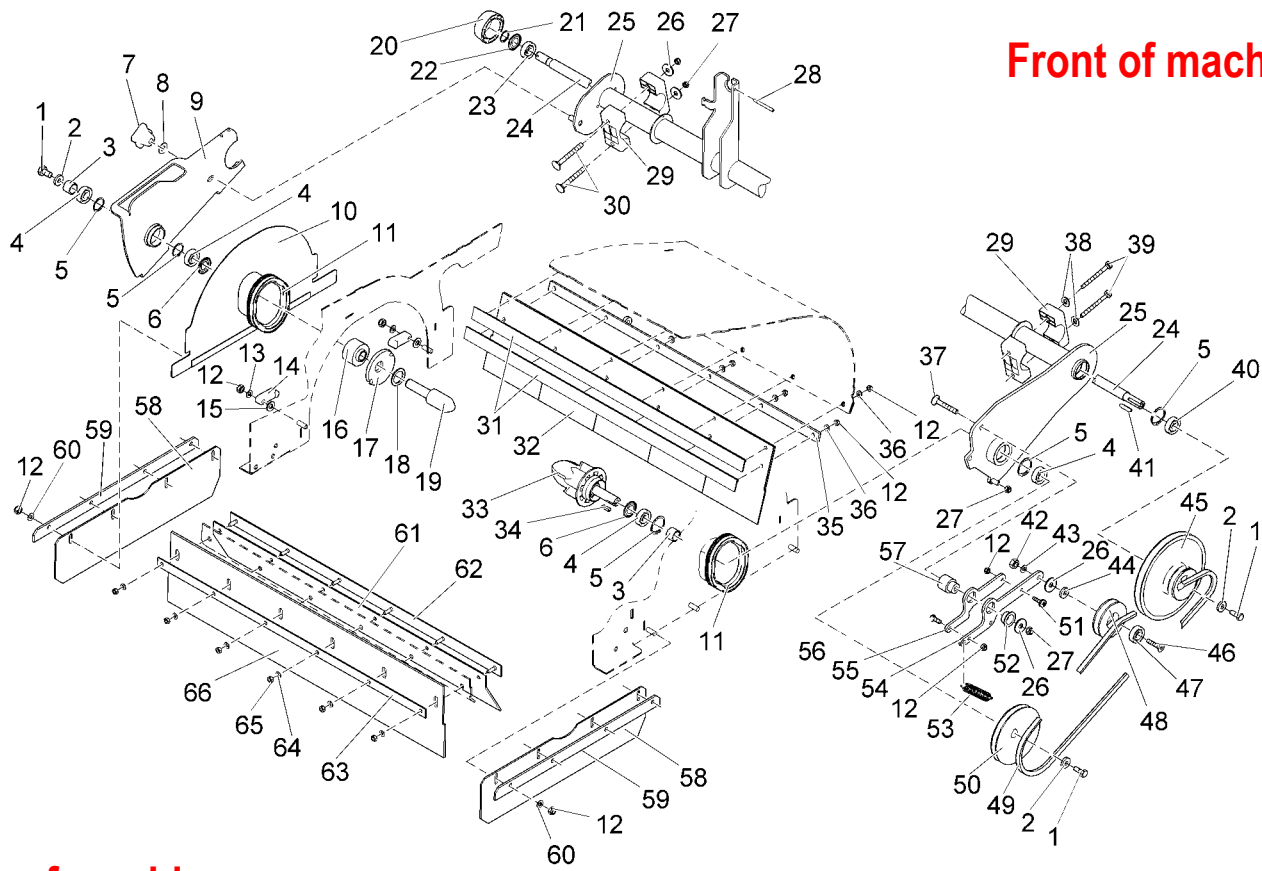


| Motor - Chassis | | | |
|------------------------|----------|------|---------------------|
| Item | PN | Qty. | |
| 1 | 03003360 | 1 | Chassis |
| 2 | 00053080 | 2 | Hex.bolt |
| 3 | 00740090 | 6 | Detent washer |
| 4 | 03003370 | 1 | Battery console |
| 5 | 00051520 | 3 | Hex.nut |
| 6 | 00053730 | 2 | Washer |
| 7 | 00126010 | 1 | Countersunk screw |
| 8 | 00135120 | 1 | Washer |
| 9 | 00748300 | 1 | Cable clamb |
| 10 | 00053050 | 2 | Hex.bolt |
| 11 | 00053090 | 6 | Hex.bolt |
| 12 | 00053750 | 6 | Washer |
| 13 | 00051510 | 4 | Hex.nut |
| 14 | 01131280 | 1 | Drive belt |
| 15 | 01131290 | 1 | Drive belt pulley |
| 16 | 00874340 | 1 | Washer |
| 17 | 00053010 | 5 | Hex.bolt |
| 18 | 01131300 | 1 | Drive belt |
| 19 | 01092910 | 1 | Filister head screw |
| 20 | 03003380 | 1 | Console |
| 21 | 00730940 | 4 | Detent washer |
| 22 | 03003390 | 1 | Holder |
| 23 | 01131310 | 1 | Motor |
| 24 | 01131670 | 1 | Carbon brush |
| 25 | 01131660 | 1 | Thermal relay |
| 26 | 00054260 | 1 | Adjusting spring |
| 27 | 00864520 | 1 | Cup square bolt |
| 28 | 00042900 | 1 | Washer |



