



# Electronic Service Manuals

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# 240X Floor Scrubber Battery

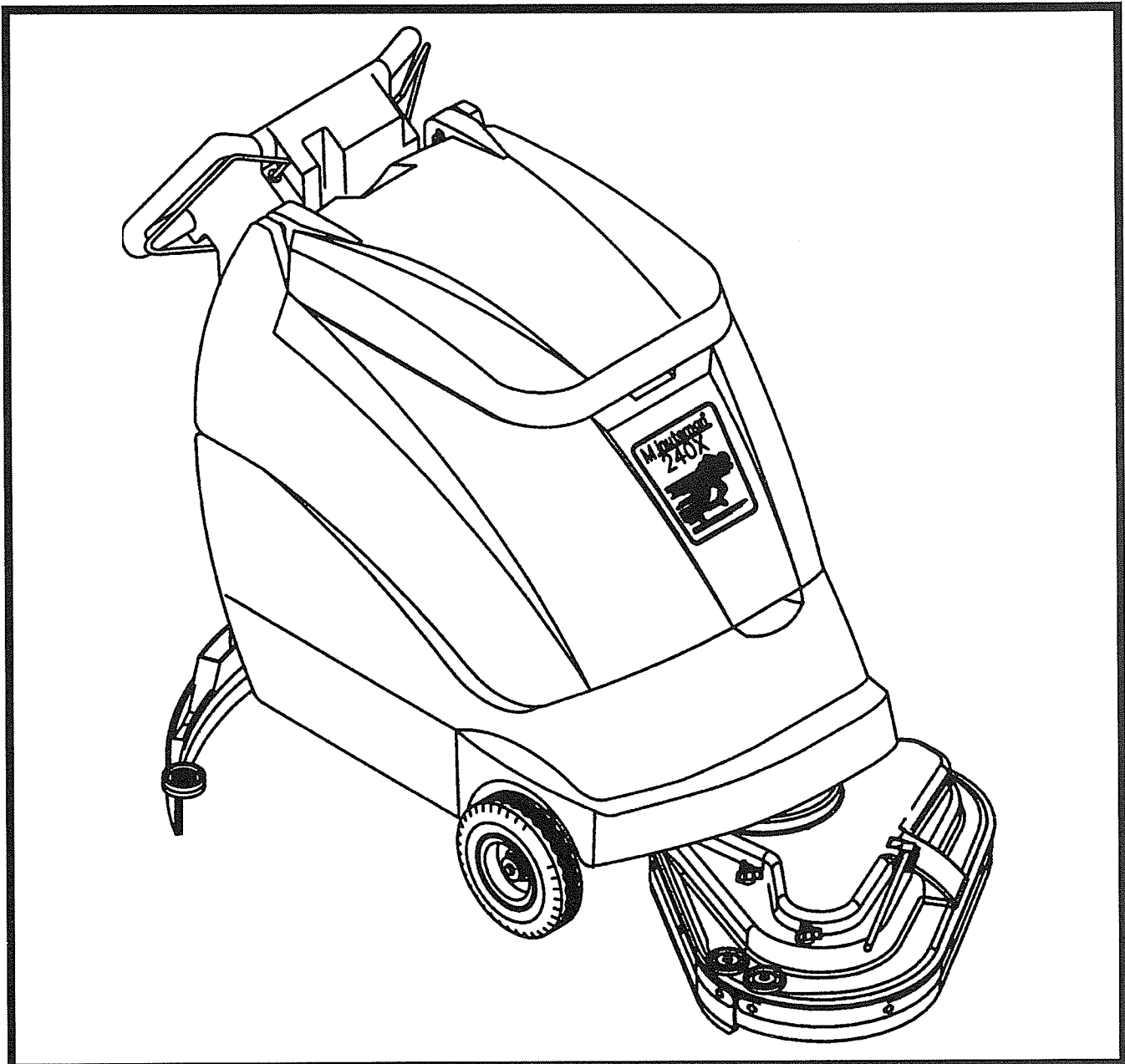
Model:  
MC240024QP, CE

OPERATION

SERVICE

PARTS

CARE



Revised 6/02

**Minuteman**<sup>®</sup>

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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 210 Amp Hour 20 Hour Rate Deepcycle P/N 956210

## BATTERY SERVICE AND INSTALLATION:

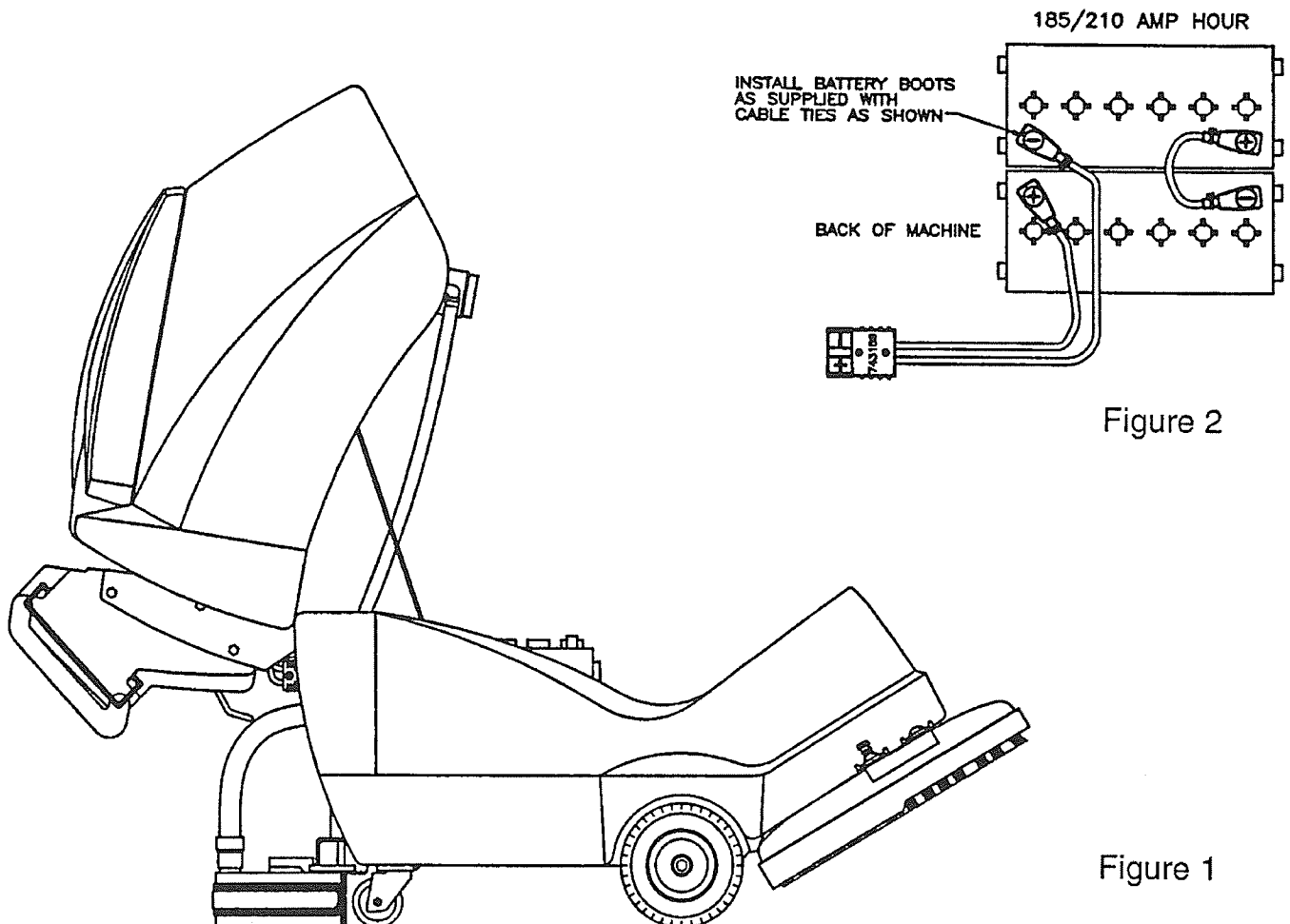
Warning: Battery acid can cause burns. When working on or around batteries, wear protective clothing and safety glasses. Remove metal jewelry. Do not lay tools or metal objects on top of batteries.

