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## Preface

### Dear Customer,

It is our desire that the excellent properties of the Kleen Sweep 27 should justify the confidence you demonstrated in making this purchase. Before first operation of your Kleen Sweep 27 read these instructions carefully. They will inform you in detail about the operation of the item and contains valuable information on operation, service and maintenance.

Kleen Sweep 27 machine is an ideal machine to clean outdoors in large and medium areas like Offices, Hospital, Restaurant, Shopping Complexes and many commercial applications.

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 instructions on to other persons operating this machine.

The symbol,



has been used in the manual in several places and identifies particular areas that the operator should be cautious.

The symbol,



has been used in the manual in several places and identifies particular areas that the operator should note at the time of operation.



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 are used since genuine spare parts only may guarantee continuous and dependable operation of your machine.

Valid as for May 2011

Minuteman International 14N845 U.S Route 20 Pinegree Grove, Illinois 60140 USA

Phone 1-800-323-9420

E-Mail: [www.minutemanintl.com](http://www.minutemanintl.com)

## Introduction

### Proper Use

The Kleen Sweep 27 machine has been exclusively designed for floor cleaning, such as dry sweeping. Whatever sort of use beyond the specified range will be deemed improper use the manufacturer can not 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 Kleen Sweep 27 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 applicable general regulations about safety and health at work will have to be complied with.

Modifications made to the Kleen Sweep 27 in absence of the manufacturer's consent will relieve the manufacturer from a possible liability for consequential damage.



**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 International 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, damages caused by inexperienced handling and unauthorized modification of the machine.

Moreover, any claim for warranty expires if damages at the machine are caused by fitting of parts or accessories without Minuteman International 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 railway authorities or the freight forwarder confirm such damage and mail your damage report and waybill to:

Our Address :

Minuteman International 14N845 U.S Route 20 Pinegroe Grove, Illinois 60140 USA

Phone 1-800-323-9420

E-Mail: [www.minutemanintl.com](http://www.minutemanintl.com)

## **General Safety Instructions**



### **General Safety Instructions**

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 is responsible for all persons in the working area. Children have to keep clear of the Kleen Sweep 27 in operation. Nobody is allowed to stay in the zone of danger.

Machines with known defects must not be used. It is important to familiarize yourself with all accessories and controls, as well as their functions, before you start working. Avoid the mess of having to read this book while trying to run the machine.



### **Machine Safety**

Floor cleaning machines may be run by qualified personnel only;

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

Do not use the machine in wet and slushy areas.

Park the machine in a dry place.

Do not use the machine in areas where there is no properly paved roads.

Using the machine on public roads and places is not admitted.

Qualified personnel only are admitted to perform maintenance and repair work.



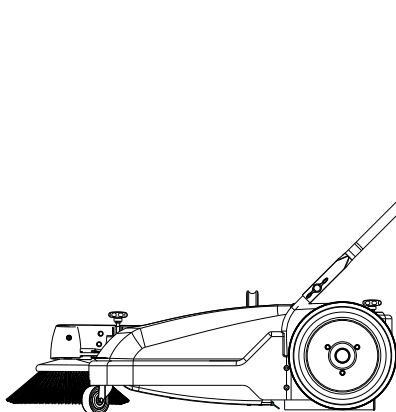
**Do not clean the machine by means of vapour jet or high pressure cleaning equipment.**  
**Use of the machine in areas endangered by explosion hazard is not admitted.**

## 1.0 How to put the machine into operation

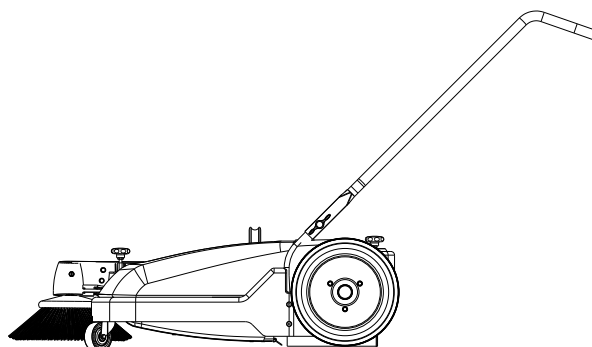
### 1.1 Assembly

For ease of packing, the handle and side brush assembly are packed separately. These parts must be installed before the machine is put into operation.

The handle is mounted by means of knobs (3 - fig on next page)  
Handle can be fixed in two different positions as shown below.



