



Count on it.

Parts Catalog

Range Pro™ 100

Robotic Ball Picker

Model No. 30931JP—Serial No. 32500000 and Up



Ordering Replacement Parts

To order replacement parts, please supply the part number, the quantity, and the description of each part desired.

Understanding Reference Numbers

Each identified part in an illustration has a reference number. The reference number for a part also appears in the parts list, along with other information about the part.

This catalog uses two special reference number formats, one to indicate parts in a service assembly and another to indicate the quantity of a given part in an illustration.

Service Assembly Reference Numbers

Parts in service assemblies have reference numbers in the form a:b. The a represents the reference number of the entire service assembly and the b represents a sequential number unique to each part within the service assembly.

For example, a wheel assembly might be identified by reference number 6, the tire by 6:1, the valve by 6:2, and the wheel by 6:3. When you order the assembly identified by reference number 6, you receive all parts identified by reference numbers 6:1, 6:2, and 6:3. However, you may also order any part individually. Reference numbers of this type appear in illustration and in parts lists.

Reference Numbers Indicating Quantity

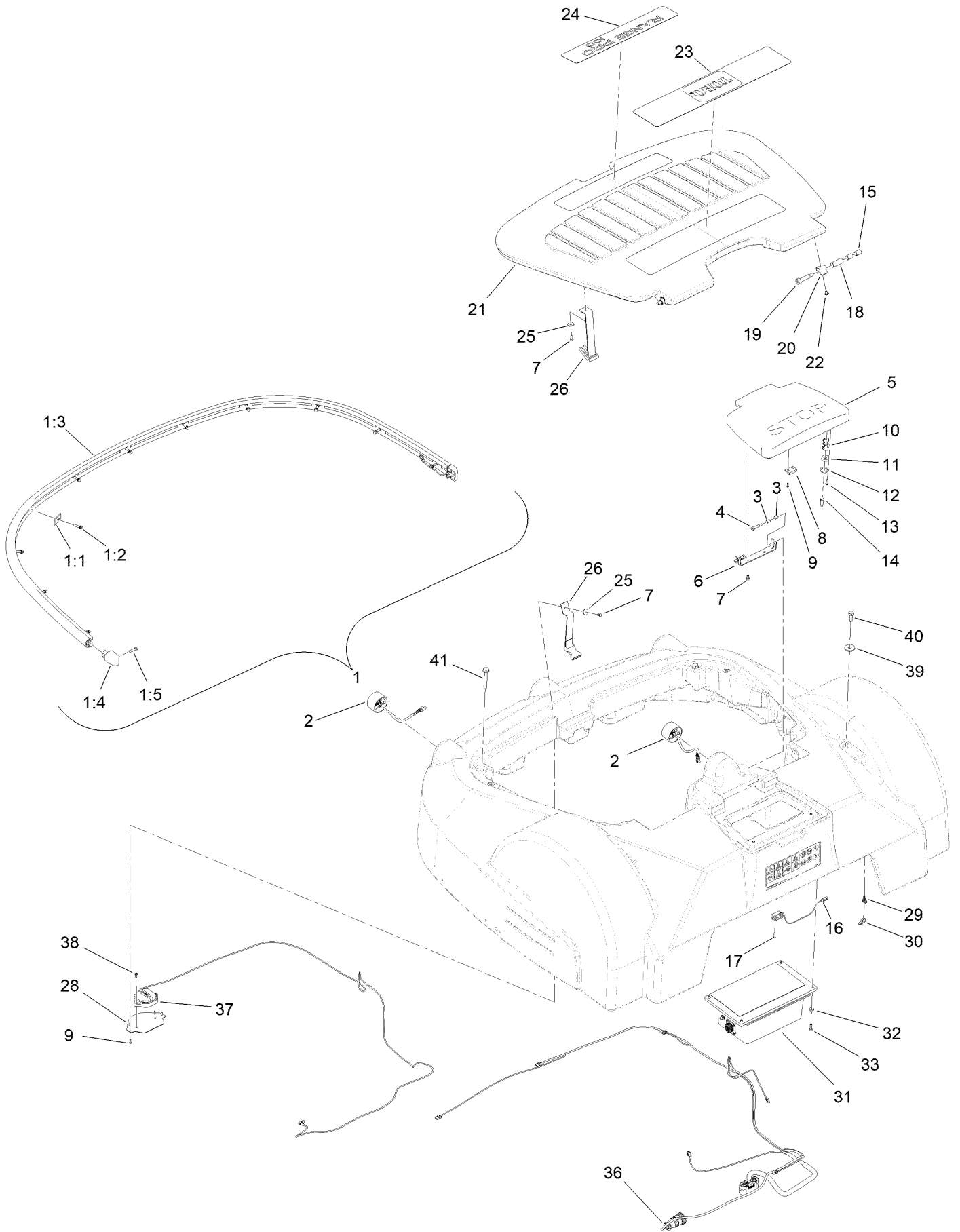
In an illustration, if a reference number indicates more than one part, the reference number has the form nX y. The n represents the quantity of the part, the X is the multiplication symbol, and the y represents the reference number.

For example, in an illustration, the reference number 2X 37 means that two of the parts identified by reference number 37 are indicated.