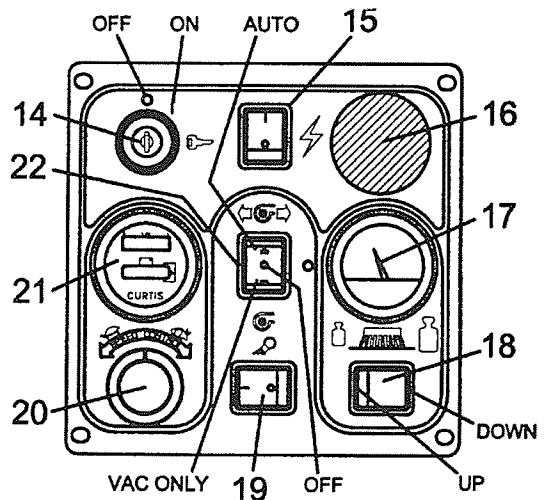
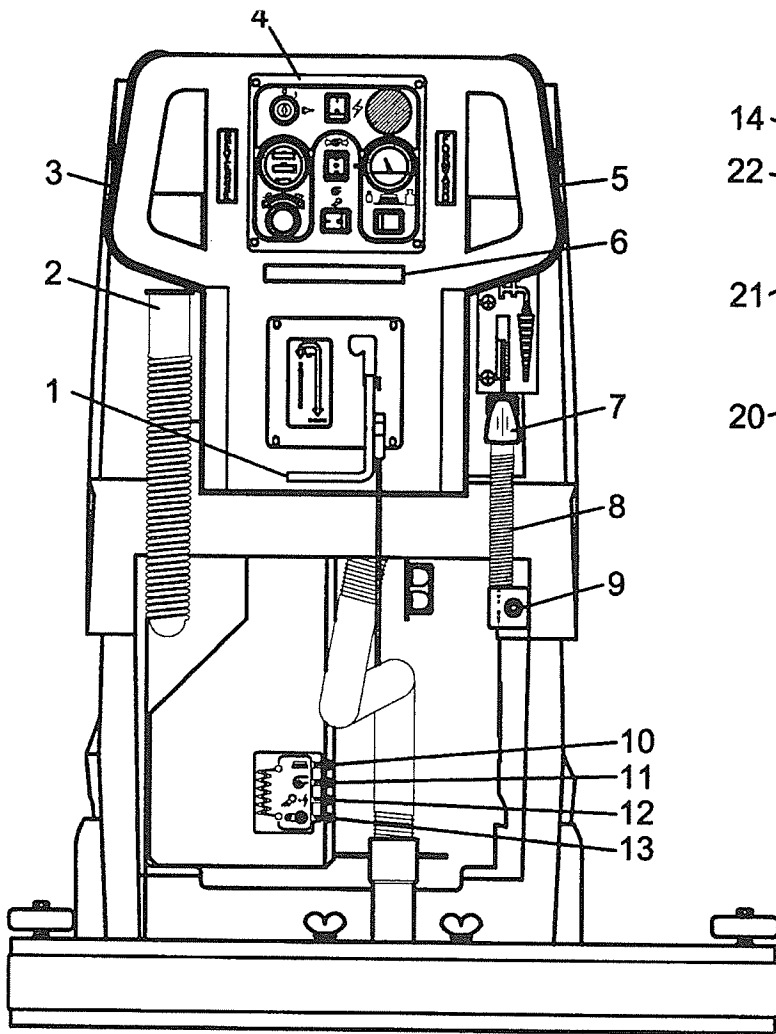
## BATTERY INSTALLATION:

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





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. Circuit breaker - Brush
11. Circuit breaker - Vac
12. Circuit breaker - System
13. Circuit breaker - Transaxle
14. Keyswitch
15. Main power
16. Emergency button
17. Brush pressure gauge
18. Brush control
19. Pump switch
20. Speed control
21. Battery condition meter
22. Vacuum control switch

#### 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 STARTING, 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.

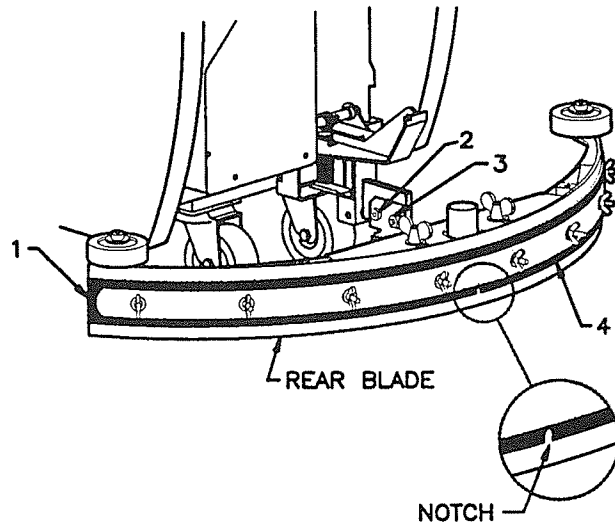
# SQUEEGEE ADJUSTMENTS

## 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 scrubhead 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

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. Hold brush under the scrubhead casting while lining up the center of brush with the hex drive hub and pressing the brush up until the brush engages on the hub.

## REMOVAL

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. Flip the handle up (Fig. 1) located at the middle of the plastic shroud. Push the handle towards the machine and the bracket underneath the casting will release both brushes at once. Replace handle in parked position.

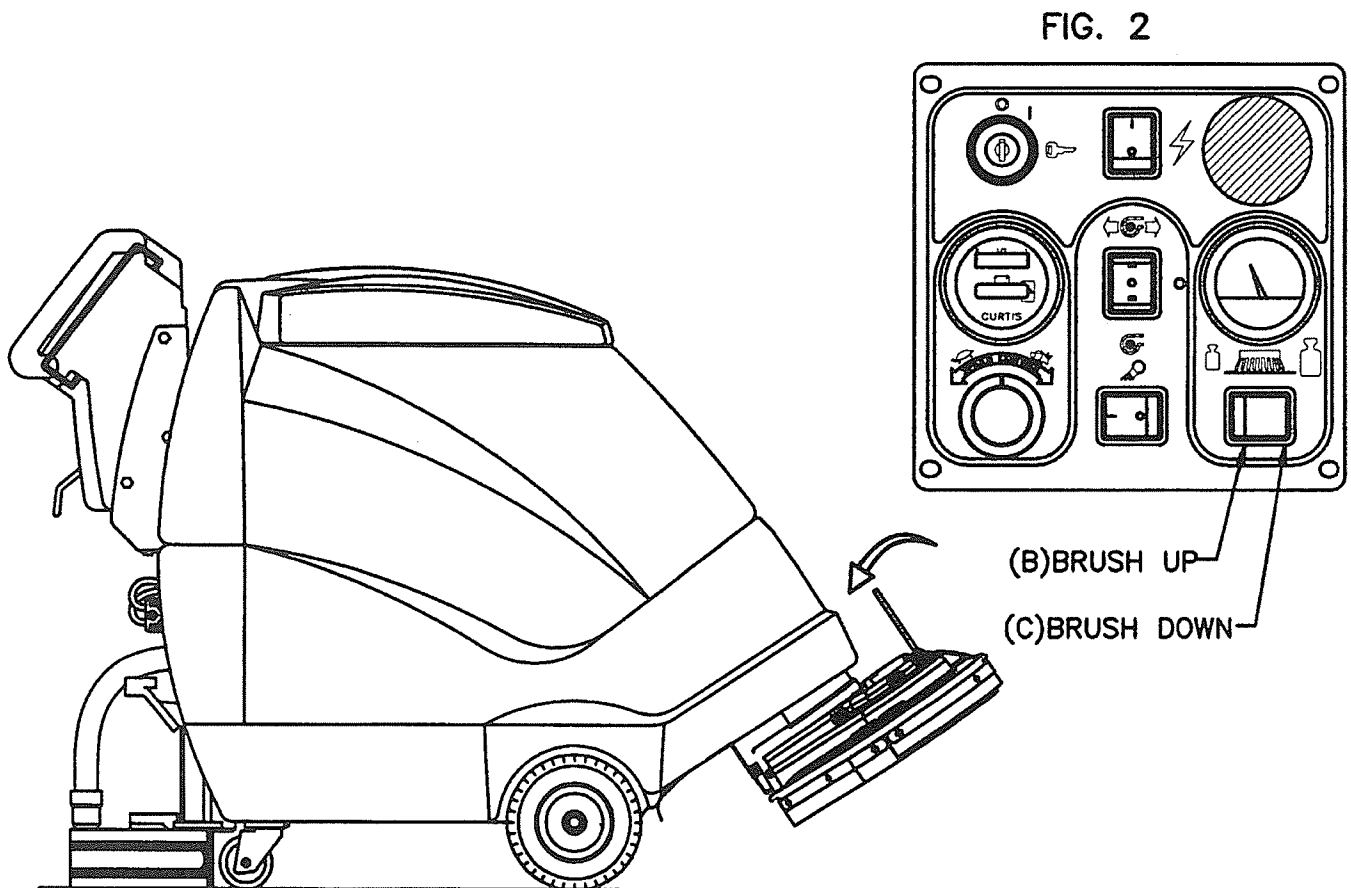
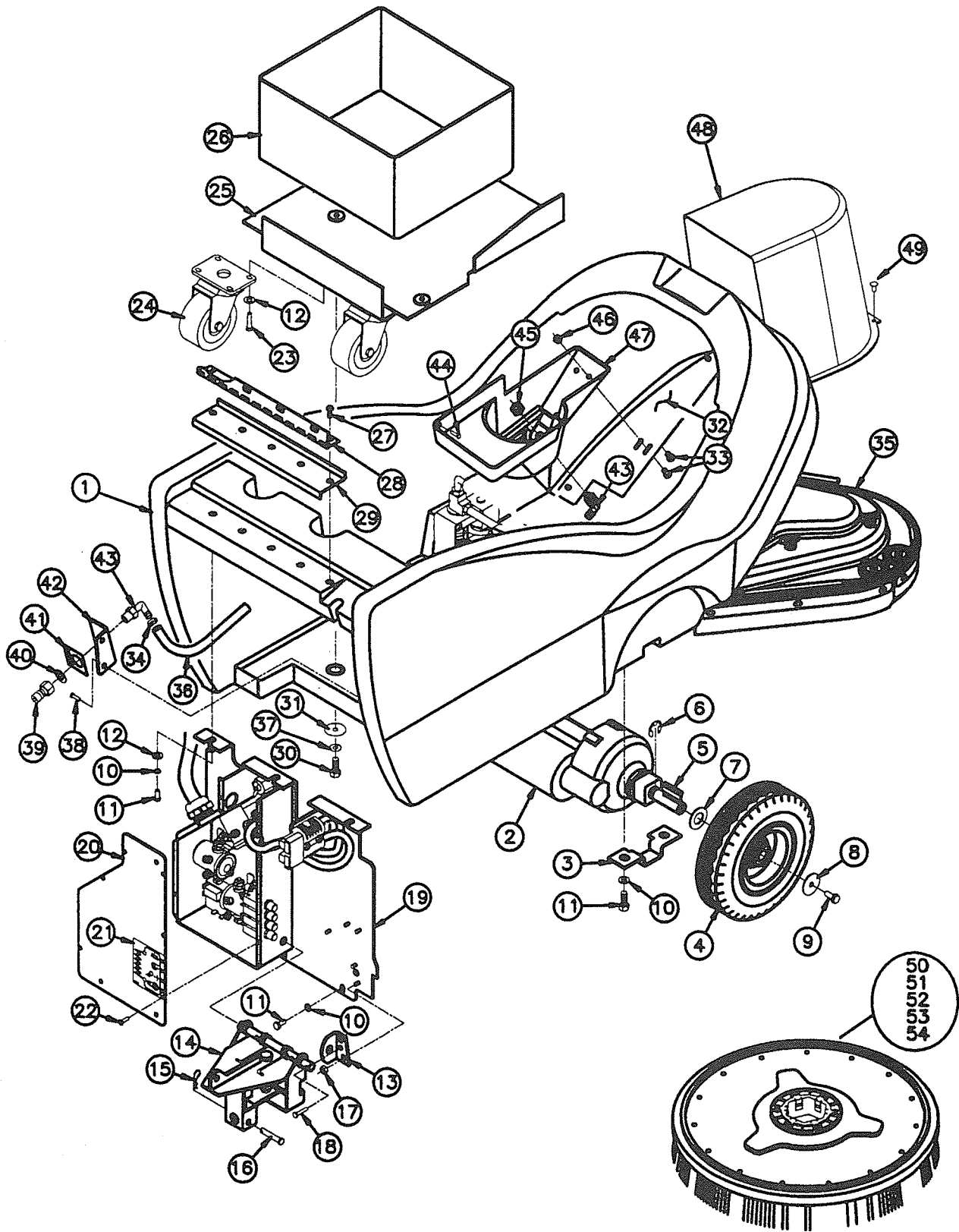


