



**Count on it.**

**Parts Catalog**

**Range Pro™ 100**

**Robotic Ball Picker**

Model No. 30931EU—Serial No. 325000000 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

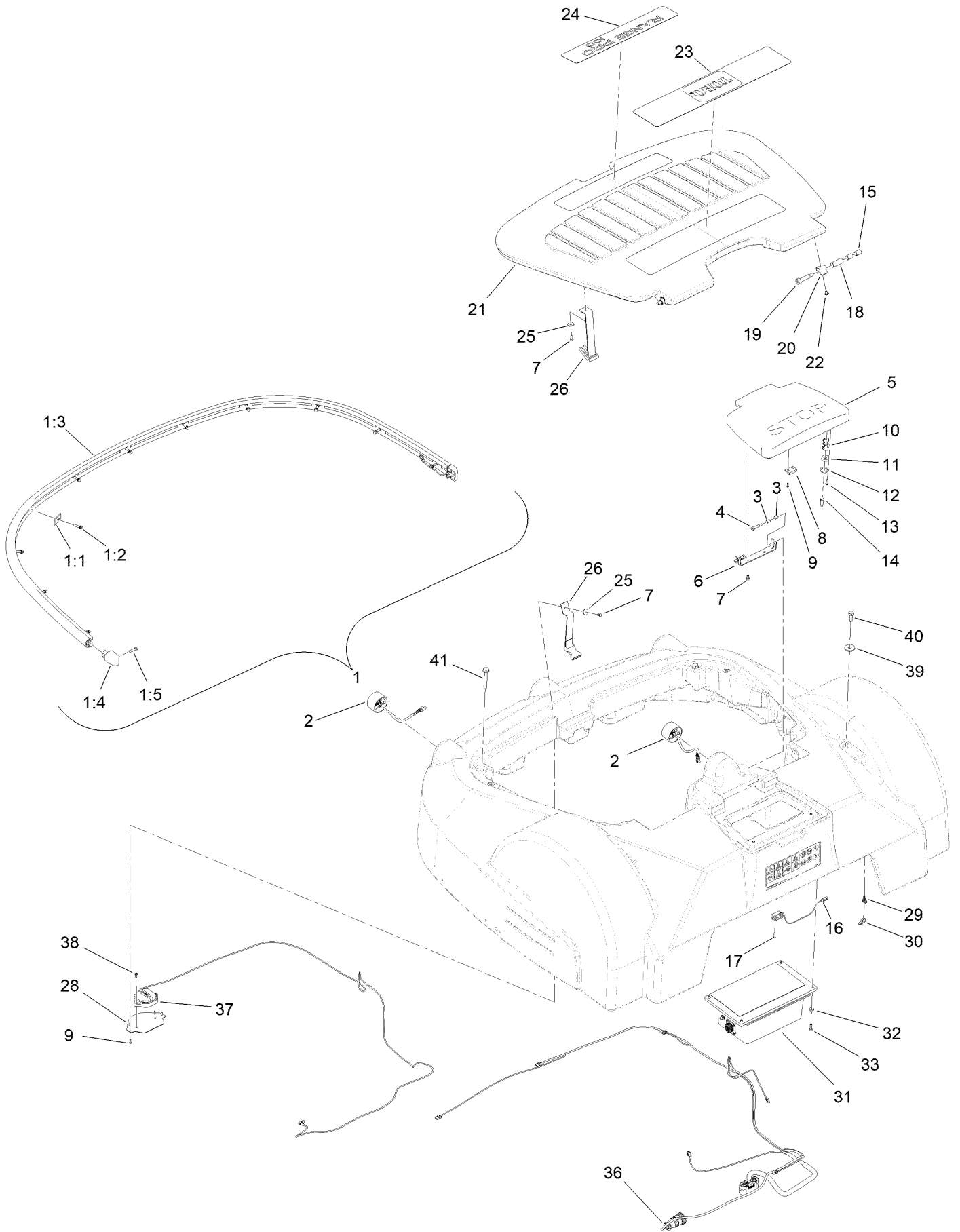
In an illustration, if a reference number indicates more than one part, the reference number has the form nX y. The n represents the quantity of the part, the X is the multiplication symbol, and the y represents the reference number.

