

# SW5X

Model: PB40PL, PB40PH

## Instruction Manual



**Minuteman<sup>®</sup>**

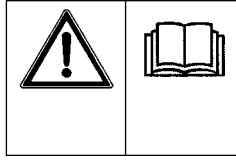
Dear customer,

It is our desire that the good characteristics of the SW5X should justify the confidence you demonstrated by making this purchase.

Before first operation of your SW5X, read these instructions carefully. The manual provides valuable information about operation, service and maintenance.



The symbol as used in this manual identifies items relevant to safety. Please observe the safety provisions (see 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.

Valid as of: March 2005

### Proper Use

The SW5X sweeper 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 SW5X may be used by personnel only that are familiar with the machine and aware of possible hazards involved.

The applicable Accident Prevention Regulations, Road Traffic Regulations, and aspects of safety and working medicine in vigour 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.**

### 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 and confirmed in the "Maintenance certificate" which is the warranty document.

The following is excluded from warranty:

fuses, natural wear, damages caused by overload, inexpert handling and unauthorised 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 SW5X 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.

## Contents

<b>Introduction/Proper Use Notes on Warranty Inspection</b>	
<b>1 Safty Information</b> . . . . .	<b>5</b>
1.1 General Safety Information . . . . .	5
1.2 Safety and Warning Symbols . . . . .	6
1.2.1 Generally Applicable Symbols . . . . .	6
1.3 Labels at the Machine . . . . .	7
1.4 Operation/Safety Information . . . . .	10
1.5 Cleaning Informaton . . . . .	11
1.6 Maintenance instructon . . . . .	12
<b>2 Description</b> . . . . .	<b>14</b>
2.1 Functional Descripton . . . . .	14
2.2 Cylinder Broom . . . . .	15
2.3 Side Brush . . . . .	15
2.4 Filter System/Dust Evacuation . . . . .	15
2.5 Shaking System . . . . .	15
2.6 Steering . . . . .	15
2.7 Wheels . . . . .	15
2.8 Brake . . . . .	16
2.9 Travel Drive Assembly . . . . .	16
2.10 Hydraulic System Lift-Up Disposal . . . . .	16
<b>3 First Operation</b> . . . . .	<b>17</b>
3.1 General . . . . .	17
3.2 Refill Fuel . . . . .	17
3.3 Check Engine Oil Level . . . . .	18
<b>4 Operation</b> . . . . .	<b>19</b>
4.1 Controls . . . . .	19
4.2 Control Panel . . . . .	21
4.3 Empty Dirt Hopper . . . . .	26
4.4 Empty Dirt Hopper Lift-Up Disposal . . . . .	26
4.5 Working with the machine . . . . .	29
4.5.1 Before Start of Engine . . . . .	29
4.5.2 Start Engine . . . . .	29
4.5.3 Stop Engine . . . . .	30
4.5.4 Sweep . . . . .	30
4.5.5 Stop and Park . . . . .	30
4.5.6 Displace . . . . .	31
4.5.7 Transport . . . . .	32
<b>5 Technical Data</b> . . . . .	<b>32</b>
<b>6 Maintenance/Service</b> . . . . .	<b>37</b>
6.1 Maintenance Instruction . . . . .	37
6.2 Mount/Dismount Cylinder Broom . . . . .	38
6.3 Adjust Sweeping Track . . . . .	38
6.4 Sealing strips for Broom Compartment . . . . .	40
6.5 Folding Apron Adjustment . . . . .	40
6.6 Replace Side Brush . . . . .	41
6.7 Dismount Plate Filter . . . . .	42
6.8 Basic Cleaning of Plate Filter . . . . .	44
6.9 Engine . . . . .	45
6.9.1 Check Engine Oil Level . . . . .	45
6.9.2 Change Engine Oil . . . . .	46
6.9.3 Air Cleaner . . . . .	46
6.10 Hydraulic System . . . . .	47
6.10.1 Check hydraulic Fluid-Level . . . . .	48
6.10.2 Refill Hydraulic fluid . . . . .	48
6.10.3 Change Hydraulic Fluid Filter . . . . .	48
6.10.4 Check and Refill Hydraulic System Lift-Up Disposal . . . . .	49
6.11 V-Belt Drive . . . . .	50
6.11.1 Replace Cylinder Broom V-Belt . . . . .	51
6.11.2 Replace Side Brush V-Belt . . . . .	51
6.11.3 Replace Suction Fan V-Belt . . . . .	52
6.11.4 Replace Hydraulic Pump V-Belt . . . . .	52
6.12 Electric System . . . . .	53
6.13 Maintenance System . . . . .	54
<b>7 Liquid propellant gas system</b> . . . . .	<b>56</b>
<b>8 Spare Parts</b> . . . . .	<b>62</b>

# 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. Machines with known defects must not be used. It will be of essence to make yourself familiar with all accessories and controls and their functions before you start working. 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 SW5X 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.



### Provide for sufficient ventilation when sweeping indoors (dust and combustion gas).



### Pinching and shearing hazard. Provide for required safe distance before lifting or lowering the dirt hopper.



### Shut down the engine before re-fuelling.






### Smoking and handling open flames is prohibited when filling fuel tanks or when working at or in the vicinity of components containing fuel.

**1.2 Safety and Warning Symbols**

1.2.1 Generally Applicable Symbols

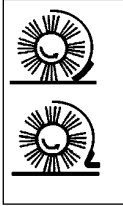
All paragraphs in this manual referring to your personal safety, the safety of your machine and the environment protection are attributed one of the following warning symbols:

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

### 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 (3)

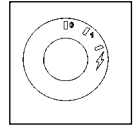
Inflation pressure (4)

**90 PSI**

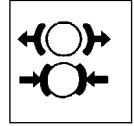
Read and observe operator's Manual (5)



Ignition lock (6)



Brake (7)



Noise power level (8)  
**91 dB (A)**

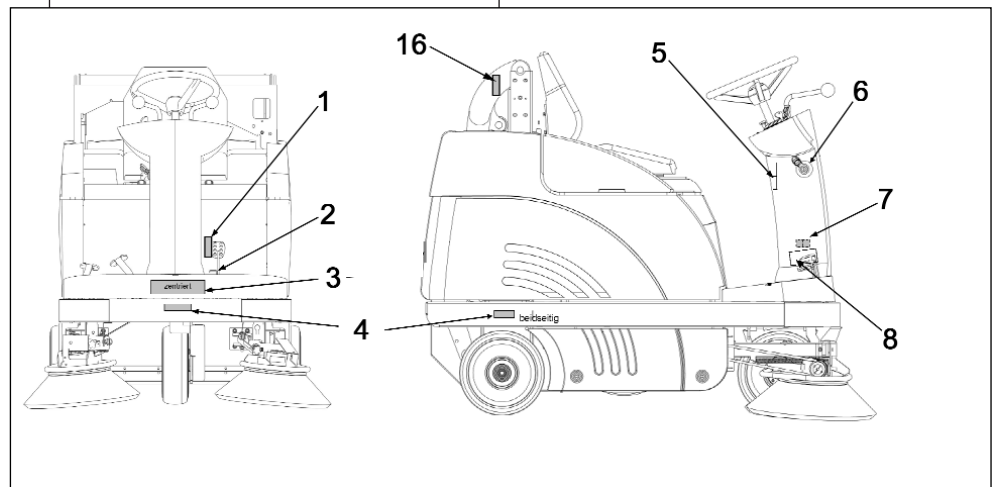


Fig.1

### 1.3 Labels at the Machine

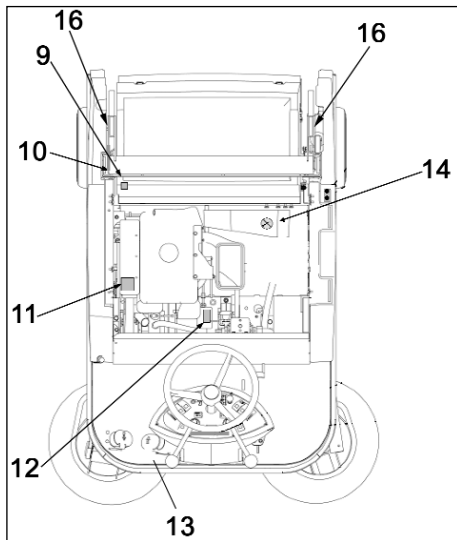


Fig. 2 Safety and information signs

Hydraulic fluid (9)



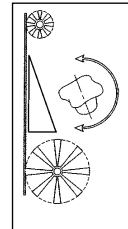
Rotating parts (10)



Burning surface (11)



Cylinder broom wearing take-up (12)



Nameplate (13)



**1.3 Labels at the Machine**

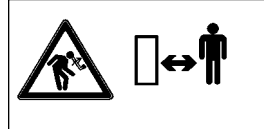
High-pressure cleaner (14)



**Do not clean by means of high pressure cleaner or vapour jet.**

Pinching hazard (16)

(Lifted-Up Disposal)



#### 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 authorised 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 seated.

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. The driver has to take account of local conditions and when operating the sweeper he has to watch out for other persons, especially children.



**Do not open hood or fairings with the machine running.**



**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 (dust and combustion gas).**



**Proceed to filter shaking only if the dirt hopper is in closed position.**

## 1.5 Cleaning Information

The machine is splash-proof (IPX3).



**Do not clean the SW5X by means of 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 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.



**Switch off the motors before maintaining the machine or replacing parts of it. Turn off the machine and pull the key.**



**Check hydraulic hoses and lines for leakage or damages in regular intervals. Replace defective hoses and lines immediately.**



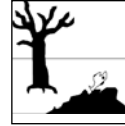
**Before changing wheels protect the machine against rolling by placing wedges. Proceed to wheel changing when the machine is on level and solid ground.**



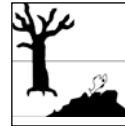
**Do not repair the pneumatic tires mounted to the machine yourself. Dismount the wheel and take it to repair to a tire workshop.**



**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.**



**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.**



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



Before commencing any work on the electric system disconnect battery (neg. lead) of the SW5X and pull the ignition key.



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



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



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



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



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.



Battery acid is highly caustic (keep clear of children). 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. Use appropriate protective means (e.g. protective gloves or finger-stalls) when handling battery acid. Do not use open flames (explosion hazard).

## 2 Description

### 2.1 Functional Description

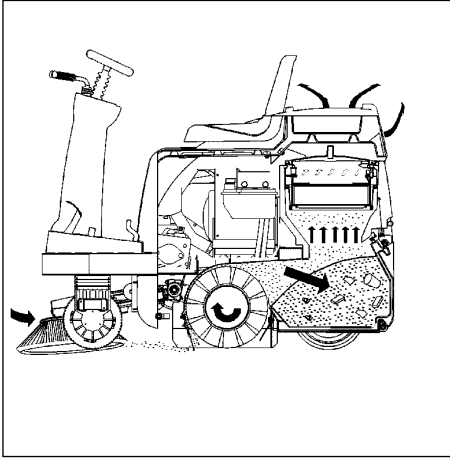


Fig.3

Principle

The side brush is used to collect dirt at borders and to enlarge the working width as well as to increase the area performance on large surfaces. The cylinder broom casts the debris overhead into the dirt hopper. The collected fine dust is evacuated by the suction fan and separated by a filter system. The air returned into the environment is clean. Dirt disposal at the SW5X is realized via two dirt hoppers (2x30 litres) which are to be emptied manually.

Dirt disposal at the SW5X (Lift-Up Disposal) is realized via lift-up disposal (lift-up height > 1350mm) directly into standard waste containers.

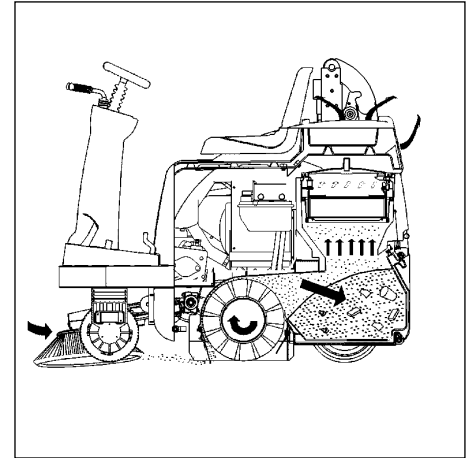


Fig.4

## 2.2 Cylinder Broom

The cylinder broom is equipped with 12 rows of bristles arranged in V-shape.

The cylinder broom width amounts to 27.6 in. (700mm) and its diameter to 13.6 in. (345mm).

## 2.3 Side Brush

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

The side brush has a light inclination. The swinging 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.

## 2.4 Filter System / Dust Evacuation

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



**In case of heavy dust development, 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, or after request by the pilot lamp at the latest.

## 2.6 Steering

Steering is controlled mechanically from steering wheel to front wheel via chain. This chain is to be re-adjusted as required.

## 2.7 Wheels

Pneumatic tyres with hose, size. 4.00 - 4 6PR

Inflation pressure: 90 PSI (6 bar)

Solid rubber tyres (Option)

## 2.8 Brake

The SW5X is equipped with a service brake.

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



**Any work at the braking system has to be executed by qualified persons in a qualified workshop only.**

## 2.9 Traction Drive Assembly

The SW5X is equipped with a hydrostatic drive assembly which is driven by the combustion engine via pump.

## 2.10 Hydraulic System Lift-Up Disposal

The hydraulic system comprises a compact unit (hydraulic pump with hydraulic tank), the hydraulic hoses and a hydraulic cylinder.

Hydraulic fluid: Mobiloil DTE 15 M

The named hydraulic fluid has been filled in the hydraulic system in the factory.

Filling of hydraulic tank: 0.2 gal. (0.76 litre)



### 3 First Operation

The SW5X has been extensively tested and submitted to a functional check before delivery. 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.

#### 3.1 General



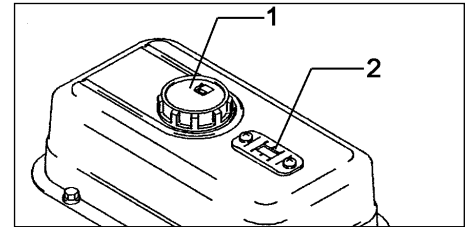
**Smoking and handling open flames is prohibited when filling fuel tanks or when working at or in the vicinity of components containing fuel.**



**Use clean fuel oil only. Store fuel in approved and closed reservoirs only.**

- Turn engine off
- Secure machine by engaging the parking brake.
- Pull ignition key.
- Fold back seat hood.

**Do not use the SW5X at ambient temperatures of more than 104°F (40°C). Do not start the machine at temperatures of 5°F (-15°C) or less. Liquid propellant gas system: refer to LPG operating instructions.**



Fuel tank

Fig.5

#### 3.2 Refill Fuel

The fuel tank is located under the foldable seat hood.

- Check filling level at the filling level indicator (Fig. 5/2).
- Remove tank lid (Fig. 5/1) before filling.



**Turn engine off before filling fuel.**

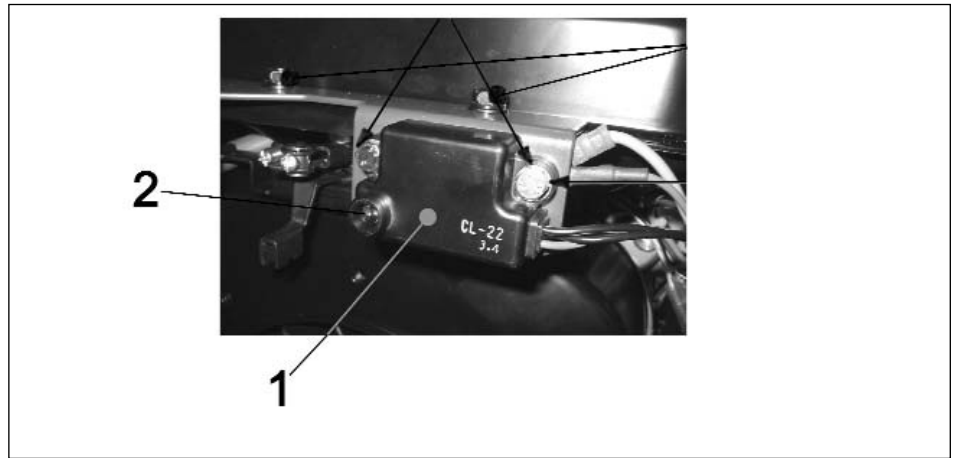


**Smoking and handling open flames is prohibited when filling fuel tanks or when working at or in the vicinity of components containing fuel.**

### 3.3 Check Engine Oil Level

- Engine oil has been filled in the factory.
- For safety reasons, check the engine oil level (refer to paragraph 6.9.2, Fig. 23/2)
- In order to protect the engine, it is switched off or cannot be started if engine oil level is insufficient.

This function is controlled by a low oil level switch (Fig. 0/1) at the engine. A red pilot lamp (Fig. 0/2) is situated at this switch and lights simultaneously in case of insufficient oil level.



Engine Oil Level

Fig.0



**Before the machine is operable again, refill oil until the prescribed level is attained.**



**Use clean oil only for refilling.**



**Store oil in approved and closed reservoirs only.**



**Do not use used oil.**

## 4 Operation

### 4.1 Controls

- 1 Actuator for folding apron
- 2 Service brake lock
- 3 Service brake/parking brake pedal
- 4 Drive pedal, reverse
- 5 Drive pedal, forward
- 6 Control panel
- 7 Seat adjustment
- 8 Safety knob, lock for release of swinging dirt hopper function (Lift-Up Disposal)
- 9 Release lever for swinging dirt hopper function (Lift-Up Disposal)

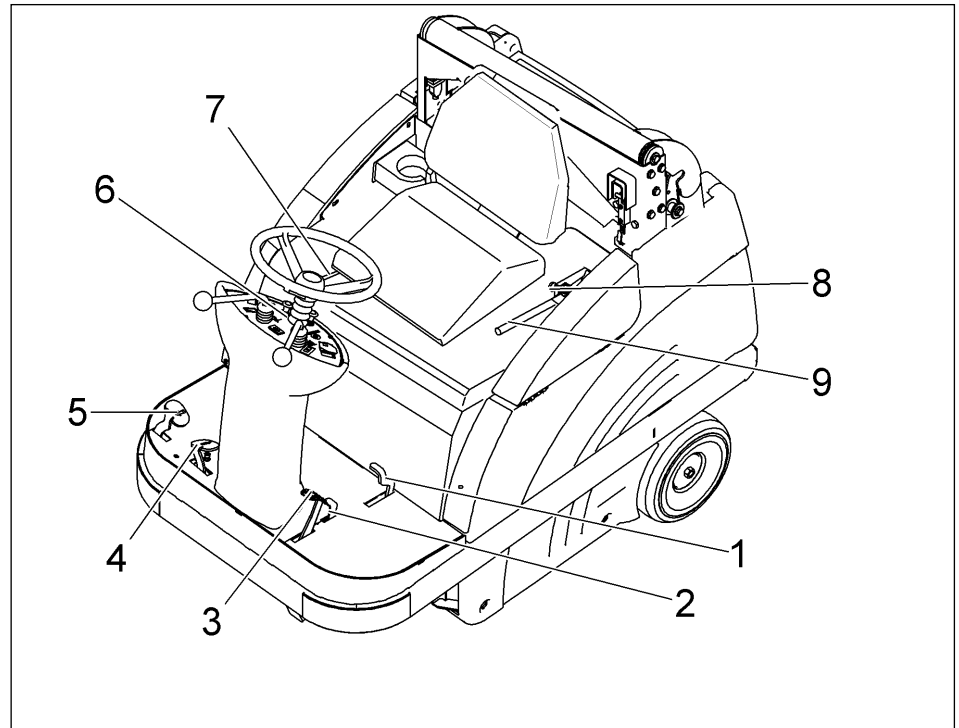


Fig.6

- 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/parking brake. If locked, the service brake works as parking brake. Release the lock by depressing the service 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 with continuous regulation of riding speed at the same time. If the driver releases the pedal it returns to initial position and the machine slows down to standstill.
- 5 Drive pedal, forward**  
to change direction to forward ride with continuous regulation of riding speed at the same time. If the driver releases the pedal 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.  
Adjust the seat so as to allow the driver being comfortably seated and attaining all elements required for operation.
- Adjust seat lengthwise: push lever slightly to the right and displace seat forwards or backwards to the required position. Then let the lever catch again.
- 8 Safety knob, lock for release of swinging dirt hopper function**  
to release the lever for swinging dirt hopper function.
- 9 Release lever for swinging dirt hopper function**  
to swing the dirt hopper

#### 4.2 Control Panel

- 1 Cylinder broom lever
- 2 Release of lifted-up disposal function
- 3 Horn
- 4 Suction fan/shaking system knob
- 5 Choke flap knob
- 6 Flashlight (option)
- 7 Lighting (option)
- 8 Lift and lower (Lift-Up Disposal)
- 9 Side brush lever
- 10 Pilot lamp, parking brake
- 11 Battery charge status indicator
- 12 Hourmeter
- 13 Pilot lamp, fan
- 14 Pilot lamp, shaking system
- 15 Engine speed regulation knob
- 16 Ignition switch

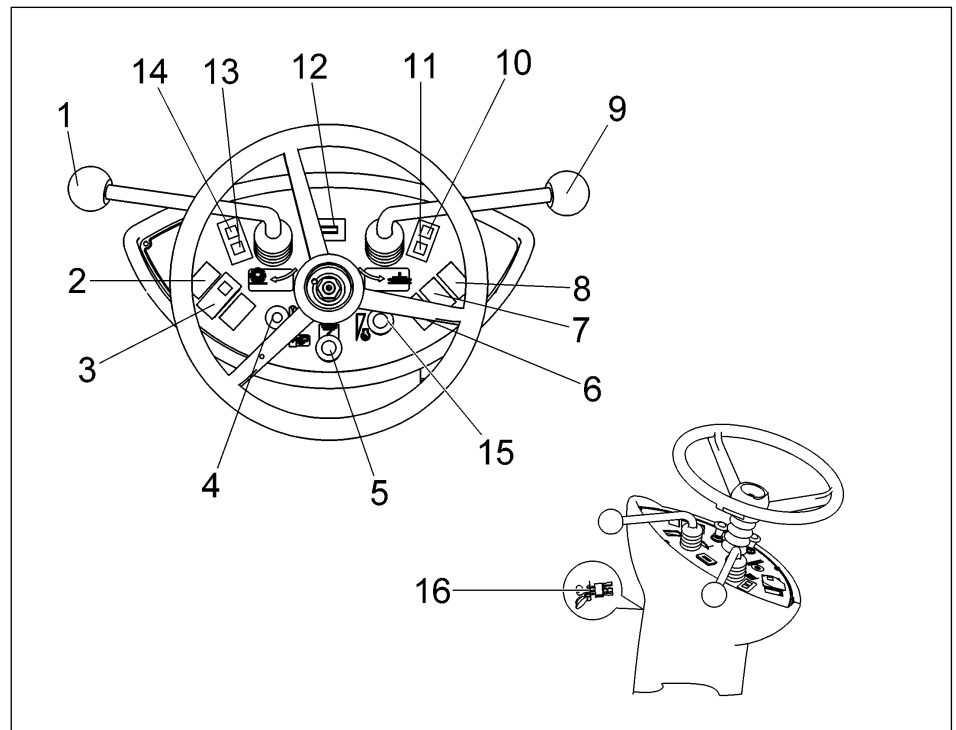
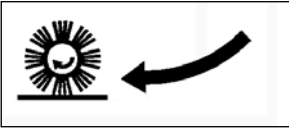


Fig.7



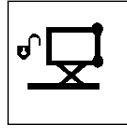
**1 Cylinder broom lever**  
to lift and lower as well as to switch on and off the cylinder broom and the side brush.

- 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



**2 Release for lifted-up disposal function**  
to release the lifted-up disposal function for lowering of lifting.



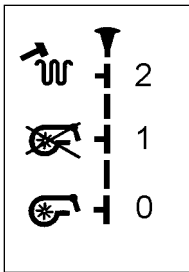
**Has to be actuated before pressing the key for lifting/lowering lifted-up disposal function. Hold the key during lifting/lowering.**



**Before changing lifting to lowering or vice versa, the "Release Lifted-Up Disposal" key has to be released once and pressed again**



**3 Horn**  
An acoustic signal sounds upon actuation of this button.



**4 Suction fan/shaking system knob**

Knob position (from bottom to top):

- Pos. 0 Activated vacuuming function (close flap before sweeping dry surfaces or collecting dry dirt).
- Pos. 1 Deactivated vacuuming function (open flap before sweeping wet surfaces and collecting wet dirt).
- Pos. 2 Shaking system ON (pull knob to stop and then release)

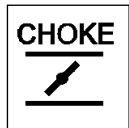


After jolting, the knob is to be kept in position 1 for about 10 seconds. Reduce engine speed to idling in order to optimize the cleaning result in case of heavy fine dust load.

If the yellow pilot lamp (Fig. 7/13) lights, actuate the shaking system (position 2). In this position, the shaking system is operable and proceeds to jolting in 7 repeated intervals.



**Do not hold the knob in position 2!**

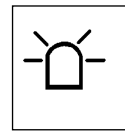


**5 Choke flap knob**

- to actuate the choke flap (cold start)
- Knob down - choke not actuated
- Knob pulled up - choke actuated for cold start.

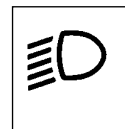


If the engine has already attained temperature, do not actuate the choke flap and start with full throttle.



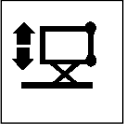
**6 Flashlight (option)**

to switch the flashlight ON/OFF.



**7 Lighting (option)**

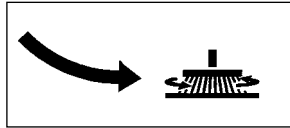
to switch the driving headlight ON/OFF.



**8 Lift and lower (lifted-up disposal)**  
to lift and lower the dirt hopper. Lift the dirt hopper by pressing the key until the desired height for lifting-out is attained. When lowering the dirt hopper make sure to hold the key pressed until the hopper has contact with the frame.

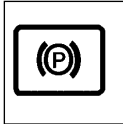


**Actuate release key for lifted-up disposal and hold before lifting or lowering.**

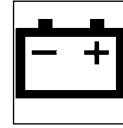


**9 Side brush lever**  
to lift and lower the side brush.

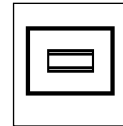
- Lower side brush  
= push lever
- Lift side brush  
= pull lever



**10 Pilot lamp, parking brake (red)**  
lights upon actuation of the parking brake Extinguishes upon release of the parking brake.

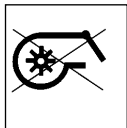


**11 Battery charge status indicator (red)**  
lights upon actuation of the ignition switch and has to extinguish as the engine fires.

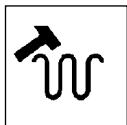


**12 Hourmeter**  
indicates the operating hours. The counter works only if the driver is seated and the ignition is ON.





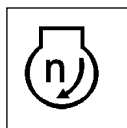
**13 Pilot lamp, suction fan (orange)** lights if the suction fan is not activated.



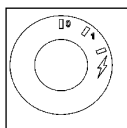
**14 Pilot lamp, shaking system (yellow)**  
Proceed to jolting of the filter system upon lighting of this pilot lamp by actuating the knob (Fig.7/5).



**The pilot lamp flashes during the shaking procedure and extinguishes after filter has been cleaned. Jolting is effectuated in 7 intervals.**



**15 Engine speed regulation knob** to adjust the engine speed. Service speed is attained by pulling the knob up.



**16 Ignition switch** to switch ignition on and off, to start and stop engine and to secure it against unauthorised use.



**For safety reasons, the SW5X has been equipped with a seat contact switch. Starting the engine is possible only after the driver has taken place on the seat. If seat contact is interrupted while the engine is running, the combustion engine of the SW5X has to be re-started.**

### 4.3 Empty Dirt Hopper

- Fold bow (Fig. 8/3) up
- = the dirt hoppers (Fig. 8/2) are lowered.
- Use the recessed grip (Fig. 8/1) 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. 8/2) and fold down the bow (Fig. 8/3).

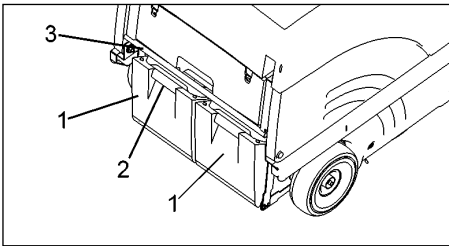


Fig.8

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



**Clean dirt hoppers at regular intervals.**

### 4.4 Empty Dirt Hopper (Lift-Up Disposal)



**Lift side brush and cylinder broom before emptying of the dirt hoppers.**



**If the hopper is lifted with the cylinder broom still running, the engine is switched off.**

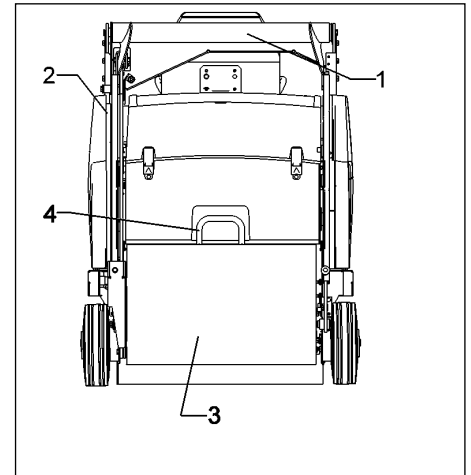


Fig.9

- 1 Lift-out arm
- 2 Lift-out cylinder
- 3 Dirt hopper
- 4 Bow-type handle



**Clean dirt hopper at regular intervals.**



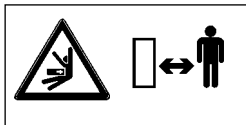
Riding with the lifted hopper reduces stability of the machine significantly. For this reason, do not lift the hopper but just before emptying. Before lifting the hopper, the operator has to make sure that no persons or objects are behind or next to the machine. Stop the machine on level ground before lifting the hopper.



When the hopper is lifted, the operator has to ride the machine slowly.



Keep clear of the hazard zone!



Pinching and shearing hazard. Provide for required safe distance before lifting or lowering the dirt hopper.

### Control panel (Lift-Up Disposal)

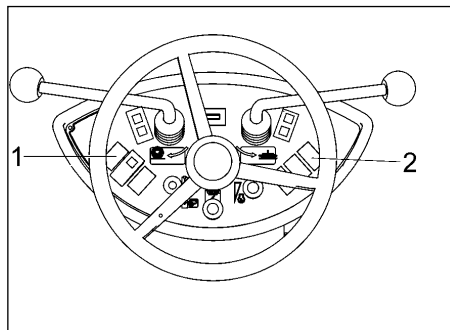


Fig.10

1 Release switch for lifted-up disposal function

2 Dirt hopper, lift and lower

Proceed to emptying of the dirt hopper as follows:

- Lift and switch off side brush and cylinder broom
- Proceed to shaking of the filter system
- Actuate switch (Fig. 10/1) and hold (dirt hopper is released)
- Actuate switch (Fig. 10/2) by pushing = lift dirt hopper
- Dirt hopper (Fig. 9/3) is lifted-out
- Back the SW5X until the dirt hopper is positioned above the container for disposal.
- Pull the safety knob (Fig. 11/1) of the release lever (Fig. 11/2).
- Release swinging of the dirt hopper by release lever (Fig. 11/2).
- Forward the SW5X after emptying.

- Lower dirt hopper by actuating switch (Fig. 10/1) and switch (Fig. 10/2); pull lever = lower dirt hopper



Observe the information given in paragraph 4.2/2 on releasing of lifted-up disposal.



If the hopper is lifted, the sweeping function is blocked. If the main broom is lowered even if the hopper is lifted, the combustion engine stops. Starting is then possible only after sweeping function is turned off (main broom lever in OFF position) or the hopper is lowered. (Under condition that the driver is seated)



Lifted-up disposal function is blocked as long as sweeping function is ON.

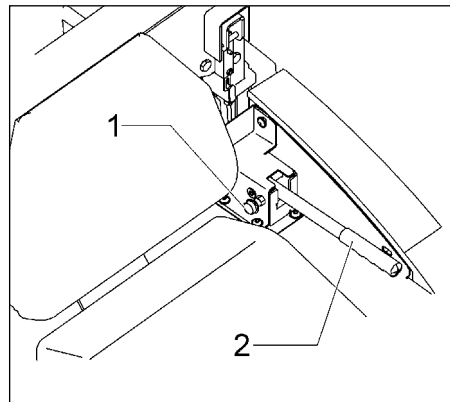


Fig.11

Release lever, swing dirt hopper

- 1 Safety knob
- 2 Release lever, swing dirt hopper



If the cylinder broom is switched on with the dirt hopper being lifted, the engine stops.



Should the dirt hopper not be completely emptied after swinging, proceed to manual shaking with the handle (Fig. 9/4).



Clean the dirt hopper in regular intervals.



The dirt hopper is approved only for a max. filling of 18.5 gal (70 litres) but not more than a weight of 242.5 lb (110 kg).

