

**200X  
Traction Drive  
Deluxe  
Floor Scrubber  
Battery**

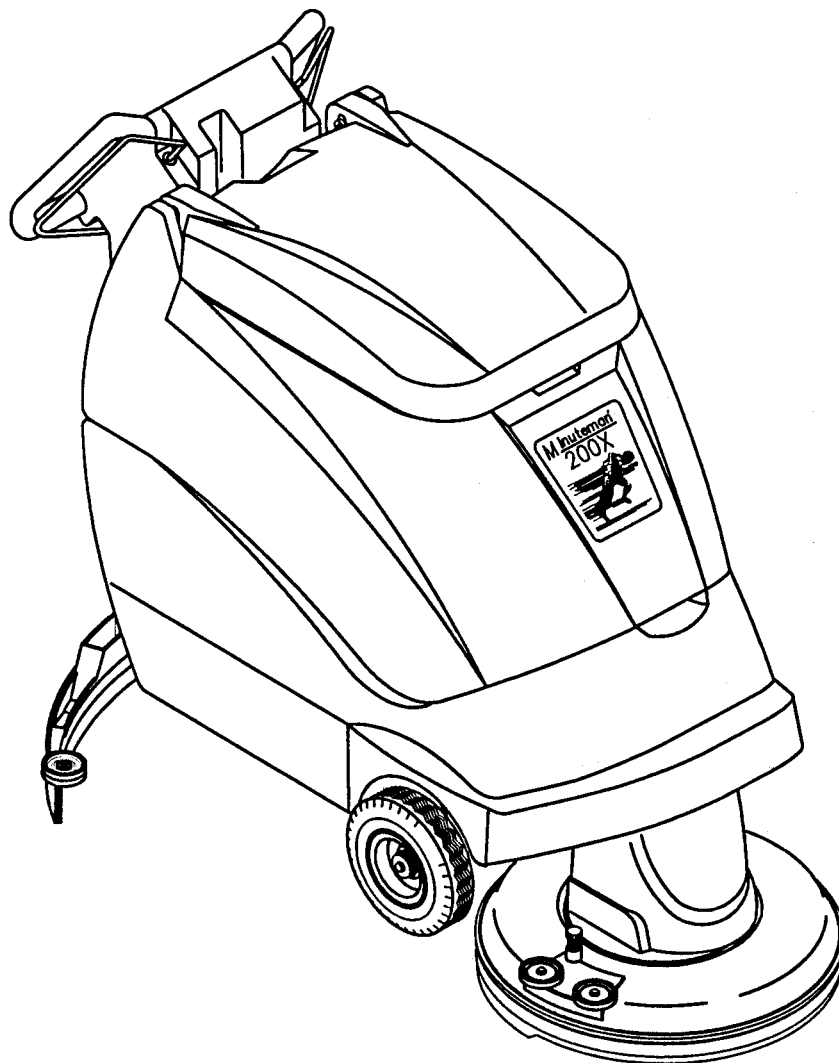
**Model: MC20001QP, CE  
MC20002QP, CE**

**OPERATION**

**SERVICE**

**PARTS**

**CARE**



Revised 8/02

**Minuteman<sup>®</sup>**

# EC Declaration of Conformity

according to Directives 72/23, 89/392, and 89/336

We, Minuteman International Incorporated, of 111 South Rohlwing Road Addison Illinois 60101 USA, declare under our sole responsibility that the product MC20004CE Commercial Automatic Floor Scrubber to which this declaration relates corresponds to the relevant requirements of the EC Directives 72/23, 89/392 and 89/336. The following standards were used to determine compliance with the Directives: EN 292, EN 294, EN 811, EN 55014, EN 55104 and IEC 335-1-72.

<b>SOUND</b>		<b>VIBRATION</b>
<b>81 dB Operator</b>	<b>77dB At 3m</b>	<b>4.8 m/s<sup>2</sup> At Operators Handle</b>

Tests were conducted on 6/14/00 with calibrated sound and vibration equipment under the conditions noted below:

General Condition: Indoors	Wind: 0 km/hr
Temperature: 23°C	Humidity: 70%
Barometric Pressure: 29.1	

Jeff Pollack

Jeff Pollack, Standards Engineer

6/15/00

Date

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# IMPORTANT SAFETY INSTRUCTIONS

## CAUTION

Operators must read and understand this manual before operating or maintaining this equipment.

- Keep hands and feet clear of moving parts while machine is in operation.
- All switches must be in the “OFF” position when charging batteries.
- Electrical motors and components can cause an explosion when operated near explosive materials or vapors. Do not operate this machine near flammable materials such as solvents, thinners, fuels, grain dusts, etc.
- Make sure all switches are turned “OFF” and battery connections are removed before performing any maintenance procedures.
- Store or park this machine on a level surface only.
- These machines are designed for level floor operation only. DO NOT OPERATE on ramps or inclines.
- 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.
- This machine is not suitable for picking up hazardous dust.

Charging batteries generates explosive gases. 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 batteries. Charge the batteries in a well-ventilated area.

Maintenance and repairs must be performed by authorized personnel.

**SAVE THESE INSTRUCTIONS**

## ELECTRICAL REQUIREMENTS:

This piece of equipment operates on 24 Volt DC.

## BATTERY REQUIREMENTS:

2 x 12V 185 Amp Hour 20 Hour Rate Deepcycle P/N 956709

2 x 12V 210 Amp Hour 20 Hour Rate Deepcycle P/N 956210

## BATTERY SERVICE AND INSTALLATION:

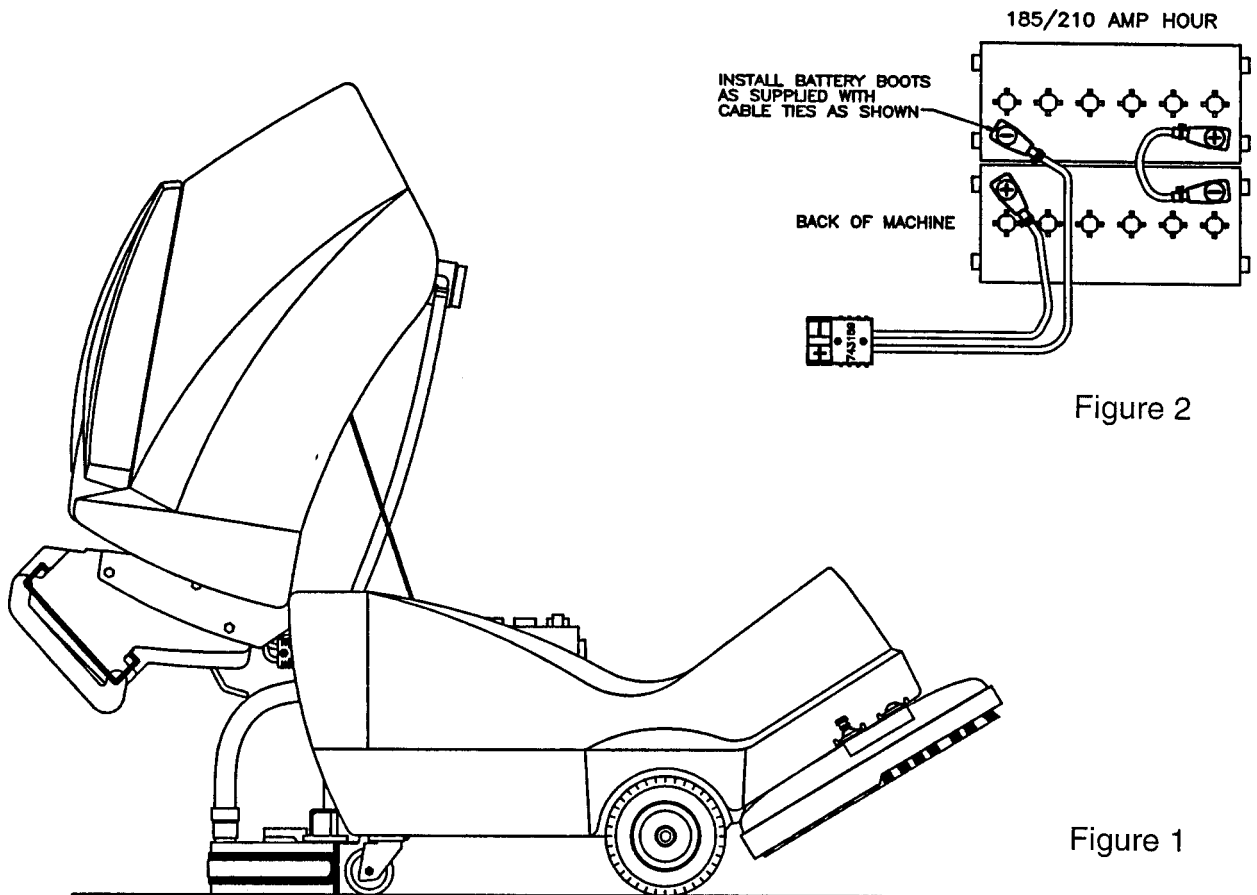
Warning: Battery acid can cause burns. When working on or around batteries, wear protective clothing and safety glasses. Remove metal jewelry. Do not lay tools or metal objects on top of batteries.

## BATTERY INSTALLATION:

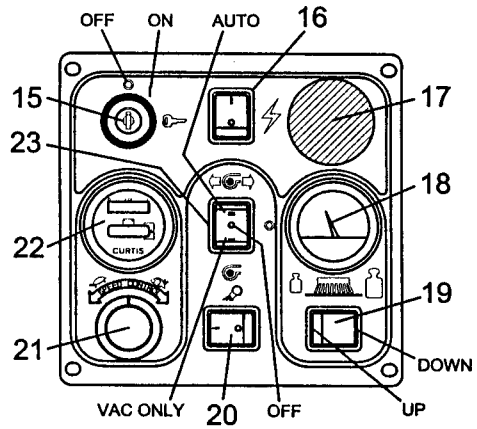
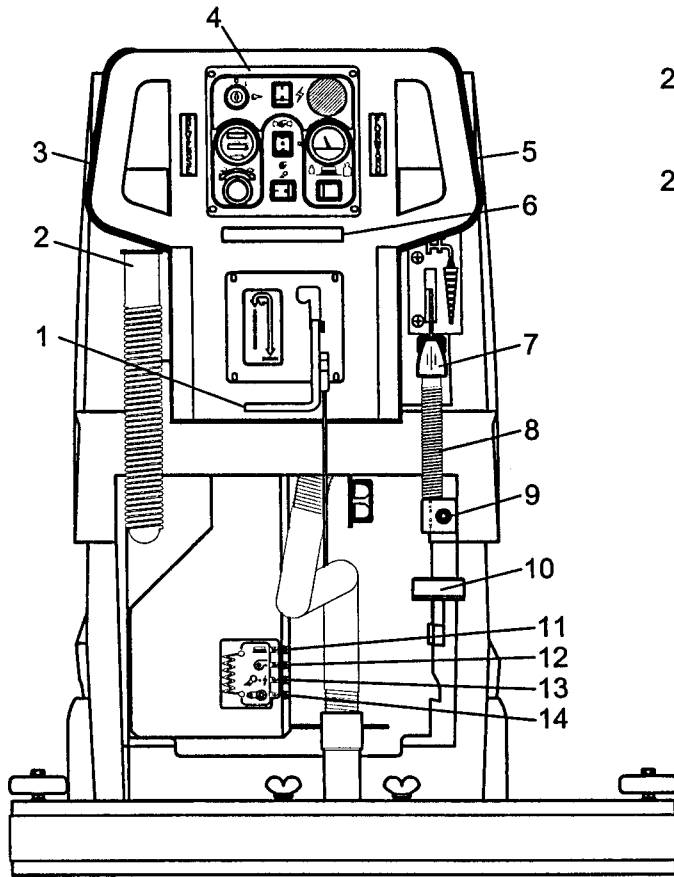
1. Raise tank assembly by gripping the front of the tank and lift the tank backward as shown in Fig. 1.
3. Install batteries as shown in Figure 2.