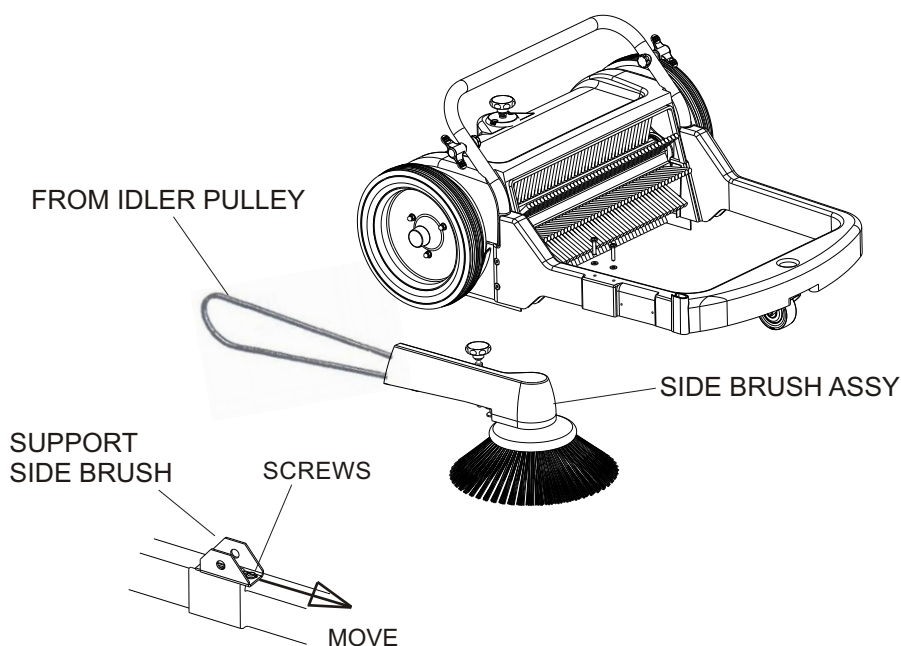
Handle position 1



Handle position 2

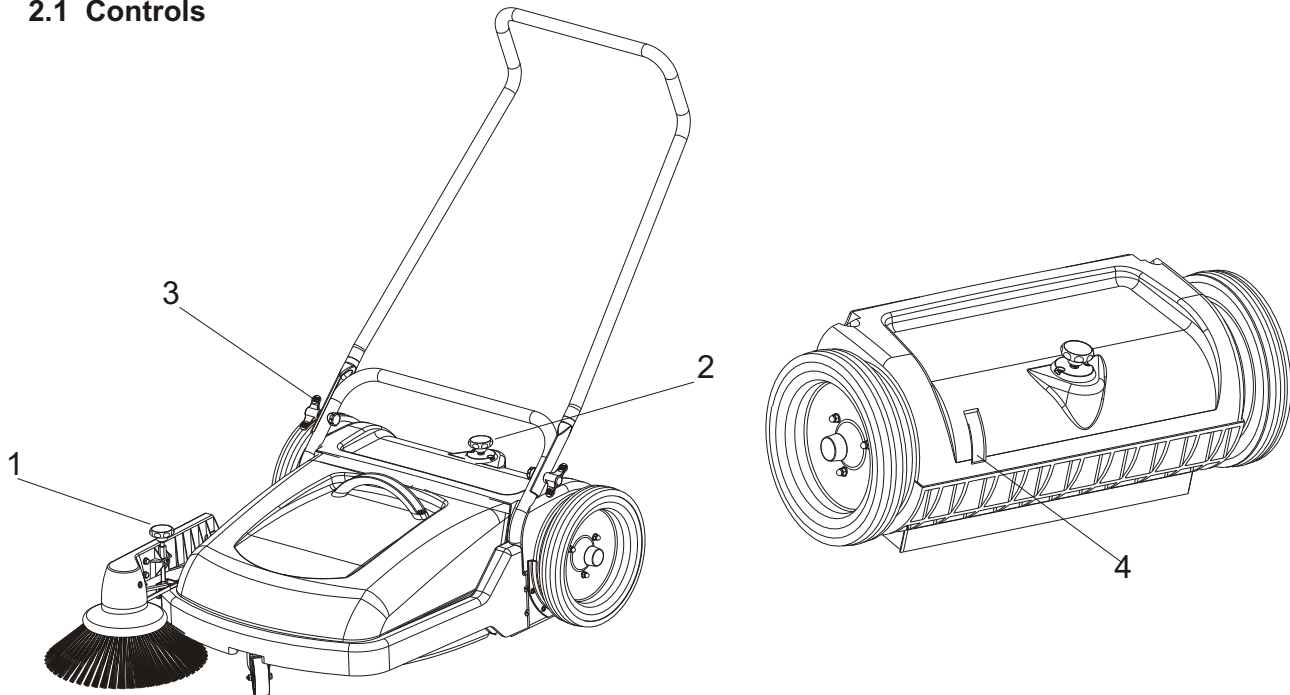
### 1.2 Side Brush Assembly

1. Mount the side broom to the brush plate on the side arm assembly using hex head bolt and nylock nut.
2. Position the V-Belt from the side arm assembly around the pulley attached to the backside of the right wheel. In order to do this it will be necessary to twist the V-Belt. The lower loop of the v-belt should be coming from the idler pulley (not from the broom pulley).
3. Attach the side arm assembly with the support side brush on the frame by loosening the screws fixed onto the frame. Place the V-Belt on to the drive pulley on the wheel, adjust the arm assembly forwards or backwards for the desired tension. Fasten the arm assembly by tightening the screws. Check the brush for free rotation.
4. Check for proper rotation and operation of the side broom. The broom should rotate counter clockwise when the sweeper is pushed forward-if not the v-belt was installed incorrectly. If the belt slips the tension can be adjusted by loosening the 2 screws that attach the support side brush to the frame, move the bracket forward, then re-tighten the screws.



## 2.0 Operation

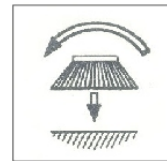
### 2.1 Controls



#### 1. Pressure adjustment knob for Side Brush

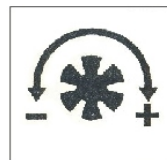
Used for setting of the side brush. The side brush may touch the floor only by its one third section, so as to throw the swept matter into the machine.

The castor wheel is to keep the pre-set working height of the side brush.



#### 2. Pressure adjustment knob for Main Brush

Used for setting of the main brush pressure. The pressure must be set so as to assure perfect cleaning operation.



#### 3. Knobs

Used to secure the handle to the machine or to reposition it.



**Excess pressure will cause unnecessary wear of the brush and increased load for the operator.**

#### 4. Main Brush Pressure Reading Scale

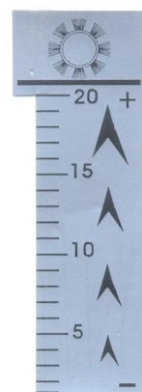
Indicates the pressure at which the main brush has been set.

Setting must be performed as described below :

Set the main brush by turning the knob clock-wise to increase the pressure, at this position the scale should read '5' .

Starting with this setting, the main brush pressure can be increased to meet the requirement. (As the brush wears out)

Turn the knob in counter-clockwise direction to reduce the main brush pressure according to the requirement.



