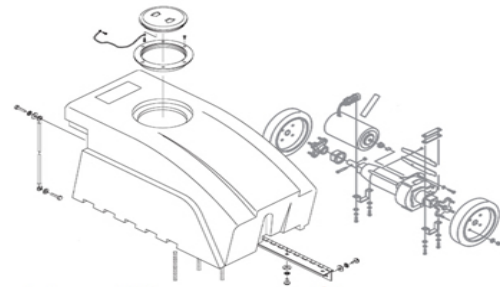


# Instruction Manual

ERide 30 (7090.31)



**FLOOR-EQUIPMENT-PARTS.COM**

## Introduction

It is our desire that the excellent properties of the ERide 30 should justify the confidence you demonstrated by making this purchase. We did our best to supply you with an efficient and dependable machine. Before first operation of your ERide 30 read these instructions carefully. They will inform you in detail about operation of the item and contains valuable information fore service and maintenance.

The exclamation mark symbol



has been used in this manual at several places and identifies particular areas that are of essence for your safety. Please pass all safety instruction on to other operators.

Please comply with the "General provisions for safety" (chapter 1)



Prior to first operation, read the manual carefully and strictly comply with the instructions contained.

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

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

Valid as of : October 2008

**Minuteman International Inc.**  
**14N845 U.S. Route 20**  
**Pingree Grove, Il. 60140**  
**U.S.A.**

## Introduction

### Proper Use

The ERide 30 vacuum scrubbing machine has been exclusively designed for floor cleaning, such as wet scrubbing and vacuum cleaning.

Whatever sort of use beyond the specified range will be deemed improper use; the manufacturer cannot be held liable for consequential damages.

The term of proper use also includes compliance with the manufacturer's instructions about operation, maintenance and repair.

The ERide 30 may be used, serviced and repaired by persons only that are familiar with the machine and are aware of possible hazards involved.

The appropriate Accident Prevention Regulations as well as the applicable general regulations about safety and health at work will have to be complied with. Modifications made to the ERide 30 in absence of the manufacturer's consent will relieve the manufacturer from a possible liability for consequential damage.



Caution! This machine is not suitable for evacuation of dusts, which are explosive or dangerous to health.

### 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. Any maintenance work has to be performed by an authorized Minuteman Service workshop and confirmed in the "Maintenance certificate" which is the warranty document.

The following is excluded from warranty:

Natural wear and tear after overload, fuses and damages caused by inexperienced handling and unauthorized modification of the machine.

Moreover, any claim for warranty becomes extinct if damages at the machine are caused by fitting of parts or accessories without Minuteman prior and explicit consent or by non-compliance with the maintenance instructions.

### Acceptance of the machine

Upon arrival, check your consignment for possible transit damage. Please have the freight forwarder confirm such damage and mail your report and waybill to:

**Minuteman International Inc.**  
**14N845 U.S. Route 20**  
**Pingree Grove, Il. 60140**  
**U.S.A.**

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## 1. General safety instructions

### General information

Apart from the information contained in this manual, the generally applicable legal provisions for safety and prevention of accidents must be adhered to. Do not put this manual aside without having read it, even if you did already operate similar ground cleaning equipment before. Allow yourself the time to do so in order to save time at a later moment. The operator has to use the machine in accordance to its intended fields of application. During driving operation, he has to take account of the local conditions and when working, he has to pay attention to other persons, in particular to children. Nobody is allowed to stay in the zone of danger.

The warning and instruction plates attached to the ERide 30 give important advice about safe operation. Before starting to work, the operator has to check that the ERide 30 and its working implements are in proper and safe operating condition.

**Caution!** The protective cover of brushes/drive plates must only be removed for maintenance or transport purposes and with the engine being turned off. Do not perform cleaning work without the covers being closed and locked. Machines that are not in perfect condition must not be used.

It is indispensable to get familiar with operation of all types of attachment and controls as well with their function before operation begins. Once you have started to work there will be no time to do so.

### Operation

Ground sweepers may be operated only by appropriate persons who have been trained for such work, who have testified their capability to the owner of the unit or his authorized representative and who have been ordered explicitly by him to operate the machine.



The machine may be used only on those areas as clearly specified by the owner or his authorized representative.

Never leave the machine unattended as long as the motors are running and the machine is not protected against unintended movements.

To prevent the machine from being used by unauthorized persons, the control key must be removed such that the travel drive unit is locked. When transporting the ERide 30, shut down the motors of the working implements. The operator has to use the machine in accordance to its intended fields of application.

During driving operation, he has to take account of the local conditions and has to pay attention to other persons, in particular to children.

Use cleaning agents only, which are suitable for automatic machines (low foaming), and adhere to the instructions for use, disposal and to the precautions specified by the manufacturer of the cleaning agent.

## 1. General safety instructions

### Caution!

Never collect explosive fluids, undiluted acids and solvents!

This includes e.g. gasoline, paint thinners or fuel oil, which - when penetrating the air being taken in - may form explosive vapours or mixtures; moreover acetone, undiluted acids and solvents if they should be aggressive to the material used for the machine components.

### Caution!

This machine is not suitable for evacuation of dusts which are explosive or dangerous to health.

The machine must not be used in areas endangered by explosion hazard.

The machine may be used only on hard floorings and for operation on level grounds with a maximum inclination of up to 2%.

Driving e.g. on ramps with a maximum inclination of 10% is only allowed for transportation. Uphill ride must not exceed 1-minute duration and particular care has to be taken.

Repair, maintenance and cleaning work must be performed only with the control key removed.

Before working at the electrical system, make sure to disconnect the battery plug.

It is prohibited to transport other persons. If the ERide 30 is equipped with a driver's seat it may only be started with the operator being seated (seat contact switch).

A perfect maintenance of the machine mainly helps preventing accidents. Use appropriate tools when performing repair, maintenance setting or other work.

All other spare parts than the genuine ones have to equal those as far as the safety standards are concerned.

The ERide 30 has to be checked for its proper and safe operation by an expert at regular intervals (we recommend a yearly check at least) and after modification or repair. The ERide 30 must be equipped with brushes and pads as specified by the manufacturer (refer to the "Technical data" paragraph). Using other brushes/pads than indicated may affect your safety.

Do not clean the machine by means of vapour jet or high pressure cleaning equipment.

Before cleaning or servicing the machine as well as before replacing parts, switch motors off.

If the machine is battery-driven, disconnect the battery plug and the mains plug of the intended charger unit. Make sure to take precautions against unintended starting of the appliance.



Due to an increased tilting hazard, the pneumatic tire equipment of the ERide 30 is not admissible.

Do not allow water to penetrate the electrical parts.

The machine is splash-water proof (IPX3)

Do not allow water to get into the machine in the driver's seat area as it may be collected on the battery stored below the seat. Remove water if required.

Particular instructions for safe handling of drive batteries

(See enclosed leaflet 88-60-2556)

The machine is equipped with a charger unit. In this case comply with the instructions of the extra operating manual of the battery charger unit.