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

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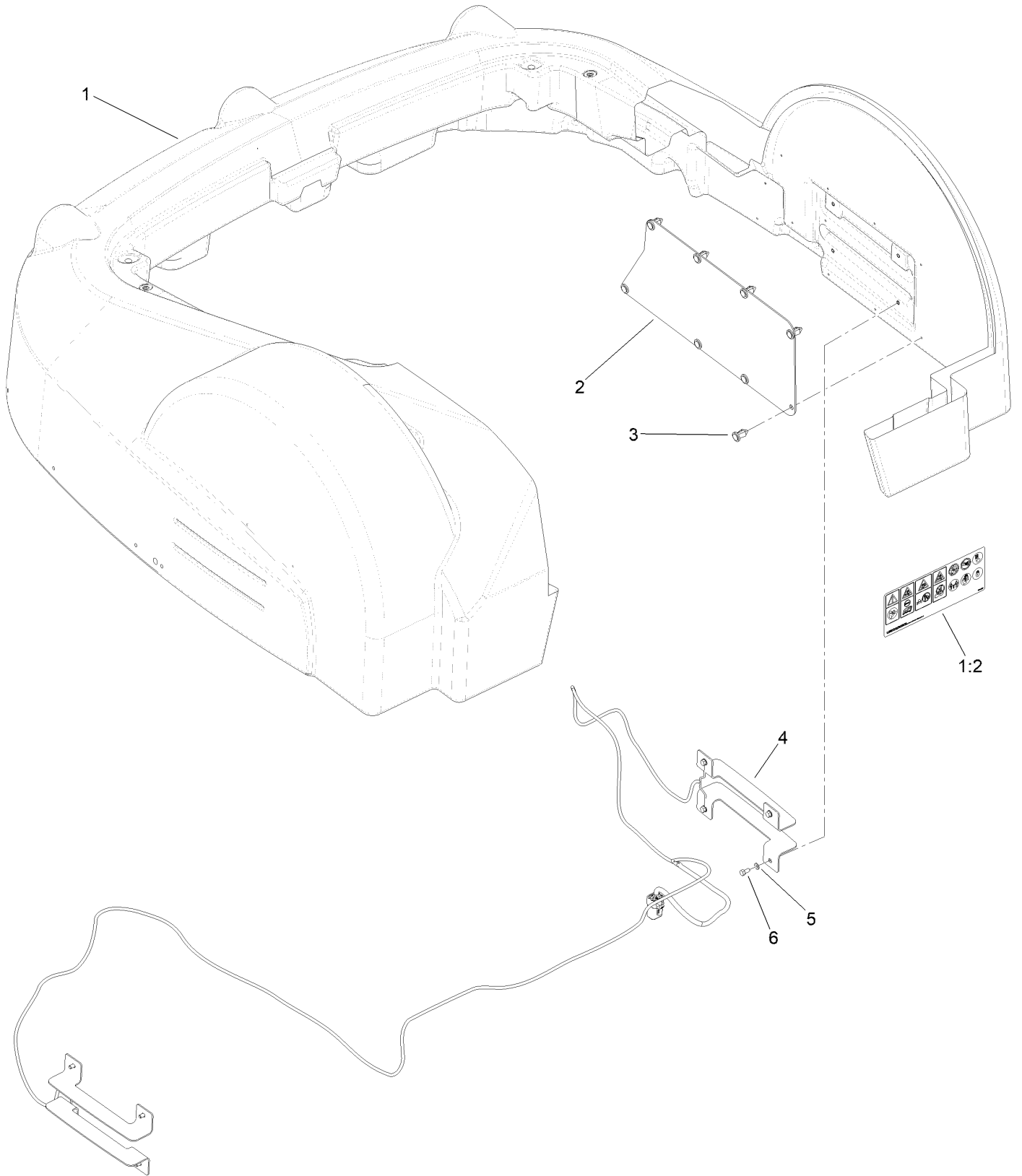
# Body Assembly