## CHARGING OF BATTERIES:

Charging of batteries generates explosive gases. 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 batteries. Charge the batteries in a well-ventilated area. Fluid levels should be checked before and after charging and maintained at the proper levels.



# CONTROL PANEL IDENTIFICATION



1. Squeegee lift lever
2. Recovery dump hose
3. Reverse handle
4. Dashboard control panel
5. Forward handle
6. Safety bar switch
7. Solution control lever
8. Solution dump hose
9. Quick disconnect - Aux. out (Deluxe only)
10. Foot pedal (TD only)
11. Circuit breaker - Brush
12. Circuit breaker - Vac
13. Circuit breaker - System
14. Circuit breaker - Transaxle
15. Keyswitch
16. Main power
17. Emergency button
18. Brush pressure gauge
19. Brush control
20. Pump switch
21. Speed control
22. Battery condition meter

## AUTO SCRUBBER BRUSH DESCRIPTION

TYPE	DESCRIPTION	DURABILITY*	COLOR	COMPARISON TO PADS	RECOMMENDED USE
Bassine	Natural Fiber	Short	Dark Brown	Red	Light duty general cleaning, acid etching
Nylon	Nylon	Medium	Black	Tan/Red	General cleaning & scrubbing vinyl floors, ceramic tile & concrete floors
Dyna-Scrub	Nylon impregnated with 500 Grit Silicon Carbide Fine Bristle, Dense Fill	Long	Light	Red	General scrubbing, vinyl tile, ceramic tile, epoxy floors, urethane finish, uneven concrete floors
Power-Scrub	Nylon impregnated with 120 Grit Silicon Carbide Fine Bristle, Dense Fill	Long	Rust	Red/Blue	Moderate aggressive scrubbing, tile floors, concrete floors
Poly-Grit	Nylon impregnated with 80 Grit Silicon Carbide Coarse Bristle	Long	Green	Brown/Black	Aggressive stripping and scrubbing, tile floors, unfinished concrete floors
Strata-Grit	Nylon impregnated with 46 Grit Silicon Carbide Coarse Bristle	Long	Dark Blue	Black	Heavy duty stripping/scrubbing unfinished concrete

• Durability is dependent on floor surface, chemicals used and proper care.

## OPERATING INSTRUCTIONS

### BEFORE STATING, FAMILIARIZE YOURSELF WITH THE MACHINE AND ITS CONTROLS (SEE “MACHINE OVERVIEW” & CONTROL PANEL DIAGRAMS)

1. Filling: Fill the solution tank with the desired amount of water and add liquid cleaning solution to the proper dilution ratio. DO NOT USE powdered cleaning chemicals. Powders are unlikely to dissolve thoroughly, resulting in clogging the in-line solution filter. This can reduce or stop water flow to the brush.
2. Close lid.
3. Turn on machine by lifting the red emergency disconnect button (17) so it is in the up position. Turn keyswitch (15) clockwise to “on” position and turn on main power switch (16).
4. Adjust main speed control (21) to full counter-clockwise position.
5. Lower brush assembly.
  - To lower the brush, first push the pedal (10) slightly outward on the machine (unlock it), and then release it slowly or by pressing “brush down” switch (19) on Deluxe models.
  - To lift the brush, press the pedal (10) down until lift mechanism engages or by pressing “brush up” switch (19) on Deluxe models.
  - Brush will come on automatically when brush in on the floor and “forward” (5) or “reverse” (3) handles are squeezed and remain on approximately 5 seconds after release.
6. Adjust solution control feed lever.
7. Select vacuum operations:
  - “Vacuum On” mode (23)  
Vacuum will remain on until switched to the “off” position
  - “Vacuum Auto” mode (23) –  
Vacuum will come on automatically when “forward” or “reverse” handle is squeezed, and scrubhead is on the floor. The brush and vacuum will remain on approximately 5 minutes.
8. Lower squeegee assembly by lowering handle (1).
9. Squeeze “forward” handle (5) and adjust forward speed (21) as desired.

#### After Use:

1. Turn off solution feed.
2. Raise squeegee assembly.
3. Turn off vacuum motor.

Solution and recovery tanks should be emptied after every use.

#### MAINTENANCE:

- |         |  |
|---------|--|
| Daily   | 1. Clean float assembly & squeegee blades. Vac filter                        |
|         | 2. Recharge batteries (check battery acid levels before and after charging). |
| Monthly | 1. Check wear on squeegee blades.  |
|         | 2. Grease front wheels.  |
|         | 3. Grease pivot points on brush motor assembly.                              |

Every 500 hours check condition of carbon brushes on vacuum motor and brush drive motor.

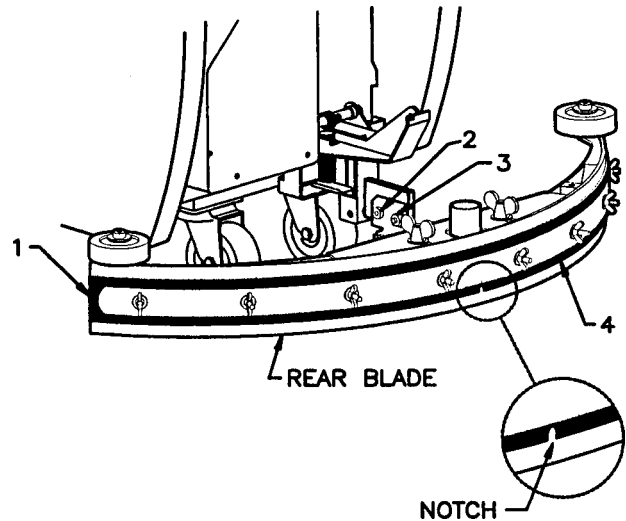
# SQUEEGEE ADJUSTMENTS

## Squeegee Adjustment

The squeegee set-up is pre-adjusted at the factory. Adjustments may be required to get optimum performance for different floors and conditions.

## Pitch Control Adjustment

1. Ensure that the scrubber is on a relatively flat surface. Pull the red emergency button away from the dashboard to activate power. Turn on the main power switch and turn the key switch clockwise to the on position. Raise the scrub head off the floor. Turn the vacuum switch to the "vacuum only" position.
2. Turn the speed control knob counter-clockwise to the low speed position. Lower the squeegee (item 1) to the floor and squeeze the forward control handle, move the machine one or two feet forward to check the rear squeegee blade for uniform deflection to the floor.
3. If uneven deflection or lay is evident, minor adjustments may be necessary to avoid streaking and uneven wear on the blade.
4. To correct this, pitch adjustment is necessary. Loosen the pivot screw (item 2) and the pitch screw (item 3). Move the machine forward and allow the squeegee to level itself or adjust the angular position accordingly to achieve a uniform blade deflection. Re-tighten screws.
5. In certain applications where a different blade set-up is required, the reinforcement blade (item 4) may be turned upside down. The notch, which is normally on the bottom will now be located on the topside. This allows the rear squeegee blade a larger deflection than normal.





# BRUSH INSTALLATION - REMOVAL

## INSTALLATION

### Traction Drive

1. Raise the scrubhead to the "UP" position by depressing the pedal (A) downward as shown on Fig. 1.

### Deluxe Model

1. Raise the scrubhead to the "UP" position by pressing the switch "BRUSH UP" (B) switch as shown on Fig. 2 until the scrubhead stops retracting upwards.
2. Center brush (D) under the scrubhead shroud while lining up the center hex drive hub and pressing the brush up until the brush engages on the drive hub.

## REMOVAL

### Traction Drive

1. Raise the scrubhead to the "UP" position by depressing the pedal (A) downward as shown on Fig. 1.

### Deluxe Model

1. Raise the scrubhead to the "UP" position by pressing the switch "BRUSH UP" (B) switch as shown on Fig. 2 until the scrubhead stops retracting upwards.
2. Remove the brush (D) by stepping on the "BRUSH RELEASE PIN" on the top of the scrubhead shroud as shown on Fig. 1 below.