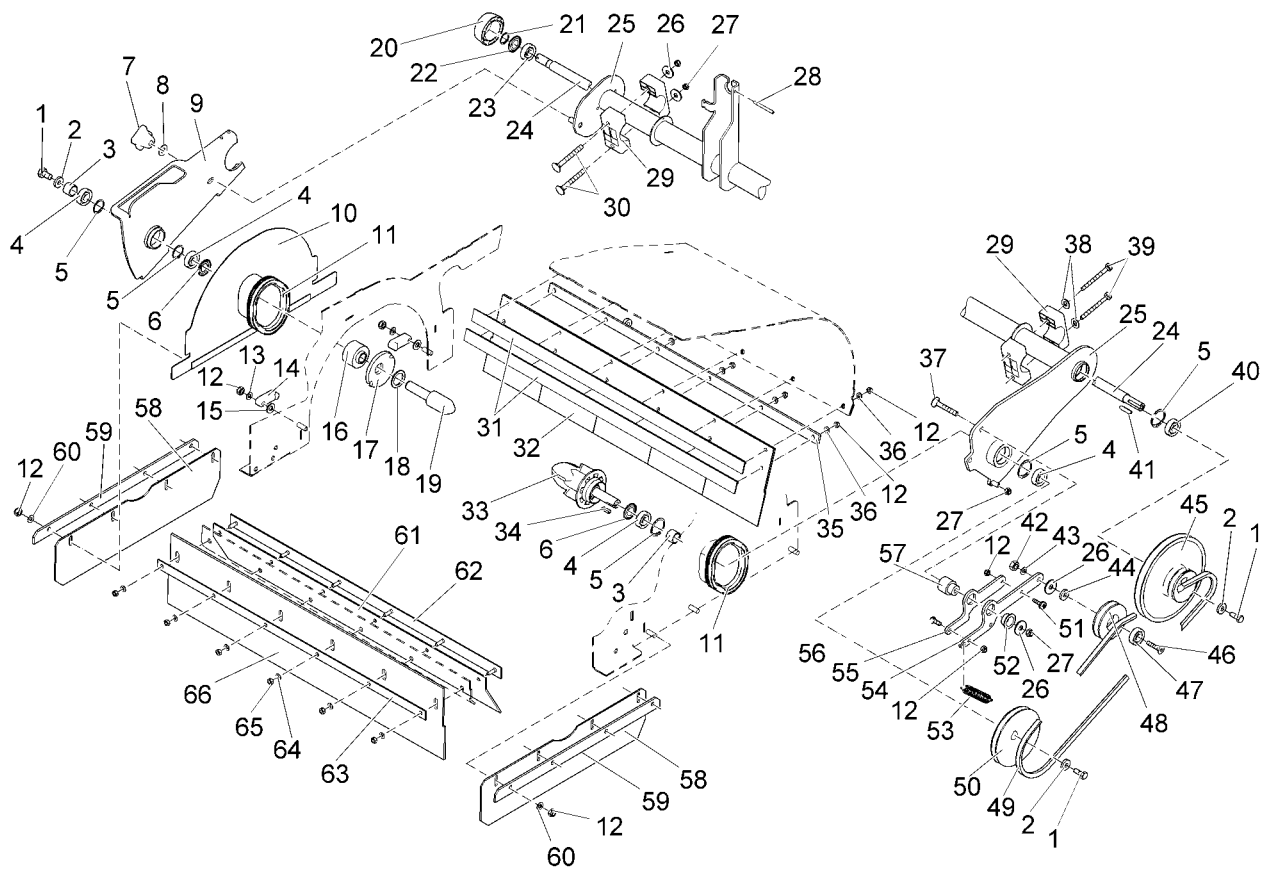
| Electrical equipment | | | |
|----------------------|----------|------|--|
| Item | PN | Qty. | |
| 1 | 01075720 | 1 | Device plug |
| 2 | 00053730 | 2 | Washer |
| 3 | 00051520 | 2 | Hex.nut |
| 4 | 00053050 | 1 | Hex.bolt |
| 6 | 01131430 | 1 | Dust cover |
| 7 | 00053330 | 2 | Hex.nut |
| 8 | 00135120 | 2 | Washer |
| 9 | 00500360 | 1 | Fuse link |
| 10 | 00733630 | 1 | Fuse link |
| 11 | 00906120 | 3 | Fuse link |
| 13 | 00152060 | 1 | Fuse link |
| 14 | 00022200 | 2 | Hex.nut |
| 15 | 00553740 | 2 | Washer |
| 16 | 00101580 | 2 | Fillister head screw |
| 17 | 00733650 | 7 | Fuse holder |
| 18 | 00106050 | 2 | Rubber washer |
| 19 | 00957270 | 1 | Signal transmitter for low-level discharge |
| 20 | 00052620 | 6 | Fillister head screw |
| 21 | 00053710 | 6 | Washer |
| 22 | 00133830 | 6 | Hex.nut |
| 23 | 00903510 | 1 | Fuse holder |
| 24 | 00903550 | 1 | Fuse motor |
| 25 | 00731550 | 2 | Fillister head screw |
| 26 | 01131420 | 1 | Solenoid |
| 27 | 03003420 | 1 | Mounting kit for solenoid |
| 28 | 01019610 | 2 | Pin housing 15-pole |
| 29 | 00954570 | 2 | Screw |
| 30 | 00121440 | 1 | Fuse holder |
| 31 | 01056100 | 1 | Fuse |
| 32 | 00053080 | 4 | Hex.bolt |
| 33 | 00053750 | 4 | Washer |
| 34 | 00744670 | 2 | Single clamp |
| 35 | 00965030 | 3 | Relay |
| 36 | 00108650 | 2 | Fillister head screw |
| 37 | 00053720 | 2 | Washer |
| 38 | 00051340 | 2 | Hex.nut |
| 39 | 00780710 | 4 | Screw base |
| 40 | 01130760 | 1 | Control system 120A |
| 41 | 01018100 | 1 | Plug-in housing |