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## 2.2 Operation of the Kleen Sweep 27

The Kleen Sweep 27 operates with two brushes. The side brush takes dirt from the side into the reach of the main brush. The main brush maintains its direction of rotation to throw the dirt into the hopper in forward direction of the machine.

## 2.3 Overcoming Obstacles

In case of normal obstacles coming in the way of sweeping the Kleen Sweep 27 should be pressed down at the handle. This will cause the two brushes to lift off from the floor and the machine can easily surmount these obstacles.

## 2.4 Emptying of Hopper

The hopper can be easily lifted by using the handle provided. The hopper is secured to the machine by means of the frame. The hopper must be in direct contact with the brush compartment in order to prevent leakage of dirt.

## 2.5 Renewal of Brush Assemblies

The main brush consists of a brush shaft with two brush core assemblies fastened with six self tapping screws.

The brush cores can be replaced as below:

- Unscrew the self tapping screws
- Pull the brush core assembly to the front (broom viewed from user side) to remove it from the brush shaft.



**When reassembly of the brush ensure the split pins are fixed in the holes to guide the brush.**

## 2.6 Rubber Sealing Aprons

The rubber aprons avoid leaking of the dust produced by the brush. Damaged or used aprons cannot fulfill this task any longer and must be replaced.

## 2.7 Greasing of the Main Wheels

For cleaning and greasing of the wheel axle and the gear ring, the main wheels must be removed as described below.

1. Remove hood, remove the bolt and domed cap nut from the wheel and pull the main wheel.
2. Unscrew the gear cover and apply grease in the gear area.
3. Reposition the main wheel.

## 2.8 Replacement and Tensioning of the V-belt

1. Lift up the side brush arm
2. Loosen the clamp screw and pull out the side brush from the brush arm.
3. Place the V-belt through the brush arm and put it on the V-belt pulley on the brush shaft
4. Push the side brush back into the brush arm and re-tighten the clamp screw.
5. Place V-belt into the groove of the right-hand main wheel.

When the brush arm is put down, the V-belt must be tensioned so as to allow a perfect drive transmission, if necessary re-tighten by shifting of the side brush arm bearing.

## 2.9 Replacement of the Side Brush

The side brush can be replaced after removing hex-bolts from the side brush.

### 2.9.a Regaining of Bristles

If the bristles have been bent inwards in transit the side brush must be placed on a flat base, the bristles pointing outward and a weight must be placed on the plate. The bristles will regain their correct position gradually.

If the bristles have been bent outwards, bring them together apply a rubber band around the bristles and allow it to stay for sometime. The bristles will regain their correct position gradually.



**Refer figure on page 3 for point 2.8 and 2.9.**

### 3.0 Technical Specification

DESCRIPTION	UNIT	VALUE
WIDTH	mm	725
WIDTH WITH SIDE BRUSH	mm	785
HEIGHT WITH HANDLE	mm	1020
HEIGHT WITHOUT HANDLE	mm	400
LENGTH WITH SIDE BRUSH	mm	1000
LENGTH WITHOUT SIDE BRUSH	mm	800
WEIGHT WITH SIDE BRUSH GROUP	kg	26
DIAMETER OF DRIVE WHEEL	mm	280
SWEEPING WIDTH WITHOUT SIDE BRUSH	mm	460
SWEEPING WIDTH WITH SIDE BRUSH	mm	650
DIAMETER OF MAIN BRUSH	mm	230
MAIN BRUSH BRISTLE DIA	mm	0.30
BRUSH SPEED (THEORETICAL)	rpm	273 at 4 kmph
SIDE BRUSH BRISTLE DIA	mm	0.4
V-BELT (SIDE BRUSH)	mm	8 x 1680
DIRT BOX CAPACITY	Lit	40
DIRECTION OF ROTATION FOR SWEEPING		Forward
AREA COVERAGE		Upto 2600 sq.mtr/hr at 4 kmph

### 4.0 Maintenance Schedule



#### 4.1 Maintenance Works

Compliance with our operating and maintenance instructions will ensure trouble free and smooth operation of the machine we have supplied.

If you are not capable of performing the works according to the maintenance schedule by yourself, please contact your Minuteman dealer. Our agents, who have trained staff and stock original Minuteman Spares will be glad to perform those works for you.

In case of all enquires and when ordering spare parts, please quote the machine No indicated on the name plate and on the guarantee card. The nameplate is installed on the left side of the frame.



#### 4.2 Maintenance Intervals

- |         |  |
|---------|--|
| Daily   | <ul style="list-style-type: none"><li>- empty dirt box</li><li>- clean the unit</li><li>- check brushes and sealing aprons</li></ul> |
| Weekly  | <ul style="list-style-type: none"><li>- remove the ropes, tapes etc entangled in the main brush shaft</li></ul>                      |
| Monthly | <ul style="list-style-type: none"><li>- grease the track wheels</li><li>- check V-belt tension, if necessary, re-tighten</li></ul>   |