Figure 1

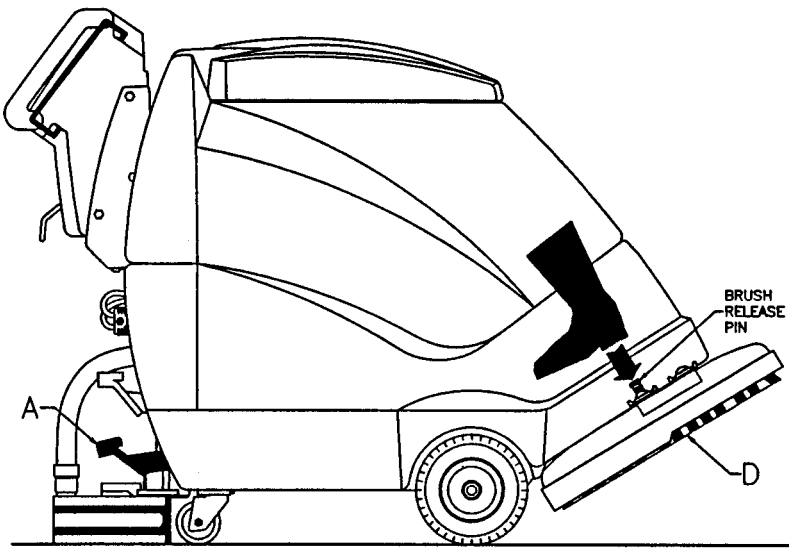
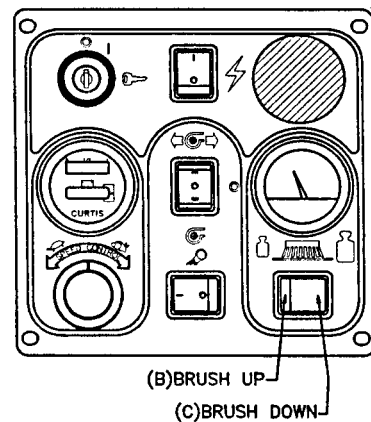
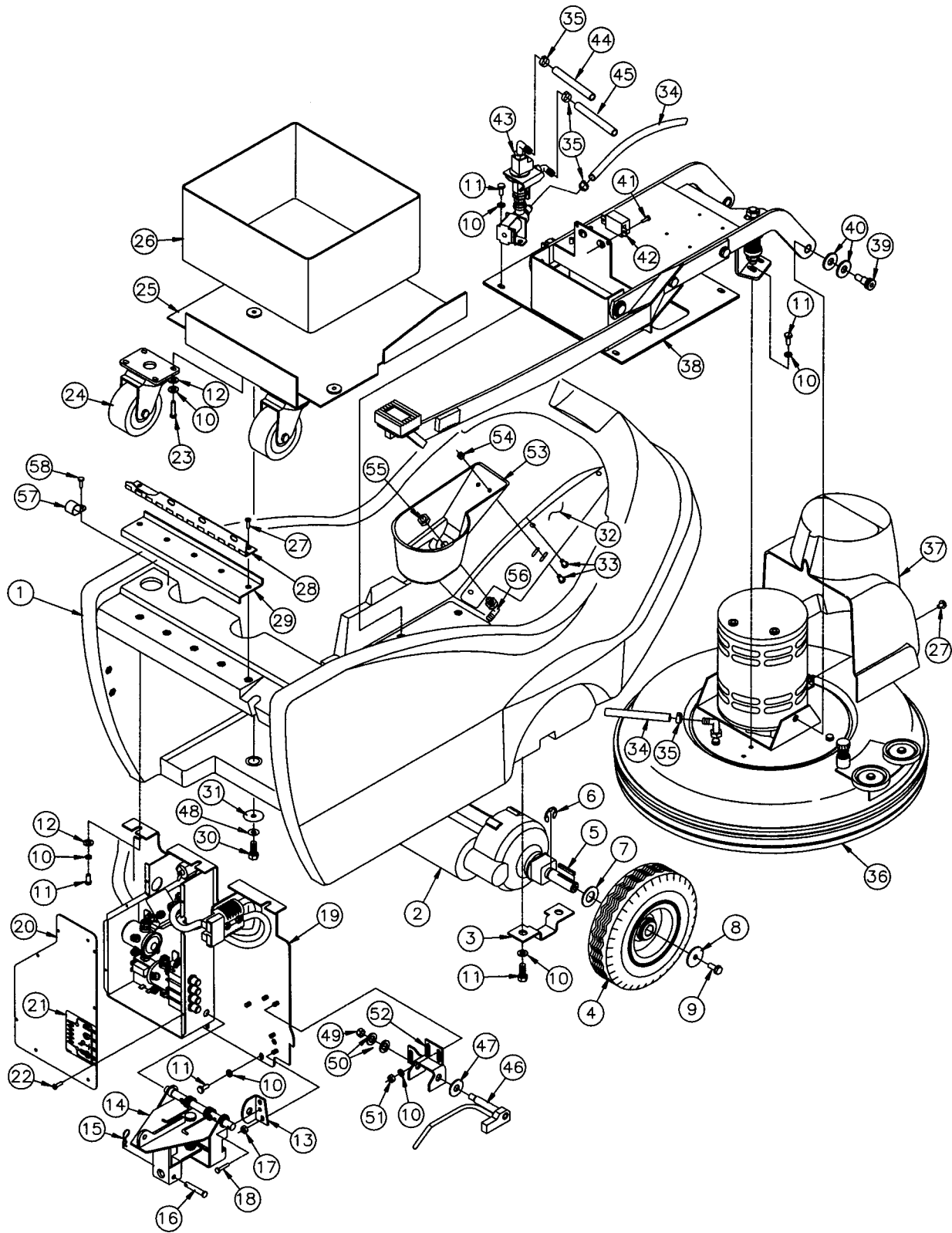


Figure 2



# BASE ASSEMBLY - TRACTION DRIVE

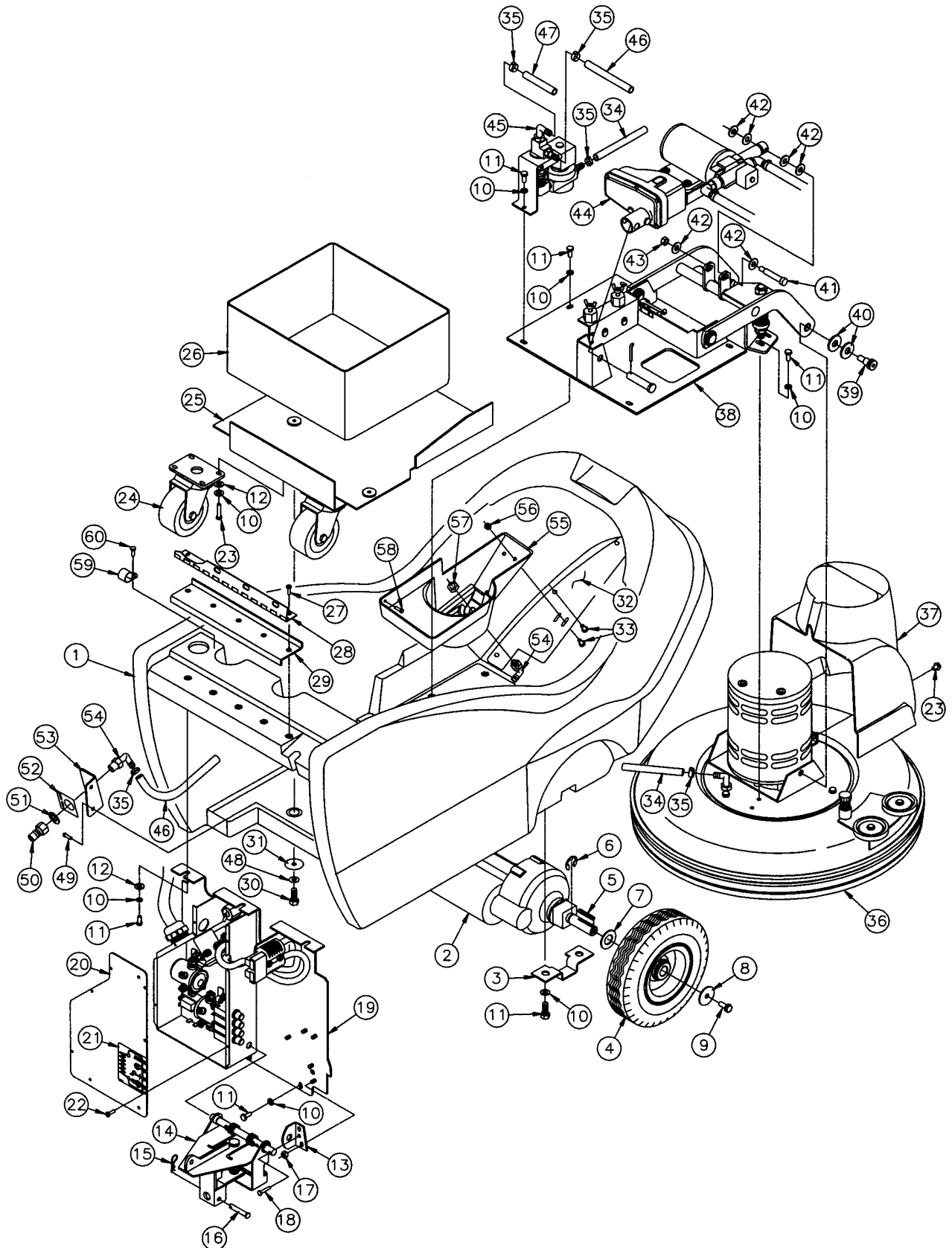


# TRACTION DRIVE

## Parts List

Item	Part No.	Qty.	Description
1	200102	1	Base
2	743506	1	Transaxle 24V
3	200126	2	Transaxle Mount
4	200172	2	Tire, Pneumatic
5	361233	2	Key 3/16 sq. x 1.50
6	809148	2	E-Ring 3/4
7	712318	2	WSR-Flat 3/4 x 1.12 x .12
8	712759	2	WSR-Flat 5/16 x 1.37 x .06 SS
9	712042	2	Bolt-WSR HH 5/16-18 x .62
10	711544	30	WSR-Helical 1/4
11	711203	19	BLT-HH 1/4-20 x .62
12	711505	11	WSR-Flat 1/4
13	200158	1	Pin Bracket
14	200153	1	Squeegee Mechanism Assy.
15	711808	1	Cotter Pin
16	210415	1	Clevis Pin 5/16
17	260183	3	Nut 1/4 NPT Nyloc
18	712564	1	Bolt-HH 1/4-20 x 1 SS
19	200175	1	Back Panel Assy.
20	200154	1	Electrical Box Cover
21	715286	1	Decal, CB
22	711125	4	SCR-ST-B #10 x 1/2
23	713002	8	BLT-HH 1/4-20 x .75
24	200345	2	Caster, 3 1/2"
25	200125	1	Battery Tray Weldment
26	210048	1	Battery Liner
27	712565	5	SCR-MC 1/4 - 20 x .62 SS
28	200145	1	Hinge
29	200146	1	Hinge Plate
30	711228	4	Bolt-HH 5/16-18 x 3/4
31	711507	4	WSR-Flat .37 x 1.12 x .06
32	200233	1	Bottom Cover
33	712822	5	SCR-THMS 10-24 x 1/2
34	200235	1	Hose Nylobraid 17.50
35	450076	2	Crimp Clamp 185R SS
36	200155	1	Scrubhead Assy. TD/Deluxe
37	200186	1	Motor Cover
38	200302	1	Motor Lift Assy. - TD
39	712099PLT	2	Shoulder Bolt 1/2 x .50
40	711510	4	WSR-Flat .50 x 1.38 x .10
41	712822	2	SCR-THMS 10-24 x 1/2
42	743032	1	Terminal Block
43	200197	1	Solution Valve Assy. - TD
44	200234	1	Solution Hose 51.00
45	200236	1	Auxilliary Hose 48.50
46	200130	1	Pawl Weldment
47	711578	1	WSR-Flat 1/2 Brass
48	711545	4	WSR-Helical 5/16
49	711375	1	Nut-Nyloc 3/8-16
50	712310	2	WSR-Flat .52 x .87 .06
51	711316	3	Nut-Hex 1/2 -20
52	200129	1	Pawl Mounting Bracket
53	200318MCH	1	Reservoir
54	712908	2	Nut-Wizz 10-24
55	260183	1	Nut-Nylon 1/4 NPT
56	833325	2	Barb 90° Elbow 3/8 x 1/4 NPT
57	83-54-A	1	Clamp
58	711160	1	Hi/Lo Screw #10 x 5/8

