



Parts Catalog

Kleen Sweep 27

Walk-Behind Sweeper

PREFACE

Thank you for your purchase of the new industry standard for floor sweepers. Minuteman International® takes great pride in offering the most dependable, reliable and best value in industrial sweepers. We set the standard.

Our Customer Service Department would like to hear from you. If you see any errors, omissions or something that needs clarification in this Parts Catalog please let us know. We are working hard towards continually improving our processes to bring you the best you deserve. Please copy the form below, fill out and comment on how you found our catalog.

Thank you!
The Minuteman International Team

Name: _____

Title: _____

Company Name: _____

Address: _____

Country: _____

Type of equipment or model number: _____

Comments: _____

Please return to:
Customer Service Manager
Minuteman International, Inc.
14N845 U.S. Route 20
Pingree Grove, Illinois 60140 USA

Phone: (800) 323-9420
Email: tech@minutemanintl.com

TECHNICAL SPECIFICATIONS

Model: Kleen Sweep 27 Walk-Behind Sweeper
Model No.: HM27R

Sweeping Width (with side broom)	26 inches
Sweeping Width (without side broom)	18 inches
Theoretical area coverage	27,986 ft² / hr
Dirt Hopper Capacity	10.5 gallons
Length (without / with side broom)	31.5 / 40 inches
Width (without / with side broom)	28.5 / 31 inches
Height (without / with handle)	16 / 40 inches
Weight	51 pounds

This is the Parts Catalog for the Minuteman International® HM27R Walk-Behind Sweeper machines.

This catalog covers all Standard HM27R machine variations.

We believe this machine will provide excellent service for many years. Best results will be obtained if:

- The machine is operated with reasonable care.
- The machine is maintained regularly per the maintenance schedule provided.
- The machine is maintained with Minuteman International® supplied or equivalent parts.

All information contained in this catalog is current at the time of printing.

Minuteman International, Inc. reserves the right to make changes at any time without notice.

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PROPER USE

Proper Use

This machine has been exclusively designed for floor cleaning, such as dry sweeping. Use of the product beyond the specified range is deemed improper and the manufacturer cannot be held liable for consequential damages.

The terms of proper use also includes compliance with the manufacturer's instructions on the operation, maintenance and repair of the product.

This machine may be used, serviced and repaired only by persons who 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 must be complied with.

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



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





Acceptance of the machine

As soon as the machine arrives, Please check for any transport damage. In the event of any damage, it is the purchaser's responsibility to send a claim letter to the particular Minuteman Branch / Dealer with a copy of invoice. The letter should be sent within 24 hours after the goods were delivered.

GENERAL SAFETY INSTRUCTIONS

Safety & Warning Symbols

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

Symbol (Hazardous for)	Description
Safety Provisions (persons and goods) 	Safety provisions in dangerous situation caused by misuse inaccurate adherence of instruction or prescribed work routine.
Caution (the machine) 	Important information on handling the machine in order to maintain operability.
Ecological hazard (the environment) 	Due to use of substances representing an inherent danger to health of environment.
Read Manual 	Prior to first operation, read the manual carefully and strictly comply with the instructions contained.


Safety Instructions


- Apart from information contained in this manual, 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 have already operated similar ground cleaning equipment before.
- Allow yourself the time to do so in order to save time at a later time.
- The operator is responsible for all persons in the working area.
- Children must be kept away from the machine during operation.
- No person must be allowed to stay in the zone of danger.
- The warning and instruction plates attached to machine give important advice on safe operation.
- Replace lost or illegible stickers.
- Before starting to work, the operator has to check that the machine and its working implements are in proper and safe operating condition.
- Machines with known defects must not be used.
- It is important for operators and all persons likely to use the product, to familiarize themselves with all accessories and controls, as well as their functions, before starting operations.


- Abiding by the above general instructions can help
- you avoid having to read this book while trying to run
- the machine.


Safety during machine operation

- Ground 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.
- The operator must use the machine in accordance to its intended fields of application.
- During operation, the operator must take account of local conditions (stairs, obstacles) and of other persons, particularly children.

 Use only genuine spare brooms as specified by the manufacturer. Use of other than the indicated broom types may affect safety.

 Never collect explosive fluids, undiluted acids and solvents. This includes e.g. gasoline paint thinners or fuel oil, which-when combined with air, may form explosive vapors or mixtures. Acetone, undiluted acids and solvents can be aggressive to the material used for the machine components.


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

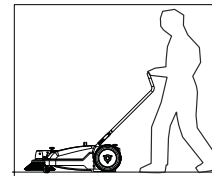
 - Do not clean the machine by means of vapour jet or high pressure cleaning equipment.
- Do not USE the machine on steps.

- Use of the machine in areas prone to explosion hazards is strictly forbidden.

Transport

- Incorrect lifting techniques may create a personal injury. When transporting the machine ensure that all components and removable parts are securely fastened.
- Do not lift or transport the machine whilst containing dirt as this will add considerable weight.
- Take extreme care when moving the machine up or down steps or stairs.

 Bumping over thresholds, kerbs and similar obstacles can damage the machine. Small obstacles can be overcome by pulling the machine backwards.



FIRST OPERATION

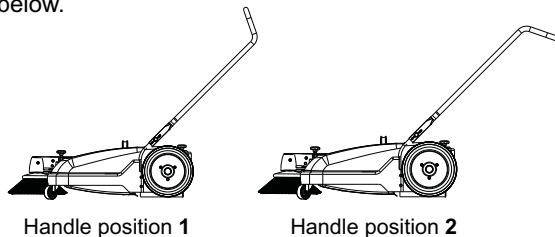
This machine is exclusively designed for Dry Sweeping on Solid, Level and Dry surfaces.



Assembly

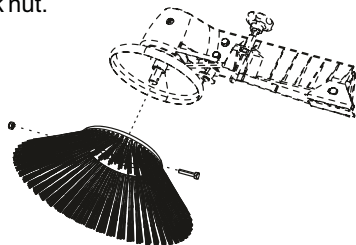
For ease of packing, the handle and side broom assembly are packed separately. These parts must be installed before the machine is put into operation. The handle is mounted by means of knobs.

Handle can be fixed in two different positions as shown below.