Front of machine

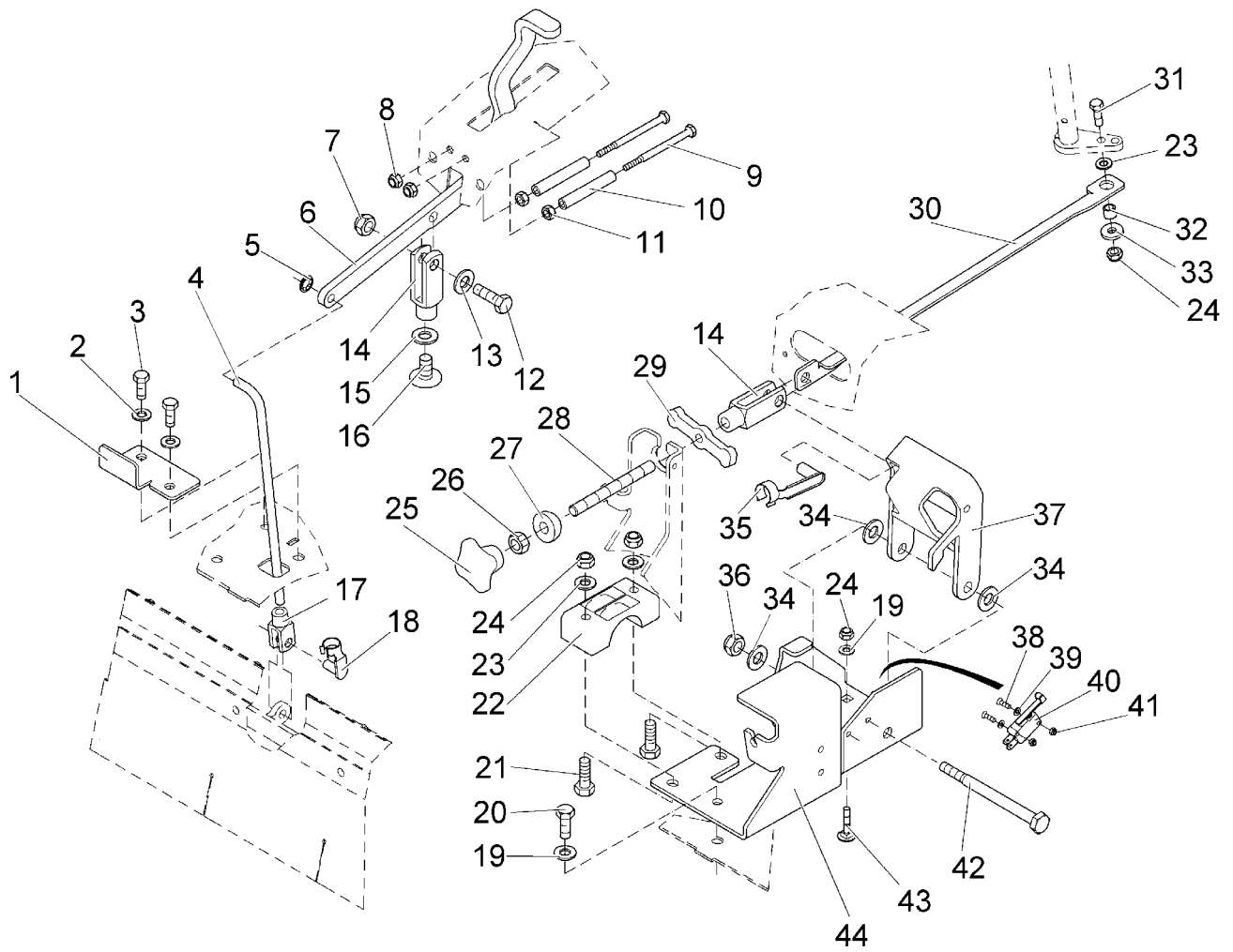


Rear of machine

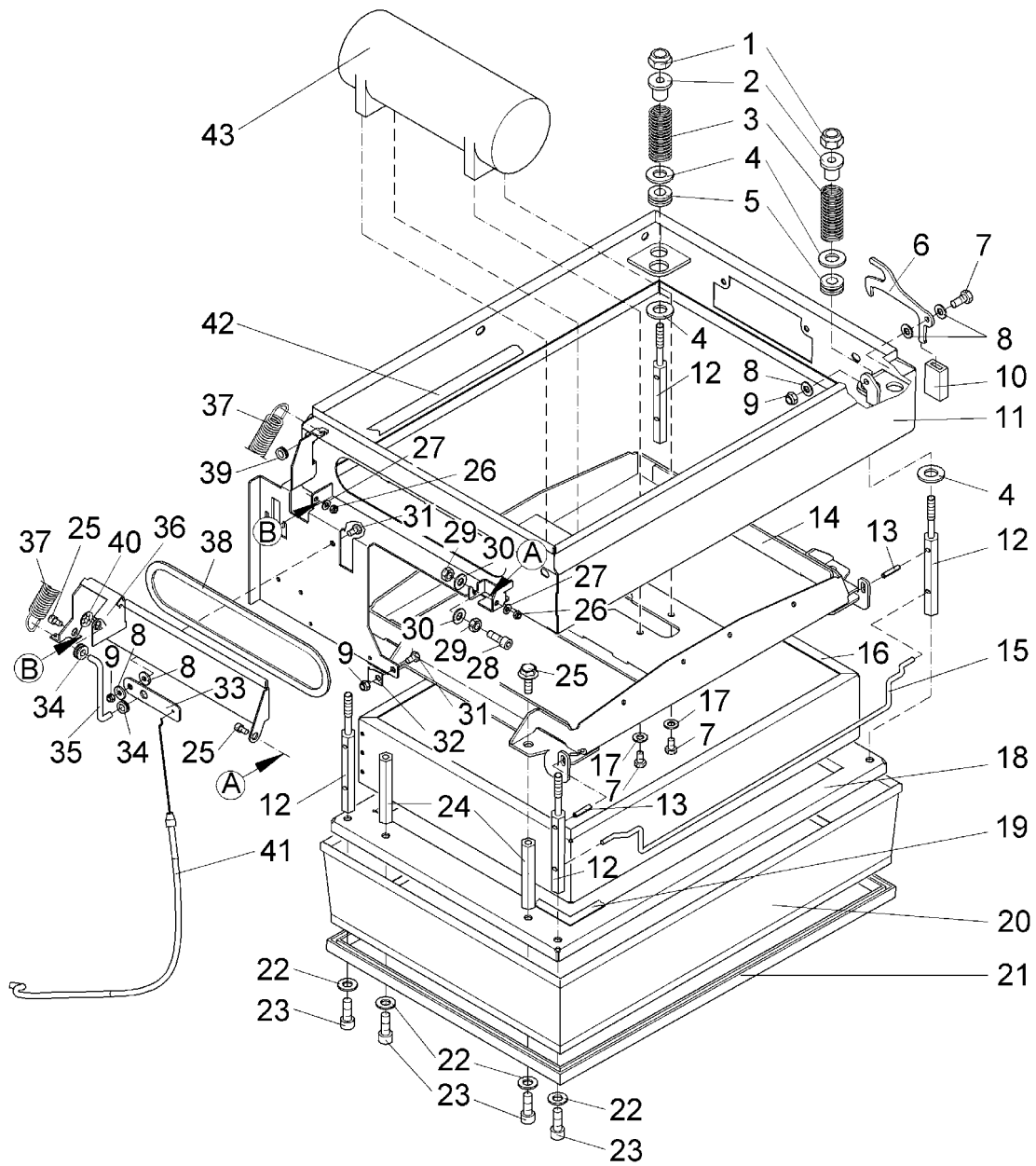
| Group of main sweeper roller | | | |
|------------------------------|----------|------|---------------------------|
| Item | PN | Qty. | |
| 1 | 00053080 | 3 | Hex.bolt |
| 2 | 00695300 | 3 | Washer |
| 3 | 00509180 | 2 | Distance sleeve |
| 4 | 00106300 | 4 | Ball bearing |
| 5 | 00101660 | 5 | Retaining ring |
| 6 | 00102410 | 2 | Nilos-ring |
| 7 | 00866720 | 1 | Star handle |
| 8 | 00740290 | 1 | Detent washer |
| 9 | 01130830 | 1 | Brush rocker, l.h. |
| 10 | 01130840 | 1 | Side shield |
| 11 | 00681570 | 2 | Edge protection |
| 12 | 00051520 | 24 | Hex.nut |
| 13 | 00053840 | 2 | Spring washer |
| 14 | 00968190 | 2 | Toggle |
| 15 | 00053750 | 2 | Washer |
| 16 | 01130850 | 1 | Gasket |
| 17 | 01130860 | 1 | Washer |
| 18 | 00135560 | 1 | Washer |
| 19 | 01130870 | 1 | Drag element |
| 20 | 01130880 | 1 | Centering bush |
| 21 | 00022340 | 1 | Retaining ring |
| 22 | 00104480 | 1 | Nilos-ring |
| 23 | 00706360 | 1 | Ball bearing |
| 24 | 01130890 | 1 | Shaft |
| 25 | 03003310 | 1 | Torque shaft |
| 26 | 00042900 | 4 | Washer |
| 27 | 00051510 | 7 | Hex.nut |
| 28 | 00861020 | 1 | Tensioning sleeve |
| 29 | 01130610 | 4 | Bearing |
| 30 | 01130900 | 2 | Cup head square neck bolt |
| 31 | 01130910 | 2 | Retaining strip |
| 32 | 01130800 | 1 | Brush apron, front |
| 33 | 01130920 | 1 | Drag element |
| 34 | 00054260 | 1 | Adjusting spring |
| 35 | 01130930 | 1 | Strip |
| 36 | 00053730 | 12 | Washer |
| 37 | 01130940 | 1 | Cup head square neck bolt |
| 38 | 00740080 | 2 | Safety washer |
| 39 | 00557600 | 2 | Hex.bolt |
| 40 | 00538360 | 1 | Ball bearing |
| 41 | 00107380 | 1 | Adjusting spring |
| 42 | 00046500 | 1 | Hex.nut |
| 43 | 00740310 | 1 | Detent washer |
| 44 | 01130950 | 1 | Bush |
| 45 | 01130960 | 1 | Belt pulley |
| 46 | 00509000 | 1 | Countersunk screw |
| 47 | 00126330 | 1 | Ball bearing |
| 48 | 01130970 | 1 | Idler |
| 49 | 01130980 | 1 | V-belt |
| 50 | 01130990 | 1 | Belt pulley |