Contents

Body Assembly	4
Charging Housing Assembly	6
Collection Components Assembly	8
Main Frame Assembly	10
Sensors Assembly	12
Wheels and Drive Motor Assembly	14
Electrical Box and Battery Assembly	16
Heater Battery Kit Assembly No. 163-5819	18
Attachments and Accessories	20

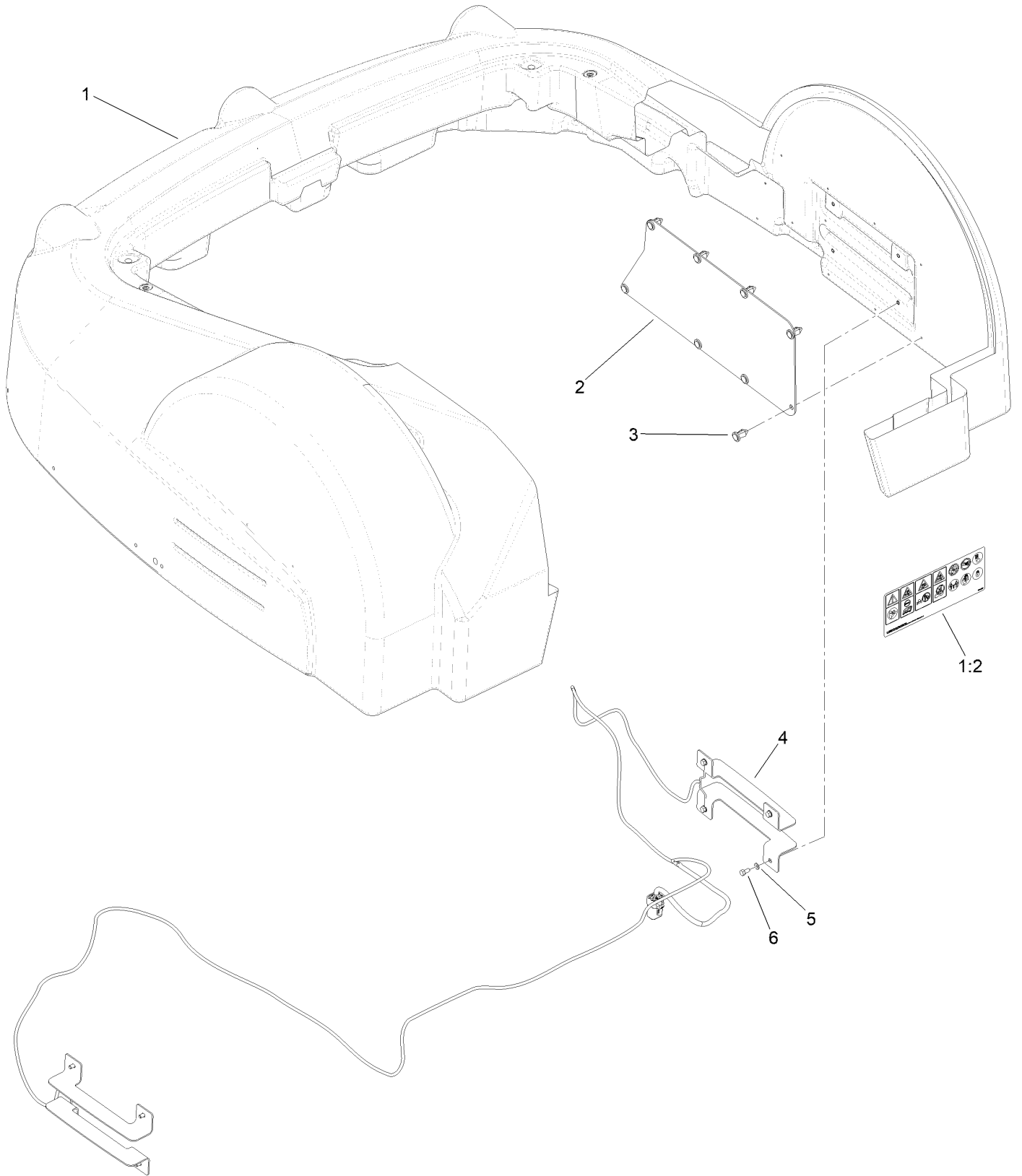
Body Assembly



Body Assembly (continued)

<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>	<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>
1	164-0086	1	Bumper Kit	18	163-5690	2	Spacer
1:1	163-5375	13	Plate-Nut	19	163-5688	2	Screw-Shoulder
1:2	163-5374	13	Screw-HWH, Sems	20	163-5685	2	Hinge
1:3	164-0088	1	Bumper ASM	21	163-5684	1	Hatch
1:4	163-5373	2	End Cap, Bumper	22	163-5686	2	Screw-Hsbfh
1:5	163-5376	2	Screw-Pzph	23	163-3950	1	Decal-Toro
2	164-0084	4	Sensor-Ultrasonic	24	163-3978	1	Decal-Range Pro 100
3	163-5390	4	Spacer	25	163-5687	2	Washer-Flat
4	163-5389	2	Screw-Shoulder	26	163-5698	1	Hatch Strap ASM
5	163-5391	1	Button-Stop	28	163-5867	1	Mount-Antenna, Rtk
6	163-5397	1	Bracket-Hinge, Stop Button	29	163-5384	38	Mount-Cable Tie
7	163-5382	4	Screw-HH	30	3290-378	38	Tie-Cable
8	163-5392	1	Magnet-Bonnet	31	163-5585	1	Smartbox-Jp
9	163-5523	6	Screw-Pz, Plastic	32	163-5554	4	Washer-Flat
10	163-5393	2	Spring-Compression	33	163-5553	4	Screw-HH
11	163-5394	2	Magnet	36	163-5695	1	Harness-Stop Button
12	163-5395	2	Washer-Lock	37	163-5558	1	Antenna-Rtk
13	163-5396	6	Screw-Pzfbh, Plastic	38	163-5559	2	Screw-PPH
14	163-5388	2	Screw-Shoulder	39	163-5400	2	Washer-Flat
15	163-5689	4	Spacer	40	163-5398	2	Screw-HH
16	163-5694	1	Harness-Stop Button	41	163-3847	2	Screw-Hfh
17	163-5380	2	Screw-Pzrh, Plastic				