## 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	163-5583	1	Smartbox-EU
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				

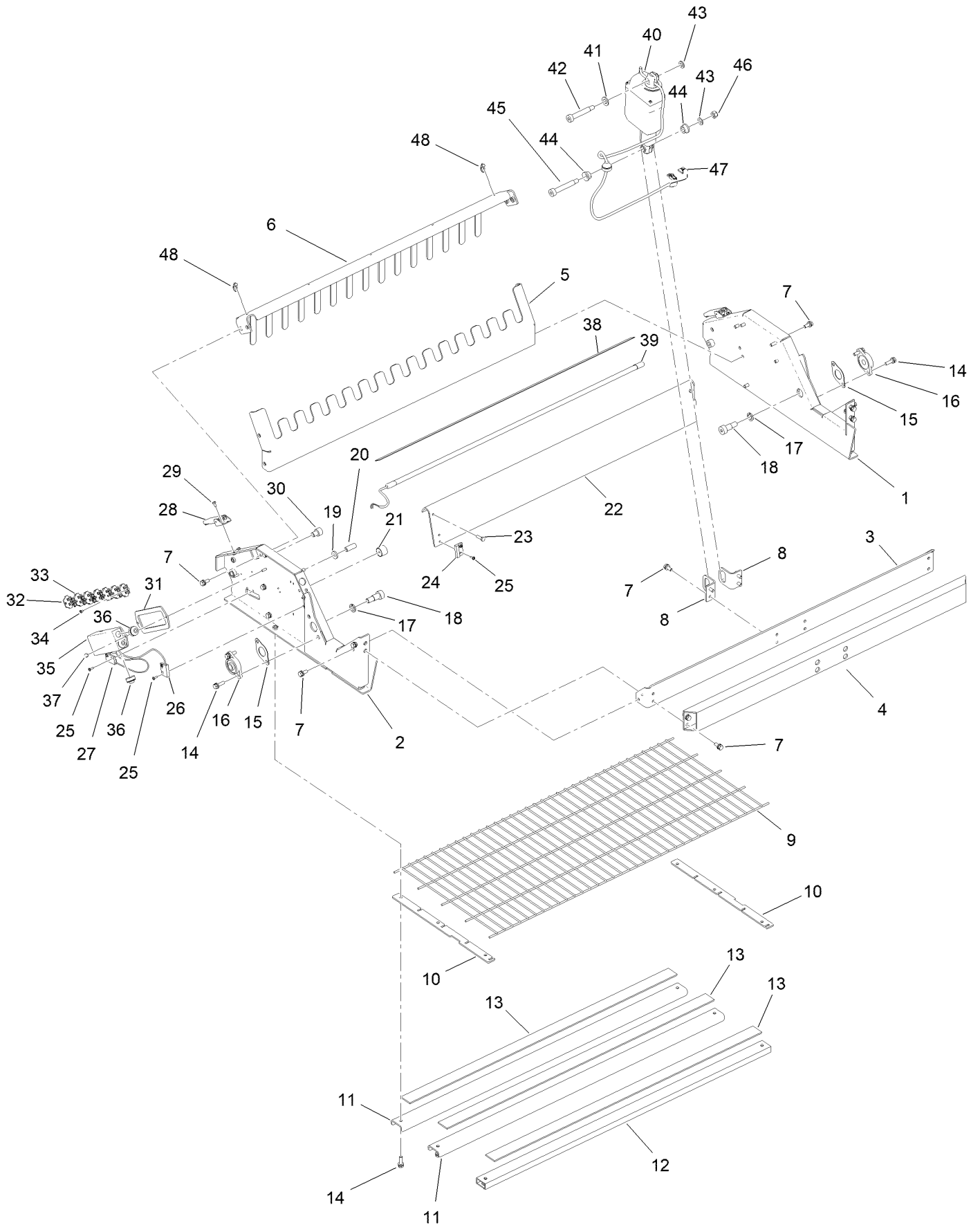
# Charging Housing Assembly



## 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

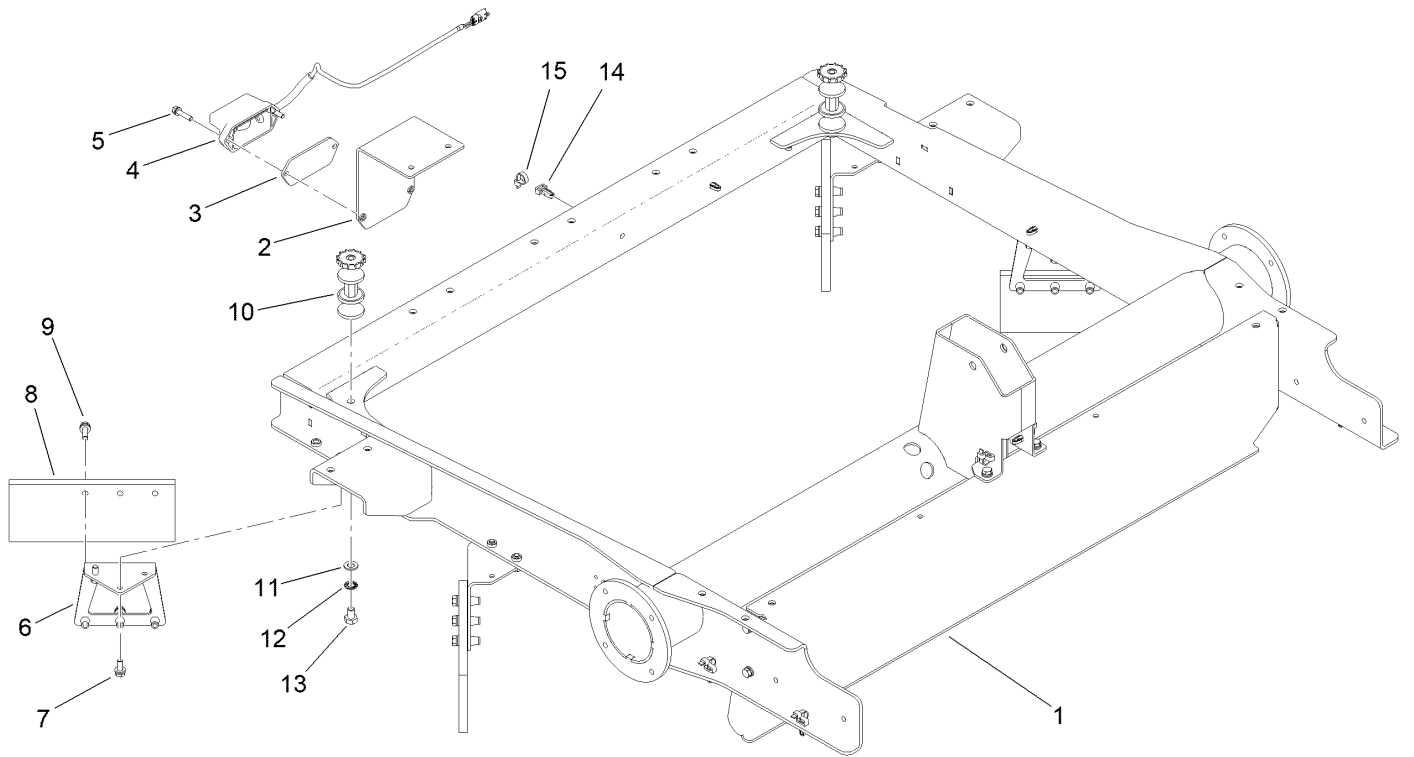
