

**Minuteman<sup>®</sup>**



**Parts Manual**  
**Kleen Sweep 28 - Model Battery**

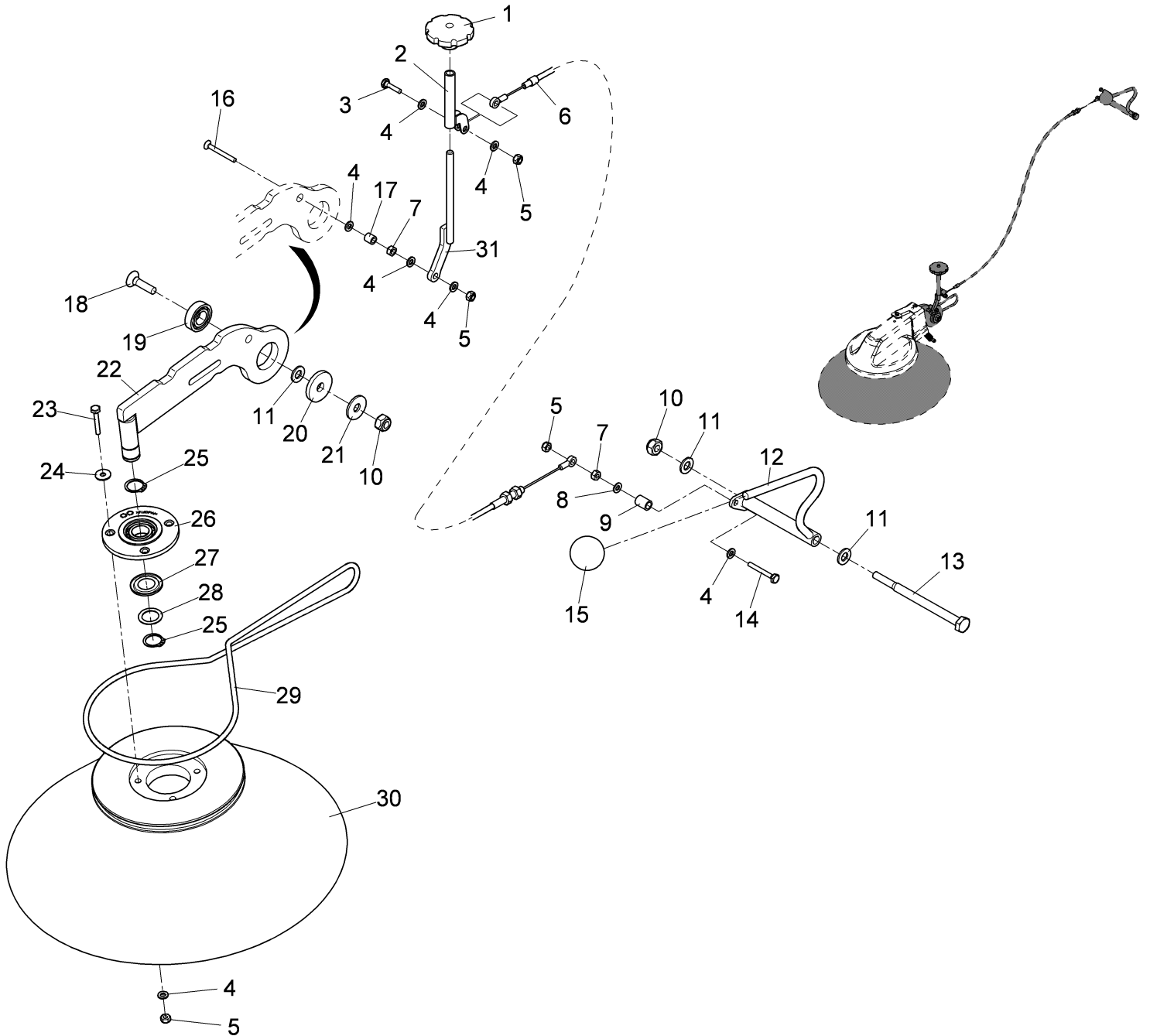
### **For Safety When Servicing or Maintaining Machine**

- Stop on level surface.
- Disconnect the power to the machine by pulling the red Battery Connector located under the recovery tank near the batteries.
- 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.
- Do not clean machine with a pressure washer.
- Authorized personnel must perform repairs and maintenance. Use Minuteman supplied replacement parts.

## Table of Contents

Side broom cpl. part 1 .....	4
Side broom cpl. part 2 .....	6
Frame - Wheels .....	8
Covering MM KS 28B.....	10
Travel drive, part 1 .....	12
Travel drive, part 2.....	14
Electric equipment 12V MM KS 28B .....	16
Main sweeper group.....	22
Filter system MM KS 28B .....	26
Hopper H 650.....	28
Handle - Control element .....	32
Carpet retrofit kit .....	34
Labels KS 28 B.....	36

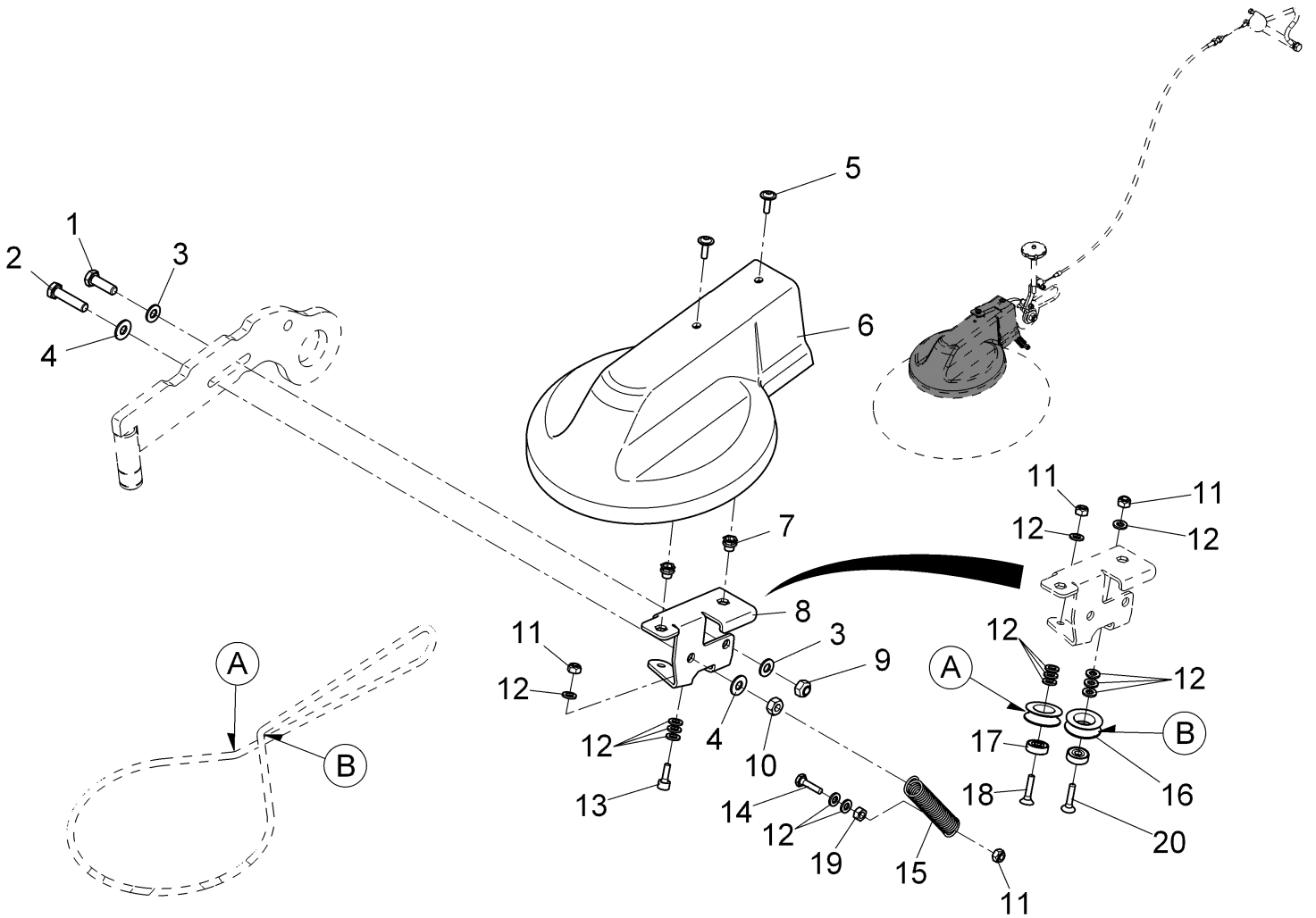
**Side broom cpl. part 1**  
Rev.\* 05/11



Side broom cpl. part 1 (97104618-1 6404-20)  
Rev.\* 05/11

Item	Spare part number	Description	Qty.	Remarks
1	00522330	Hand wheel	1	
2	01271280	Adjusting pipe	1	
3	00154070	Hex.bolt	1	
4	00053730	Washer	8	
5	00051520	Hexagon nut	6	
6	01179680	Bowden cable	1	
7	00053330	Hexagon nut	2	
8	00740280	Washer	1	
9	01130170	Bush	1	
10	00051500	Hexagon nut	2	
11	00053760	Washer	3	
12	01179640	Operating element	1	
13	00504920	Hex.bolt	1	
14	00535110	Hex.bolt	1	
15	00741150	Ball button	1	
16	00109500	Countersunk screw	1	
17	01271310	Bushing	1	
18	01111700	Countersunk screw	1	
19	00106300	Deep groove ball bearing	1	
20	00047080	Washer	1	
21	00046520	Washer	1	
22	01179670	Side broom arm	1	
23	00053290	Hexagon screw	3	
24	00135120	Washer	3	
25	00054310	Retaining ring	2	
26	01173010	Flange bearing	1	
27	00537310	Ring	1	
28	00153700	Adjusting washer	1	
29	01179690	Round belt	1	
30	01270920	Side broom PES	1	
31	01271290	Adjusting rod L.H.	1	