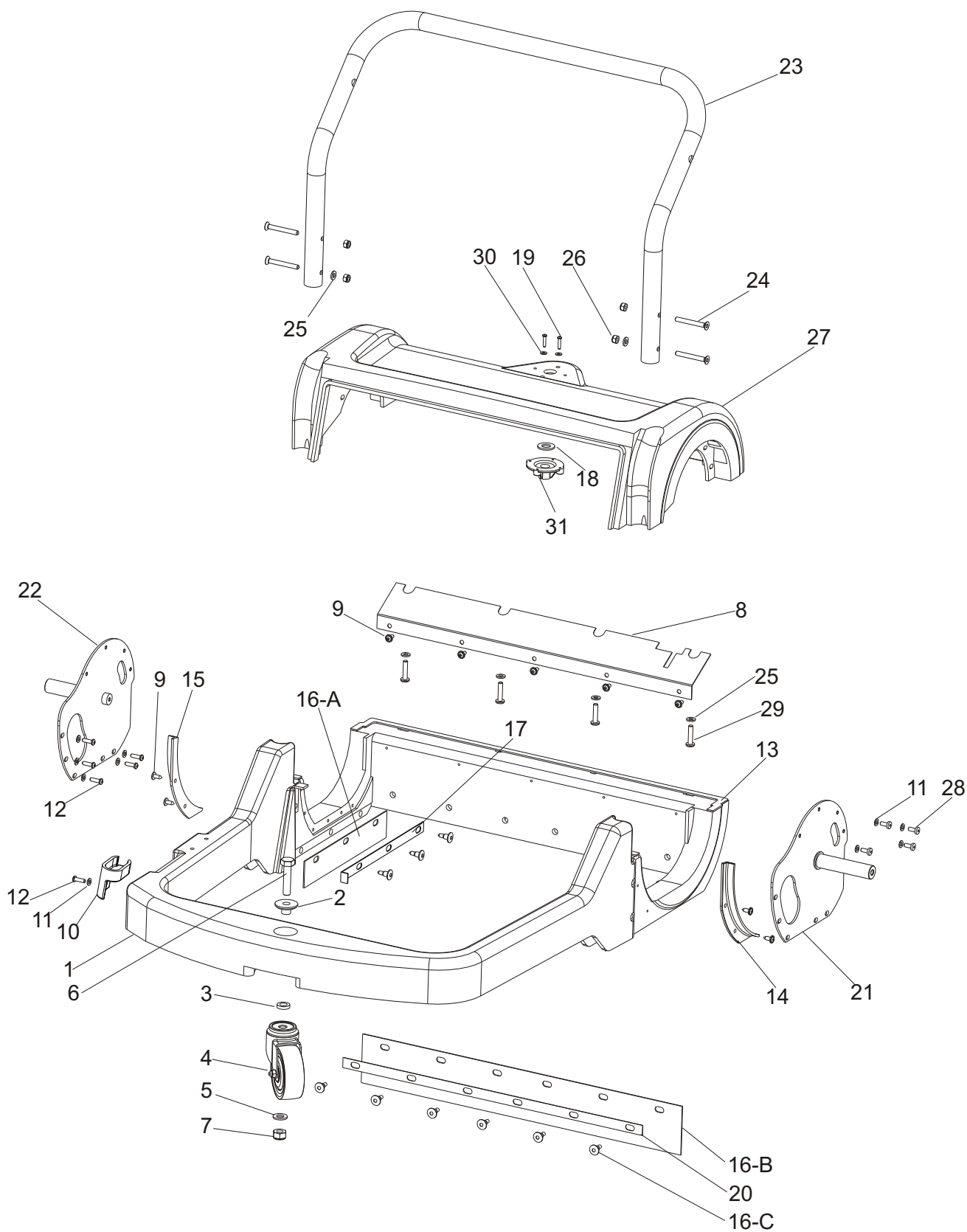
## 5.0 Trouble Shooting



TROUBLE	REMEDIAL ACTION
1. Machine hard to push/pull	Decrease main brush pressure setting Grease main Wheels
2. Sweeping unsatisfactory	Increase Main/Side Brush Pressure Clean Main/Side Brush Check Main Brush for loose bristles
3. Traces of dirt left behind the machine	Check side/rear rubber sealings
4. Side Brush not rotating	Check V- Belt for transmission.