# Collection Components Assembly



## 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)

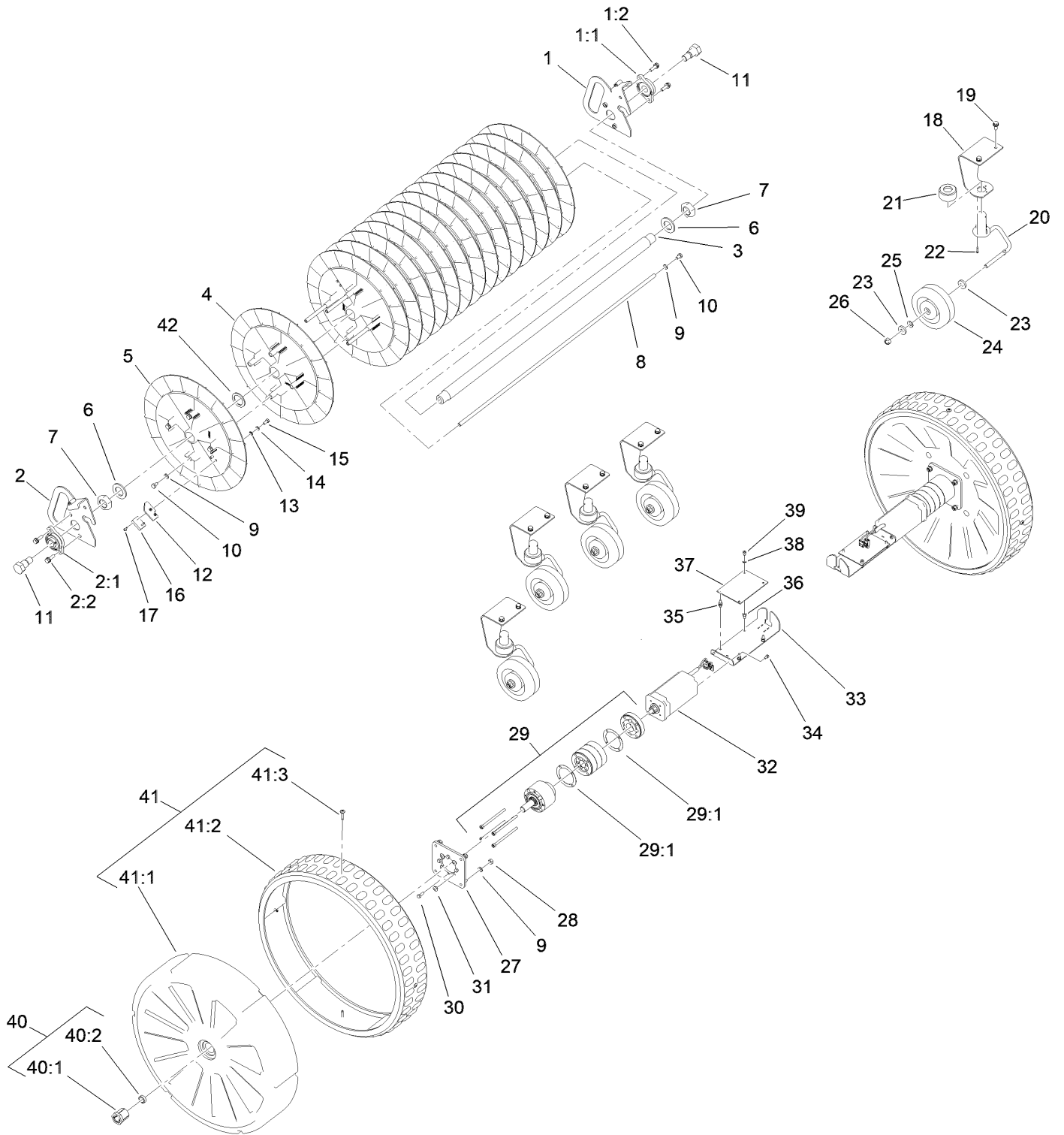
<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>	<i>Ref.</i>	<i>Part Number</i>	<i>Qty.</i>	<i>Description</i>
1	163-5745	1	Main Frame ASM	9	163-5448	12	Screw-HWH, Sems
2	163-5768	1	Bracket-Mount, Coil	10	163-5479	2	Front Cushion ASM
3	163-5404	1	Foam-Mount, Coil	11	163-5502	2	Washer-Flat
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 (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				