Figure 1

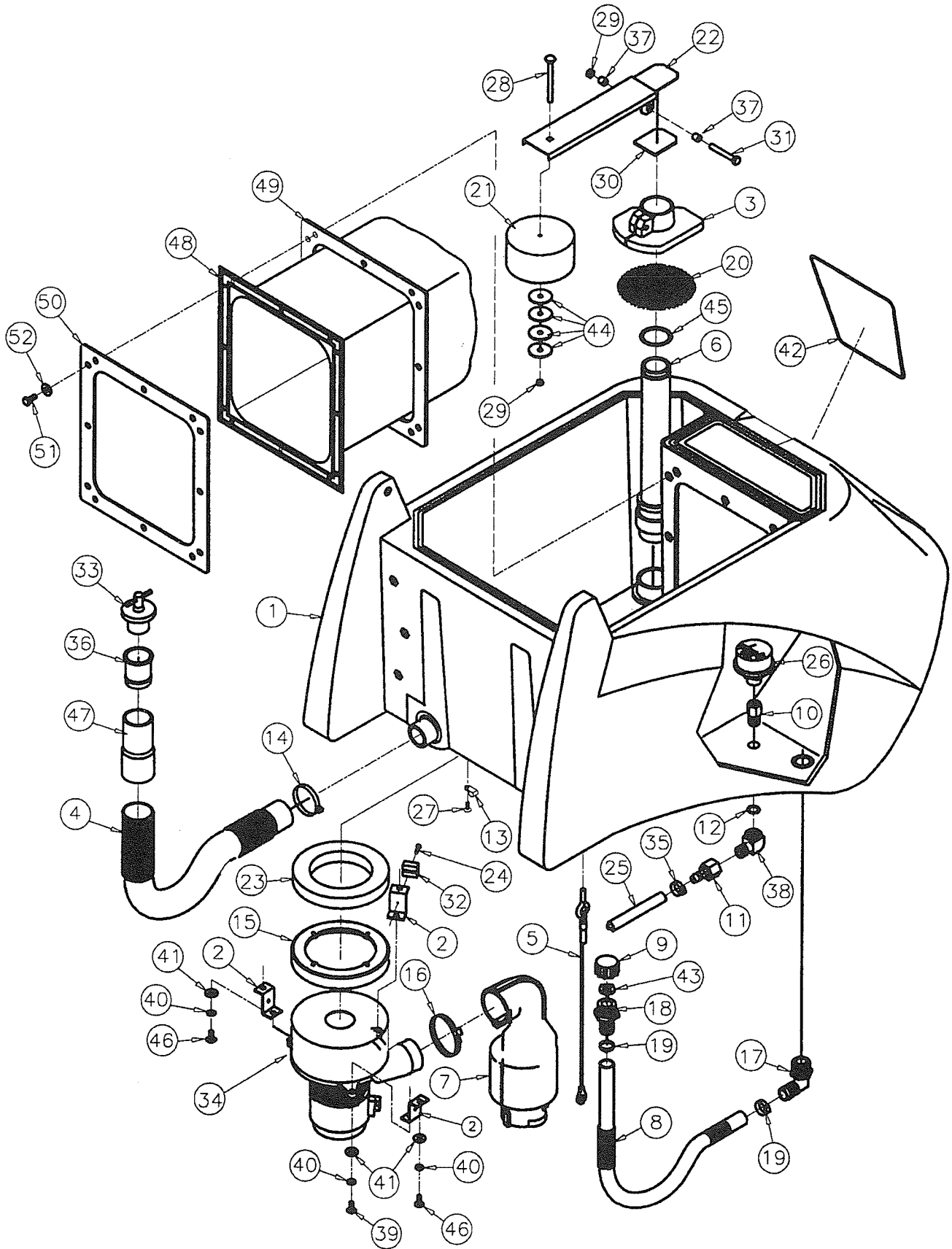
# BASE ASSEMBLY



## 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   | 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   | 450076    | 2    | Crimp Clamp 185R SS           |
| 35   | 200500    | 1    | Scrubhead Asm 240X            |
| 36   | 200236    | 1    | Auxilliary Hose 48.50         |
| 37   | 711545    | 4    | WSR-Helical 5/16              |
| 38   | 711161    | 1    | Hi/Lo Screw #10 x 3/4         |
| 39   | 828368    | 1    | Male Coupler BH2-61           |
| 40   | 711594    | 1    | WSR-Flat .56 x .88 x .03      |
| 41   | 715144    | 1    | Decal Aux Pump                |
| 42   | 200237    | 1    | Quick Disconnect Bracket      |
| 43   | 833325    | 2    | Barb 90° Elbow 3/8 x 1/4 NPT  |
| 44   | 711160    | 1    | Hi/Lo Screw #10 x 5/8         |
| 45   | 260183    | 1    | Nut-Nylon 1/4 NPT             |
| 46   | 712908    | 2    | Nut-Wizz 10-24                |
| 47   | 200318MCH | 1    | Reservoir                     |
| 48   | 200523    | 1    | 240X Motor Cover              |
| 49   | 710178    | 2    | SCR-MC 1/4-20 x .50 Truss     |
| 50   | 260002-1  | 2    | Pad Driver, No Riser          |
| 51   | 260003    | 2    | Bassine Brush                 |
| 52   | 260004    | 2    | Nylon Brush                   |
| 53   | 260005    | 2    | Poly-Grit Brush               |
| 54   | 260006    | 2    | Strata-Grit Brush             |

