



Electronic Service Manuals

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Minuteman[®]
Excellence Meets Clean



Parts and Instruction Manual
Kleen Sweep 35W

This manual is furnished with each new **MINUTEMAN Kleen Sweep 35W**. This provides the necessary operating and preventive maintenance instructions. Operators must read and understand this manual before operating or servicing this machine.

This machine was designed to give you excellent performance and efficiency. For best results and minimal cost, please follow the general guidelines below:

- Operate the machine with reasonable care.
- Follow the manufacturers suggested maintenance instructions as provided in this booklet.
- Use original Minuteman supplied parts.

TECHNICAL SPECIFICATIONS

Model *Kleen Sweep 35W*

Model No. HM35BQP

Dimensions and Weight

Length, Total: 54.72" (1.39m), Width, Total: 31.78" (840mm)

Height Over Handlebar: 40.57" (1030mm)

Weight, Without Batteries: 208lbs (95kg)

Weight, With Batteries: 342lbs (155kg)

Traveling and Sweeping Performance

Speed, Forward: 3mph (4.83km/h)

Sweeping Width, With Side Broom: 34" (850mm)

Sweeping Capacity With Side Broom, Max.: 36.6 sq. ft (3400m²)

Theoretical Max Rate of Climb: 15% grade

Filter System

Filter Area: 1.5 ft² (0.139 m²)

Number of Filter Elements: 1 piece

Dust Extractor Fan

Speed: 2500rpm

Broom Roller

Length / Dia.: 28.61/9.84" (700 / 250mm)

Wear Limit (approx.): 9" (230mm)

Speed: 510rpm

Sweeping Track Width: 2" (50mm)

Rows of Bristles: 10

Side Broom

Diameter: 12.25" (47mm)

Speed: 94rpm

Dirt Hopper

Capacity: 12.5 Gal (47liters)

Tires

Caster Wheel, Front, Dia.: 4.92" (125mm)

Rear Wheels, Dia.: 5.9" (150mm)

Electric Drive System

DC-Motor Voltage: 12V

Power Rating / Speed: 550W / .75 Hp

Current Dissipation: 57A

Noise Emission

Sound pressure level: 64dB (A)



DECLARATION OF CONFORMITY

MANUFACTURER'S NAME: Minuteman International Inc.

MANUFACTURER'S ADDRESS: 111 South Rohlwing Road
Addison, IL. 60101

EQUIPMENT DESCRIPTION: KLEEN SWEEP 35W

EQUIPMENT MODEL DESIGNATION: HM35B, HM35BQP

Application of Council Directives: 89/392/EEC

Harmonized EN standards complied with: EN 292

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

SIGNATURE: Jeffrey Pollack **DATE:** 7/22/04

PRINTED NAME: Jeffrey Pollack
TITLE: Standards Engineer

Form: ECO 79

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IMPORTANT SAFETY INSTRUCTIONS

Operators must read and understand this manual before operating or maintaining this machine. Do not operate this machine in flammable or explosive areas.

The following information below may cause a potential hazard to the operator and equipment. Read this manual carefully and be aware when these conditions can exist. Take necessary steps to locate all safety devices on the machine and train the personnel operating the machine. Report any machine damage or faulty operation immediately. **Do not use machine if it is not in proper operating condition.**

FOR SAFETY DURING OPERATION:

Keep hands and feet clear of moving parts while machine is in operation.

Make sure all safety devices are in place and operate properly. All covers, doors and latches must be closed and fastened before use.

During operation, attention should be paid to other persons in the work area and especially if small children are present.

Electric motors and components can cause an explosion when operated near explosive materials or vapor. Do not operate this machine near flammable materials such as solvents, thinners, fuels, grain dust, etc.

Store or park this machine on a level surface only, with parking brake engaged. To prevent unauthorized use, machine should be stored or parked with the key removed.

This machine is designed for level operation only. **Do not operate on ramps or inclines over 15% grade.**

This machine is not suitable for picking up hazardous dusts.

Use caution when moving this machine into areas that are below freezing temperatures. Any water in the tanks or hoses can cause damage to the machine.

FOR SAFETY WHEN SERVICING or MAINTAINING MACHINE:

Stop on level surface.

Disconnect the power to the machine when charging batteries or during installation or removal of brushes.

Avoid moving parts. Do not wear loose jackets, shirts, or sleeves when working on machine.

Avoid contact with battery acid. Battery acid can cause burns. When working on or around batteries, wear protective clothing and safety glasses. Remove metal jewelry. Do not lay tools or metal objects on top of batteries.

Charging batteries generates explosive gasses. **Do not charge batteries when open flames or sparks are present. Do not smoke.** Make sure the charger is turned off before disconnecting it from the machine. Charge the batteries in a well-ventilated area with the battery cover removed completely.

Do not clean machine with a pressure washer.

Authorized personnel must perform repairs and maintenance. Use Minuteman supplied replacement parts.

SAVE THESE INSTRUCTIONS

Proper Use

The Kleen Sweep 35W vacuum sweeper has been designed exclusively for sweeping floor surfaces, including production facilities, warehouses, parking areas, and pedestrian areas, to collect dry and moist matter. Whatever sort of use beyond the specified range will be deemed improper use; the manufacturer cannot be held liable for consequential damage. The term of proper use also includes compliance with the manufacturer's instructions about operation, maintenance and repair. The Kleen Sweep 35W may be used, serviced and repaired by persons only that are familiar with the machine and are aware of possible hazards.

Inspection

Carefully unpack and inspect your Kleen Sweep 35W for shipping damage. Follow unpacking instructions on shipping pallet. Each unit has been tested and thoroughly inspected before shipment. Any damage is the responsibility of the delivery carrier who should be notified immediately.

Electrical

This machine is battery operated and designed to operate on 12 volts DC (2) 6-volt batteries.

Batteries

The recommended batteries are rated 275Ah (Minuteman P/N 956740).

We do not recommend mixing AMP hour capacities. Any alternate battery sets can be used if they equal physical size and capacity.

Operator Responsibility

Read this manual carefully before operating this machine.

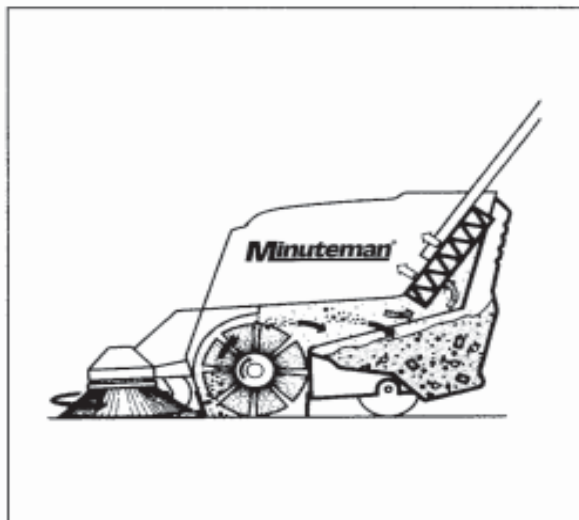
The operator is responsible in taking care of the daily maintenance and check ups of the machine to keep it in good working condition. The operator must inform the service mechanic or supervisor when the scheduled maintenance intervals are required as stated in the MAINTENANCE section of this manual.

Special Instructions for Handling Batteries

Never leave batteries in discharged condition for an extended period of time, but re-charge them as soon as possible. In order to preclude risks to health, eating, smoking and drinking are forbidden in battery charging stations and rooms. Satisfactory ventilation must exist in the battery charging area. Batteries must not be connected to or disconnected from the power supply as long as they are energized. Top up using distilled water only. Never add battery acid when the cells are in good condition. To avoid leakage currents, make sure that the batteries are always kept in dry and tidy condition. Protect them against dirtiness, e.g. by metallic powder. Do not put metallic objects or tools on the batteries. Risk of short circuits and fuming-off! When handling batteries, wear appropriate protective garments such as protective gloves and finger-stalls. In particular when checking the acid density, do not use any open flames (danger of explosion)

Kleen Sweep 35W – How it Works

The side broom is going to collect dirt out of corners & niches and carries it into the track of the main broom. Fine dust involved is extracted by a suction fan and held back by a filter. Dust-free only air will exit the machine.

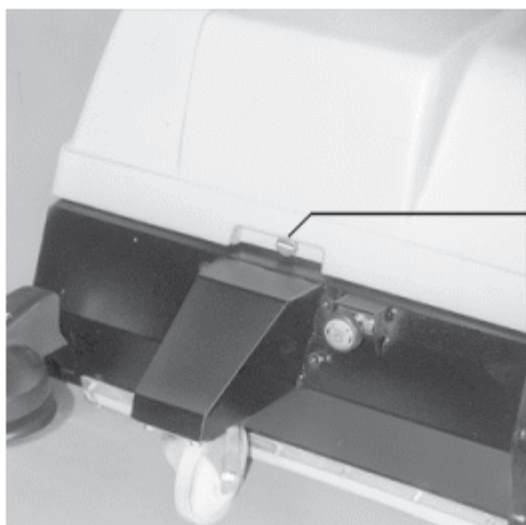


First Operation

Assembly

To reduce the box volume the handlebar is folded forward and the side broom is packed unassembled. Assemble these items as follows:

- Unfold the handlebar and secure on both sides with the enclosed hex nuts and washers. Connect the protective caps.
- Tilt machine back until resting on the handlebar. Attach side broom with bolt. Bolt should be torque tightened snugly only to avoid damage to the broom hub.