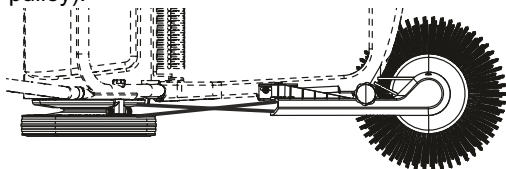


Side Broom Assembly

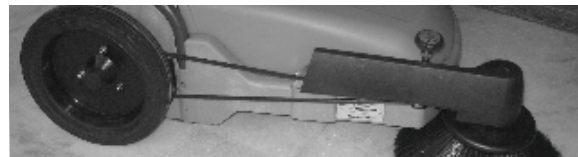
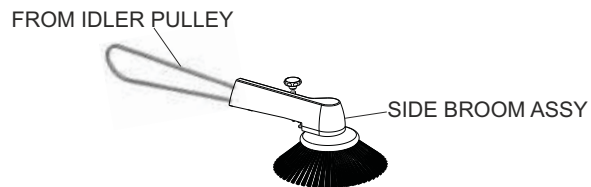
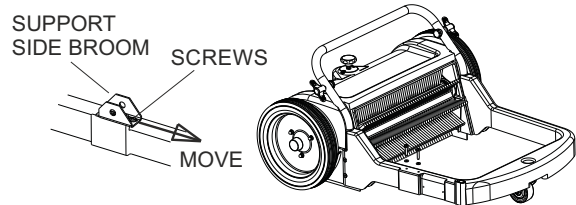
- Mount the side broom to the broom plate on the side arm assembly using Hex Head Bolt and Nylock nut.



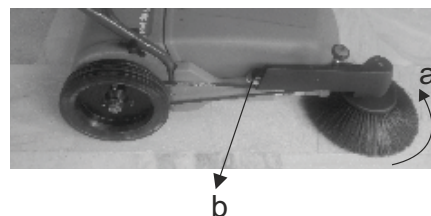
- Position the V-Belt from the side arm assembly around the pulley attached to the backside of the right wheel. In order to do this it will be necessary to twist the V-Belt. The lower loop of the v-belt should be coming from the idler pulley (not from the broom pulley).



- To attach the side arm assembly to the main frame remove the two screws that have already been inserted into the right side of the main 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 broom for free rotation.

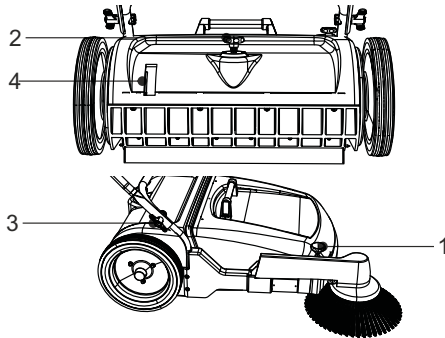


- Check for proper rotation and operation of the side broom. The broom should rotate counter clockwise(a) when the sweeper is pushed forward-if not the V-Belt was installed incorrectly. If the belt slips the tension can be adjusted by loosening the 2 screws(b) that attach the support side broom to the frame, move the bracket forward, then re-tighten the screws.



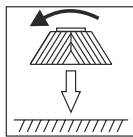
MACHINE OPERATION

Controls



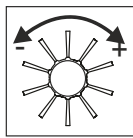
1. Pressure Adjustment Knob for Side Broom


- Used for setting of the side broom pressure. The side broom 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 broom.



2. Pressure adjustment knob for Main Broom

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



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

3. Knobs

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

4. Main Broom Pressure Reading Scale

Indicates the pressure at which the main broom has been set. Setting must be performed as described below :

- Set the main broom by turning the knob clock-wise to increase the pressure, at this position the scale should read '5'.
- Starting with this setting, the main broom pressure can be increased to meet the requirement. (As the broom wears out)
- Turn the knob in counter-clockwise direction to reduce the main broom pressure according to the requirement.



MACHINE OPERATION

The machine operates with two brooms. The side broom takes dirt from the side into the reach of the main broom. The main broom maintains its direction of rotation to throw the dirt into the hopper in forward direction of the machine. To use the machine, simply push it at a normal walking speed.

Overcoming Obstacles

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

Emptying of Dirt Hopper


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

Renewal of Broom Assemblies

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

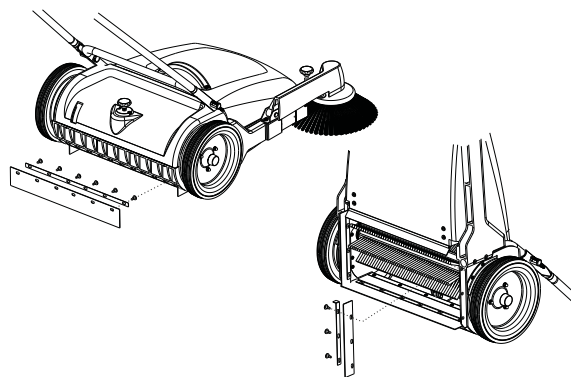
The broom cores can be replaced as below:

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

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

Rubber Sealing Aprons

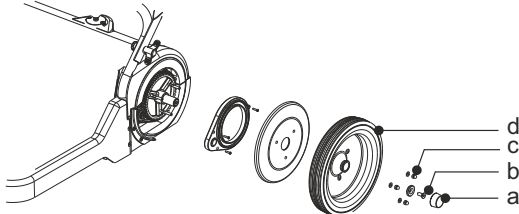
The rubber aprons avoid leaking of the dust produced by the broom. Damaged or used aprons cannot fulfil this task any longer and must be replaced.



MAINTENANCE

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.



- Remove hood (a), remove the bolt (b) and domed cap nut (c) from the wheel (d) and pull the main wheel.
- Unscrew the gear cover and apply grease in the gear area.
- Reposition the main wheel.

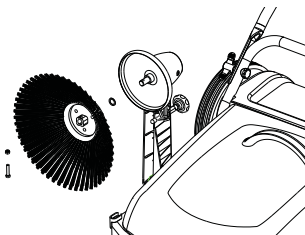
Replacement and Tensioning of the V-belt

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

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

Replacement of the Side Broom

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



Regaining of Bristles

If the bristles have been bent inwards in transit the side broom 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.

Maintenance Works

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

The machine requires minimum maintenance apart from the checks by the operator such as Dirt hopper, Brooms, V-Belt.

Maintenance Intervals

- Daily
- empty dirt hopper.
 - clean the unit.
 - check Brooms and Sealing Aprons.
- Weekly
- remove the ropes, tapes etc entangled in the main broom shaft.
 - clean & lubricate.
 - trunnion - main broom
- Monthly
- grease the main wheels, check the caster wheel
 - check V-belt tension, if necessary, re-tighten.