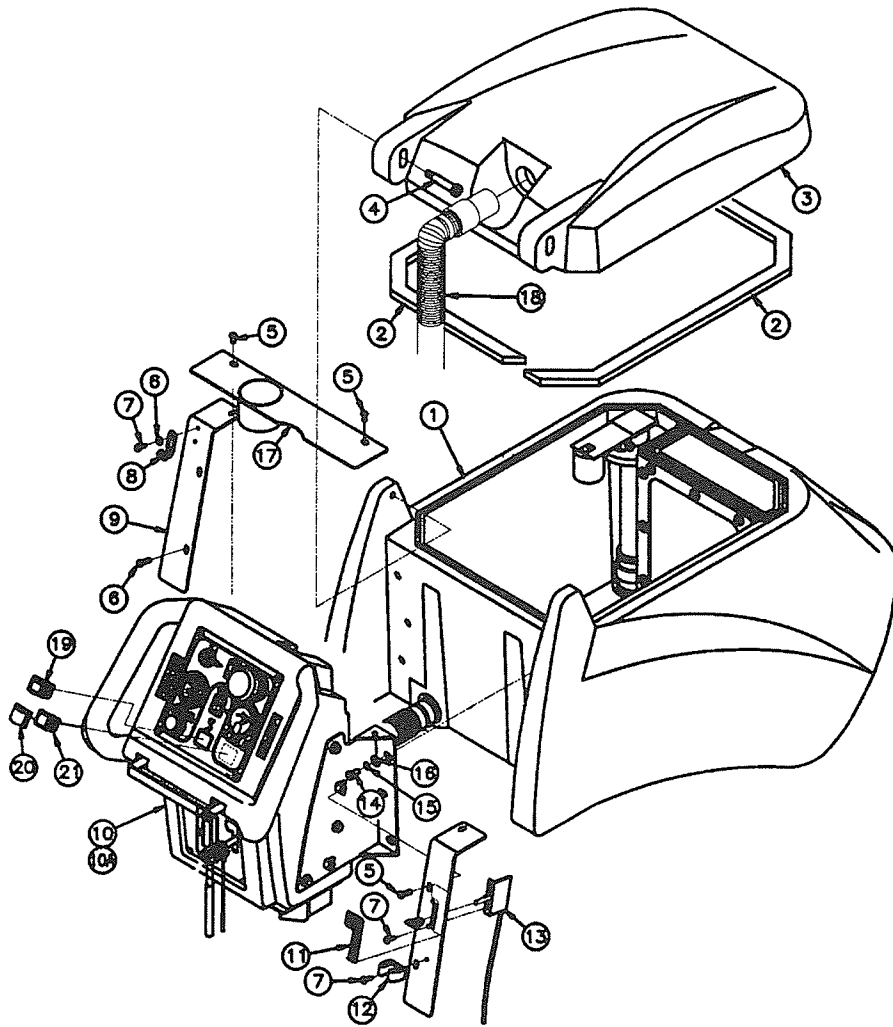
# BASE ASSEMBLY



## Parts List

| Item | Part No.  | Qty. | Description                  |
|------|-----------|------|------------------------------|
| 1    | 200102MCH | 1    | Sol/Rec 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 3/8MPT        |
| 11   | 210410    | 1    | Fitting, Brass 3/8FPT        |
| 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 3/4MPT 3/4BARB PP      |
| 18   | 200022    | 1    | 3/4" MGHT x Hose Barb        |
| 19   | 829129    | 2    | Clamp, Crimp 3/4 Hose        |
| 20   | 430050    | 1    | Filter Screen 4x4            |
| 21   | 260155    | 1    | Foam Float                   |
| 22   | 200320    | 1    | Shut Off 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 Black 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 3/8MPT      |
| 39   | 710180    | 3    | SCR-MC 1/4-20 x .75          |
| 40   | 711544    | 6    | Lockwasher-Helical 1/4       |
| 41   | 711505    | 6    | Washer 1/4                   |
| 42   | 715295    | 1    | Decal, 240X                  |
| 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        |
| 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                |