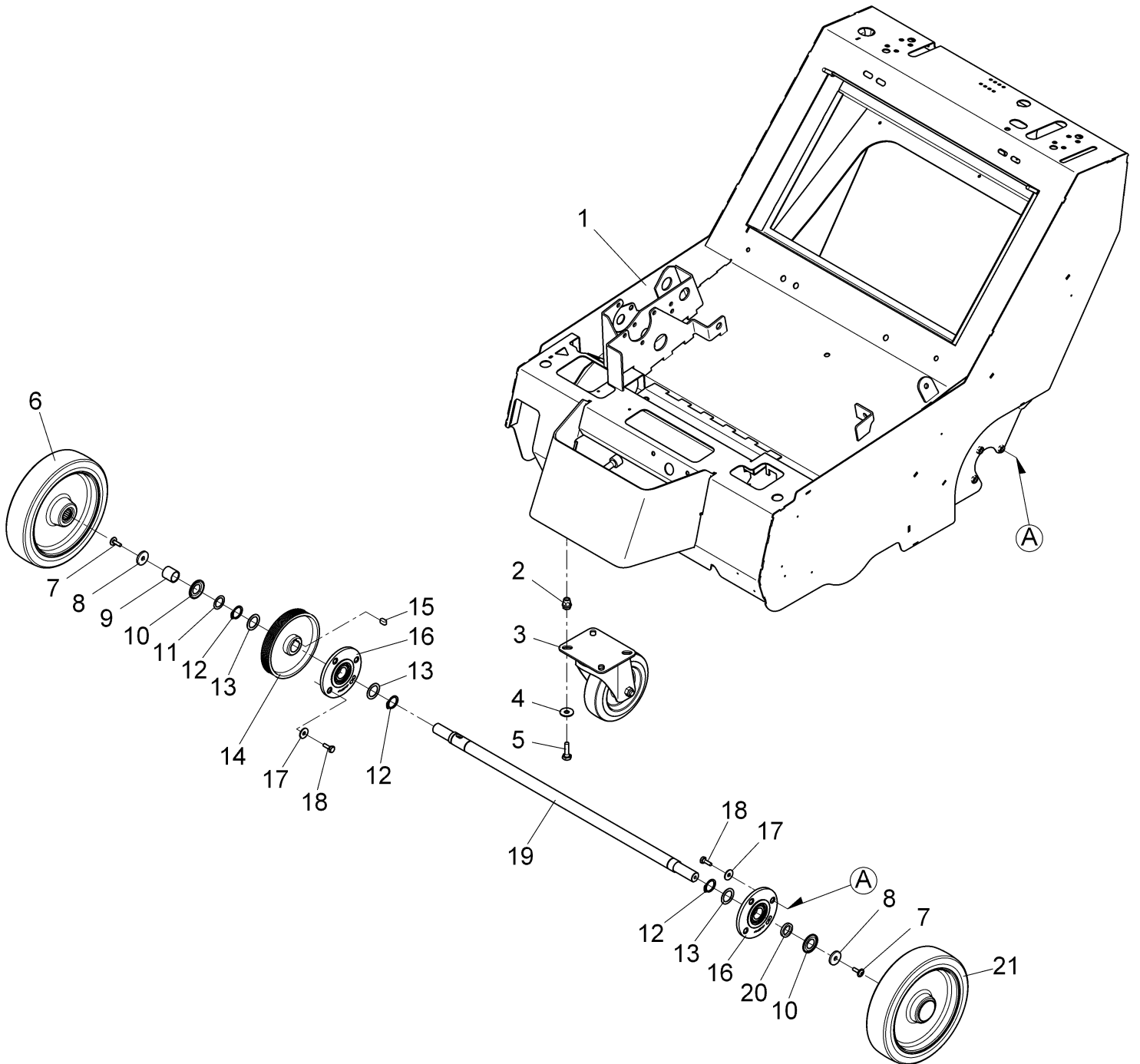
Side broom cpl. part 2  
Rev.\* 05/11



**Side broom cpl. part 2 (97104618-2)**  
 Rev.\* 05/11

Item	Spare part number	Description	Qty.	Remarks
1	00053100	Hexagon screw	1	
2	00054690	Hexagon screw	1	
3	00074230	Washer	2	
4	00740090	Detent edged washer	2	
5	01015340	Lens flange screw	2	
6	01179650	Covering	1	
7	01271300	Nut	2	
8	01179660	Roll holder	1	
9	00051510	Hexagon nut	1	
10	00053350	Hexagon nut	1	
11	00051520	Hexagon nut	4	
12	00053730	Washer	14	
13	00136910	Cylinder head screw	1	
14	00053030	Hexagon screw	1	
15	01131000	Pull spring	1	
16	01179700	Deflection roller	2	
17	01175800	Grooved ball bearing	2	
18	00551160	Countersunk screw	2	
19	00053330	Hexagon nut	1	
20	00529260	Countersunk screw	1	

**Frame - Wheels**  
Rev.\* 05/11

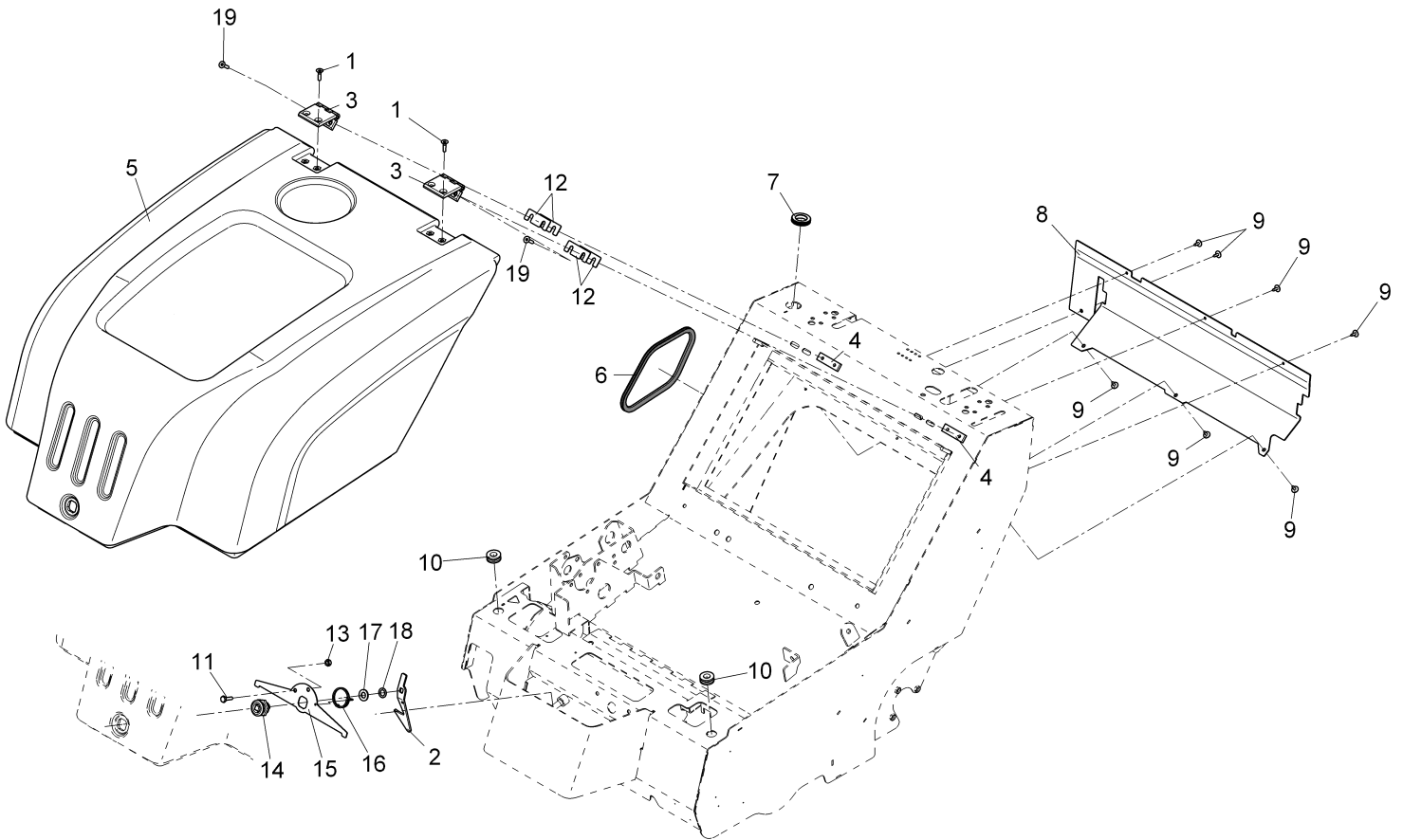




**Frame - Wheels (97104673)**  
 Rev.\* 05/11

Item	Spare part number	Description	Qty.	Remarks
1	03009610	Chassis H650	1	
2	01111990	Nut	4	
3	00911800	Steering roller	1	
4	00740080	Washer	4	
5	00053100	Hexagon screw	4	
6	01179550	Wheel R.H.	1	
7	01015340	Lens flange screw	2	
8	00874340	Washer	2	
9	00041450	Inner ring	2	
10	00102410	Ring	2	
11	00125680	Adjusting washer	1	
12	00054310	Retaining ring	3	
13	00153700	Adjusting washer	3	
14	01179560	Belt pulley	1	
15	00133060	Fitting key	1	
16	01173010	Flange bearing	2	
17	00135120	Washer	6	
18	00053010	Hex.bolt	6	
19	01271330	Shaft H 650	1	
20	01271320	Sleeve	1	
21	01179540	Wheel L.H.	1	