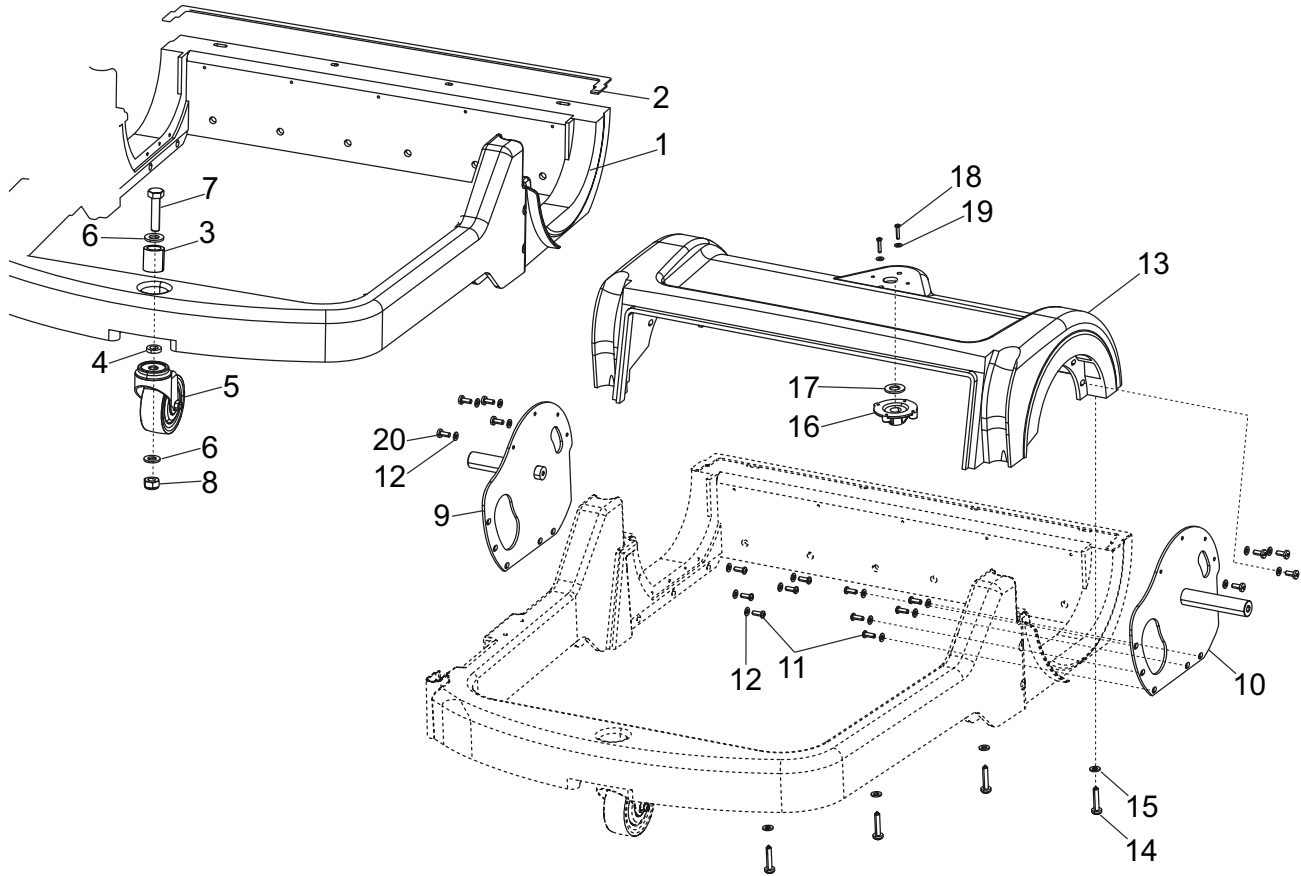
Maintenance Chart

MAINTENANCE				
Maintenance Works	Operating Hours			
	Daily	Every 50	Every 100	Every 200
Check Main & Side Broom pressure	●			
Check Rubber Sealing Aprons in frame & dirt hopper	●			
Check Gear, Gearing & Pinion				●

Troubleshooting

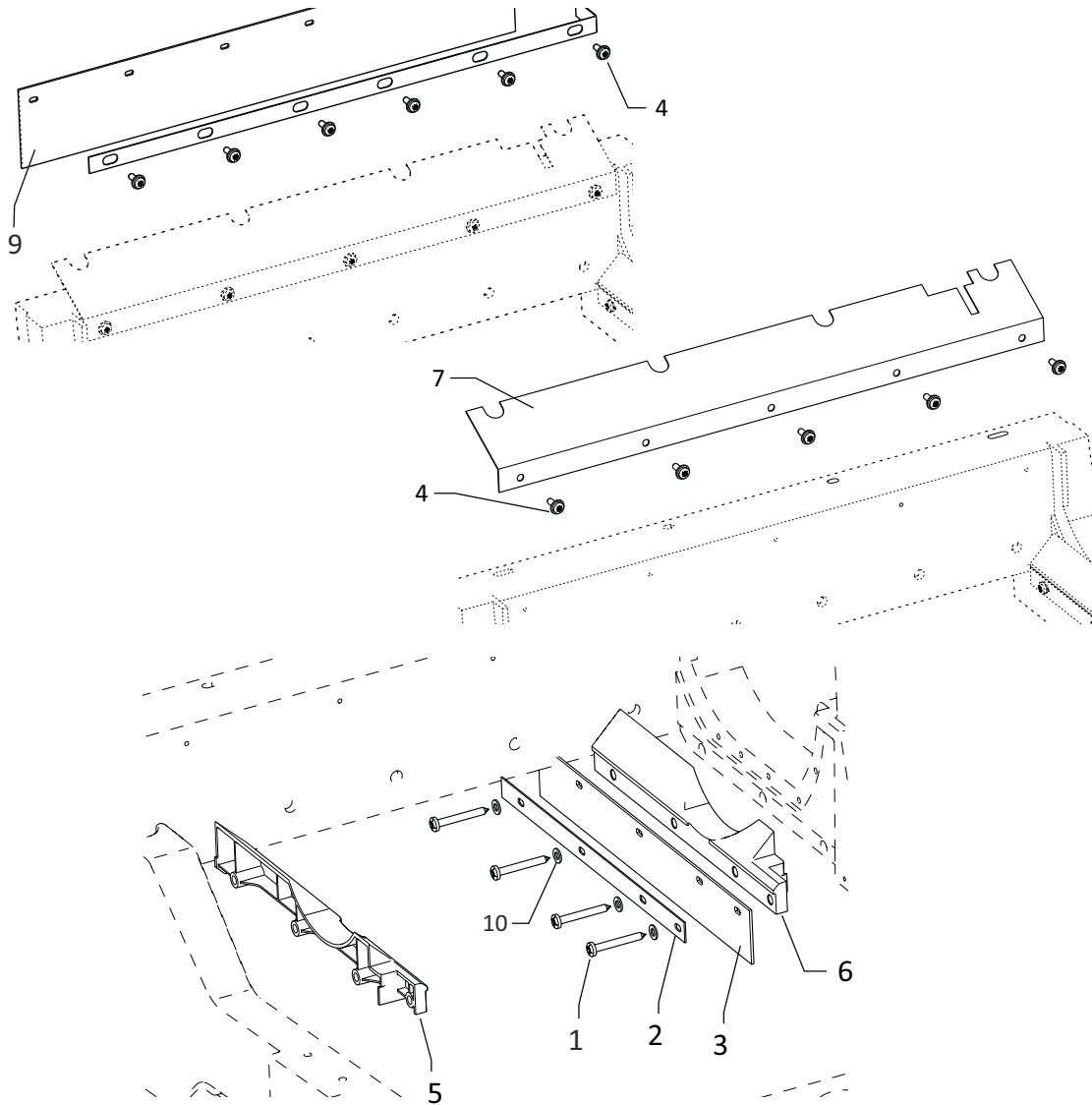
TROUBLE	REMEDIAL ACTION
Machine hard to push/pull	Decrease main broom pressure setting grease main wheels
Sweeping unsatisfactory	Increase Main/Side broom Pressure clean Main/Side broom check Main broom for loose bristles
Traces of dirt left behind the machine	Check side/rear rubber aprons.
Side Broom not rotating	Check V- Belt for transmission.