# BASE ASSEMBLY - DELUXE

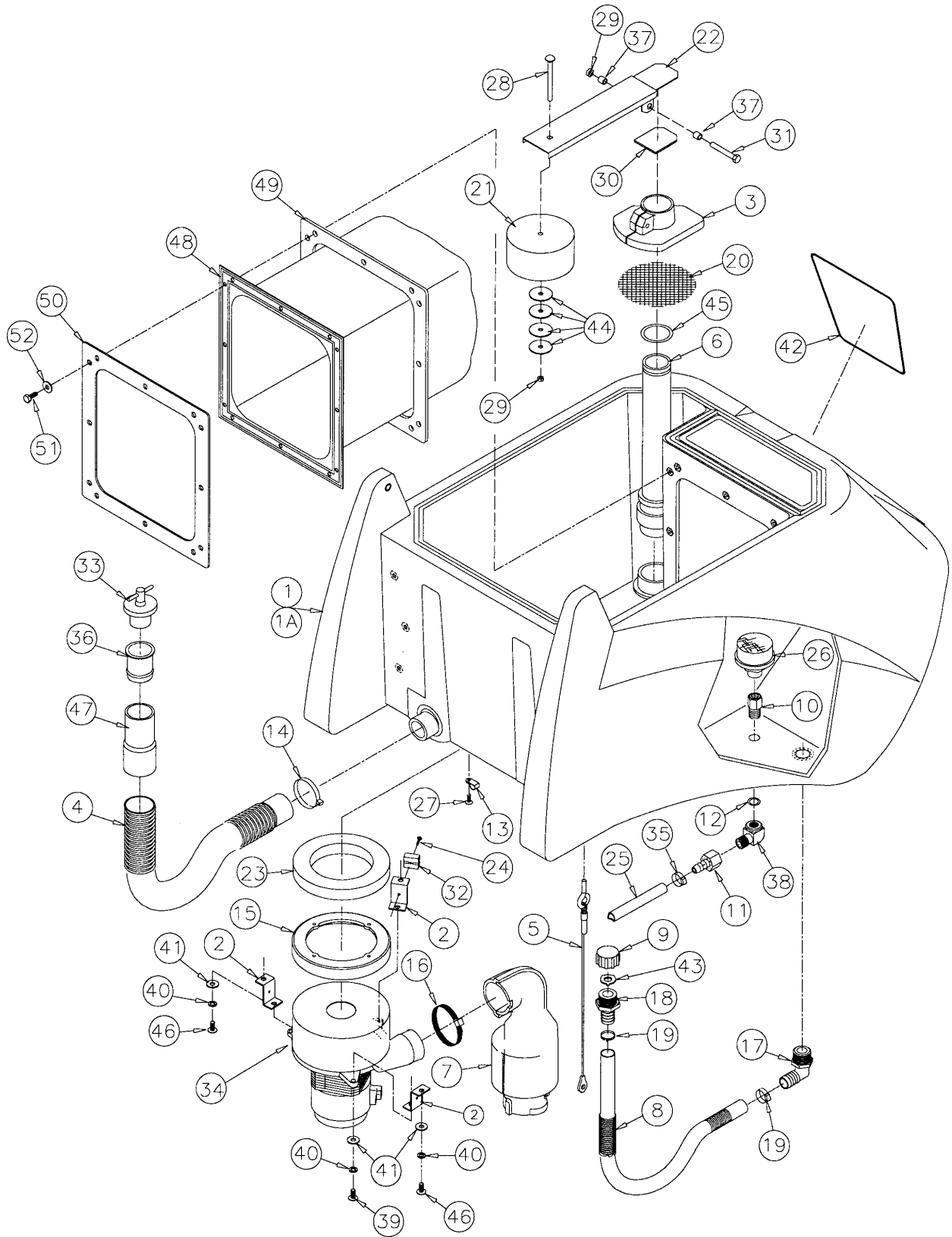


# DELUXE

## Parts List

Item	Part No.	Qty.	Description
1	200102	1	Base
2	743506	1	Transaxle 24V
3	200126	2	Transaxle Mount
4	200172	2	Tire, Pneumatic
5	361233	2	Key 3/16 sq. x 1.50
6	809148	2	E-Ring 3/4
7	712318	2	WSR-Flat 3/4 x 1.12 x .12
8	712759	2	WSR-Flat 5/16 x 1.37 x .06 SS
9	712042	2	Bolt-WSR HH 5/16-18 x .62
10	711544	27	WSR-Helical 1/4
11	711203	19	BLT-HH 1/4-20 x .62
12	711505	11	WSR-Flat 1/4
13	200158	1	Pin Bracket
14	200153	1	Squeegee Mechanism Assy.
15	711808	1	Cotter Pin
16	210415	1	Clevis Pin 5/16
17	260183	3	Nut 1/4 NPT Nyloc
18	712564	1	Bolt-HH 1/4-20 x 1 SS
19	200175	1	Back Panel Assy.
20	200154	1	Electrical Box Cover
21	715286	1	Decal, CB
22	711125	4	SCR-ST-B #10 x 1/2
23	713002	8	BLT-HH 1/4-20 x .75
24	762333	2	Caster, 3 1/2"
25	200125	1	Battery Tray Weldment
26	210048	1	Battery Liner
27	712565	5	SCR-MC 1/4 - 20 x .62 SS
28	200145	1	Hinge
29	200146	1	Hinge Plate
30	711228	4	Bolt-HH 5/16-18 x 3/4
31	711507	4	WSR-Flat .37 x 1.12 x .06
32	200233	1	Bottom Cover
33	712822	5	SCR-THMS 10-24 x 1/2
34	200235	1	Hose Nylobraid 17.50
35	450076	2	Crimp Clamp 185R SS
36	200155	1	Scrubhead Assy. TD/Deluxe
37	200186	1	Motor Cover
38	200290	1	Motor Lift Assy.
39	712099PLT	2	Shoulder Bolt 1/2 x .50
40	711510	4	WSR-Flat .50 x 1.38 x .10
41	712126	1	Shoulder Bolt 1/2 x .50
42	711515	6	WSR-Flat .406 x .81 x .06
43	711373	1	Nut-Hex 5/16-18 Nyloc
44	200285	1	Actuator/Pump Assy
45	200139	1	Valve Assy - Deluxe
46	200236	1	Auxilliary Hose 48.50
47	200234	1	Solution Hose 51.00
48	711545	4	WSR-Helical 5/16
49	711161	2	Hi/Lo Screw #10 x 3/4
50	828368	1	Male Coupler BH2-61
51	711594	1	WSR-Flat .56 x .88 x .03
52	715144	1	Decal Aux Pump
53	200237	1	Quick Disconnect Bracket
54	833325	2	Barb 90° Elbow 3/8 x 1/4 NPT
55	200318	1	Reservoir
56	712908	2	Nut-Wizz 10-24
57	260183	1	Nut-Nylon 1/4 NPT
58	711160	1	Hi/Lo Screw #10 x 5/8
59	260183	1	Clamp
60	711106	1	SCR-ST-A 10 x .75 PL

# TANK ASSEMBLY

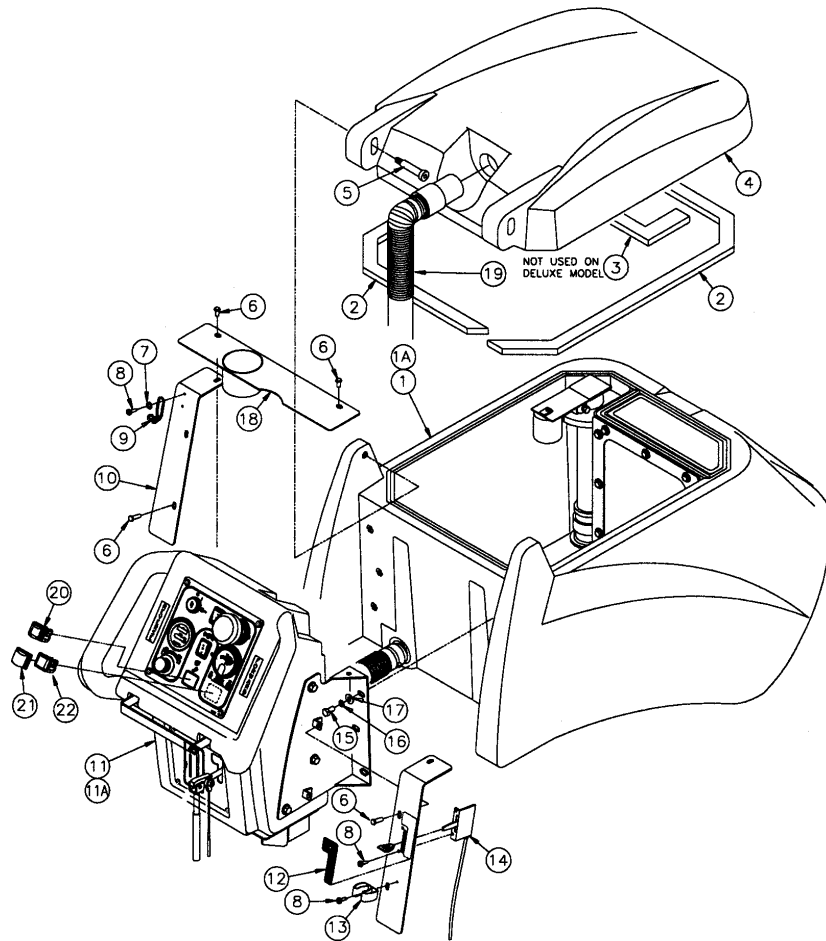


# TANK ASSEMBLY

## Parts List

Item	Part No.	Qty.	Description
1	200101	1	Solution/Recovery Tank
2	200147	3	Bracket, Vac Motor
3	200173	1	Float, Housing
4	210122	1	Drain Hose, Wirelock
5	200232	1	Cable, Tank
6	200251	1	Stand Pipe Assembly
7	200258	1	Muffler Assembly
8	200270	1	Hose, 3/4 Solution Drain
9	200023	1	Garden Hose Cap
10	210409	1	Fitting, Brass 3/8 MPT
11	210410	1	Fitting, Brass 3/8 FPT
12	210414	1	"O" Ring 2-113
13	250039	3	Clamp, Plastic 5/16 3305
14	260203	1	Hose Clamp 102120 Murray
15	290017	1	Gasket, Molded, Vac Motor
16	760859	1	Clamp-Hose
17	383321	1	Elbow 3/4 MPT 3/4 Barb PP
18	200022	1	3/4" MGHT x Hose Barb
19	829129	2	Clamp, Crimp 3/4 Hose
20	430050	1	Filter Screen 4 x 4
21	260155	1	Foam Float
22	430090	1	Float Valve Weldment
23	460019	1	Gasket
24	710207	1	SCR-MC 6-32 x .87 ST PL
25	200234	Ref.	Solution Hose
26	130118	1	Solution Strainer
27	712540	3	SCR-MC #10-24 x .375 SS
28	712574	1	CR Bolt SS 1/4-20 x 3"
29	712667	2	Nut-Hex 1/4-20 SS Nyloc
30	200321	1	Gasket, Shut-Off
31	712568	1	SCR-MC 1/4-20 x 2.25 SS
32	832996	1	Terminal Block 2-Pole VDE
33	833316	1	Drain Plug
34	740225	1	Vac Motor 6515-13 24V
35	760245	2	Hose Clamp 62P24
36	760343	1	Tube Hose 24/32B
37	762384	2	Bushing .277 x .375 x .37 SS
38	830062	1	Fitting Brass 90 3/8 MPT
39	710180	3	SCR-MC 1/4-20 x .75
40	711544	6	Lockwasher - Helical 1/4
41	711505	6	Washer 1/4
42	715285	1	Decal, 200X
43	200024	1	Black Vinyl Washer
44	712759	4	WSR-Flat .31 x 1.37 x .06 SS
45	310008	1	O-Ring
46	712565	3	SCR-MC 1/4-20 x .625 SS
47	805613	1	Hose Cuff, Grey Vinyl
<b>Deluxe Model Only</b>			
48	200106	1	Bladder Bag
49	200267	1	Gasket, Bladder
50	200189	1	Frame, Bladder
51	712562	12	SCR-MC HH 1/4-20 x .75 SS
52	711504	12	Washer 1/4 SS