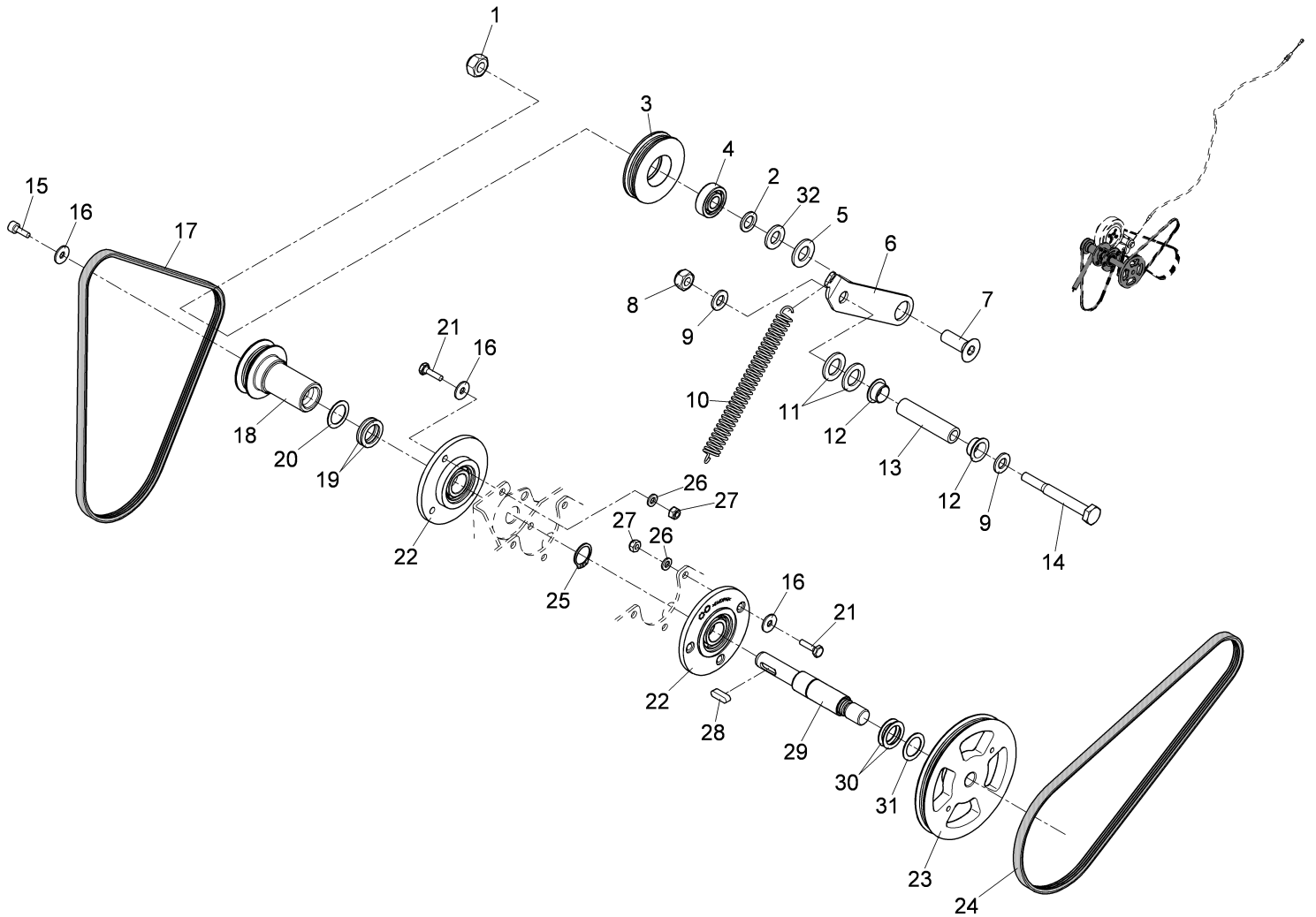
**Covering MM KS 28B**  
Rev.\* 05/11



**Covering MM KS 28B (97116255)**  
Rev.\* 05/11

Item	Spare part number	Description	Qty.	Remarks
1	00872460	Countersunk screw	4	
2	01271020	Hook	1	
3	01179820	Hinge	2	
4	00740440	Plate	2	
5	01271810	Hood	1	
6	00721090	Edge protection	440 mm	
7	00902030	Cable sleeve	1	
8	01271630	Covering rear	1	
9	00747160	Tapping screw	7	
10	00027190	Cable sleeve	2	
11	00053020	Hexagon screw	2	
12	01271640	Sheet metal	4	
13	00051520	Hexagon nut	2	
14	00121730	Sash fastener	1	
15	01271010	Sash fastener sheet metal	1	
16	01271030	Torsion spring	1	
17	00053760	Washer	1	
18	00903250	Adjusting washer	1	
19	01271620	Countersunk screw	2	

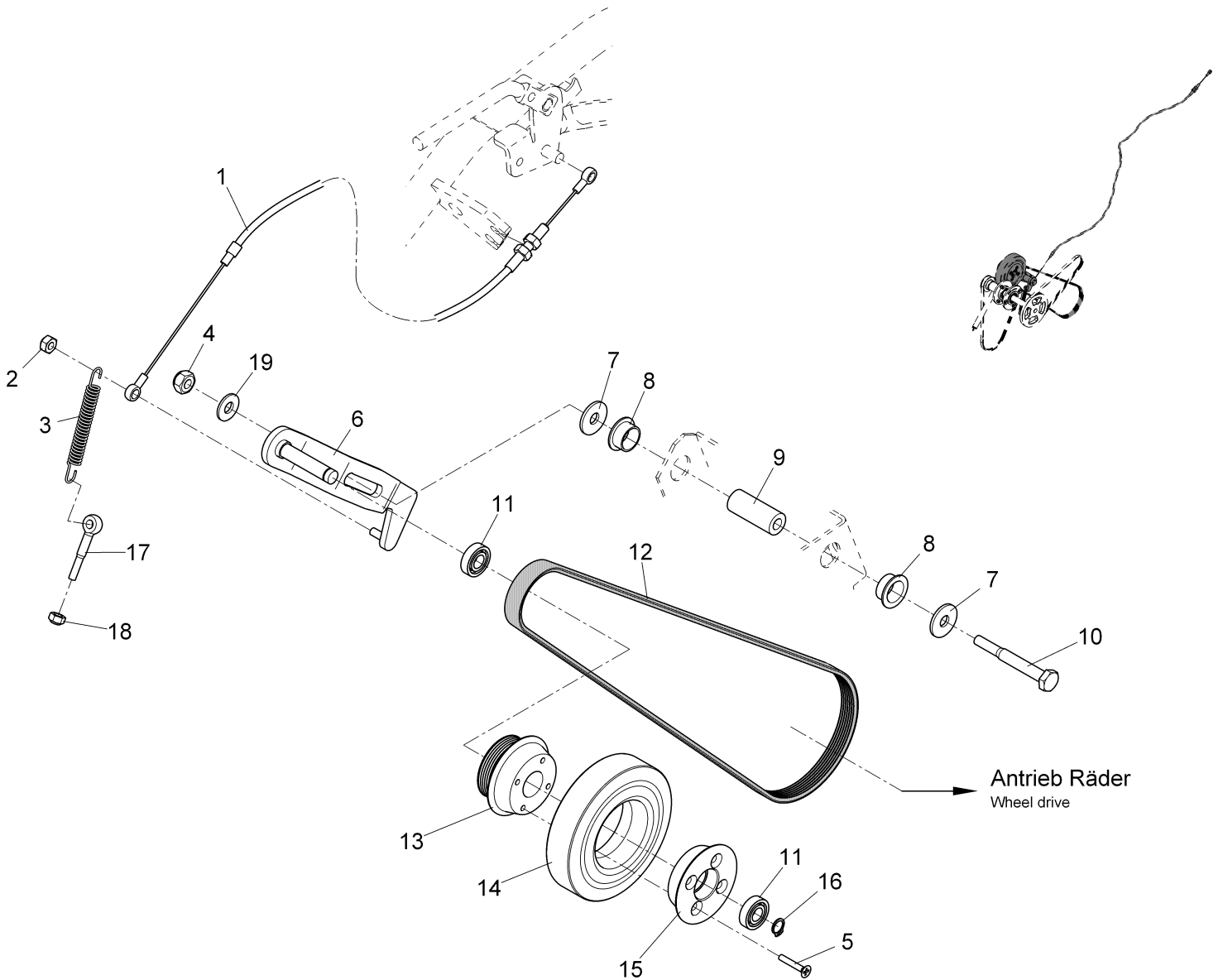
**Travel drive, part 1**  
Rev.\* 05/11



**Travel drive, part 1 (97104723-1)**  
 Rev.\* 05/11

Item	Spare part number	Description	Qty.	Remarks
1	00051490	Hexagon nut	1	
2	00156720	Washer	1	
3	01152600	Pulley	1	
4	00126330	Deep groove ball bearing	1	
5	00053780	Washer	1	
6	01179770	Clamping lever	1	
7	00734400	Countersunk screw	1	
8	00051500	Hexagon nut	1	
9	00053760	Washer	2	
10	01130130	Pull spring	1	
11	00127290	Washer	2	
12	01055290	Plain bearing bush	2	
13	01271480	Bearing bush	1	
14	00157410	Hex.bolt	1	
15	00136910	Cylinder head screw	1	
16	00135120	Washer	7	
17	01176250	Ribbed band	1	
18	01179760	Belt pulley	1	
19	00136510	Supporting ring	2	
20	00153700	Adjusting washer	1	
21	00053020	Hexagon screw	6	
22	01173010	Flange bearing	2	
23	01179750	Belt pulley	1	
24	01179730	Ribbed band	1	
25	00054310	Retaining ring	1	
26	00053730	Washer	6	
27	00051520	Hexagon nut	6	
28	00121640	Feather key	1	
29	01271460	Shaft	1	
30	00152530	Adjusting washer	2	
31	00101760	Adjusting washer	1	
32	00053770	Washer	1	