**PARTS BREAKDOWN
FRAME, COVER AND PLATE ASSEMBLY**



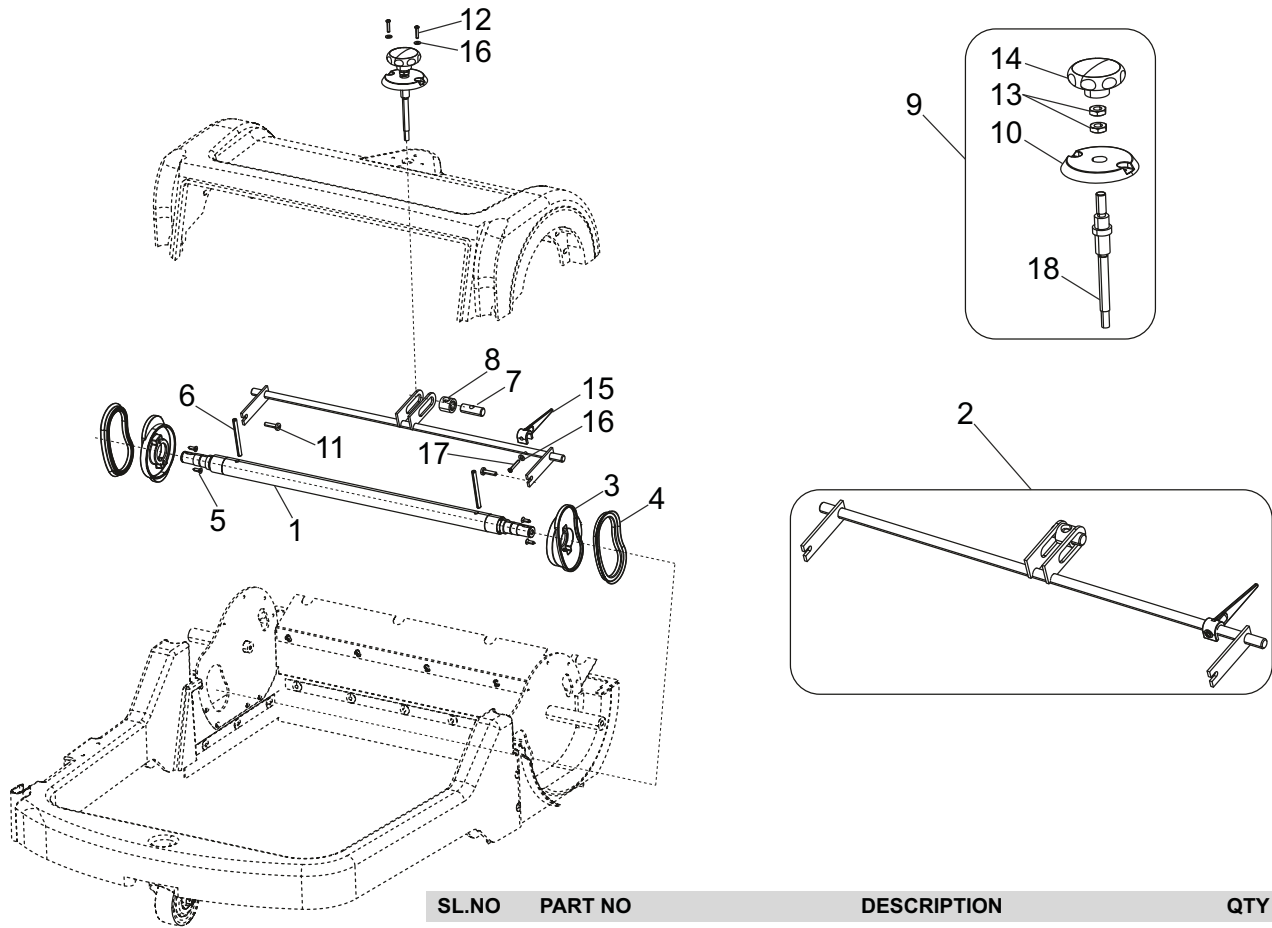
SL.NO	PART NO	DESCRIPTION	QTY
1	552130007	FRAME	1
2	923255	GASKET FRAME	1
3	922130	SLEEVE - GROMMET	1
4	552350021	WASHER STEEL - 10.6X18.0X4.0	1
5	922824	CASTOR WHEEL ASSY	1
6	844082	WASHER STEEL - 8.4X24X2.0	2
7	552020040	HEX HEAD SCREW - M8X45	1
8	859086	HEX NYLOCK NUT - M8	1
9	552180035	SIDE PLATE GROUP RH	1
10	552180034	SIDE PLATE GROUP LH	1
11	837210	CRPH SELF TAPPING SCREW - 4.8X13	10
12	844051	WASHER STEEL - 5.3X10.0X1.0	18
13	552130008	COVER	1
14	835709	CRPH SELF TAPPING SCREW - 6.3X30	4
15	844061	WASHER STEEL - 6.4X12.5X1.6	4
16	552130084	BOTTOM COVER THREAD ROD	1
17	552350046	WASHER - STEEL - 12.5X24X2.0	1
18	836206	CRPH SELF TAPPING SCREW - 3.5X16	2
19	844041	WASHER STEEL - 4.3X9.0X0.8	2
20	817204	CR PAN HEAD SCREW - STEEL - M5X12	8