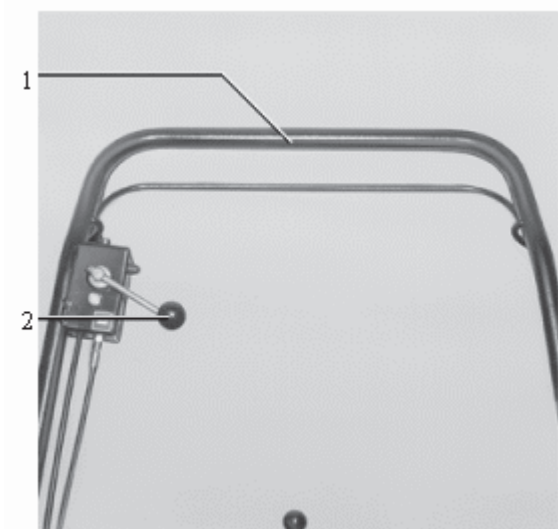


Installing / Servicing the Batteries

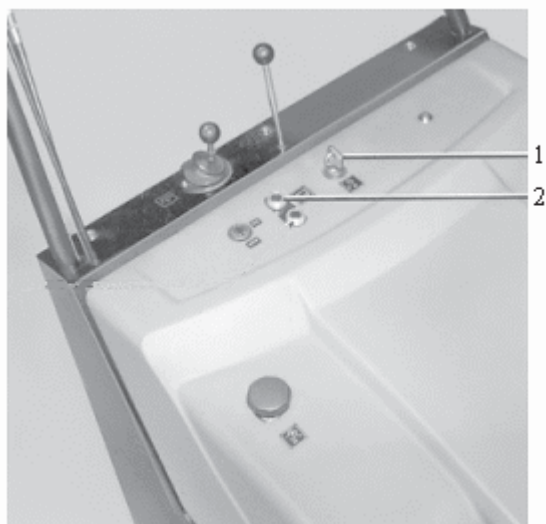
Open the hood

- Pull the key
- Open the hood lock (1) at the front side with a screw-driver
 - Slot horizontal = close
 - Slot vertical = open
- Tilt the hood upwards

Operation of the Kleen Sweep 35W



1. Traction Drive control bow
2. Control lever for side broom



1. Key Switch
2. Pilot Light, Green



1. Hand wheel for broom roller vertical adjustment
2. Pedal to set parking brake.

Controls

Traction drive control bow
to connect / disconnect wheel drive

- pull bow on handlebar up = engages traction drive
- return bow = disengages traction drive

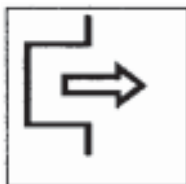
(machine will stop = safety mode)



Control lever for side broom

Lowers and lifts the side broom

- Lever horizontal = side broom down
- Lever vertical (up) = side broom up



Control lever for dirt hopper

Unlocks the dirt hopper

- Lever RH = unlocked
- Lever vertical (up) = locked



Rotary knob for suction fan flap

Opens and closes the suction fan flap

- Rotate knob CW = close flap
- Rotate knob CCW = open flap

Note: keep suction fan flap closed when working on wet floors or with wet matter.



Key-switch

Turn ignition ON/OFF, secures machine against unauthorized use

0 = OFF

1 = ON



Hand wheel for Main Broom Adjustment

Adjust roller brush load (sweeping track width). Best setting is 2" (50mm).

- Turn Hand wheel CW = Reduced track width (low brush load)
- Turn Hand wheel CCW = Extended track width (high brush load)

Pilot light, GREEN

Turns ON, when: Key switch is ON

Key-switch

Connect and disconnect the drive motor and to secure the machine against unauthorized use.

How to Use the Kleen Sweep 35W

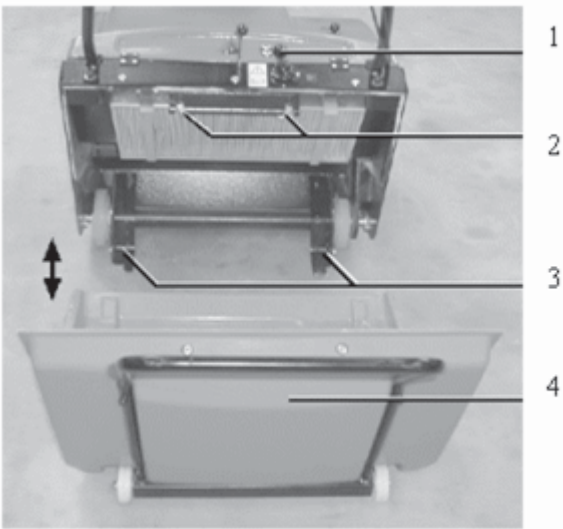
Turn motor ON and OFF

- Turn key-switch to "1" = electric motor runs
- Turn key-switch to "0" = electric motor stops

Sweeping with the Kleen Sweep 35W

- Start / switch-on
 - Open dust extractor fan flap
- Note: always keep dust extractor fan flap closed, when sweeping wet areas or wet matter
- Lower side broom
 - Actuate traction drive control bow
 - Empty dirt hopper as required

Empty Dirt hopper

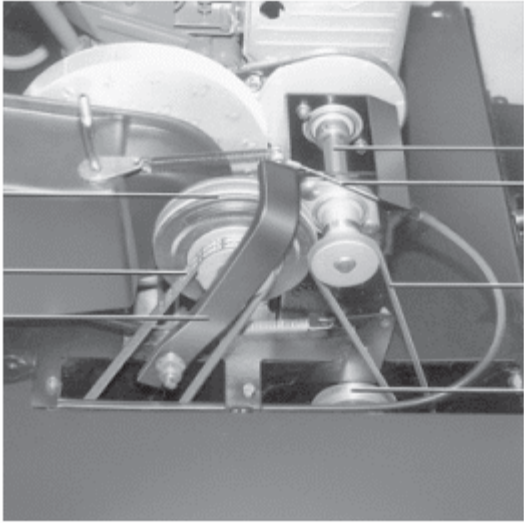


- 1 Dirt hopper control lever
- 2 Latch
- 3 Bar for dirt hopper wheels
- 4 Dirt hopper

- Depress lever (1) to the right to unlock
- Hold dirt hopper by its handle (3) and pull to the rear, empty hopper
- Slide dirt hopper into opening, exert pressure against latch (2) until click is audible, to ensure the dirt hopper is installed in place.

Traction Drive

The traction drive system uses a friction wheel (1) and a V-belt (2) driving the wheel axle. When actuating the traction drive control lever, the friction wheel arm (3) with its friction wheel (1) is pressed against the drive shaft (7), thus allowing power transmission. Note: dust extractor fan and side broom will rotate as soon as motor is running. Keep hands and fingers away from any moving parts to avoid injury



- 1. Friction wheel
- 2. V-belt
- 3. Friction wheel arm
- 4. Cocking roller for broom roller drive
- 5. V-belt for broom roller drive
- 6. Control cable for friction wheel arm
- 7. Drive shaft for traction drive, broom roller and side broom drive assy's.

Replace Broom Roller

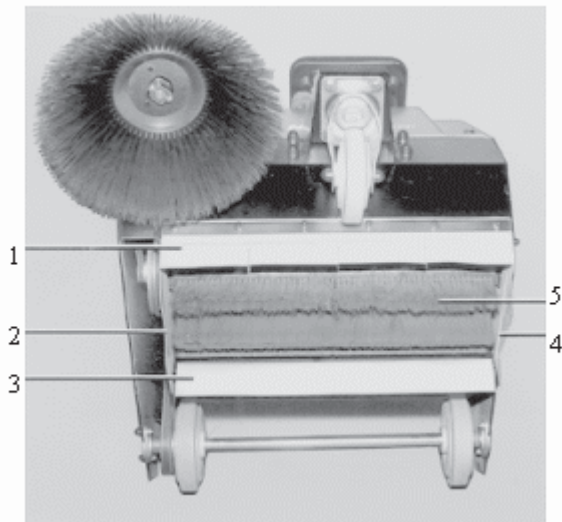
The broom roller bears 10 rows of bristles and consists of 4 halves. A new broom is 9.8" dia. (250mm). The broom roller should be replaced when reaching a dia. of 9" (230 approx. mm) to function properly.

To remove the broom roller:
Tilt the Kleen Sweep 35W back on the handlebar, as shown. Remove 4 ea. cylinder Hexagon screws, rotate roller through 180, and remove cylinder Hexagon screws from the other half. Pull drive pin out of broom shaft. For installation, reverse the above sequence of operations.

Adjust Sweeping Track

In case of broom roller wear and after replacing the roller broom, adjust sweeping pattern as follows:

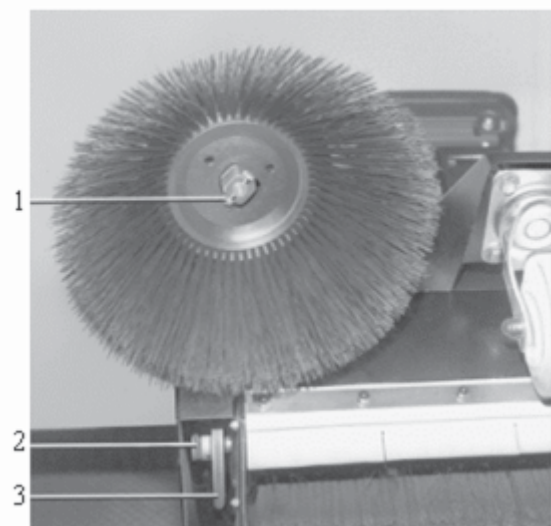
- Start the machine and rotate broom roller for a short period of time (static)
- Lift front end of machine and pull back.
- If adjusted properly, a parallel line of sweep is visible on the ground (sweeping track). This sweeping track width is adjusted to approx. 2" (50 mm) by rotating the hand wheel CW or CCW. Sealing strips (1 to 4) have to be inspected for wear in regular intervals and replaced as required. Sealing strips slightly should touch the ground.