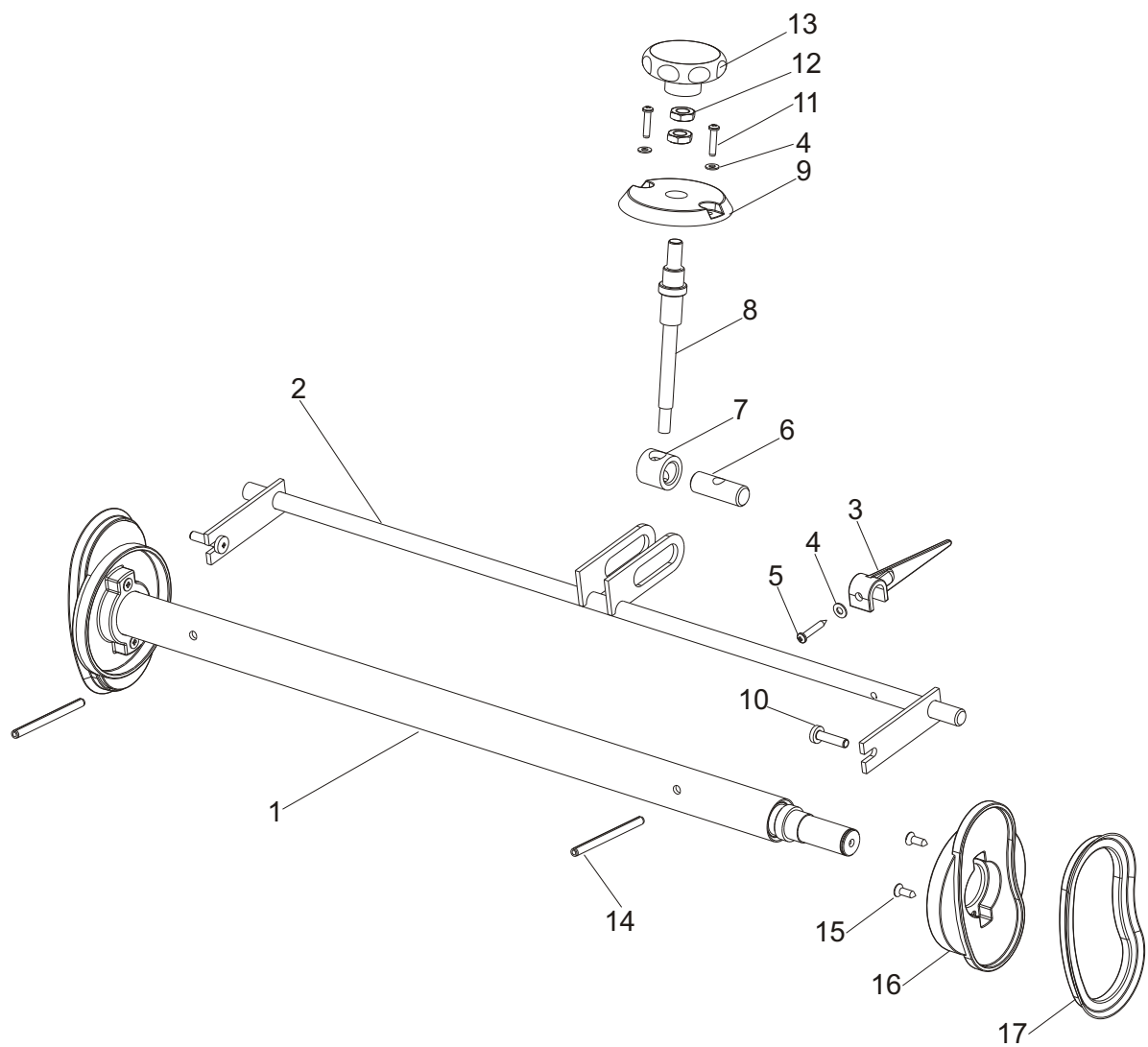
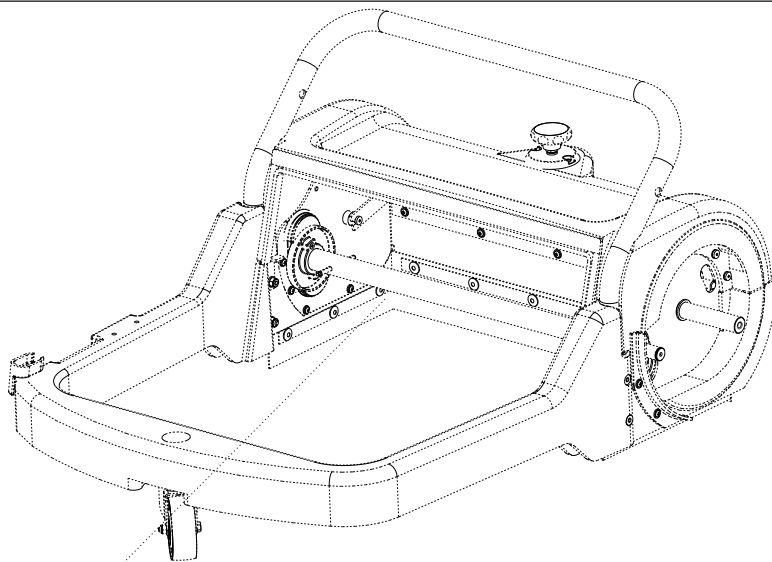
# Spare Parts Manual



16 - 552180041-RUBBER STRIP KIT - FLIPPER +			
REF NO	PART NO	DESCRIPTION	QTY
A	552130015	SIDE RUBBER STRIP	2
B	552130025	REAR RUBBER STRIP	1
C	881097	ROCKET CLIP	12

The above items will be supplied only as a kit.