RUBBER SEALING STRIPS



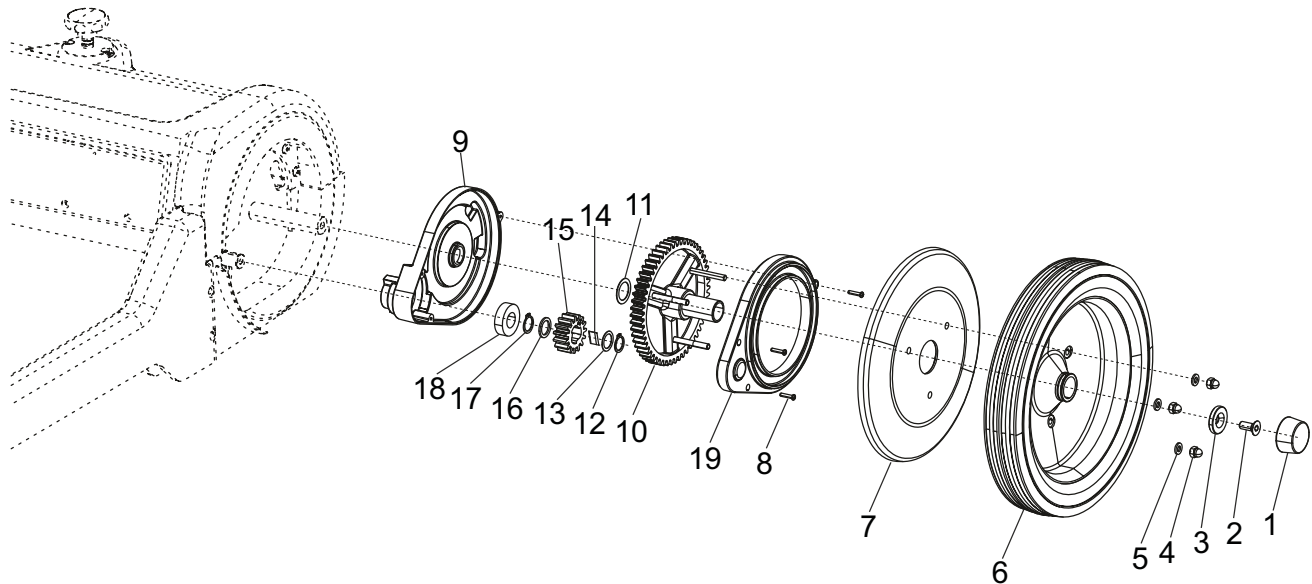
SL.NO	PART NO	DESCRIPTION	QTY
1	835708	CRPH SELF TAPPING SCREW-STEEL-4.8X40	8
2	553210239	SIDE STRIP HOLDER	2
3	553210224	SIDE RUBBER STRIP	2
4	921131	SELF TAPPING SCREW W/COLLAR 4.8X13	11
5	553210230	RUBBER STRIP HOLDER RH	1
6	553210231	RUBBER STRIP HOLDER LH	1
7	552130051	SPLASH SHIELD	1
8	553210227	REAR STRIP HOLDER	1
9	553210240	REAR RUBBER STRIP	1
10	844051	WASHER STEEL-5.3X10.0X1.0	8

BRUSH SHAFT ASSEMBLY



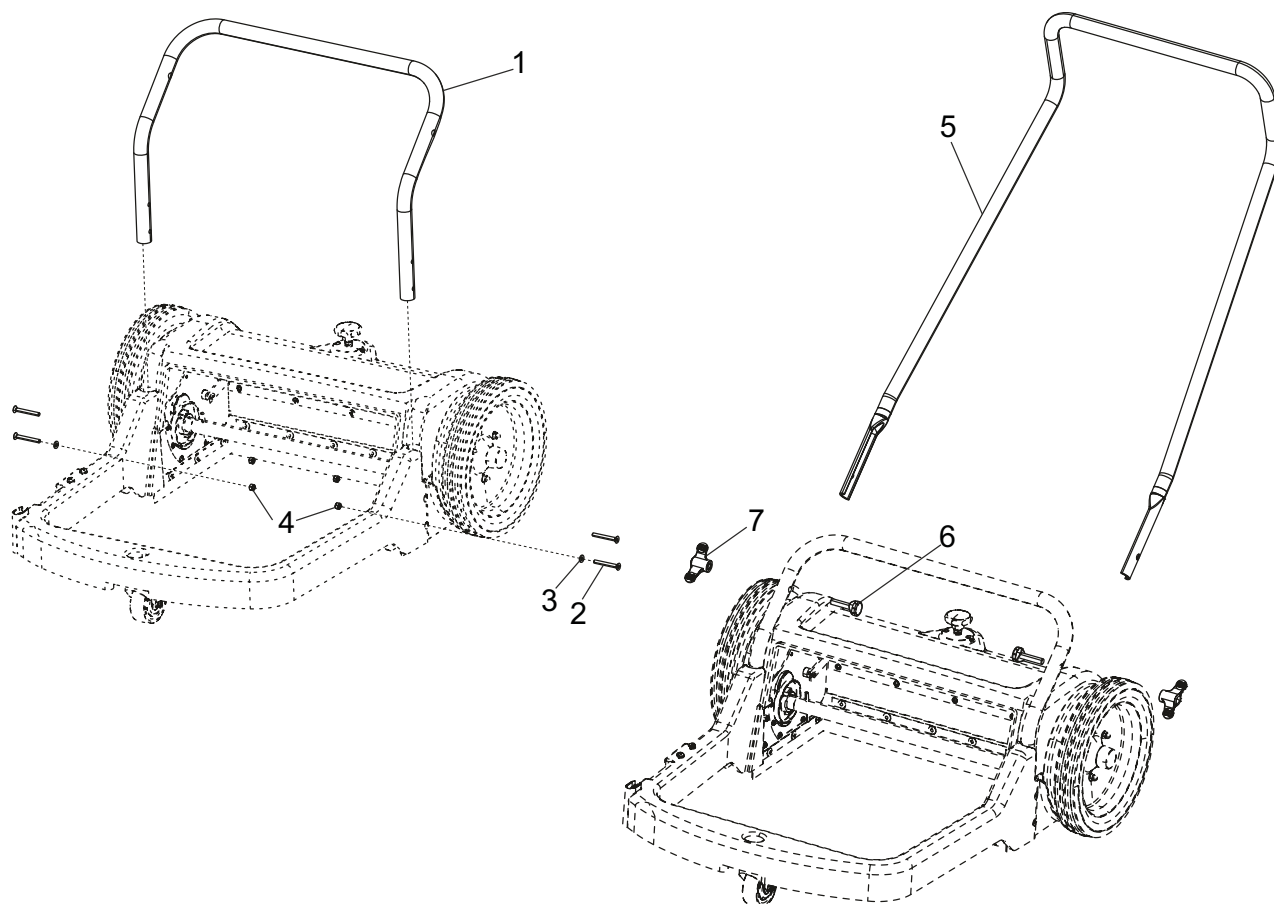
SL.NO	PART NO	DESCRIPTION	QTY
1	552180031	BRUSH SHAFT GROUP	1
2	552180033	PRESSURE ADJUSTMENT GROUP	1
3	552130079	BOOT	2
4	552130080	SEAL	2
5	841110	CRCSK SELF TAPPING SCREW- STEEL - 3.5X12.7	4
6	552130056	SPLIT PIN – 63	2
7	552130039	TRUNNION SHAFT	1
8	552130092	SPACER THREAD ROD	1
9	552180029	THREAD ROD ASSY	1
10	552130085	TOP COVER THREAD ROD	1
11	817207	CR PAN HEAD SCREW STEEL - M5X20	2
12	926057	CRPH SELF TAPPING SCREW - 3.5X16	2
13	833084	HEX LOCK NUT STEEL - M8	2
14	558210109	TOP KNOB ASSY	1
15	552130089	INDICATOR	1
16	844041	WASHER STEEL - 4.3X9.0X0.8	3
17	836210	CRPH SELF TAP SCREW - 3.5X25	1
18	552180036	THREAD ROD GROUP	1