1. Sealing Strip, Forward
2. Sealing Strip, Right Hand
3. Sealing Strip, Rear
4. Sealing Strip, Left Hand
5. Broom Roller

Replacing the Side Broom

- Tilt the Kleen Sweep 35W back on its handlebar (also refer to previous section, “replace broom roller”)
- Remove attaching bolt (1) underneath side broom
- Pull-off side broom
- Plug-on new side broom and secure; torque attaching bolt light tight only, to avoid damage to the broom hub.



- 1 side broom attaching bolt
- 2 round belt for side broom drive
- 3 V-belt for broom roller drive

Replacing the Side Broom V-Belt

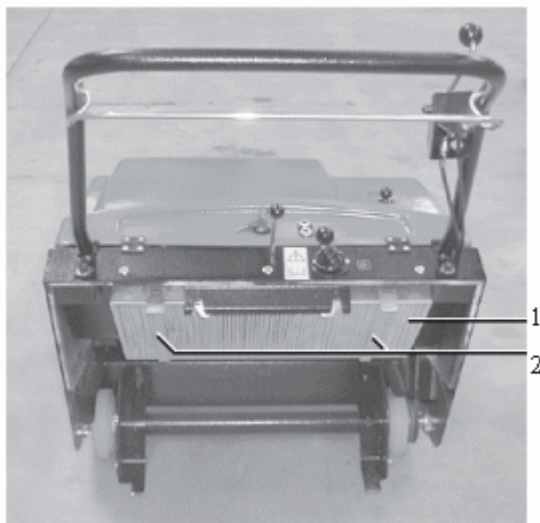
- Tilt the Kleen Sweep 35W back on its handlebar (refer to section, “Replace Broom Roller”)
- Remove hood (3 ea. Screws)
- Lift side broom and uncock round belt
- Remove round belt and assemble new one.
- **NOTE:** Refer to direction arrow.



4 Round belt
5 Pulley

Filter System – Dust Extractor

fine dust in the broom housing is suctioned through a filter module by the dust extractor fan. The filter module (1) is located in the rear part of the machine and is removed as follows:



1. Filter Module
2. Straps

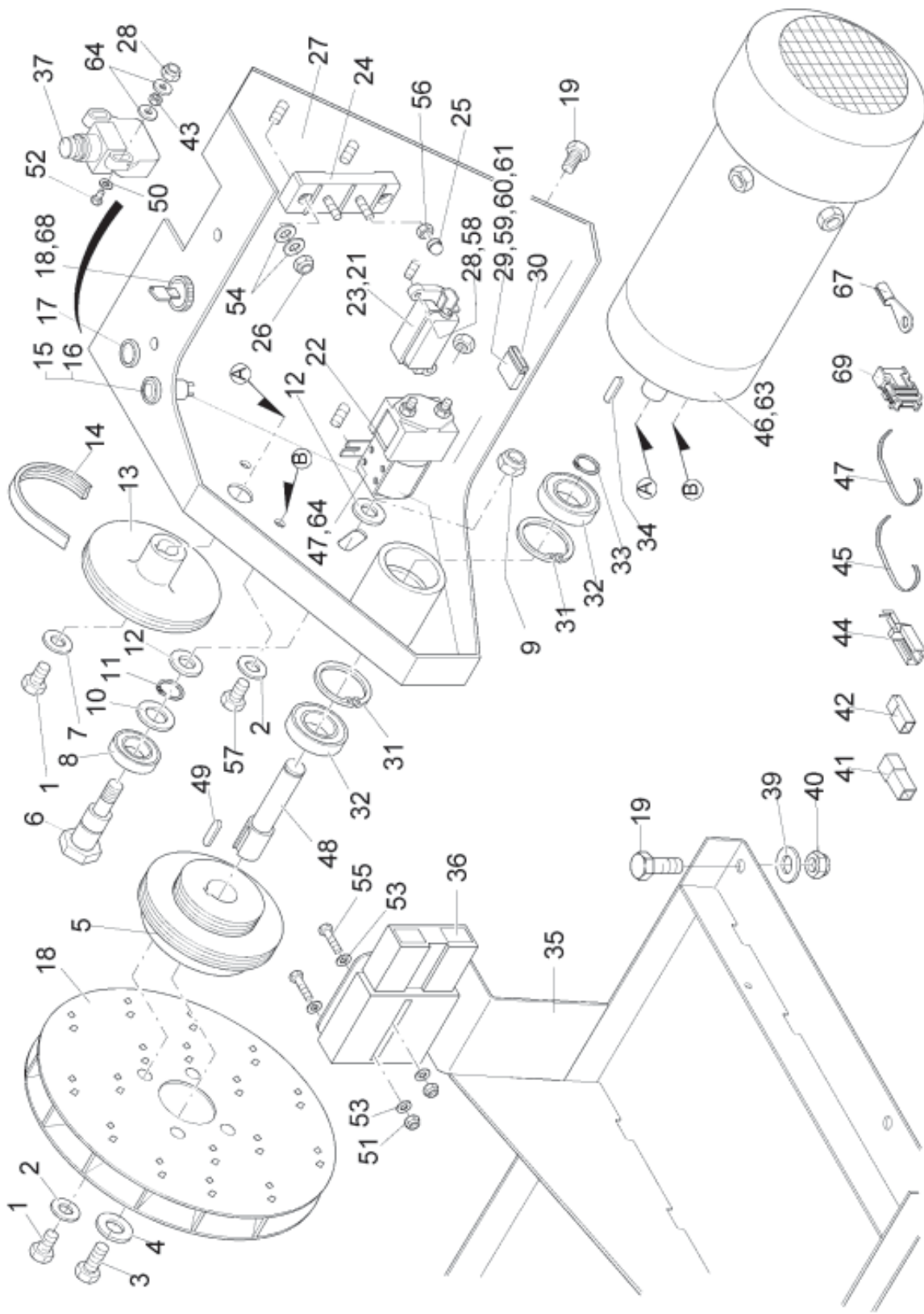
- Disconnect Power
- Remove dirt hopper
- Unhook straps (2) at top end and remove filter module (1)
- Carefully shake filter clean or clean with vacuum cleaner (do not damage filter element)
- Re-assemble filter module in true position (arrow towards machine) and re-attach straps
- Install dirt hopper

Maintenance

Compliance with our recommended maintenance and service schedule will guarantee a dependable machine all the time. It is better and cheaper to take precautions instead of facing costly repair work. If your in-house facilities are unable to perform the work per maintenance schedule, your authorized distributor will be glad to conclude a maintenance agreement with you. For all inquiries or parts orders, always specify chassis and motor numbers as printed on the data plate. The data plate is located on the left side under the hood of the handlebar. When performing cleaning or service work or replacing parts, stop the motor, pull ignition key and disconnect the power. Use adequate tooling for maintenance, servicing and adjustment jobs only. As far as safety is concerned, spare parts will at least be of the same quality as genuine parts. When working on the electrical system, disconnect battery plug.

Daily	Per Service Hours			
	50	100	200	
Empty dirt hopper, clean the guide edges inside the chassis	Check broom roller and side broom for wear and foreign matter (e.g. Tape, Wire), replace as required			
Charge Batteries				Check sweeping track width, adjust as required
	Check all sealing strips for appearance, replace as required. Strip tips should slightly touch the floor; adjust as required			
				Check drive belts for wheel, extractor fan, broom roller and side broom for appearance and wear, adjust tension or replace as required
				Check traction drive control cable, adjust as required
				Check dust extractor and filter system for good seal, replace as required
				Check dust extractor fan and flap for function
				Check dirt hopper lock
			Clean Motor, Check carbon brushes for ease of movement and wear, clean as required	