## 2. Battery systems

Battery system A: Tray-type battery, 24V/320Ah5, PzS, Aquamatic	7450.02
Battery system B: Tray-type battery, 24V/280Ah5, PzS, maintenance-free	7451
Battery system C: Drive battery, 6V/180Ah5, maintenance-free	7411
Battery system D: Compound battery, 6 V/240Ah, GiV, maintenance-free	7401
Dimensions of tray-type batteries: Length 425mm (in direction of travel), width 525mm, height 465mm	
The machine is equipped with an on board charger unit (24V/32A, IU1a characteristic, with 230V AC power supply and suitable for all battery systems. In the factory, the charger unit is set to a 280Ah-PzV battery type (switch position 3). If other batteries are used, set the charger unit characteristic accordingly.	
<p><b>Note:</b> We recommend to have the characteristic curve of the on board charger un set by your local Minuteman service centre only.</p>	

### Battery charge warning unit (low discharge sensor)

The ERide 30 is equipped with a charge status monitoring device to preclude poor battery charge conditions. This monitoring device is integrated in the electronic system and factory-set as follows:

#### Dip switch setting 1111 PzV batteries as GEL-Deta

Using other battery types requires modification of the low discharge sensor setting.

**Note:** We recommend having the low discharge sensor set by your local Minuteman service centre only.



Before starting work at the electrical system, disconnect the battery plug.

## 2. Battery systems

### Taking into operation, service and maintenance of batteries

See enclosed leaflet 88-60-2556  
"Instructions for drive batteries"

#### Plug connection coding

All battery plugs at machines, batteries and battery charger units have to be coded with the coloured coding pins according to the battery type and the nominal voltage.

The charger unit plugs are/will be set in the factory according to their characteristic curve such that a modification of the curve (in relation to the battery type) requires changing of the plug coding.

#### Plug case of **charger units** :

Grey for fluid-filled batteries

Green for maintenance-free Gel batteries

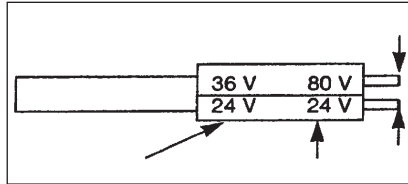
#### Plug case of **machine** :

Yellow for both battery types

Socket case of battery:

Grey for fluid-filled **batteries** :

Green for maintenance-free Gel batteries



Nominal plug voltage is indicated on each side of the hexagon (letters upside down)

Indication for nominal socket voltage accordingly

Replace the coding plug by pressing the ends together with pliers.

#### Press together for removal.

Insert coding plug such that the nominal voltage inscription is visible through the case window. Socket and plug only with the same nominal voltage.

The following three conditions have to be met:

1) Voltage coding must be the same for all sockets and plugs

- 2) Coding pin colour in the machine = yellow
- 3) Coding pin colour in the charger unit = the same as for the battery plug according to battery type



Open the seat console of the ERide 30 before performing charging of the batteries.

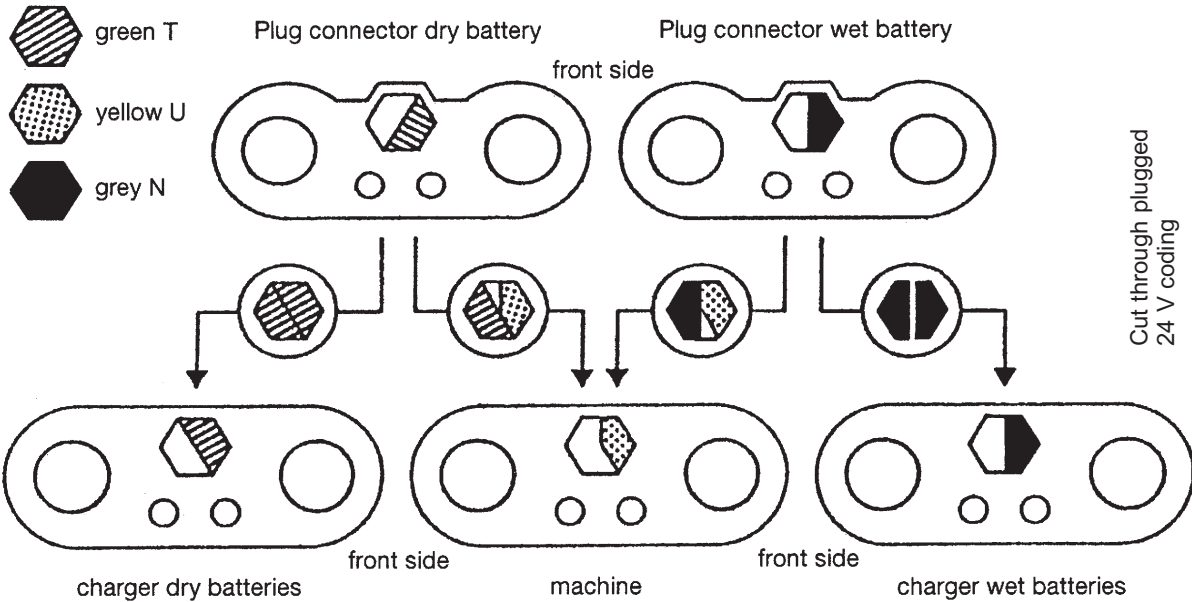


Before first operation of the machine, fully charge the battery with an initial charging procedure and comply with the operating instructions of the charger as well as with those of the battery manufacturer. Minuteman cannot be held liable for damages resulting from the fact that the initial charging has not or insufficiently been done.



## 2. Battery systems

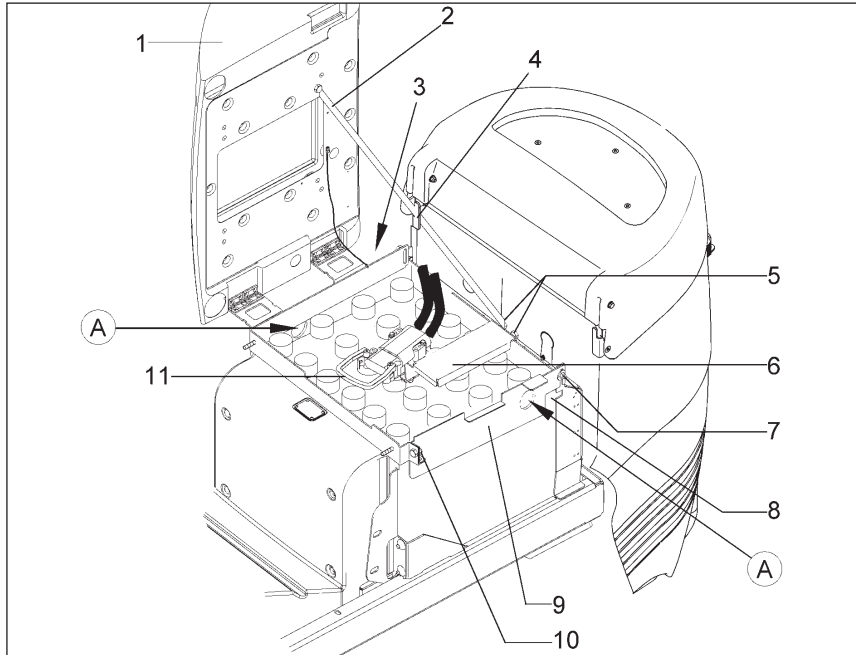
Coding system in the charger unit for fluid-filled and dry batteries (Gel batteries)  
Example 24V



## 2. Battery systems

### 2.1 Changing batteries

#### 2.1.1 Tray-type batteries



#### Disassembling tray-type batteries

- Switch off key switch
- Remove control key
- Engage parking brake of the machine
- Tilt seat console (I/1) upwards. Jam strap (I/2) at position (I/4)
- Disconnect battery plug (I/11).
- Loosen hexagonal nuts (I/5)
- Remove holder (I/5) with battery cable and let it overhang at position (I/3).
- Loosen hexagonal nuts (I/7/10).
- Remove plate (I/9).
- Apply carrying straps at position A and remove tray battery by lifting device.