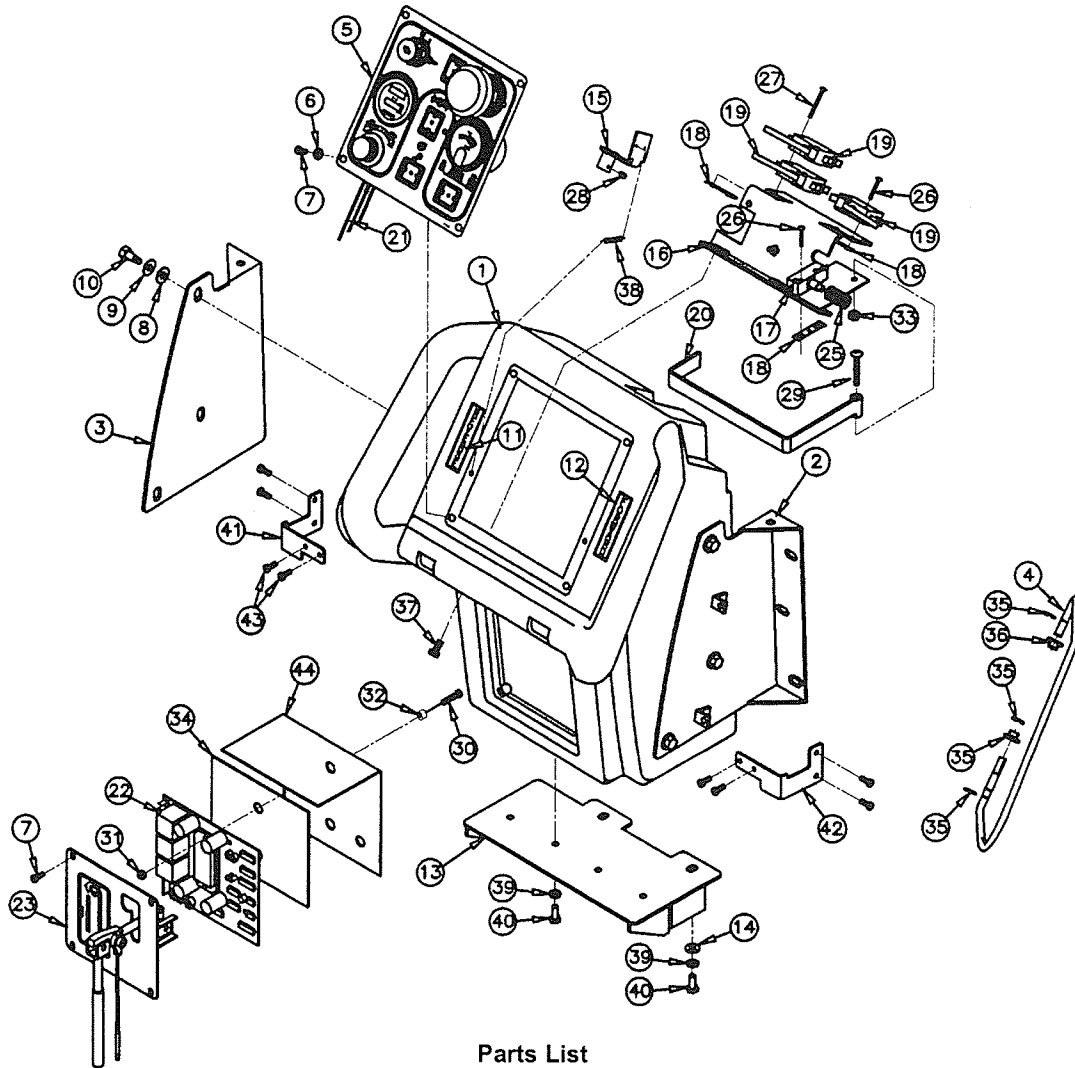
# UPPER ASSEMBLY



## Parts List

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

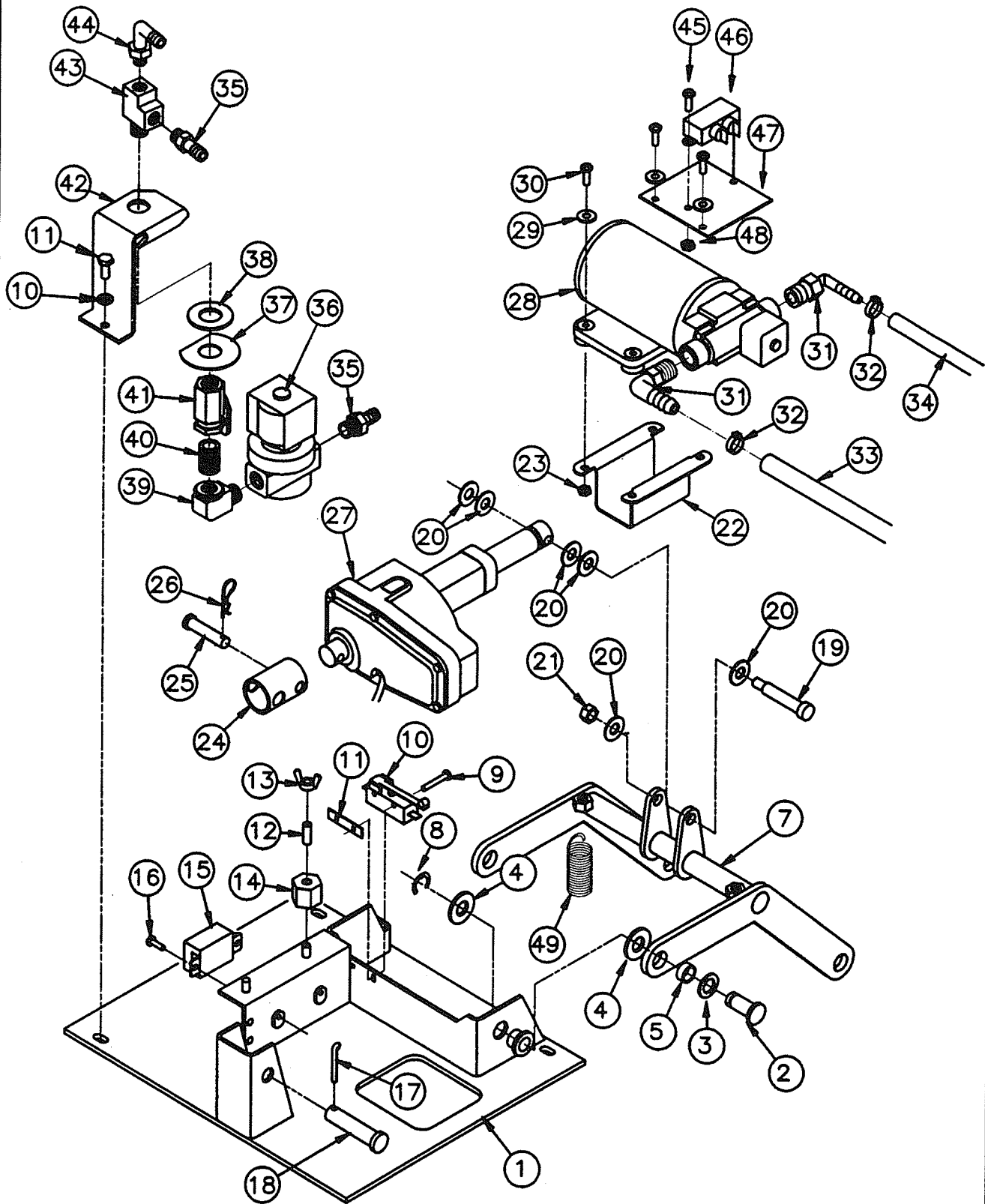
# CONSOLE ASSEMBLY



## Parts List

| 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.             | 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 |

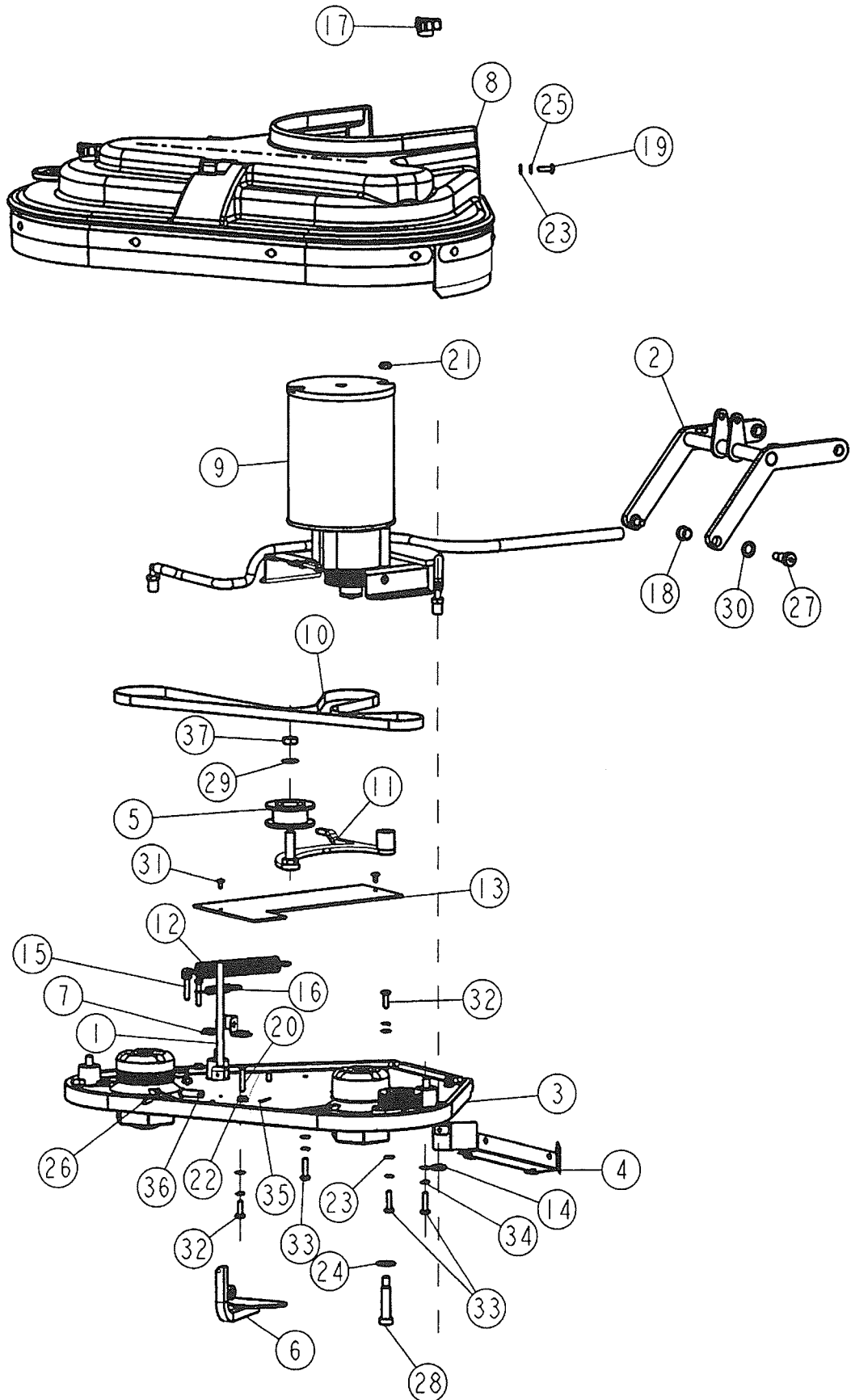
# MOTOR LIFT ASSEMBLY



## Parts List

| Item | Part No.  | Qty. | Description                  |
|------|-----------|------|------------------------------|
| 1    | 200249    | 1    | Base Plate Weldment-Deluxe   |
| 2    | 260036    | 2    | Pin Retainer                 |
| 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    | 200509    | 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   | 712126    | 1    | Shoulder Bolt 5/16 x 1.75    |
| 20   | 711515    | 6    | WSR-Flat .406 x .81 x .063   |
| 21   | 712683    | 1    | Nut-Nyloc 5/16-18 SS         |
| 22   | 200174    | 1    | Pump Mounting Bracket        |
| 23   | 712638    | 1    | Nut-Nyloc 10-24 SS           |
| 24   | 200248    | 1    | Pivot Tube                   |
| 25   | 831965    | 1    | Clevis Pin 3/8 x 1.63        |
| 26   | 711808    | 1    | Cotter Pin                   |
| 27   | 743503    | 1    | Actuator                     |
| 28   | 833299    | 1    | Pump                         |
| 29   | 711505    | 5    | WSR-Flat 1/4                 |
| 30   | 712532    | 5    | SCR-MC 10-24 x 1 SS          |
| 31   | 833325    | 2    | Elbow 3/8 Barb x 1/4NPT      |
| 32   | 450076    | 2    | Crimp Clamp 185R             |
| 33   | 200282    | 1    | Hose Pump Inlet              |
| 34   | 200281    | 1    | Hose Pump Outlet             |
| 35   | 342430    | 2    | Fitting 3/8 Barb x 3/8 MPT   |
| 36   | 743505    | 1    | Water Solenoid 24V           |
| 37   | 829463    | 1    | WSR-Flat SS                  |
| 38   | 828975    | 1    | WSR-Neoprene .75 x 1.5 x .09 |
| 39   | 830062    | 1    | 3/8 Street 90 Brass          |
| 40   | 383332    | 1    | 3/8 Closed Nipple            |
| 41   | 809413MCH | 1    | Solution Valve Machined      |
| 42   | 200259    | 1    | Valve Bracket                |
| 43   | 210408    | 1    | Fitting Brass Tee 3/8 NPT    |
| 44   | 450040    | 1    | Elbow 3/8 Barb x 3/8 MPT     |
| 45   | 710329    | 2    | SCR-MC 8-32 x .5             |
| 46   | 742391    | 1    | RFI Fliter                   |
| 47   | 200335    | 1    | RFI Bracket                  |
| 48   | 711372    | 2    | Nut-Nyloc 8-32               |
| 49   | 760594    | 2    | Spring, Extension            |