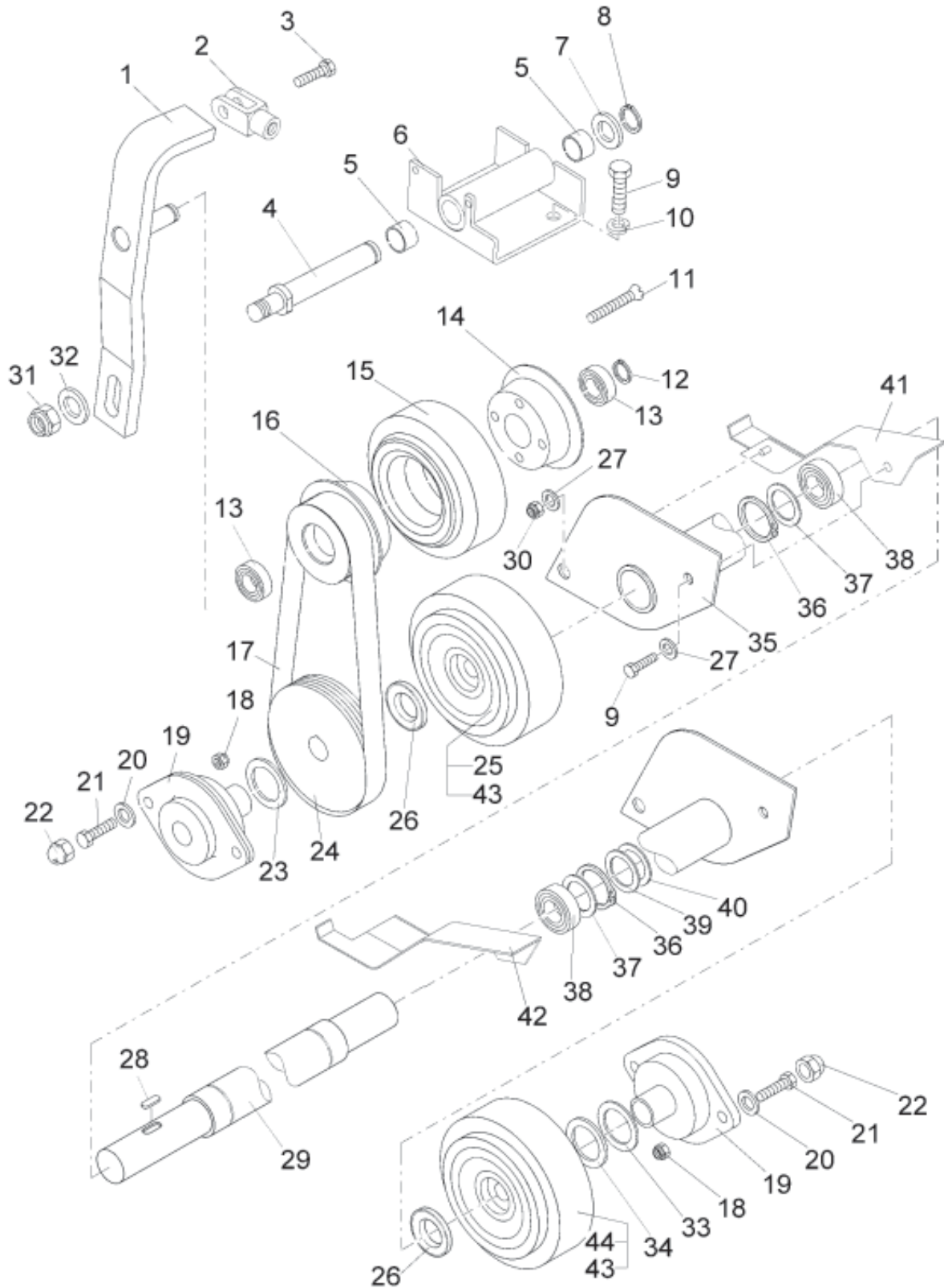
Exploded Views Traction Drive



Traction Drive BOM

Item	Part No.	Qty.	Description	Item	Part No.	Qty.	Description
1	10-450	5	Hex. bolt	35	105-477	1	Battery tray
2	73-094	8	Detent washer	36	107-555	1	Connector
3	05-309	3	Hex. bolt	37	92-761	1	Switch
4	04-290	1	Washer	39	05-375	8	Washer
5	53-168	1	Belt pulley	40	05-151	4	Hex. nut
6	53-173	1	Bolt	41	08-365	1	Plug housing
7	13-512	2	Washer	42	08-364	9	Socket housing
8	70-541	1	Ball bearing	43	05-281	2	Hex. Nut
9	05-150	1	Hex. nut	44	55-967	1	Flat connector sleeve
10	15-518	3	Adjusting shim	45	12-101	6	Cable tie
11	02-223	1	Retaining ring	46	71-223	1	Electro motor
12	04-652	2	Washer	47	12-115	3	Cable tie
13	74-590	1	Belt pulley	48	53-172	1	Shaft
14	71-224	1	Belt conti-V	49	12-628	1	Adjusting spring
15	13-375	1	Pilot lamp, green	50	55-715	2	Washer
16	101-426	1	Bulb	51	05-152	2	Hex. nut
17	107-492	1	Plug	52	02-720	2	Fillister-head screw
18	02-171	1	Key switch	53	05-373	2	Washer
19	05-308	6	Hex. bolt	54	95-877	6	Washer
20	66-168	1	Fan wheel	55	05-329	2	Hex. bolt
21	90-3558	1	Fuse	56	05-333	4	Hex. nut
22	74-46	1	Ignition switch	57	05-301	4	Hex. bolt
23	90-351	1	Fuse holder	58	05-371	2	Washer
24	15-283	1	Clamping block	59	02-218	1	Hex. bolt
25	52-591	2	Protective cap	60	55-374	1	Washer
26	05-134	3	Hex. nut	61	02-220	1	Hex. nut
27	32-192	1	Hold frame	63	87-667	4	Carbon brush
28	13-383	2	Hex. nut	64	55-552	2	Washer
29	50-956	1	Fuse box	67	12-640	1	Ring terminal
30	90-612	1	Fuse link	68	74-589	1	Key
31	12-632	2	Retaining ring	69	73-365	1	Fuse holder
32	70-636	2	Ball bearing				
33	02-234	1	Retaining ring				
34	05-426	1	Adjusting Spring				

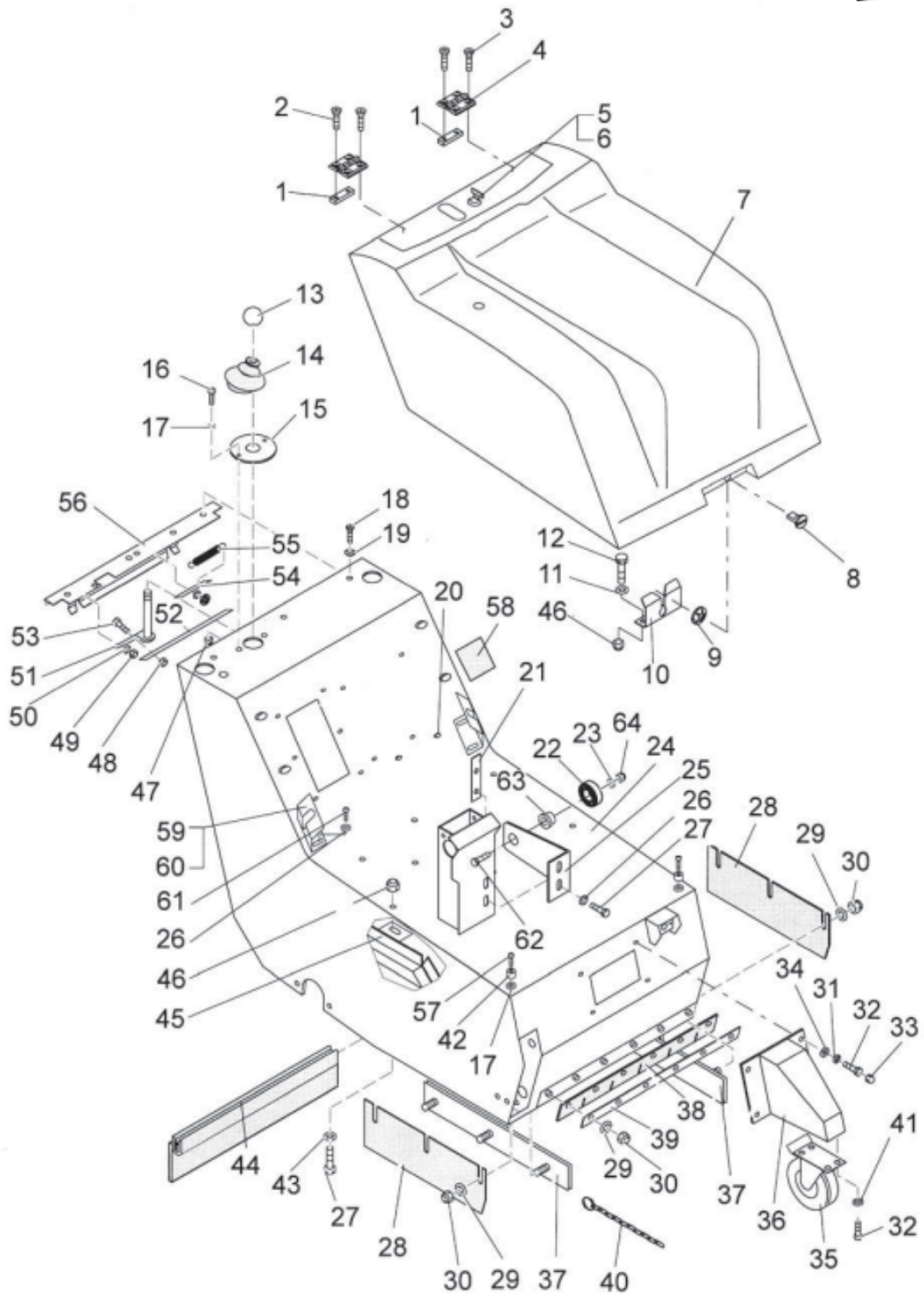
Travel Drive



Travel Drive BOM

Item	Part No.	Qty.	Description
1	105-100	1	Lever
2	85-157	1	Fork head
3	05-303	1	Hex. bolt
4	105-102	1	Bolt
5	04-656	2	DU-Bushing
6	105-101	1	Holder
7	05-378	1	Washer
8	02-234	1	Retaining ring
9	05-308	6	Hex. bolt
10	05-341	2	Lock washer
11	52-926	4	Countersunk screw
12	07-244	1	Retaining ring
13	12-483	2	Ball bearing
14	95-878	1	Rim half
15	91-186	1	Tyre
16	95-879	1	Belt pulley
17	91-184	1	Belt conti-V
18	05-152	4	Hex. nut
19	92-852	2	Bearing
20	05-373	4	Washer
21	05-301	4	Hex. bolt
22	52-591	4	Protective cap
23	04-159	1	Back-up disc
24	53-150	1	Belt pulley
25	107-043	1	Wheel, R.H.
26	10-241	2	Nilos-ring
27	74-008	2	Safety washer
28	12-628	1	Adjusting spring
29	107-044	1	Wheel axle
30	05-335	2	Hex. nut
31	05-149	2	Hex. nut
32	15-120	2	Washer
33	12-568	1	Adjusting shim
34	05-379	1	Washer
35	105-480	1	Rocker
36	05-431	2	Retaining ring
37	13-651	2	Back-up disc
38	04-625	2	Ball bearing
39	04-643	2	Adjusting shim
40	15-370	1	Adjusting shim
41	105-481	1	Angle, L.H.
42	105-482	1	Angle, R.H.
43	04-145	2	Inside ring
44	107-042	1	Wheel, L.H.