#### Note :

Upon delivery of the machine the handle (I/11) for battery plug (I/1) is located in position 8.

Remove mains cable in the area (I/8) and let it overhang sidewise at the appliance.

## 2. Battery systems

### Assembling tray-type batteries

Proceed in inverse order for assembly of tray-type batteries and note the following:

- Fasten plate (Fig. 1/9) with hex. screws (Fig.1/7 and 10) and hex. nuts (Fig.1/2) hand-tight
- Align seat console (Fig.1/1)
- Tighten hex. screws (Fig.1/7 and 10)

### 2.1.2 Compound batteries

#### Disassembling compound batteries

- Switch off key switch
- Remove control key
- Engage parking brake of the machine
- Tilt seat console (I/1) upwards.
- Disconnect battery plug (I/11).
- Remove harness of the battery.
- Remove holder (I/5) with battery cable and let it overhand at position (I/3).
- Remove battery.



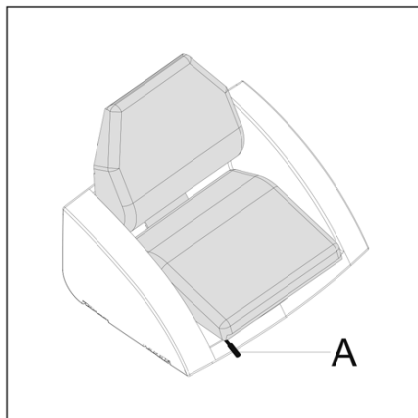
Remove or place the compound batteries by means of a lifting device only.

#### Assembling compound batteries

Proceed in inverse order for assembly of compound batteries.

### 3. Description

#### 3.1. Control and display elements

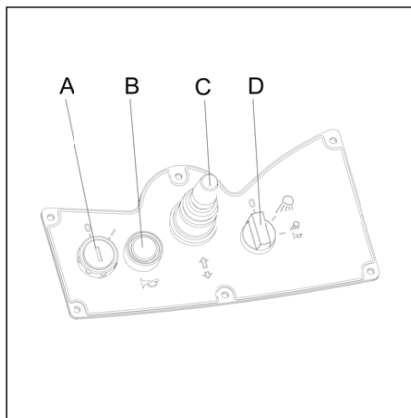


##### Adjust driver's seat

Adjust the driver's seat such that the operator is comfortably seated and has all control elements within his reach. Adjust the driver's seat longitudinally as follows:

- Push lever (II/A) to the side and displace the seat as required, then let the lever (II/A) catch into place again.

#### 3.1.1 Left-hand control panel



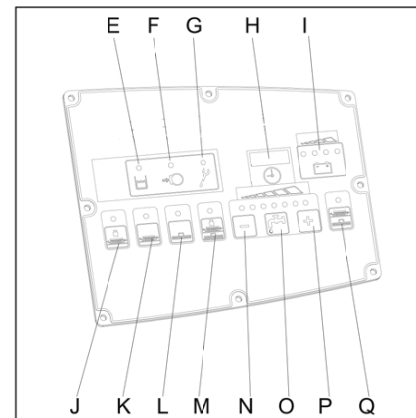
**A** Key switch (on/off)

**B** Horn button

**C** Direction selector (forward/reverse)

**D** Option (buzzer/warning light) or searchlight

#### 3.1.2 Right-hand control panel



**E** Pilot lamp (red) for max. filling level in soiled water tank

**F** Pilot lamp (red) for parking brake

**G** Pilot lamp (red) for fault display

### 3. Description

- H** Hourmeter/service display
- I** Pilot lamp for battery charge condition
- J** Key for increasing brush pressure with pilot lamp (green)
- K** Key for brush drive with pilot lamp (green)
- L** Key for squeegee and suction turbine (on/off) with pilot lamp (green)
- M** Key for cleaning program 2 (on/off) for brush head/squeegee (up/down) with pilot lamp (green). Additionally increased brush pressure and last saved amount of water
- N** Key for water flow reduction with pilot lamp (green)
- O** Key for water infeed with pilot lamp (green)
- P** Key for water flow raising with pilot lamp (green)

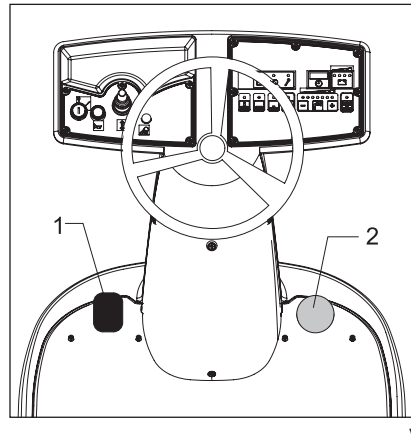
- Q** Program key 1 for brush drive, suction turbine (on/off) and simultaneous brush head/squeegee movement (up/down) with pilot lamp (green) and last saved amount of water

**Note:**

The parking brake engages after actuating the brake pedal and backing the pedal slightly.

Disengage the parking brake by pushing the brake pedal forward.

#### 3.1.3 Control and brake pedals

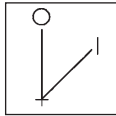


1 Brake pedal / parking brake

2 Accelerator pedal

### 3. Description

#### 3.1.4 Display elements



##### **A Key switch**

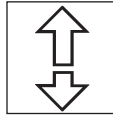
(on/off) turns the electrical system ON/OFF and protects the machine against unauthorized use;

moreover, it holds the hourmeter display. With the switch in OFF position, all control functions are reset to the initial state.



##### **B Horn button**

actuates the electric horn.



##### **C Direction selector**

(forward/reverse) selects the travel drive direction.

Forward switch position = forward ride  
Central switch position = neutral  
Reverse switch position = reverse ride  
Before changing direction, slow down machine with service brake, then select and restart.



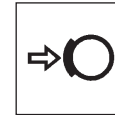
##### **D Option**

(buzzer/warning light) or searchlight switches buzzer or warning light on and off as well as the searchlight. This function is also available without key switch (warning light/searchlight optionally)



##### **E Pilot lamp**

(red) for max. filling level in soiled water tank alights if the max. filling level is attained in the soiled water tank. A float (VII/7) switches the suction turbine off.



##### **F Pilot lamp**

(red) for parking brake alights if the parking brake pedal (V/1) is actuated



##### **G Pilot lamp**

(red) for fault display alights in case of one of the following faults occurring:

- thermal switch of the brush motor or the drive motor has responded
- one of the fuses is defective or one of the electronic circuit-breakers has tripped
- other faults

### 3. Description



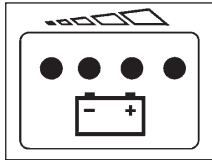
#### **H Hourmeter/service display**

displays the operation hours. The meter only counts if the consumers

such as drive or brush motor or suction turbine are ON. A red dot at the bottom right of the display flashes simultaneously. Equally displays occurring errors when the (red) pilot lamp for fault display (G) alights.