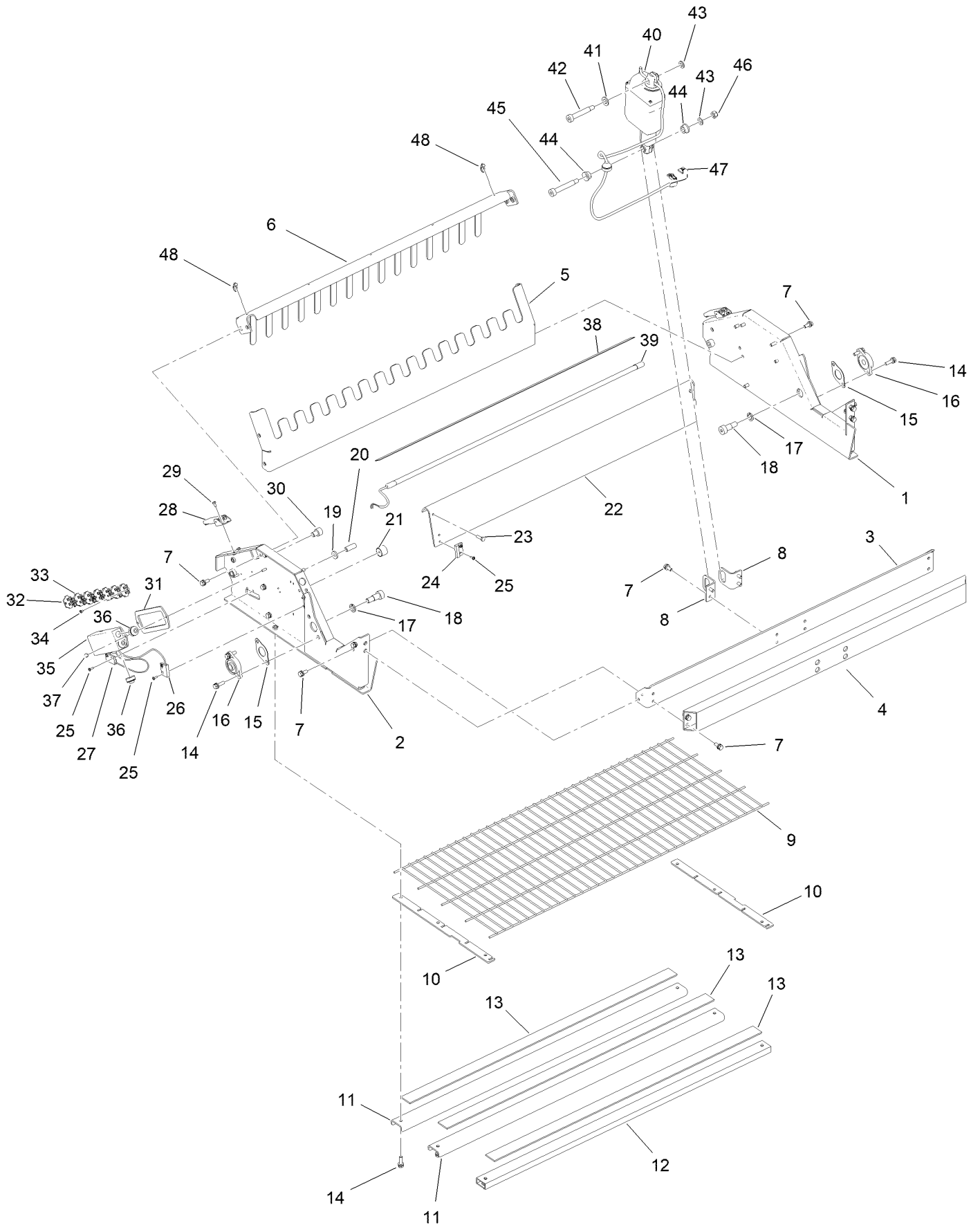
Charging Housing Assembly



Charging Housing Assembly (continued)

<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>	<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>
1	163-5368	1	Range Pro 100 Body Service ASM	3	163-5387	16	Rivet-Push
1:2	163-3955	1	Decal-Panel	4	163-5696	1	Charge Cable ASM
2	163-5691	2	Plate-Protection, Contacts	5	163-5383	8	Washer-Flat
				6	163-5382	8	Screw-HH