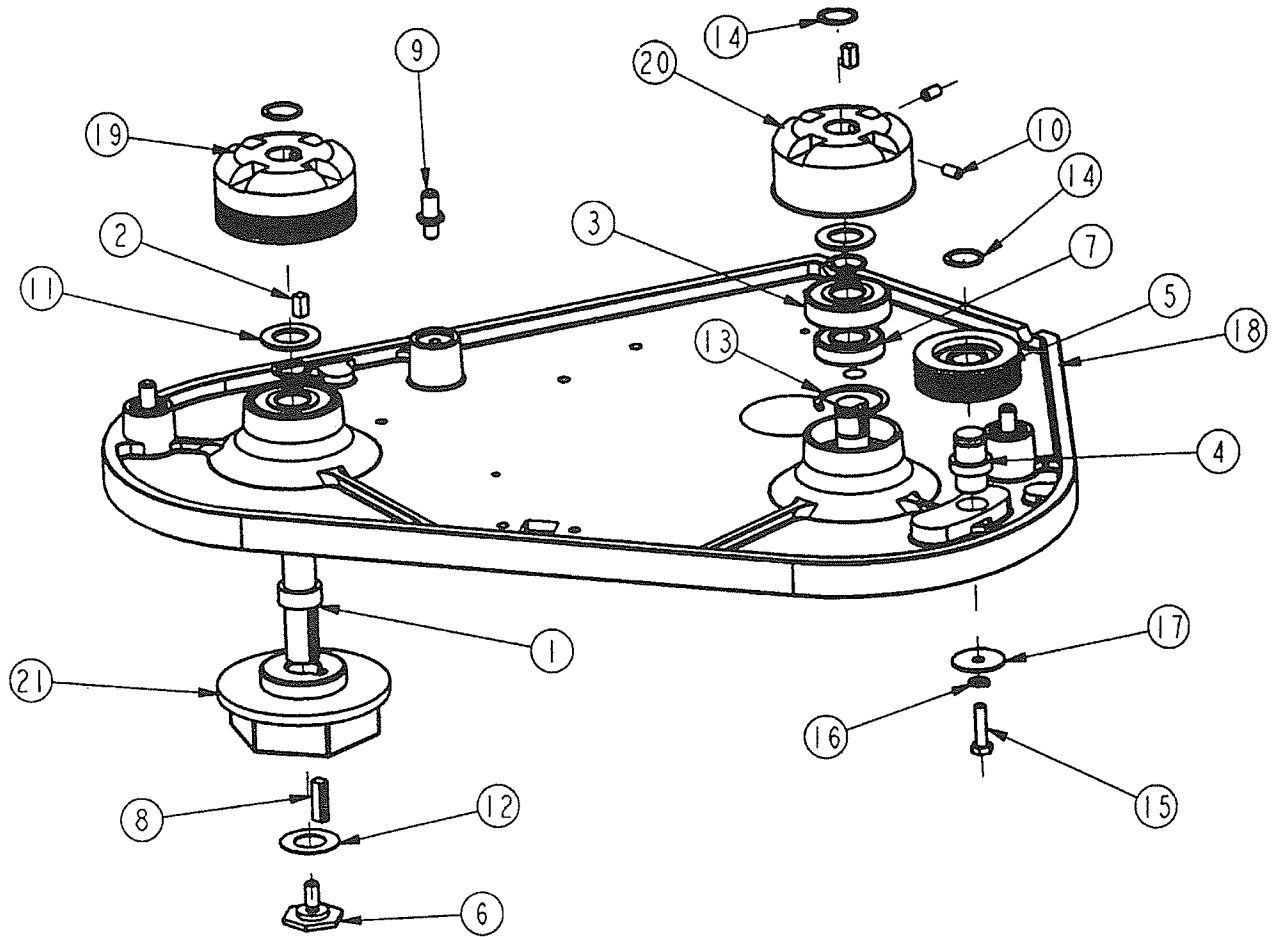
# SCRUBHEAD ASSEMBLY



## Parts List

| Item | Part No. | Qty. | Description                      |
|------|----------|------|----------------------------------|
| 1    | 200038   | 1    | Handle Shaft Weldment            |
| 2    | 200509   | 1    | 240X Lift Weldment               |
| 3    | 200525   | 1    | Scrubdeck Casting Assy           |
| 4    | 200530   | 1    | Spring Mount                     |
| 5    | 200531   | 1    | Belt Idler w/Bushing             |
| 6    | 200545   | 1    | Brush Release Lever Weldment     |
| 7    | 200548   | 1    | Bracket, Brush Release           |
| 8    | 200570   | 1    | Cover Assy - 240X Scrubdeck      |
| 9    | 200574   | 1    | Brush Motor Assy, 240X           |
| 10   | 200579   | 1    | Belt, Brush Drive                |
| 11   | 200586   | 1    | Idler Arm Weldment               |
| 12   | 200588   | 1    | Extension Spring .875 OD x 6.00  |
| 13   | 200589   | 1    | Idler Arm Liner                  |
| 14   | 260183   | 2    | Nut 1/4 Npt Nylon, Half          |
| 15   | 260292   | 1    | Spring Catch                     |
| 16   | 430051   | 1    | Return Spring 3.00"              |
| 17   | 430074   | 3    | Adjusting Nut 17B/E              |
| 18   | 670117   | 4    | Oilite Flanged Bushing           |
| 19   | 710180   | 2    | SCR-MC 1/4-20 x .75 TR HD        |
| 20   | 711210   | 2    | BLT-HH 1/4-20 x 1.25 STPL        |
| 21   | 711375   | 1    | Nut-Nyloc 3/8-16 x 1/2 Nut       |
| 22   | 711425   | 3    | Nut, Hex 1/4-20 Wiznut           |
| 23   | 711504   | 10   | WSR-Flat 1/4 ID SS               |
| 24   | 711509   | 1    | WSR-Flat 1/2 (.54x 1.082 x .087) |
| 25   | 711564   | 2    | WSR-External Lock 1/4            |
| 26   | 711642   | 1    | Roll Pin .187 x 1.00             |
| 27   | 712122   | 2    | BOLT-SHLDR 1/2 x 5/8             |
| 28   | 712132   | 1    | BOLT-SHLDR 1/2 x 1-3/4"          |
| 29   | 712301   | 1    | WSR-Flat .87 x .38 x .06         |
| 30   | 712310   | 2    | WSR-Flat .52 x .87 x .06 PL      |
| 31   | 712540   | 2    | SCR-MC 10-24 SS TH               |
| 32   | 712562   | 4    | BLT-HH 1/4-20 x 3/4 SS           |
| 33   | 712564   | 4    | BLT-HH 1/4-20 x 1.00 SS          |
| 34   | 712758   | 8    | WSR-Helical 1/4 SS               |
| 35   | 809311   | 1    | Pin Cotter 7/64 Dia x 1          |
| 36   | 833833   | 1    | Clevis Pin                       |
| 37   | 364-816  | 1    | 1/2-13 Nyloc Half Nut            |