#### **Note:**

Should the contact to the seat switch not be given, the hourmeter starts flashing.



#### **I Pilot lamp for battery charge condition** **Upon turning**

ON the key switch, all green pilot lamps

alight in case of a perfectly charged battery. During operation, the lamps will successively extinguish as the battery discharges.

A flashing red light indicates that operation will soon be interrupted and a buzzer sounds.



#### **J Key for increasing brush pressure with pilot lamp (green)**

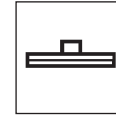
increases the brush pressure to 48kg max. if required by the degree of soiling.



#### **K Key for brush drive with pilot lamp (green)**

turns the brush drive ON and OFF. The green lamps alights if the brush

head is lowered and the brushes rotate. In case of malfunction, the fault lamp (G) alights and an error code appears in the service display.



#### **L Key for squeegee and suction turbine (on/off) with pilot lamp (green)**

is lowering/lifting out the squeegee and turns the

suction turbine ON/OFF. The green lamp alights if the squeegee is lowered and the suction turbine ON. In case of malfunction, the fault lamp (G) alights and an error code appears in the service display.

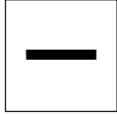


#### **M Key for cleaning heavy soiling**

switches the program for heavy soiling and, simultaneously, brushing and

vacuuming with increased brush pressure ON and OFF. The last saved amount of water is supplied automatically. In case of malfunction, the fault lamp (G) alights and an error code appears in the service display.

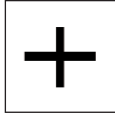
### 3. Description



#### **N Key for water flow reduction with pilot lamp (green)**

is used to reduce the water quantity supplied to

the brushes. The quantity may be gradually reduced from 5.2l to 1.0l per minute, each grade corresponding to one lamp.



#### **P Key for water flow raising with pilot lamp (green)**

is used to increase the water quantity supplied

up to max. 5.2l per minute.



#### **O Key for water infeed with pilot lamp (green)**

is used to turn ON and OFF the water supply.

When switching on the brushes, the last saved water amount is supplied automatically. The water quantity can be increased or reduced via the (N) and (P) keys



#### **Q Program key 1 for brush drive, suction with pilot lamp (green)**

turns the brush drive assembly and the squeegee ON and OFF with a simultaneous

lowering/lifting out of the squeegee.

The green lamp lights if the units are ON and lowered. In case of malfunction, the fault lamp (G) alights and an error code appears in the service display.



### 3. Description

#### 3.1.5 Service display

The hourmeter holds the service display. Upon turning on, the following is successively displayed:

- the software version displayed for approx. 1 sec., e.g.

3.	0	1	8
----	---	---	---

- the last error repeated for approx. 2 sec. (flashing dots), e.g.

1.	2.	6.	1.
----	----	----	----

**Note:** If an error is present, a buzzer sounds and the red lamp lights (-)

- the operating hours displayed, e.g.

0	2	1	5.
---	---	---	----

During operation, the dot flashes.

**Note:** At new machines, the following may appear after actuating the key switch

9	9	9	9.
---	---	---	----

This display is for internal control purposes only and changes after an hour max. to display of zero hours of operation while the ERide 30 is nevertheless operable. The fault display is activated. If a malfunction occurs during operation, the 4-digit number is displayed, the four dots flash and a buzzer sounds. Refer to chapter 4 for a list of errors you may remedy yourself.

If these measures do not help, note down the displayed error code and inform your local Minuteman centre.

## 4. Service display

Displayed error code	Malfunction	Cause	Remedy
1. 2. 5. 2.	Brushes stop	<ul style="list-style-type: none"> <li>● Cord or similar matter accumulated between brush and shaft</li> <li>● Rubber protection from the brush head loosened and slipped under the brush</li> </ul>	<ul style="list-style-type: none"> <li>● Remove cord or other matter</li> <li>● Adjust rubber protection and fasten (ground clearance 2 to 3 mm)</li> </ul>
1. 2. 6. 1.	Brushes stop	<ul style="list-style-type: none"> <li>●Brushes blocked by foreign matter</li> </ul>	<ul style="list-style-type: none"> <li>● Check brush head for matters and remove</li> </ul>
3. 4. 5. 1.	Cleaning function OFF	<ul style="list-style-type: none"> <li>● Parking brake engaged</li> <li>● Drive chain or drive wheels blocked by foreign matters</li> </ul>	<ul style="list-style-type: none"> <li>● Release parking brake</li> <li>● Remove foreign matter</li> </ul>
1. 2. 6. 3.	Lift out of brushes and brush motor OFF	<ul style="list-style-type: none"> <li>● Matters between brush head and machine sich ein Fremdkörper</li> <li>● Brush head placed on a step</li> </ul>	<ul style="list-style-type: none"> <li>● Remove foreign matter</li> <li>● Take machine from the step</li> </ul>
1. 4. 6. 1	Lift out of squeegee and suction turbine OFF	<ul style="list-style-type: none"> <li>● Squeegee stuck or foreign matter between squeegee and machine</li> </ul>	<ul style="list-style-type: none"> <li>● Free squeegee or remove foeeign matter</li> </ul>
<input type="text"/>			

## 5. Taking into operation

### 5.1 Working with the ERide 30

The driver has to read this manual carefully. The control elements are represented by comprehensible symbols and facilitate familiarisation.

Proceed to the first driving trails on a clear training ground until the driver is acquainted with the elements and their functions.



#### Comply with the following instructions:

When using the ERide 30, the safety instructions generally applicable for using self-propelled working machines have to be complied with. Transporting persons on the ERide 30 is strictly prohibited. The warning and instruction plates attached to the ERide 30 give important advice about safe operation. Complying with the instructions is of essence for your safety.

Before starting to work, check the ERide 30 and its working implements for their proper and safe condition. Do not operate the ERide 30 without the protections being installed.

### 5.2 Detergents

#### Important note:

Use detergents suitable for automatic machines (low foaming only). We recommend our detergents for cleaning and care, which are perfectly adapted for use in the ERide 30. These products comply with the provisions of the Detergents Act (WMRG applicable in Germany). Comply with the instructions for correct dosage of detergent. Occurrence of great quantities of foam will affect the performance of your machine. Actually, it indicates excessive dosage or improper suitability of dosing and degree of soiling. Unused detergent particles lead to formation of foam. Take the manufacturer's recommendations as a first basis.

Test made by yourself in practise will help you find the ideal type of detergent and the perfect dosage applicable to it.

Correct dosage will help you save money and protect the environment.

### 5.3 Driving with the ERide 30

#### 5.3.1 Starting

Disconnect battery and charger unit and connect battery with machine or unplug mains cable and store in cable case.



Before connecting battery plug and machine switch key switch off.

The driver has to be seated.

**Note:** The machine is equipped with a safety circuit via the seat contact switch.

If the operator leaves the seat (for approx. 2 sec.) the power supply is interrupted. If the operator sits down again he may restart after setting the direction selector (III/C) or the accelerator pedal (V/2) to neutral then re-select direction.

## 5. Taking into operation

### 5.3.2 Stopping

Release the pedal and the machine is slowed down (pedal returns to its initial position)

**Note:** The slowing effect may be increased by actuating the service brake.

Switch off by key switch and remove control key.