#### 4.5 Working with the machine

The driver is requested to carefully read this 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 SW5X all safety measures generally applicable for handling vehicles have to be observed. No passenger transport is admitted with the SW5X. Warning and instruction labels attached to the machine contain important information about safe operation 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 SW5X without protective devices.**

##### 4.5.1 Before Start of Engine

Open seat hood and check the following:

- Engine oil level
- Visual check of the V-belts
- Fuel filling
- Open fuel cock (is located at a slot of the air cleaner)



open



closed

- Close seat hood

##### 4.5.2 Start Engine

For safety reasons, the SW5X is equipped with a seat contact switch. Starting the engine is possible only when the driver is seated.

- Switch all levers and switches to neutral position. Actuate parking brake.
- Actuate choke (with cold engine only)
- Turn ignition key to switch on ignition
- Continue turning ignition key clockwise to start engine.



**If the starting procedure has to be repeated or if the engine stops, re-starting is possible only after ignition has been turned off. The ignition lock is equipped with a protection to preclude repeated ignition with the engine running.**

**Interruption of the starting procedure after 10 seconds and brief pause between starting cycles is recommended to save the battery.**

- Let the engine run and then slowly press the choke knob down.

#### 4.5.3 Stop Engine

- Turn ignition key counter-clockwise.

#### 4.5.4 Sweep

- Start engine
- Adjust service speed



**In initial position, vacuuming is activated. If the collected dirt is wet, open the flap.**

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



**Refer to LPG operating instructions for information on how to start machine equipped with liquid propellant gas system.**

#### 4.5.5 Stop and Park

- Release drive pedal which returns automatically into its neutral position and the machine slows down to standstill.
- Actuate parking brake
- Lift side brush and cylinder broom
- Turn engine off



**Slowing down the SW5X is possible by applying opposite forces with the drive pedal or by using the service brake.**



**When leaving the machine unattended, pull key in order to preclude unauthorized use.**



**Close the fuel cock in case of long-term standstill of the machine.**

#### 4.5.6 Displace

If the SW5X should be moved with the engine being off, actuate the bypass valve (Fig. 12).



**Before displacement of the machine actuate the bypass valve located at the drive pump.**

To do so, turn the lever (Fig. 13/1) of the bypass valve anticlockwise approx. a quarter turn against the stop.

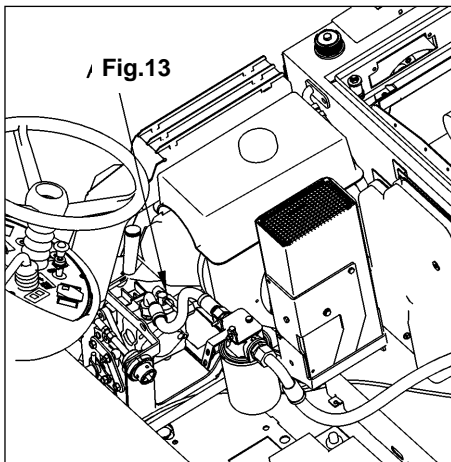


Fig.12

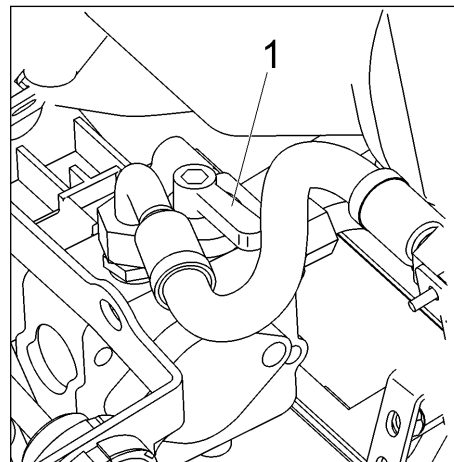


Fig.13

#### 4.5.7 Transport

Before transporting the SW5X on other vehicles, engage the parking brake and secure the machine by straps and by placing wedges at the wheels.

## 5 Technical Data

		SW5X	SW5X (Lift-Up Disp.)
<b>Dimensions and weights</b>			
Length with side brush	in. (mm)	59.8 (1520)	59.8 (1520)
Width without side brush	in. (mm)	39.4 (1000)	39.4 (1000)
Width with 1 side brush	in. (mm)	44.1 (1120)	44.1 (1120)
Width with 2 side brushes	in. (mm)	48.8 (1240)	48.8 (1240)
Height above driver's seat	in. (mm)	51.2 (1300)	51.2 (1300)
Max weight including accessories	lb (kg)	904 (410)	1058 (480)
Admissible total weight	lb (kg)	1278 (580)	1499 (680)
<b>Driving and sweeping performance</b>			
Forward speed	mph (km/h)	3.7 (6,0)	3.7 (6,0)
Reverse speed	mph (km/h)	2.5 (4,0)	2.5 (4,0)
Sweeping speed up to (4 km/h recommended)	mph (km/h)	3.7 (6,0)	3.7 (6,0)
Sweeping track without side brushes	in. (mm)	27.6 (700)	27.6 (700)
- with 1 side brush	in. (mm)	28.2 (970)	28.2 (970)
- with 2 side brushes	in. (mm)	48.8 (1240)	48.8 (1240)
Theoretical sweeping perf. without side brushes	sq. ft./h (m <sup>2</sup> / h)	45210(4200)	45210(4200)
- with 1 side brush	sq. ft./h (m <sup>2</sup> / h)	62430(5800)	62430(5800)
- with 2 side brushes	sq. ft./h (m <sup>2</sup> / h)	80190(7450)	80190(7450)
Gradability, max.	%	16	16



Technical Data

		<b>SW5X</b>	<b>SW5X (Lift-Up Disp.)</b>
<b>Filter system</b> Filtering surface Plate filter	sq. ft. (m <sup>2</sup> ) piece	30.1 (2,8) 1	30.1 (2,8) 1
<b>Cylinder broom</b> Length Diameter Wearing limit 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 + 0.4 (50+10) 12 v-shape PA	27.6 (700) 13.6 (345) 11.4 (290) 530 +/- 20 2.0 + 0.4 (50+10) 12 v-shape PA
<b>Ground clearance of sealing strips at broom compartment</b> Sealing strips - left - right - rear Sealing strip, front	in. (mm) in. (mm) in. (mm)	0.04 (1) 0.04 (1) 0.16 (4)	0.04 (1) 0.04 (1) 0.16 (4)
<b>Side brushes</b> Diameter Speed Serial bristling	in. (mm) rpm	460 90 PA	460 90 PA
<b>Dirt hopper</b> Hopper capacity	gal (l)	2x7.9 (2x30)	18.5 (70)

Technical Data

		<b>SW5X</b>	<b>SW5X (Lift-Up Disp.)</b>
<b>Drive wheels</b> Pneumatic tyres with hose, size Inflation pressure Solid rubber tyres	PSI (bar)	4.00 - 4 6PR 90 (6) Option	4.00 - 4 6PR 90 (6) Option
<b>Engine</b> Manufacturer Type Working process/no. of cylinders Piston capacity Performance at 3,600 rpm Service speed (with cylinder broom, side brush and suction fan being on) Fuel tank capacity (regular, unleaded) Fuel consumption Engine oil - filling Spark plug LPG-Spark plug, (Honda Part-No.) Air cleaner insert (Kawasaki) Pre-filter (Kawasaki)	in. <sup>3</sup> (cm <sup>3</sup> ) KW rpm  gal (l) gal/h (l/h) Typ gal (l)	Kawasaki FE 250 D 4- stroke / 1 Zyl. 15.2 (249) 6 2475 +/- 25  1.4 (5,3) 0.32 (1,2) 15W-40 0.3 (1,1) NGK BP 5 ES HON 98079-56846 11013-2128 11013-2129	Kawasaki FE 250 D 4- stroke / 1 Zyl. 15.2 (249) 6 2475 +/- 25  1.4 (5,3) 0.32 (1,2) 15W-40 0.3 (1,1) NGK BP 5 ES HON 98079-56846 11013-2128 11013-2129

Technical Data

		<b>SW5X</b>	<b>SW5X (Lift-Up Disp.)</b>
<b>Hydraulic system Travel drive assembly</b> Hydraulic fluid, e.g. Mobiloil  Hydraulic tank, capacity Fluid filter cartridge	  gal (l) Order-No	DTE 15 M  2.6 (10) CS-050-P-10-A	DTE 15 M  2.6 (10) CS-050-P-10-A
<b>Hydraulic system Lifted-up disposal unit</b> Compact unit (maintenance-free) Hydraulic fluid, e.g. Mobiloil  Hydraulic tank, capacity	  gal (l)		DTE 15 M  0.2 (0,76)
<b>Electric system</b> Starter battery Generator	V / Ah A	12 / 45 13	12 / 45 13

## Technical Data

<p><b>Noise emission</b>            The sound pressure level measured according to DIN EN ISO 11201 and under standard operating conditions at the operator's ear with            - operating status            - fan, cylinder broom and side brush ON amounts to</p> <p>The sound power level measured according to DIN EN ISO 3744 under standard operating conditions and maximum volume flow amounts to</p>	<p>dB (A)</p> <p>dB (A)</p>	<p>77</p> <p>91</p>
<p><b>Vibrations</b>            The frequency weighted acceleration measured according to EN 1003 which have an effect upon the upper limbs (hand-arm-system) amounts under normal working conditions</p> <p>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</p>	<p>ft./s<sup>2</sup> (m/s<sup>2</sup>)</p> <p>ft./s<sup>2</sup> (m/s<sup>2</sup>)</p>	<p>&lt; 8.07 (&lt; 2,5)</p> <p>&lt; 1.64 (&lt; 0,5)</p>

## 6 Maintenance/Service

### 6.1 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!



**The SW5X has to be inspected for safe condition by an authorized expert as required, but not less than once a year. Results of such an inspection have to be kept on file at least until the next inspection is performed.**

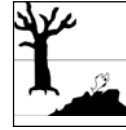
Please contact your local distributor if you cannot do the maintenance works as prescribed in the maintenance schedule in-house. He will have these works done for you and has qualified personnel and genuine spare parts at disposal.



**When cleaning or servicing the machine, or replacing parts, have the motors stopped and the key removed, the negative battery pole disconnected and the service brake (parking brake) engaged.**

In case of questions or orders for spare parts, please always quote your machine's serial indicated on the nameplate

Refer to chapter 1.3.1 Fig. 2/13 for position of nameplate.



**Collect spilled oil and provide for adequate disposal.**

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 workshop where qualified personnel and the required specific tools are available.**

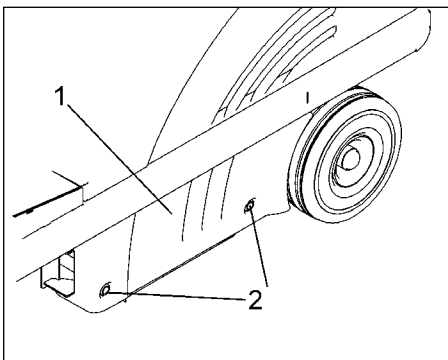


**When working at the electric system disconnect the negative pole of the battery.**

## 6.2 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
- Pull ignition key and protect by engaging parking brake
- Remove cover



Remove cover

Fig.14

- Open locks (Fig. 14/2) by enclosed square spanner (turn counter-clockwise)
- Remove cover (Fig. 14/1)

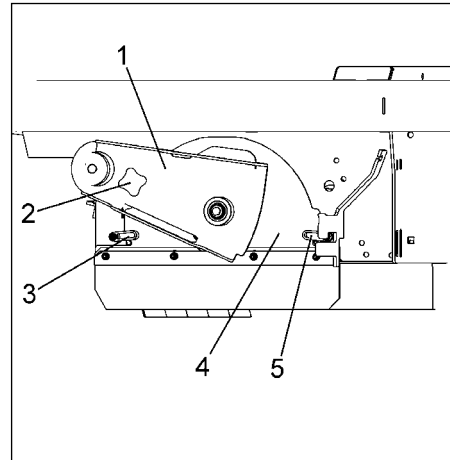


Fig.15

### Dismount cylinder broom

- Loosen star-shaped knob (Fig. 15/2) and remove
- Remove cylinder broom seating (Fig. 15/1)

- Turn handle (Fig. 15/3 +5) upwards and unlock
- Remove plate with sealing strip (Fig. 15/4)
- Remove cylinder broom by pulling.

For mounting the cylinder broom proceed in inverse order.

## 6.3 Adjust Sweeping Track

An adjustment device allows adaptation to different sweeping conditions. The cylinder broom has to be adjusted for normal use and with regard to a low degree of wearing as described in the following. Check the broom adjustment on level ground as follows.



**Before checking:**  
Mark level surface for checking broom adjustment by chalk.



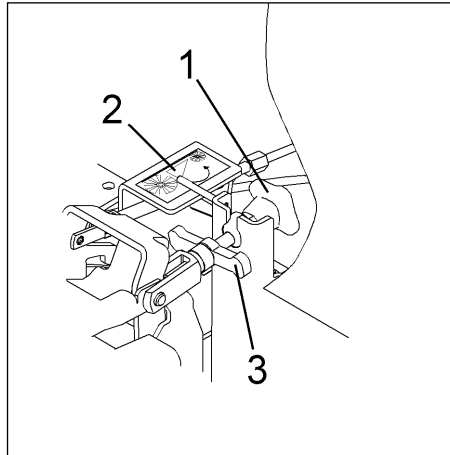
**Check inflation pressure of tyres 90 PSI (6bar).**

- Secure machine by engaging parking brake.
- Lower cylinder broom and let it run dry.
- Lift cylinder broom and forward the SW5X 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. (50mm) with the SW5X

The sweeping track width can be adjusted at the star-shaped knob (Fig. 16/2) as follows:



**Broom adjustment**

**Fig.16**

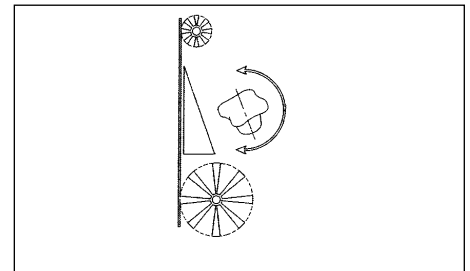
- Stop engine and pull key
- Engage parking brake
- Open seat hood
- Loosen handle (Fig. 16/3)
- Turn star-shaped knob (Fig. 16/1) to the left = wider sweeping track to the right = smaller sweeping track
- Fix handle (Fig. 16/3)
- Broom adjustment sticker (Fig. 16/2)



With one full turn of the knob, the track widens or broadens by approx. 0.4 in. (10mm).



When exceeding the sweeping track width the cylinder broom wearing increases as well as the load of the drive.



**Fig.17**

**Fig. 17 Broom adjustment sticker (in Fig. 16/2)**

#### 6.4 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 low pressure 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 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 with an inflation pressure of the pneumatic tyres of 90 PSI (6bar).

Height of the front sealing strip (folding apron) cannot be adjusted.

Being dragged, it has contact with the floor.

#### 6.5 Folding Apron Adjustment Adjust folding apron

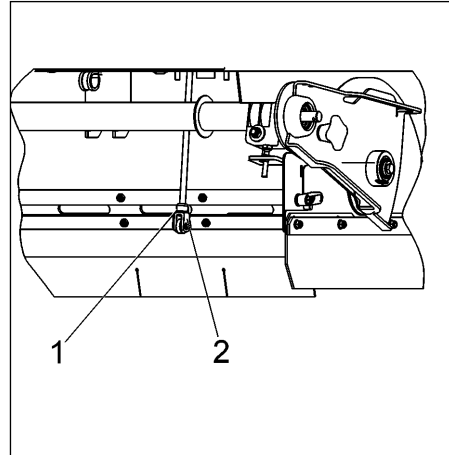


Fig.18

- Remove bolt (Fig. 18/2).
- Modify adjustment by turning the fork head (Fig. 18/1).



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

- Turn engine off and pull key
- Secure machine by engaging parking brake
- Remove cover (as described in the paragraph "Mount/Dismount Cylinder Broom").



## 6.6 Replace Side Brush

The side brush is located at the front right of the machine (standard version). Use the lever (paragraph 4.2, Fig. 7/9) to lift and lower the side brush.

The side brush is to be lightly inclined in forward and in outward direction.

The swinging 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.

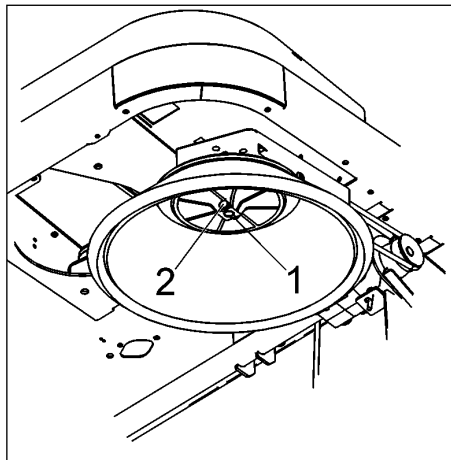


Fig.19

Proceed as follows for dismounting of the side brush:

### Replace side brush

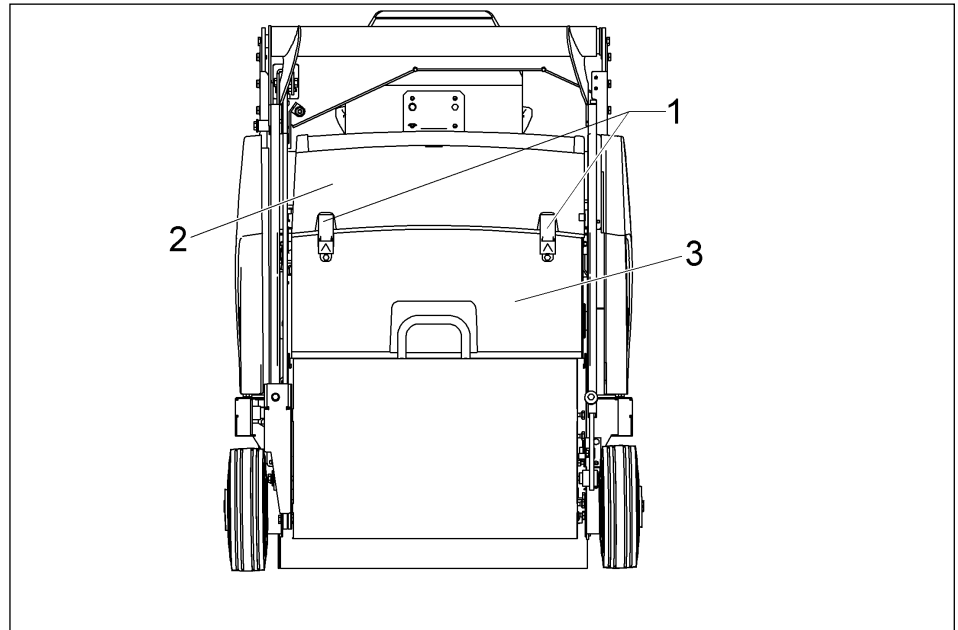
- Turn engine off and pull key.
- Secure machine by engaging parking brake
- Disconnect battery plug
- Side brush lifted
- Loosen hexagonal nut (Fig. 19/1) und remove together with washer
- Remove screw (Fig. 19/2)
- Remove side brush

Proceed in inverse order for mounting of the side brush.

### 6.7 Dismount Plate Filter

Proceed as follows for dismounting of the plate filter:

- Turn engine off and pull key.
- Secure machine by engaging parking brake
- Open seat hood
- Open quick-release locks (Fig. 20/1)
- Remove cover, filter case (Fig. 20/2)
- Loosen wing screws (Fig. 21/2) and remove.
- Fold back frame with electric-motor (Fig. 21/3).
- Hook frame at indicated position (Fig. 21/4)
- Remove plate filter (Fig. 21/5).



For mounting of plate filter proceed in inverse order.

**Dismount plate filter**

- 1 Quick-release locks
- 2 Cover of filter case
- 3 Filter case

**Fig.20**

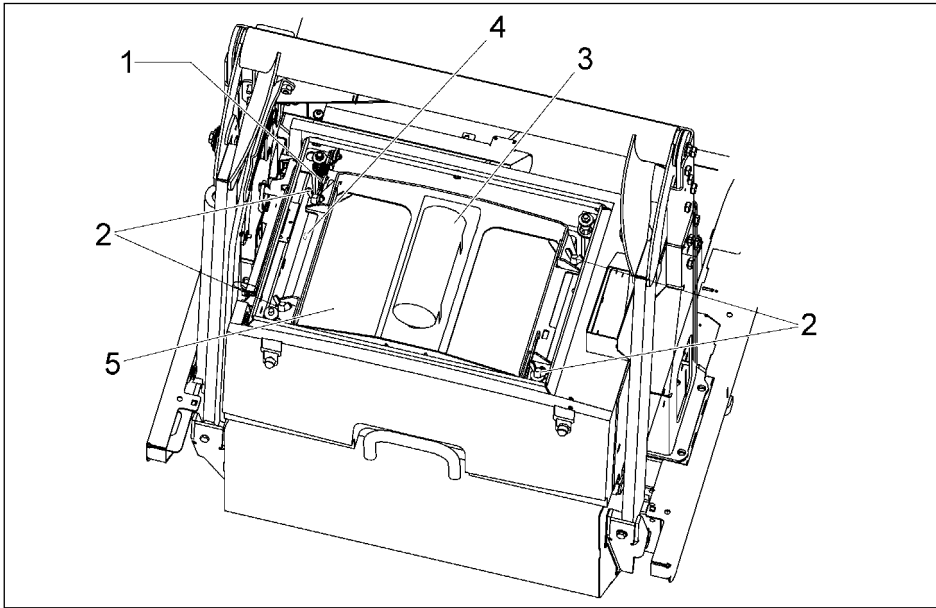


Fig.21

**Plate filter**

- 1 Detent hook
- 2 Wing screws
- 3 Frame with electric-motor
- 4 Opening for detent lever
- 5 Plate filter

### 6.8 Basic Cleaning of Plate Filter

Hold the plate filter (Fig. 22/1) in vertical position and drop it from a height of approx. 3 ft. (1 m) to the even floor as represented in Fig. 22.



**The soiled side of the filter points to the bottom.**

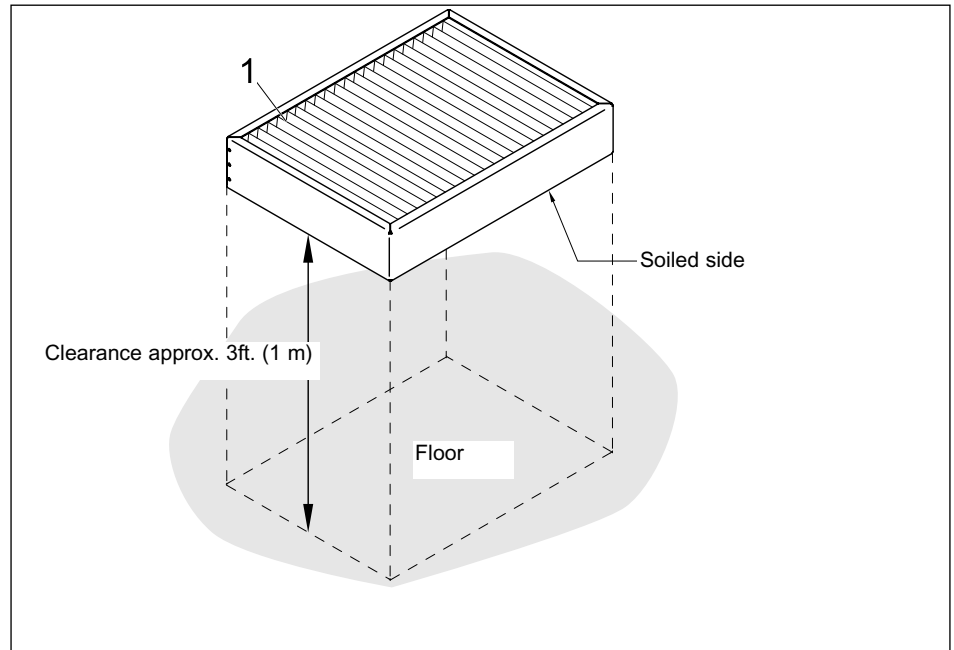


Fig.22

#### Basic cleaning of plate filter

1 Plate filter

## 6.9 Engine

The engine is a robust four-stroke engine and easy-to-maintain. Maintenance work is to execute at regular intervals. Find the details described in the following.



**Before cleaning or maintaining the machine as well as before replacing parts, turn the engine off and pull 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.**

### 6.9.1 Check Engine Oil Level



**Position the machine on level ground before checking the engine oil level as follows:**

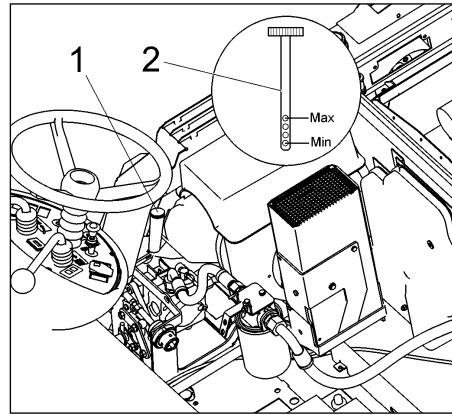


Fig. 23

#### Engine oil level check



**If the machine has not been used for a longer time, let the engine run to have the oil attained appropriate temperature.**

- Turn engine off and pull key.
- Secure machine by engaging parking brake
- Open seat hood
- Pull plug (Fig. 23/1) with dipstick.
- Wipe dipstick, push it into opening until stop and pull it again.
- Oil level has to mark between minimum and maximum, refill engine oil if required.
- Re-insert plug.



**The engine stops automatically in case of insufficient oil level to preclude damages.**

### 6.9.2 Change Engine Oil

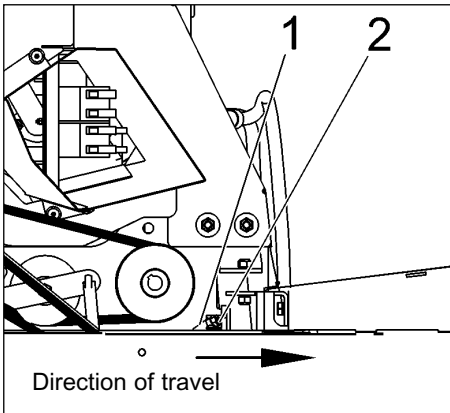


Fig.24

#### Engine oil changing, right side of machine



**Caution!**  
Burning hazard at muffler pipe!



If the machine has not been used for a longer time, let the engine run to have the oil attained appropriate temperature.

#### Proceed to the following before changing engine oil:

- Turn engine off and pull key.
- Secure machine by engaging parking brake.
- Open seat hood.
- Loosen quick-release locks (Fig. 20/1).
- Remove cover, filter case (Fig. 20/2).
- Loosen screws at the inside of the right lateral fairing and remove.
- Lightly tilt lateral fairing to the outside then remove by pulling up.
- Remove drain hose (Fig. 24/1) from holding clamp (Fig. 24/2) and lead it downwards through the vehicle frame.
- Loosen clamp, pull drain plug from the hose and drain oil.
- Close drain hose (Fig. 24/1) by plug and protect with clamp.

- Fasten drain hose (Fig. 24/1) at holding clamp.
- Fill engine oil into check opening with the machine standing on level ground.
- Check oil level with dipstick, continue filling if required

Engine oil: SAE 15 W-40  
Filling: approx. 0.3 gal (1.1 litre)



**Use an oil-resistant funnel for filling engine oil.**

### 6.9.3 Air Cleaner

The air cleaner is located in the engine's compartment. Clean the foam-type filter after every 50 hours of operation and the paper insert after every 100 hours of operation.



**Proceed to daily cleaning of the air cleaner with heavy dust formation.**

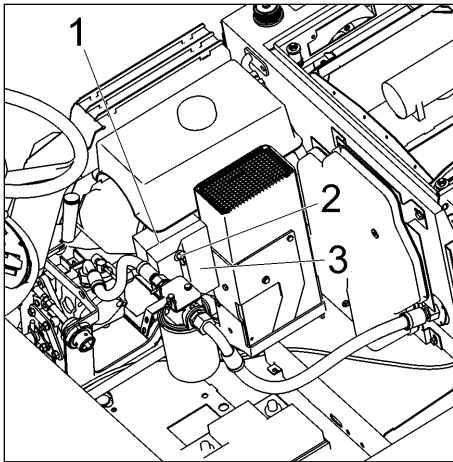


Fig. 25

**Air cleaner**

- 1 Air cleaner
- 2 Wing screw
- 3 Air cleaner cap with filtering insert



**A soiled filtering insert may lead to reduced performance and heavy smoking of the engine. Never let the engine run without filtering insert.**

Replace filtering insert as required. Proceed as follows for dismantling the filtering insert:

- Unscrew wing screw (Fig. 25/2) and remove filter cap (Fig. 25/3) with filtering insert.
- Remove foam-type filter and paper filter (Fig. 26/3 and 4) and proceed to dry cleaning or replace if required.

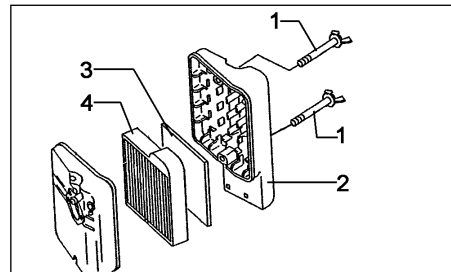


Fig. 26

**Air cleaner components**

- 1 Wing screw
- 2 Air cleaner cap
- 3 Foam-type filter
- 4 Paper filter

**6.10 Hydraulic System**

The hydraulic units are maintenance-free. The hydraulic oil and filters are concerned by maintenance work only. Premature failure can be prevented by regular inspection and periodical maintenance (see maintenance schedule).



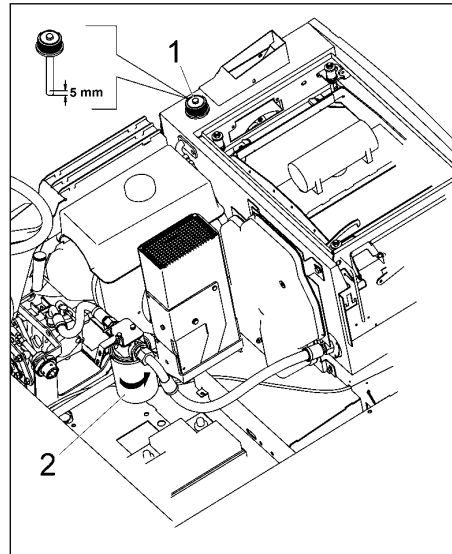
**We recommend having all other works at the hydraulic system done by qualified personal.**

### 6.10.1 Check Hydraulic Fluid Level

- Turn engine off and pull key.
- Secure machine by engaging parking brake.
- Open seat hood.
- Unscrew cap with dipstick (Fig. 27/1)
- Wipe dipstick by means of cloth
- Screw cap until stop
- Unscrew cap with dipstick and check hydraulic fluid level, refill if required

### 6.10.2 Refill Hydraulic Fluid

- Unscrew cap with dipstick and check hydraulic fluid level according to paragraph 6.10.1.
- Use appropriate oil-resistant recipient with mouth or funnel for refilling
- Proceed to check of fluid level after refilling



**Hydraulic fluid filter**

**Fig.27**

- 1 Filler neck
- 2 Hydraulic oil filter

- Filling is sufficient if the bottom end of the dipstick immerses into the fluid for approx. 0.2 in. (5mm).

### 6.10.3 Change Hydraulic Fluid Filter

The hydraulic fluid filter is located in the pump line and equipped with a bypass valve in order to guarantee fluid supply of the travel drive assembly even if the fluid filter is soiled. Change the fluid filter after the first 100 hours of operation.

- Turn hydraulic fluid filter (Fig. 27/2) counter-clockwise to loosen it and unscrew
- Before screwing new filter, fill it with oil
- Ride the machine a short distance
- Refill sufficient hydraulic fluid
- Check fluid filling level

Hydraulic fluid: Mobil DTE 15 M or a fluid of similar quality.



Should it be required to drain the hydraulic fluid completely proceed as follows:

- Turn engine off and pull key.
- Secure machine by engaging parking brake.
- Remove right-hand dirt hopper or lift the dirt hopper (see paragraph 4.3/4.4).
- Place recipient under the drain plug (drain plug is located underneath the filter case at the right) and remove drain plug.

#### 6.10.4 Check and Refill Hydraulic System (Lift-Up Disposal)

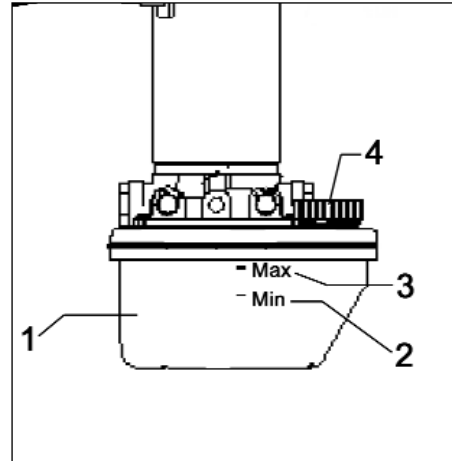


Fig.28

#### Hydraulic unit lifted-up disposal

Check hydraulic fluid level

- Turn engine off and pull key.
- Secure machine by engaging parking brake.
- Open seat hood

- Check hydraulic fluid level in tank (Fig. 28/1). The hydraulic fluid level must not fall below the minimum (Fig. 28/2). It should read between the minimum (Fig. 28/2) and the maximum (Fig. 28/3).