Chassis - Covering



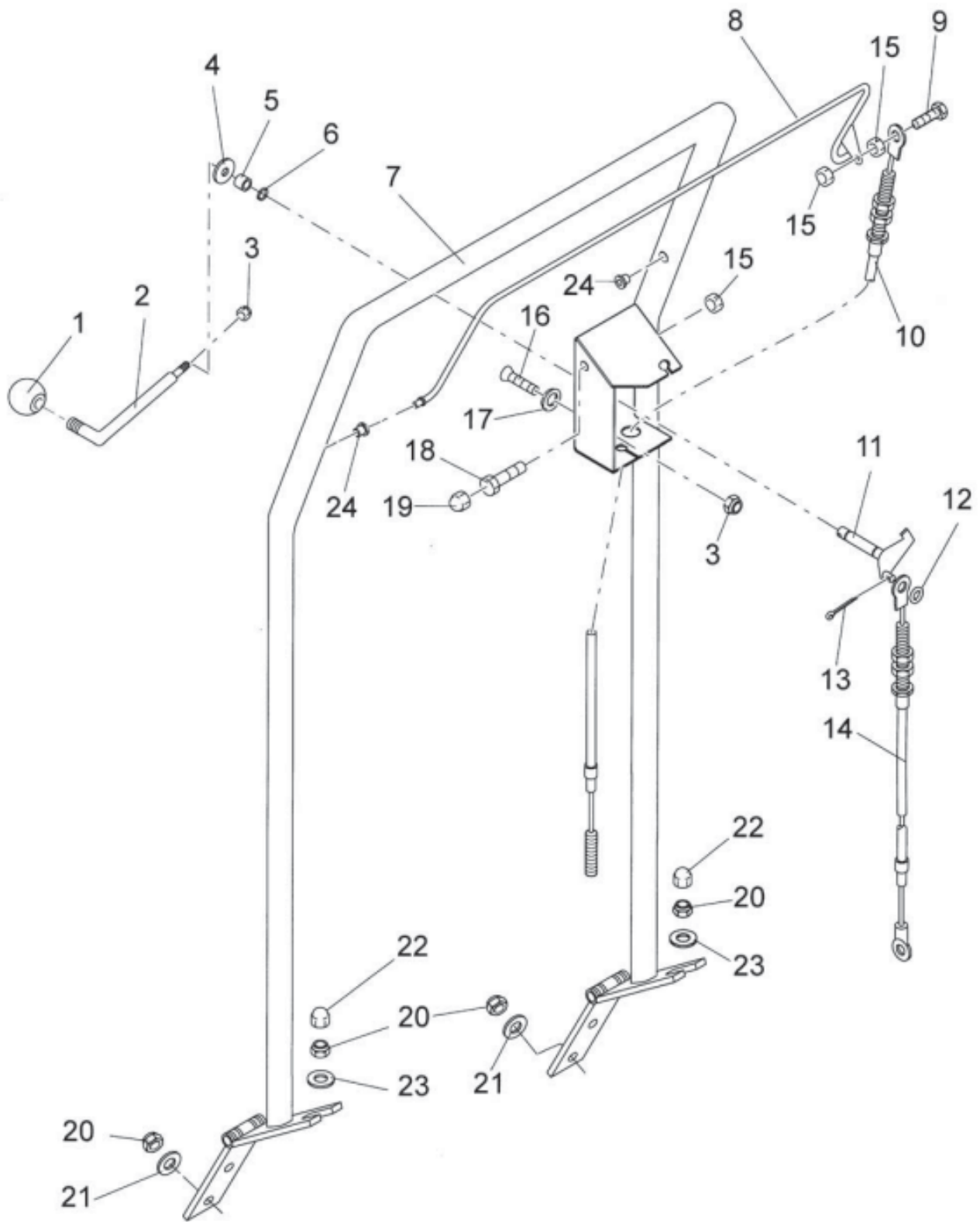
Chassis - Covering BOM

Item	Part No.	Qty.	Description	Item	Part No.	Qty.	Description
1	85-368	2	Plate	32	05-308	8	Hex. bolt
2	15-774	4	Countersunk screw	33	13-161	4	Protective cap
3	04-455	4	Countersunk screw	34	05-375	4	Washer
4	02-923	2	Hinge	35	11-211	1	Guide roller
5	02-169	1	Ignition switch	36	105-544	1	Holder
6	74-589	1	Key (set)	37	53-101	2	Clamping strip
7	107-554	1	Hood	38	105-550	1	Apron
8	105-096	1	Twistlock	39	105-549	1	Strut
9	53-879	1	Retaining disc	40	04-283	1	Earth chain
10	105-095	1	Locking plate	41	74-009	4	Detent washer
11	13-512	6	Washer	42	74-036	2	Grommet
12	05-301	2	Hex. bolt	43	05-373	2	Washer
13	15-467	1	Ball element	44	105-548	1	Seal profil
14	53-112	1	Rubber below	45	105-545	1	Holder
15	53-111	1	Locking disc	46	05-152	3	Hex. nut
16	73-155	2	Fillister head srew	47	13-383	2	Hex. nut
17	05-371	6	Washer	48	05-332	2	Hex. nut
18	15-468	3	Countersunk screw	49	05-151	2	Hex. nut
19	15-769	3	Hollow disc	50	07-423	4	Washer
20	07-380	2	Plug	51	53-105	1	Lever
21	04-144	1	Threaded plate	52	53-108	2	Strut
22	70-541	1	Ball bearing	53	15-280	2	Hex. bolt
23	74-008	1	Safety washer	54	53-107	1	Plate
24	107-409	1	Chassis	55	70-531	1	Pull spring
25	04-143	1	Locking angle	56	105-547	1	Angle
26	13-512	6	Washer	57	13-485	2	Panel screw
27	05-301	3	Hex. bolt	58	73-962	1	Foam rubber
28	02-168	2	Sealing tape	59	105-546	1	Angle
29	05-372	13	Washer	61	05-396	4	Raised countersunk head
30	04-236	13	Cap nut	62	05-311	1	Hex. bolt
31	05-341	4	Lock washer	63	107-338	1	Bushing
				64	05-335	1	Hex. nut

Decal

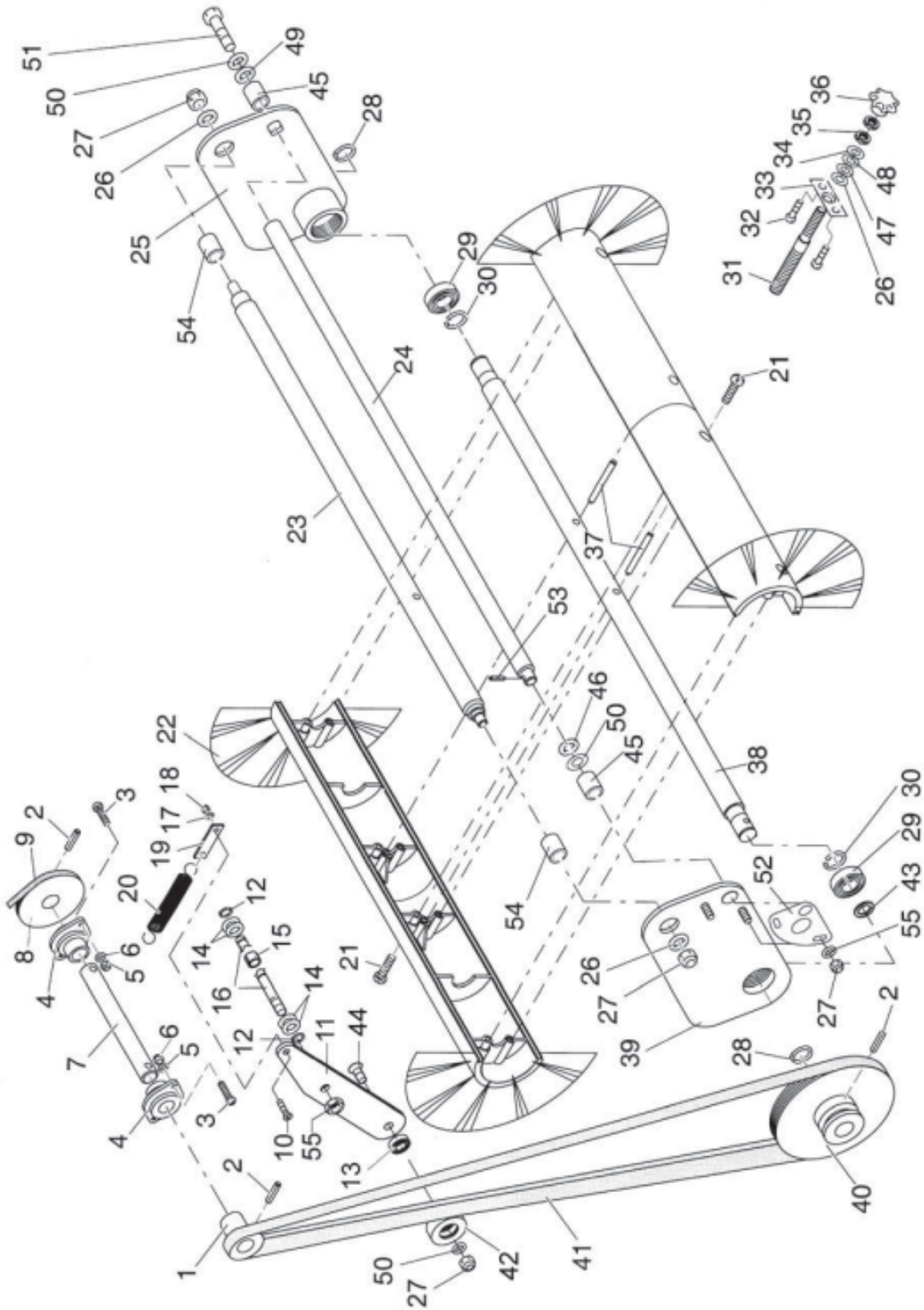
Part No.	Qty.	Description
105-540	1	Decal, look guard of hood
73-971	1	Decal, ventilator
73-972	1	Motor, start
107-353	1	Decal
300-116	1	Decal, side broom
113-269	1	Decal, 12V
300-118	1	Decal, Sweeper roller
107-171	1	Decal, instruction manual
300-119	1	Decal
113-159	1	Decal rotating parts