Before leaving the machine make sure to remove the key and engage the parking brake. Because of skidding hazard drive at reduced speed on wet grounds and when turning. Slow down when riding downhill and turning.

### Actuate the following control elements for operation of the ERide 30

- Switch key switch ON
- Release parking brake (if actuated)
- Press key (IV/Q) to initiate the following:
  - brush head lowers
  - brushes rotate
  - squeegee lowers
  - suction turbine starts operation / water pump starts running
  - lye blocking valve opens
- Switch on/off the lye supply via the (IV/O) key and reduce with the (-) or increase supply with the (+) keys.
- Actuate accelerator pedal until the required speed is attained.

**Note:** Start riding immediately after brush head has lowered otherwise the brush might leave traces on the ground. Lift the brush head before riding over obstacles (doorsteps) of 10mm height.

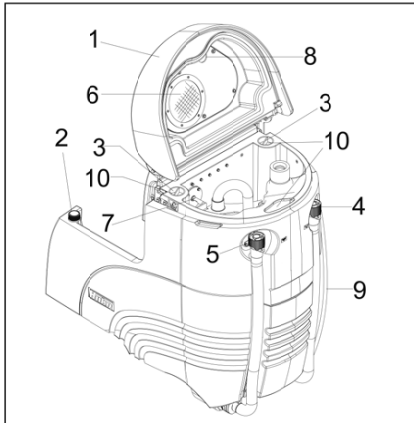
### After work :

- Stop the machine
- Lift up brush head and squeegee by actuation on the (IV/Q) key (the suction turbine continues running for approx. 19 seconds, the squeegee lifts after approx. 6 seconds).
- Switch off by key switch
- Engage parking brake
- Empty soiled water tank with drain hose (VI/5) and rinse
- Clean sealing strips of the squeegee
- Check intake filter (VI/6) and clean if required via water hose by opening (VI/8)

**Note:** do not clean the machine by means of a vapour jet or a high pressure cleaning equipment but by a water hose (pressure: 5 to 6 bar max.) and from the top to the bottom only. Do not direct the water jet into any opening, slots, on electronic modules, control panels or sealing.

## 5. Taking into operation

### 5.4 Soiled water and fresh water tanks



VI

- 1 Tank lid
- 2 Maintenance opening
- 3 Drain plug
- 4 Drain hose of fresh water tank
- 5 Drain hose of soiled water tank
- 6 Filter sieve
- 7 Floater in soiled water tank

- 8 Maintenance opening
- 9 Level measuring, fresh water tank
- 10 Inlet openings of fresh water tank

#### 5.4.1 Refilling the fresh water tank

- Open tank lid (VI/1)
- Drain plug remove (VI/3)
- Add cleaning agent according to the instructions
- Refill the tank according to the instructions via the openings (VI/10) with fresh water (temperature: 50°C max.)

#### 5.4.2 Cleaning

- Clean the fresh water tank via the maintenance openings (VI/2). Insert a water hose and rinse the fresh water tank. Drain the tank via the drain hose (VI/4).
- Clean the filter sieve by inserting a water hose into opening (VI/8) and rinse the filter from inside.

**Note:** Empty and rinse the soiled water tank after work. Clean the floater as well. Clean the drain hose plug at regular intervals and grease the O-ring if required.



Observe the legal provisions for disposal of soiled water and lye.



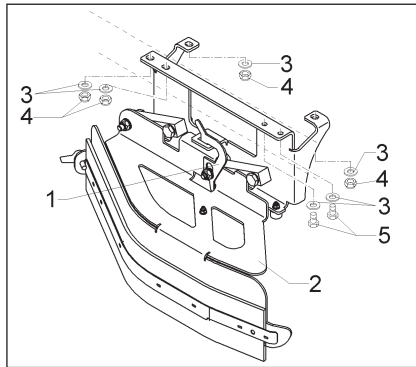
Do not open the lid of the maintenance opening (VI/2) with a filled fresh water tank.

## 5. Taking into operation

### 5.5 Plate brush head



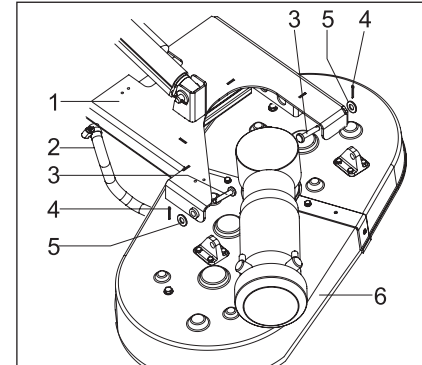
#### 5.5.1 Dismounting plate brush head



VII

- 1 Locking hook
- 2 Right-hand separator, complete
- 3 Washer
- 4 Hex. screw
- 5 Hex. bolt

- Lower plate brush head
- Switch off by key switch and remove key
- Engage parking brake
- Disconnect battery plug (open seat hood)  
Locking hook (VII/1) unhook, right-hand separator, complete lowers itself on the soil
- Loosen hex. nut (VII/4)
- Loosen hex. bolt (VII/5)
- Pull complete separator to the side and put down
- Separate water hose (VIII/2) and solenoid valve
- Separate electric lines and brush motor
- Remove split pin (VIII/4)
- Remove bolt (VIII/3) from inside
- Pull plate brush head to the right side below the appliance



VIII

- 1 Plate brush lift-out
- 2 Hose for water supply
- 3 Bolt
- 4 Split pin
- 5 Washer
- 6 Plate brush head

## 5. Taking into operation



### 5.5.2 Mounting plate brush head

- Mount plate brush head according to Fig. VIII
- Connect water hose (VIII/2) and solenoid valve
- Connect electric lines and brush motor
- Mount separator according to Fig. VIII
- Connect battery plug (open seat hood)



### 5.5.3 Mounting plate brushes

Lift out the brush head and switch off by key switch before mounting or dismounting the plate brushes.

- Place plate brush onto catch and rotate slightly until the teeth take hold. Then pull upwards until the hooks snap in.

Check whether all hooks have snapped in by rotating the brush.



### 5.5.4 Dismounting plate brushes

Lift out the brush head and switch off by key switch before mounting or dismounting the plate brushes.

- Press the plate brush down, let snap it out and remove.

## 5. Taking into operation

### 5.6 Squeegee

- 1 Squeegee
- 2 Star-shaped knob
- 3 Screw for angle adjustment
- 4 Suction hose
- 5 Fastening device
- 6 Washers for height adjustment

#### 5.6.1 Cleaning the Squeegee

Check the squeegee (Fig. 1/1) daily and clean as necessary.

To clean it lift the squeegee out, pull off the suction hose (Fig. 1/4), loosen the two star-shaped knobs (Fig. 1/2) and remove the squeegee.

#### 5.6.2 Changing the Sealing Strips

Check the inner and outer sealing strips on the squeegee (Fig. 1/1) weekly for signs of wear. The sealing strips can be used fourfold by turning them.

1. Lift the squeegee out.
2. Pull off the suction hose, loosen the two star-shaped knobs and remove the squeegee.
3. Unlock the fastening device (Fig. 1/5) and remove the outer sealing strip. Turn the sealing strip or install a new one, as necessary. Change the inner sealing strip in the same way.