Refill hydraulic fluid

- Remove lid (Fig. 28/4) and refill as required.
- Close lid of hydraulic fluid tank.

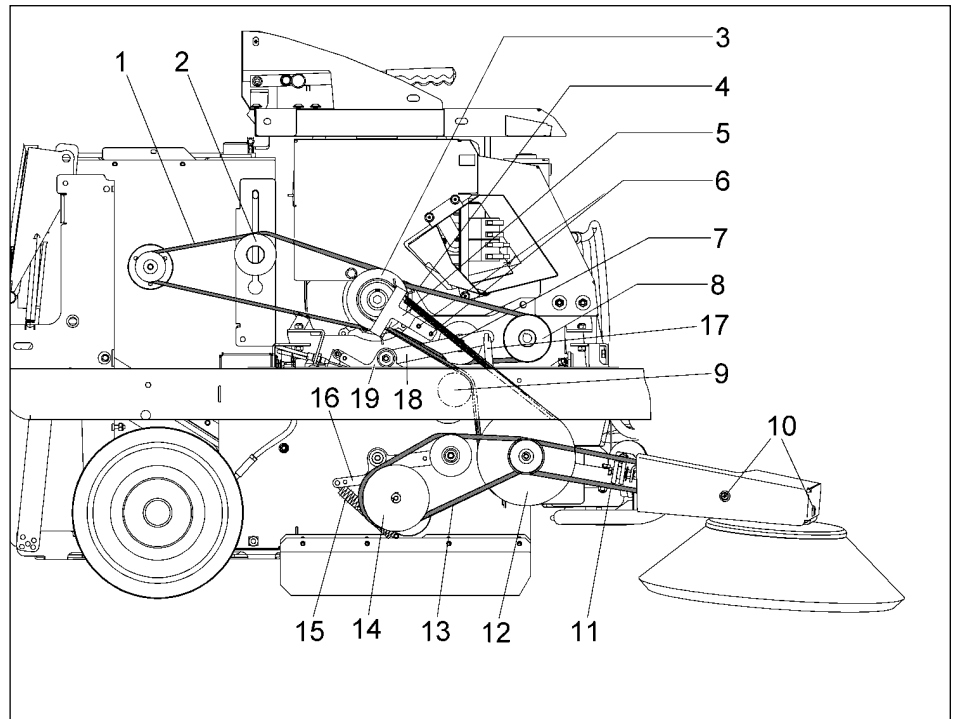
Use Mobiloil DTE 15 M fluid or a hydraulic fluid of similar quality.



**Dirt hopper has to be lowered.**

### 6.11 V-Belt Drive

- 1 Suction fan V-belt (40Hz)
- 2 Tensioning roller
- 3 V-belt pulley
- 4 Hydraulic pump V-belt
- 5 Belt guide
- 6 Hexagonal nut
- 7 V-belt for cylinder broom and side brush drive
- 8 Hydraulic pump belt pulley
- 9 Tensioning / coupling roller
- 10 Screws
- 11 Side brush V-belt
- 12 Belt pulley
- 13 Cylinder broom V-belt
- 14 Cylinder broom belt pulley
- 15 Tension spring
- 16 Tensioning roller lever
- 17 Tension spring
- 18 Tensioning roller lever for hydraulic pump V-belt
- 19 Tensioning roller lever for cylinder broom and side brush drive



V-belt drive

Fig.29

#### 6.11.1 Replace Cylinder Broom V-Belt

- Turn engine off and pull key.
- Secure machine by engaging parking brake.
- Remove bottom right fairing (turn locks counter-clockwise by square spanner).
- Detent tensioning spring (Fig. 29/15) by left hand while taking the V-belt off the tensioning roller with right hand.
- Remove V-belt (Fig. 29/13).

Proceed in inverse order for mounting.

#### 6.11.2 Replace Side Brush V-Belt

- Turn engine off and pull key.
- Secure machine by engaging parking brake
- Remove bottom right cover (turn locks counter-clockwise by square spanner).
- Remove cylinder broom V-belt (as described in paragraph "Replace Cylinder Broom V-Belt")
- Loosen screws (Fig. 29/10) at the cover plate and remove
- Remove cover plate
- Push side brush from the front side in direction of the machine to detent V-belt (Fig. 29/11)
- Remove V-belt (Fig. 29/11)

Proceed in inverse order for mounting.

#### 6.11.3 Replace Suction Fan V-Belt

- Turn engine off and pull key.
- Secure machine by engaging parking brake
- Open seat hood
- Loosen hexagon nuts (Fig. 29/6) and remove together with belt guide (Fig. 29/5)
- Detent V-belt (Fig. 29/7) with tensioning roller lever (Fig. 29/19) and take from the belt pulley
- Loosen tensioning roller (Fig. 29/2) and detent the V-belt, and then remove.

Proceed in inverse order for mounting.

#### 6.11.4 Replace Hydraulic Pump V-Belt

- Turn engine off and pull key.
- Secure machine by engaging parking brake
- Open seat hood
- Loosen hexagon nuts (Fig. 29/6) and remove together with belt guide (Fig. 29/5)
- Detent V-belt (Fig. 29/7) with tensioning roller lever (Fig. 29/19) and take from the belt pulley
- Loosen tensioning roller (Fig. 29/2) and detent the V-belt, and then remove.
- Unhinge tension spring (Fig. 29/17).
- Remove V-belt (Fig. 29/4).

Proceed in inverse order for mounting.

### 6.12 Electric System

- 1 F2 Pre-fuse (20A)
- 2 F3 Engine shutdown, hourmeter (5A)
- 3 F4 Indicators control panel, jolter controlling, (front right lighting option, right rear light (5A)
- 4 F5 Horn (10A)
- 5 F7 LPG equipment option (10A)
- 6 F8 Front left lighting option, left rear light (7.5A)
- 7 F9 Lifted-up disposal control (7.5A)
- 8 F10 LPG equipment option (10A)
- 9 F11 Shaking motor (30A)
- 10 F12 Generator charge status indicator (5A)
- 11 F14 Flashlight option (5A)
- 12 LPG option control unit
- 13 K6 Relay, (Lift-Up disposal)
- 14 K7 Relay, (Lift-Up disposal)
- 15 K8 Relay, (Lift-Up disposal)
- 16 K9 Relay, (Lift-Up disposal)
- 17 K10 Relay, (Lift-Up disposal)
- 18 K11 Relay, lower hopper
- 19 K3 Relay
- 20 K4 Relay, filter monitoring
- 21 K5 Relay, impulse relay shaking
- 22 F13 Hydraulik unit for (Lift-Up disposal) 30A

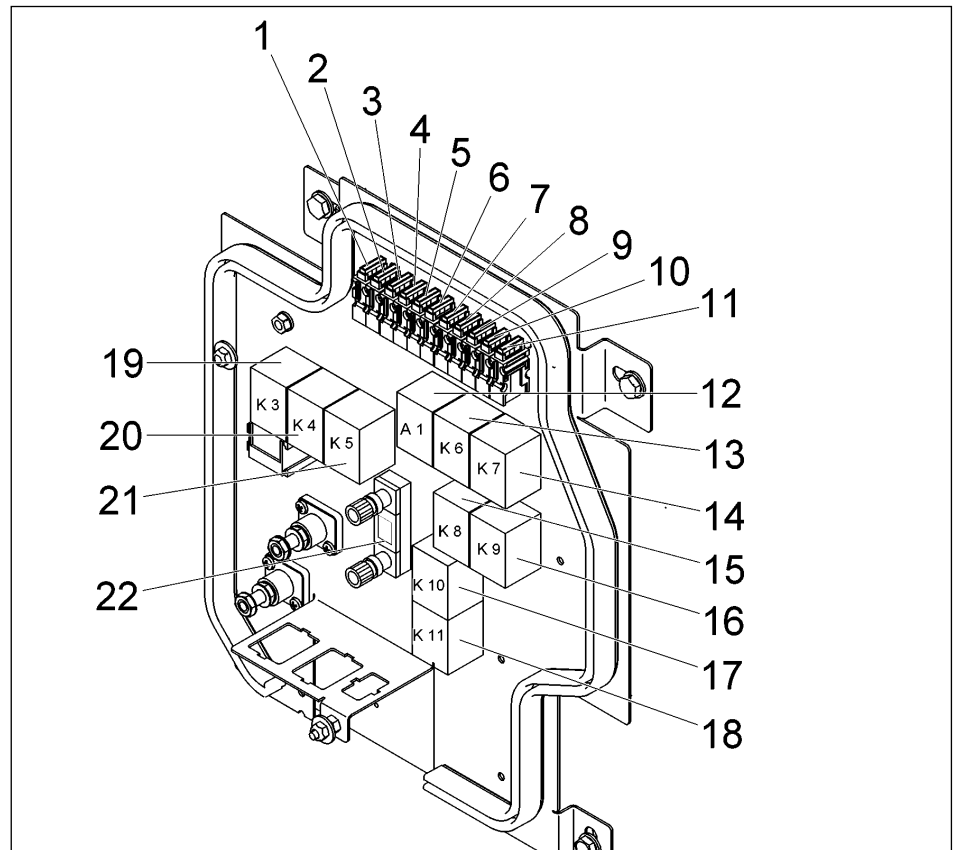


Fig. 30

6.13 Maintenance Schedule	hours of operation					
	Daily	after first	every 100	every 200	every 500	alle 000
Check engine oil level and refill if required	X					
Check fuel level and refill if required (regular unleaded)	X					
Replace fuel filter (as required)				X		
Change engine oil (1.1 litre engine oil SAE 15-W-40)		5	X			
Check engine air cleaner for soiling and clean if required (tap, do not use compressed air), replace air cleaner insert if required	X		X			
Visual check of engine, pump and wheel motor for oil leakage			X			
Check idling and service speed (1,200rpm and 2475rpm)				X		
Check spark plug air gap 0.03 in. (0.75mm) LPG: 0.01 in. (0.3mm)			X			
Replace spark plugs				X		
Check valve play 0.006 in. (0.15mm inlet, 0.15mm outlet) each in cold state				X		
Check starter battery acid level and top with distilled water if required, clean and grease battery terminals			X			
Change hydraulic fluid filter and refill fluid (use Mobiloil DTE 15 M or fluid of equivalent quality)		100			X	
Check cables and plugged connections for damages and tight fit				X		

6.13 Maintenance Schedule	hours of operation					
	Daily	after first	every 100	every 200	every 500	alle 000
Check function of seat contact switch				X		
Check exhaust system				X		
Check inflation pressure 90 PSI (6bar)	X					
Check cylinder broom for wearing or foreign particles (e.g. wire, straps) and replace broom if required	X					
Check sweeping track and adjust if required			X			
Check sealing strips at the broom compartment, adjust if required or replace defective sealing strips			X			
Check sealing strips at dirt hopper, replace defective sealing strips				X		
Check side brush adjustment and brush bristles for wearing, adjust if required or replace side brush			X			
Visual check of V-belts	X					
Check V-belt for wearing and correct tension and re-adjust if required		5	X			
Check service/parking brake and re-adjust if required			X			
Check filter system for tightness			X			
Dismount plate filter and clean if required			X			
Check tread of wheels				X		

6.13 Maintenance Schedule	hours of operation					
	Daily	after first	every 100	every 200	every 500	alle 000
Check hydraulic fluid level of lifted-up disposal function and refill if required			X			
Check tightening moment of fixing screws for lifted-up disposal and tighten if required 36 lb. ft. (49Nm)		5	X			
Check hydraulic hoses and replace if required				X		
Check tension of steering chain and adjust tension if required				X		



## Liquid Propellant Gas System USER TIPS

- Allow only qualified and trained personnel to operate a Minuteman Propane sweeper.
- Always maintain your Minuteman Propane sweeper, follow operating and maintenance instructions.
- Always check oil level before starting.
- Always keep accurate records of maintenance and service in a maintenance log book.
- Never overfill a propane fuel tank. Be sure to follow safety instructions for venting overfilled tanks in safety section in this manual.
- Never leave machine unattended with engine running.
- Never change or alter fuel system unless authorized by Minuteman International Inc. Service Department.
- Always keep nuts and bolts tightened and hose connection snug.
- Always store propane tank outside in an approved, secured, and tamper proof enclosure to provide safety from vandalism and accidents.
- Never use a non-sweeper listed fuel tank on your propane buffer.
- Always operate your sweeper, with exhaust (muffler) pointed away from merchandise, furniture, etc. Heat from exhaust may cause damage.
- For all engine repairs refer to the engine manual included with this parts and instruction book.
- Engine will not start if rego coupling is crossed, (fuel line connection) make sure fuel line connection is properly done.
- Always check fuel system for leaks with soapy water. (Hoses, regulators, connections)
- Never smoke while operating or working on sweeper.
- Keep hands, feet, hair, clothing, etc. away from brushes, pulleys, and any other moving parts on equipment.
- If you smell gas, do not touch any electric switch, extinguish any open flame and contact your gas supplier, and open windows.
- If there is any smell of propane fuel, check immediately for leaks.
- Do not store any other flammable liquids or vapors in the vicinity of propane storage area, machine storage area or any other appliance.
- Do not place flammable objects such as matches, fuel, etc., close to the engine while it is running.
- When parking the machine, immediately close the tapping valve of the cylinders.
- Never attempt to repair a propane fuel tank by yourself. Tanks can only be repaired by a Department of Transportation authorized facility.
- Check liquid propellant gas systems for proper condition, function and leakage at regular intervals.
- For repairs or adjustments on your Propane sweeper use only an authorized Minuteman Service Center.



**CAUTION**

Visible escaping gas vapor is extremely cold (ICE). Degrees (-44) avoid contact.



**CAUTION**

Propane gas is heavier than air. The gas will settle to the lowest possible area and build upwards.



**CAUTION**

Build-up of propane vapor in any enclosed area, can cause an explosion if ignited. Operate only in well-ventilated areas.

## Liquid Propellant Gas System SAFETY PRECAUTIONS

Before operating the engine, read the Operator's Manual and become familiar with it and the equipment. Safe and efficient operation can be achieved only if the equipment is properly operated and maintained.

The following symbols, found throughout this manual, alert you to potentially dangerous conditions to the operator, service personnel, or the equipment.



This symbol warns of immediate hazards that will result in severe personal injury or death.



This symbol refers to a hazard or unsafe practice that can result in severe personal injury or death.



This symbol refers to a hazard or unsafe practice that can result in personal injury or product or property damage.

Fuels, electrical equipment, batteries, exhaust gases and moving parts present potential hazards that can result in severe personal injury. Take care in following these recommended procedures. All local, state and federal codes should be consulted and complied with.

### GENERAL

- Provide appropriate fire extinguishers and install in convenient locations. Use an extinguisher rated ABC by NFPA.
- Make sure that all fasteners on the engine are secure and accurately torqued. Keep guards in position over fans, driving belts, etc.

- If it is necessary to make adjustments while the engine is running, use extreme caution when close to hot exhausts, moving parts, etc.
- Used engine oils have been identified by some state or federal agencies as causing cancer or reproductive toxicity. When checking or changing engine oil, take care not to ingest, breathe the fumes, or contact used oil.
- Do not work on this equipment when mentally or physically fatigued, or after consuming any alcohol or drug that makes the operation of equipment unsafe.

### BATTERIES

- Before starting work on the engine, disconnect batteries to prevent inadvertent starting of the engine.
- DO NOT SMOKE while servicing batteries. Lead acid batteries give off a highly explosive hydrogen gas which can be ignited by flame, electrical arcing or by smoking.
- Verify battery polarity before connecting battery cables. Connect negative cable last.

### FUEL SYSTEM

- DO NOT fill fuel tanks while engine is running.
- DO NOT smoke or use an open flame in the vicinity of the engine or fuel tank. Internal combustion engine fuels are highly flammable.
- Fuel line must be LP approved, adequately secured, and free from leaks. Piping at the engine should be approved flexible line. Do not use copper piping for flexible lines as copper will work harder and become brittle enough to break.
- Be sure all fuel supplies have a positive shut-off valve.

### PROTECT AGAINST MOVING PARTS

- Do not wear loose clothing in the vicinity of moving parts, such as PTO shafts, flywheels, blowers, couplings, fans belts, etc.
- Keep your hands away from moving parts.

### EXHAUST SYSTEM

- Exhaust products of any internal combustion engine are toxic and can cause injury, or death if inhaled. When operating the engine in a confined area, make sure the ventilation system is operating properly.
- DO NOT use exhaust gases to heat a compartment.
- Make sure that your exhaust system is free of leaks. Make sure that exhaust manifolds are secure and are not warped by bolts unevenly torqued.

### EXHAUST GAS IS DEADLY!

- Exhaust gases contain carbon monoxide, a poisonous gas that can cause unconsciousness and death. It is an odorless and colorless gas formed during combustion of hydrocarbon fuels. Symptoms of carbon monoxide poisoning are: Dizziness, Headache, Weakness and Sleepiness, Throbbing in Temples, Vomiting, Muscular Twitching

If you experience any of these symptoms, get out into fresh air immediately, shut down the unit and do not use it until it has been inspected.

The best protection against carbon monoxide inhalation is proper installation and regular, frequent inspections of the complete exhaust system. If you notice a change in the sound or appearance of exhaust system, shut the unit down immediately and have it inspected and repaired at once by a competent mechanic.

### KEEP THE UNIT AND SURROUNDING AREA CLEAN

- Make sure that oily rags are not left on or near the engine.
- Remove all unnecessary grease and oil from the unit. Accumulated grease and oil can cause overheating and subsequent engine damage and present a potential fire hazard.

**For Your Safety!**

These safety precautions should be followed at all times. Failure to follow these safety precautions could result in injury to yourself and others.

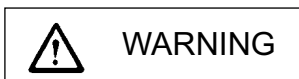


**Accidental Starts!**

Before servicing the engine or equipment, always disconnect the spark plug lead to prevent the engine from starting accidentally. Ground the lead to prevent sparks that could cause fires.

On engines equipped with a 12-volt battery and/or electric start, disconnect the battery cables from the battery. Always disconnect the negative (-) cable first.

Before disconnecting the negative (-) ground cable, make sure all switches are OFF. If ON, a spark will occur at the ground cable terminal which could cause an explosion if hydrogen gas or fuel vapors are present.



**Over-speed is Hazardous!**

Never tamper with the governor components or settings to increase the maximum speed. Severe personal injury and damage to the engine or equipment can result if operated at speed above maximum ratings.

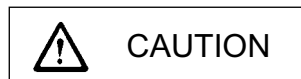


**Explosive Fuel**

LPG is extremely flammable and is heavier than air and tends to settle in low areas where a spark or flame could ignite the gas. Do not start or operate this engine in a poorly ventilated area where leaking gas could accumulate and endanger the safety of persons in the area.

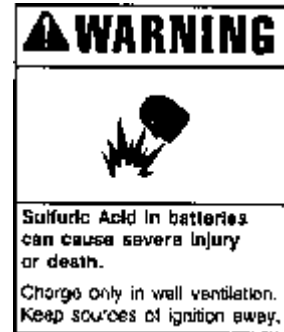
To insure personal safety, installation and repair of LPG fuel supply systems must be performed only by qualified LPG system technicians. Improperly installed and maintained LPG equipment could cause fuel supply system or other components to malfunction, causing gas leaks.

Observe federal, state and local laws governing LPG fuel and systems.



**High Voltage!**

Never touch electrical wires or components while the engine is running. They can be sources of electrical shock which could cause severe injury or burns.



**Dangerous Acid, Explosive Gases!**

Batteries contain sulfuric acid. To prevent acid burns, avoid contact with skin, eyes and clothing. Batteries produce explosive hydrogen gas while being charged. To prevent a fire or explosion, charge batteries only in well ventilated areas. Keep sparks, open flames, and other sources of ignition away from the battery at all times. Keep batteries out of the reach of children. Remove all jewelry when servicing batteries.

Before disconnecting the negative (-) ground cable, make sure all switches are OFF. If ON, a spark will occur at the ground cable terminal which could cause an explosion if hydrogen gas or gasoline vapors are present.



#### Lethal Exhaust Gases!

Engine exhaust gases contain poisonous carbon monoxide. Carbon monoxide is odorless, colorless, and can cause death if inhaled. Avoid inhaling exhaust fumes, and never run the engine in a closed building or confined area.



#### Rotating Parts!

Keep hands, feet, hair, and clothing away from all moving parts to prevent injury. Never operate the engine with covers, shrouds, or guards removed.



The crankcase, cylinder head, exhaust system, and other components can get extremely hot from operation. To prevent severe burns, do not touch these areas while the engine is running - or immediately after it is turned off. Never operate the engine with heat shields or guards removed.

#### PROPANE TANK

The tank supplied with this equipment is a horizontal vapor withdrawal 20 lb. tank. Do not overfill. Fill tank to 80% of rated capacity. Safety fill, Aluminum unpolished, polished, and steel. All propane tanks are equipped with this special warning sticker. Please read.

**WARNING:** Vapor withdrawal tank weight fill only! Failure to weight fill tank will void warranty and cause damage to propane components! Tare weight is stamped on the tank.

**DANGER:** Liquid propane is highly flammable and its vapors are explosive. To prevent personal injury or property damage:

- Do not allow open flame, matches, or smoking in area.
- Never overfill a propane tank. The tank supplied with this machine is a horizontal vapor withdrawal 20 lb. tank. Weight fill tank only 80% of rated capacity. Tare weight is stamped on the tank.
- Always store propane tank outside in an approved, secured, tamper proof enclosure to provide safety from vandalism and accidents.
- Never use a non-UL listed propane tank.

## Operation

Refer to the Sweeper operating instructions for information on operation; the present manual contains specifications for liquid propellant gas system only.

### Start engine

- Set all operating elements and switches to neutral position.


**NOTE Do not contact the drive pedal by foot.**

- Actuate parking brake.
- Open cylinder valve.
- Set speed governor to full throttle position
- Pull choke knob as well if engine has already attained service temperature.
- Turn ignition start switch to position 1.
- Continue turning ignition start switch to position 2 until the engine cranks. Push choke flap knob back at the first ignition impulses already. Then release ignition start switch.

**NOTE Should the engine not start after 5 seconds, interrupt starting procedure, turn ignition start switch to "0" position and repeat starting procedure. The starting procedure may be extended to 15 seconds at temperatures below 32°F (0°C).**

**NOTE Let engine run for some seconds before pushing back the choke knob.**

### Stop engine

- Actuate parking brake
- Set engine speed governor to idling position
- Turn ignition off
-  - Close cylinder valve.

**Before a longer out-of-operation period of the machine (longer than one hour), switch off ignition only if engine has died away itself after closing of the cylinder valve.**

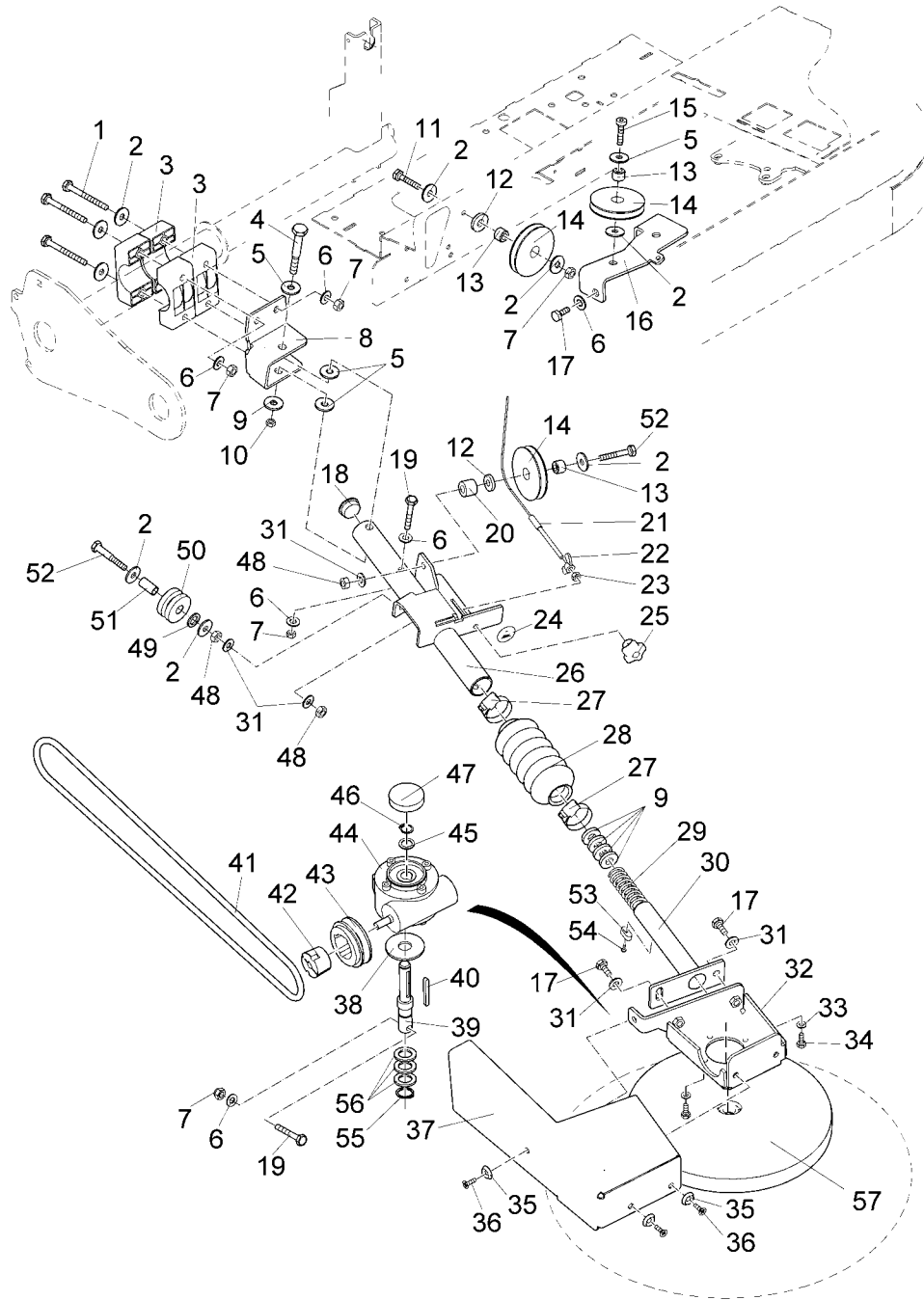
### CO contents of the exhaust gas

The CO contents of the exhaust gas must not exceed 0.1 % by volume when idling (1,400 to 1,450 rpm) and if engine is at operating temperatures without use of working implements.

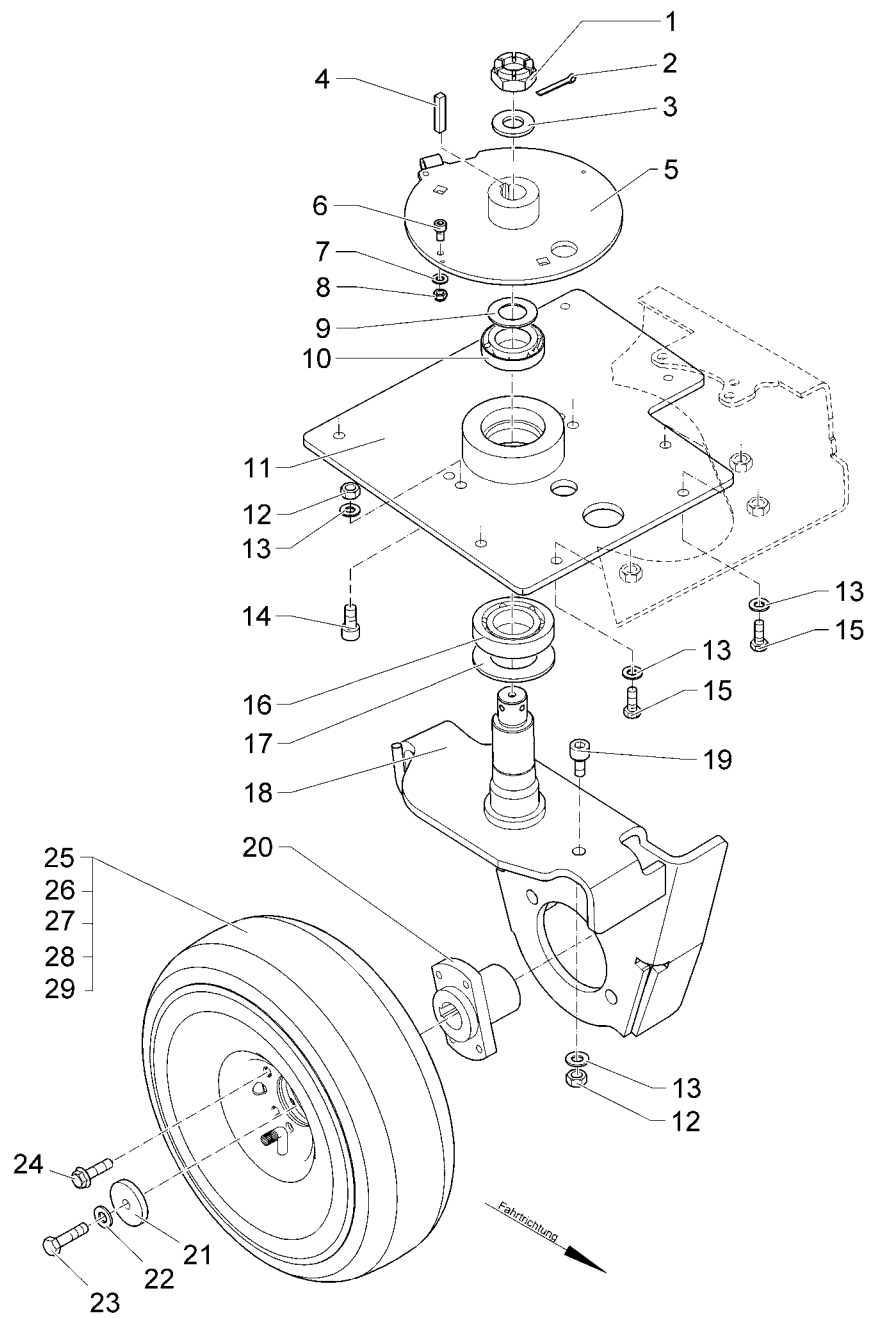


**Qualified persons and workshops with personnel having evidenced qualification for execution of such works is authorized only to proceed to setting work.**