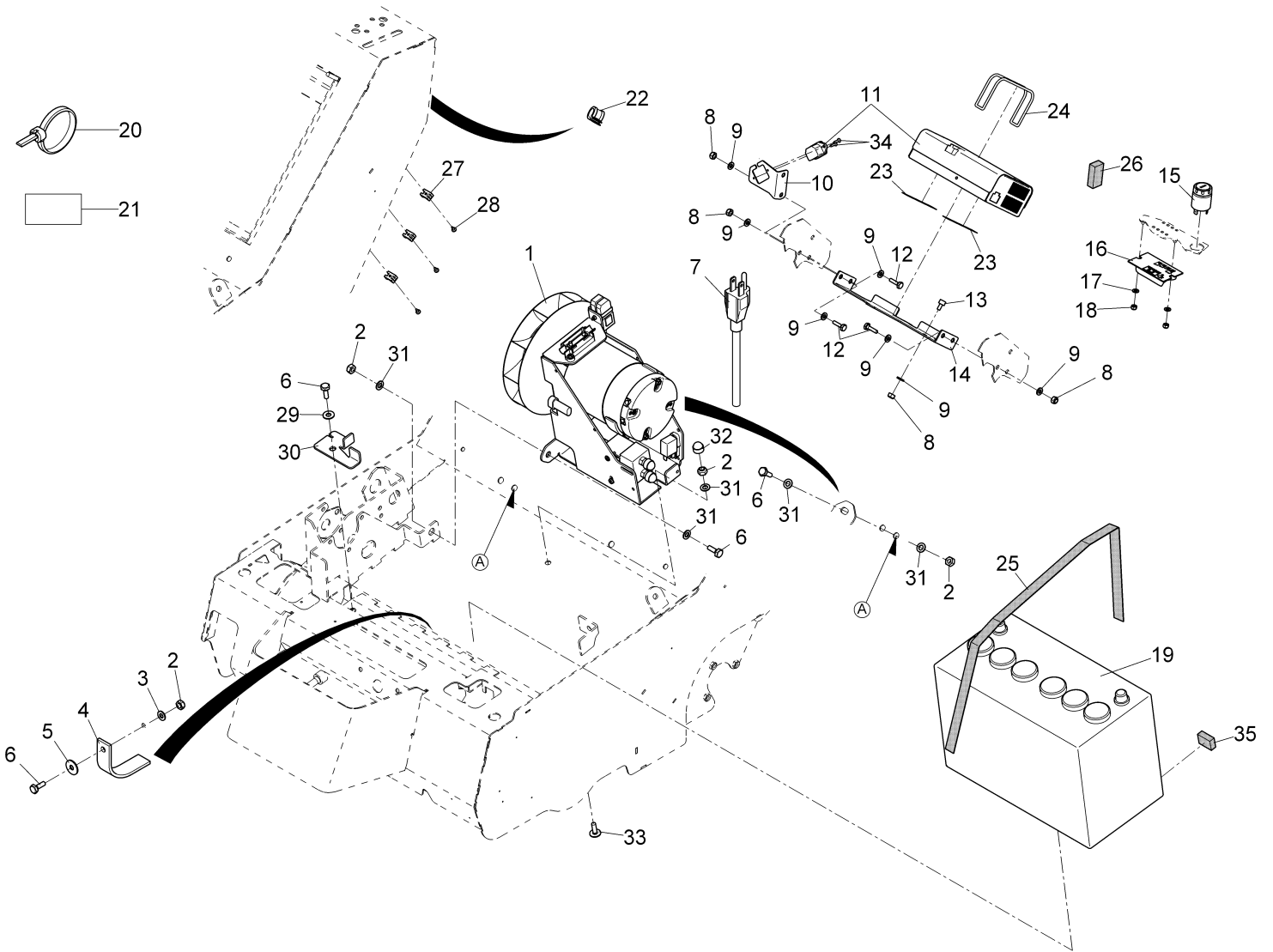
**Travel drive, part 2**  
Rev.\* 05/11



**Travel drive, part 2 (97104723-2)**  
 Rev.\* 05/11

Item	Spare part number	Description	Qty.	Remarks
1	01179790	Bowden cable	1	
2	00051510	Hexagon nut	1	
3	00705310	Tension spring	1	
4	00051500	Hexagon nut	1	
5	00529260	Countersunk screw	4	
6	01179710	Retainer	1	
7	00046520	Washer	3	
8	01130470	Slide bearing bush	2	
9	01271470	Bushing	1	
10	00107600	Hex.bolt	1	
11	00124830	Deep groove ball bearing	2	
12	01179720	Ribbed band	1	
13	01179780	Belt pulley	1	
14	00911860	Tyre	1	
15	00958780	Rim	1	
16	00072440	Circlip	1	
17	00706170	Eye bolt	1	
18	00051510	Hexagon nut	1	
19	00870090	Detent edged washer	1	

**Electric equipment 12V MM KS 28B**  
 Rev.\* 05/11

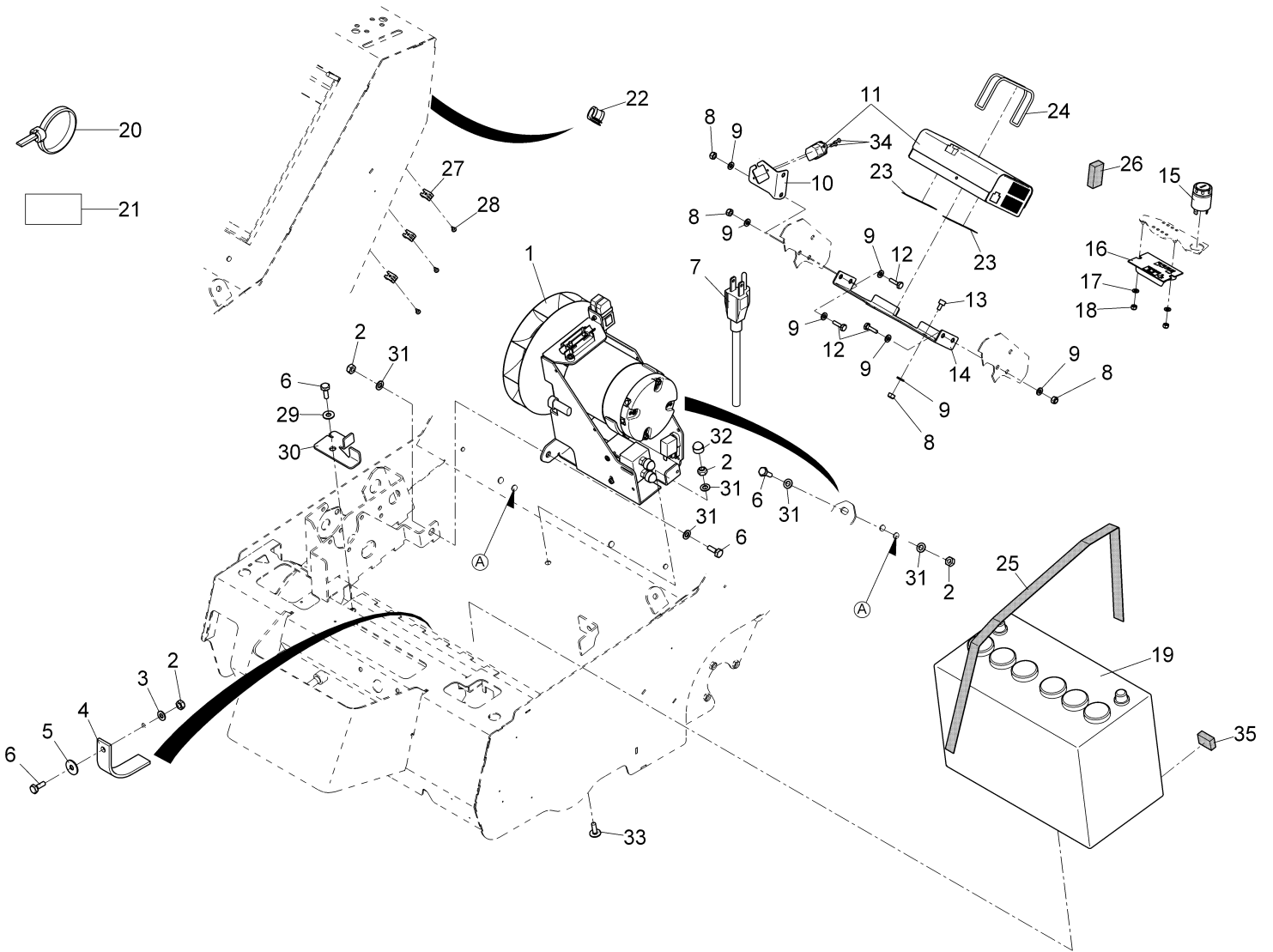




**Electric equipment 12V MM KS 28B (97116271)**  
 Rev.\* 05/11

Item	Spare part number	Description	Qty.	Remarks
1	<b>97104962</b>	<b>Motor group E 12V</b>	<b>Page</b>	<b>20</b>
2	00051510	Hexagon nut	4	
3	00074230	Washer	1	
4	01271050	Ground strap	1	
5	00042900	Washer	1	
6	00053090	Hexagon screw	4	
7	01271820	Power cable	1	
8	00051520	Hexagon nut	6	
9	00053730	Washer	11	
10	01271710	Angle	1	
11	01270990	On-board charger	1	
12	00053010	Hex.bolt	5	
13	00134200	Socket head screw	1	
14	01271720	Retainer	1	
15	00021710	Key switch	1	
16	01178800	Signal transmitter 12V-24V	1	
17	00053720	Washer	2	
18	00051340	Hexagon nut	2	
19	99742700	Block battery	1	
20	00121150	Cable tie	25	
21	03009630	Wiring harness W1	1	
22	00970350	Pipe clamp	1	
23	00748620	Gasket Tesamoll	90 mm	
24	01171850	O-ring	1	
25	01271730	Tension band	1	
26	01031010	Foam rubber self sticking	40 mm	
27	00780710	Socket	3	
28	00134850	Tapping screw	3	
29	00740090	Detent edged washer	1	
30	01271750	Angle	1	
31	00924700	Washer	5	
32	00131610	Lens cap	2	
33	01000670	Lens flange screw	1	
34	01271740	Tapping screw	2	