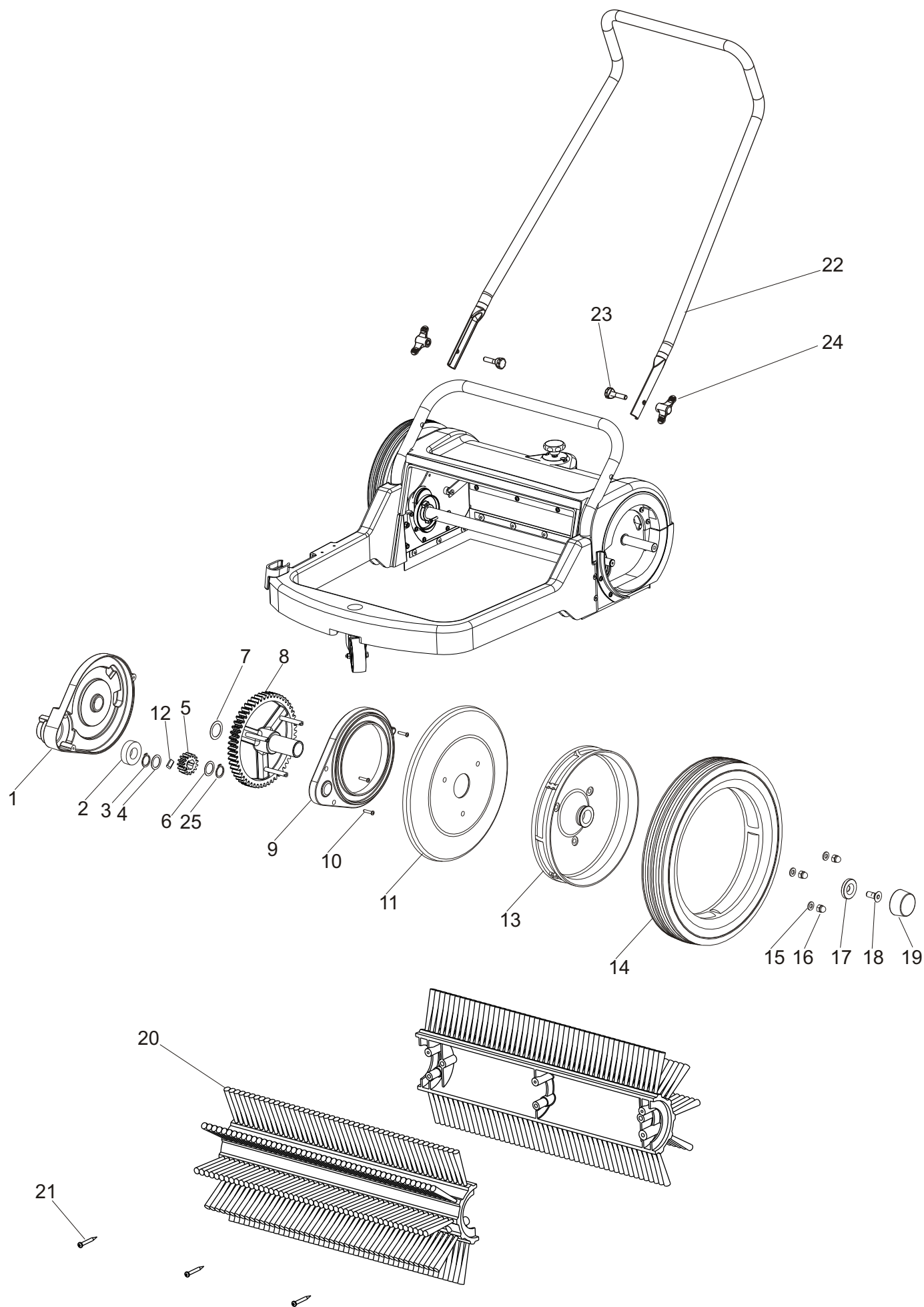
Sl.No	Part No	Description	Qty
1	552130007	FRAME	1
2	552130027	STEPPED WASHER	1
3	921007	WASHER STEEL 10.5X18.0X4.0	1
4	922824	CASTOR WHEEL ASSY (LOCAL)	1
5	844101	WASHER STEEL 10.5X20.0X2.0	1
6	802510	HEX HEAD SCREW - STEEL 8.8 - M10X45	1
7	859106	HEX NYLOCK NUT M10	1
8	552130051	SPLASH SHIELD	1
9	921131	SELF TAPPING SCREW W/COLLAR 4.8X13	9
10	552130028	HOLDER SIDE BRUSH ARM	1
11	844051	WASHER STEEL 5.3X10.0X1.0	19
12	837210	CRPH SELF TAPPING SCREW-4.8X13	11
13	923255	GASKET FRAME	1
14	552130090	CURVE PLATE LH	1
15	552130091	CURVE PLATE RH	1
16	552180041	RUBBER STRIP KIT FLIPPER +	1
17	552130075	SIDE STRIP HOLDER	2
18	845204	WASHER SS 304 12.5X24X2	1
19	926057	CRPH SELF TAPPING SCREW 3.5X16	2
20	552130074	REAR STRIP HOLDER	1
21	552180034	SIDE PLATE GROUP LH	1
22	552180035	SIDE PLATE GROUP RH	1
23	552130055	HANDLE	1
24	828512	HEX SOC CSK HEAD SCREW- STEEL M6X45	4
25	844061	WASHER STEEL 6.4X12.5X1.6	8
26	859068	HEX NYLOCK NUT-STEEL GR.8 -M6	4
27	552130008	COVER	1
28	817204	CR PAN HEAD SCREW - STEEL M5X12	8
29	835709	CRPH SELF TAPPING SCREW-6.3X30	4
30	844041	WASHER STEEL 4.3X9.0X0.8	2
31	552130084	BOTTOM COVER THREAD ROD	1