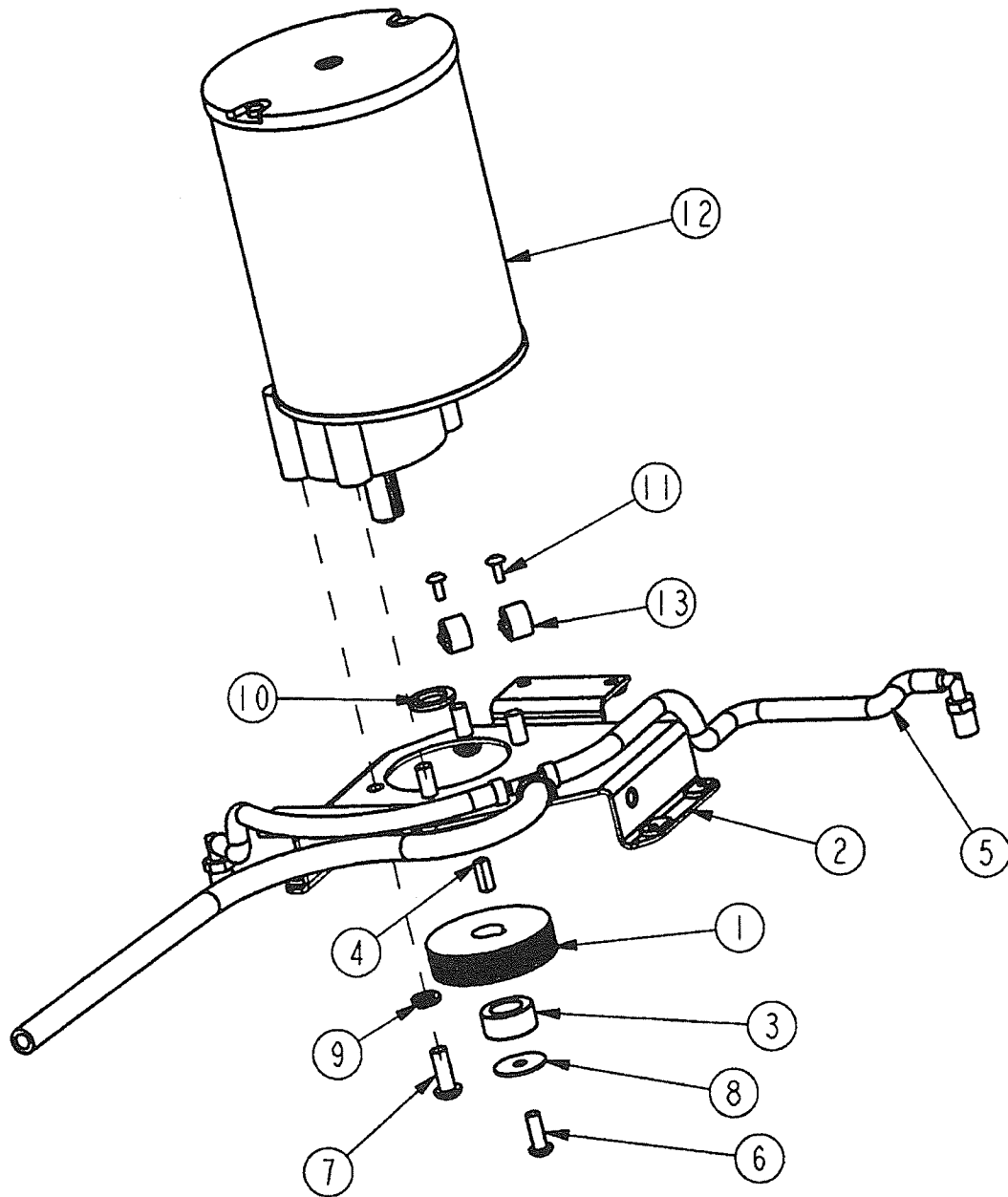
# CASTING ASSEMBLY



## Parts List

| Item | Part No.  | Qty. | Description                          |
|------|-----------|------|--------------------------------------|
| 1    | 200514    | 2    | Shaft Driven                         |
| 2    | 200527    | 2    | Key 1/4 x 1/4 x 1/2                  |
| 3    | 200532    | 2    | Bearing                              |
| 4    | 200566    | 1    | Idler Pin                            |
| 5    | 200578    | 1    | Pulley Bearing Assy                  |
| 6    | 210066    | 2    | Drive Hub Retainer Bolt              |
| 7    | 250016    | 2    | Bearing                              |
| 8    | 320268    | 2    | Key 1/4 x 5/16 x 1.00                |
| 9    | 430075    | 3    | Threaded Insert                      |
| 10   | 711016    | 4    | SCR-SK 1/4-20 x .50 - Cup Pt Set SCR |
| 11   | 711512    | 2    | WSR-Flat .75 x 1.37 x .08            |
| 12   | 711517    | 2    | WSR-Flat .75 x 1.375 x .09 SS        |
| 13   | 711702    | 2    | Retaining Ring, Int. 1.62            |
| 14   | 711715    | 5    | Retaining Ring, Axt 1.00             |
| 15   | 712564    | 1    | Bolt-HH 1/4-20 x 1.00 SS             |
| 16   | 712758    | 1    | WSR-Helical 1/4 SS                   |
| 17   | 712761    | 1    | WSR-Flat .28 x 1.25 x .059SS         |
| 18   | 200501MCH | 1    | 240X Scrubdeck Casting               |
| 19   | 200557MCH | 1    | Drive Pulley                         |
| 20   | 200558MCH | 1    | Drive Pulley                         |
| 21   | 430035-1  | 2    | Drive Hub                            |

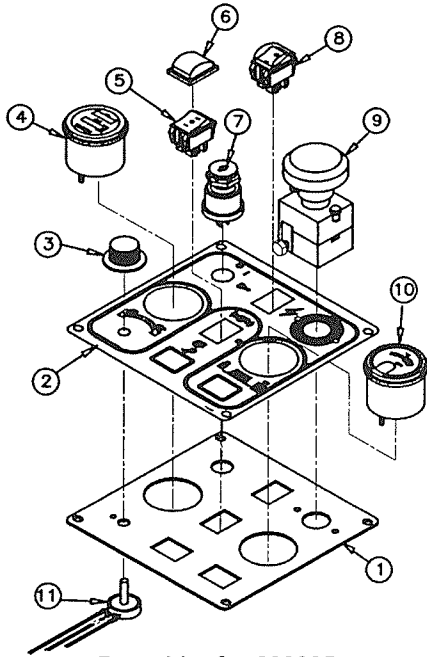
# DRIVE MOTOR ASSEMBLY



## Parts List

| Item | Part No. | Qty. | Description                  |
|------|----------|------|------------------------------|
| 1    | 200517   | 1    | Drive Pulley Poly V          |
| 2    | 200518   | 1    | 240X Motor Plat Weldment     |
| 3    | 200521   | 1    | 240X Motor Spacer            |
| 4    | 200528   | 1    | Key 1/4 x 1/4 x 3/4          |
| 5    | 200580   | 1    | Hose Assy, 240X Scrubdeck    |
| 6    | 710975   | 1    | SCR-SC 5/16-18 x .87 ST PL   |
| 7    | 710986   | 4    | SCR-SC 3/8-16 x .87 ST PL    |
| 8    | 711516   | 1    | WSR-Flat .31 x 1.25 x .05    |
| 9    | 711546   | 4    | WSR-Helical 3/8              |
| 10   | 712318   | 2    | WSR-Flat .75 x 1.12 x .12 PL |
| 11   | 712822   | 2    | SCR-MC 10-24 x .50 TH SS     |
| 12   | 740209   | 1    | Motor 24V 1HP                |
| 13   | 827998   | 2    | Clamp                        |

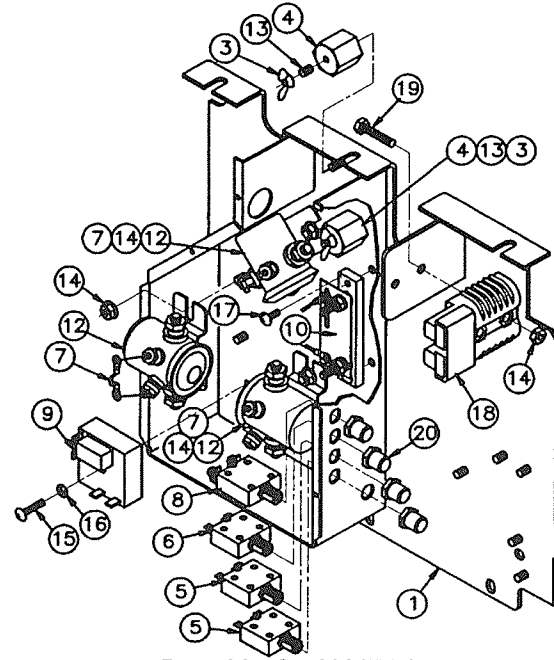
## DASHBOARD



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   | 743049   | 1    | Gauge, Brush Pressure   |
| 11   | 743240   | 1    | Harness 200X Console    |

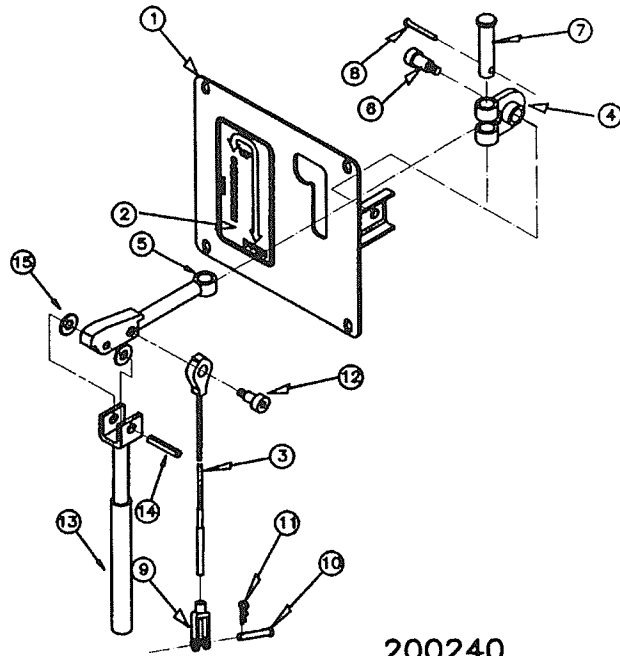
## BACK PANEL



Parts List for 200175-1

| Item | Part No. | Qty. | Description                 |
|------|----------|------|-----------------------------|
| 1    | 200124   | 1    | Backpanel Weldment          |
| 2    |          |      |                             |
| 3    | 711368   | 2    | Wing Nut, 1/4-20            |
| 4    | 740132   | 2    | Insulator (Glastic)         |
| 5    | 740238   | 2    | Circuit Breaker 18          |
| 6    | 740247   | 1    | Circuit Breaker 30          |
| 7    | 742000   | 3    | Diode Assembly              |
| 8    | 740549   | 1    | Circuit Breaker 50          |
| 9    | 741037   | 1    | 5 Sec. True Off Delay Timer |
| 10   | 740134-1 | 1    | Shunt, Uncalibrated         |
| 11   | 743250   | 1    | Wire Harness, Lower Assy.   |
| 12   | 788147   | 3    | Solenoid 24VDC              |
| 13   | 833638   | 2    | Brass Stud                  |
| 14   | 711425   | 8    | Whiz-Nut 1/4-20             |
| 15   | 712823   | 1    | SCR-THMS 10-24 x 1"         |
| 16   | 712320   | 1    | WSR-Nylon .22 x .42 x .04   |
| 17   | 712536   | 2    | SCR 10-24 x .62             |
| 18   | 740159   | 1    | CB175 Red Housing Only      |
| 19   | 711210   | 2    | SCR-HH 1/4-20 x 1 1/4       |
| 20   | 742748   | 4    | Boot, Circuit Breaker       |