Steering Handle



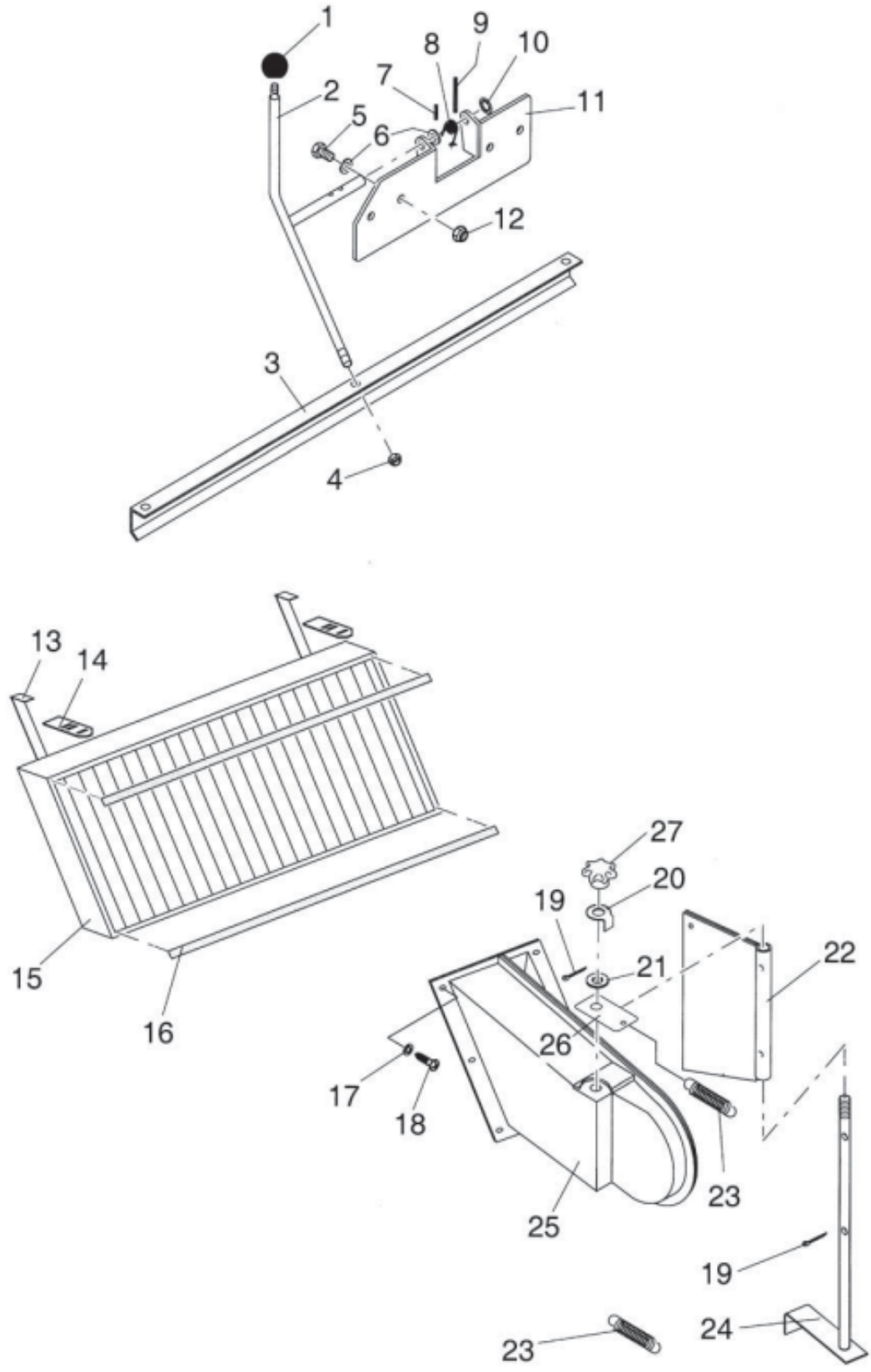
Steering Handle BOM

Item	Part No.	Qty.	Description
1	12-223	1	Ball end
2	53-161	1	Shift lever
3	05-152	1	Hex. nut
4	15-120	1	Washer
5	07-790	1	DU-bushing
6	07-244	2	Retaining ring
7	105-265	1	Steering handle
8	105-264	1	Bow, handle
9	05-302	1	Hex. bolt
10	107-084	1	Bowden cable
11	53-165	1	Shift shaft
12	05-373	1	Washer
13	53-454	1	Cotter pin
14	24-660	1	Bowden cable
15	05-333	3	Hex. nut
16	15-468	1	Countersunk screw
17	15-769	1	Hollow disc
18	05-329	1	Hex. bolt
19	52-591	1	Protective cap
20	05-151	6	Hex. nut
21	74-009	4	Detent washer
22	13-161	2	Protective cap
23	04-290	2	Washer
24	04-140	2	Slide bearing bushing