## BRUSH SHAFT GROUP

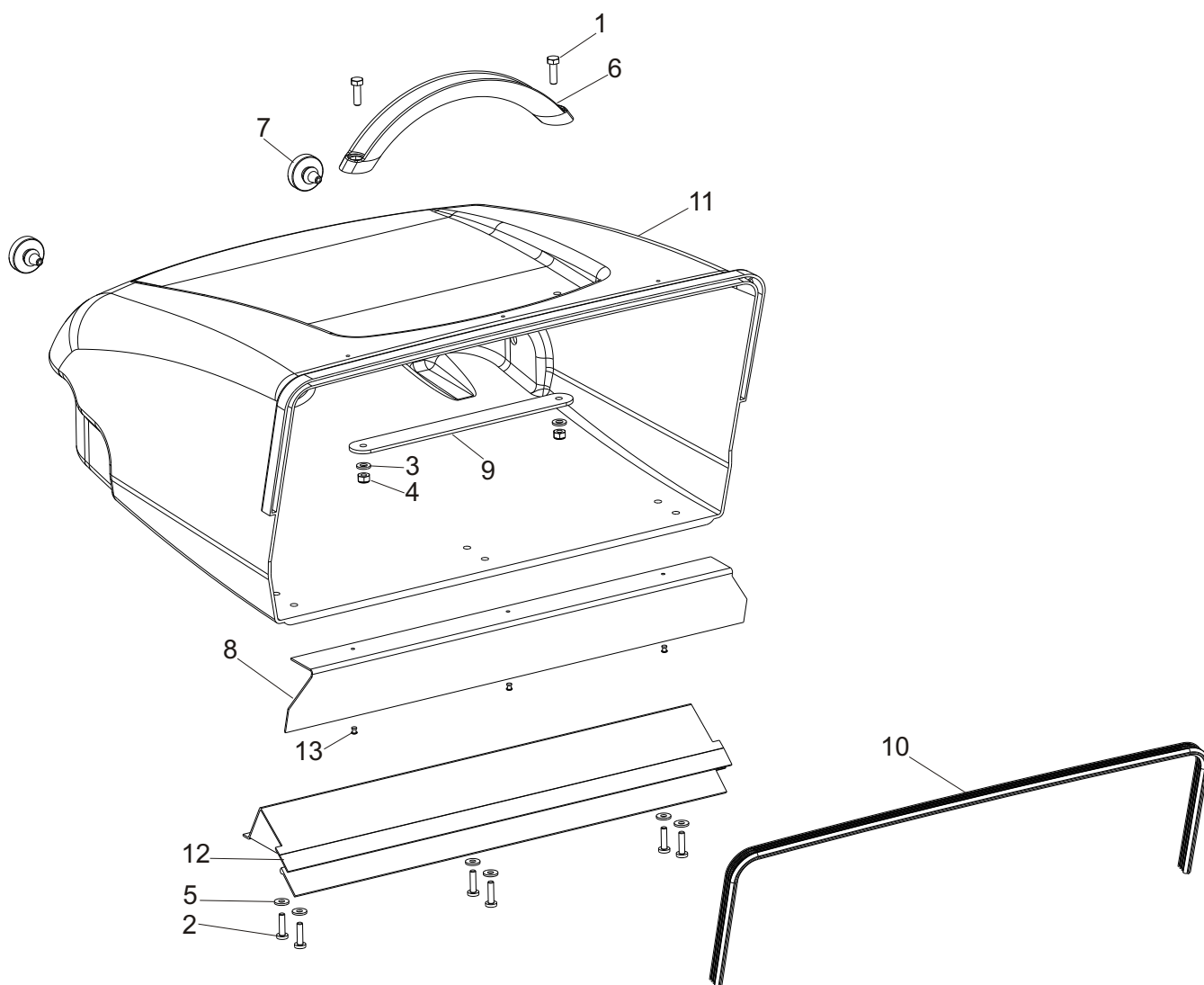
13

Sl.No	Part No	Description	Qty
1	552180031	BRUSH SHAFT GROUP	1
2	552180033	PRESSURE ADJUSTMENT GROUP	1
3	552130089	INDICATOR	1
4	844041	WASHER STEEL 4.3X9.0X0.8	3
5	836210	CRPH SELF TAP SCREW 3.5X25	1
6	552130039	TRUNNION SHAFT	1
7	552130092	SPACER THREAD ROD	1
8	552180036	THREAD ROD GROUP	1
9	552130085	TOP COVER THREAD ROD	1
10	817207	CR PAN HEAD SCREW STEEL -M5X20	2
11	926057	CRPH SELF TAPPING SCREW- 3.5X16	2
12	833084	HEX LOCK NUT STEEL M8	2
13	921776	KNOB ASSY	1
14	552130056	SPLIT PIN 63	2
15	841110	CRCSK SELF TAPPING SCREW- STEEL- 3.5x12.7	4
16	552130079	BOOT	2
17	552130080	SEAL	2

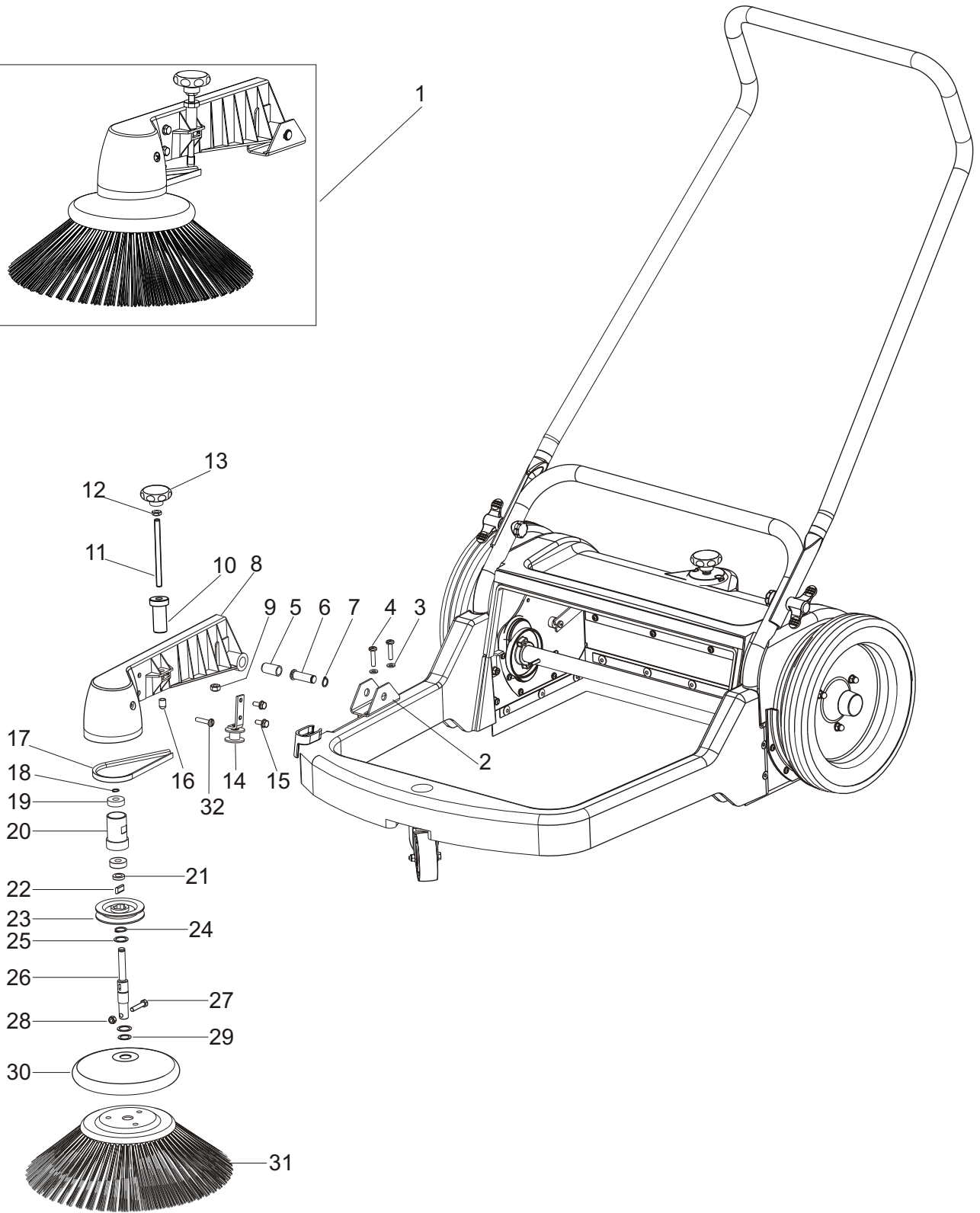
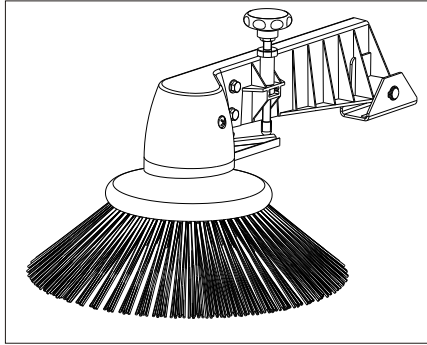