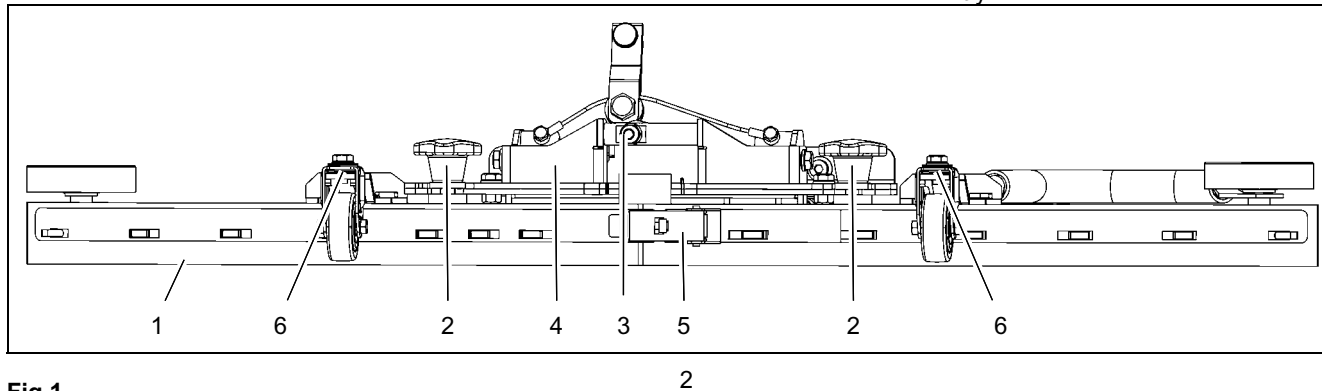


Fig.1



## 5. Taking into operation

### 5.6.3 Adjusting the Sealing Strips Angle Adjustment

The angle adjustment is the decisive factor in ensuring that the sealing strips on the squeegee lie evenly on the floor.

1. Park the machine on a level surface and lower the squeegee.
2. Loosen the counternut on the screw (Fig. 1/3) and adjust the squeegee using the counternut so that the ends of the sealing strips still have contact with the floor.

#### Figure A

Turn the counternut counterclockwise: The clearance between sealing strip and floor is reduced in the centre.

#### Figure B

Turn the counternut clockwise: The clearance between sealing strip and floor is increased in the centre.

3. Switch the machine on and check the suction pattern. When the machine is in operation, the entire surface of the sealing strips (centre and outer areas) must be applied as evenly as possible.
4. Tighten the counternut on the adjusting screw at 5 lb ft.

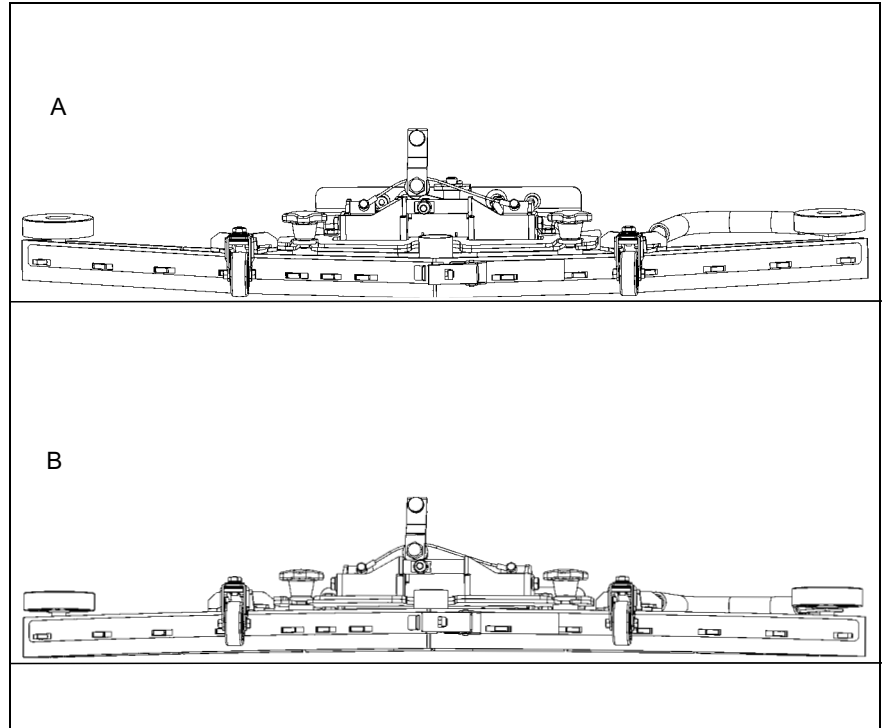


Fig.2

## 5. Taking into operation

### Height Adjustment

The height adjustment is set to 3 mm at the factory. If streaks are produced, despite an optimum angle adjustment, the clearance between the rollers and floor must be adjusted by changing the number of washers on the holder.

In the case of very smooth floors, e.g. finished floors, PVC, linoleum, etc. Number of washers = 2. This corresponds to a clearance of approx. 2 mm.

In the case of very uneven floors, e.g. poorly laid tiles (water does not run off) Number of washers = 4. This corresponds to a clearance of approx. 4 mm.



The Squeegee 110 cm is equipped with two additional rollers which are adjusted at the factory to a distance of 10 mm to the floor by means of spacers.

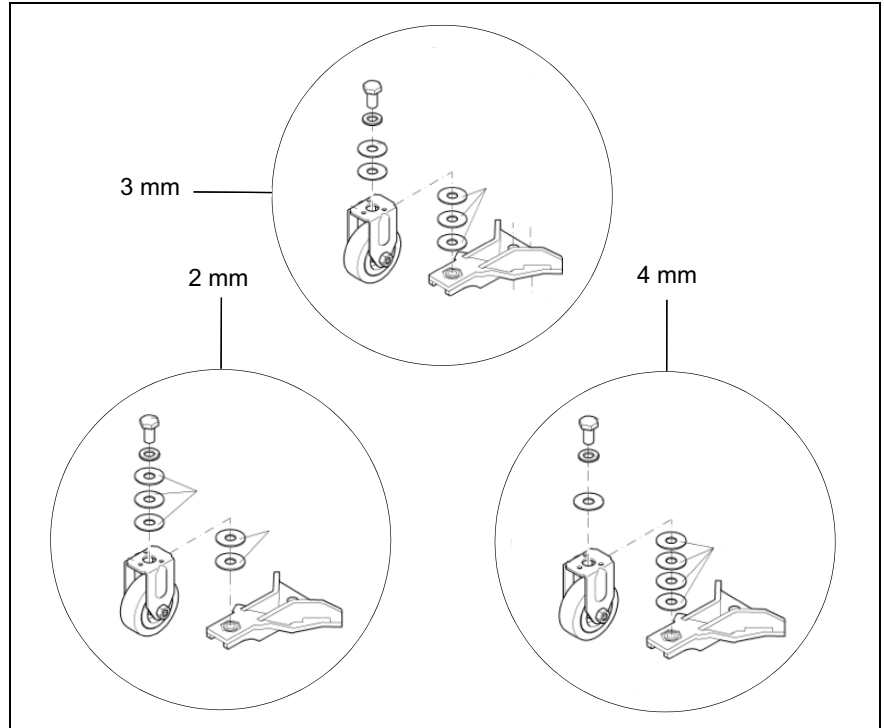


Fig.3

## 5. Taking into operation

## 6. Brushes

Gegree of soiling	Bristles	PN	Quantity
Light to medium, structured-pattern floor	Synthetic fibres PPN 0.5	7514	2
Light to medium, structured-pattern floors	Mixed synthetic fibres K 901	7518	2
Medium to heavy	Synthetic fibres PPN 0.8	7516	2
Very heavy soiling and basic cleaning	SIC PA6 grain 180, grey	7520	2

## 7. Super pads with drive plate

Cleaning method	Colour	PN	Quantity
Minor soiling	red	7526	2
Maintenance cleaning	Brown	7528	2
Basic cleaning and heavy soiling	black	7530	2
Poly-pads (micro fibre pads)		7086	2
Accessories required: Drive plate (pad holder) with Centerlock		7524	2

### Brushes/pads

The ERide 30 should be equipped with brushes/pads from the accessory kit as required by the degree of soiling and the kind of ground.