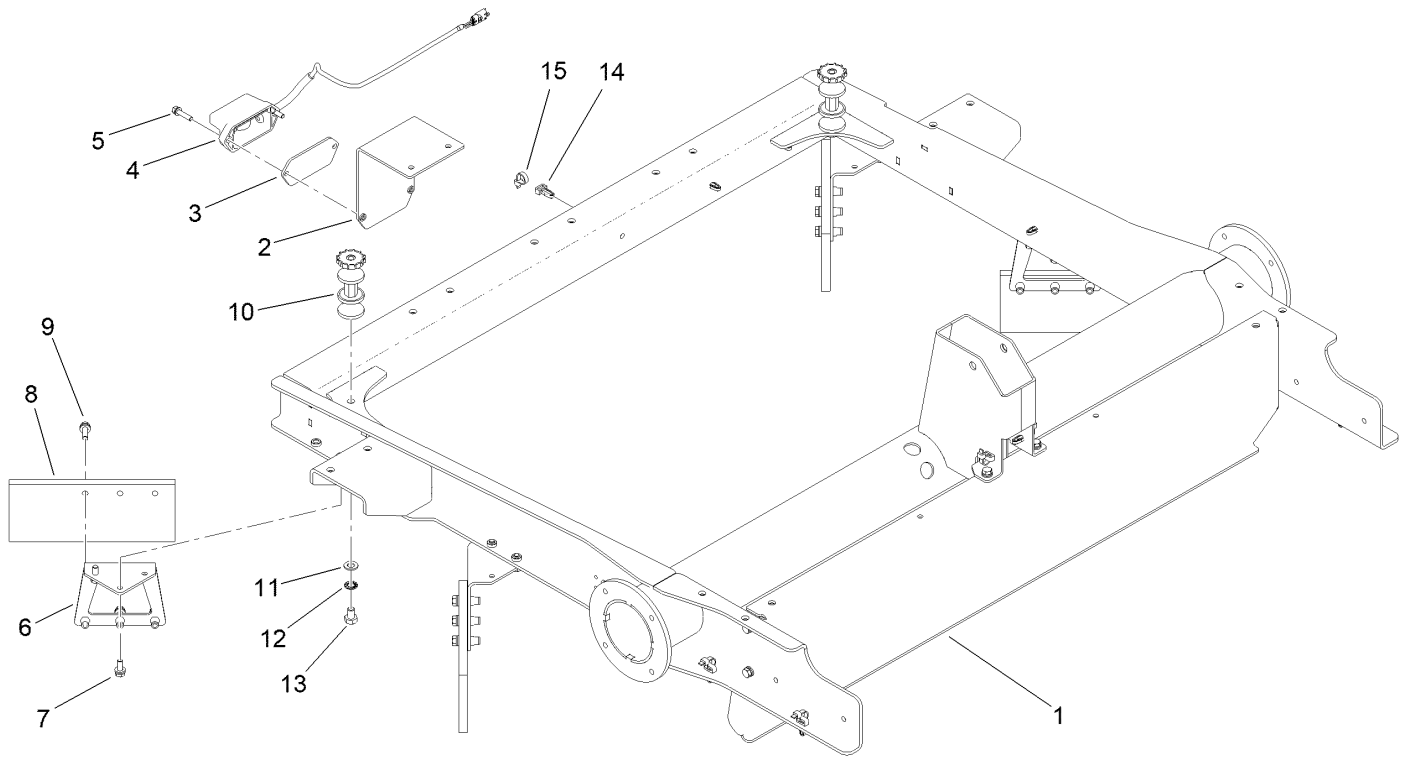
Collection Components Assembly



Collection Components Assembly (continued)

<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>	<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>
1	163-5730	1	Frame ASM-RH	26	163-5751	1	Cable-Tank, Full
2	163-5731	1	Frame ASM-LH	27	163-5752	1	Cable-Blockage, Wheel
3	163-5733	1	Plate-Rear, Frame	28	163-5753	2	Latch
4	163-5732	1	Crossbar-Rear, Frame	29	163-5754	4	Screw-HH, Slotted
5	163-5736	1	Plate-Front, Frame	30	163-5755	2	Screw-SHCS
6	163-5737	1	Rake-Front	31	163-5756	1	Gasket-Foam, Terminal Block
7	163-5408	20	Screw-HWH, Sems	32	163-5759	1	Lid-Block, Terminal
8	163-5734	2	Bracket-Mount, Actuator	33	163-5760	6	Block-Terminal
9	163-5742	1	Grid	34	163-5487	2	Screw-Hsbhf
10	163-5741	2	Plate-Positioning, Grid	35	163-5757	1	Cover-Terminal Block
11	163-5738	2	Crossbar-Grid	36	163-5758	4	Grommet
12	163-5739	1	Crossbar-Tube, Grid	37	163-5434	2	Nut-Hex, NI
13	163-5740	3	Pad-Rubber, Grid	38	163-5761	1	Adhesive-Double Sided
14	163-5448	10	Screw-HWH, Sems	39	163-5762	1	Sensor-Counter
15	163-5743	2	Spacer-Bearing	40	163-5763	1	Actuator-Linear
16	163-5744	2	Bearing-Self Aligning	41	163-5765	1	Washer-Flat
17	163-5746	2	Washer-Split Lock	42	163-5764	1	Screw-Shoulder
18	163-5747	2	Screw-Shoulder	43	163-5502	2	Washer-Flat
19	163-5748	2	Washer-Flat	44	163-5767	2	Bearing-Flanged
20	163-5470	2	Spacer-Threaded	45	163-5766	1	Screw-Shoulder
21	163-5749	2	Cushion-Cylindrical	46	163-5503	1	Nut-Hex, NI
22	163-5735	1	Panel-Detection, Full	47	163-5866	1	Cable-Actuator
23	163-5750	2	Screw-HH	48	1-303287	2	Tie-Cable
24	163-5392	1	Magnet-Bonnet				
25	163-5413	6	Screw-Hsbhf				