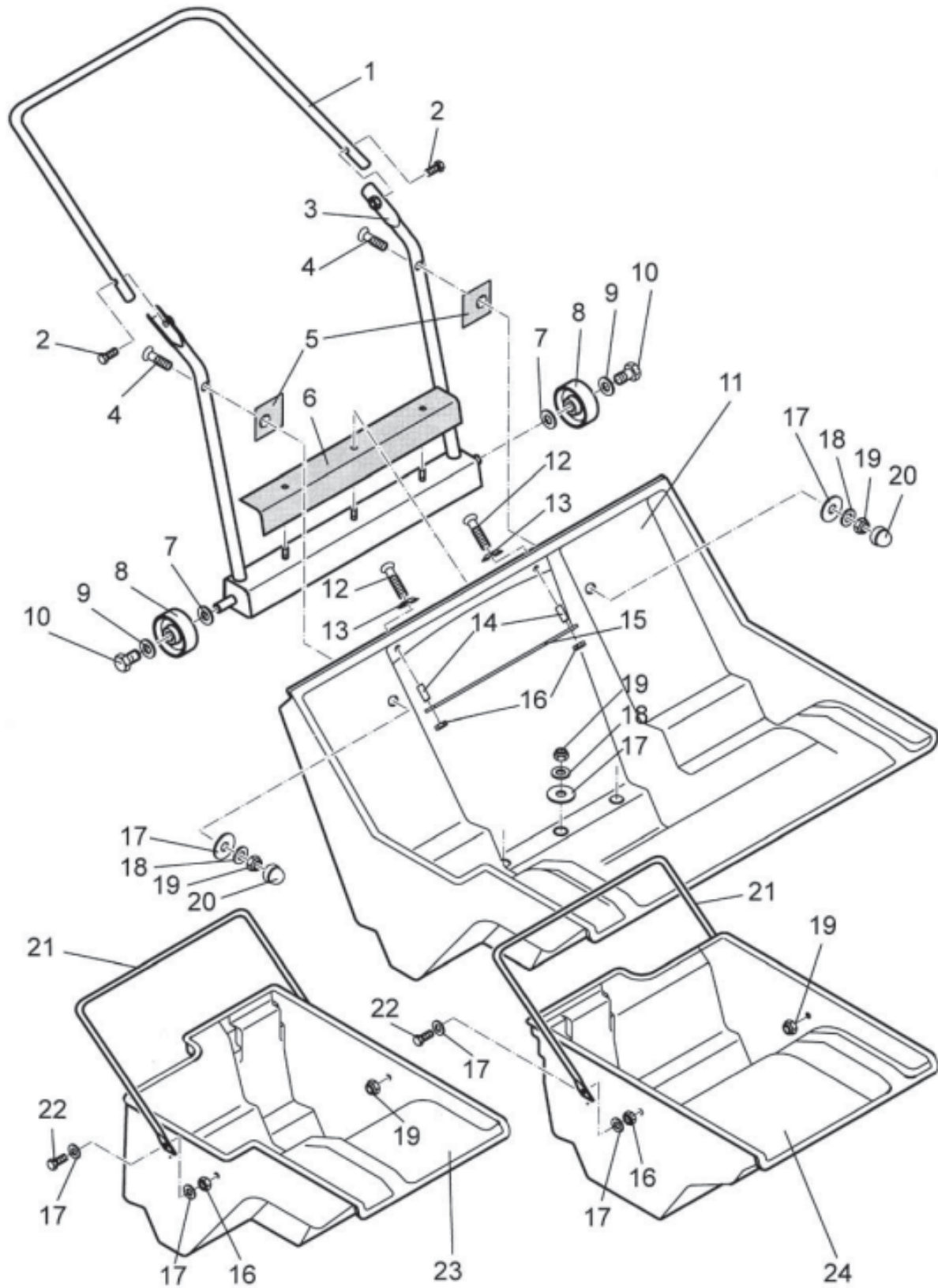


Sweep Roller with Travel Drive BOM

Item	Part No.	Qty.	Description	Item	Part No.	Qty.	Description
1	53-129	1	Belt pulley	30	13-310	4	Retaining ring
2	05-758	3	Tensioning sleeve	31	53-137	1	Threaded bolt
3	07-654	4	Screw	32	15-280	2	Hex. bolt
4	92-852	2	Bearing	33	105-507	1	Plate
5	05-373	4	Washer	34	12-607	1	Ballwasher
6	05-152	4	Hex. nut	35	73-355	2	Hex. nut
7	105-510	1	Shaft	36	48-043	1	Hand wheel
8	53-132	1	Belt pulley	37	90-608	2	Cylinder pin
9	91-179	1	Belt conti-V	38	105-502	1	Brush shaft
10	15-774	1	Countersunk screw	39	105-509	1	Brushrockers, R.H.
11	107-113	1	Lever	40	53-130	1	Belt pulley
12	10-323	2	Retaining ring	41	91-182	1	Belt conti-V
13	12-633	1	Ball bearing	42	53-135	1	Idler pulley
14	10-670	2	Washer	43	04-159	2	Back-up disc
15	96-769	1	Slide bearing	44	85-546	2	Countersunk screw
16	107-415	1	Bolt	45	105-514	2	Bushing
17	05-372	1	Washer	46	90-602	2	Adjusting shim
18	05-134	1	Hex. nut	47	95-924	1	Washer
19	53-143	1	Plate	48	50-307	4	Cup spring
20	70-531	1	Pull spring	49	15-253	1	Back-up disc
21	90-607	8	Raised countersunk head	50	74-009	2	Detent washer
22	105-503	1	Sweeper roller	51	05-309	1	Hex. bolt
23	105-512	1	Adjusting axle	52	105-513	1	Plate
24	105-511	1	Axle of rotation	53	04-562	1	Tensioning sleeve
25	105-508		Brushrockers, L.H.	54	105-515	1	Bushing
26	05-375	3	Washer	55	07-471	1	Hex. nut
27	05-151	4	Hex. nut	56	107-557	1	Bushing
28	02-223	2	Retaining ring	57	12-632	1	Retaining ring
29	70-541	2	Ball bearing				

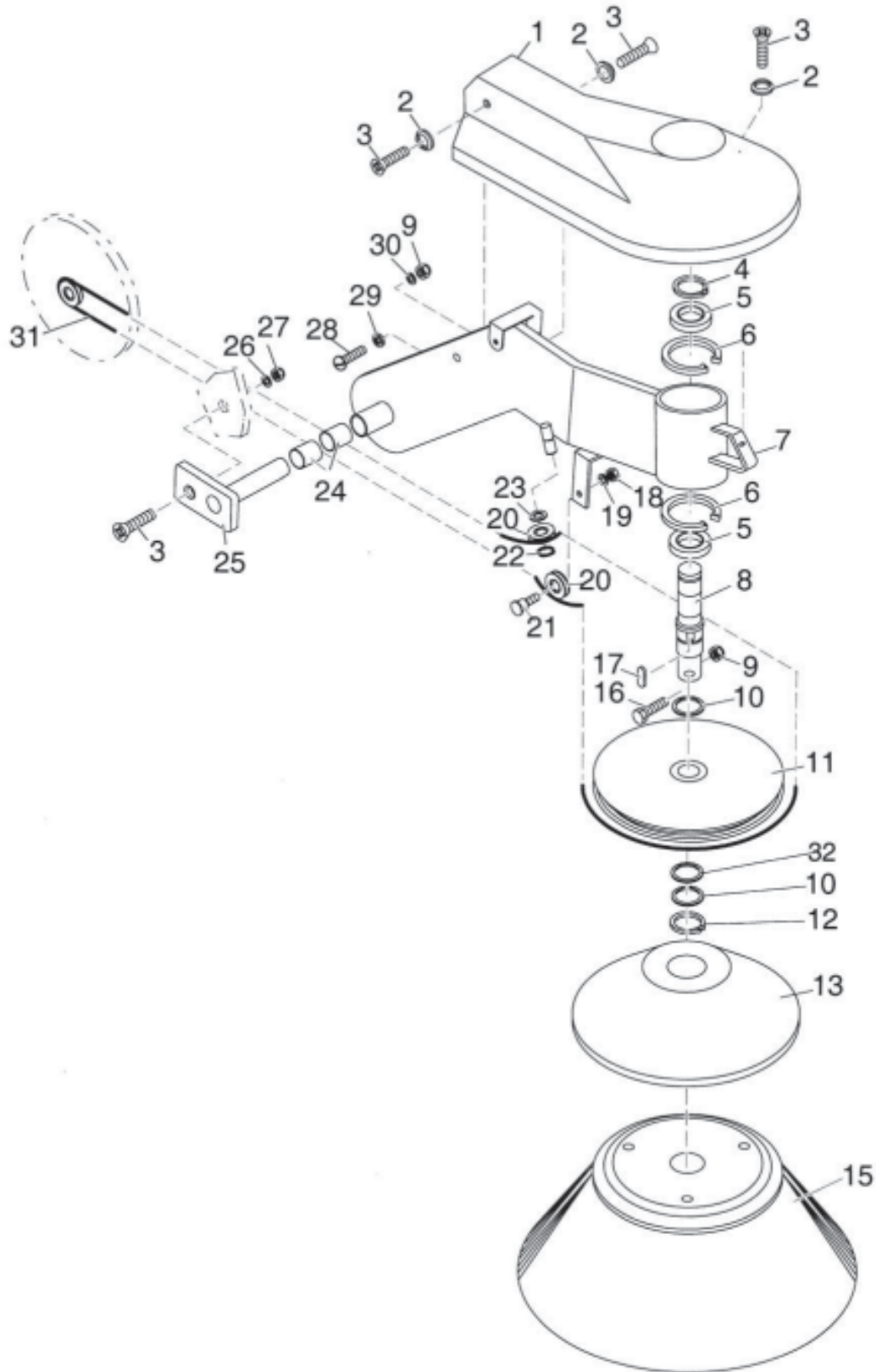


Item	Part No.	Qty.	Description
1	15-467	1	Ball element
2	69-678	1	Lever
3	28-228	1	Profile bar
4	05-152	1	Hex. nut
5	05-310	4	Hex. bolt
6	05-375	5	Washer
7	02-506	1	Tightening pin
8	69-667	1	Spring
9	04-680	1	Spiral pin
10	85-442	1	Retaining washer
11	69-679	1	Hold plate
12	05-151	4	Hex. nut
13	05-989	2	Tightening strap
14	107-276	2	Plate
15	34-091	1	Plate filter
16	74-862	2	Tesamoll
17	13-512	6	Washer
18	05-396	6	Raised countersunk head
19	96-152	2	Cotter pin
20	05-250	1	Locking plate
21	02-061	1	Back-up disc
22	53-156	1	Flap
23	53-695	2	Pull spring
24	53-157	1	Turning lever
25	91-197	1	Suction channel
26	53-154	1	Plate
27	107-105	1	Star handle