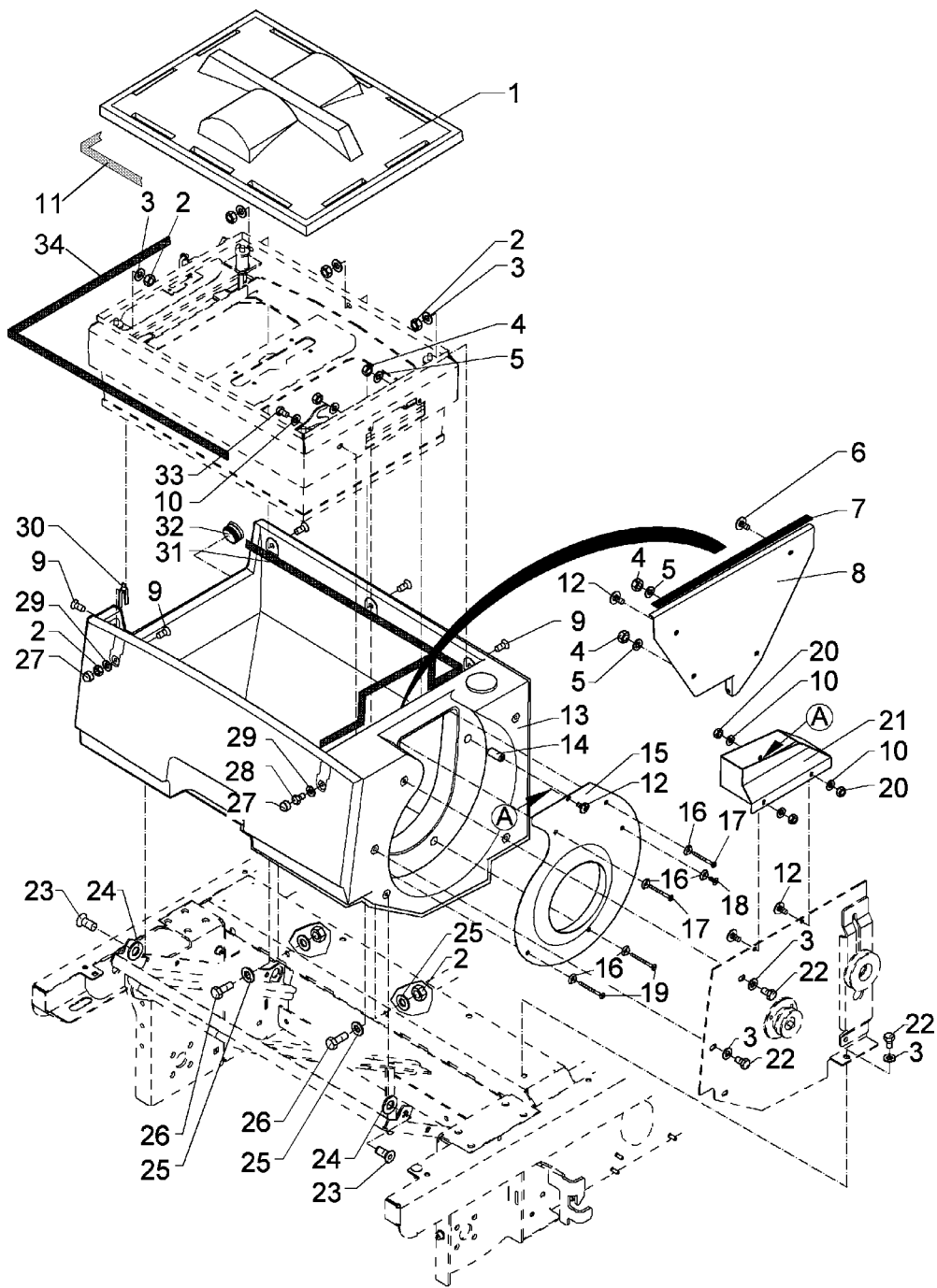
| | | | |
|----|----------|---|-------------------|
| 51 | 00053550 | 1 | Screw |
| 52 | 01130470 | 1 | Bearing bush |
| 53 | 01131000 | 1 | Pult spring |
| 54 | 01131010 | 1 | Holder |
| 55 | 01131020 | 1 | Holder for idler |
| 56 | 00053020 | 1 | Hex.bolt |
| 57 | 01131030 | 1 | Bolt |
| 58 | 01130820 | 2 | Brush apron |
| 59 | 01131050 | 2 | Strip |
| 60 | 00053730 | 8 | Washer |
| 61 | 01131040 | 1 | Brush apron, rear |
| 62 | 01130910 | 1 | Strip |
| 63 | 00243450 | 1 | Clamping strip |
| 64 | 00740280 | 6 | Detent washer |
| 65 | 00053330 | 8 | Hex.nut |
| 66 | 01130810 | 1 | Brush apron, rear |