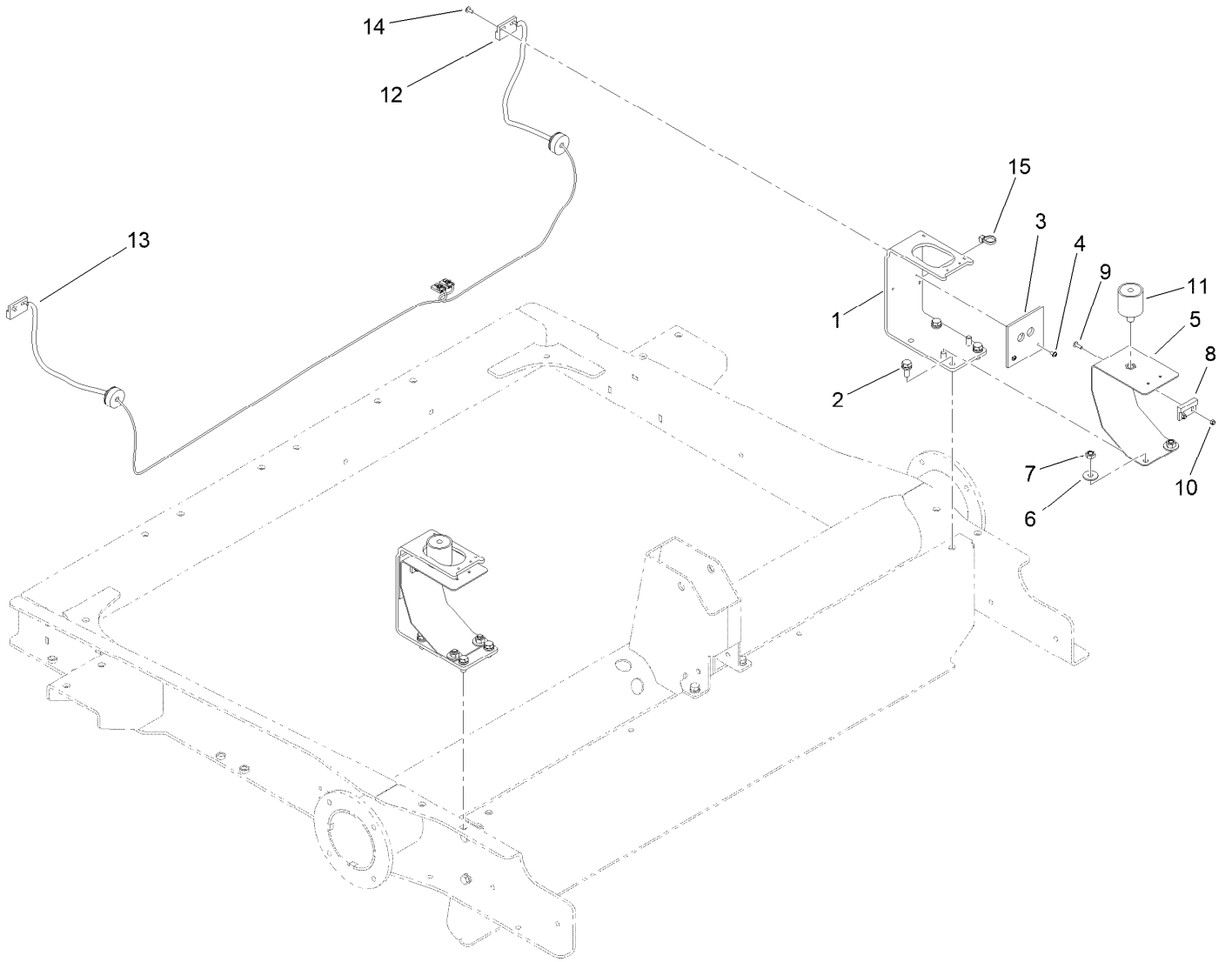
Main Frame Assembly



Main Frame Assembly (continued)

<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>	<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>
1	163-5745	1	Main Frame ASM	9	163-5448	12	Screw-HWH, Sems
2	163-5768	1	Bracket-Mount, Coil	10	163-5479	2	Front Cushion ASM
3	163-5404	1	Foam-Mount, Coil	11	163-5502	2	Washer-Flat
4	163-5405	1	Coil	12	163-5770	2	Washer-Serrated
5	163-5374	2	Screw-HWH, Sems	13	163-5771	2	Screw-HH
6	163-5769	4	Support-Deflector	14	163-5384	12	Mount-Cable Tie
7	163-5408	8	Screw-HWH, Sems	15	3290-378	12	Tie-Cable
8	163-5667	4	Deflector-Ball, Golf				