# UPPER ASSEMBLY

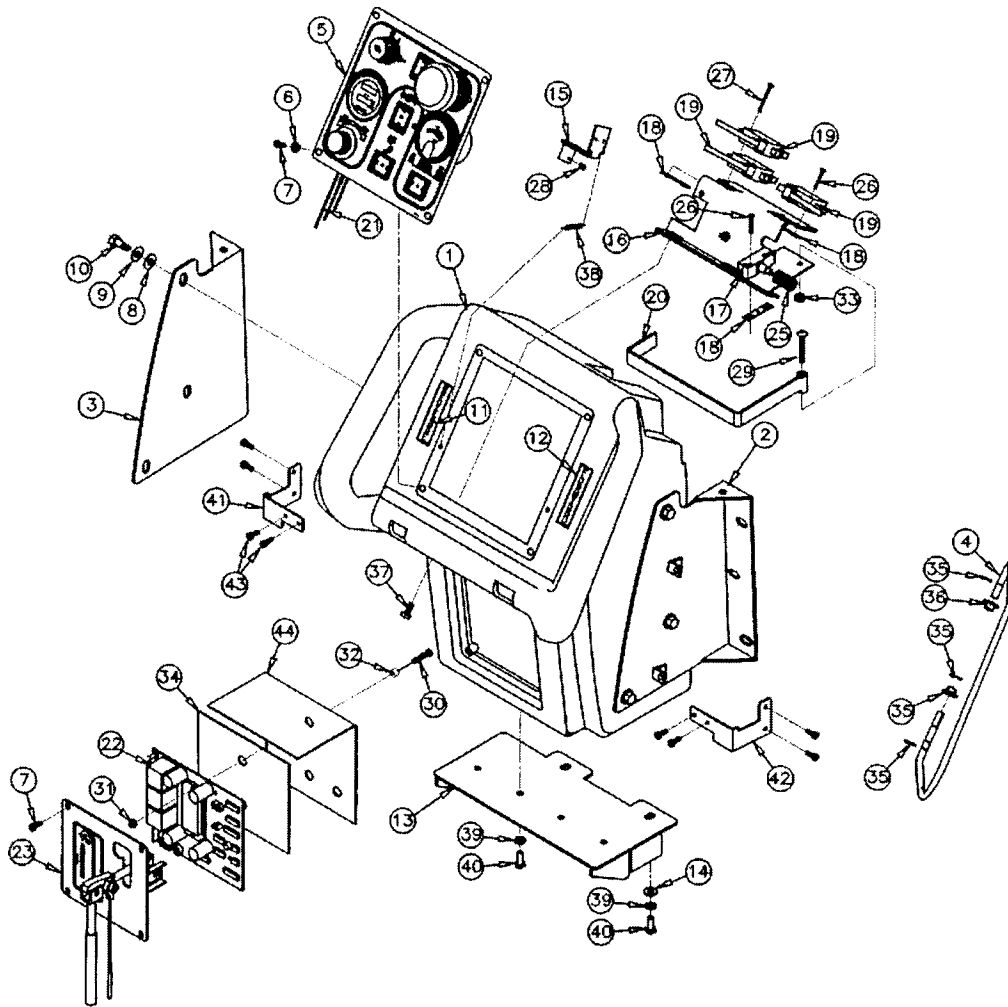


## Parts List

Item	Part No.	Qty.	Description
1	200160	1	Tank Assembly
1A	200275	1	Tank Assy. - Deluxe
2	200178	2	Gasket, Lid
3	200136	1	Gasket, Solution Lid
4	200103	1	Tank Lid
5	712120	2	Shoulder Bolt 1/2 x 2
6	710178	6	SCR-MC 1/4-20 x 1/2
7	711503	2	WSR-Flat #10
8	711125	5	SCR-ST-B #10 x 1/2
9	760286	1	Wire Formed Hook
10	200176	1	Dump Hose Bracket
11	200180	1	Console Assy. TD/Deluxe
11A	200170	1	Console Assy. - Brush Drive
12	715284	1	Decal, Solution Control
13	383367	1	Spring Clip
14	430053	1	Solution Control Cable
15	711228	6	Bolt-HH 5/16-18 x 3/4
16	711545	6	WSR-Helical 5/16
17	711575	6	WSR-Flat 5/16
18	200032	1	Console Back Cover Weldment
19	450054	1	Vacuum Recovery Hose
<b>Deluxe Model Only</b>			
20	740711	1	Switch Dreefs
21	740811	2	Switch Boot
22	740800CE	1	Switch Momentary



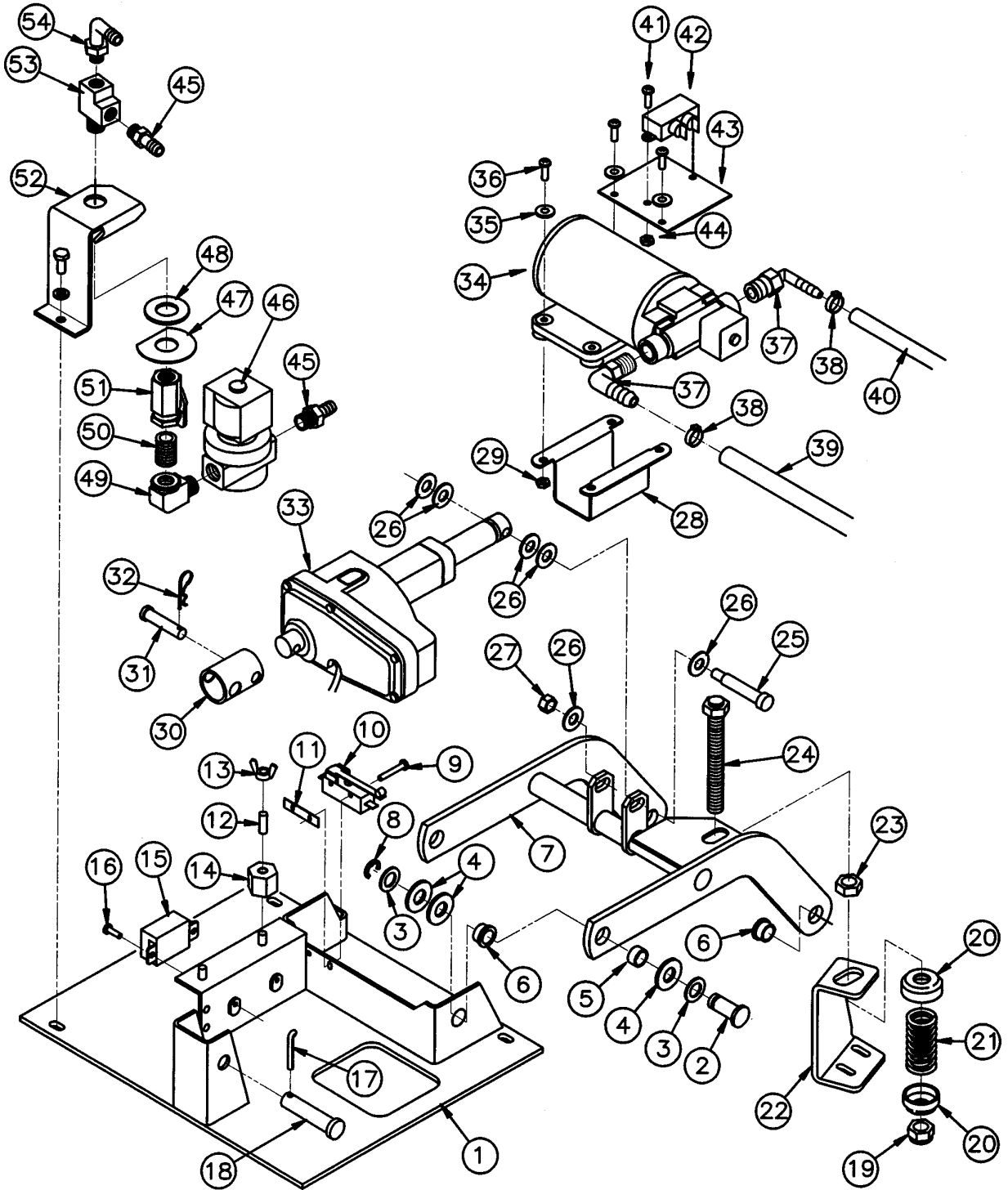
# CONSOLE ASSEMBLY



Parts List for 200180

Item	Part No.	Qty.	Description	Item	Part No.	Qty.	Description
1	200104MCH	1	Console Machined	23	200240	1	Squeegee Lift Assy.
2	200134	1	Console Bracket Right	24	200241	1	Squeegee Lift Cable
3	200135	1	Console Bracket Left	25	670093	1	Spring, Compression
4	200181CTD	2	Handle Wire, Coated	26	710207	4	SCR-MC 6-32 x .87 ST PL
5	200295	1	Dashboard Assy. TD/DLX	27	710312	2	SCR-MC 6-32 x 1.75 ST PL
6	712320	4	WSR-Nylon .22 x .45 x .04	28	711004	2	SCR-SK 1/4-20 x .25 SS
7	712540	8	SCR-MC #10-24 x .37 SS	29	712569	1	SCR-MC 1/4-20 x 1.50 SS
8	711575	6	WSR-Flat .31 x .75 x .06	30	710534	2	SCR-MC #8-32 x 1"
9	711545	6	WSR-Helical 5/16	31	711372	2	Nut, Nyloc #8-32
10	711228	6	Bolt-HH 5/16-18 x .75	32	200340	2	Spacer, S-C Board
11	715258	1	Decal, "Reverse"	33	829052	1	Nut, Hex 1/4-20
12	715257	1	Decal, "Forward"	34	805637	1	SCR Insulator
13	200151	1	Hinge Bracket Weldment	35	711721	6	Retaining Ring .312
14	711505	2	WSR-Flat 1/4	36	829052	4	Bushing Flanged, Nylon
15	200338	2	Cam Weldment	37	710180	2	SCR-MC 1/4-20 x 1"
16	200184	1	Switch Bracket Weldment	38	220324	2	Spring
17	742472	1	Switch, McGill NC	39	711544	6	WSR-Helical 1/4
18	711430	3	Nut-Tinnerman 6-32	40	711203	6	Bolt-HH 1/4-20 x .62
19	833329SA	3	Switch, Staggered Action	41	200039	1	Bail Stop (RH)
20	200190CTD	1	Lever, Switch, Coated	42	200040	1	Bail Stop (LH)
21	743240	1	Harness, 200 Console	43	711160	8	Screw Hi-Lo #10 x 5/8 PL
22	740944	1	Speed Control, 24V 1203A225	44	260210	1	Moisture Guard SCR 260TD