GEAR ASSEMBLY



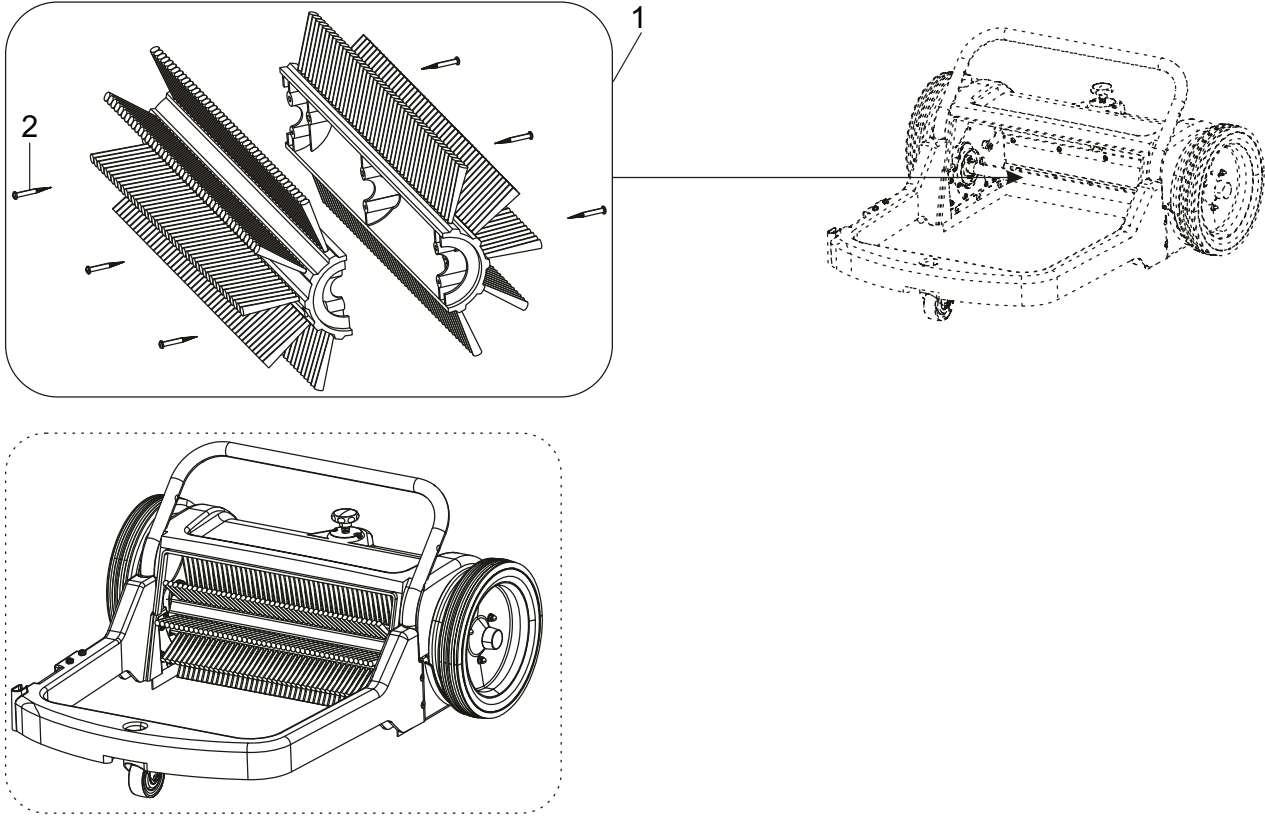
SL NO	PART NO	DESCRIPTION	QTY
1	552130067	WHEEL CAP	2
2	831516	HEX SOC HEAD CAP SCREW -STEEL -M8X20	2
3	844082	WASHER-STEEL-8.4X24X2	2
4	552300005	DOMED CAP NUT - STEEL - M6	6
5	844061	WASHER-STEEL - 6.4X12.5X1.6	6
6	552180022	TYRE ASSY	2
7	552130081	PROTECTION DISK	2
8	926057	CRPH SELF TAPPING SCREW - 3.5X16	6
9	552130082	GEAR COVER BOTTOM	2
10	558210120	GEAR ASSY	2
11	552130078	WASHER STEEL - 20X28X0.5	2
12	923429	CIRCLIP EXTERNAL - A 16	2
13	921066	WASHER - STEEL - 16X22X0.5	2
14	921006	KEY	2
15	552130044	PINION	2
16	921065	WASHER - STEEL - 16X22X1.5	2
17	923422	CIRCLIP EXTERNAL - A 17	2
18	875010	DG BALL BEARING 6003 2 RS	2
19	552130083	GEAR COVER	2