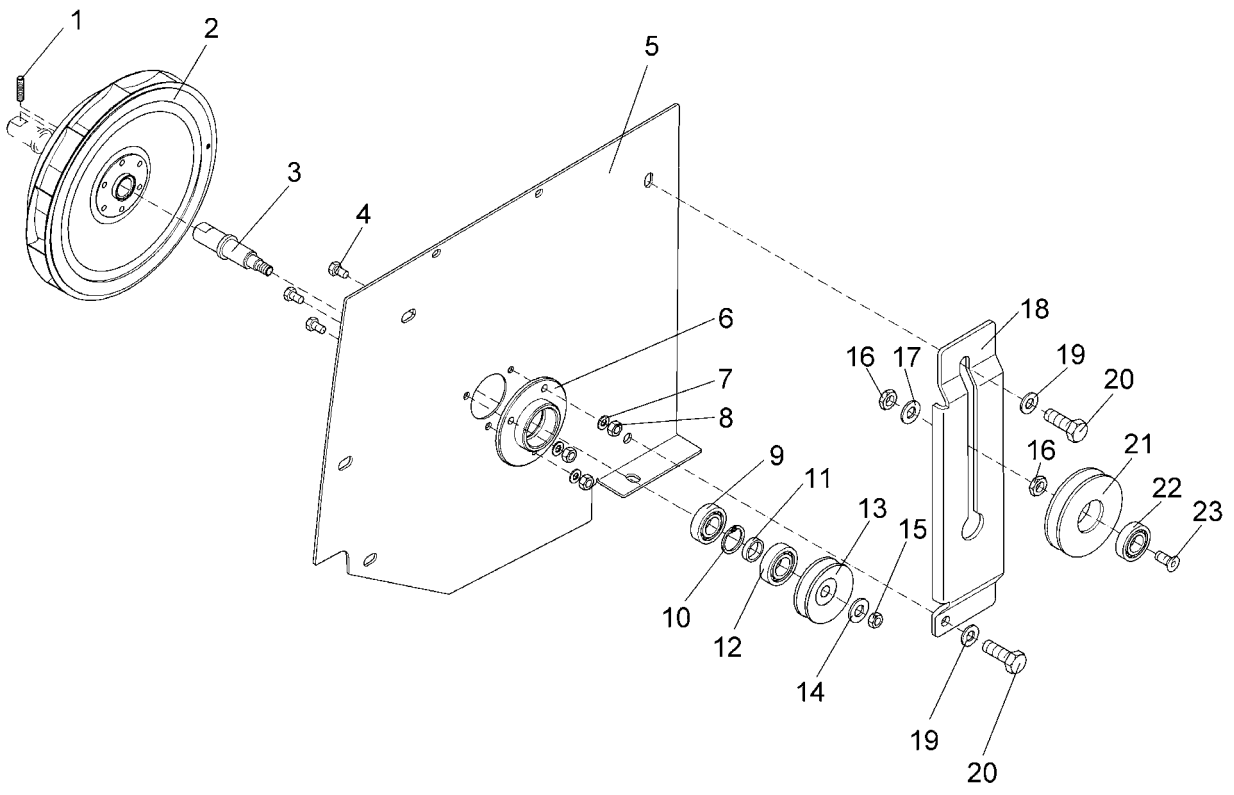
| Manipulation for brush apron - Lifter for sweeping roller | | | |
|--|----------|------|---------------------------|
| Item | PN | Qty. | |
| 1 | 01131320 | 1 | Stop angle |
| 2 | 00740090 | 2 | Detent washer |
| 3 | 00053080 | 2 | Hex. bolt |
| 4 | 01131330 | 1 | Bar |
| 5 | 00854420 | 1 | Retaining washer |
| 6 | 01131340 | 1 | Pedal bar |
| 7 | 00051500 | 1 | Hex. nut |
| 8 | 00051520 | 2 | Hex. nut |
| 9 | 00526320 | 2 | Hex.bolt |
| 10 | 01064890 | 2 | Hose |
| 11 | 00053330 | 2 | Hex. nut |
| 12 | 00123690 | 1 | Hex. bolt |
| 13 | 00130290 | 1 | Adjusting shim |
| 14 | 00925430 | 2 | Fork head |
| 15 | 00740290 | 1 | Detent washer |
| 16 | 01131350 | 1 | Filister head screw |
| 17 | 00151440 | 1 | Forked end |
| 18 | 00151400 | 1 | ES bolt |
| 19 | 00740080 | 3 | Safety washer |
| 20 | 00053090 | 1 | Hex. bolt |
| 21 | 00041600 | 2 | Hex. bolt |
| 22 | 01130610 | 1 | Bearing |
| 23 | 00053750 | 3 | Washer |
| 24 | 00051510 | 5 | Hex. nut |
| 25 | 00866720 | 1 | Star handle |
| 26 | 01050160 | 1 | Hex. nut |
| 27 | 01131360 | 1 | Tap |
| 28 | 01131370 | 1 | Spindle |
| 29 | 01131380 | 1 | Countering latch |
| 30 | 01131390 | 1 | Draw angle |
| 31 | 00054690 | 1 | Hex. bolt |
| 32 | 00733400 | 1 | Spacer bushing |
| 33 | 00695300 | 1 | Washer |
| 34 | 00053760 | 3 | Washer |
| 35 | 00925420 | 1 | ES-bolt |
| 36 | 00132880 | 1 | Hex. nut |
| 37 | 03003400 | 1 | Angle |
| 38 | 00955220 | 2 | Screw |
| 39 | 00747400 | 2 | Washer |
| 40 | 00975510 | 1 | Micro switch |
| 41 | 00022200 | 2 | Hex. nut |
| 42 | 00109460 | 1 | Hex. bolt |
| 43 | 00878410 | 2 | Cup head square neck bolt |
| 44 | 03003410 | 1 | Holder |