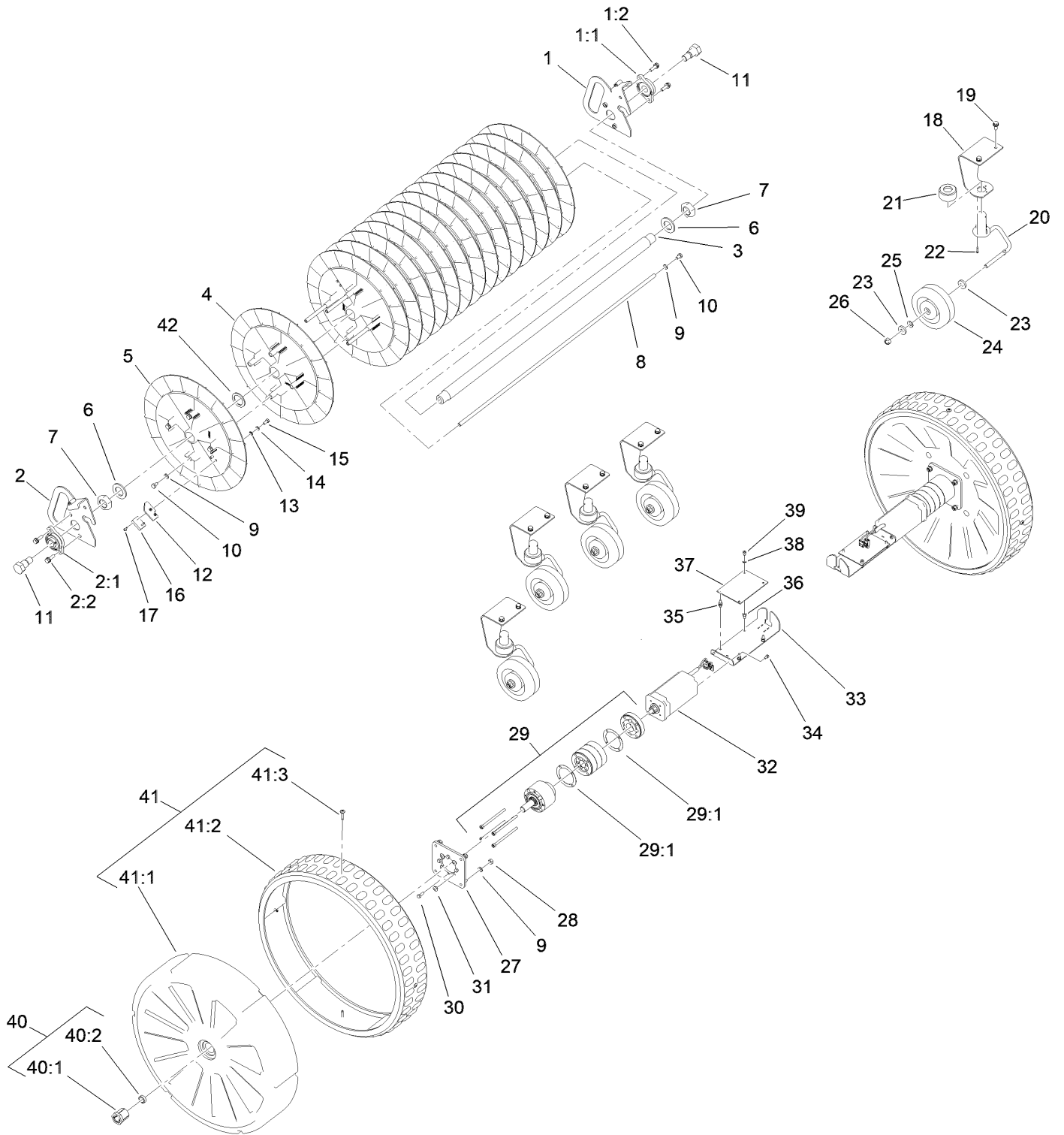
Sensors Assembly



Sensors Assembly (continued)

<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>	<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>
1	163-5486	2	Sensor Bracket ASM	9	163-5413	4	Screw-Hsbhf
2	163-5408	6	Screw-HWH, Sems	10	163-5484	4	Nut-Hex, NI
3	163-5488	2	Pad-Sensor, Rubber	11	163-5489	2	Isolator
4	163-5487	4	Screw-Hsbhf	12	163-5772	1	Cable-Sensor, RH Rear
5	163-5483	2	Sensor Spring ASM	13	163-5773	1	Cable-Sensor, LH Rear
6	163-5485	4	Washer-Flat	14	163-5421	4	Screw-Hsbhf
7	163-5416	4	Nut-Hex, NI	15	1-303287	2	Tie-Cable
8	163-5392	2	Magnet-Bonnet				