Only use brush and pad types indicated above. Using other brush/pad types may affect your safety.

## 8. Technical data

<b>Dimensions</b> Length with squeegee Width w/o squeegee Height above tank lid top	in(cm) in(cm) in(cm)	65(166) 32/38(80/96) 57(144)
<b>Working width</b> Brush head Squeegee	in(cm) in(cm)	30(75) 38(96)
<b>Weights</b> Empty weight (without batteries)	lb(kg)	760(345)
<b>Total weight (operable)</b>	lb(kg)	1587(720)
<b>Performance data</b> Driving speed forward/reverse up to max. Gradability, (tank filled) Ramp angle (level/inclined) with squeegee and brush head (max.) Turning diameter (external)	Km/h %  Degree in(mm)	7.0/3.4 10  15°/5° 97(2470)
<b>Wheels</b> Drive wheel Wheels (rear) Wheel diameter Specific wheel pressure front/rear (gross)	Gumasol Softy Gumasol Softy in(mm) N/mm <sup>2</sup>	4.00-4 4.00-4 312(305) 0.59/0.55
<b>Travel drive assembly</b> Oil filling (Aral Degol P 15 150)	l	0,5

## 8. Technical data

<b>Tank capacities</b> Fresh water tank Soiled water tank	I I	112 116
<b>Brush head</b> Quantity of brushes Brush speed Brush pressure - min./max. Specific surface pressure - min./max.	Piece(s) 1/min lb(kg) N/cm <sup>2</sup>	2 200 88/108(40/49) 0,26/0,32
<b>Suction system</b> Air volume Vacuum	m <sup>3</sup> /h mbar	110 170
<b>Electric system</b> Operating voltage Wattage max. (P1) Protection class Brush motor (P1) Fuse for drive assembly Suction turbine (P1) Drive motor (P1) at 52 to 120 min Water pump (P1) Protected against penetration of water Fuses F1 Control voltage F2 Main fuse F3 Horn F4 Optional working floodlight/warning element "Forward ride"	V W DIN EN 60335-2-72 W A W W W DIN EN 60529  A A A A	24 2500 III 880 100 550 816 100 IPX3  10 125 7,5 10

## 8. Technical data

<b>Built-in charger unit</b> Protection class	DIN EN 60335-2-72	I
<b>Noise level</b> Sound pressure as per DIN EN ISO 11201, part 1 under normal conditions of use measured at the operating area	dB (A)	63
<b>Vibrations</b> The frequency weighted acceleration which has an effect upon the upper limbs (hand-arm-system) measured according to EN 1033 under normal condition does not exceed  The frequency weighted acceleration which has an effect upon the body (feet and back) measured according to EN 1033 under normal condition does not exceed	m/s <sup>2</sup>  m/s <sup>2</sup>	2,5  0,5

## 9. Maintenance and service

### 9.1. Maintenance work

Compliance with our recommendations concerning maintenance work will give you the certitude of always having a dependable machine at your disposal, which is in perfect operating condition.

It is better to take precautions than to repair damages - and less expensive.

Please contact your local Minuteman service centre; your Minuteman dealer there will be able to perform the work for you. The personnel is qualified and the genuine Minuteman spare parts are at

your disposal. All inquiries or orders require the serial number of the machine. You will find it at the nameplate of your Minuteman appliance.

The nameplate is located at the right rear chassis above the right-hand rear wheel.



Before cleaning or servicing the machine as well as before replacing parts, switch motors off.

If the machine is battery-driven, disconnect the battery plug and the mains plug of the intended charger unit.

Make sure to take precautions against unintended starting of the appliance.

Make sure to protect the tank lid against accidental closing or tilting down before working in the area of a lifted tank lid.

The machine may be taken into operation after all protective devices have been fitted and positioned. As far as possible, cleaning should not be done by hand but using appropriate tools or equipment.



## 9. Maintenance and service

Maintenance, repair and setting work may be carried out only by means of appropriate tools and by qualified persons.

When using or replacing batteries, battery connecting cables or battery charger units, comply with the manufacturer's instructions.

For safety reasons, use exclusively genuine spare parts.

**Note :** Do not clean the machine by means of vapour jet or high pressure cleaning equipment but by means of a water hose (pressure 5 to 6 bar max.) and from top to bottom. Do not direct the water jet onto openings, slots, and electronic modules, control panels or sealing components.

Do not allow water to get onto the seat console as it may be collected on the battery stored under the seat.

Let the machine dry after cleaning e.g. for the weekend. The use of aggressive detergents is not admitted.

The legal provisions and the local regulations for disposal of detergents have to be observed.

The ERide 30 is equipped with a service display. If a malfunction occurs during operation, e.g. a defective fuse, a 4-digit number appears in the hourmeter display with 4 dots flashing and a buzzer sounding. This 4-digit number advises the technician in detail on the last error found. This allows reduced repair times. The following table lists some of the possible errors displayed. You may eventually remedy yourself.



Refer to the separate instruction manual of the manufacturer for information and specifications on maintenance and service of the optional battery charger unit.

## 9. Maintenance and service

9.2 Maintenance table	service hours				
	daily		every 50	every 200	every 500
Recharge batteries according to charger unit instructions	●				
Empty and clean (rinse) soiled water tank	●				
Check condition of squeegee sealing strips	●				
Check squeegee for foreign matters taken in and clean if required	●				
Check sieve in the tank lid and clean if required	●				
Check condition of left and right separator	●				
Check batteries poles and clean or grease if required			●		
Check battery filling level and top with distilled water if required (PzS version)			●		
Check tight fitting and condition of suction hose between squeegee and soiled water tank			●		
Check squeegee strips for wearing and turn or replace if required			●		
Check brushes and water retaining ring for tight fitting and condition and replace if required			●		
Check function of floater			●		
Check tank lid seal and replace if required			●		