HANDLE ASSEMBLY



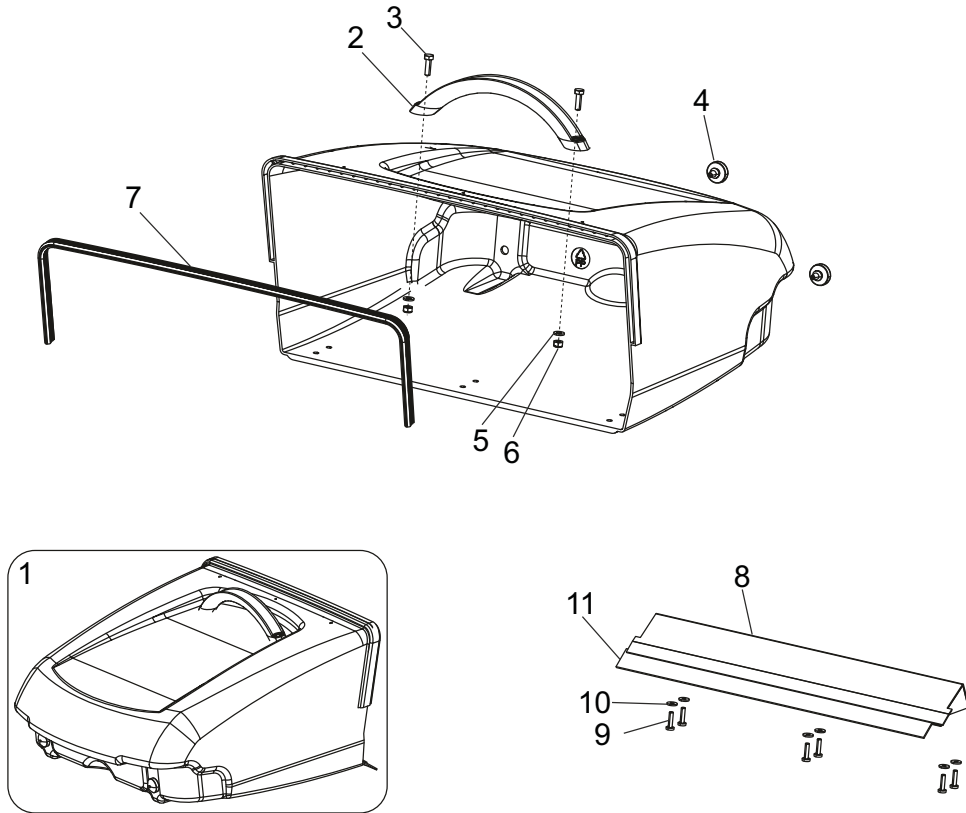
SLNO	PART NO	DESCRIPTION	QTY
1	552130055	HANDLE	1
2	828512	HEX SOC CSK HEAD SCREW- STEEL - M6X45	4
3	844061	WASHER STEEL - 6.4X12.5X1.6	4
4	859068	HEX NYLOCK NUT-STEEL GR.8 -M6	4
5	552130057	UPPER HANDLE	1
6	552130062	KNOB ASSY MALE	2
7	927872	KNOB-HANDLE	2