8 Spare parts

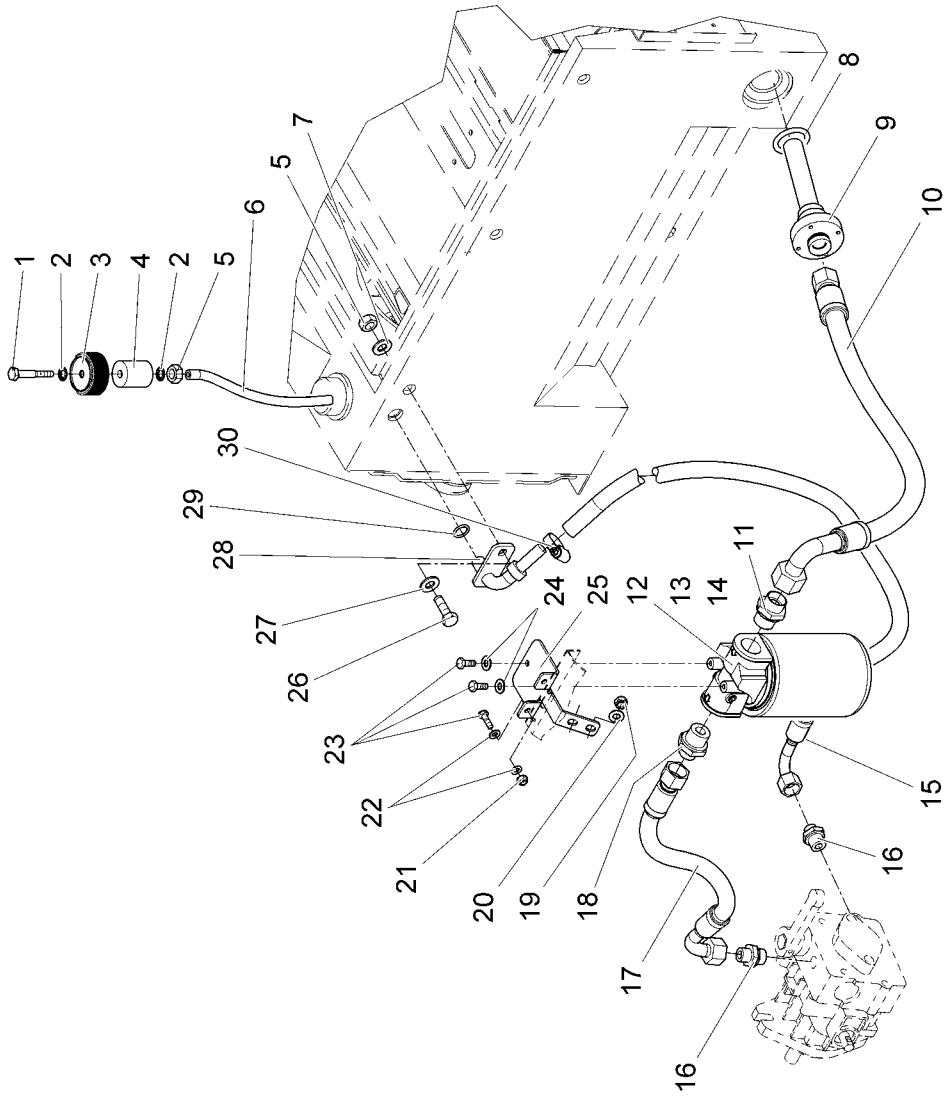


Side brush		
Pos.	Part No.	Description
1	00557600	Hex.bolt
2	00042900	Washer
3	01130610	Bearing
4	00041810	Hex.bolt
5	00046520	Washer
6	00053750	Washer
7	00051510	Hex. Nut
8	01130620	Holder
9	00855380	Washer
10	00132880	Hex. Nut
11	00054690	Hex.bolt
12	00695300	Washer
13	00974400	Bushing
14	00521270	Roller
15	00537390	Cylinder head screw
16	01130630	Holder
17	00553690	Hex.bolt
18	00152850	Drain plug
19	00041600	Hex.bolt
20	00029170	Bushing
21	01130640	Rope
22	00054020	Wing nut
23	00053330	Hex. Nut
24	01130650	Decal
25	00853730	Star handle
26	01130660	Side brush
27	01071480	Hose clamp
28	01130670	Bellows
29	00701250	Pressure spring
30	01130680	Holder
31	00740090	Washer
32	01132360	Gear support R.H.
33	00740280	Washer
34	00104500	Hex.bolt
35	00157690	Washer
36	00154680	Screw
37	01132370	Covering
38	00871350	Washer
39	01132790	Drive shaft
40	00072940	Feather key
41	01130710	Narrow drive belt
42	01130720	Bush
43	01130730	Belt pulley
44	01130740	Gear
45	00020610	Supporting ring
46	00022440	Retaining ring
47	01131530	Cap
48	00053350	Hex. Nut
49	00156720	Washer
50	00740930	Roller
51	00855240	Bushing
52	00138180	Hex.bolt
53	01132380	Fitted key
54	00695680	Fillister-head screw
55	00022230	Retaining ring
56	00041590	Supporting ring
57	01132800	Deflector grey

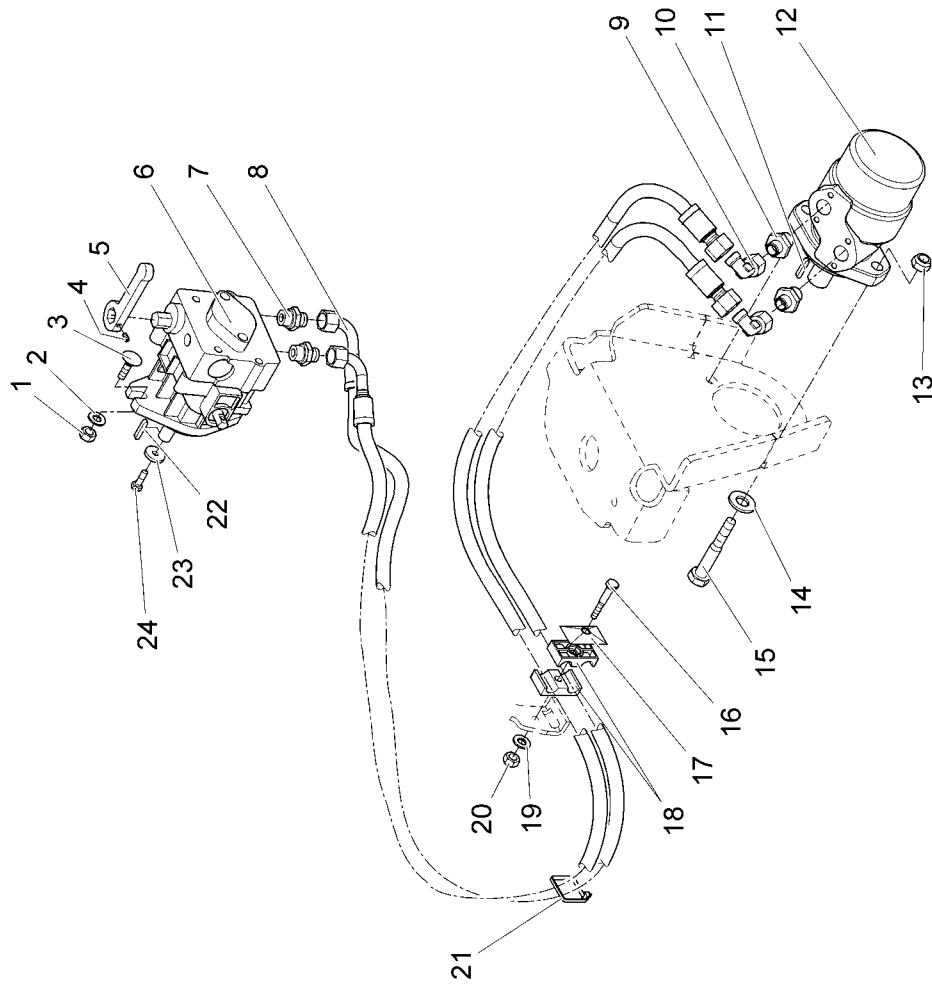




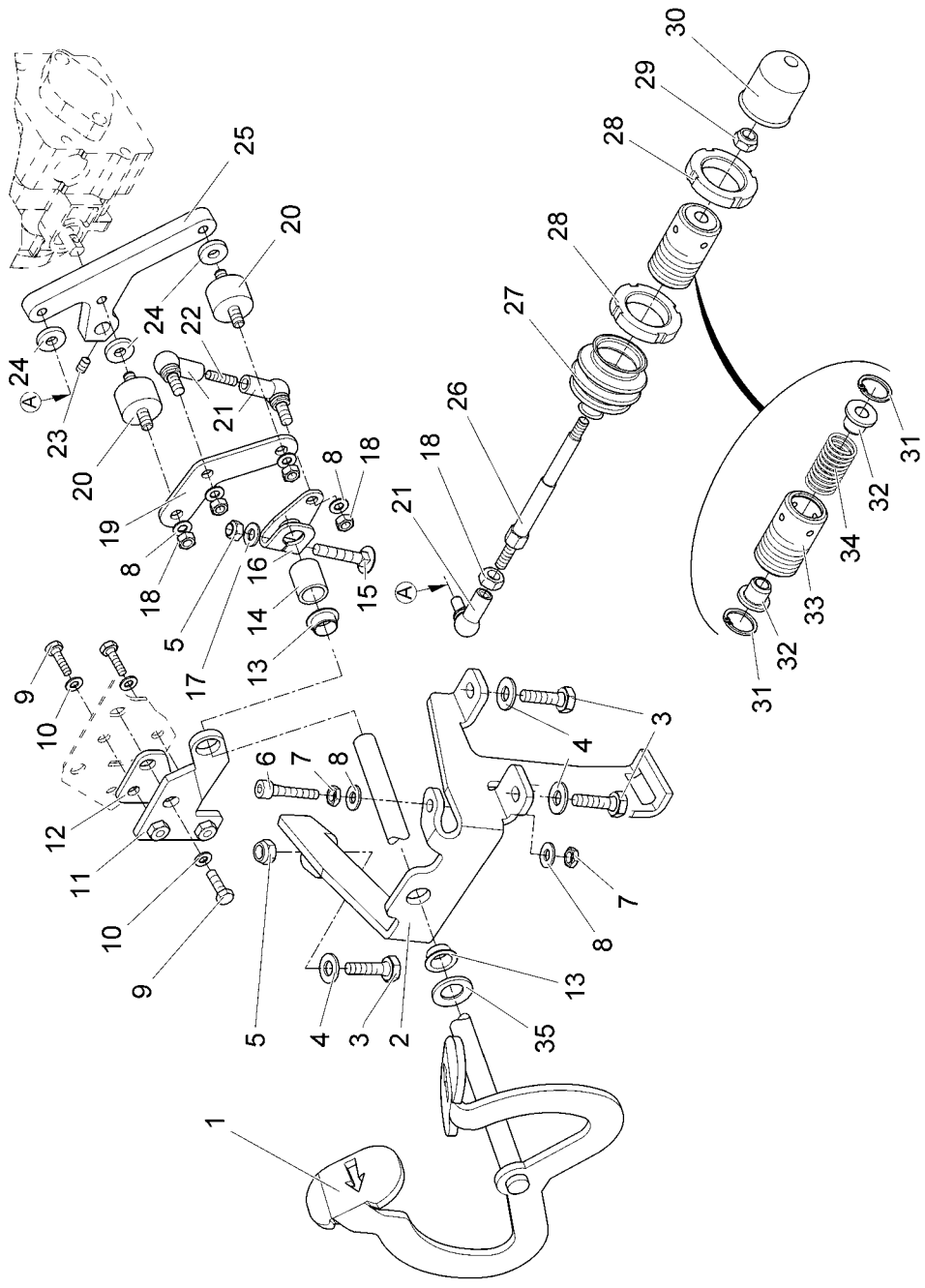
Front wheel drive		
Pos.	Part No.	Description
1	00048400	Slotted nut
2	00027880	Cotter pin
3	00743290	Washer
4	01132770	Parallel key
5	01132760	Guidance disk, cpl.
6	00136910	Cylinder head screw
7	00053730	Washer
8	00051520	Hex. Nut
9	01130030	Nilos ring
10	00048410	Cone roller bearing
11	03002980	Front wheel bearing plate
12	00053360	Hex. Nut
13	00870090	Washer
14	00135030	Cylinder head screw
15	00053310	Hex.bolt
16	00137930	Cone roller bearing
17	00743270	Lever
18	01133800	Wheelmount
19	00108590	Cylinder head screw
20	01131720	Hub
21	00133260	Washer
22	00740310	Washer
23	00133700	Hex.bolt
24	01131730	Hexagon screw
25	01133040	Tyre
26	01133050	Tube
27	01133020	Rim half
28	01133010	Rim half
29	01133060	Valve cap



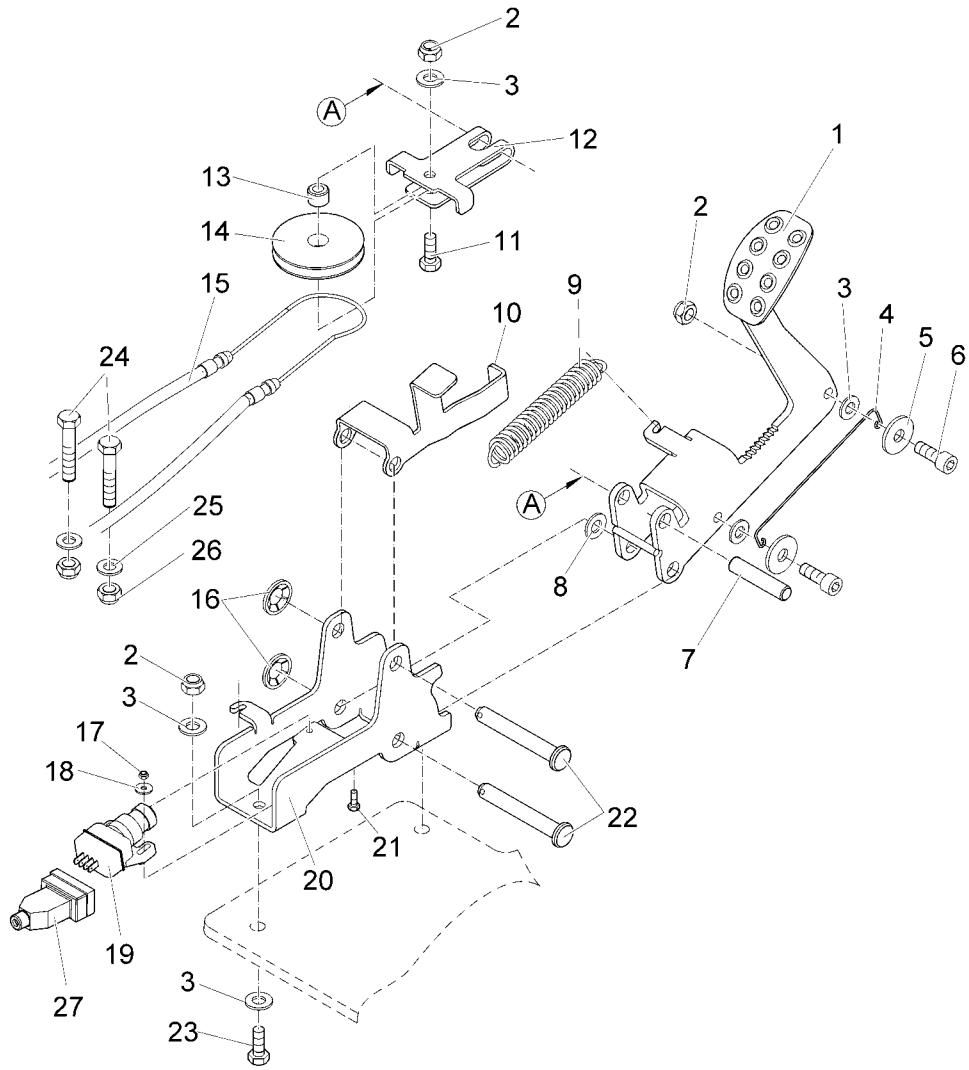
<b>Travelling mechanism (Part1)</b>		
Pos.	Part No.	Description
1	01073550	Hex.bolt
2	00959240	Lock washer
3	01131910	Cover
4	01131920	Holder
5	00053350	Hex. Nut
6	01061590	Hose
7	00740090	Washer
8	01132010	O-ring, black
9	01132020	Pipe, cpl.
10	01133540	Hose
11	01133550	Straight screw connection
12	01133510	Suction filter
13	01133520	Filter cartridge
15	01133560	Hose
16	01133570	Straight screw connection
17	01133580	Hose
18	01131950	Straight screw connection
19	00051510	Hex. Nut
20	00053750	Washer
21	00051520	Hex. Nut
22	00053730	Washer
23	00053010	Hex.bolt
24	00740280	Washer
25	01132590	Battery
26	00133700	Hex.bolt
27	00053750	Washer
28	01131930	Return pipe
29	00057720	O-ring oil resistant
30	01015350	Hose clamp



<b>Travelling mechanism (Part 2)</b>		
Pos.	Part No.	Description
1	01050160	Hex. Nut
2	00740290	Washer
3	01130020	Cup head square neck bolt
4	01006760	Threaded pin
5	01133600	Lever
6	01133610	Hydraulic pump
7	01133620	Straight screw connection
8	01132100	Hose
9	00109150	Screw connection-W
10	01132180	Straight screw connection
11	01134170	Flange
12	01132170	Hydraulic motor
13	00051490	Hex. Nut
14	00053770	Washer
15	00053220	Hex.bolt
16	00138180	Hex.bolt
17	01132150	Cover plate
18	01132160	Pair of clamping
19	00740310	Washer
20	00053350	Hex. Nut
21	00967760	Cable tie
22	00107380	Feather key
23	00874340	Washer
24	00053010	Hex.bolt

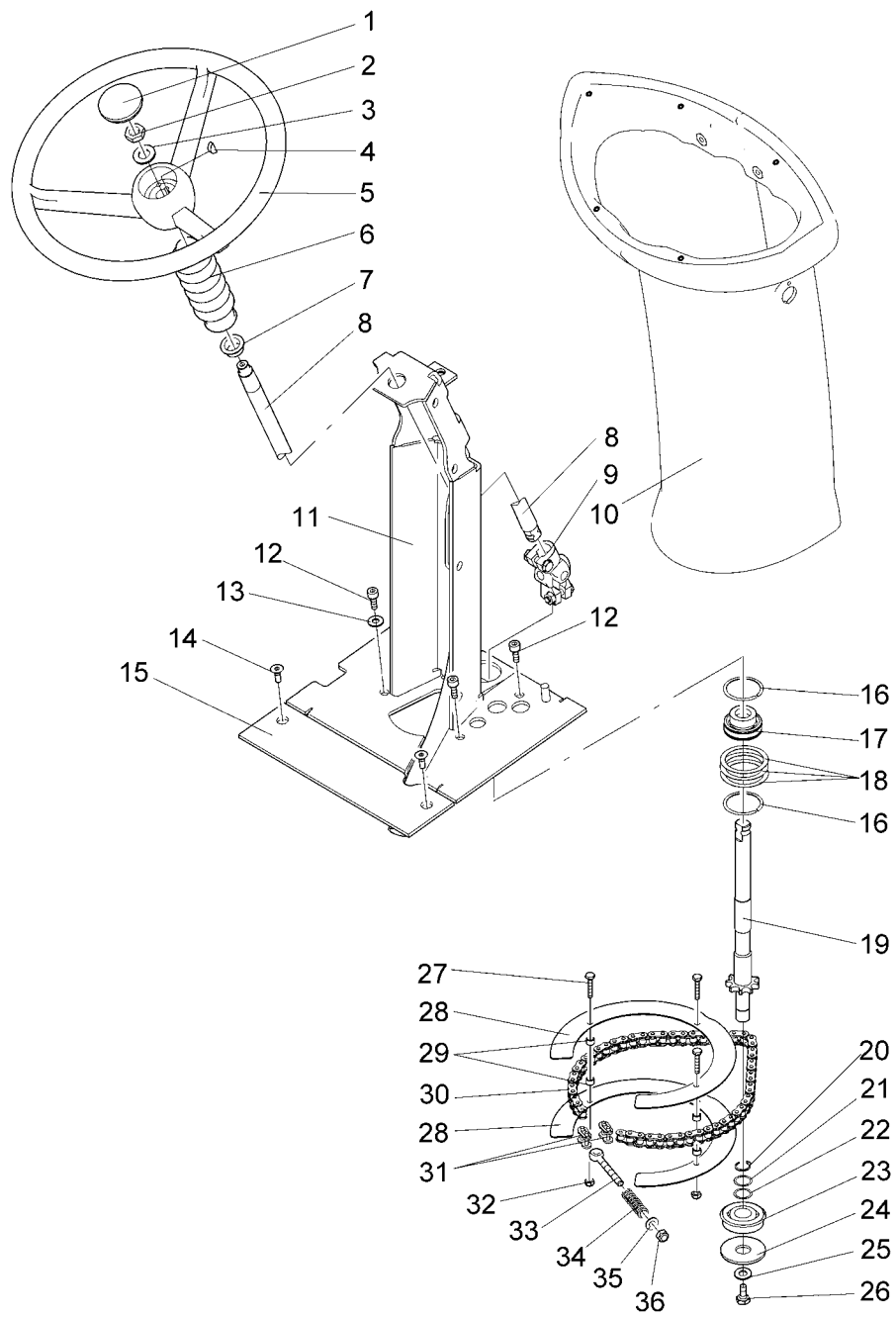


<b>Accelerator</b>		
Pos.	Part No.	Description
1	01133810	Pedal
2	01133820	Retainer
3	00053100	Hex.bolt
4	00740090	Washer
5	00051510	Hex. Nut
6	00126390	Cylinder head screw
7	00046500	Hex. Nut
8	00740310	Washer
9	00053110	Hex.bolt
10	00740090	Washer
11	01133830	Retainer
12	01133840	Sheet metal
13	01055290	Plain bearing bush
14	01133850	Bushing
15	01133860	Round head screw
16	01133870	Sheet metal
17	00053750	Washer
18	00053350	Hex. Nut
19	01133880	Sheet metal
20	00746560	Rubber buffer
21	01133950	Hinged joint
22	00054060	Threaded bolt
23	01133890	Threaded pin
24	00695300	Washer
25	01133900	Lever
26	01133910	Rod
27	01090780	Bellows
28	00057670	Groove nut
29	00051510	Hex. Nut
30	01090740	Cap
31	00052170	Retaining ring
32	00057650	Bushing
33	00057630	Spring sleeve
34	00057640	Pressure spring
35	00053790	Washer

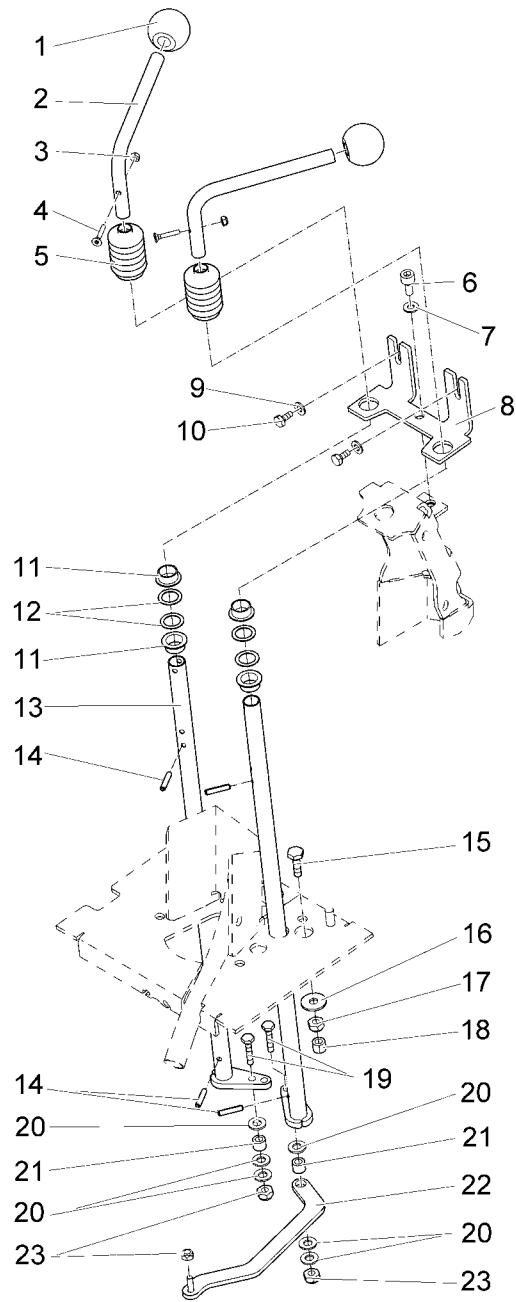




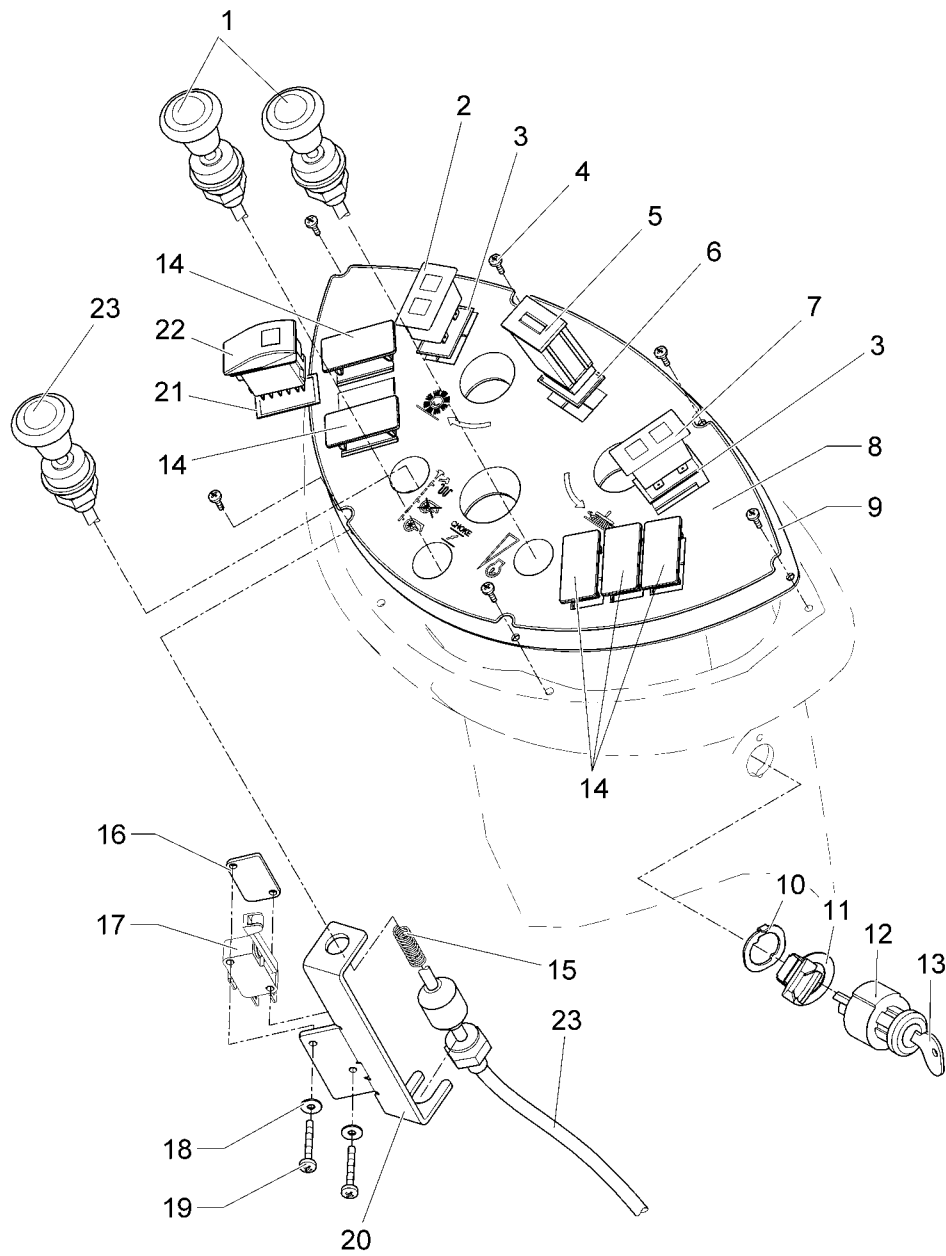
<b>Pedal brake</b>		
Pos.	Part No.	Description
1	01130320	Pedal brake
2	00051510	Hex. Nut
3	00053750	Washer
4	00854270	Handle
5	00042900	Washer
6	00124290	Cylinder head screw
7	01130330	Bolt
8	00555130	Sealing ring
9	01055930	Tension spring
10	01130340	Barrier lever
11	00053110	Hex.bolt
12	03003170	Handle
13	00974400	Bushing
14	00521270	Roller
15	01130350	Bowden cable for brake
16	00706180	Thrust washer
17	00133830	Hex. Nut
18	00557150	Washer
19	00927610	Switch
20	03003180	Bracket
21	00108490	Hex.bolt
22	00879630	Bolt
23	00053100	Hex.bolt
24	00074500	Hex.bolt
25	00740090	Washer
26	00053350	Hex. Nut
27	00927630	Cap



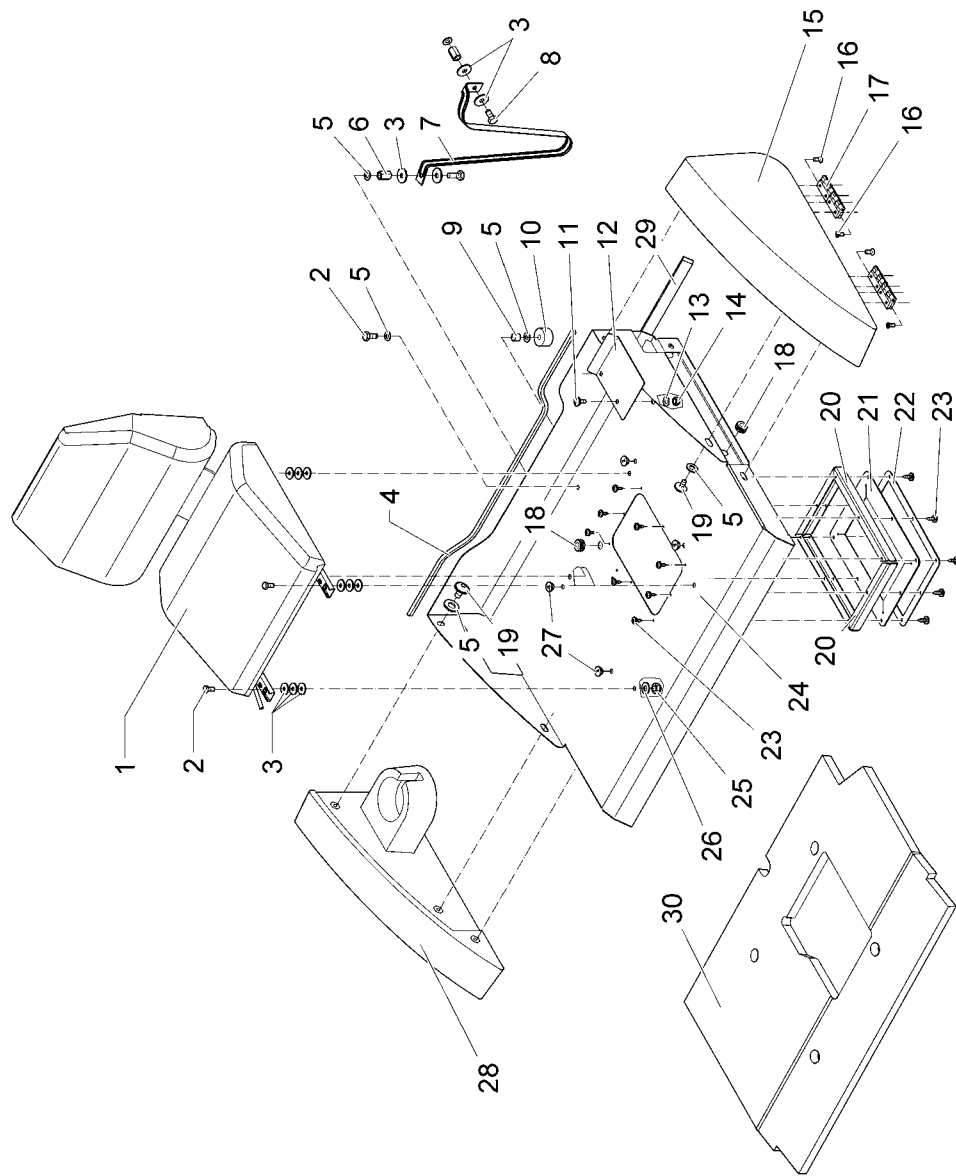
<b>Steering</b>		
Pos.	Part No.	Description
1	00852310	Cap
2	00053740	Hex. Nut
3	00053780	Washer
4	00153600	Woodruff key
5	00770220	Steering wheel
6	01130390	Bellows
7	01130470	Slide bearing bush
8	01132830	Wheelmount
9	00746040	Cardan joint
10	01132840	Steering column, cpl.
11	03004850	Steering carrier, cpl.
12	00045540	Cylinder head screw
13	00740090	Washer
14	00059080	Screw
15	03003240	Plate
16	01001260	Retaining ring
17	01001320	Bearing
18	01132850	Adjusting washer
19	01132860	Handlebar, cpl.
20	00022230	Retaining ring
21	00155180	Adjusting washer
22	00125680	Adjusting washer
23	00901380	Deep groove ball bearing
24	00954200	Washer
25	00740080	Washer
26	00053080	Hex.bolt
27	00053040	Hex.bolt
28	01132870	Plate
29	01006840	Bushing
30	01132880	Roller chain
31	00535820	Section
32	00051520	Hex. Nut
33	01132890	Eyebolt
34	00550410	Pressure spring
35	00053750	Washer
36	00051510	Hex. Nut



<b>Manipulation for side brush apron and sweeping roller</b>		
<b>Pos.</b>	<b>Part No.</b>	<b>Description</b>
1	01132810	Knob
2	01130410	Arc
3	00051520	Hex. Nut
4	01093180	Screw
5	01132820	Bellow
6	00108590	Cylinder head screw
7	00053760	Washer
8	03004840	Retainer
9	00053080	Hex.bolt
10	00053750	Washer
11	01130470	Slide bearing bush
12	00153700	Adjusting washer
13	01130430	Lever
14	00044160	Dowel pin
15	00053160	Hex.bolt
16	00046520	Washer
17	00051500	Hex. Nut
18	01090960	Hose PVC
19	00054690	Hex.bolt
20	00053750	Washer
21	00733400	Spacer sleeve
22	01130440	Supporting plate
23	00051510	Hex. Nut