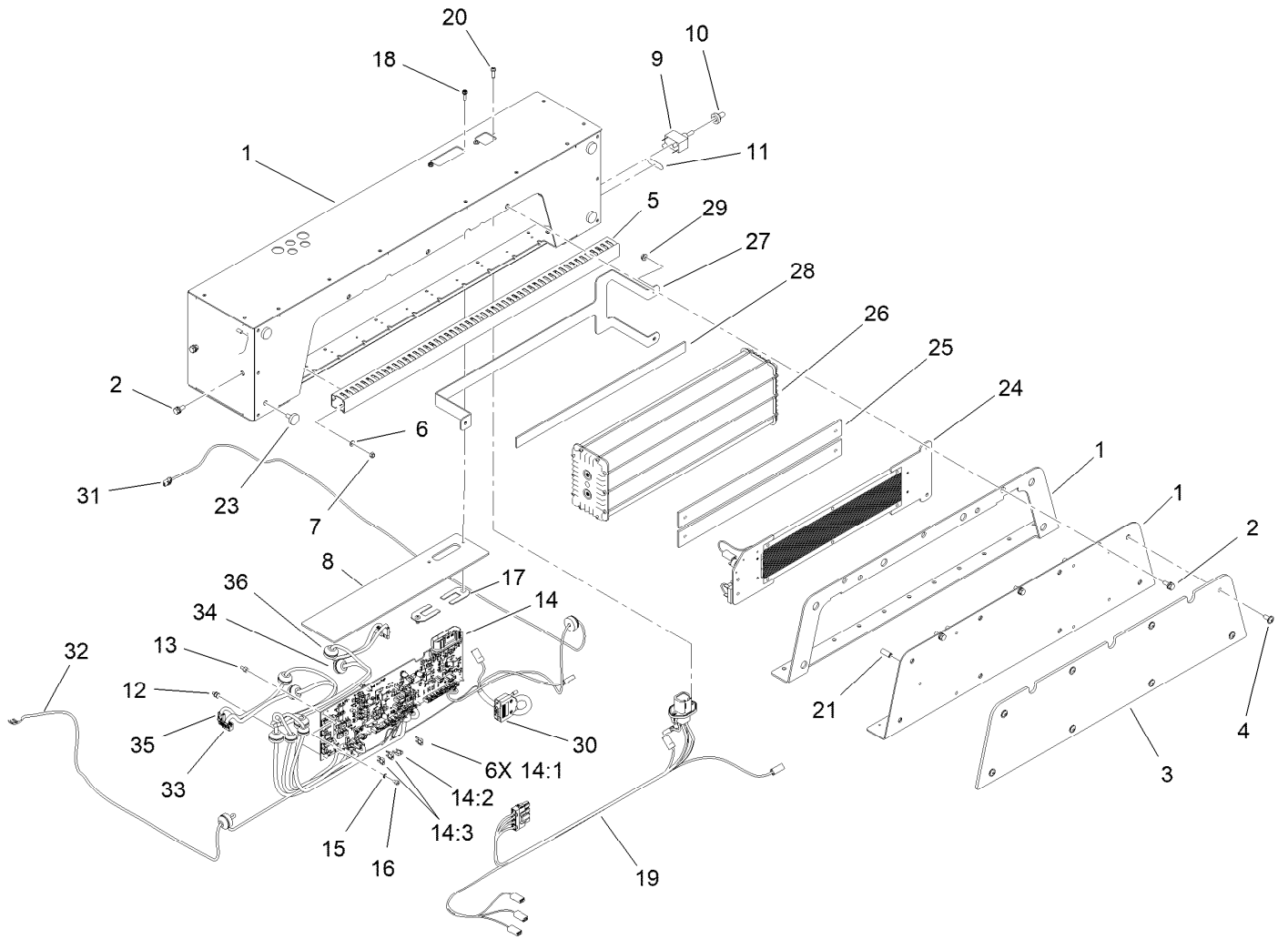
Wheels and Drive Motor Assembly



Wheels and Drive Motor Assembly (continued)

<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>	<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>
1	163-5777	1	Handle-Picker, RH	24	163-5501	5	Wheel-Front
1:1	163-5776	1	Bearing-Self Aligning	25	163-5502	5	Washer-Flat
1:2	163-5448	2	Screw-HWH, Sems	26	163-5503	5	Nut-Hex, NI
2	163-5778	1	Handle-Picker, LH	27	163-5789	2	Plate-Gearmotor
2:1	163-5776	1	Bearing-Self Aligning	28	163-5416	8	Nut-Hex, NI
2:2	163-5448	2	Screw-HWH, Sems	29	163-5681	2	Gearbox
3	163-5774	1	Shaft-Wheel, Picker	29:1	164-2981	2	Gasket-Gearbox
4	163-5781	15	Disk-Picker	30	163-5505	8	Screw-HH
5	163-5782	1	Disk-Picker, Outer	31	163-5509	8	Plug-Cap, Round
6	163-5779	2	Washer-Flat	32	163-5683	2	Motor-Wheel, Slope
7	163-5780	2	Nut-Hex, Thin	33	163-5790	2	Support-Card, Drive
8	163-5775	4	Rod-Wheel, Picker	34	163-5754	4	Screw-HH, Slotted
9	163-5417	16	Washer-Flat	35	163-5544	6	Support-Pcb
10	163-5784	8	Screw-HH	36	163-5545	2	Spacer-Hex, Pcb
11	163-5785	2	Screw-Shoulder	37	163-5652	2	Card-Drive, Traction
12	163-5786	1	Mount-Magnet, Picker	38	163-5552	2	Washer-Tooth, EXT
13	163-5787	2	Washer-Tooth	39	163-5551	2	Screw-HSH
14	163-5383	2	Washer-Flat	40	163-5495	2	Rear Wheel Retainer Kit
15	163-5788	2	Screw-HH	40:1	163-5493	1	Wheel Retainer ASM
16	163-5392	1	Magnet-Bonnet	40:2	163-5494	1	Spacer
17	163-5413	2	Screw-Hsbhf	41	163-5560	2	Rear Wheel ASM
18	163-5498	5	Bracket-Mount, Wheel, Front	41:1	163-5490	1	Rear Wheel Hub ASM
19	163-5408	10	Screw-HWH, Sems	41:2	163-5491	1	Tire-Rear
20	163-5497	5	Front Wheel Hub ASM	41:3	163-5492	4	Screw-Pbhf
21	163-5499	5	Support-Hub, Wheel, Front	42	163-5783	1	Shim
22	163-5500	20	Screw-Pzph				
23	HDW19425	10	Washer,M8,21MM OD,4MM Th,ST/ST				