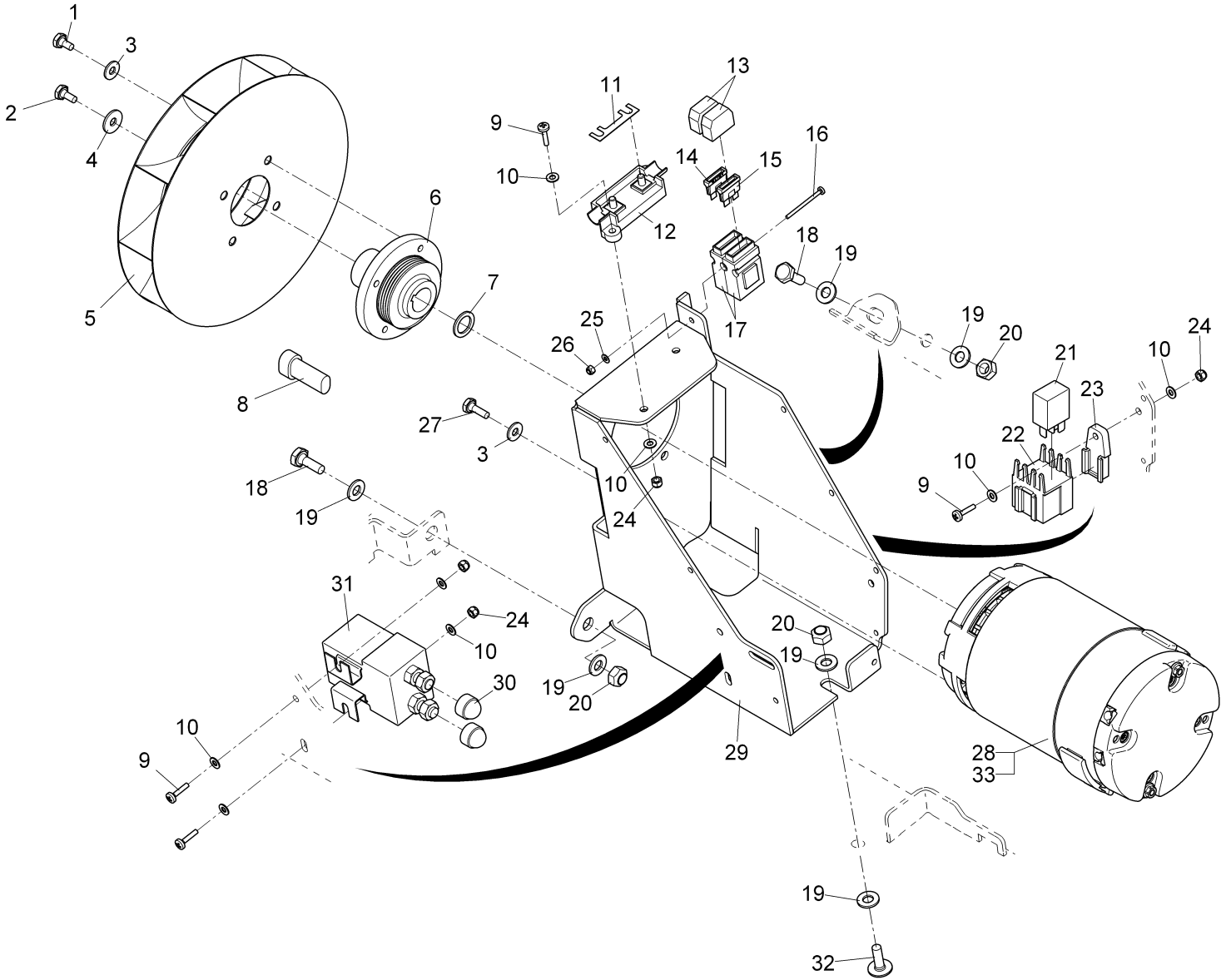
**Electric equipment 12V MM KS 28B**  
 Rev.\* 05/11



Electric equipment 12V MM KS 28B (97116271)  
Rev.\* 05/11

Item	Spare part number	Description	Qty.	Remarks
35	00430880	Foam rubber, grey	30 mm	

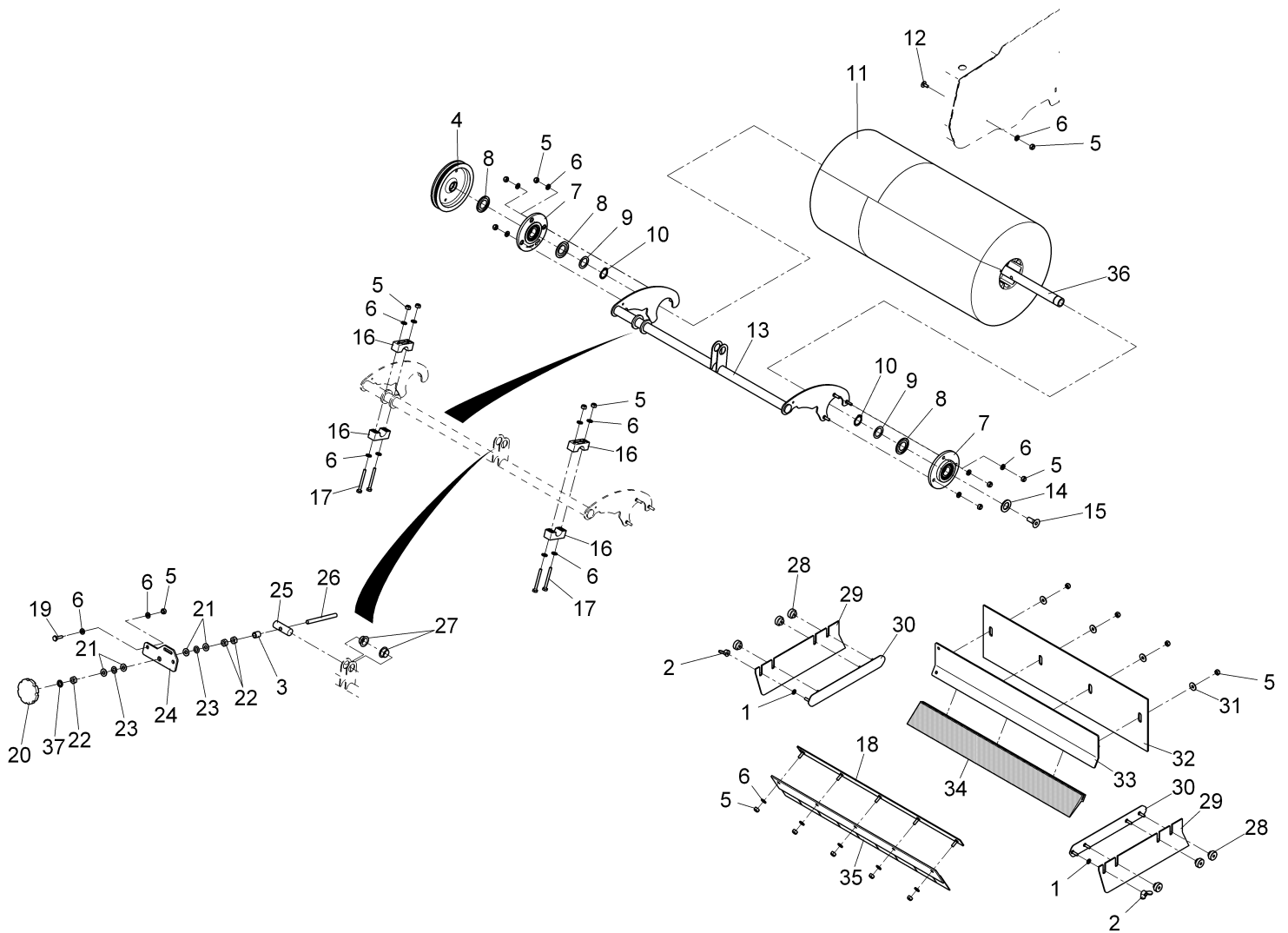
**Motor group E 12V**  
Rev.\* 05/11



**Motor group E 12V (97104962)**  
 Rev.\* 05/11

Item	Spare part number	Description	Qty.	Remarks
1	00025260	Hexagon screw	4	
2	00104500	Hexagon screw	1	
3	00730940	Detent edged washer	8	
4	00135120	Washer	1	
5	00661680	Fan wheel	1	
6	01270950	Belt pulley	1	
7	00020610	Supporting ring	1	
8	01135470	pin housing	1	
9	00731550	Fillister-head screw	5	
10	00053710	Washer	10	
11	01176290	Fuse link	1	
12	00903510	Fuse holder	1	
13	00133570	Lens cap	2	
14	00733630	Fuse	1	
15	00906120	Fuse	1	
16	00101580	Fillister-head screw	1	
17	00733650	Fuse holder	2	
18	00053090	Hexagon screw	2	
19	00074230	Washer	6	
20	00051510	Hexagon nut	3	
21	01141170	Relay	1	
22	01271830	Relay base	1	
23	01271780	Retainer	1	
24	00133830	Hex. Nut	5	
25	00553740	Washer	1	
26	00022200	Hex. Nut	1	
27	00053010	Hex.bolt	4	
28	01175770	Motor	1	
29	01271790	Retainer	1	
30	00131610	Lens cap	2	
31	00744680	Ignition switch	1	
32	01000670	Lens flange screw	1	
33	01175780	Carbon brush	1	