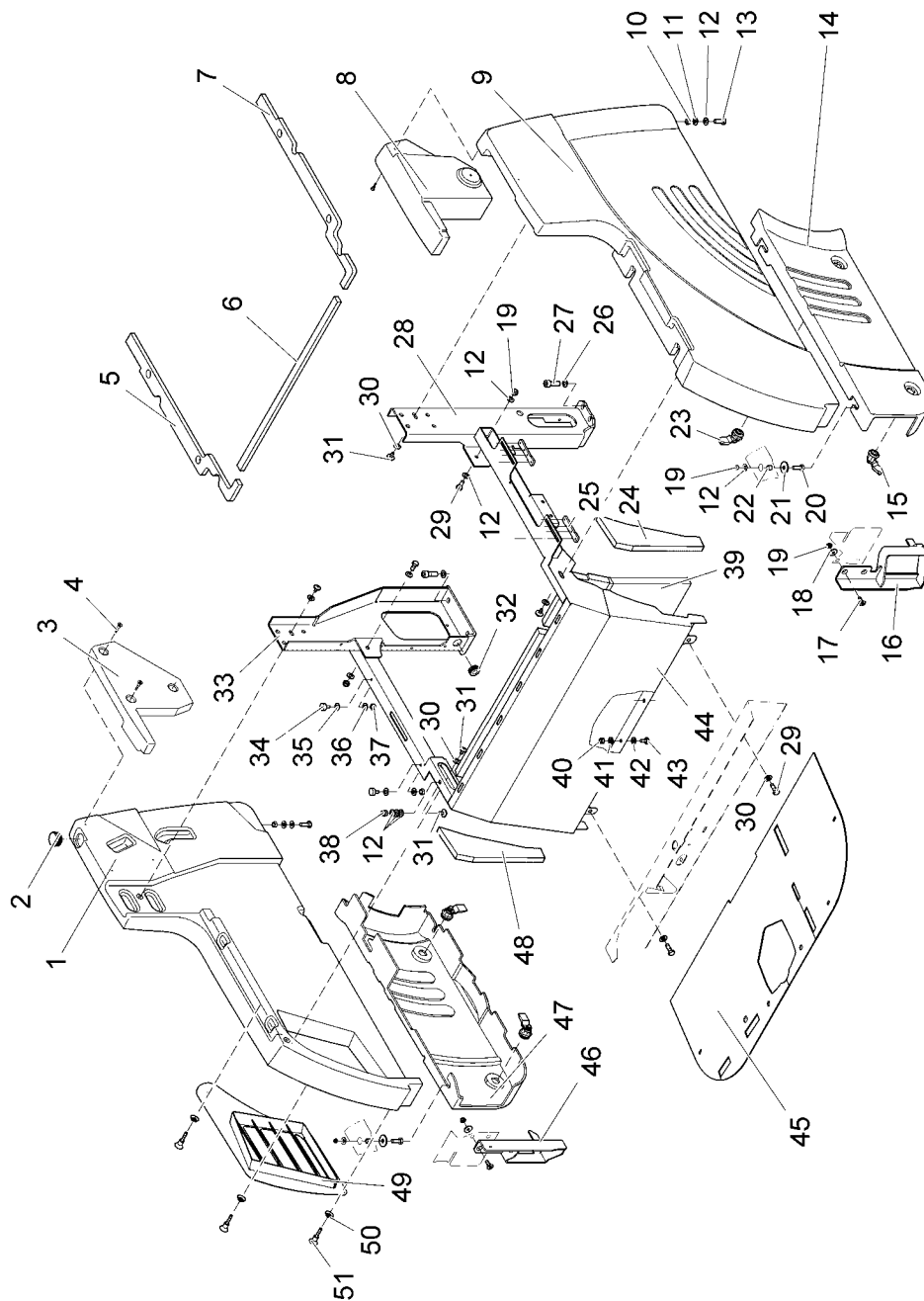


<b>Control panel</b>		
Pos.	Part No.	Description
1	01133500	Bowden cable
2	01132220	V-belt
3	01131640	Gasket control-light
4	00052620	Fillister-head screw
5	01131630	Hour meter
6	01092720	Seal
7	01133230	Indicator lamp brake/charge control
8	01133240	Control panel foil
9	01133250	Control panel plate
10	01133260	Lock washer
11	00538180	Hinged cover
12	00136950	Starting lock
13	00928330	Key blank
14	01132930	Cap
15	00902200	Pressure spring
16	01074840	Thread base plate
17	00975510	Micro switch
18	00747400	Washer
19	00955220	Fillister-head screw
20	03003450	Plate
21	01132960	Switch gasket
22	01132970	Switch horn
23	01131520	Actuating cable

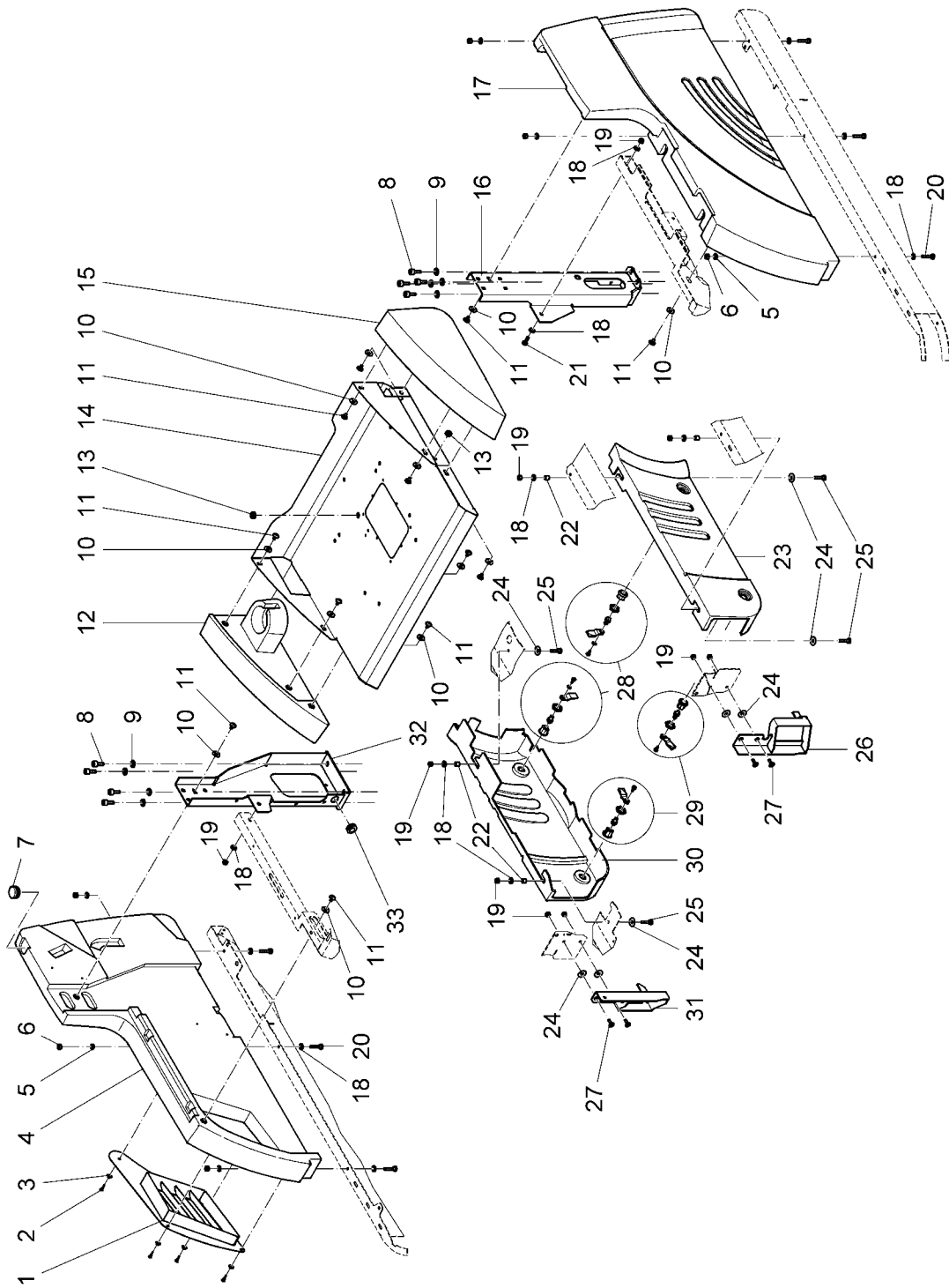




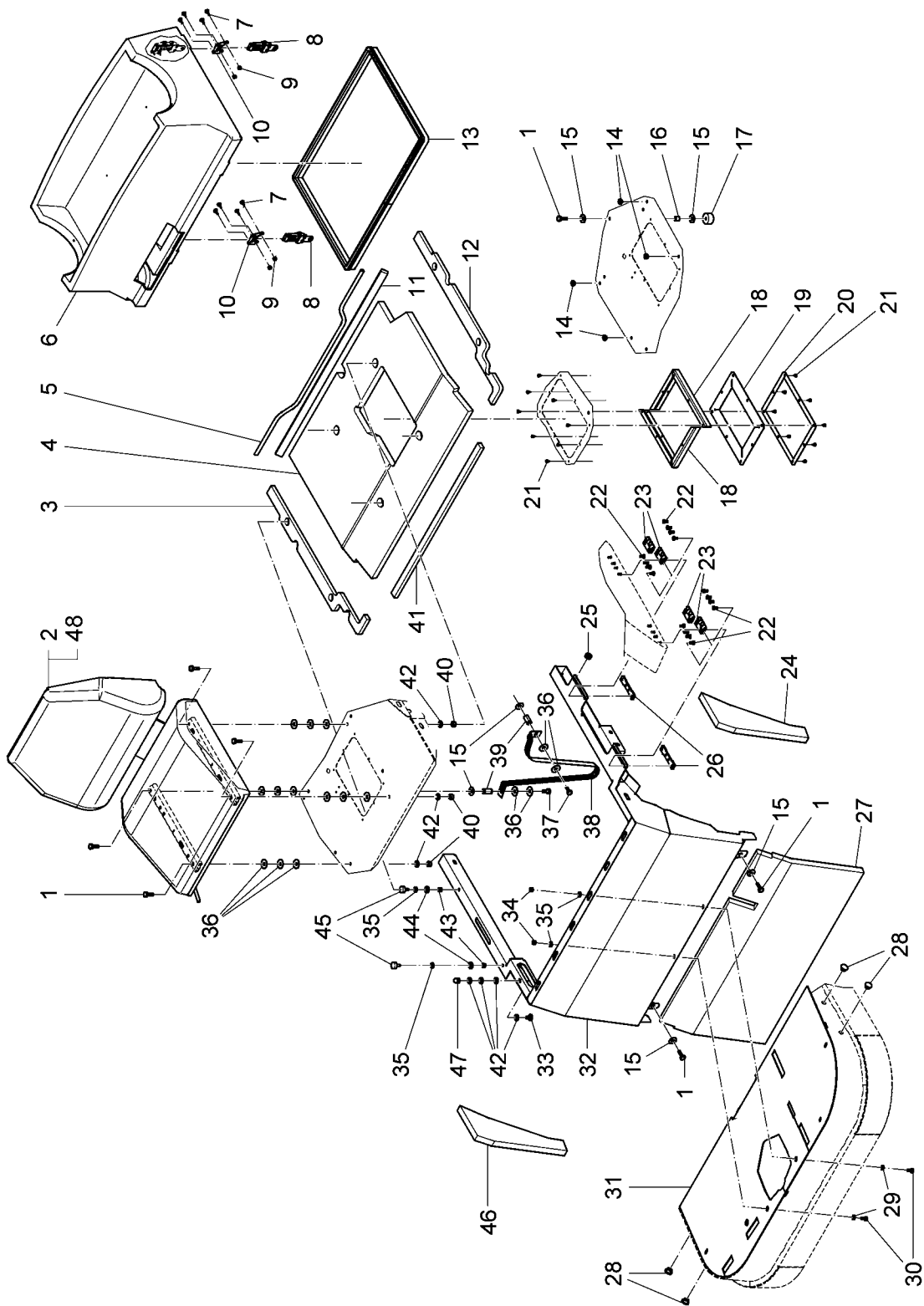
<b>Seat - Covering SW5X (Part 1)</b>		
Pos.	Part No.	Description
1	01071360	Seat
2	00077110	Hex.bolt
3	00042900	Washer
4	00721090	Edge protection
5	00740080	Washer
6	00744340	Hex. Nut
7	01055740	Belt
8	00053080	Hex.bolt
9	00733400	Spacer sleeve
10	00733560	Bumper
11	00102520	Screw
12	01133360	Plate
13	00053730	Washer
14	00051520	Hex. Nut
15	01075820	Hood L.H.
16	01133380	Countersunk screw
17	00029230	Hinge
18	00740360	Cable sleeve
19	01133350	Lens flange screw
20	01133630	Frame
21	01131890	Gasket
22	01131880	Frame
23	00134850	Tapping screw
24	03005450	Seat flap
25	00051510	Hex. Nut
26	00053750	Washer
27	00906060	Drain plug
28	01075830	Hood R.H.
29	01031010	Sealing tape
30	01133640	Insulation mat



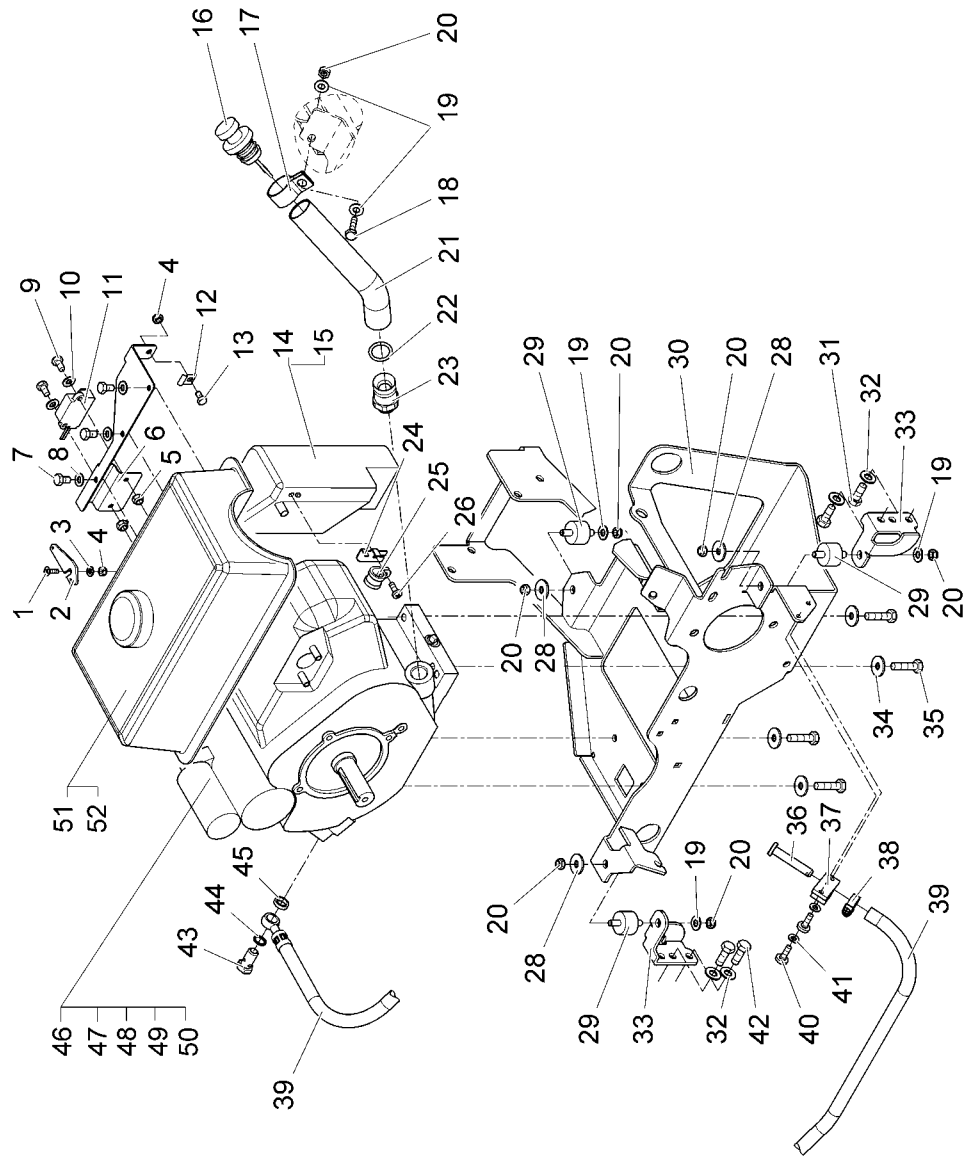
<b>Seat - Covering SW5X (Part 2)</b>		
Pos.	Part No.	Description
1	01075850	Covering R.H.
2	01133310	Gland
3	01075860	Covering R.H.
4	01063420	Self tapping screw
5	01133340	Gasket R.H.
6	01031010	Sealing tape
7	01133430	Gasket L.H.
8	01075870	Covering L.H.
9	01075810	Covering L.H.
10	00053350	Hex. Nut
11	00740310	Washer
12	00053750	Washer
13	00054690	Hex.bolt
14	01130250	Covering, L.H.
15	00121730	Sash fastener
16	01133410	Retainer L.H.
17	00059080	Screw
18	00042900	Washer
19	00051510	Hex. Nut
20	00053110	Hex.bolt
21	00042900	Washer
22	00733400	Spacer sleeve
23	01130270	Casement fastener
24	01133660	Insulation mat L.H.
25	01072970	Adjusting latch
26	00870090	Washer
27	00135030	Cylinder head screw
28	01133420	Support
29	00077110	Hex.bolt
30	00740080	Washer
31	01133350	Lens flange screw
32	00555440	Cable sleeve
33	01133460	Support
34	00127470	Stop buffer
35	00856290	Washer
36	00730940	Washer
37	00053330	Hex. Nut
38	00041790	Cap nut
39	01133670	Insulation mat
40	00051520	Hex. Nut
41	00730940	Washer
42	00053730	Washer
43	00104500	Hex.bolt
44	03005460	Support
45	01133440	Rubber mat
46	01133450	Retainer R.H.
47	01130260	Covering, R.H.
48	01133680	Insulation mat R.H.
49	01131900	Ventilation screen, cpl.
50	00076210	Washer
51	01063420	Self tapping screw



<b>Seat - Covering SW5X Lift-Up Disposal (Part 1)</b>		
Pos.	Part No.	Description
1	01131900	Ventilation screen, cpl.
2	01063420	Self tapping screw
3	00076210	Washer
4	01133650	Covering R.H.
5	00740310	Washer
6	00053350	Hex. Nut
7	01133310	Gland
8	00135030	Cylinder head screw
9	00870090	Washer
10	00740080	Washer
11	01133350	Lens flange screw
12	01133330	Hood R.H. red
13	00740360	Cable sleeve
14	03005450	Seat flap
15	01133370	Hood L.H. red
16	01133420	Support
17	01133400	Covering L.H. red
18	00053750	Washer
19	00051510	Hex. Nut
20	00054690	Hex.bolt
21	00077110	Hex.bolt
22	00733400	Spacer sleeve
23	01130250	Covering, L.H.
24	00042900	Washer
25	00053110	Hex.bolt
26	01133410	Retainer L.H.
27	00059080	Screw
28	01130270	Casement fastener
29	00121730	Sash fastener
30	01130260	Covering, R.H.
31	01133450	Retainer R.H.
32	01133460	Support
33	00555440	Cable sleeve

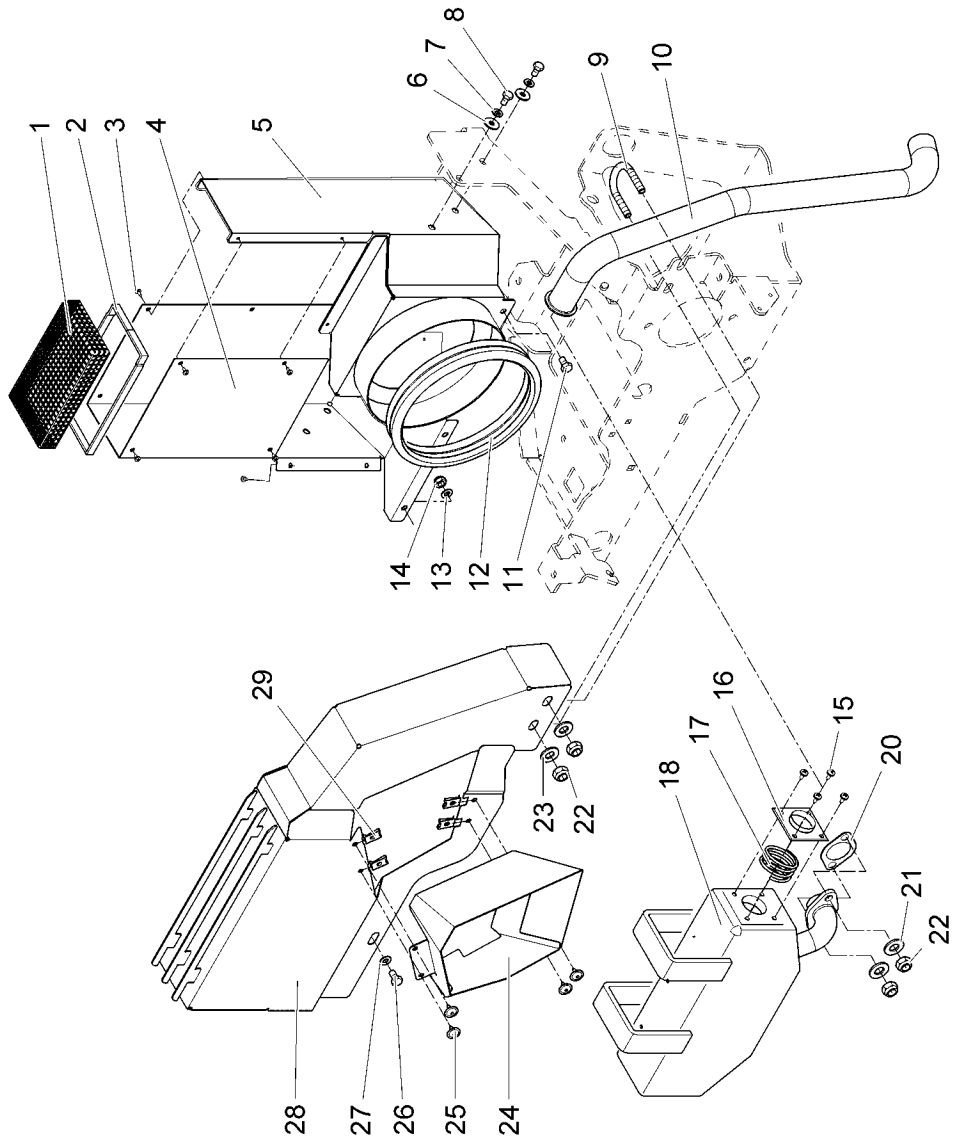


<b>Seat - Covering SW5X Lift-Up Disposal (Part 2)</b>		
Pos.	Part No.	Description
1	00077110	Hex.bolt
2	01071360	Seat
3	01133340	Gasket R.H.
4	01133640	Insulation mat
5	00721090	Edge protection
6	01133080	Filter cover red
7	00905520	Screw
8	01133090	Catch
9	00053320	Hex. Nut
10	01133100	Plate
11	01031010	Sealing tape
12	01133430	Gasket L.H.
13	00752350	Edge protection
14	00906060	Drain plug
15	00740080	Washer
16	00733400	Spacer sleeve
17	00733560	Bumper
18	01133630	Frame
19	01131890	Gasket
20	01131880	Frame
21	00134850	Tapping screw
22	01133380	Countersunk screw
23	00029230	Hinge
24	01133660	Insulation mat L.H.
25	00740360	Cable sleeve
26	01072970	Adjusting latch
27	01133670	Insulation mat
28	00558390	Drain plug
29	00053730	Washer
30	00104500	Hex.bolt
31	01133440	Rubber mat
32	03005460	Support
33	01133350	Lens flange screw
34	00051520	Hex. Nut
35	00730940	Washer
36	00042900	Washer
37	00053080	Hex.bolt
38	01055740	Belt
39	00744340	Hex. Nut
40	00051510	Hex. Nut
41	01031010	Sealing tape
42	00053750	Washer
43	00053330	Hex. Nut
44	00856290	Washer
45	00127470	Stop buffer
46	01133680	Insulation mat R.H.
47	00041790	Cap nut
48	01073290	Micro switch

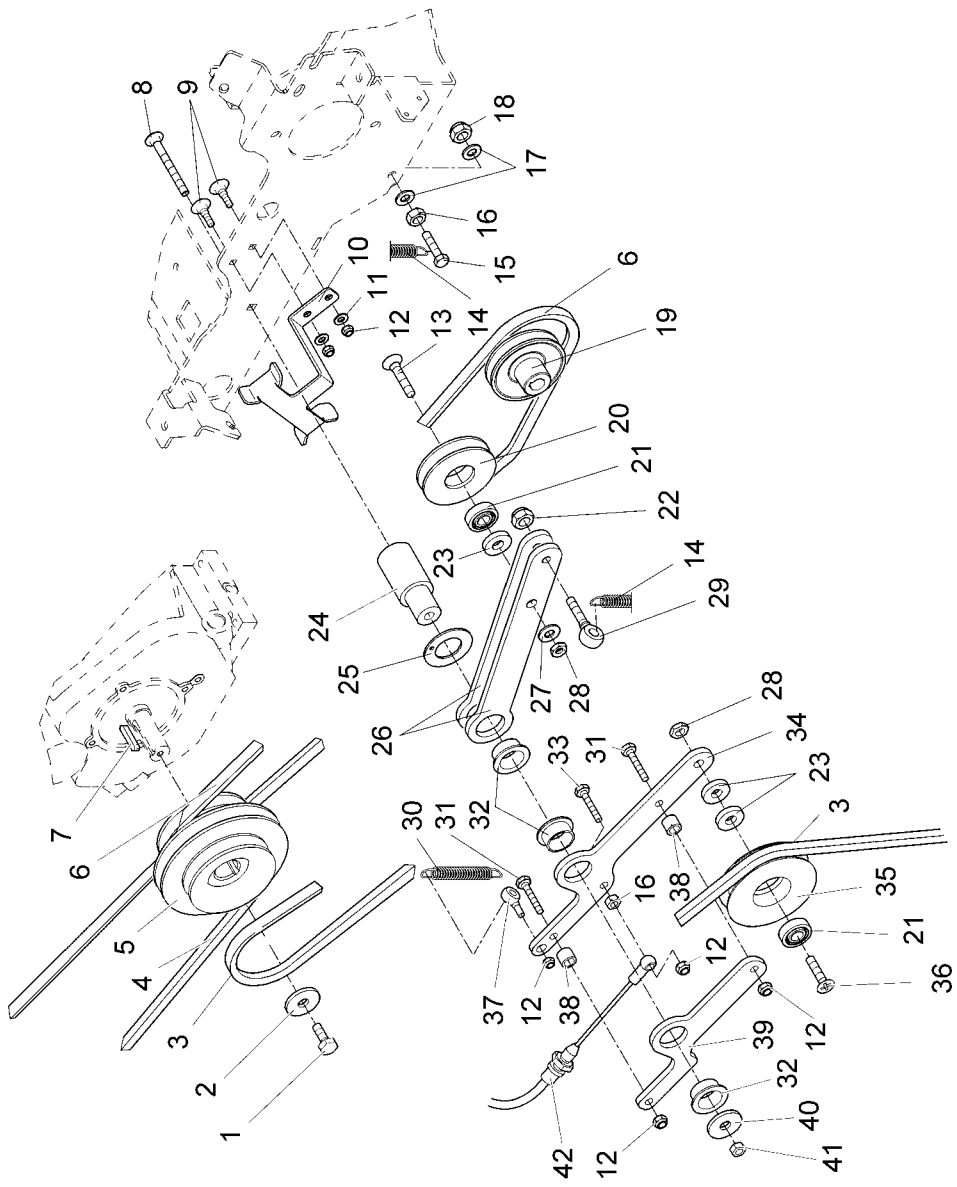




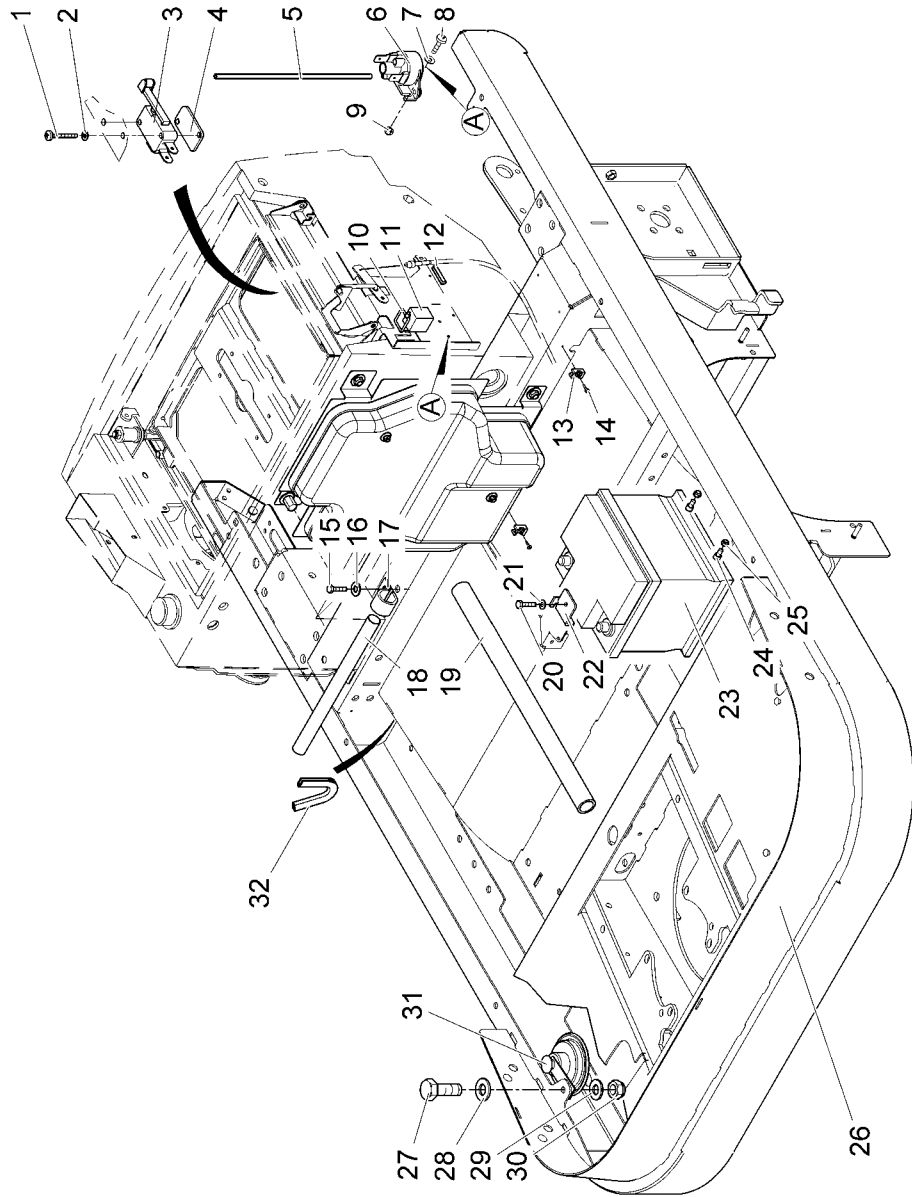
Engine		
Pos.	Part No.	Description
1	00154680	Screw
2	01134020	Mounting link
3	00053730	Washer
4	00051520	Hex. Nut
5	00051340	Hex. Nut
6	01134030	Angle plate
7	00053010	Hex.bolt
8	00740280	Washer
9	00106160	Hex.bolt
10	00053720	Washer
11	01134280	Oil level control
12	00534470	Clamp
13	00104500	Hex.bolt
14	01134220	Air filter element
15	01134230	Preliminary filter
16	01134270	Oil dip stick
17	00857580	Tube clamp
18	00053110	Hex.bolt
19	00053750	Washer
20	00051510	Hex. Nut
22	00078430	O-ring oil resistant
23	01134040	Adapter
24	01134050	Rotation angle
25	00109470	Tube clamp
26	00873910	Truss head screw
28	00042900	Washer
29	00746560	Rubber buffer
30	03005980	Angle plate
31	00053110	Hex.bolt
32	00740090	Washer
33	01134060	U-console
34	00042900	Washer
35	00133700	Hex.bolt
36	00706440	Bolt
37	00100460	Clamp
38	00074300	Hose clamp
39	01134070	oil drain hose
40	00959220	Screw
41	00053720	Washer
42	00053090	Hex.bolt
43	00052430	Banjo bolt
44	01018720	Sealing ring
45	01134080	Sealing ring
46	01134120	Gasket
47	01134130	Valve cover
48	01134140	Spark plug
49	01134260	Starter
50	01134290	Ignition coil
51	01134240	Tank cap
52	01134250	Filter cartridge