Sl.No	Part No	Description	Qty
1	552130082	GEAR COVER BOTTOM	2
2	875010	DG BALL BEARING 6003 2 RS	2
3	923422	CIRCLIP EXTERNAL A17	2
4	921065	WASHER STEEL 16X22X1.5	2
5	552130044	PINION	2
6	921066	WASHER STEEL 16X22X0.5	2
7	552130078	WASHER STEEL 20X28X0.5	2
8	552180040	GEAR ASSY	2
9	552130083	GEAR COVER	2
10	926057	CRPH SELF TAPPING SCREW-3.5x16	6
11	552130081	PROTECTION DISK	2
12	921006	KEY	2
13	552130009	WHEEL RIM MM	2
14	921077	TYRE MAIN WHEEL	2
15	844061	WASHER-STEEL-6.4X12.5X1.6	6
16	838060	DOMED CAP NUT-SS 304-M6	6
17	553530019	WASHER WHEEL	2
18	829407	HEX SOC CSK HD SCREW - SS304 M8X20	2
19	552130067	WHEEL CAP	2
20	552180026	BRUSH FLIPPER	1 Set
21	835708	CRPH SELF TAPPING SCREW-STEEL-4.8x40	6
22	552130057	UPPER HANDLE	1
23	552130062	KNOB ASSY MALE	2
24	927872	KNOB-HANDLE	2
25	923429	CIRCLIP EXTERNAL A16	2



Sl.No	Part No	Description	Qty
1	802307	HEX HEAD SCREW - M6X20	2
2	817207	CR PAN HEAD SCREW_M5X20	6
3	844061	WASHER STEEL 6.4X12.5X1.6	2
4	859068	HEX NYLOCK NUT M6	2
5	999161	WASHER STEEL 5.3X13X1	6
6	552130060	HANDLE FLIPPER	1
7	552130111	BOOT FRONT	2
8	552130098	STIFFNER HOPPER	1
9	552130099	STIFFNER HANDLE	1
10	552130100	GASKET HOPPER	1
11	553210222-00	HOPPER COLLECTION	1
12	552180049	HOPPER FLAP ASSY-IH	1
13	855004	MULTI GRIP BLIND RIVET 3.2X13	3



Sl.No	Part No	Description	Qty
1	552180025	SIDE BRUSH GROUP MM	1
2	921017	SUPPORT SIDE BRUSH ARM	1
3	844061	WASHER-STEEL-6.4X12.5X1.6	2
4	835709	CRPH SELF TAPPING SCREW-STEEL-6.3X30	2
5	921107	TAPER BUSH SIDE BRUSH ARM	1
6	921013	CLEVIS PIN SIDE BRUSH ARM	1
7	923418	CIRCLIP EXTERNAL A12	1
8	552130014	MOLDED SIDE ARM	1
9	833084	HEX LOCK NUT STEEL M8	1
10	921018	NUT SIDE BRUSH KNOB	1
11	921011	THREADED ROD SIDE BRUSH	1
12	833084	HEX LOCK NUT STEEL M8	1
13	921776	KNOB ASSY	1
14	921788	IDLER BRACKET ASSY	1
15	921133	HEX HEAD SCREW M6x16/13 mm COLLAR	2
16	921012	PROTECTION CAP THREAD ROD	1
17	921103	V-BELT	1
18	923427	EXTERNAL CIRCLIP A10	1
19	875001	BEARING 6000 ZZ	2
20	921015	BEARING HOUSING SIDE BRUSH ARM	1
21	921007	WASHER 10.5x18.0x4.0	1
22	921006	KEY	1
23	921014	V-BELT PULLEY	1
24	923429	EXTERNAL CIRCLIP A16	1
25	921066	WASHER 16.2x22x0.5	2
26	921141	AXLE SIDE BRUSH	1
27	802309	HEX HEAD SCREW - STEEL 8.8 - M6X30	1
28	859066	HEX NYLOCK NUT-STEEL GR.6-M6-LOW	3
29	923250	WASHER 14.2x20x0.5	1
30	923169	DEFLECTOR ROLLER	1
31	923783	SIDE BRUSH	1
32	552130102	CRPH STS 6.3X30 MACHINED	1

## 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 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.

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..... Three years parts, two years labor, ninety days travel (Not to exceed two hours)**

#### **Exceptions..... Port-A-Scrub, one year parts, six months labor**

MPV 13, one year parts  
V-14, One year parts, one year labor  
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  
TRS 14, one year parts, one year labor

### **Battery Operated Group..... Three years parts, two years labor, ninety days travel**

(Not to exceed two hours)

#### **Exceptions..... 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)

### **Battery Chargers .....One year replacement**

### **Replacement Parts.....Ninety days**

### **Batteries.....0-3 months replacement, 4-12 months pro-rate**

### **Polypropylene Plastic Tanks... Ten years, no additional labor**

14N845 U.S. Route 20 Pingree grove, IL 60140

Phone: 800-237-3192

E-Mail: [www.minutemanintl.com](http://www.minutemanintl.com)

**A Member of the Hako Group**

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