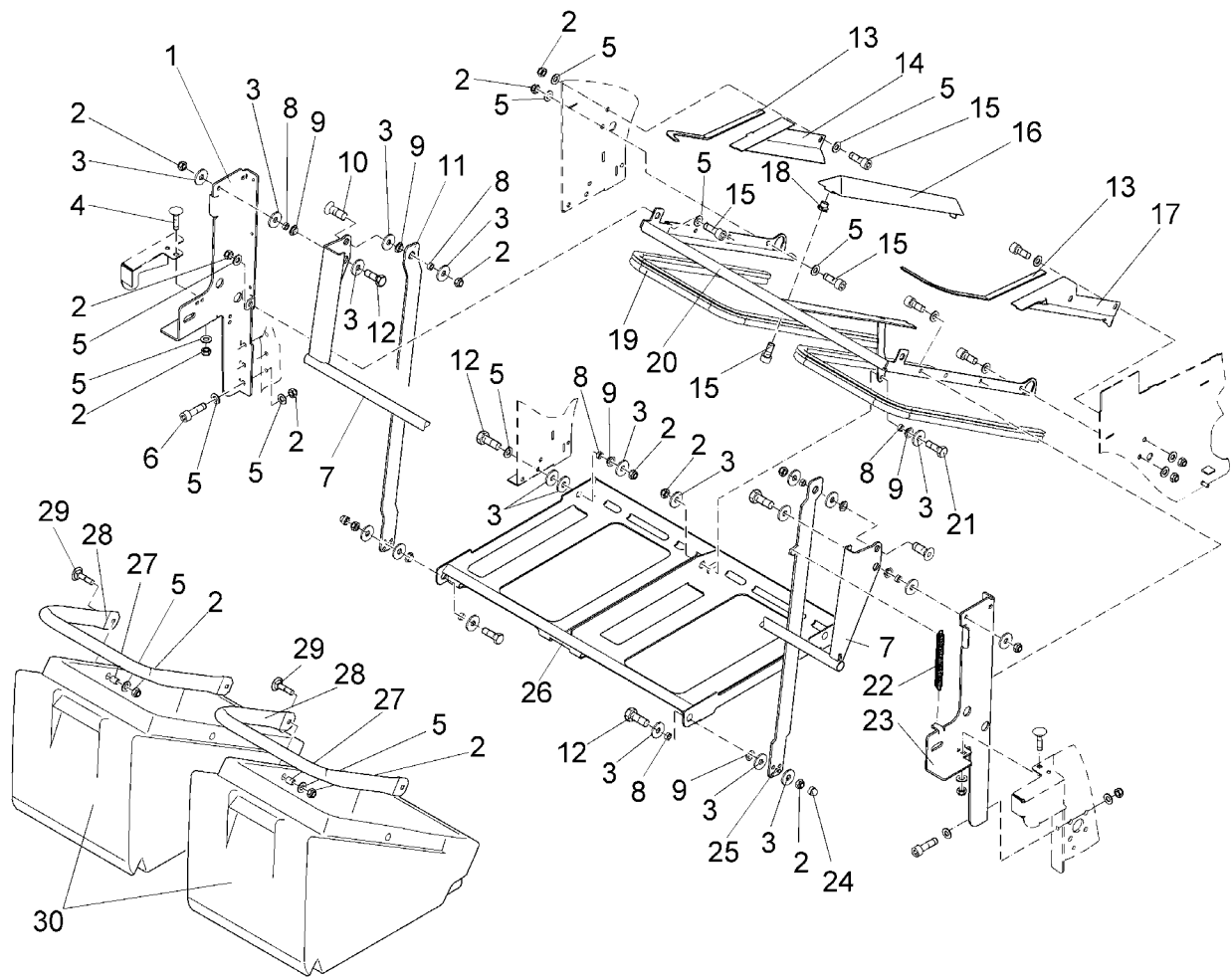
| Filter installation | | | |
|---------------------|----------|------|-----------------------------|
| Item | PN | Qty. | |
| 1 | 00051510 | 4 | Hex. nut |
| 2 | 01131100 | 4 | Bolt |
| 3 | 01074080 | 4 | Compression spring |
| 4 | 00042900 | 8 | Washer |
| 5 | 00027190 | 4 | Grommet |
| 6 | 01131110 | 1 | Lever |
| 7 | 00053020 | 5 | Hex. bolt |
| 8 | 00135120 | 5 | Washer |
| 9 | 00051520 | 3 | Hex. nut |
| 10 | 00451220 | 1 | Hose |
| 11 | 01131410 | 1 | Frame |
| 12 | 01131120 | 4 | Spacer |
| 13 | 00045620 | 2 | Tensioning sleeve |
| 14 | 01131130 | 1 | Frame |
| 15 | 01131140 | 1 | Bow |
| 16 | 01130750 | 1 | Plate filter (Panel Filter) |
| 17 | 00730940 | 4 | Detent washer |
| 18 | 01131150 | 1 | U-panel |
| 19 | 00420290 | 1 | Gasket |
| 20 | 01131160 | 1 | Annular filter |
| 21 | 00161240 | 1 | Edge protector |
| 22 | 00740310 | 8 | Detent washer |
| 23 | 00045540 | 8 | Socket head cap screw |
| 24 | 01131170 | 4 | Spacer |
| 25 | 01131440 | 2 | Socket head cap screw |
| 26 | 01017660 | 2 | Hex. nut |
| 27 | 00958770 | 1 | Washer |
| 28 | 00071450 | 1 | Hex. socket head cap screw |
| 29 | 00053350 | 2 | Hex. nut |
| 30 | 00053750 | 1 | Washer |
| 31 | 00053010 | 2 | Hex. bolt |
| 32 | 00534470 | 1 | Clamp |
| 33 | 01131180 | 1 | Holder |
| 34 | 01131190 | 2 | Grommet |
| 35 | 01131200 | 1 | Rod |
| 36 | 01131210 | 1 | Air vent |
| 37 | 01130560 | 1 | Pull spring |
| 38 | 01075290 | 1 | Gasket |
| 39 | 00740360 | 1 | Grommet |
| 40 | 00023290 | 1 | Retaining washer |
| 41 | 01131520 | 1 | Actuating cable |
| 42 | 00830680 | 1 | Hose |
| 43 | 01000890 | 1 | Shaker motor |