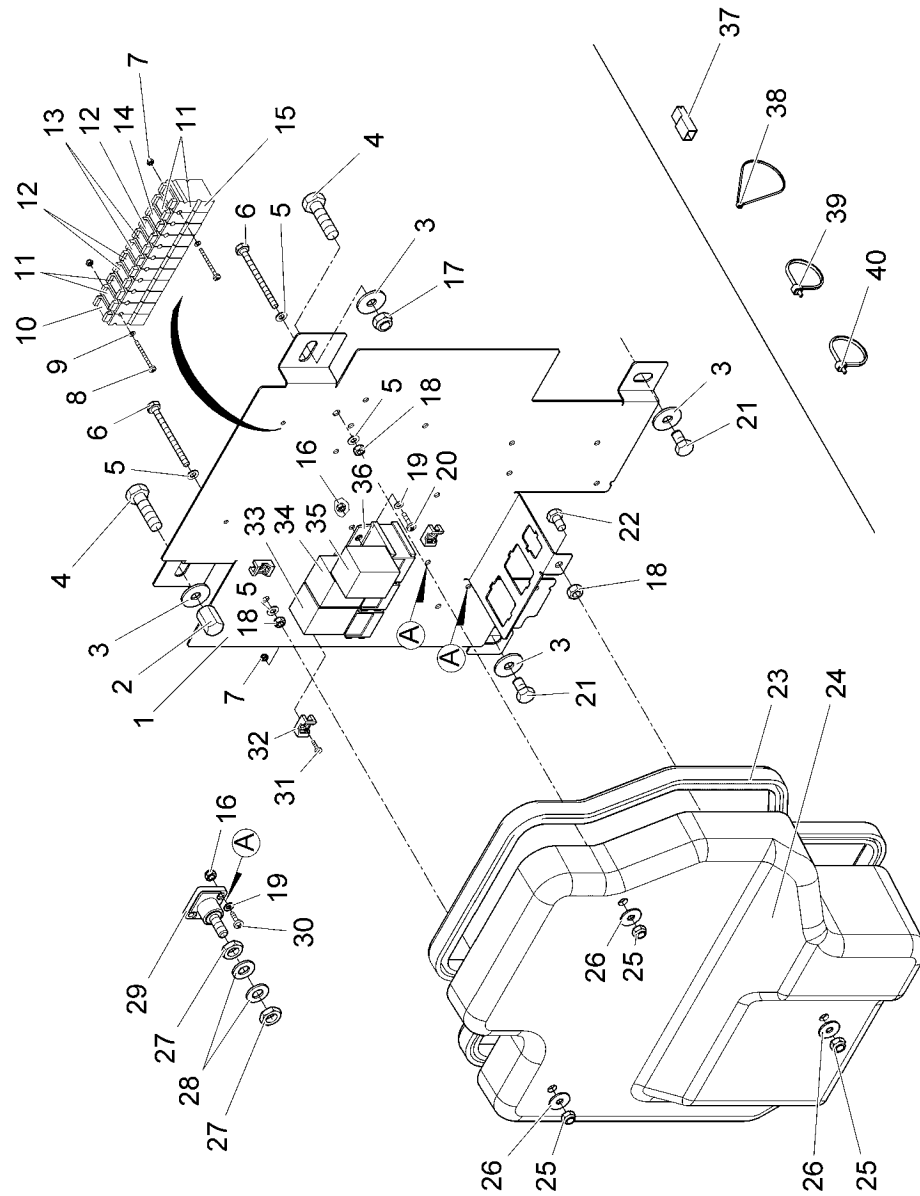
<b>Exhaust system</b>		
Pos.	Part No.	Description
1	03004200	Protection grille
2	01075290	Gasket
3	00134850	Tapping screw
4	03004210	Air shaft
5	03004220	Air funnel
6	00135120	Washer
7	00740280	Washer
8	00053010	Hex.bolt
9	01132420	Clamp
10	01134090	Exhaust tube
11	00104500	Hex.bolt
12	01052820	Edge protection
13	00053730	Washer
14	00051520	Hex. Nut
15	01134190	Flange screw
16	01134170	Flange
17	01134180	Compression spring
18	01134160	Muffler
20	00070400	Seal
21	01134210	Spring washer
22	00696640	Hex. Nut
23	00042900	Washer
24	01134100	Suction funnel
25	00747160	Tapping screw
26	00151810	Hex.bolt
27	00740090	Washer
28	01134110	Exhaust protection
29	00558830	Snap nut



<b>Drive belt plant</b>		
<b>Pos.</b>	<b>Part No.</b>	<b>Description</b>
1	00053090	Hex.bolt
2	00879170	Washer
3	01132220	V-belt
4	01005950	V-belt
5	01133750	Belt pulley
6	01132250	Narrow drive belt
8	01132320	Round head screw
9	01132310	Round head screw
10	01132300	Drive belt plant
11	00053730	Washer
12	00051520	Hex. Nut
13	00509000	Countersunk screw M8x35
14	00705310	Tension spring
15	00138180	Hex.bolt
16	00053350	Hex. Nut
17	00053750	Washer
18	00051510	Hex. Nut
19	01133760	Belt pulley
20	01130970	Idler
21	00126330	Deep groove ball bearing
22	00051520	Hex. Nut
23	01130950	Bushing
24	01133770	Bearing bolt
25	01133780	Starting disk
26	01133790	Mounting link
27	00740280	Washer
28	00046500	Hex. Nut
29	00508770	Eye bolt
30	01131000	Pull spring
31	00053040	Hex.bolt
32	01130470	Slide bearing bush
33	00053030	Hex.bolt
34	01131010	Holder
35	01132280	Ring
36	00076470	Screw
37	00856280	Eye bolt
38	00733400	Spacer sleeve
39	01131020	Holder for idler
40	00042900	Washer
41	00051510	Hex. Nut
42	01132270	Bowden cable

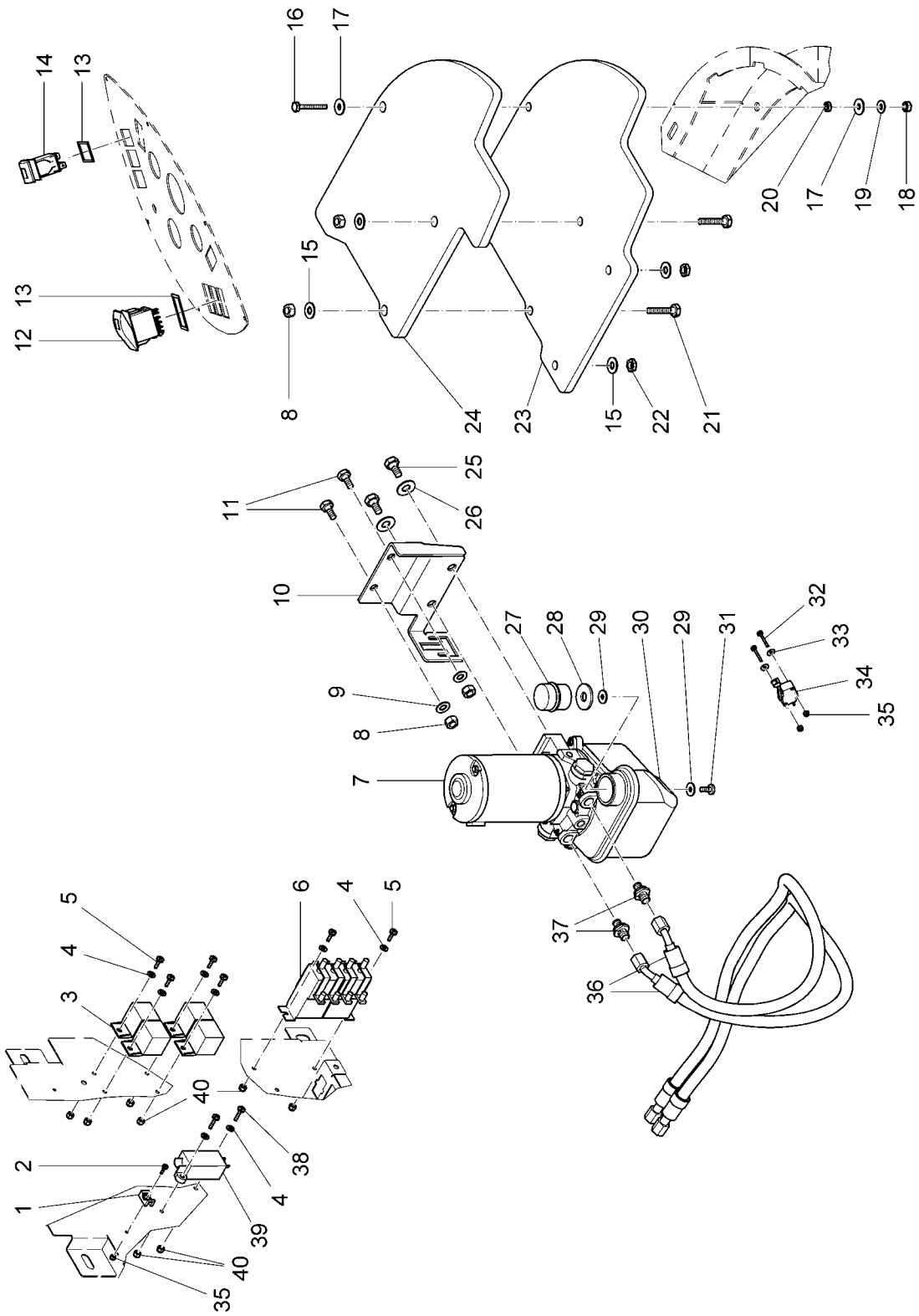


<b>Electrical equipment</b>		
Pos.	Part No.	Description
1	00955220	Fillister-head screw
2	00747400	Washer
3	00975510	Micro switch
4	01074840	Thread base plate
5	01092020	Turning knob
6	01133980	Push button switch
7	00553740	Washer
8	00535780	Fillister-head screw
9	00022200	Hex. Nut
10	00967760	Cable tie
12	00721090	Edge protection
13	00780710	Socket
14	00134850	Tapping screw
15	00053090	Hex.bolt
16	00053750	Washer
17	01133990	Pipe clamp
18	01132600	Wave tube
19	01134000	Corrugated tube
20	00133700	Hex.bolt
21	00740310	Washer
22	01132620	Angle
23	01132590	Battery
24	00134200	Cylinder head screw
25	00051520	Hex. Nut
26	03003360	Chassis, cpl
27	00077110	Hex.bolt
28	00740310	Washer
29	00053750	Washer
30	00051510	Hex. Nut
31	01134010	Signal horn 12V
32	00161240	Edge protection

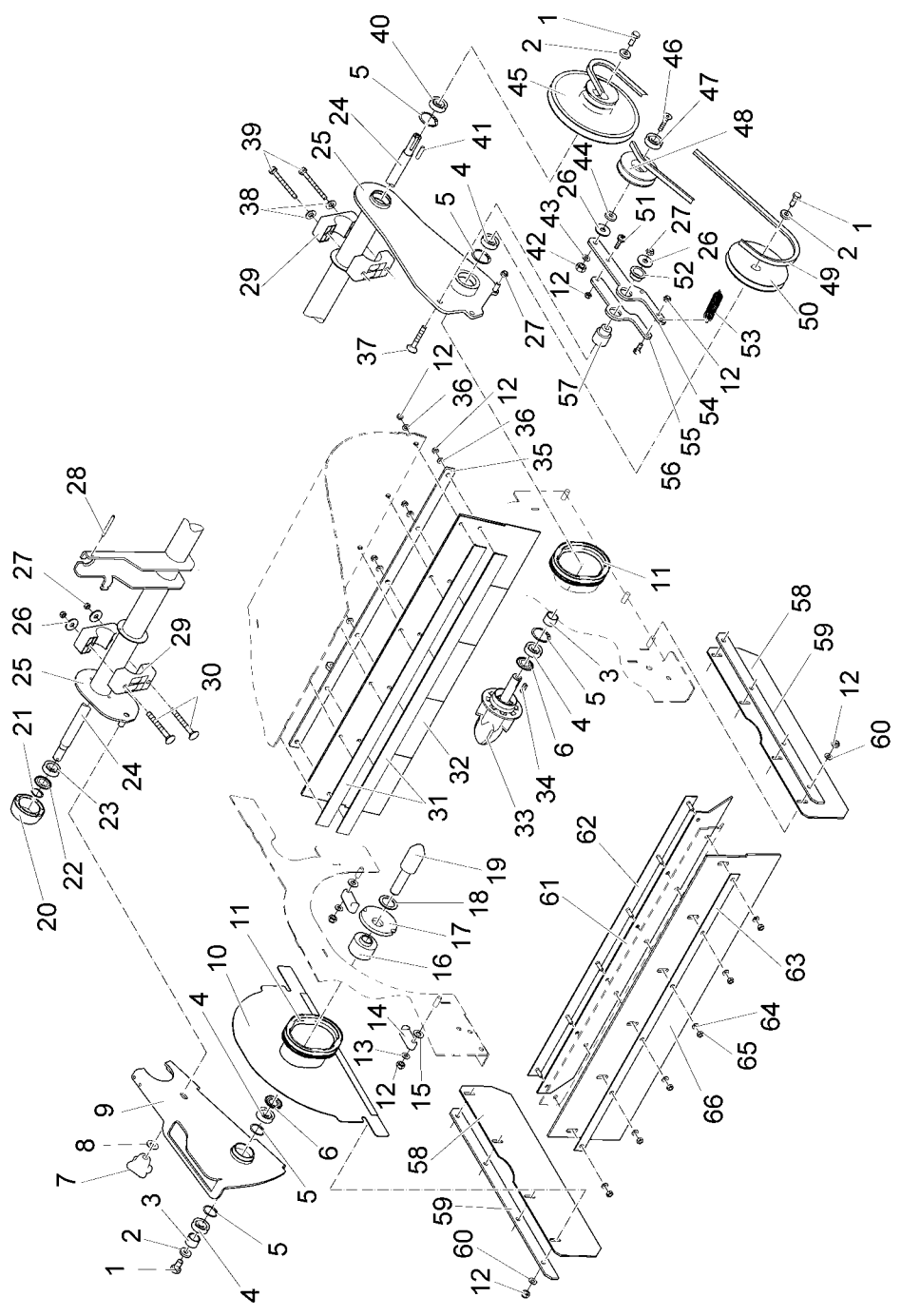




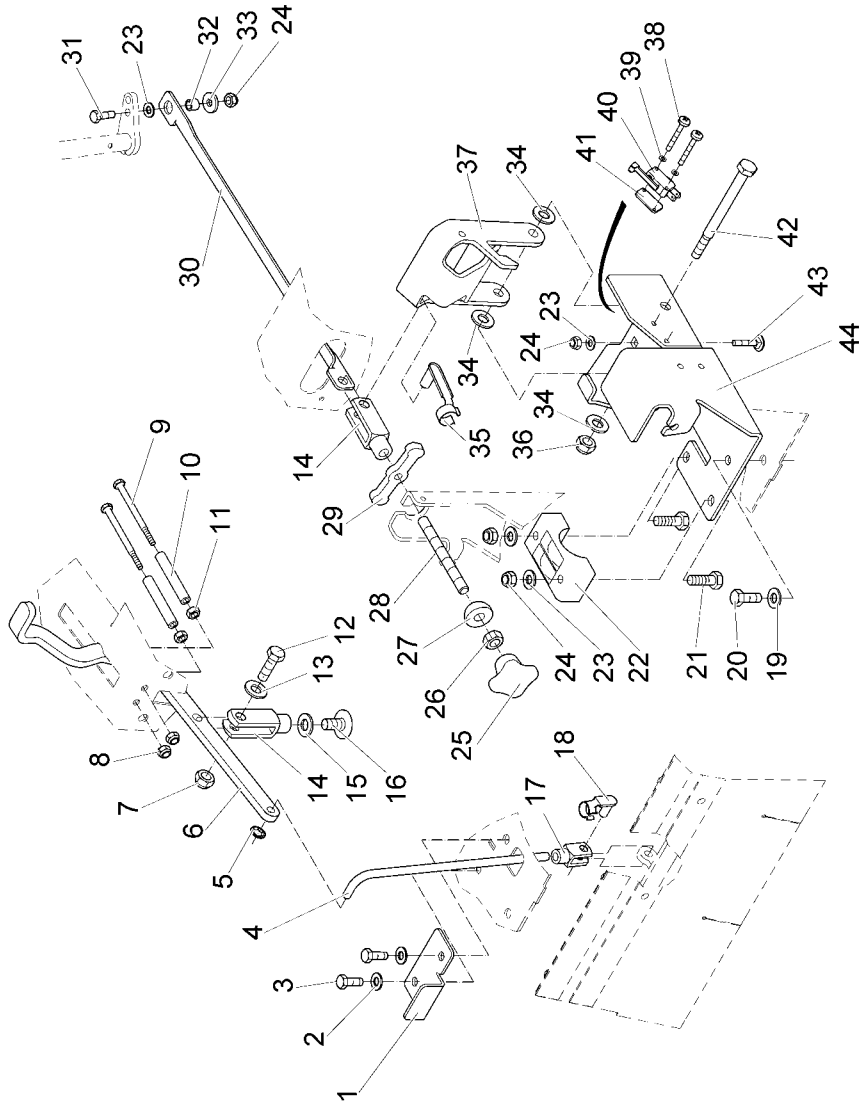
<b>Electronical box</b>		
Pos.	Part No.	Description
1	01133710	Sheet metal
2	00744340	Hex. Nut
3	00042900	Washer
4	00041600	Hex.bolt
5	00053730	Washer
6	01132650	Hexagon screw
7	00022200	Hex. Nut
8	00101580	Fillister-head screw
9	00553740	Washer
10	00500360	Fuse link 20A
11	00906120	Fuse
12	00733630	Fuse
13	00509550	Fuse
14	00152060	Fuse
15	00733650	Fuse holder
16	00133830	Hex. Nut
17	00051510	Hex. Nut
18	00053330	Hex. Nut
19	00053710	Washer
20	00052620	Fillister-head screw
21	00053080	Hex. bolt
22	00053020	Hex.bolt
23	01132640	Edge protection
24	01133720	Cover
25	00051520	Hex. Nut
26	00135120	Washer
27	00046500	Hex. Nut
28	00053850	Spring washer
29	00744670	Single clamp
30	00731550	Fillister-head screw
31	00535780	Fillister-head screw
32	00780710	Socket
33	01132660	Relay
34	01133730	Relay
35	01133180	Relay
36	01018100	Housing
37	01133740	Protection sleeve
38	00121150	Cable tie
39	00121010	Cable tie
40	00967760	Cable tie



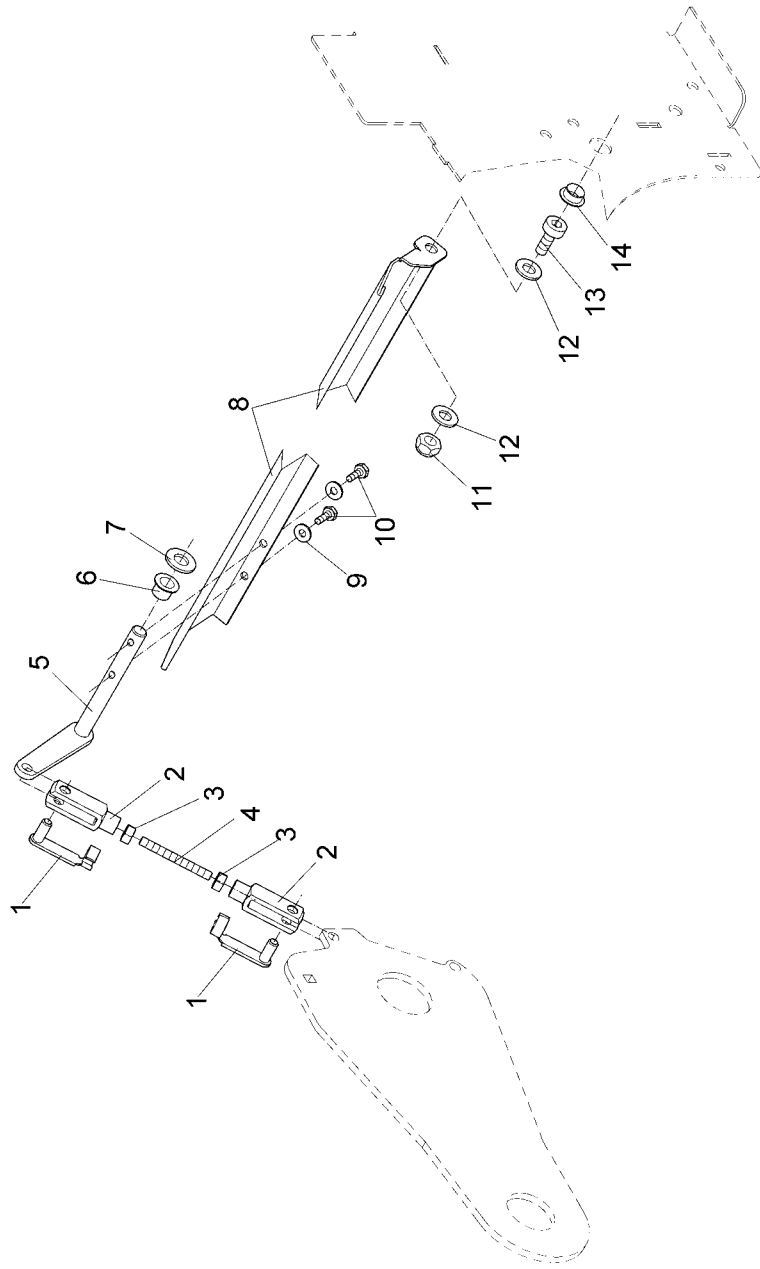
Electrical equipment SW5X Lift-Up Disposal		
Pos.	Part No.	Description
1	00780710	Socket
2	00535780	Fillister-head screw
3	00744770	Relay
4	00053710	Washer
5	00052620	Fillister-head screw
6	01134310	Reversion contactor
7	01134340	Hydraulic unit 12V
8	00053350	Hex. Nut
9	00740310	Washer
10	01134350	Retainer
11	01201840	Hexagon screw
12	01134360	Switch
13	01132960	Switch gasket
14	01134370	Switch
15	00740090	Washer
16	00053050	Hex.bolt
17	00135120	Washer
18	00053330	Hex. Nut
19	00730940	Washer
20	00135790	Hex. Nut
21	00054690	Hex.bolt
22	00046500	Hex. Nut
23	01134380	Sheet metal
24	01134390	Sheet metal
25	01134400	Hexagon screw
26	00740290	Washer
27	01134410	Oil tank cap
28	00046520	Washer
29	00555520	Washer
31	00053960	Tapping screw
32	00955220	Fillister-head screw
33	00747400	Washer
34	00975510	Micro switch
35	00022200	Hex. Nut
36	01134420	Pressure hose
37	01134430	Straight screw connection
38	00731550	Fillister-head screw
39	00152060	Fuse
40	00133830	Hex. Nut



Group of main sweeper roller		
Pos.	Part No.	Description
1	00053080	Hex.bolt
2	00695300	Washer
3	00509180	Sleeve
4	00106300	Deep groove ball bearing
5	00101660	Retaining ring
6	00102410	Ring
7	00866720	Star handle
8	00740290	Washer
9	01130830	Brush rocker, L.H.
10	01130840	Side shield
11	00681570	Edge protection
12	00051520	Hex. Nut
13	00053840	Spring washer
14	00968190	Toggle
15	00053750	Washer
16	01130850	Gasket
17	01130860	Washer
18	00135560	Supporting ring
19	01130870	Carrier
20	01130880	Centering brush
21	00022340	Retaining ring
22	00104480	Ring
23	00706360	Deep groove ball bearing
24	01130890	Shaft
25	03003310	Torque shaft
26	00042900	Washer
27	00051510	Hex. Nut
28	00861020	Dowel pin
29	01130610	Bearing
30	01130900	Cup head square neck bolt
31	01130910	Retaining strip
32	01130800	Brush apron, front
33	01130920	Drag element
34	00054260	Feather key
35	01130930	Strip
36	00053730	Washer
37	01130940	Cup head square neck bolt
38	00740080	Washer
39	00557600	Hex.bolt
40	00538360	Deep groove ball bearing
41	00107380	Feather key
42	00046500	Hex. Nut
43	00740310	Washer
44	01130950	Bushing
45	01130960	Drive belt pulley
46	00509000	Countersunk screw
47	00126330	Deep groove ball bearing
48	01130970	Idler
49	01130980	Narrow drive belt
50	01130990	Belt pulley
51	00053550	Fillister-head screw
52	01130470	Slide bearing bush
53	01131000	Pull spring
54	01131010	Holder
55	01131020	Holder for idler
56	00053020	Hex.bolt
57	01131030	Bolt
58	01130820	Brush apron
59	01131050	Strip
60	00053730	Washer
61	01131040	Brush apron, rear
62	01130910	Retaining strip
63	00243450	Fitting strip
64	00740280	Washer
65	00053330	Hex. Nut
66	01130810	Brush apron, rear

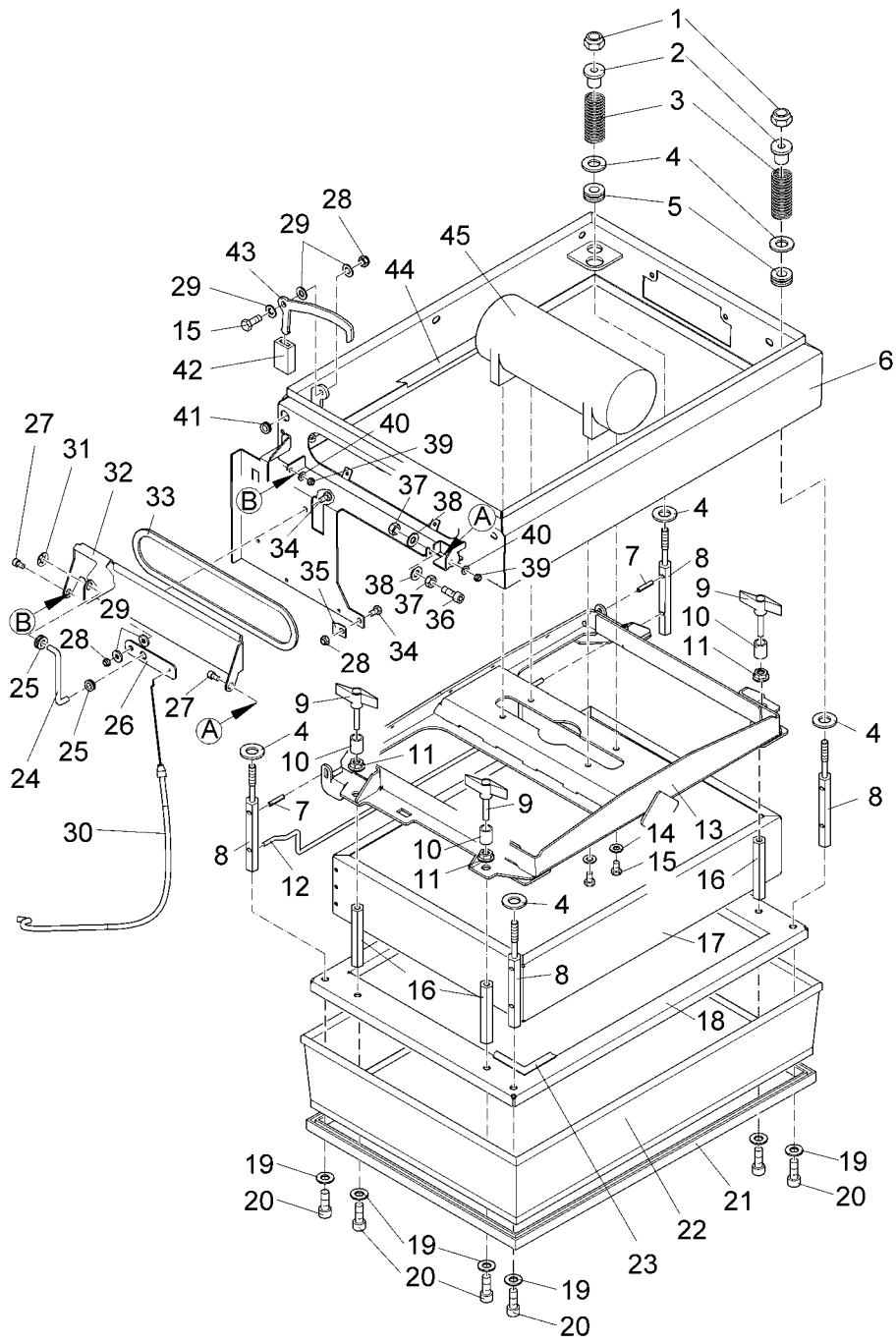


<b>Manipulation for brush apron - Lifter for sweeping roller</b>		
Pos.	Part No.	Description
1	01131320	Stop angel
2	00740090	Washer
3	00053080	Hex.bolt
4	01131330	Bar
5	00854420	Thrust washer
6	01131340	Pedal bar
7	00051500	Hex. Nut
8	00051520	Hex. Nut
9	00526320	Hex.bolt
10	01064890	Hose
11	00053330	Hex. Nut
12	00123690	Hex.bolt
13	00130290	Adjusting washer
14	00925430	Fork yoke
15	00740290	Washer
16	01131350	Fillister-head screw
17	00151440	Fork yoke
18	00151400	Bolt
19	00740080	Washer
20	00053090	Hex.bolt
21	00041600	Hex.bolt
22	01130610	Bearing
23	00053750	Washer
24	00051510	Hex. Nut
25	00866720	Star handle
26	01050160	Hex. Nut
27	01131360	Tap
28	01131370	Spindle
29	01131380	Countering latch
30	01131390	Draw angel
31	00054690	Hex.bolt
32	00733400	Spacer sleeve
33	00695300	Washer
34	00053760	Washer
35	00925420	Bolt
36	00132880	Hex. Nut
37	03003400	Angel
38	00955220	Fillister-head screw
39	00747400	Washer
40	00975510	Micro switch
41	01074840	Thread base plate
42	00109460	Hex.bolt
43	00878410	Screw
44	03003410	Holder