# MOTOR LIFT - DELUXE



## Parts List

### 200290 Motor Lift Assembly

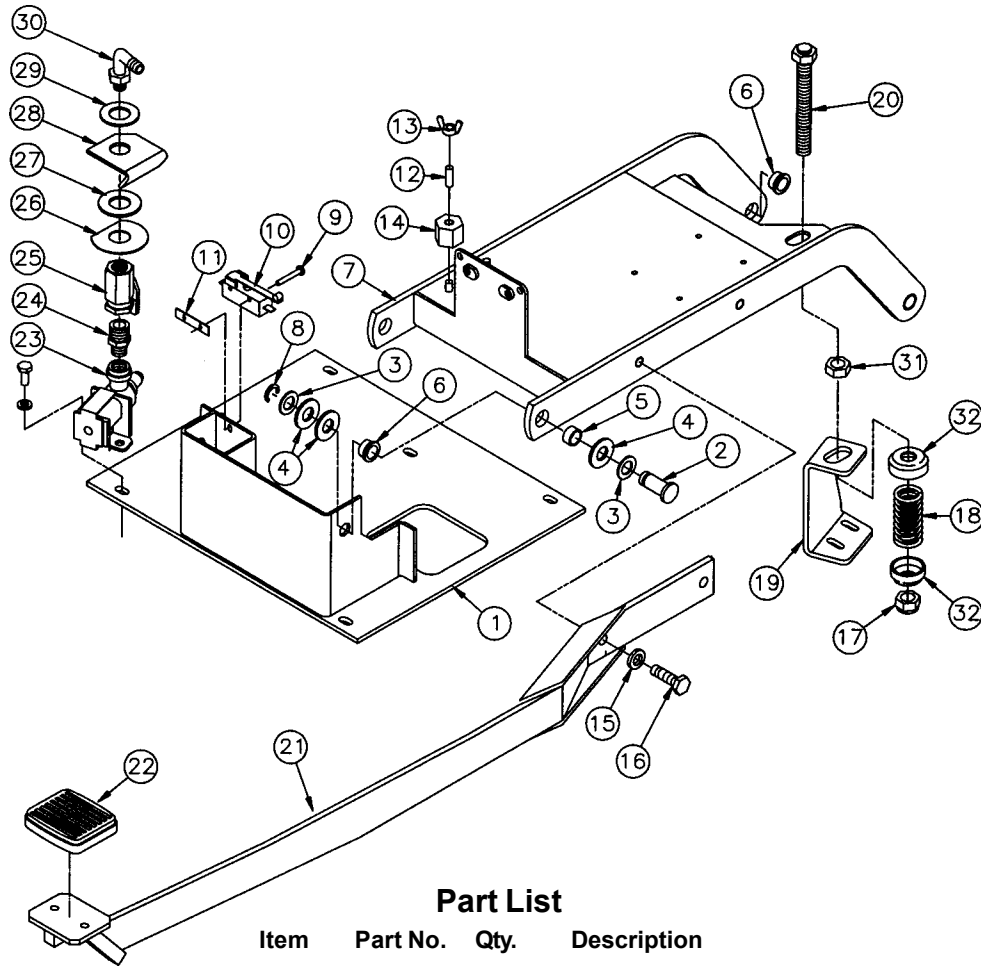
Item	Part No.	Qty.	Description
1	200249	1	Base Plate Weldment - Deluxe
2	260036	2	Pin
3	712310	4	WSR-Flat .52 x .88 x .06
4	711527	6	WSR-Flat 5/8 x 1.12 x .12
5	762340	2	Oilite Bushing 1/2
6	260041	4	Oilite Flanged Bushing 1/2
7	200242	1	Lift Arm Weldment - Deluxe
8	711713	2	E-Ring 1/2
9	710207	2	SCR-MC 6-32 x .87
10	740128	1	Microswitch
11	711430	1	Tinnerman Clip
12	833638	2	Brass Stud
13	711368	2	Wing Nut
14	740132	2	Insulator Glastic
15	743032	1	Terminal Block
16	712822	2	SCR-THMS 10-24 x 1/2
17	711807	1	Cotter Hair Pin
18	711672	1	Clevis Pin 1/2
19	711376	1	Nut-Nyloc 1/2-13
20	828264	2	Cup Washer
21	260137	1	Compression Spring
22	200110	1	Spring Bracket
23	711334	1	Nut-Hex 1/2-13
24	200149	1	Adjustment Rod
25	712126	1	Shoulder Bolt 5/16 x 1.75
26	711515	6	WSR-Flat .406 x .81 x .063
27	711373	1	Nut-Nyloc 1/4-20

### 200285 Pump/Actuator Assembly

28	200174	1	Pump Mounting Bracket
29	712638	4	Nut-Nyloc 10-24 SS
30	200248	1	Pivot Tube
31	831965	1	Clevis Pin 3/8 x 1.63
32	711808	1	Cotter Pin
33	743503	1	Actuator
34	833299	1	Pump
35	711505	4	WSR-Flat 1/4
36	712532	4	SCR-MC 10-24 x 1 SS
37	833325	2	Elbow 3/8 Barb x 1/4 NPT
38	450076	2	Crimp Clamp 185R
39	200282	1	Hose Pump Inlet
40	200281	1	Hose Pump Outlet
41	710329	2	SCR-MC 8-32 x .5 C.E. Only
42	742391	1	RFI Filter, Corcom C.E. Only
43	200335	1	RFI Bracket C.E. Only
44	711372	2	Nut-Nyloc 8-32 C.E. Only

### 200139 Valve Assembly - Deluxe

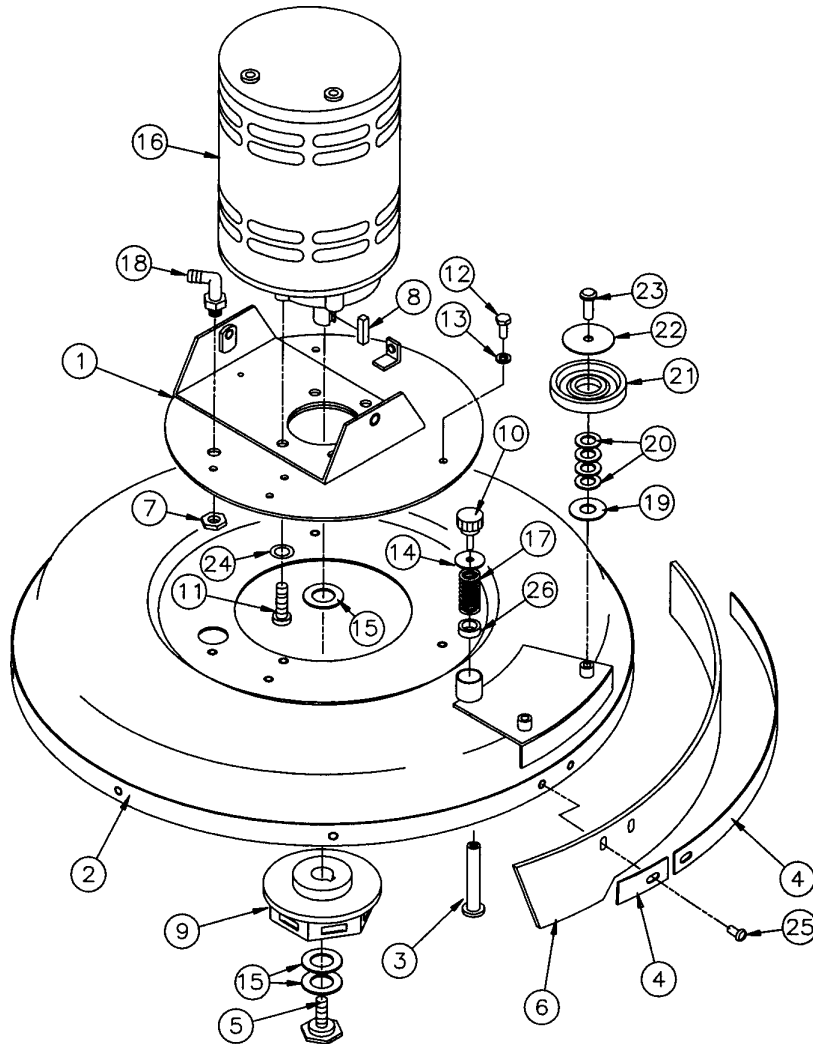
45	342430	2	Fitting 3/8 Barb x 3/8 MPT
46	743505	1	Water Solenoid 24V
47	829463	1	WSR-Flat SS
48	828975	1	WSR-Neoprene .75 x 1.5 x .09
49	830062	1	3/8 Street 90° Brass
50	383332	1	3/8 Closed Nipple
51	809413MCH	1	Solution Valve Machined
52	200259	1	Valve Bracket
53	210408	1	Fitting Brass Tee 3/8 NPT
54	450040	1	Elbow 3/8 Barb x 3/8 MPT



### Part List

Item	Part No.	Qty.	Description
1	200120	1	Base Plate Weldment
2	260036	2	Pin
3	712310	4	WSR-Flat .52 x .88 x .06
4	711527	6	WSR-Flat 5/8 x 1.12 x .12
5	762340	2	Oilite Bushing 1/2
6	260041	4	Oilite Flanged Bushing 1/2
7	200115	1	Lift Arm Weldment
8	711713	2	E-Ring 1/2
9	710207	2	SCR-MC 6-32 x .87
10	740128	1	Microswitch
11	711430	1	Tinnerman Clip
12	833638	2	Brass Stud
13	711368	2	Wing Nut
14	740132	2	Insulator Glastic
15	711546	2	WSR-Helical 3/8
16	711241	2	Bolt-HH 3/8-16 x 3/4
17	711376	1	Nut-Nyloc 1/2 - 13
18	260137	1	Compression Spring
19	200110	1	Spring Bracket
20	200149	1	Adjustment Rod
21	200116	1	Pedal Arm Weldment
22	210142	1	Pedal
23	740493	1	Water Solenoid 24V
24	200195	1	Reducing Nipple 3/8 x 1/4
25	809413MCH	1	Solution Valve Machined
26	829463	1	WSR-Flat SS
27	828975	1	WSR-Neoprene .75 x 1.5 x .09
28	200196	1	Valve Bracket
29	711512	1	WSR-Flat .75 x 1.37 x .08
30	450040	1	Elbow 3/8 Barb x 3/8 MPT
31	711334	1	Nut-Hex 1/2 - 13
32	828264	2	Cup Washer

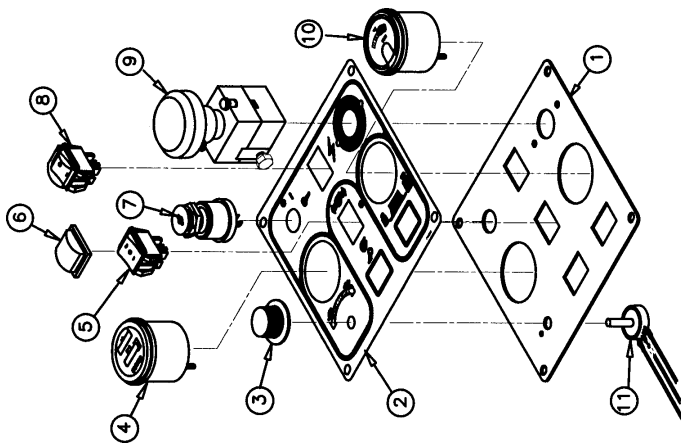
# MOTOR LIFT TRACTION DRIVE



## Parts List

Item	Part No.	Qty.	Description
1	200141	1	Motor Platform Weldment - TD
2	200187	1	Brush Shroud Weldment
3	200194	1	Pin, Brush Release
4	200294	2	Shroud Strap
5	210066	1	Retainer Bolt
6	200293	1	Shroud Skirt
7	260183	1	Nut 1/4 NPT Nylon
8	320268	1	Key, 1/4 x 5/16 x 1.00
9	430035	1	Drive Hub
10	500033	1	Locking Screw
11	710986	4	SCR-SC 3/8-16 x 1.00
12	711202	3	SCR-MC 1/4-20 x 1/2
13	711544	3	WSR-Helical 1/4
14	711519	1	WSR-Flat .25 x 1.00 x .03
15	711517	5	WSR-Flat 3/4
16	740209	1	Gear Motor 24V
17	833102	1	Spring
18	833325	1	Hose Barb 90 Nylon
19	711578	2	WSR-Flat 1/2 Brass
20	712310	8	WSR-Flat .52 x .87 x .06
21	430085	2	Bumper Wheel
22	712579	2	WSR-Flat .31 x 1.37 x .06 SS
23	710975	2	SCR-SC 5/16-18 x .87
24	711555	4	WSR-Lock Internal 3/8
25	712560	8	SCR-MC 1/4-20 x .50 Nyloc
26	200339	1	Spacer .51 x .75 x .25