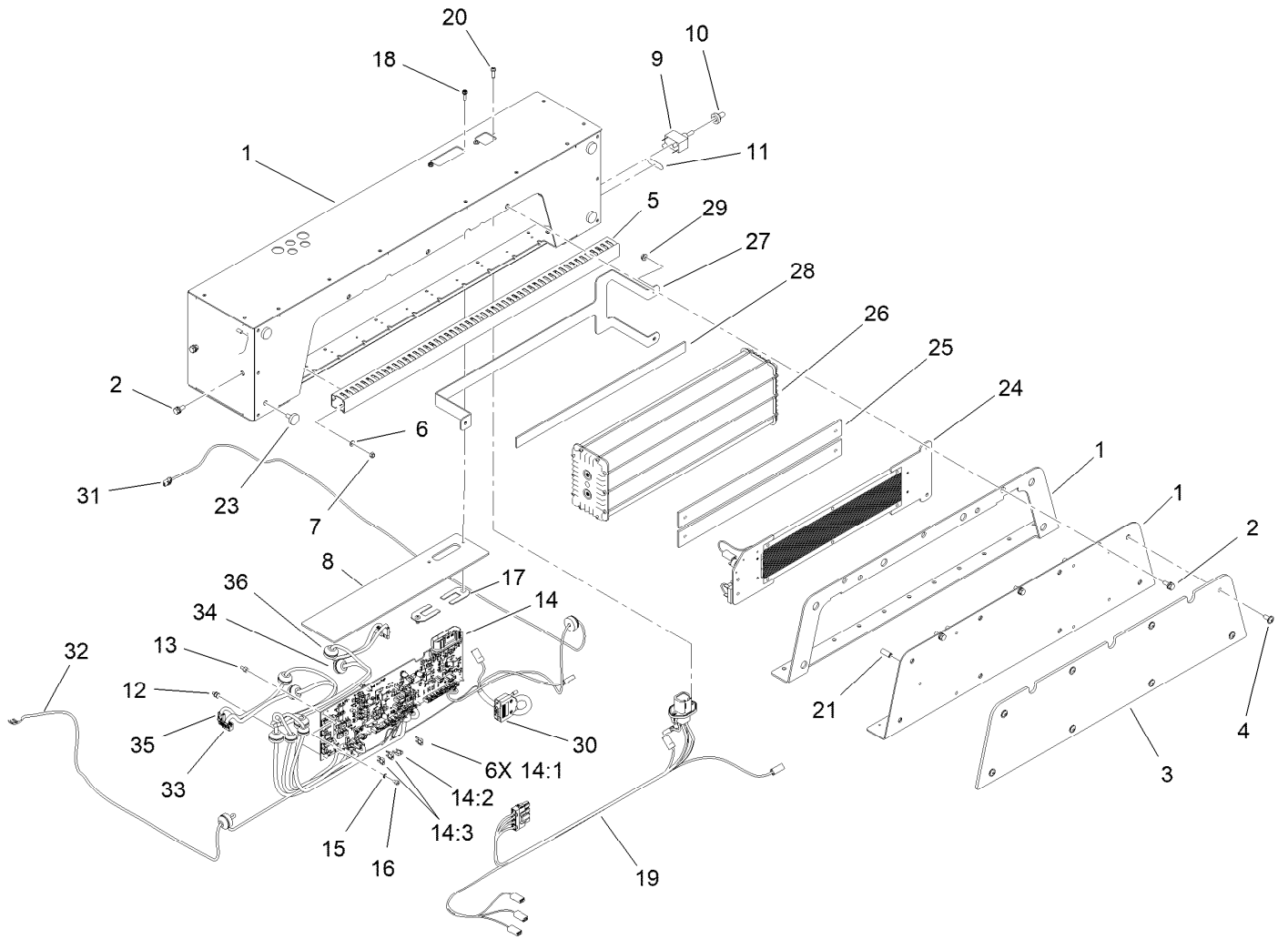
# Wheels and Drive Motor Assembly



## 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				

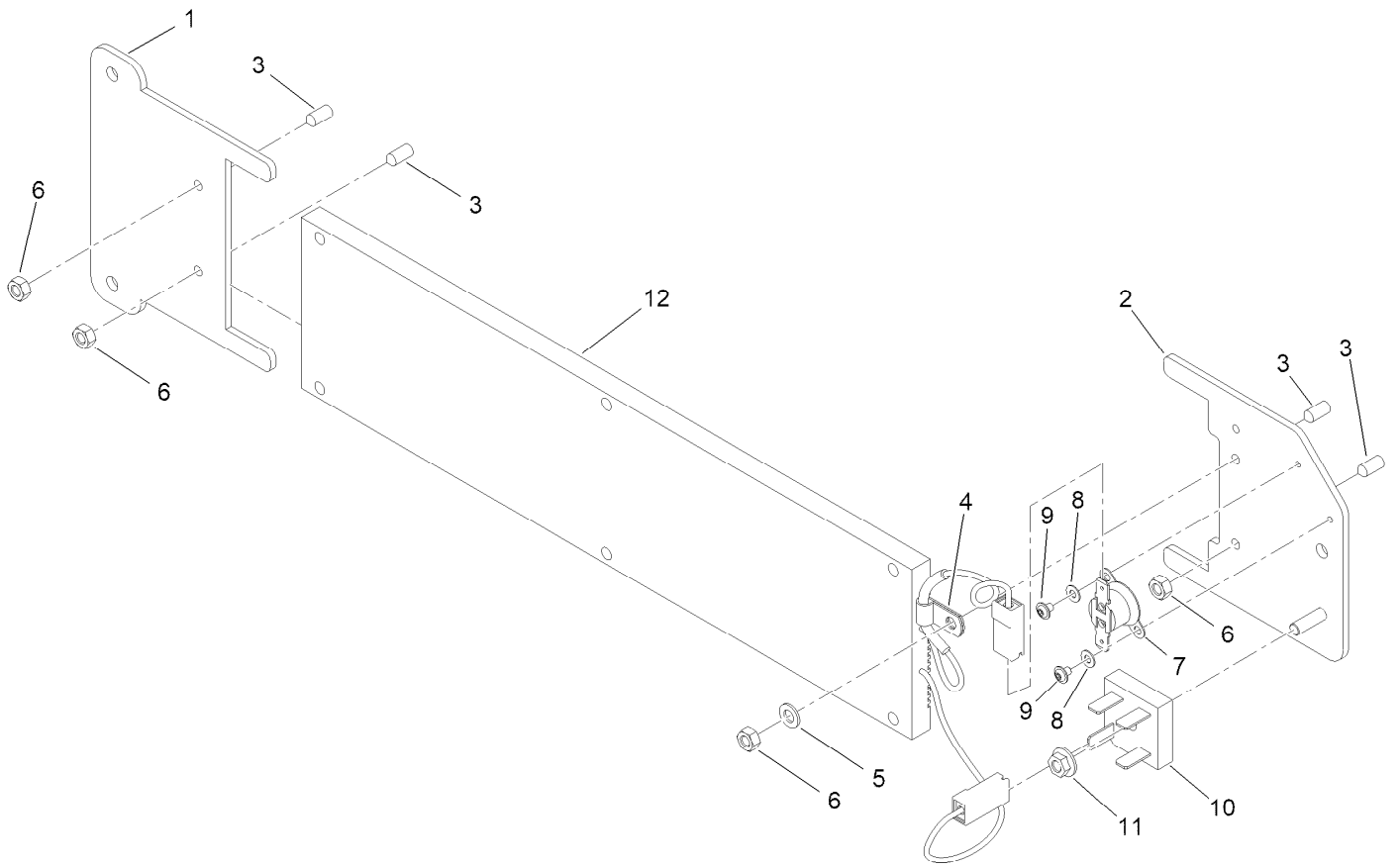
# Electrical Box and Battery Assembly



## 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 30931EU — Range Pro 100 Robotic Ball Picker

<b>Product Name</b>	<b>Model/Part</b>
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
Wire-Spool-500 M.....	163-3928
4G RTK Base EU.....	30912EU
Charge Station, Loop Only EU.....	30913EU
Charge Station, Two Loop EU .....	30914EU
WIFI RTK Base WW .....	30915

**Notes:**

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