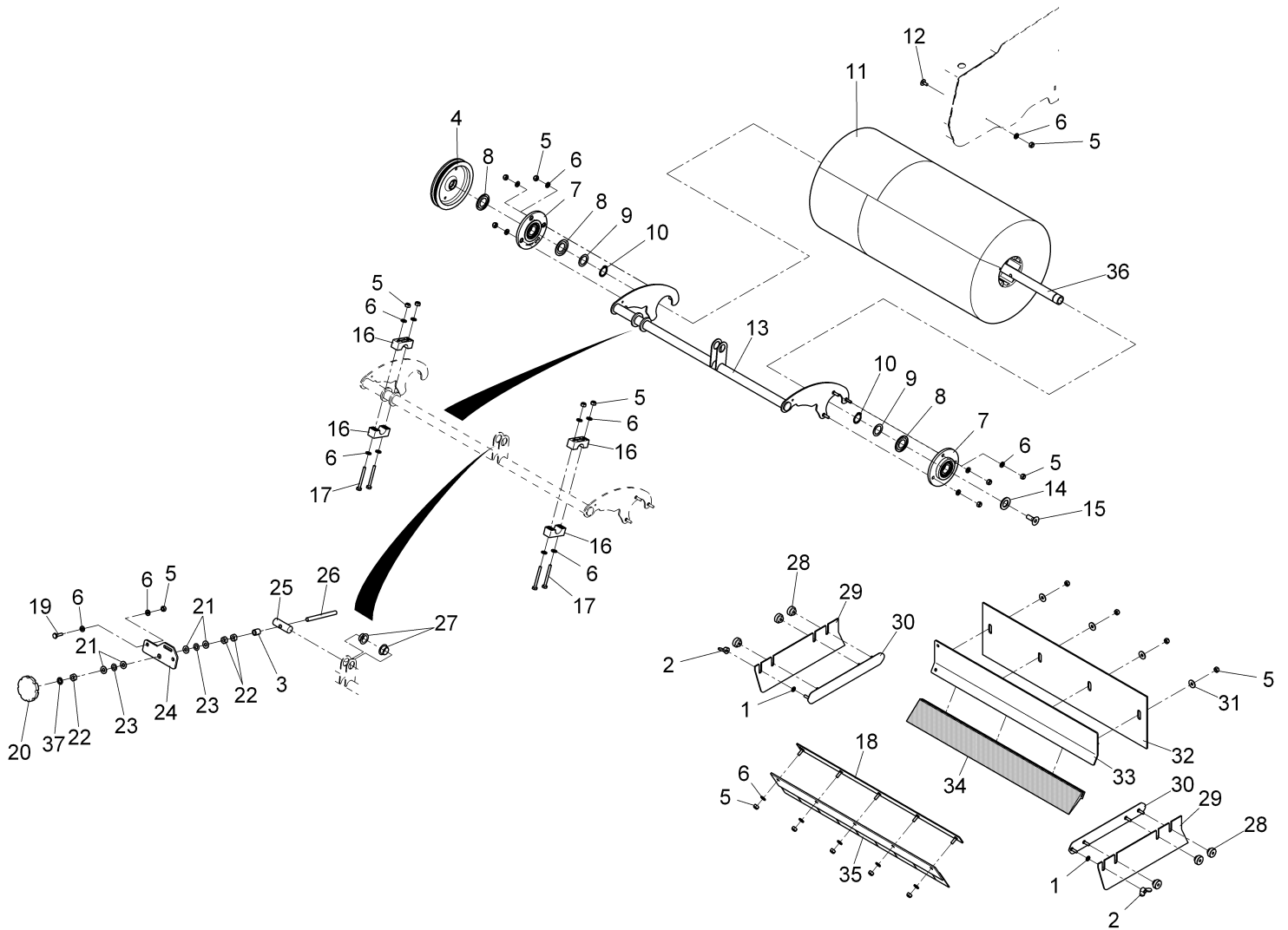
**Main sweeper group**  
Rev.\* 05/11



**Main sweeper group (97104772)**  
 Rev.\* 05/11

Item	Spare part number	Description	Qty.	Remarks
1	01072030	Toothed washer	2	
2	00054020	Wing nut	2	
3	01111390	Sleeve	1	
4	01271040	Belt pulley	1	
5	00051520	Hexagon nut	27	
6	00053730	Washer	26	
7	01173010	Flange bearing	2	
8	00537310	Ring	3	
9	00153700	Adjusting washer	2	
10	00054310	Retaining ring	2	
11	01272090	Sweeper roller H650	1	
12	01000850	Lens flange screw	2	
13	01271410	Broom rocker	1	
14	00127290	Washer	1	
15	01059150	Countersunk screw	1	
16	01271360	Bearing seat	4	
17	00053060	Hex.bolt	4	
18	01271400	Sheet metal	1	
19	00053020	Hexagon screw	2	
20	00480430	Hand wheel	1	
21	00074230	Washer	5	
22	00053350	Hexagon nut	3	
23	00053850	Spring washer	2	
24	01271350	Reinforcement	1	
25	01271370	Bolt	1	
26	01271380	Stud screw	1	
27	01055290	Plain bearing bush	2	
28	00903210	Knurled nut	8	
29	01179610	Sealing strip	2	
30	01271340	Sheet metal	2	
31	00135120	Washer	4	
32	01175880	Broom apron rear H650	1	
33	01271390	Angle plate	1	
34	00461460	Edge protection	510 mm	

**Main sweeper group**  
Rev.\* 05/11

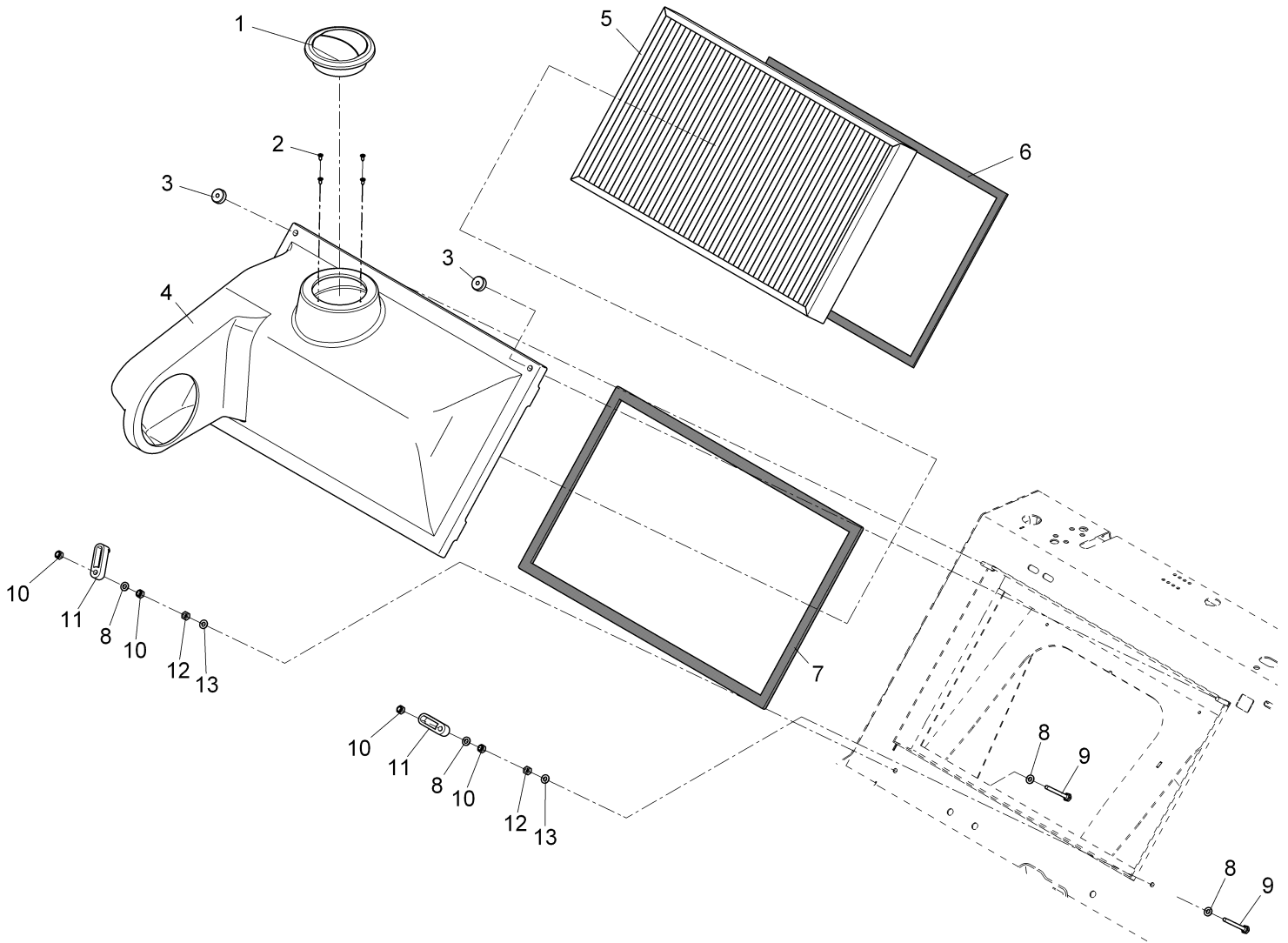




**Main sweeper group (97104772)**  
Rev.\* 05/11

<b>Item</b>	<b>Spare part number</b>	<b>Description</b>	<b>Qty.</b>	<b>Remarks</b>
35	01175890	Broom apron front H650	1	
36	01271840	Broom shaft	1	
37	01144660	toothed locked washer	1	

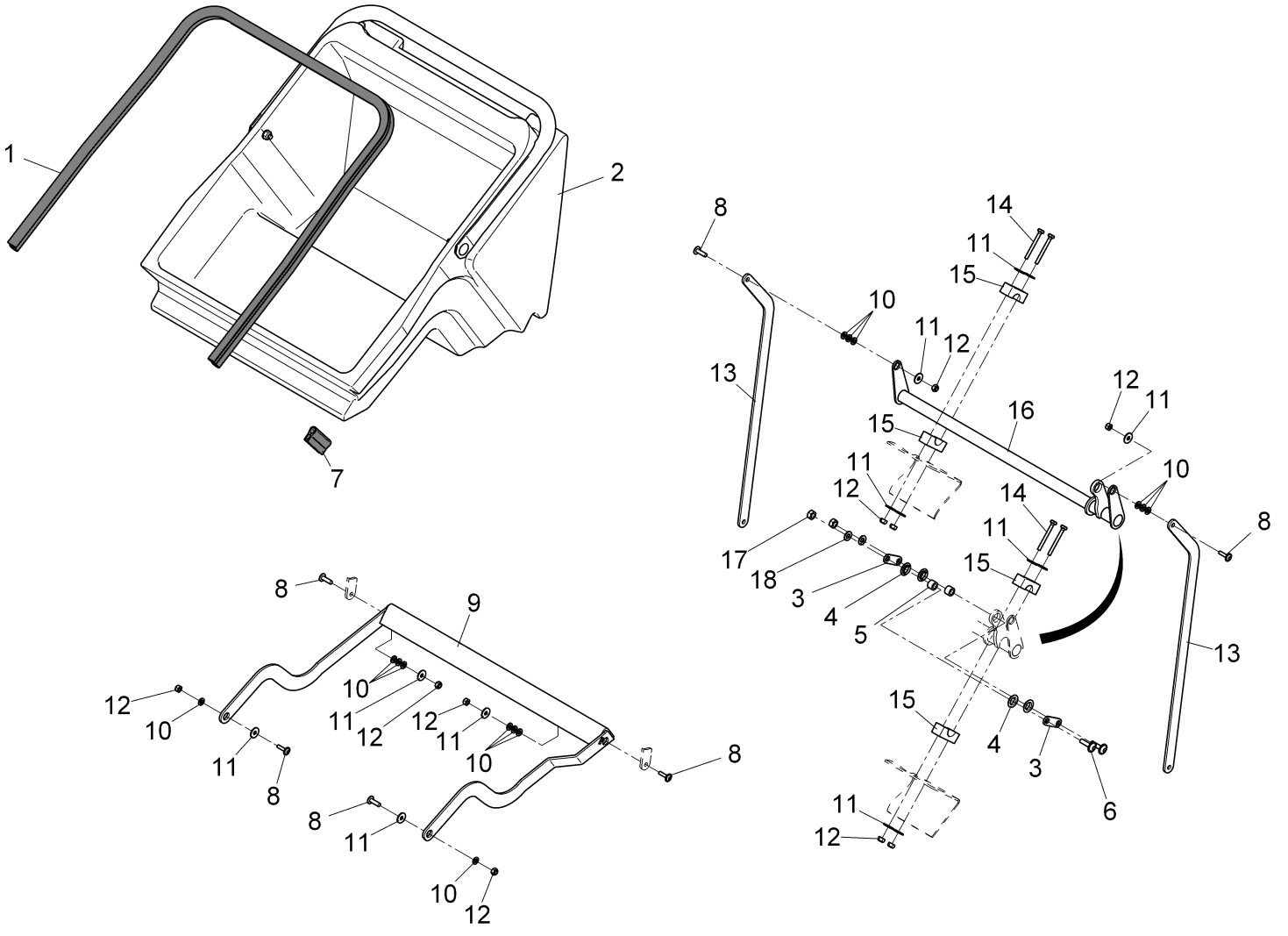
**Filter system MM KS 28B**  
Rev.\* 05/11