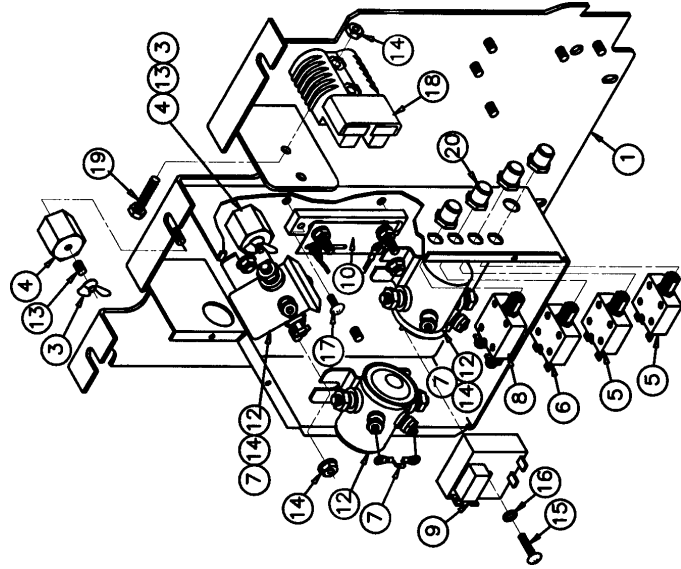
# DASHBOARD



Parts List for 200295

Item	Part No.	Qty.	Description
1	200179	1	Dashboard Plate
2	715280	1	Decal 200 Dashboard
3	809874	1	Knob
4	743501	1	Meter, Hour Battery 24V
5	742102	1	Switch, 23670C4D
6	740811	2	Switch Boot
7	741005	1	Keyswitch On-Off
8	740711	1	Switch Dreefs
9	742202	1	Disconnect Switch 125A
10	743502	1	Gauge, Brush Pressure
11	743199-1	1	Pot Assy w/o Resistor

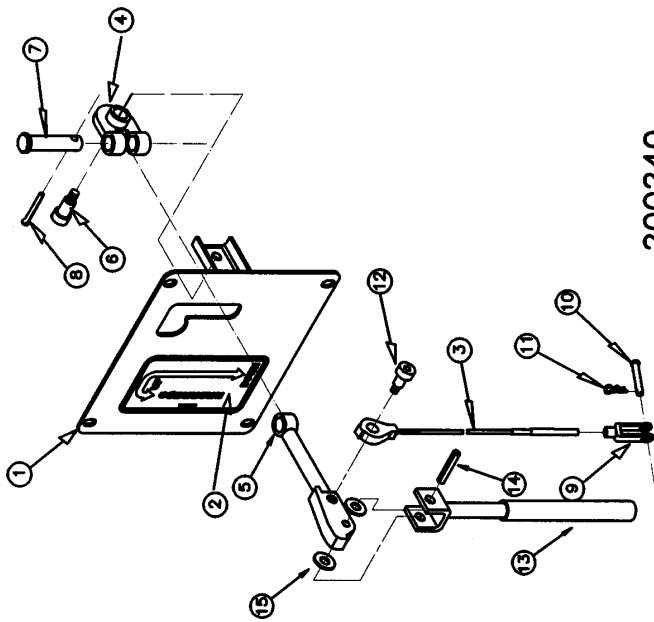
# BACK PANEL



Parts List for 200175

Item	Part No.	Qty.	Description
1	200124	1	Backpanel Weldment
2	711368	2	Wing Nut, 1/4-20
3	740132	2	Insulator (Glastic)
4	740238	2	Circuit Breaker 18
5	740247	1	Circuit Breaker 30
6	742000	3	Diode Assembly
7	740549	1	Circuit Breaker 50
8	741037	1	5 Sec. True Off Delay Timer
9	742403	1	Shunt, Calibrated
10	743250	1	Wire Harness, Lower Assy.
11	743250	1	Solenoid 24VDC
12	788147	3	Brass Stud
13	833638	2	Whiz-Nut 1/4-20
14	711425	8	SCR-THMS 10-24 x 1"
15	712823	1	WSR-Nylon .22 x .42 x .04
16	712320	1	SCR 10-24 x .62
17	712536	2	CB175 Red Housing Only
18	740159	1	SCR-HH 1/4-20 x 1 1/4
19	711210	2	Boot, Circuit Breaker
20	742748	4	Boot, Circuit Breaker

# SQUEEGEE LIFT

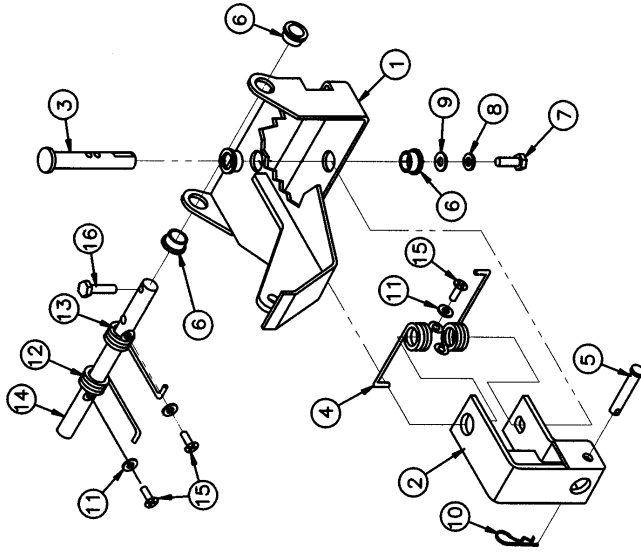


200240

## Parts List for 200240

Item	Part No.	Qty.	Description
1	200239	1	Panel Cover Weldment
2	715603	1	Decal Squeegie Lift
3	200241	1	Squeegie Lift Cable
4	200261	1	Inner Arm Weldment
5	200017	1	Arm Squeegie, Lift Weldment
6	712070	1	Bolt, Shoulder 5/16 x .75
7	831965	1	Clevis Pin 3/8
8	809311	1	Cotter Pin 7/64 x 1"
9	881009	1	Yoke
10	881002	1	Clevis Pin 5/16
11	711808	1	Cotter Pin #13
12	712041	1	Bolt-Shoulder 5/16 x .44
13	200038	1	Handle Weldment
14	711642	1	3/16 X 1.00 Roll Pin
15	711504	2	WSR-Flat 1/4 SS

# SQUEEGEE MECHANISM

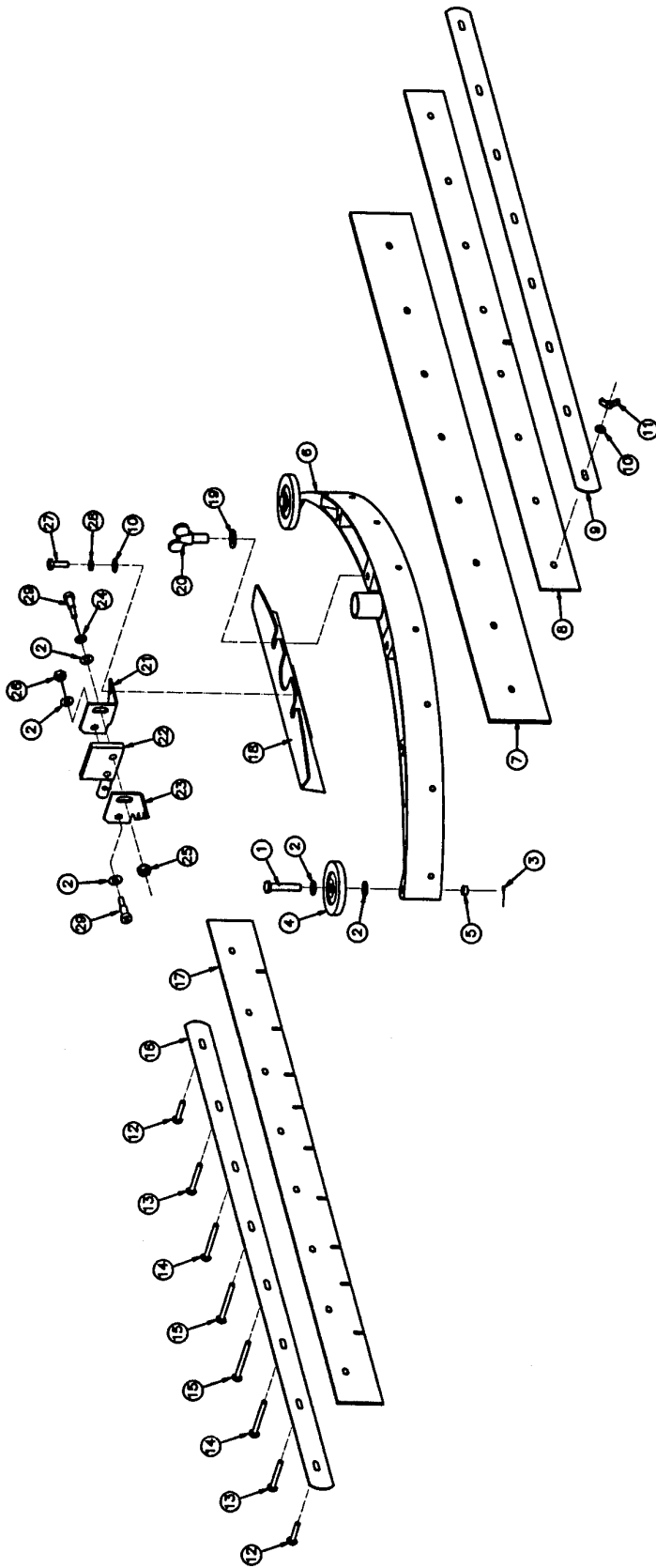


200153

## Parts List for 200153

Item	Part No.	Qty.	Description
1	200144	1	Spring Housing Weldment
2	200300	1	Yoke Weldment
3	210375	1	Swivel Pin
4	210391	2	Return Spring SS
5	210415	1	Clevis Pin .31 x 1.7 11-097
6	260041	4	Oilite Flange Bushing
7	710180	1	SCR-MC 1/4-20 x .75 ST PL
8	711544	1	WSR-Helical 1/4
9	711519	1	WSR-Flat .25 x 1.01 x .06
10	711808	1	Cotter Pin - Hair #13
11	712320	2	WSR-Nylon .22 x .45 x .04
12	900080	1	Spring, Torsion RH
13	900081	1	Spring, Torsion LH
14	200159	1	Pin
15	712536	4	SCR-MC 10-24 x .62 SS
16	712564	1	BLT-HH 1/4-20 x 1.00 SS