Lifter Hopper BOM

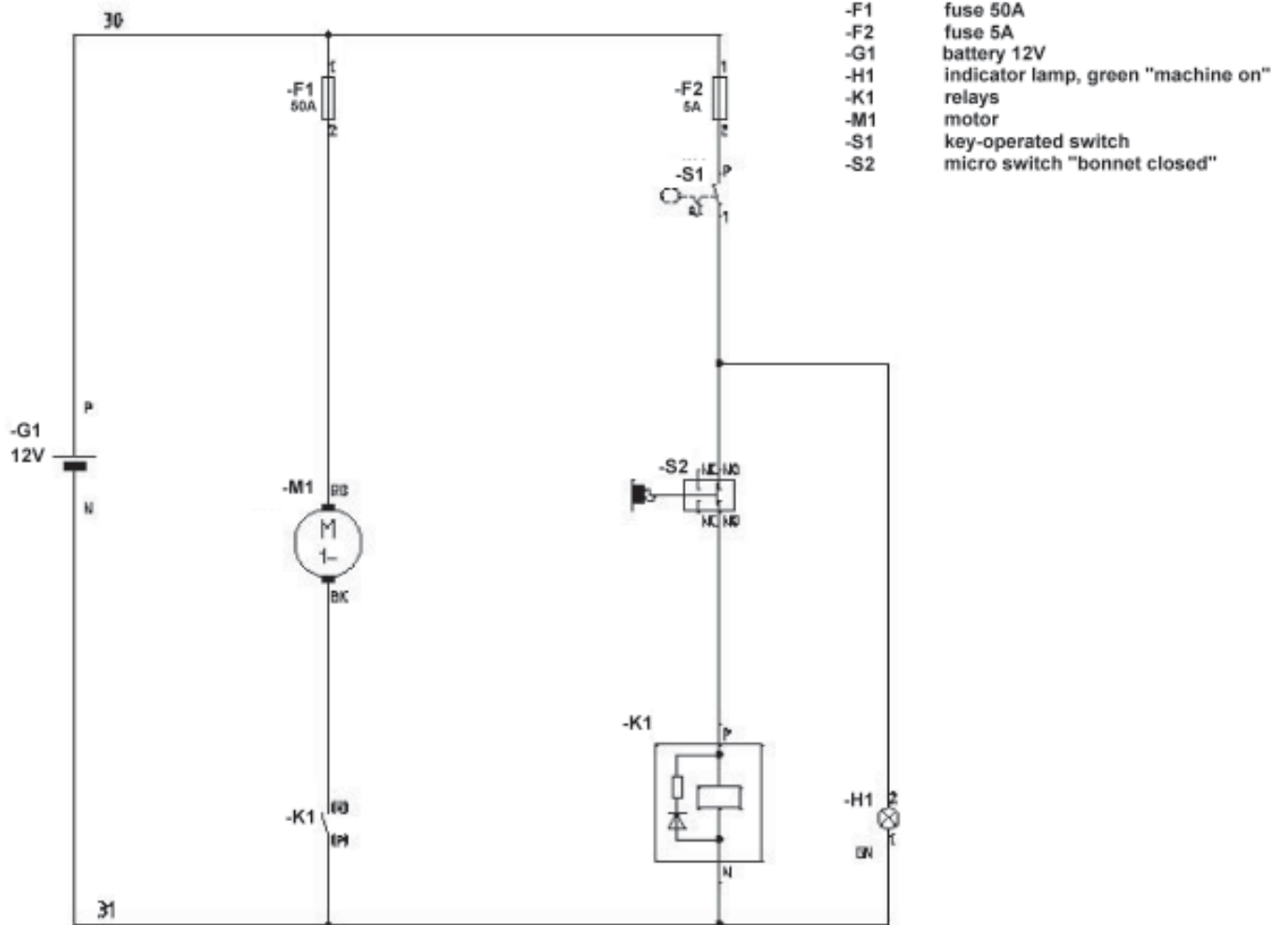
Item	Part No.	Qty.	Description
1	105-516	1	Bow handle
2	55-116	2	Countersunk screw
3	105-517	1	Bracket
4	12-601	2	Countersunk screw
5	105-523	2	Rubber strap
6	105-524	1	Rubber covering
7	05-378	2	Washer
8	105-522	2	Wheel
9	74-008	2	Safety washer
10	15-181	2	Hex.bolt
11	107-553	1	Lifter hopper
12	10-950	2	Countersunk screw
13	15-769	2	Hollow disc
14	53-160	2	Spacer sleeve
15	53-158	1	Strut
16	13-579	6	Hex. nut
17	13-512	17	Washer
18	10-072	5	Washer
19	05-152	9	Hex. nut
20	52-591	2	Protective cap
21	105-521	2	Bow handle
22	15-407	4	Hex. bolt
23	105-519	1	Hopper, R.H.
24	105-520	1	Hopper, L.H.



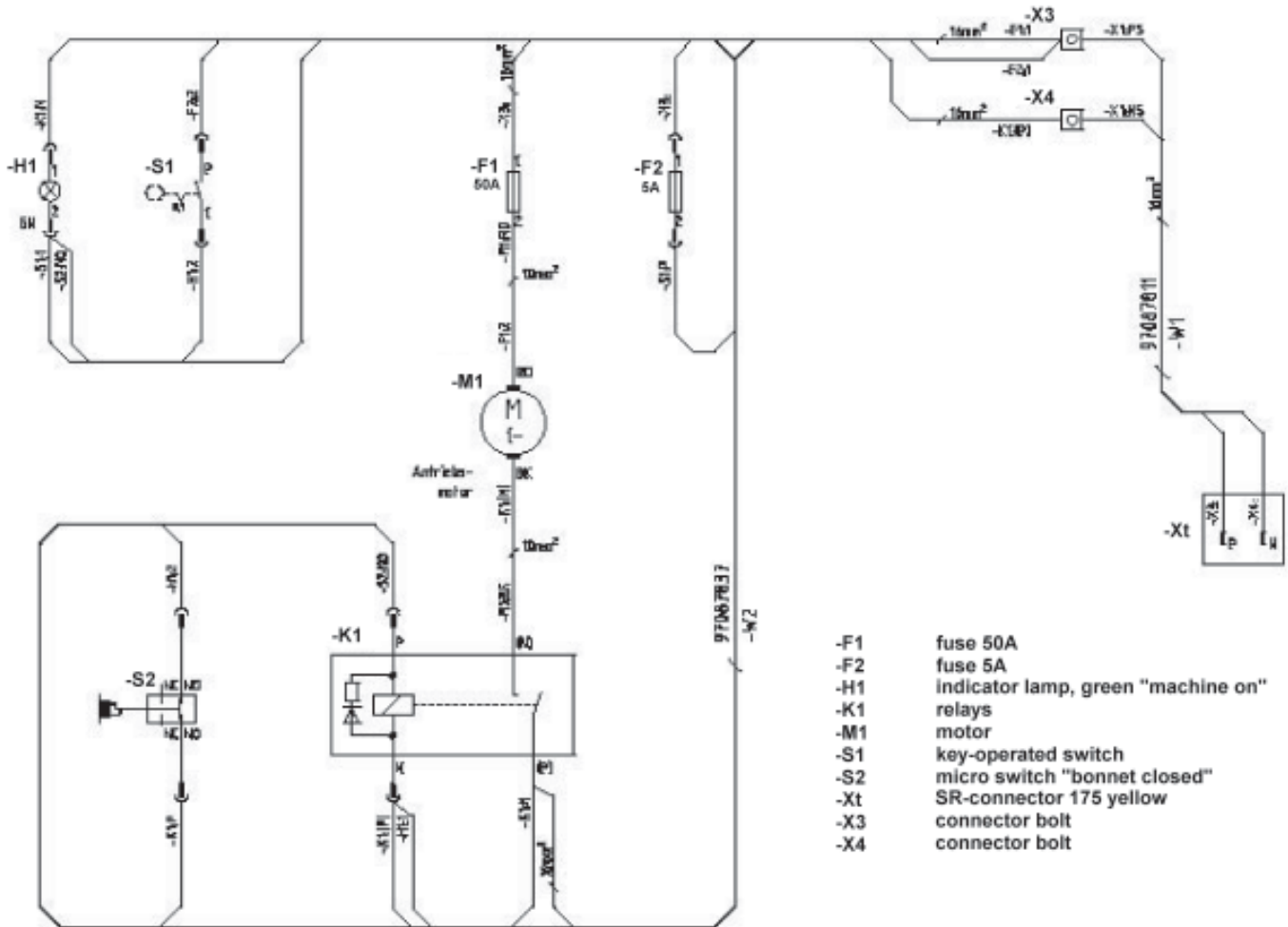
Side Brush Drive BOM

Item	Part No.	Qty.	Description
1	91-194	1	Covering hood
2	07-621	3	Hollow disc
3	15-774	4	Countersunk screw
4	02-234	1	Retaining ring
5	70-636	2	Ball bearing
6	12-632	2	Retaining ring
7	91-192	1	Brush arm
8	53-117	1	Shaft
9	05-152	2	Hex. nut
10	10-176	2	Adjusting shim
11	53-120	1	Belt pulley
12	10-145	1	Retaining ring
13	67-089	1	Fleeting plate
15	01-073	1	Side brush
16	05-304	1	Hex. bolt
17	96-749	1	Adjusting spring
18	05-333	1	Hex. nut
19	05-340	1	Lock washer
20	53-122	2	Rope pulley
21	53-124	1	Bolt
22	10-323	1	Retaining ring
23	10-670	1	Washer
24	10-696	2	DU-bushing
25	53-113	1	Socket pin
26	05-372	1	Washer
27	05-134	1	Hex. nut
28	10-179	1	Screw
29	13-579	1	Hex. nut
30	05-373	1	Washer
31	91-177	1	Round belt
32	90-602	1	Adjusting shim

Circuit Diagram



Wiring Diagram



Minuteman International Made Simple Commercial Limited Warranty



REVISION F
EFFECTIVE 6/1/2009

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.....

Model	Parts	Labor	Poly	Travel
Port A Scrub	1yr	6months	10yrs	0
MPV 13	1yr	0	0	0
MPV 14 & 18	2yrs	1yr	0	0
V Series Upright Vacuums	1yr	1yr	0	0
Rapid Air Blower	1yr	1yr	10yrs	0
Explosion Proof Vacuum	1yr	1yr	0	0
X12, X12H & TRS 14	1yr	1yr	10yrs	0
E17 & E20 Electric Scrubbers	1yr	6month	10yrs	0
Pneumatic Vacuums	3yr	1yr	0	0

Description	Parts	Labor	Poly	Travel
Battery Operated Group	3yrs	2yrs	10	90 days
Sweepers	1yr	1yr	10	90 days
Internal Combustion Group	1yr	1yr	10	90 days

Not to exceed two hours

Exception: PAS 14B **1yr** **1yr** **10yr** **0**

Battery Chargers:

Replacement Parts:

Batteries:

Polyethylene Plastic Tanks:

One year replacement

Ninety days

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

Tanks have 10yr warranty, no additional labor