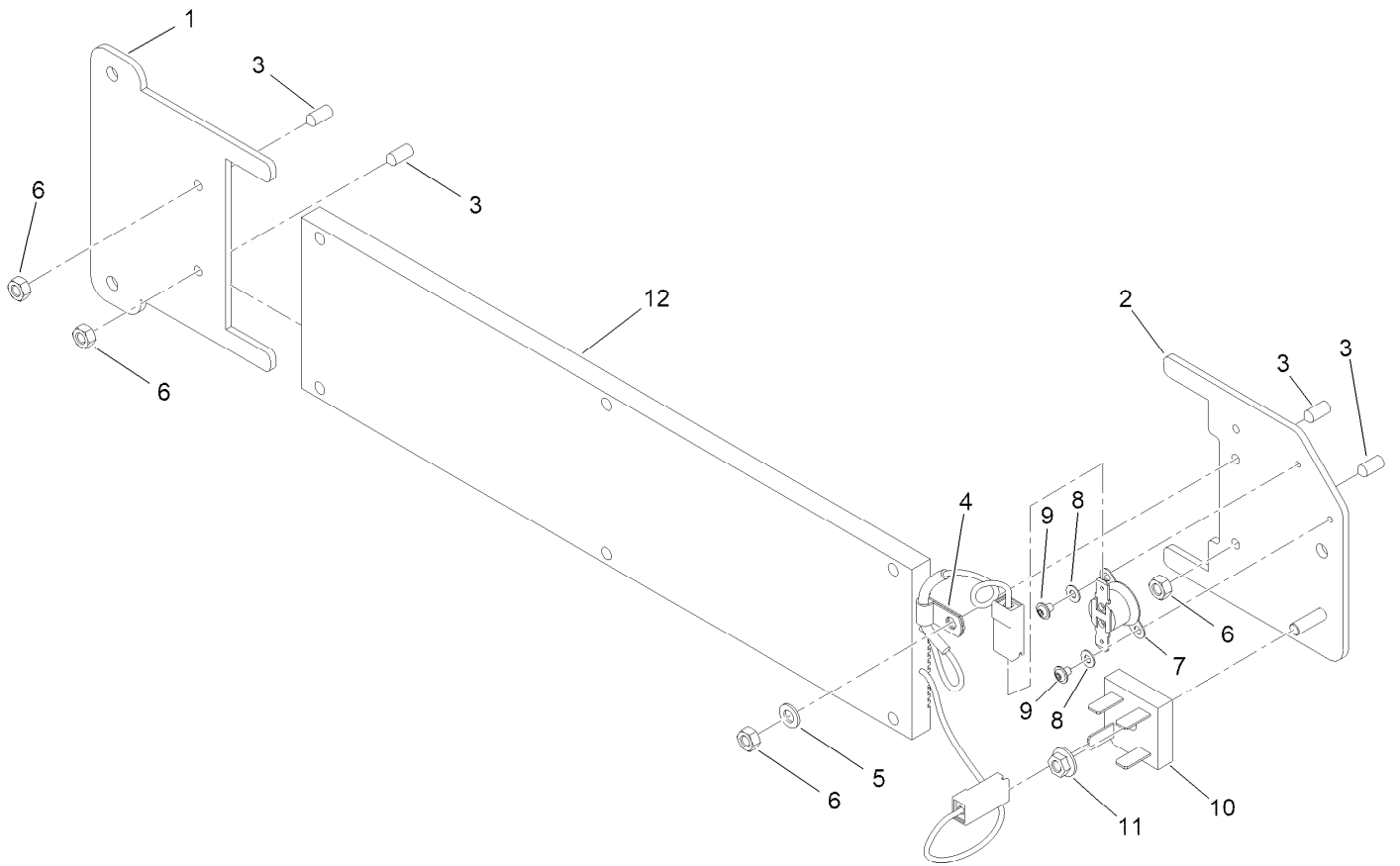
Electrical Box and Battery Assembly



Electrical Box and Battery Assembly (continued)

<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>	<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>
1	163-5793	1	Electrical Box ASM	17	163-5549	2	Pcb Retainer ASM
2	163-5408	7	Screw-HWH, Sems	18	163-5424	2	Screw-Hph, Sems
3	163-5798	1	Protection-Door	19	163-5797	1	Cable-Power Supply
4	163-5799	8	Screw-Hsbfh	20	163-5442	2	Screw-Pz, Plastic
5	163-5794	1	Duct-Cable	21	163-5800	4	Spacer-Threaded
6	163-5383	4	Washer-Flat	23	163-5801	4	Bumper-Rubber, Threaded
7	163-5795	4	Nut-Hex, NI	24	163-5819	1	Heater Battery Kit
8	163-5796	1	Foam-Anti-Condensing	25	163-5818	2	Contact-Heater
9	163-5547	1	Switch-Toggle	26	164-0085	1	Battery
10	163-5548	1	Cap-Switch, Rubber	27	163-5811	1	Strap-Battery
11	163-5628	1	Decal-On-Off, Horizontal	28	163-5812	1	Pad-Rubber, Battery
12	163-5544	5	Support-Pcb	29	163-5810	3	Nut-Hex, Serrated
13	163-5545	1	Spacer-Hex, Pcb	30	163-5813	1	Cable-Battery
14	163-5650	1	Peripheral Board ASM	31	163-5860	1	Cable-Coil, Central
14:1	121-8861	6	Fuse-Mini Blade, 2 Amp	32	163-5861	1	Cable-Tool
14:2	121-8864	1	Fuse-Mini Blade, 5 Amp	33	163-5862	1	Cable-Motor, Signal, LH
14:3	121-8867	2	Fuse-Mini Blade, 15 Amp	34	163-5863	1	Cable-Motor, Signal, RH
15	163-5552	1	Washer-Tooth, EXT	35	163-5864	1	Cable-Power, LH
16	163-5551	1	Screw-HSH	36	163-5865	1	Cable-Power, RH

Heater Battery Kit Assembly No. 163-5819



Heater Battery Kit Assembly No. 163-5819 (continued)

<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>	<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>
1	163-5802	1	Support-Resistor, RH	7	164-0093	1	Thermostat
2	163-5803	1	Support-Resistor, LH	8	163-5617	2	Washer-Flat
3	163-5804	4	Screw-Set	9	163-5808	2	Screw-Hsbfh
4	163-5806	1	Clamp-Cable	10	163-5809	1	Rectifier-Bridge
5	163-5383	1	Washer-Flat	11	163-5810	1	Nut-Hex, Serrated
6	163-5805	4	Nut-Hex	12	163-5817	1	Resistor-Heater

Attachments and Accessories

For 30931JP — Range Pro 100 Robotic Ball Picker

Product Name	Model/Part
Cable-Diagnostic	163-3870
Charger-Mobile	163-3871
Cable-Battery/Wake-up	163-3872
Stops-Calibration	163-3873
Wire-Spool-1000 FT	163-3926
Wire-Spool-250 FT	163-3927
4G RTK Base JP.....	30912JP
Charge Station, Loop Only JP	30913JP
Charge Station, Two Loop JP	30914JP
WIFI RTK Base WW	30915

Notes:

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