## 9. Maintenance and service

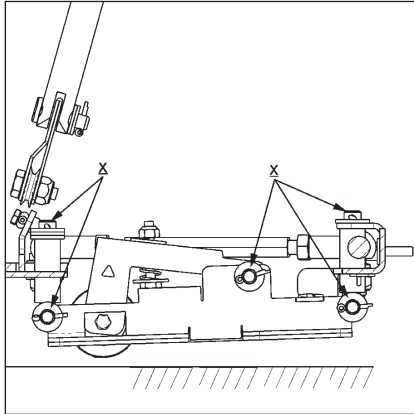
9.2 Maintenance table	service hours				
	daily		every 50	every 200	every 500
Check wheel fastening screws at front wheel and re-tighten if required (34Nm)			●		
Check rotation direction of brushes			●		
Check function of brake and pedal locking device			●		
Check squeegee holder and castor roller and re-adjust if required			●		
Check fresh water supply to the brushes (function of solenoid valves and pump) <b>Note:</b> Empty the fresh water tank before replacing			●		
Check filter sieve of water inlet and clean or replace if required <b>Note:</b> Empty the fresh water tank before replacing			●		
Clean the ventilation grid of the brush motors from flushes and other particles				●	
Clean drive motor from carbon dust and check the accessible carbon brushes for smooth running and condition and replace if required					●
Check fresh water tank for deposits and clean according to par. 5.4.2 if required			●		

## 9. Maintenance and service

9.2 Maintenance table	service hours				
	daily		every 50	every 200	evrey 500
Clean electro-motors from carbon dust and check carbon brushes for smooth running and condition and replace if required					●
Grease steering pinion and gear ring					●
Check joints at squeegee holder and grease if required				●	

## 9. Maintenance and service

### 9.3 Greasing joints at the squeegee holder

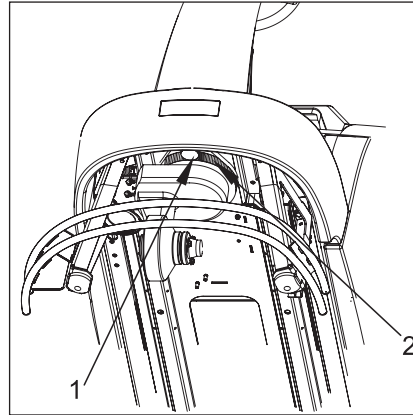


VIII

Lateral view of the squeegee holder

Grease the joints (VIII/X) according to the maintenance table.

### 9.4. Greasing the gear ring of the wheel drive and the steering pinion

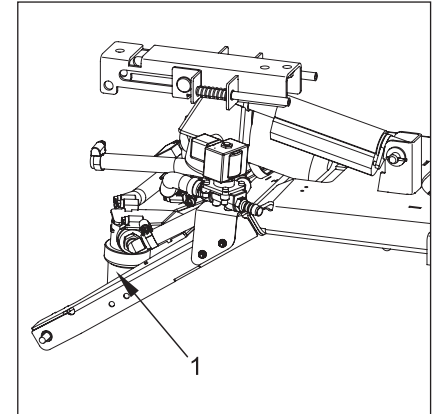


XIV

Front view of the machine

Grease the steering pinion (XIV/1) and the gear ring of the one-wheel drive (XIV/2) according to the indications of the maintenance table.

### 9.5 Cleaning and replacing the water filter for fresh water supply of brushes



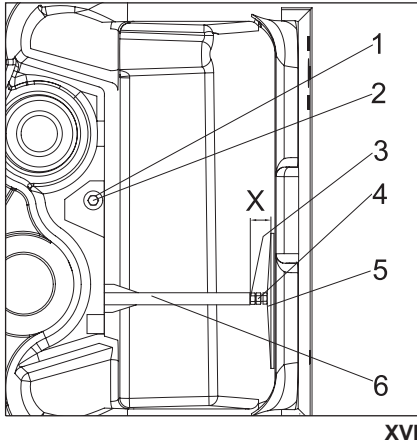
XV

Fresh water filter

Clean or replace the water filter (XV/1) according to the indications of the maintenance table.

## 9. Maintenance and service

### 9.6 Tank stabilizer



Tank stabilizer

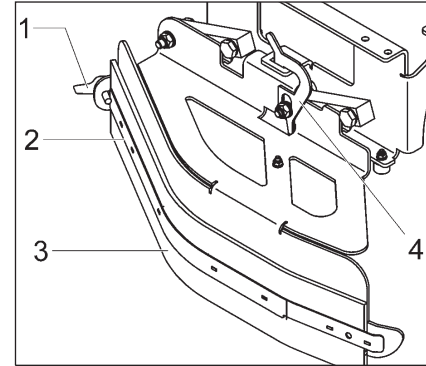
- 1 Washer
- 2 Hex. bolt
- 3 Hex. nut
- 4 Hex. nut
- 5 Pressure plate
- 6 Stay

### How to mount the stabilizer

- Before fitting plate to measure X at the stbilizer, pre-mount to 20 mm
- Mount complete stabilizer (XVI/6) in the tank and fasten hand-tight by means of (XVI/1 and 2)
- Fasten plate (XVI/5) hand-tight at tank wall and determine X
- Adjust tension of plate (XVI/5) to  $X + 4\text{mm}$
- Tighten (XVI/2)
- Fasten (counter-lock) plate (XVI/5) by means of (XVI/4)

### 9.7 Replace wiper

- Loosen wing nut (XVII/1)
- Push clamping strip (XVII/2) untill the hooks are free and the clamping strip can be removed.
- Change wiper (XVII/3).
- Proceed to mounting in inverse order.



Wiper right

XVII

- 1 Wing nut
- 2 Clamping strip
- 3 Wiper rubber

**Note: Hinge the locking (XVII/4) when changing the wiper.**

## Minuteman International Made Simple Commercial Limited Warranty

Minuteman International, Inc. warrants to the original purchaser/user that the product is free from defects in workmanship and materials under normal use. Minuteman will, at its option, repair or replace without charge, parts that fail under normal use and service when operated and maintained in accordance with the applicable operation and instruction manuals. All warranty claims must be submitted through and approved by factory authorized repair stations.

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 are covered by and subject to the warranties and/or guarantees of their manufacturers. Please contact Minuteman for procedures in warranty claims against these manufacturers.

**Special warning to purchaser** -- Use of replacement filters and/or prefilters not manufactured by Minuteman or its designated licensees, will void all warranties expressed or implied. A potential health hazard exists without original equipment replacement.

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

Minuteman disclaims any implied warranty, including the warranty of merchantability and the warranty of fitness for a particular purpose. Minuteman 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 is not responsible for costs or repairs performed by persons other than those specifically authorized by Minuteman. 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.

## Minuteman International Made Simple Commercial Limited Warranty

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.

### **Cord Electric Group Exceptions**

Three years parts, two years labor, ninety days travel (Not to exceed two hours)  
Port-A-Scrub, one year parts, six months labor  
MPV 13, one year parts  
MPV 14 and 18, two years parts, one year labor  
RapidAir blower, one year parts, one year labor  
Explosion-Proof Vacuum, one year parts, one year labor  
Pneumatic Vacuums, three years parts, one year labor  
EX 12 and EX12H, one year parts, one year labor

### **Battery Operated Group**

#### **Exceptions**

Three years parts, two years labor, ninety days travel  
(Not to exceed two hours)  
Sweepers, one year parts, one year labor, ninety days travel  
(Not to exceed two hours)

### **Internal Combustion Group**

One year parts, one year labor, ninety day travel  
(Not to exceed two hours)

### **Replacement Parts Batteries**

Ninety days  
0-3 months replacement, 4-12 months pro-rate

### **Polypropylene Plastic Tanks**

Ten years, no additional labor





**Minuteman**<sup>®</sup>  
*Excellence Meets Clean*



88-10-2841

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