**Filter system MM KS 28B (97116297)**  
 Rev.\* 05/11

Item	Spare part number	Description	Qty.	Remarks
1	00391480	Air nozzle	1	
2	01073600	Tapping screw	4	
3	00903210	Knurled nut	2	
4	01270940	Filter cover	1	
5	00911850	Plate filter	1	
6	00881980	Sealing tape	1580 mm	
7	01130200	Gasket	1580 mm	
8	00053730	Washer	4	
9	00053060	Hex.bolt	2	
10	00051520	Hexagon nut	4	
11	00968190	Toggle	2	
12	00053330	Hexagon nut	2	
13	00740280	Washer	2	

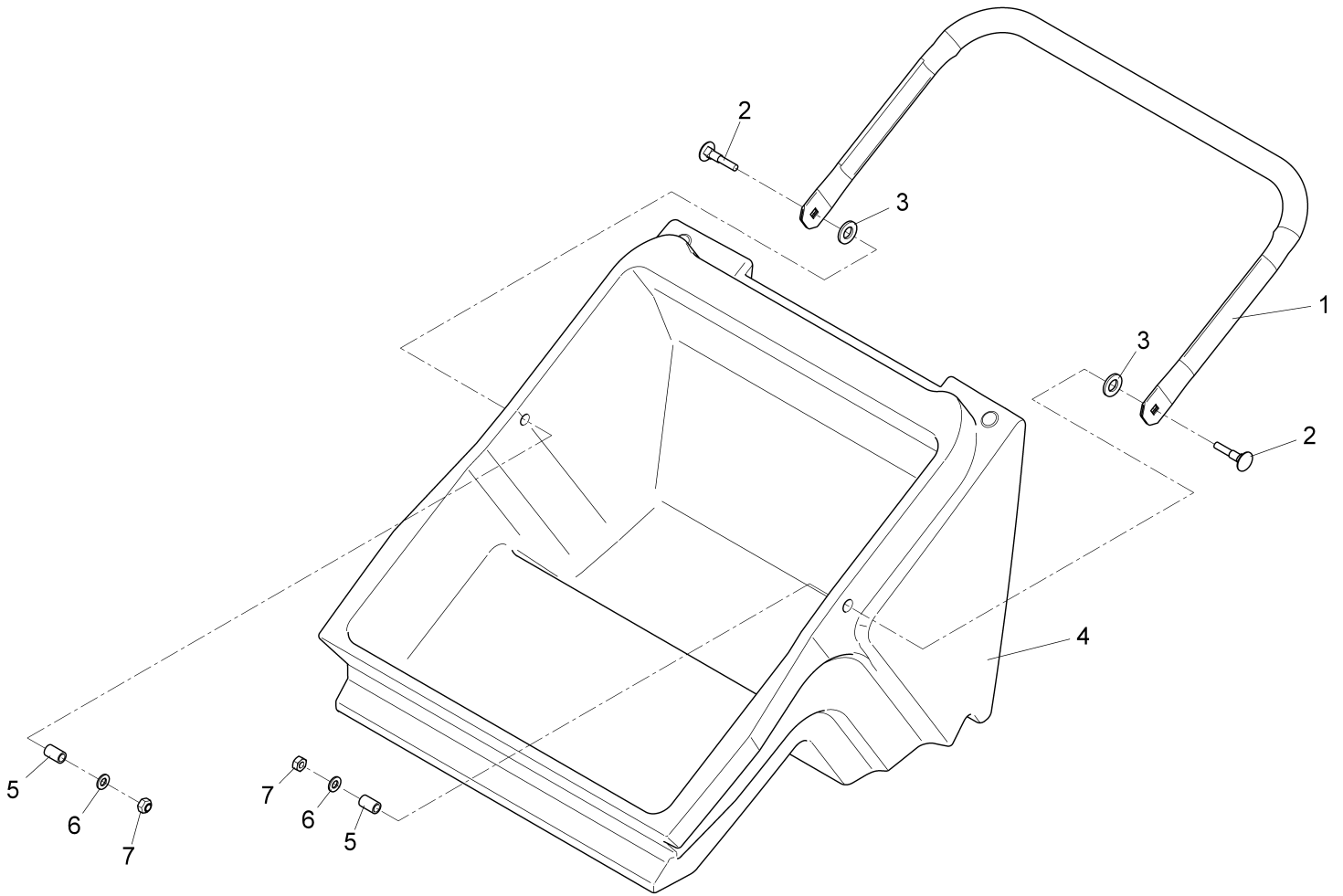
**Hopper H 650**  
Rev.\* 05/11



Hopper H 650 (97104657)  
Rev.\* 05/11

Item	Spare part number	Description	Qty.	Remarks
1	00750430	Edge protection	1490 mm	
2	<b>97104970</b>	<b>Hopper cpl.</b>	<b>Page</b>	<b>30</b>
3	01271500	Sheet metal	2	
4	01055150	Plain bearing bush	4	
5	01271490	Bearing bush	2	
6	01092910	Lens flange screw	2	
7	01052820	Edge protection	60 mm	
8	01092780	Lens flange screw	6	
9	01271530	Lever	1	
10	00053730	Washer	20	
11	00135120	Washer	14	
12	00051520	Hexagon nut	10	
13	01271510	Truss	2	
14	00053060	Hex.bolt	4	
15	01271360	Bearing seat	4	
16	01271520	Shaft	1	
17	00053350	Hexagon nut	2	
18	00740310	Washer	2	

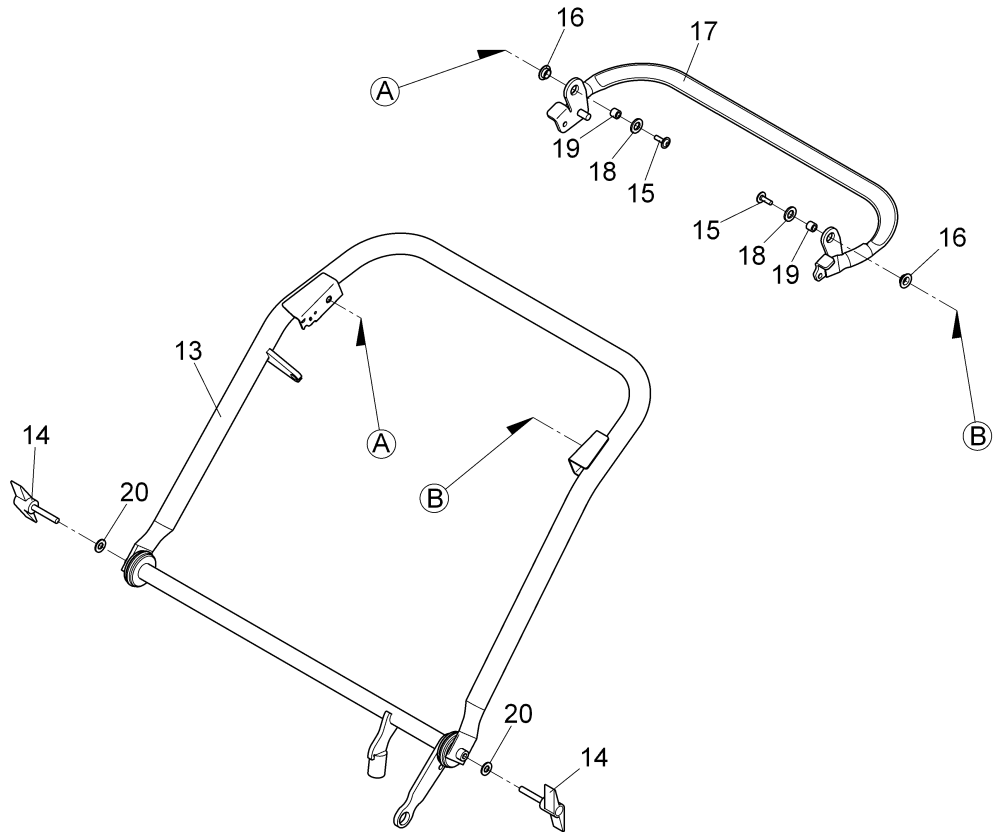
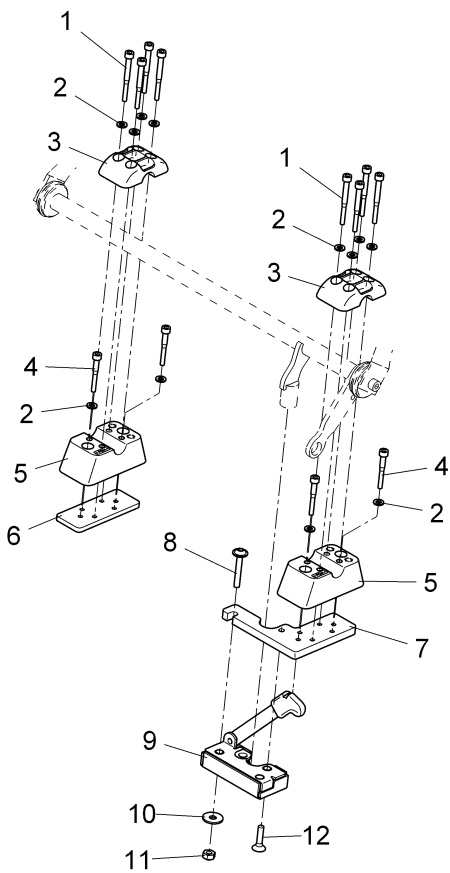
Hopper cpl.  
Rev.\* 05/11



Hopper cpl. (97104970)  
Rev.\* 05/11

Item	Spare part number	Description	Qty.	Remarks
1	01271850	Tube bow	1	
2	01073500	Screw	2	
3	00053770	Washer	2	
4	01271860	Litter hopper	1	
5	00100590	Pipe	2	
6	00042900	Washer	2	
7	00051510	Hexagon nut	2	