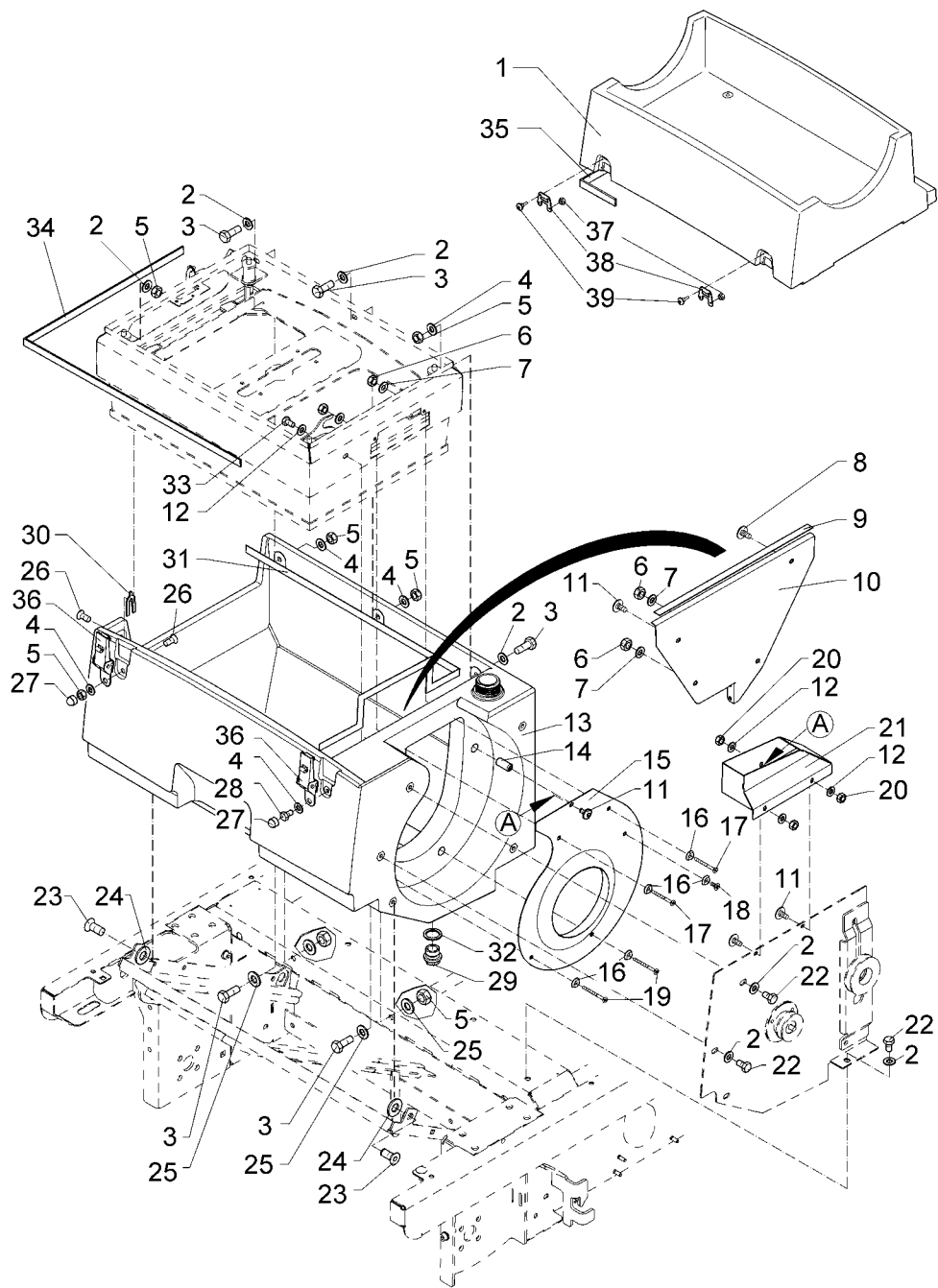




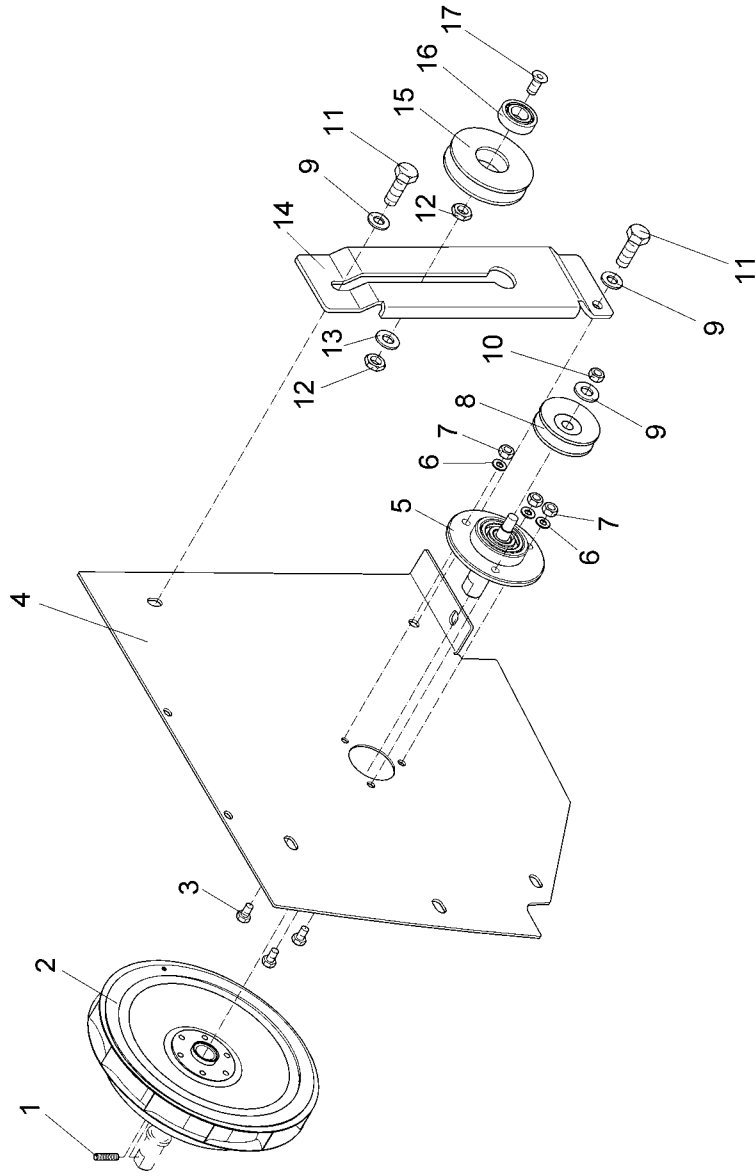
<b>Broom wear compensation</b>		
Pos.	Part No.	Description
1	00706030	Bolt
2	00027110	Fork yoke
3	00053350	Hex. Nut
4	00902600	Threaded bolt
5	03004890	Lever
6	01071440	Plain bearing bush
7	00053770	Washer
8	03004900	Plate
9	00730940	Washer
10	00053010	Hex.bolt
11	00132880	Hex. Nut
12	00053760	Washer
13	00108590	Cylinder head screw
14	01055290	Plain bearing bush



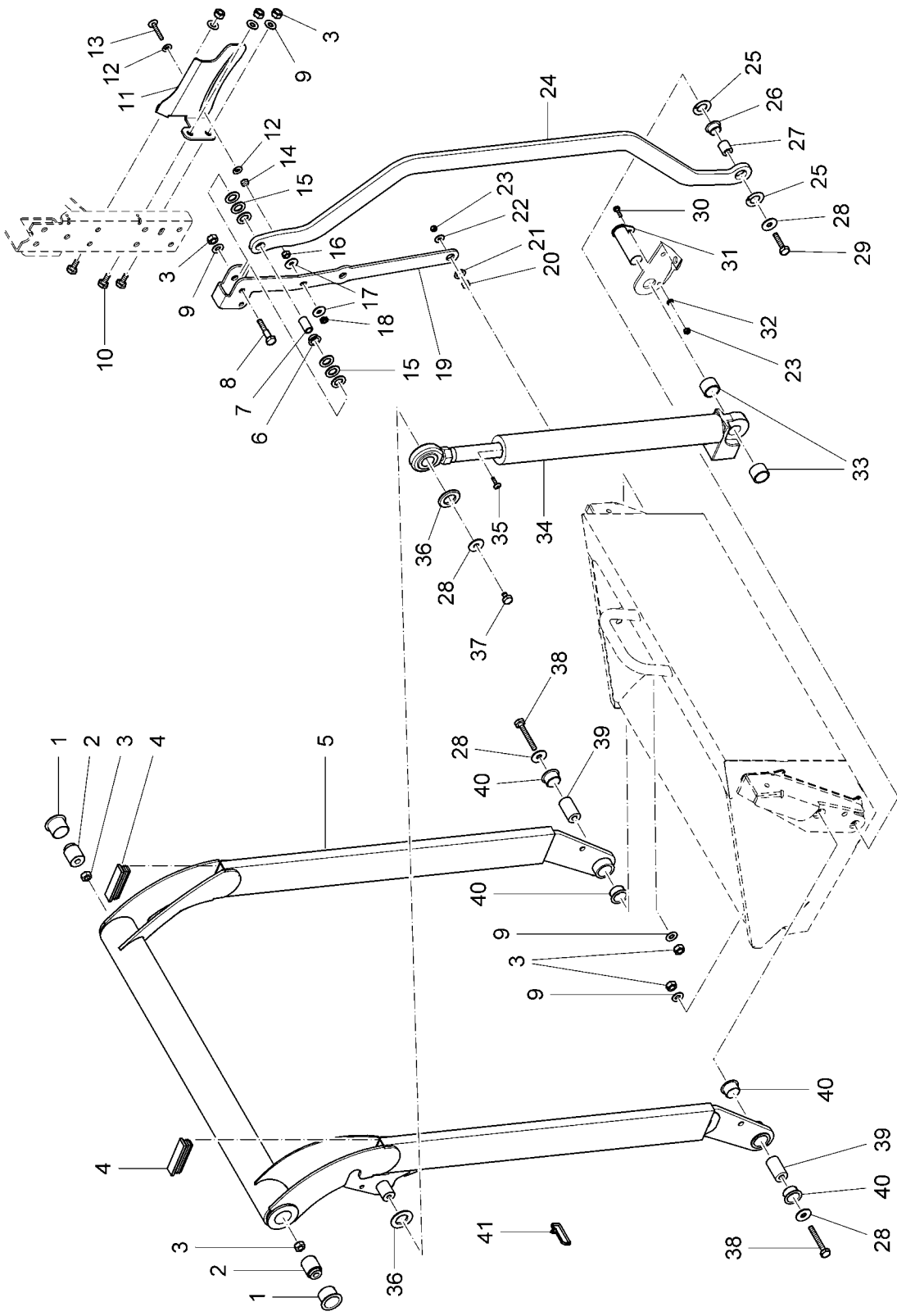
<b>Filter installation</b>		
Pos.	Part No.	Description
1	00051510	Hex. Nut
2	01131100	Bolt
3	01074080	Compression spring
4	00042900	Washer
5	00027190	Cable sleeve
6	01131410	Frame
7	00045620	Dowel pin
8	01131120	Spacer
9	00905560	Wing
10	01130170	Bush
11	01133210	Locknut
12	01131140	Handle
13	01131130	Frame
14	00730940	Washer
15	00053020	Hex.bolt
16	01131170	Spacer
17	01130750	Plate filter
18	01131150	U-panel
19	00740310	Washer
20	00045540	Cylinder head screw
21	00161240	Edge protection
22	01131160	Annular filter
23	00420290	Gasket Tesamoll
24	01131200	Rod
25	01131190	Grommet
26	01131180	Holder
27	01131440	Socket head cap screw
28	00051520	Hex. Nut
29	00135120	Washer
30	01131520	Actuating cable
31	00023290	Thrust washer
32	01131210	Air vent
33	01075290	Gasket
34	00053010	Hex.bolt
35	00534470	Clamp
36	00071450	Cylinder head screw
37	00053350	Hex. Nut
38	00053750	Washer
39	01017660	Hex. Nut
40	00958770	Washer
41	00740360	Cable sleeve
42	00451220	Hose
43	01131110	Lever
44	00830680	Hose
45	01000890	Vibration motor



<b>Dust extraction</b>		
<b>Pos.</b>	<b>Part No.</b>	<b>Description</b>
1	01075840	Filter cover
2	00740090	Washer
3	00133700	Hex.bolt
4	00053750	Washer
5	00053350	Hex. Nut
6	00053330	Hex. Nut
7	00740280	Washer
8	01092780	Lens flange screw
9	00420290	Gasketl
10	03003430	Plate
11	01131450	Filister head flange screw
12	00730940	Washer
13	01131740	Housing, cpl.
14	01131460	Threaded bushing
15	01131470	Nozzle
16	00157690	Washer
17	00109500	Screw
18	00871440	Screw
19	00120130	Screw
20	00135790	Hex. Nut
21	01131480	Air scoop
22	00864230	Hex.bolt
23	00059080	Screw
24	00070170	Washer
25	00042900	Washer
26	00903480	Screw
27	00131610	Lens cap
28	00151810	Hex.bolt
29	00077890	Screw plug
30	01131490	Sheet metal
31	00420290	Gasket
32	01063590	Washer
33	00104500	Hex.bolt
34	01130200	Gasket
35	01131840	Gasket band 9x10
36	01133090	Catch
37	00053320	Hex. Nut
38	01133100	Plate
39	00905520	Screw

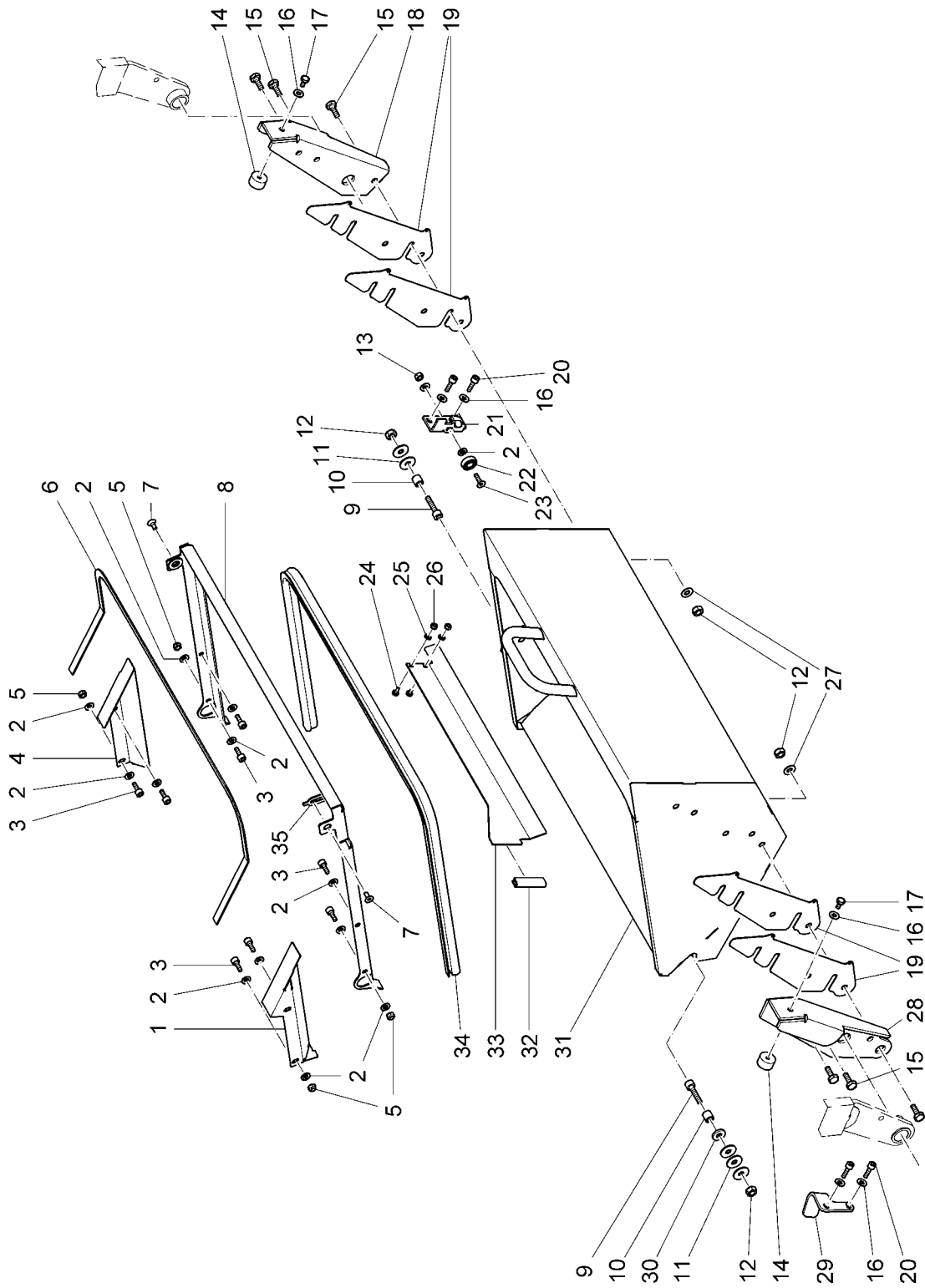


<b>Fan bearing</b>		
Pos.	Part No.	Description
1	00506780	Threaded pin
2	01131220	Rotating fan
3	00053010	Hex.bolt
4	03003350	Plate
5	01131230	Shaft
6	00740280	Washer
7	00053330	Hex. Nut
8	01131260	Belt pulley
9	00740090	Washer
10	00022330	Hex. Nut
11	00553690	Hex.bolt
12	00074710	Hex. Nut
13	00740290	Washer
14	01131270	Holder
15	01130970	Idler
16	00126330	Deep groove ball bearing
17	00021800	Screw

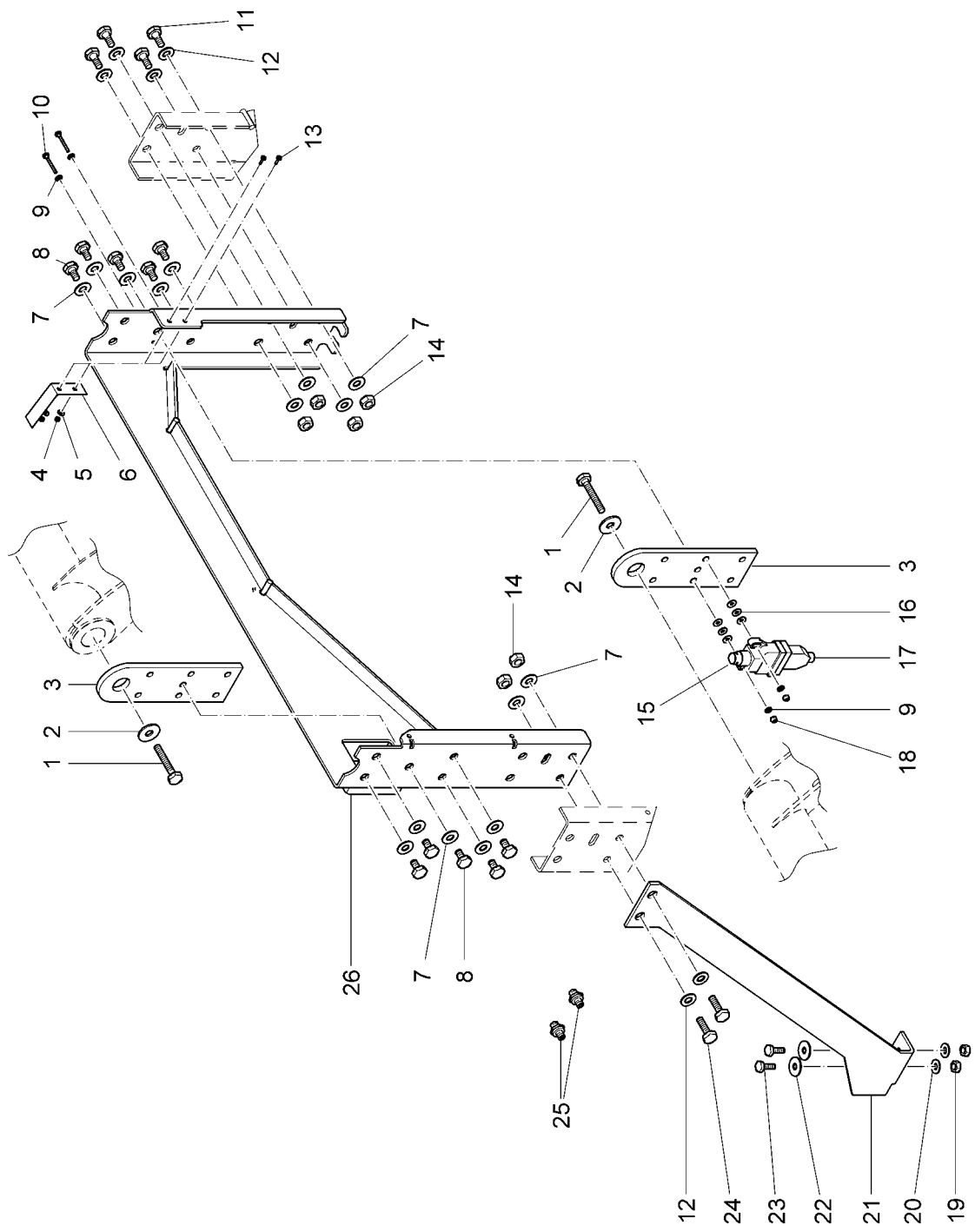




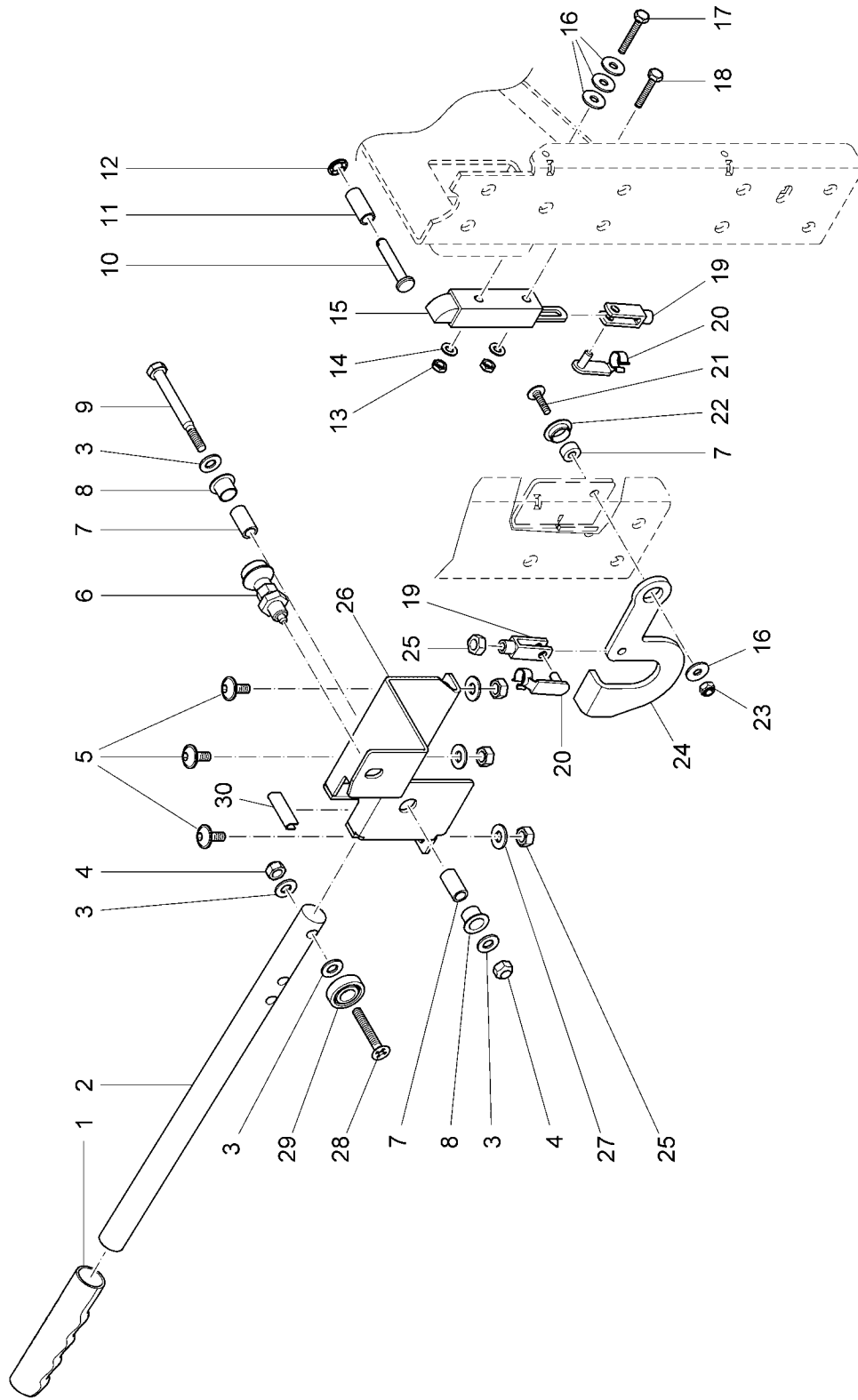
<b>Lift-Up Disposal (Part 1)</b>		
Pos.	Part No.	Description
1	01134680	Slide bearing bush
2	01134690	Bush
3	00053360	Hex. Nut
4	01134700	Gland
5	03006070	Support
6	01055290	Plain bearing bush
7	01134710	Bush
8	00133450	Hex.bolt
9	00740290	Washer
10	00021130	Hex.bolt
11	01134720	Support
12	01134730	Starting disk
13	01134740	Lens flange screw
14	00051510	Hex. Nut
15	00127290	Washer
16	00053350	Hex. Nut
17	00042900	Washer
18	00046500	Hex. Nut
19	01134750	Plate
20	01134510	Bush
21	01130080	Slide bearing bush
22	00135120	Washer
23	00051520	Hex. Nut
24	01134760	Plate
25	01133780	Starting disk
26	01130470	Slide bearing bush
27	01134770	Bush
28	00046520	Washer
29	00053170	Hex.bolt
30	00154210	Hex.bolt
32	00053730	Washer
33	01134780	Pipe
34	00392250	Hydraulic cylinder
35	01092780	Lens flange screw
36	00743290	Washer
37	00550090	Hex.bolt
38	00051550	Hex.bolt
39	01134790	Bush
40	00740200	Plain bearing bush
41	00967760	Cable tie



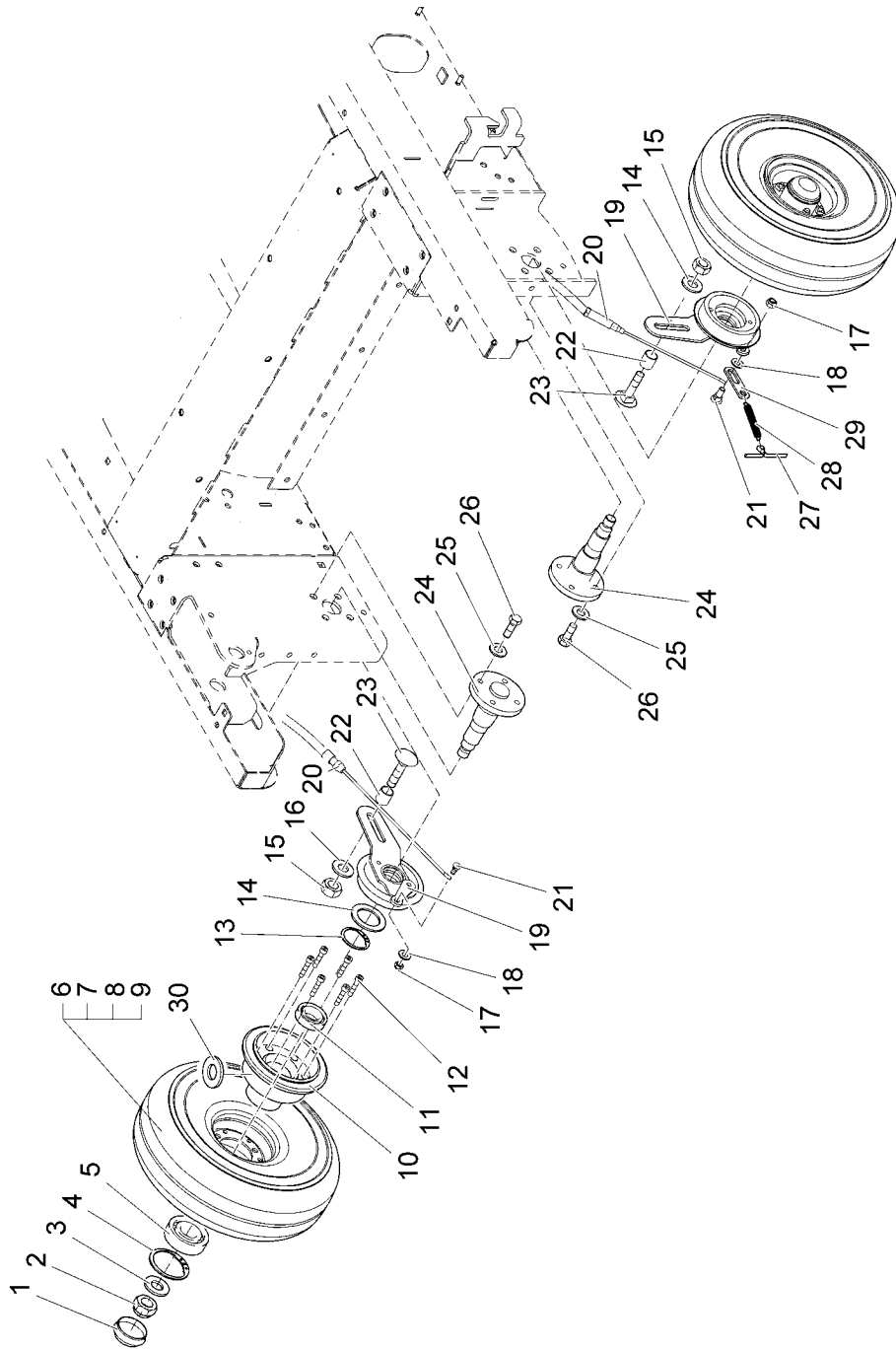
<b>Lift-Up Disposal (Part 2)</b>		
<b>Pos.</b>	<b>Part No.</b>	<b>Description</b>
1	01130300	Angel, L.H.
2	00053750	Washer
3	00045540	Cylinder head screw
4	01130310	Angel, R.H.
5	00051510	Hex. Nut
6	01130200	Gasket
7	00705440	Screw
8	01134590	Sealing plate
9	00045010	Cylinder head screw
10	01134600	Bushing
11	00046520	Washer
12	00053360	Hex. Nut
13	00053350	Hex. Nut
14	00733560	Bumper
15	00053310	Hex.bolt
16	00740090	Washer
17	00536320	Hex.bolt
18	01134610	Sheet metal
19	01134620	Sheet metal
20	00103300	Cylinder head screw
21	01134630	Sheet metal
22	00124830	Deep groove ball bearing
23	00101500	Screw
24	00104500	Hex.bolt
25	00740280	Washer
26	00053330	Hex. Nut
27	00740290	Washer
28	01134640	Sheet metal
29	01134650	Sheet metal
30	00855380	Washer
31	01134660	Dirt container
32	00161240	Edge protection
33	01134670	Sheet metal
34	00750430	Edge protection
35	01131490	Sheet metal



<b>Lift-Up Disposal (Part 3)</b>		
Pos.	Part No.	Description
1	00107100	Hex.bolt
2	00046520	Washer
3	01134560	Retainer
4	00073270	Hex. Nut
5	00747400	Washer
6	01134570	Flat spring
7	00740290	Washer
8	00055460	Hex.bolt
9	00053710	Washer
10	00900590	Hex.bolt
11	00021130	Hex.bolt
12	00053760	Washer
13	00535780	Fillister-head screw
14	00053360	Hex. Nut
15	00927610	Switch
16	00557150	Washer
17	00927630	Cap
18	00133830	Hex. Nut
19	00053350	Hex. Nut
20	00740090	Washer
21	01134580	Sheet metal
22	00042900	Washer
23	00053090	Hex.bolt
24	00053160	Hex.bolt
25	01134430	Straight screw connection
26	03006060	Support

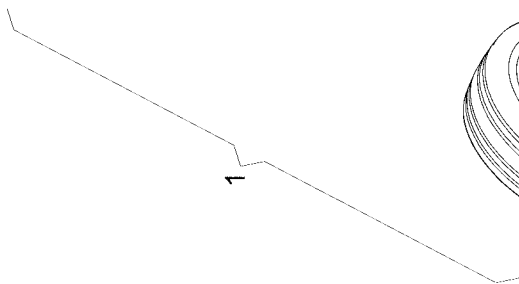
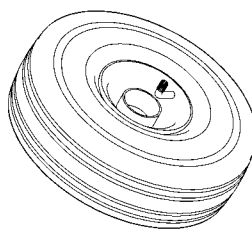
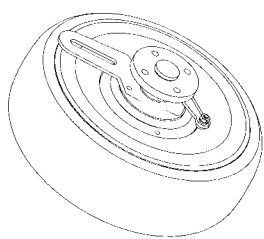
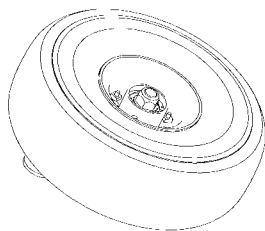


<b>Lift-Up Disposal (Part 4)</b>		
Pos.	Part No.	Description
1	00552970	Handle
2	01134490	Lever
3	00053750	Washer
4	00051510	Hex. Nut
5	01006820	Lens flange screw
6	01134500	Locking bolt
7	01134510	Bushing
8	01071440	Plain bearing bush
9	00534440	Hex.bolt
10	00706200	Bolt
11	01134520	Pipe
12	00854420	Thrust washer
13	00135790	Hex. Nut
14	00740280	Washer
15	01070220	Spring lock
16	00135120	Washer
17	00053290	Hex.bolt
18	00053040	Hex.bolt
19	00851570	Fork yoke
20	00851590	Bolt
21	01092780	Lens flange screw
22	01130080	Slide bearing bush
23	00051520	Hex. Nut
24	01134530	Sheet metal
25	00053350	Hex. Nut
26	01134540	Retainer
27	00740090	Washer
28	01134550	Countersunk screw
29	00124830	Deep groove ball bearing
30	00721090	Edge protection