# SQUEEGEE ASSEMBLY - 200219



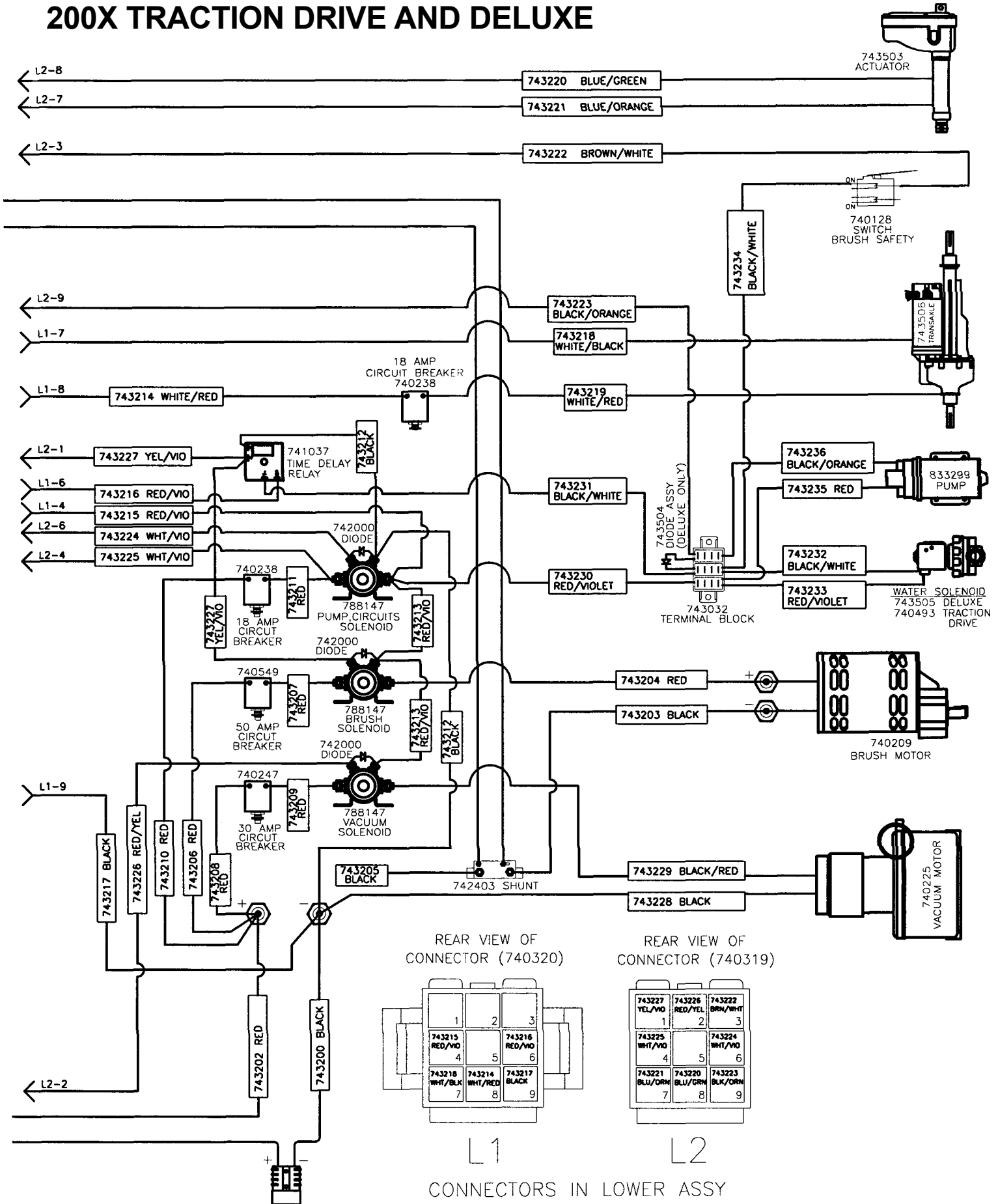
Parts List for 200219

Item	Part No.	Qty.	Description	Item	Part No.	Qty.	Description
1	711668	2	Clevis Pin 3/8 x 1	16	260273	1	Front Blade Strap
2	711507	7	WSR-Flat .37 x 1.12 x .06	17	260322	1	Squeegie Blade 260 Quarry
3	711808	2	Cotter Pin - Hair #13	18	320191	1	Squeegie Mounting Bracket
4	210153	2	Roller Wheel	19	711578	2	WSR-Flat 1/2 Brass
5	762281	2	Bushing .37 x .500 x .25	20	220249	2	Wing Bolt 1/2-13 x .75
6	200222	1	Squeegie Casting, 200	21	320156	1	Mounting Bracket - Right
7	260203	1	Rear Squeegie Blade	22	200169	1	Pitch Control Weldment
8	260264	1	Reinforcement Blade	23	320157	1	Mounting Bracket - Left
9	260272	1	Rear Blade Strap	24	712301	1	WSR-Flat .37 x .87 x .07
10	711504	12	WSR-Flat .25 x .56 SS	25	711379	1	Nut- Flanged Wizz 5/16-18
11	712668	8	Wing Nut 1/4-20 SS	26	711374	1	Nut-Nyloc 5/16-18
12	712571	2	Bolt-SS Carr 1/4-20 x 1.50	27	712562	4	Bolt-HH 1/4-20 x .75 SS
13	712572	2	Bolt-SS Carr 1/4-20 x 2.00	28	712758	4	WSR-Helical 1/4 SS
14	712573	2	Bolt-SS Carr 1/4-20 x 2.50	29	712081	2	Bolt-Shoulder 3/8 x .75
15	712574	2	Bolt-SS Carr 1/4-20 x 3.00				



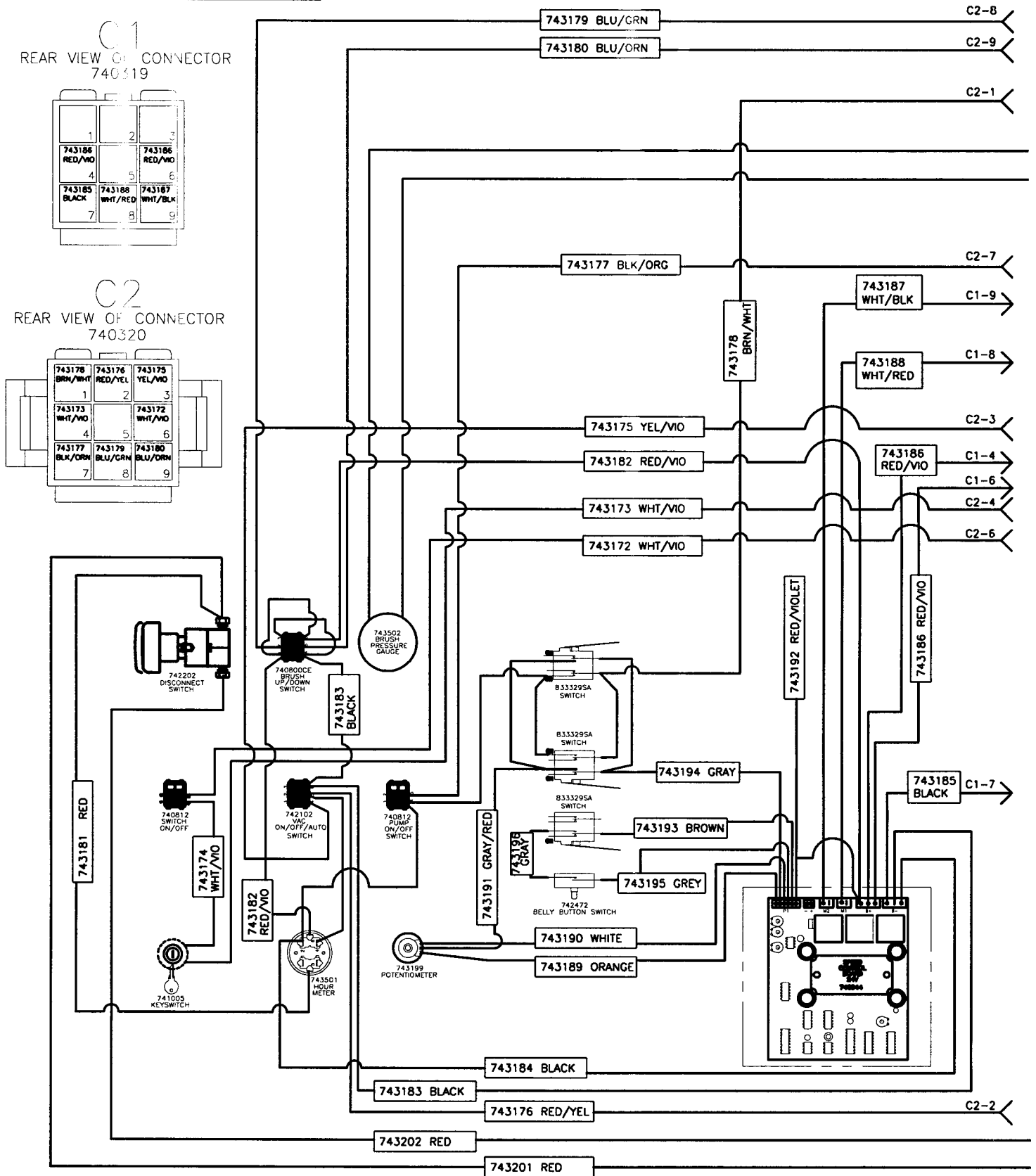


# 200X TRACTION DRIVE AND DELUXE



# CE 200X TRACTION DRIVE AND DELUXE MC20001CE, MC20002CE

## CONNECTORS IN CONSOLE ASSY





# LIMITED WARRANTY

Minuteman International, Inc. warrants to the original purchaser/user that this product is free from defects in workmanship and materials under normal use and service for a period of three years from date of purchase. In addition, Minuteman International, Inc. will, at its option, honor labor warranty claims for the first 12 months from date of sale, provided such claims are submitted through and approved by factory authorized repair stations. Minuteman International, Inc. will, at its option, repair or replace without charge, except for transportation costs, parts that fail under normal use and service when operated and maintained in accordance with the applicable operation and instruction manuals.

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 not manufactured by Minuteman International, Inc. such as engines, batteries, battery chargers, hydraulic pumps, and tires are covered by and subject to the warranties and/or guarantees of their manufacturers. Please contact Minuteman International, Inc. for procedures in warranty claims against these manufacturers.

**Special warning to purchaser** — Use of replacement filters and/or prefilters not manufactured by Minuteman International, Inc. or its designated licensees, will void all warranties expressed or implied.

A potential health hazard exists without exact original equipment replacement.

All warranted items become the sole property of Minuteman International, Inc. or its original manufacturer, whichever the case may be.

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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.

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