MAIN BROOM ASSEMBLY



SL. NO	PART NO	DESCRIPTION	QTY
1	552180026	MAIN BRUSH	1
2	835708	CRPH SELF TAPPING SCREW-STEEL - 4.8X40	6

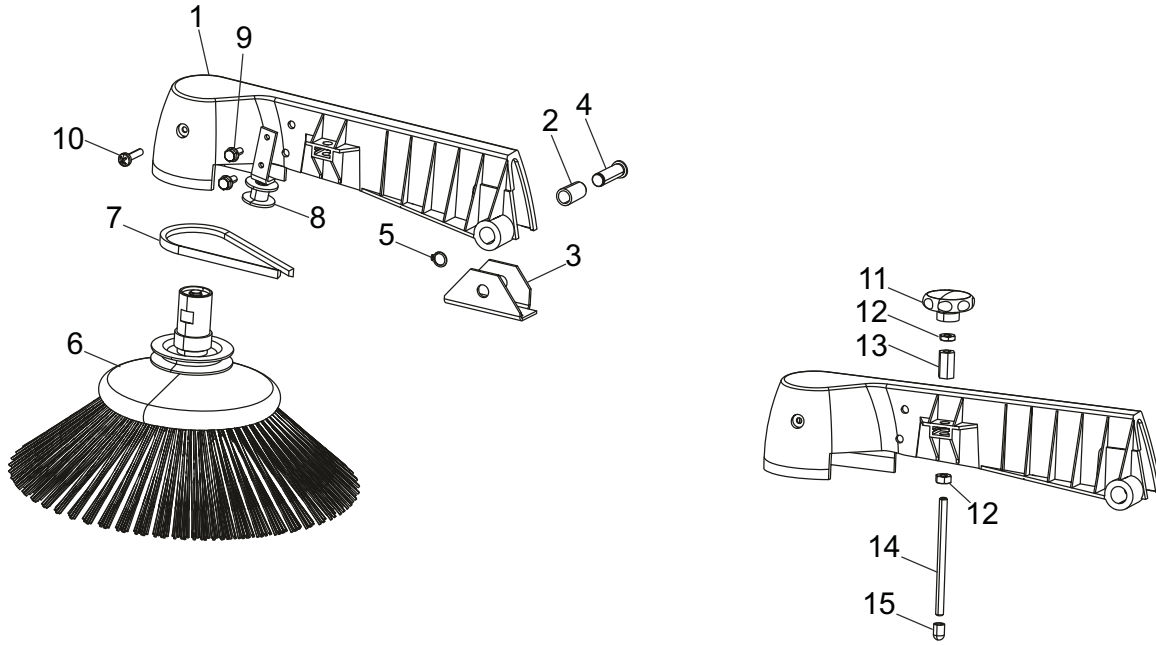
HOPPER ASSEMBLY



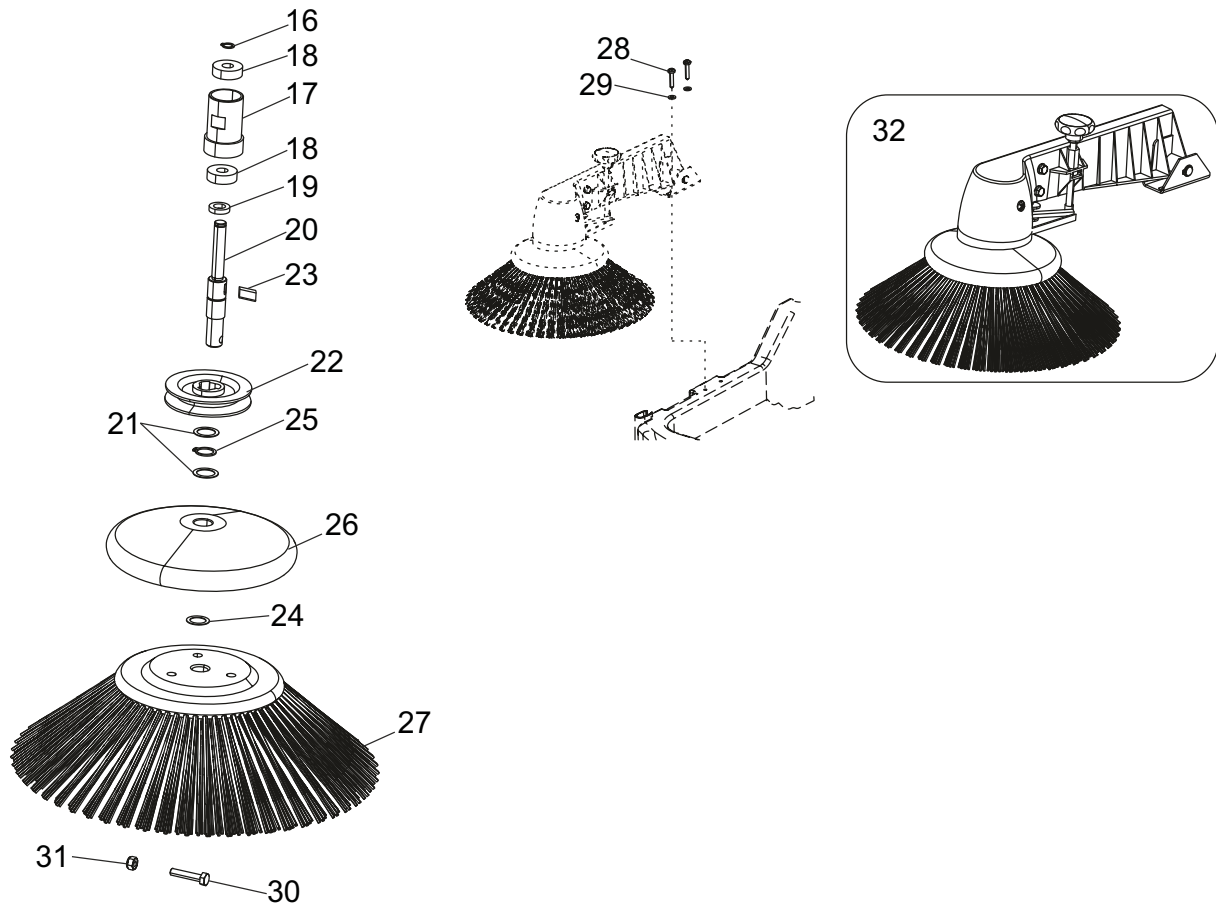
SL. NO	PART NO	DESCRIPTION	QTY
1	558210083	HOPPER ASSEMBLY - KS 27	1
2	552130060	HANDLE	1
3	802306	HEX HEAD SCREW - M6X20	2
4	553210228	BOOT FRONT	2
5	844061	WASHER STEEL - 6.4X12.5X1.6	2
6	859066	HEX NYLOCK NUT - M6	2
7	552130100	GASKET HOPPER	1
8	558210128	HOPPER FLAP ASSY	1
9	817204	CR PAN HEAD SCREW - M5X12	6
10	999161	WASHER STEEL - 5.3X13X1.0	6
11	553210241	HOPPER RUBBER STRIP	1

NOTES

SIDE BROOM ASSEMBLY COMPLETE



SL. NO	PART NO	DESCRIPTION	QTY
1	552130014	MOLDED SIDE ARM	1
2	921107	TAPER BUSH SIDE BROOM ARM	1
3	921017	SUPPORT SIDE BROOM ARM	1
4	921013	CLEVIS PIN SIDE BROOM ARM	1
5	923418	CIRCLIP EXTERNAL - A 12	1
6	921821	SIDE BROOM ASSY COMPLETE	1
7	921103	V-BELT	1
8	921788	IDLER BRACKET ASSY	1
9	921133	HEX HEAD SCREW – M6x16/13 mm COLLAR	2
10	552130102	CRPH STS – 6.3X30 MACHINED	1
11	921776	KNOB ASSY	1
12	822088	HEX NUT STEEL - M8	2
13	921018	NUT SIDE BROOM KNOB	1
14	921011	THREADED ROD – SIDE BROOM	1
15	921012	PROTECTION CAP THREAD ROD	1



SL.NO	PART NO	DESCRIPTION	QTY
16	923427	EXTERNAL CIRCLIP - A 10	1
17	921015	BEARING HOUSING – SIDE BROOM ARM	1
18	875001	BEARING – 6000 ZZ	2
19	552350021	WASHER STEEL - 10.6X18X4	1
20	921141	AXLE SHAFT – SIDE BROOM	1
21	921066	WASHER STEEL - 16.2X22X0.5	2
22	921014	V-BELT PULLEY	1
23	921006	KEY	1
24	923250	WASHER STEEL - 14.2X20X0.5	1
25	923429	EXTERNAL CIRCLIP - A 16	1
26	923169	DEFLECTOR ROLLER - SIDE BRUSH	1
27	923783	SIDE BRUSH ASSY	1
28	835709	CRPH SELF TAP SCREW – STEEL - 6.3X30	2
29	844061	WASHER-STEEL - 6.4X12.5X1.6	2
30	802309	HEX HEAD SCREW - STEEL 8.8 - M6X30	1
31	859066	HEX NYLOCK NUT-STEEL GR.6 - M6	3
32	552180025	SIDE BROOM GROUP	1

“More Than Just Clean”

**Minuteman is a Full Line Manufacturer of Sweepers and Scrubbers,
for Industrial Facilities.**