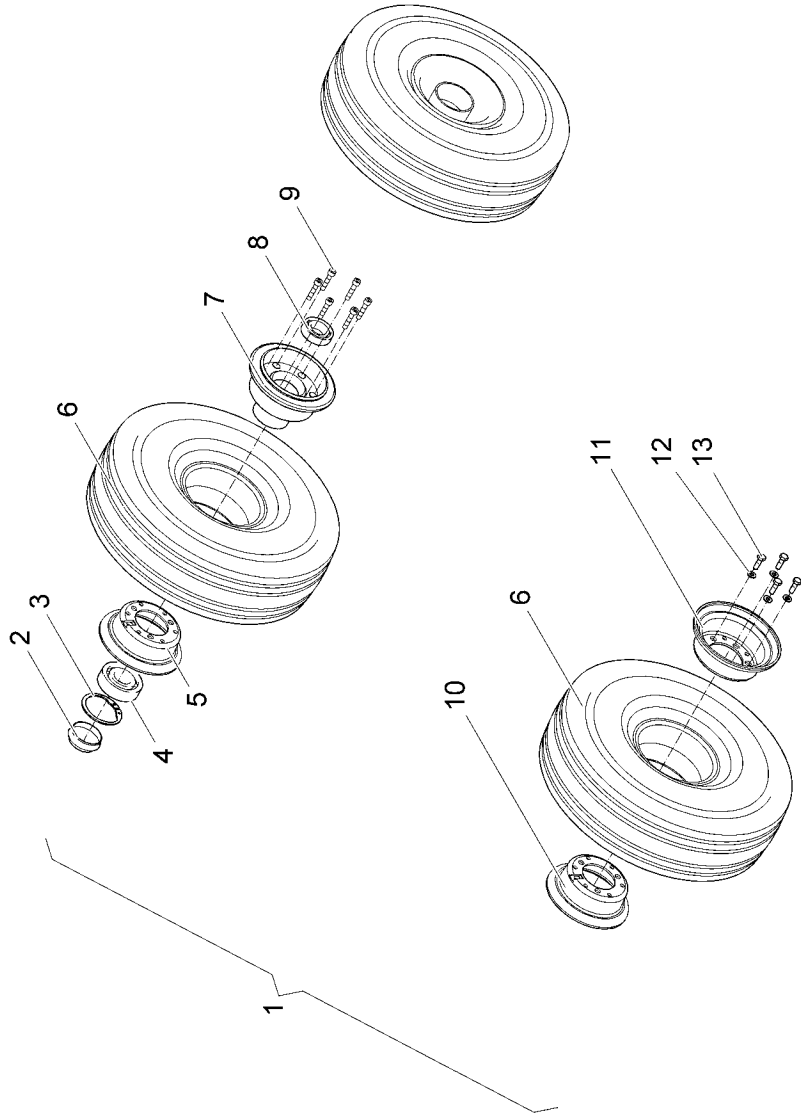




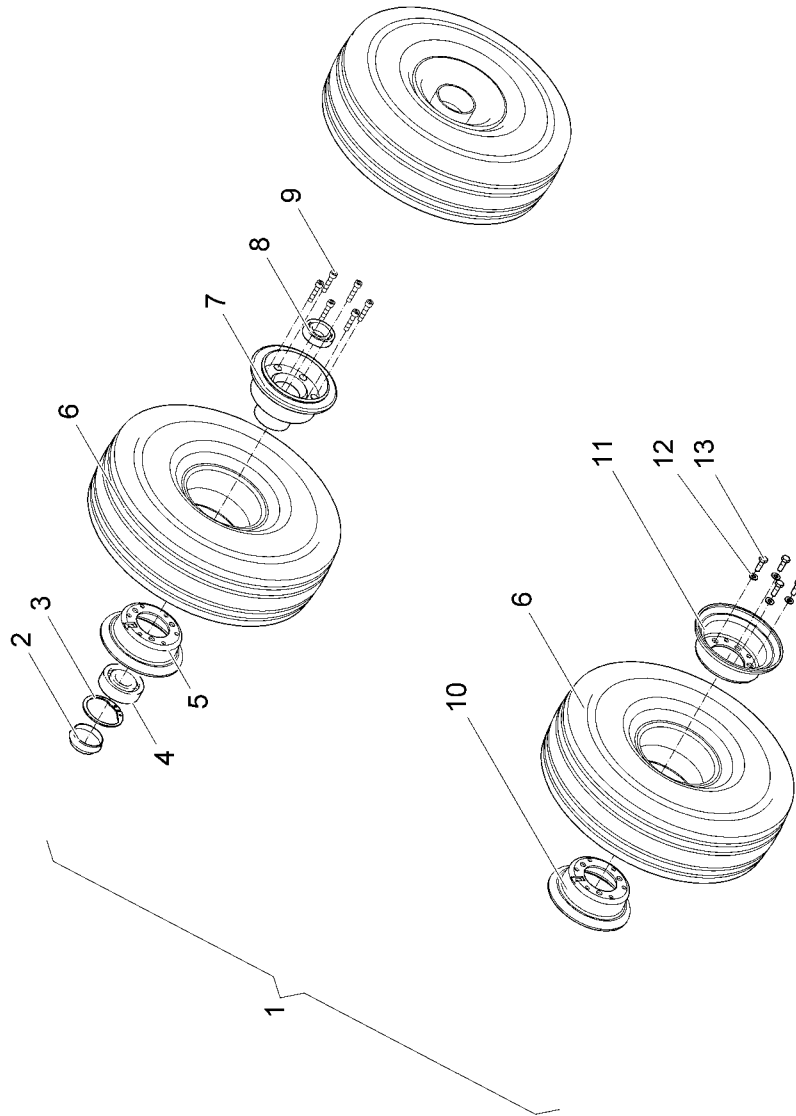
<b>Rear-wheel - Brake</b>		
Pos.	Part No.	Description
1	01131060	Cap
2	01133690	Hexagon nut
3	00053790	Washer
4	00054230	Retaining ring
5	00706370	Deep groove ball bearing
6	01133040	Tyre
7	01133050	Tube
8	01133010	Rim half
9	01133060	Valve cap
10	01132990	Brake drum
11	00281050	Deep groove ball bearing
12	00137020	Cylinder head screw
13	00863220	Retaining ring
14	01133960	Washer
15	00074710	Hex. Nut
16	00053760	Washer
17	00053330	Hex. Nut
18	00053730	Washer
19	01131080	Brake
20	01130350	Bowden cable for brake
21	01133970	Clamping screw
22	01130780	Bush
23	01130790	Cup head square neck bolt
24	01131090	Axle with flange
25	00740290	Washer
26	00021130	Hex.bolt
27	00054890	Cotter pin
28	00853650	Tension spring
29	01133700	Mounting link
30	00106050	Rubber washer



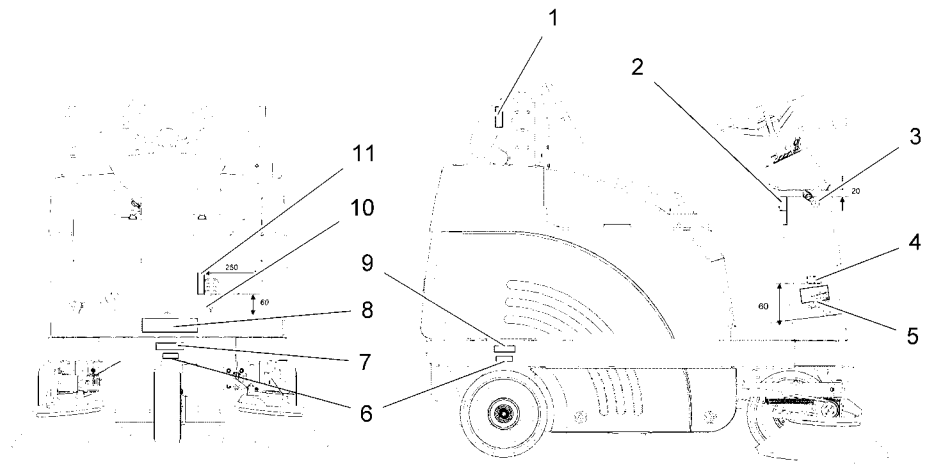
<b>Set of tires</b>		
Pos.	Part No.	Description
1	99652900	Set of pneumatic tyres



<b>Set of SE-solid wheels</b>		
Pos.	Part No.	Description
1	99651600	Set solid rubber tires
2	01131060	Cap
3	00054230	Retaining ring
4	00706370	Deep groove ball bearing
5	01133010	Rim half
6	01133030	Tyre
7	01132990	Brake drum
8	00281050	Deep groove ball bearing
9	00137020	Cylinder head screw
11	01133020	Rim half
12	00053730	Washer
13	00053010	Hex.bolt

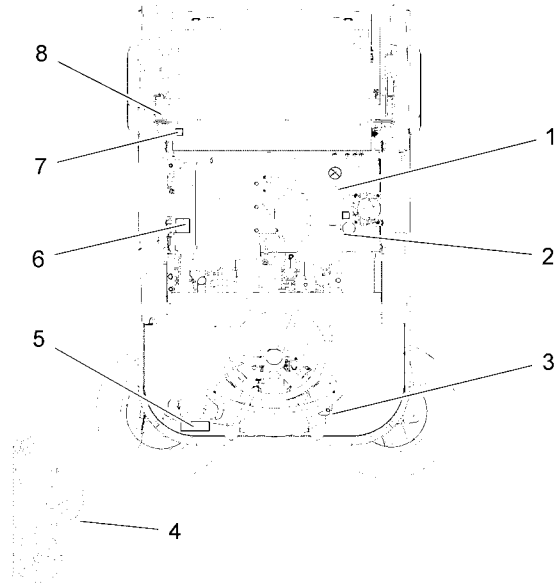


<b>Set of SE-solid wheels, not marking</b>		
Pos.	Part No.	Description
1	99651200	Solid tyres, non markin
2	01131060	Cap
3	00054230	Retaining ring
4	00706370	Deep groove ball bearing
5	01133010	Rim half
6	01132980	Tyre Solid, non marking
7	01132990	Brake drum
8	00281050	Deep groove ball bearing
9	00137020	Cylinder head screw
11	01133020	Rim half
12	00053730	Washer
13	00053010	Hex.bolt

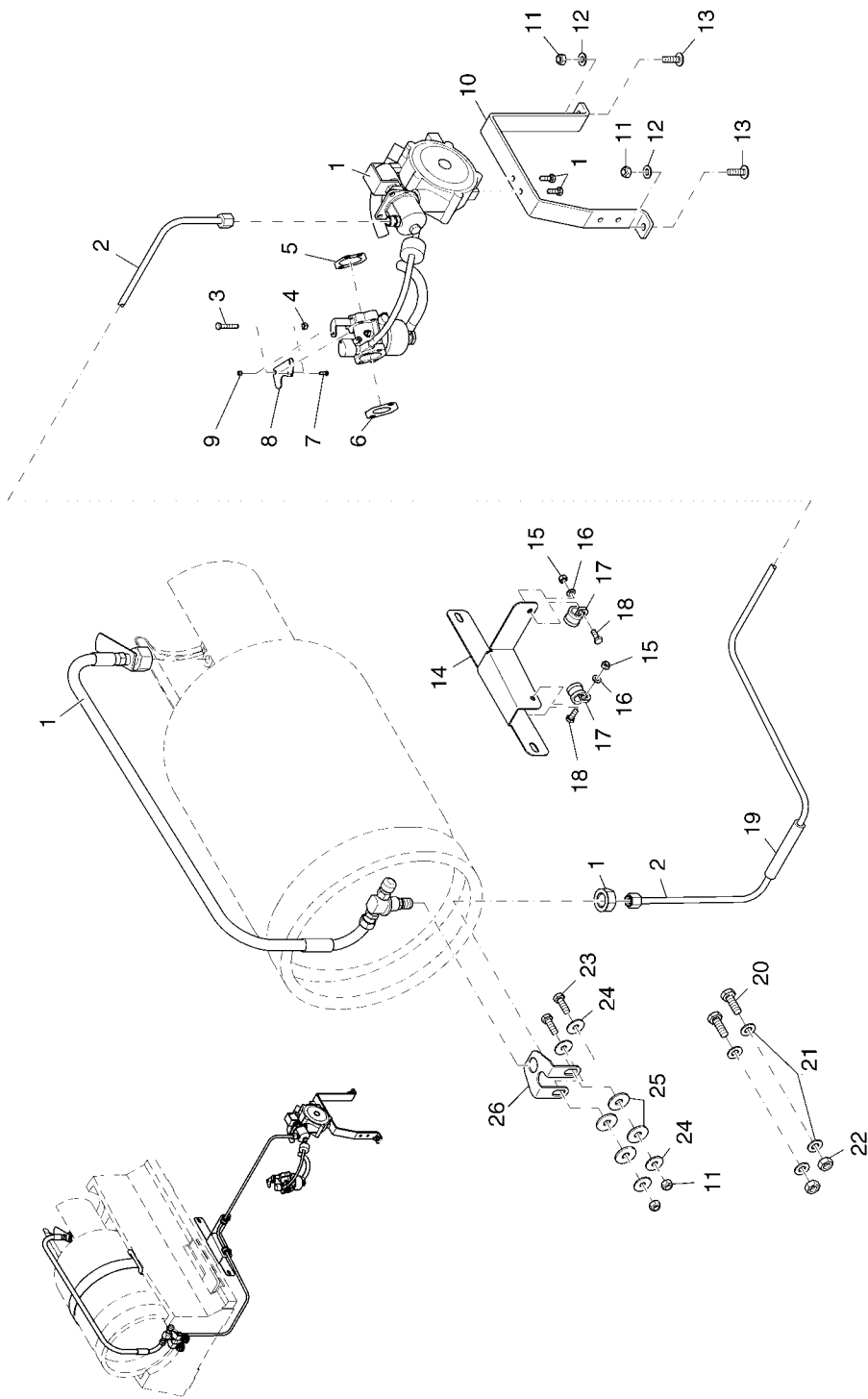




<b>Decal Part 1</b>		
Pos.	Part No.	Description
1	01142760	Decal SQUEEZING DANGER
2	01071710	Decal INSTRUCTION MANUEL
3	01133920	Decal SYMBOL START
4	01131560	Decal BRAKE
5	01073530	Transparency
6	03003000	Transparency
7		Decal POWERBOSS
8		Decal MINUTEMAN
9		Decal SW5X
10	01131550	Decal BRAKE
11	01131540	Decal BRUSH APRON

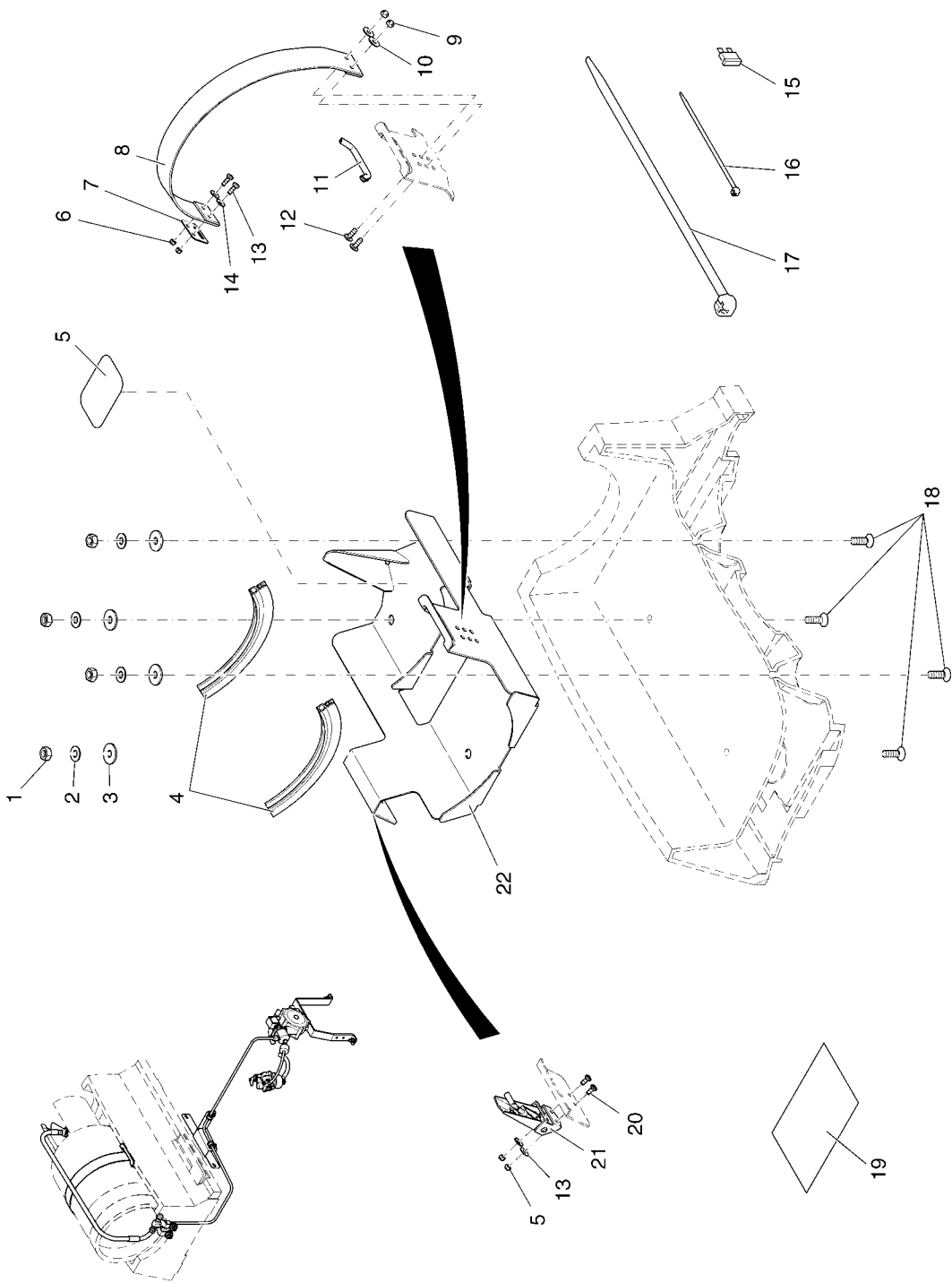


<b>Decal Part 2</b>		
Pos.	Part No.	Description
1	01132720	Decal HIGH PRESSURE CLEANER
2	01132710	Decal HYDRAULIK OIL
3	01131550	Decal BRAKE
4	01133940	Decal ADJUSTABLE SWEEPER ROLLER
5	01073530	Transparancy
6	01132720	Decal HOT PARTS
7	01132710	Decal HYDRAULIK OIL
8	01131590	Decal ROTATING PARTS

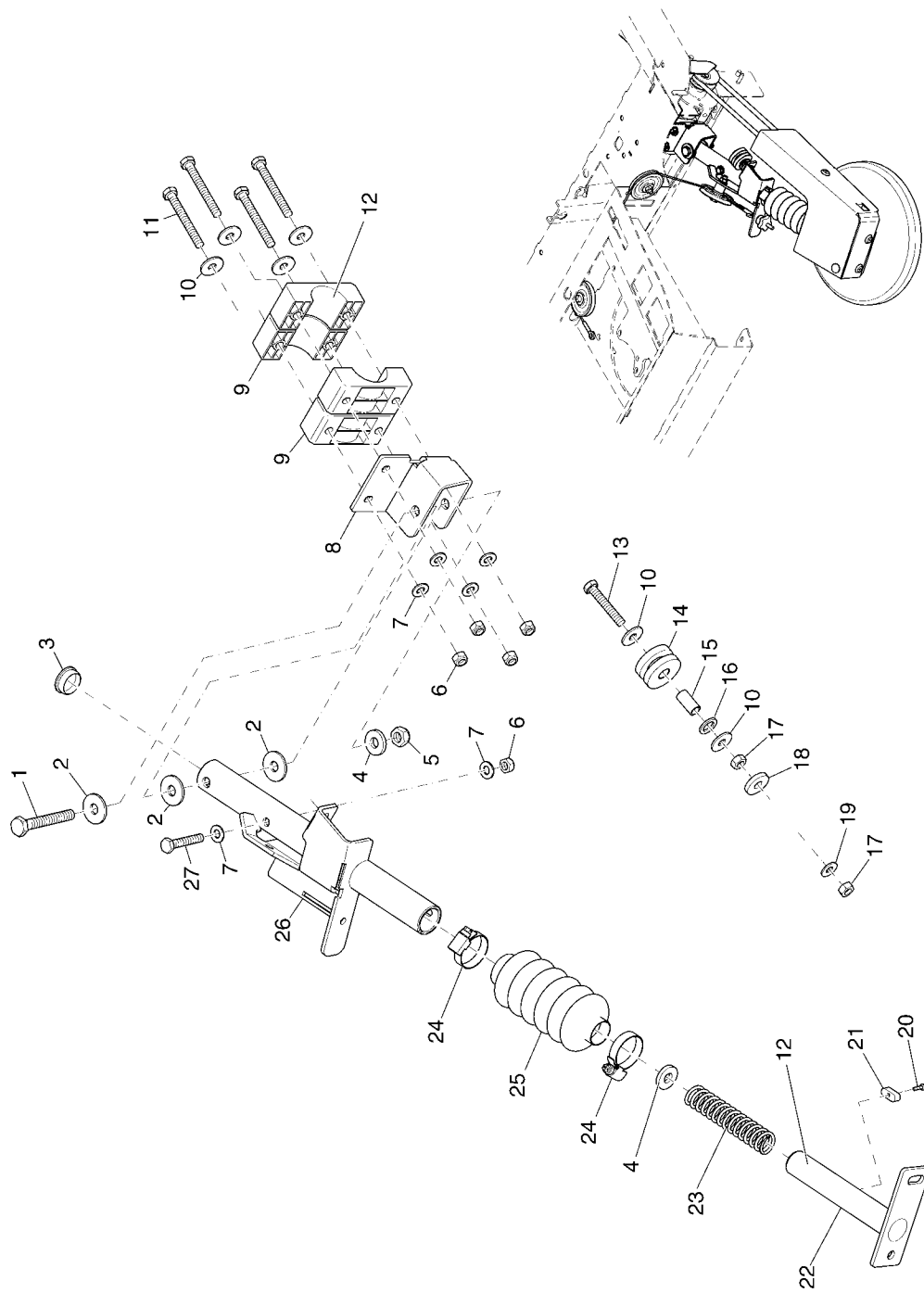


Mit Hochentleerung Pos. 20, 21 und 22, sonst Pos. 11, 23, 24 und 25.  
 With high dumping Pos. 20, 21 and 22, otherwise Pos. 11, 23, 24 and 25.  
 Avec déchargement haut Pos. 20, 21 et 22, sinon Pos. 11, 23, 24 et 25.

<b>LPG - Kit SW5X Lift-Up Disposal (Part 1)</b>		
Pos.	Part No.	Description
1	03006080	LPG Kit
2	01134980	Pipe
3	00875760	Hex.bolt
4	00051340	Hex.nut
5	01134890	Carburetor seal
6	01134920	Carburetor seal
7	00042350	Hex.bolt
8	01134970	Choke plate
9	00022200	Hex.nut
10	01134900	Bow
11	00051510	Hex.nut
12	00053750	Washer
13	01092910	Lens flange screw
14	01134940	Holder
15	00051520	Hex.nut
16	00053730	Washer
17	00109470	Tube clamp
18	00053010	Hex.bolt
19	00830680	Hose
20	00053160	Hex.bolt
21	00053760	Washer
22	00053360	Hex.nut
23	00053100	Hex.bolt
24	00042900	Washer
25	00046520	Washer
26	00113484	Support angle

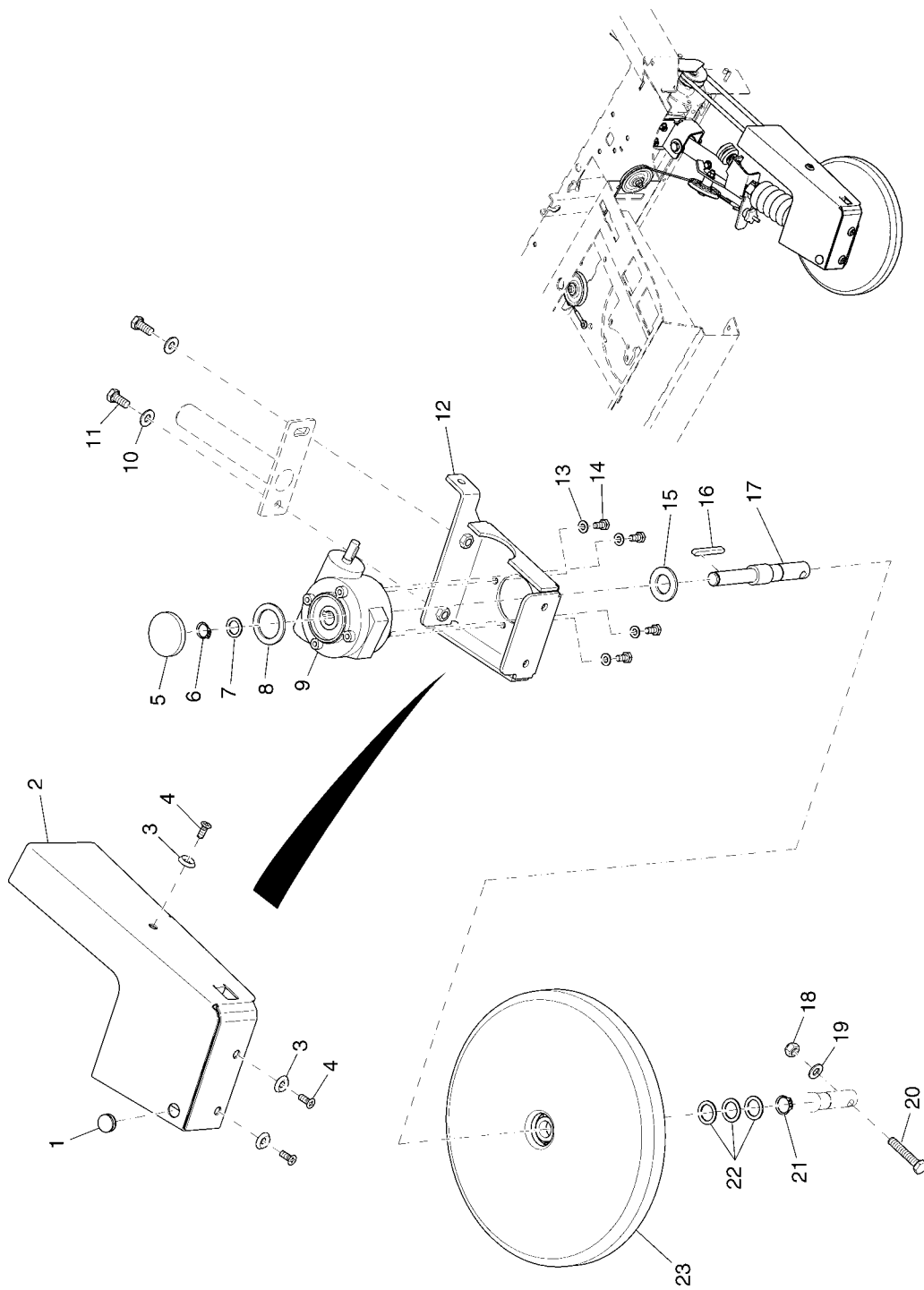


<b>LPG - Kit SW5X Lift-Up Disposal (Part 2)</b>		
Pos.	Part No.	Description
1	00053360	Hex.nut
2	00740290	Washer
3	00046520	Washer
4	01052820	Edge protection black
5	01134870	Lable LPG
6	00051340	Hex.nut
7	01134960	Latch
8	01134930	Tension band
9	00051520	Hex.nut
10	00135120	Washer
11	00721090	Edge protection black
12	01015340	Lens flange screw
13	00053530	Lens screw
14	00555520	Washer
15	00733630	Fuse
16	00121010	Cable tie
17	00967760	Cable tie
18	00021800	Screw
19	01134880	Lable
20	00108650	Lens screw
21	00968070	Lock
22	01134950	Ground sheet metal

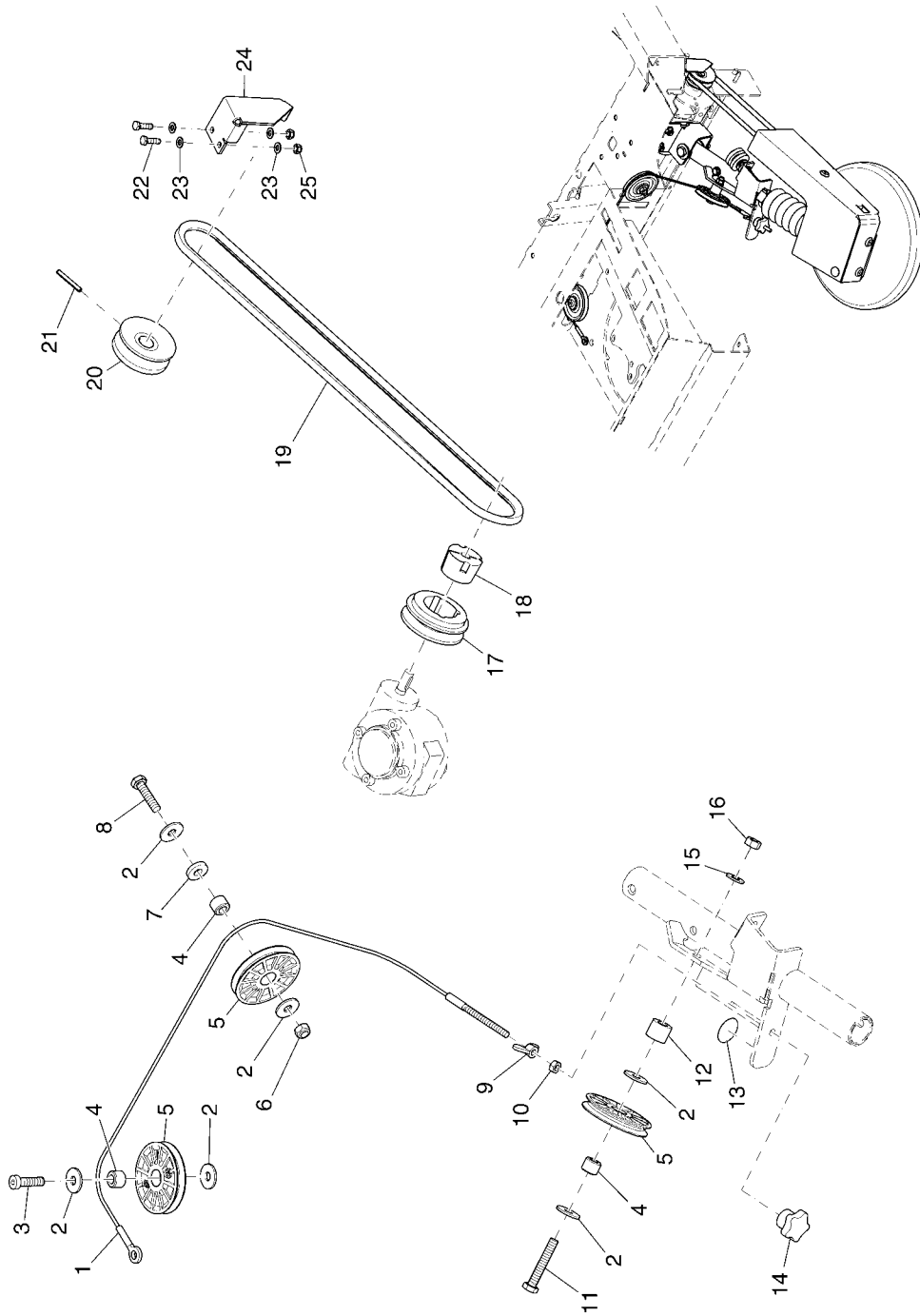




<b>Side Brush I.h. Part 1</b>		
<b>Pos.</b>	<b>Part No.</b>	<b>Description</b>
1	00041810	Hex. Bolt
2	00046520	Washer
3	00152850	Drain plug
4	00855380	Washer
5	00132880	Hex. Nut
6	00051510	Hex. Nut
7	00053750	Washer
8	01135020	Holder, I.h.
9	01130610	Bearing
10	00042900	Washer
11	00557600	Hex. Bolt
13	00138180	Hex. Bolt
14	00740930	Roller
15	00855240	Bushing
16	00156720	Washer
17	00053350	Hex. Nut
18	00047990	Disk wheel
19	00740090	Washer
20	00695680	Filister-head screw
21	01132380	Fitted key
22	01135040	Holder
23	00701250	Pressure spring
24	01071480	Hose clamp
25	01130670	Bellows
26	01135050	Side brush arm
27	00041600	Hex. Bolt



<b>Side Brush l.h. Part 2</b>		
Pos.	Part No.	Description
1	00740360	Cable sleeve
2	01135030	Covering
3	00157690	Washer
4	00154680	Screw
5	01131530	Cap
6	00022440	Retaining ring
7	00020610	Supporting ring
8	00155120	Supporting ring
9	01130740	Gear
10	00740090	Washer
11	00553690	Hex.bolt
12	01135060	Gear holder
13	00740280	Washer
14	00104500	Hex.bolt
15	00871350	Washer
16	00072940	Fitted key
17	01132790	Drive shaft
18	00051510	Hex.nut
19	00053750	Washer
20	00041600	Hex.bolt
21	00022230	Retaining ring
22	00041590	Supporting ring
23	01132800	Deflector grey



Side Brush I.h. Part 3		
Pos.	Part No.	Description
1	01135000	Rope
2	00042900	Washer
3	00537390	Hex.bolt
4	00974400	Bushing
5	00521270	Roller
6	00051510	Hex.nut
7	00695300	Washer
8	00054690	Hex.bolt
9	00054020	Wing nut
10	00053330	Hex.nut
11	00138180	Hex.bolt
12	00029170	Bushing
13	01130650	Decal
14	00853730	Star handle
15	00740090	Washer
16	00053350	Hex.nut
17	01130730	Belt pulley
18	01130720	Bushing
19	01134320	Narrow V-belt
20	01134990	Belt pulley
21	00052420	Dowel pin
22	00054410	Hex.bolt
23	00053720	Washer
24	01135010	Angle
25	00051340	Hex.nut

**Minuteman**<sup>®</sup>

declares under our sole responsibility  
that the product

**SW5X**

**Type: PB40PL, PB40PH**

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.

## ***Minuteman***<sup>®</sup>

**World Headquarters**  
Minuteman International, Inc.  
111 South Rohlwing Road  
Addison, Illinois 60101

Minuteman Canada, Inc.  
2210 Drew Road  
Mississauga, Ontario  
L5S 1B1

(630) 627-6900  
FAX (630) 627-1130

(905) 673-3222  
FAX (905) 673-5161

Form 988062  
Printed in U.S.A.

06/05

rev. A