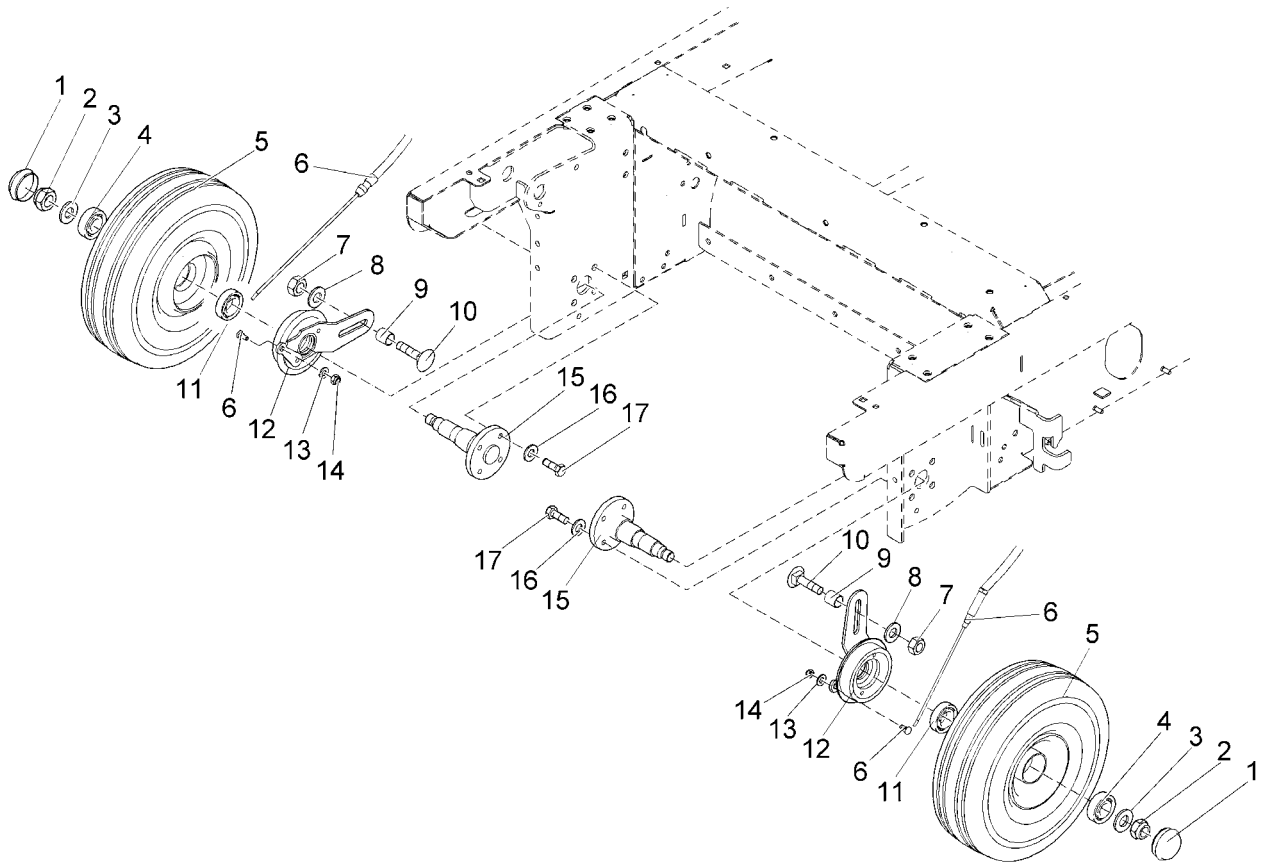
| Dust extraction | | | |
|------------------------|----------|------|----------------------------|
| Item | PN | Qty. | |
| 1 | 01131510 | 1 | Filter cover |
| 2 | 00053350 | 7 | Hex. nut |
| 3 | 00740090 | 7 | Detent washer |
| 4 | 00053330 | 4 | Hex. nut |
| 5 | 00740280 | 4 | Detent washer |
| 6 | 01092780 | 1 | Filister head flange screw |
| 7 | 00420290 | 1 | Gasket |
| 8 | 03003430 | 1 | Covering |
| 9 | 00903480 | 5 | Countersunk screw |
| 10 | 00730940 | 4 | Detent washer |
| 11 | 01131840 | 1 | Gasket filter cover |
| 12 | 01131450 | 4 | Filister head flange screw |
| 13 | 03003440 | 1 | Housing |
| 14 | 01131460 | 1 | Threaded bushing |
| 15 | 01131470 | 1 | Nozzle |
| 16 | 00157690 | 5 | Hollow disc |
| 17 | 00127360 | 2 | Countersunk screw |
| 18 | 00871440 | 1 | Countersunk screw |
| 19 | 00120130 | 1 | Countersunk screw |
| 20 | 00135790 | 3 | Hex. nut |
| 21 | 01131480 | 1 | Air scoop |
| 22 | 00864230 | 3 | Hex. bolt |
| 23 | 00059080 | 2 | Countersunk screw |
| 24 | 00070170 | 2 | Washer |
| 25 | 00042900 | 2 | Washer |
| 26 | 00133700 | 2 | Hex. bolt |
| 27 | 00131610 | 2 | Protective cap |
| 28 | 00151810 | 1 | Hex.bolt |
| 29 | 00053750 | 2 | Washer |
| 30 | 01131490 | 1 | Sheet metall |
| 31 | 00420290 | 1 | Gasket |
| 32 | 01131500 | 1 | Plug |
| 33 | 00104500 | 1 | Hex. bolt |
| 34 | 01130200 | 1 | Gasket |



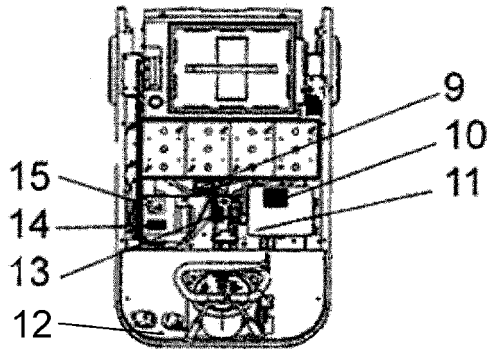
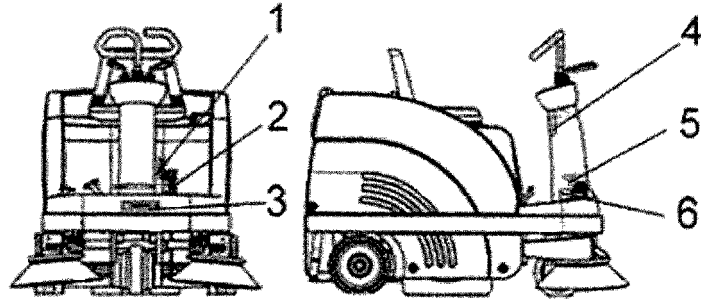
| Fan bearing | | | |
|-------------|----------|------|---------------------|
| Item | PN | Qty. | |
| 1 | 00506780 | 1 | Threaded pin |
| 2 | 01131220 | 1 | Rotating fan |
| 3 | 01131230 | 1 | Shaft |
| 4 | 00053010 | 3 | Hex. bolt |
| 5 | 03003350 | 1 | Bearing plate |
| 6 | 01131240 | 1 | Bearing bush |
| 7 | 00740280 | 3 | Detent washer |
| 8 | 00053330 | 3 | Hex. nut |
| 9 | 00706360 | 1 | Cylindrical bearing |
| 10 | 00126320 | 1 | Retaining ring |
| 11 | 01131250 | 1 | Distance tube |
| 12 | 00538360 | 1 | Cylindrical bearing |
| 13 | 01131260 | 1 | Belt pulley |
| 14 | 00740090 | 1 | Detent washer |
| 15 | 00022330 | 1 | Hex. nut |
| 16 | 00074710 | 2 | Hex. nut |
| 17 | 00740290 | 1 | Detent washer |
| 18 | 01131270 | 1 | Holder |
| 19 | 00740090 | 2 | Detent washer |
| 20 | 00553690 | 2 | Hex. bolt |
| 21 | 01130970 | 1 | Idler |
| 22 | 00126330 | 1 | Cylindrical bearing |
| 23 | 00021800 | 1 | Countersunk screw |