**Handle - Control element**  
Rev.\* 05/11

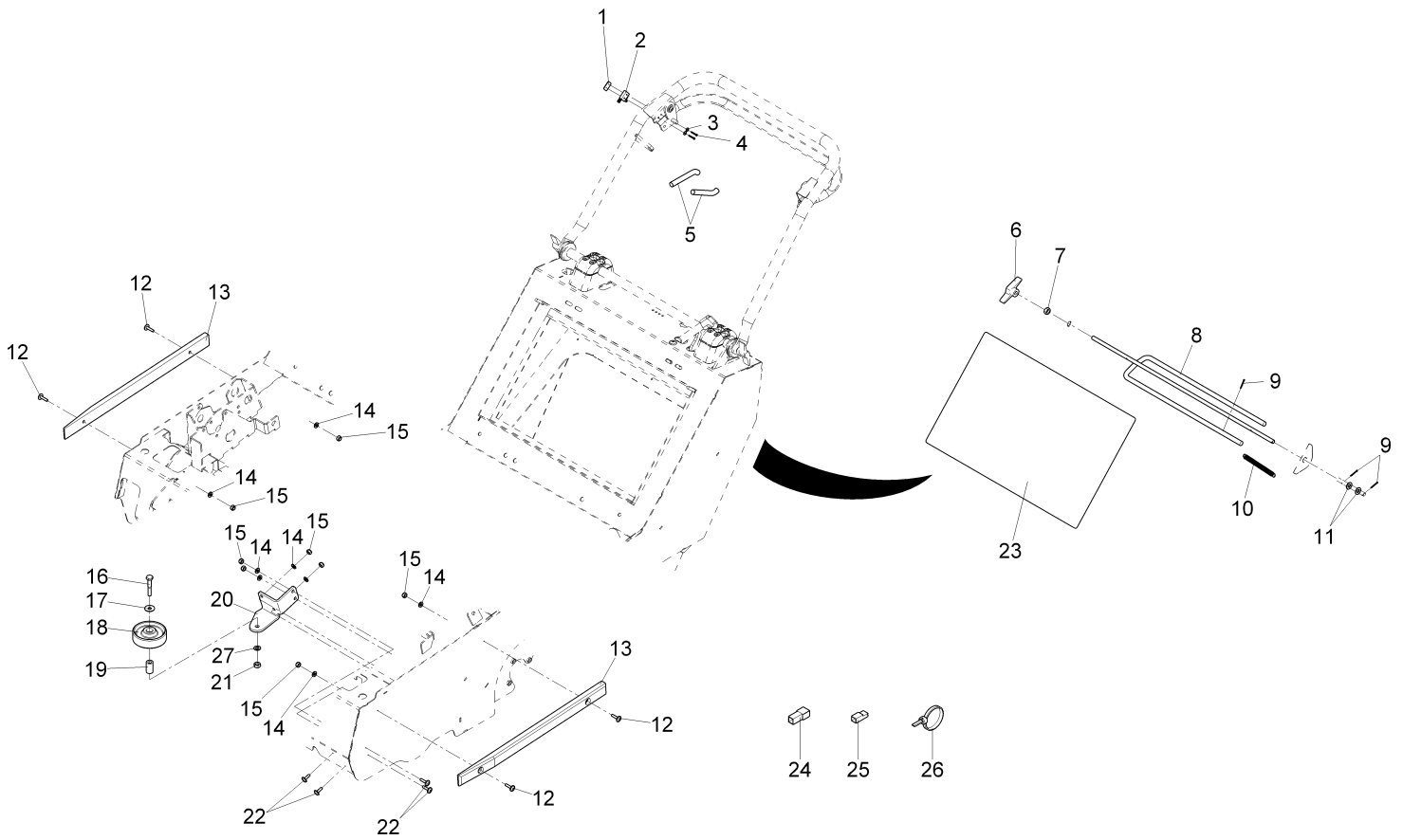




**Handle - Control element (97104863)**  
 Rev.\* 05/11

Item	Spare part number	Description	Qty.	Remarks
1	01271540	Socket head screw	8	
2	00053730	Washer	12	
3	01179450	Retainer upper	2	
4	01143070	Socket head screw	4	
5	01179460	Retainer lower	2	
6	01271550	Retaining plate	1	
7	01271560	Thread base plate	1	
8	01271570	Lens flange screw	1	
9	01179480	Door lock	1	
10	01122240	washer	1	
11	00051510	Hexagon nut	1	
12	01223150	Countersunk screw	1	
13	01271600	Handle H650	1	
14	00905560	Wing	2	
15	01015340	Lens flange screw	2	
16	01111140	Slide bearing bush	2	
17	01179470	Control lever	1	
18	01271590	Starting disk	2	
19	01271580	Bushing	2	
20	00740310	Washer	2	

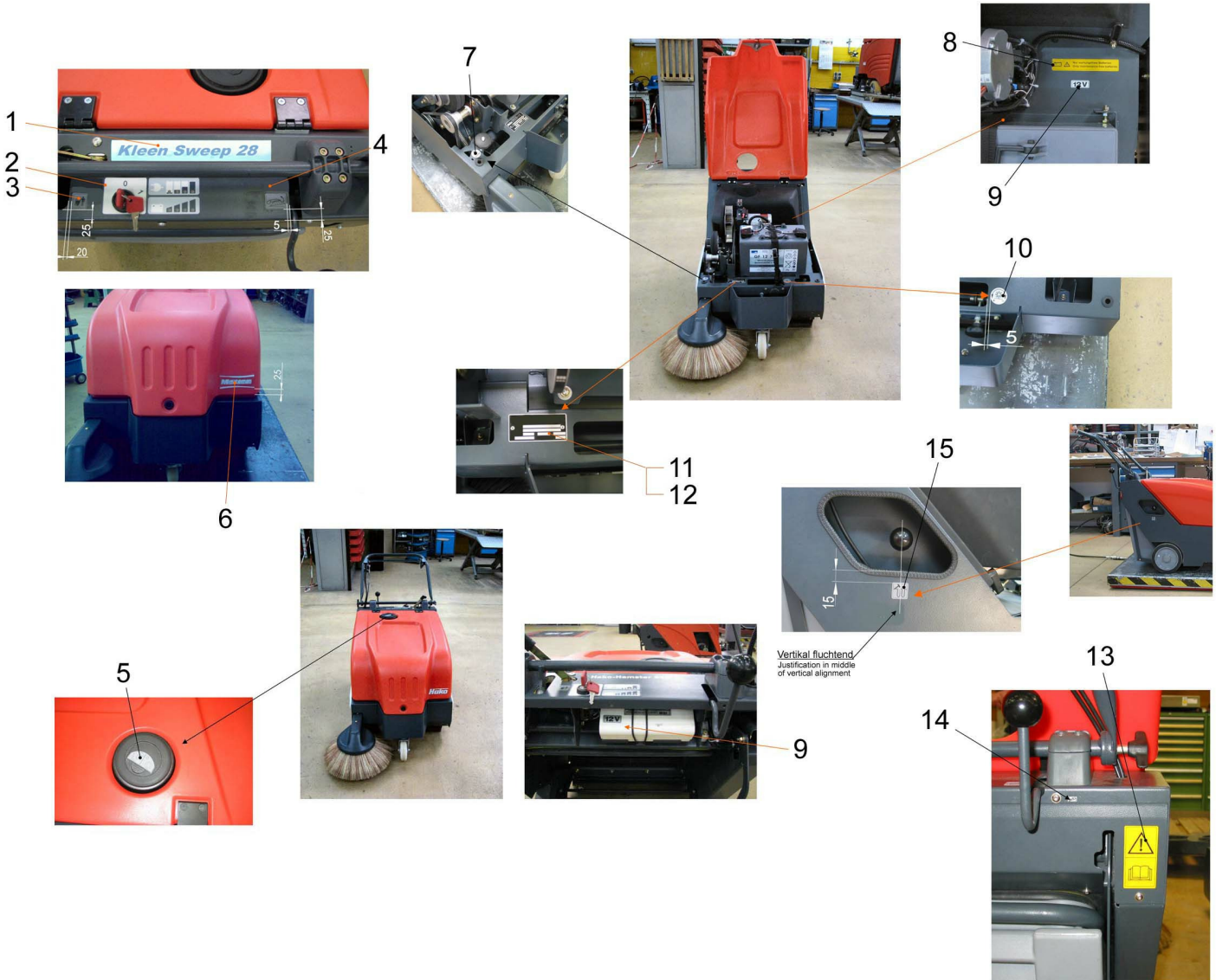
**Carpet retrofit kit**  
Rev.\* 05/11



**Carpet retrofit kit (97115455)**  
Rev.\* 05/11

Item	Spare part number	Description	Qty.	Remarks
1	01271870	Thread base plate	1	
2	00696680	Micro switch	1	
3	01271880	Washer	2	
4	01141220	Lens head screw	2	
5	01271890	Shrinkable tube	170 mm	
6	00101470	Wing nut	1	
7	00053350	Hexagon nut	1	
8	01271900	Bracket	1	
9	00054860	Cotter pin	3	
10	00536950	Tension spring	1	
11	00074230	Washer	2	
12	01092780	Lens flange screw	4	
13	01271910	Bumper strip	2	
14	00053730	Washer	8	
15	00051520	Hexagon nut	8	
16	00053120	Hexagon screw	1	
17	00042900	Washer	1	
18	01055220	Pevolon wheel	1	
19	01271920	Bushing	1	
20	01271930	Angle	1	
21	00051510	Hexagon nut	1	
22	01015340	Lens flange screw	4	
23	01271940	Filter	1	
24	00083650	Plastic cover	1	
25	00083640	Plastic cover	1	
26	00121150	Cable tie	8	
27	00053750	Washer	1	

**Labels KS 28 B**  
Rev.\* 05/11



**Labels KS 28 B (97116263)**  
 Rev.\* 05/11

<b>Item</b>	<b>Spare part number</b>	<b>Description</b>	<b>Qty.</b>	<b>Remarks</b>
1	03009810	Decal KLEEN SWEEP 28	1	
2	01271770	Foil	1	
3	01270880	Decal LITTER HOPPER	1	
4	01270890	Decal SIDE BROOM	1	
5	01270860	Decal BYPASS-FLAP	1	
6	03007820	Decal MINUTEMAN	1	
7	01130650	Decal SIDE BROOM ADJUSTMENT	1	
8	01270840	Decal MAINTENANCE FREE BATTERY	1	
9	01132690	Decal 12 V	2	
10	03001180	Decal	1	
11	03008630	Type plate MINUTEMAN	1	
12	00504370	Blind rivet	2	
13	01071710	Decal "Instruction manual"	1	
14	03008790	Backing film	1	
15	01270900	Decal SHAKING	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  
X12 and X12H, 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