| Dirt hopper - Dirt hopper lifter | | | |
|----------------------------------|----------|------|-----------------------|
| Item | PN | Qty. | |
| 1 | 01130050 | 1 | Holder, l.h. |
| 2 | 00051510 | 10 | Hex. nut |
| 3 | 00042900 | 12 | Washer |
| 4 | 00878410 | 2 | Cup square bolt |
| 5 | 00053750 | 6 | Washer |
| 6 | 00103300 | 6 | Socket head cap screw |
| 7 | 01130060 | 1 | Handle |
| 8 | 01130070 | 9 | Bush |
| 9 | 01130080 | 9 | Slide bearing bush |
| 10 | 00101500 | 2 | Countersunk screw |
| 11 | 01130090 | 1 | Holder, l.h. |
| 12 | 00053100 | 2 | Hex. bolt |
| 13 | 01130200 | 1 | Gasket |
| 14 | 01130300 | 1 | Angle, l.h. |
| 15 | 00045540 | 4 | Socket head cap screw |
| 16 | 01130100 | 1 | Plate |
| 17 | 01130310 | 1 | Angle, r.h. |
| 18 | 01130110 | 1 | Nut |
| 19 | 00750430 | 2 | Edge protector profil |
| 20 | 01130120 | 1 | Sealing plate |
| 21 | 00077110 | 1 | Hex. bolt |
| 22 | 01130130 | 1 | Pull spring |
| 23 | 01130140 | 1 | Holder, r.h. |
| 24 | 00874930 | 2 | Protective cap |
| 25 | 01130150 | 1 | Holder, r.h. |
| 26 | 01130160 | 1 | Plate |
| 27 | 01130170 | 4 | Bush |
| 28 | 01130180 | 2 | Handle |
| 29 | 00078920 | 4 | Saucer head screw |
| 30 | 01130190 | 2 | Dirt hopper |



| Rear wheel - Brake | | | |
|--------------------|----------|------|---------------------------|
| Item | PN | Qty. | |
| 1 | 01131060 | 2 | Cap |
| 2 | 00135350 | 2 | Hex. nut |
| 3 | 01131070 | 2 | Washer |
| 4 | 00706370 | 2 | Ball bearing |
| 5 | 01130770 | 2 | Rear wheel |
| 6 | 01130350 | 2 | Bowden cable for brake |
| 7 | 00074710 | 2 | Hex. nut |
| 8 | 00053760 | 2 | Washer |
| 9 | 01130780 | 2 | Bush |
| 10 | 01130790 | 2 | Cup head square neck bolt |
| 11 | 00281050 | 2 | Ball bearing |
| 12 | 01131080 | 2 | Brake |
| 13 | 00053730 | 2 | Washer |
| 14 | 00051520 | 2 | Hex. nut |
| 15 | 01131090 | 2 | Axle |
| 16 | 00740290 | 8 | Detent washer |
| 17 | 00021130 | 8 | Hex. bolt |



| Lable | | | |
|--------------|----------|------|---|
| Item | PN | Qty. | |
| 1 | 00113140 | 1 | Lable brush apron |
| 2 | 01131550 | 1 | Lable brake |
| 3 | | 1 | Lable, Minuteman |
| 4 | 01071010 | 1 | Lable instruction manual |
| 5 | 01131560 | 1 | Lable brake |
| 6 | 01073530 | 1 | Lable noise performance |
| 9 | 00871160 | 1 | Lable 24V |
| 10 | 01055410 | 1 | Lable battery setting |
| 11 | 01131570 | 1 | Lable high-pressure cleaner |
| 12 | 01073530 | 1 | Lable |
| 13 | 01073530 | 1 | Lable cylinder broom wearing take-up |
| 14 | 01131590 | 1 | Lable rotating parts |
| 15 | 01131600 | 1 | Lable battery charging |

EC Declaration of Conformity

Minuteman[®]

declares under our sole responsibility
that the product

Kleen Sweep 40R/47R
Type: HM40B/HM47B/HM40BQP
HM47BQP/HM40QP/
HM50QP

to which this declaration relates, corre-
sponds to the relevant basic safety and
health requirements of the Directives
98/37/EEC, and to the requirements of
the relevant Directive

- 89/336/EEC.

For the relevant implementation of the
safety and health requirements mentio-
ned in the Directives, the following stan-
dard(s) and/or technical specification(s)
has (have) been respected:

EN 60335-2-72
EN 61000-6-3
EN 61000-6-2

Addison (Illinois), 30th Sept. 2004


Gregory J. Rau
President

LIMITED WARRANTY

Minuteman International, Inc. warrants to the original purchaser/user that this product is free from defects in workmanship and materials under normal use and service for a period of one year from date of purchase. In addition, Minuteman International, Inc. will, at its option, honor labor warranty claims for the first 6 months from date of sale, provided such claims are submitted through and approved by factory authorized repair stations. Minuteman International, Inc. will, at its option, repair or replace without charge, except for transportation costs, parts that fail under normal use and service when operated and maintained in accordance with the applicable operation and instruction manuals.

This warranty does not apply to normal wear, or to items whose life is dependent on their use and care, such as belts, cords, switches, hoses, rubber parts, electrical motor components or adjustments. Parts not manufactured by Minuteman International, Inc. such as engines, batteries, battery chargers, hydraulic pumps, and tires are covered by and subject to the warranties and/or guarantees of their manufacturers. Please contact Minuteman International, Inc. for procedures in warranty claims against these manufacturers.

Special warning to purchaser -- Use of replacement filters and/or prefilters not manufactured by Minuteman International, Inc. or its designated licensees, will void all warranties expressed or implied.

A potential health hazard exists without exact original equipment replacement.

All warranted items become the sole property of Minuteman International, Inc. or its original manufacturer, whichever the case may be.

Minuteman International, Inc. disclaims any implied warranty, including the warranty of merchantability and the warranty of fitness for a particular purpose. Minuteman International, Inc. assumes no responsibility for any special, incidental or consequential damages.

This limited warranty is applicable only in the U.S.A. and Canada, and is extended only to the original user/purchaser of this product. Customers outside the U.S.A. and Canada should contact their local distributor for export warranty policies. Minuteman International, Inc. is not responsible for costs or repairs performed by persons other than those specifically authorized by Minuteman International, Inc. This warranty does not apply to damage from transportation, alterations by unauthorized persons, misuse or abuse of the equipment, use of non-compatible chemicals, or damage to property, or loss of income due to malfunctions of the product.

If a difficulty develops with this machine, you should contact the dealer from whom it was purchased.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow the exclusion or limitation of special, incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions and limitations may not apply to you.

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