## SQUEEGEE LIFT

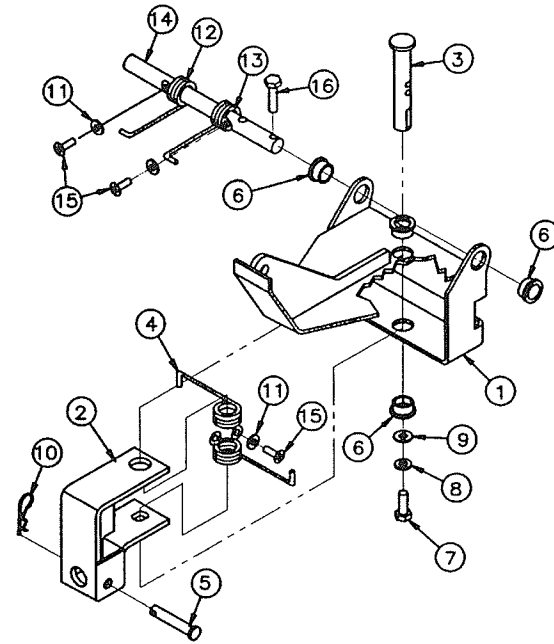


200240

### 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

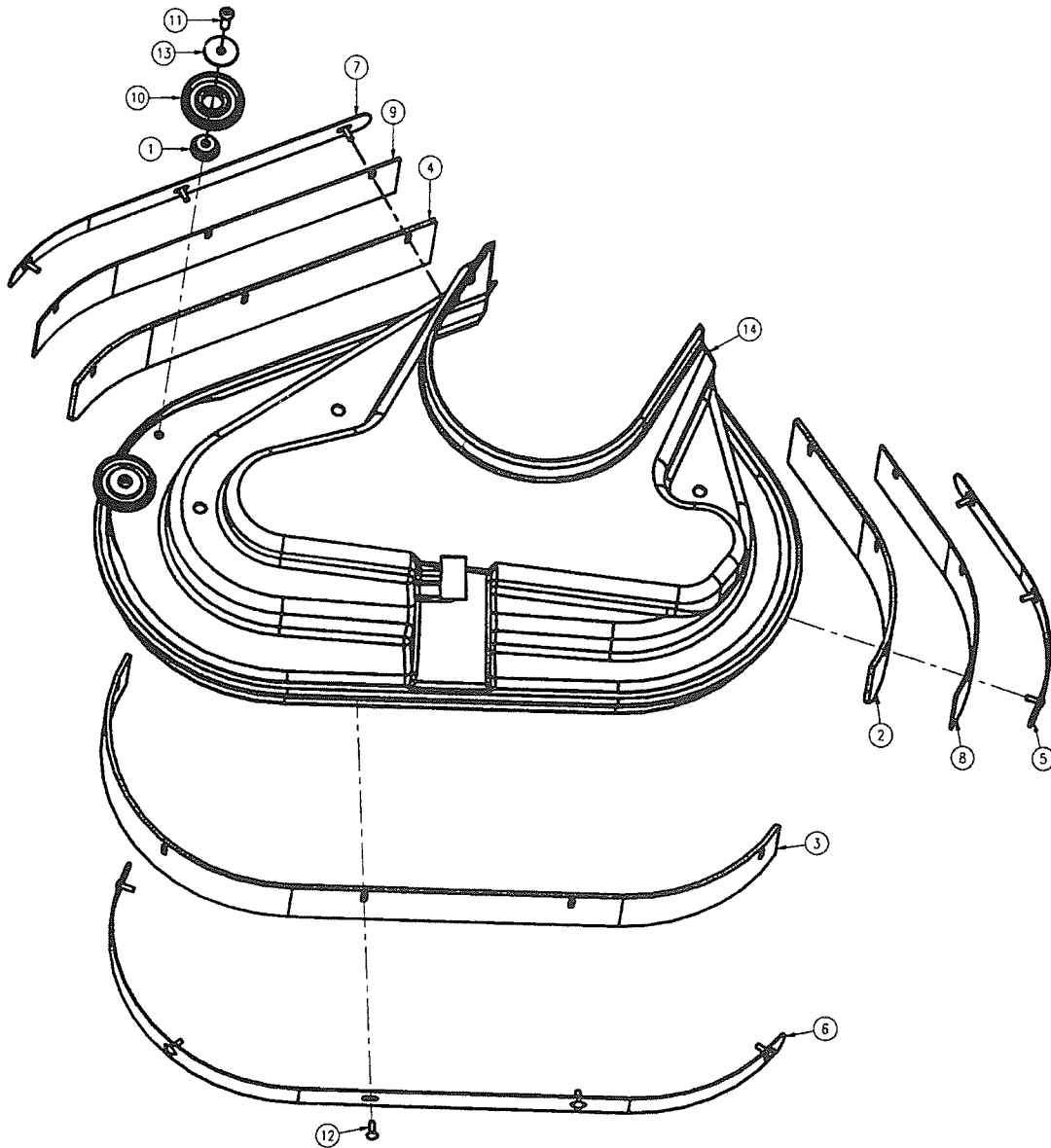


200153

### 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     |

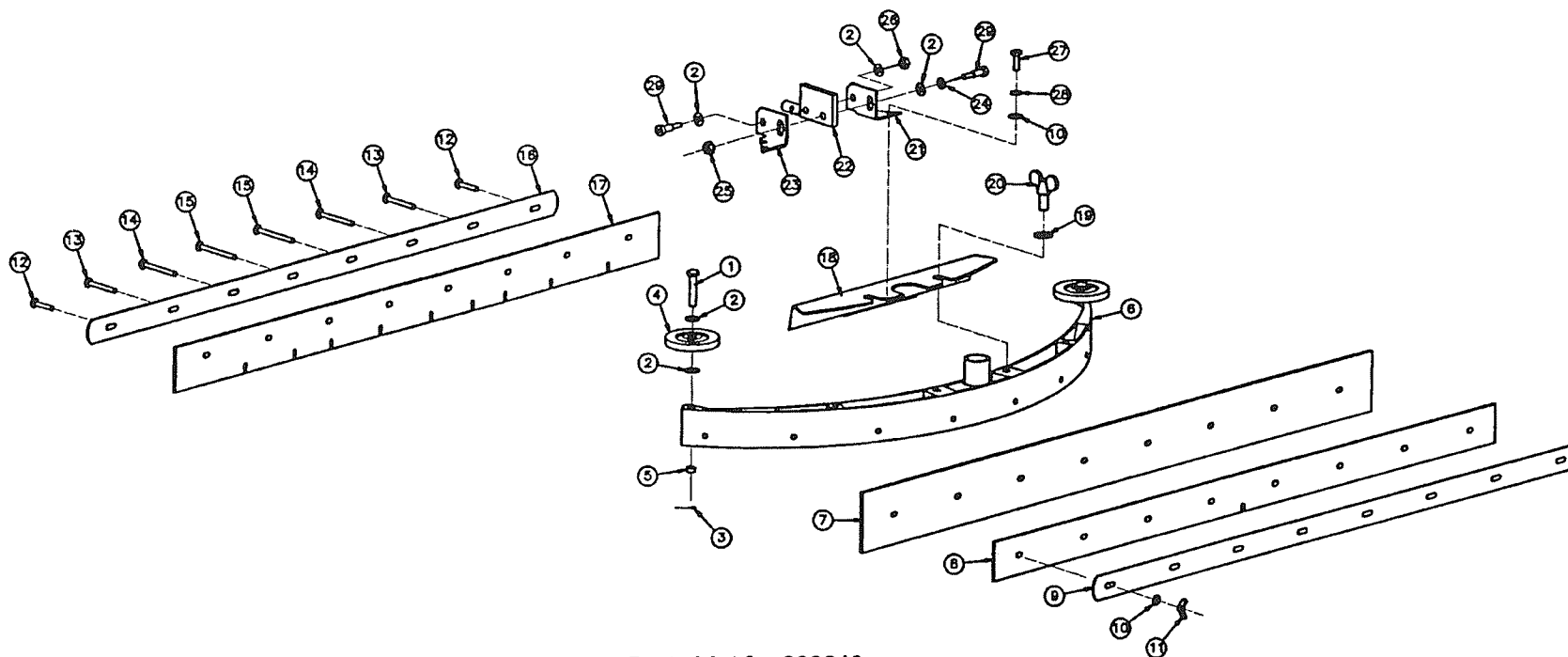
# COVER ASSEMBLY 200570



## Parts List

| Item | Part No.  | Qty. | Description                 |
|------|-----------|------|-----------------------------|
| 1    | 200535    | 2    | Roller Spacer               |
| 2    | 200551    | 1    | Skirt, Left 240X            |
| 3    | 200552    | 1    | Skirt, Center 240X          |
| 4    | 200553    | 1    | Skirt, Right 240X           |
| 5    | 200554    | 1    | Skirt Retainer, Left 240X   |
| 6    | 200555    | 1    | Skirt Retainer, Center 240X |
| 7    | 200556    | 1    | Skirt Retainer, Right 240X  |
| 8    | 200571    | 1    | Left Backer Plate, 240X     |
| 9    | 200573    | 1    | Right Backer Plate, 240X    |
| 10   | 430085    | 2    | Squeegee Bumper Wheel       |
| 11   | 710975    | 2    | SCR-SC 5/16-18 x .87 ST PL  |
| 12   | 711160    | 11   | #10 x 5/8 Hi-Lo             |
| 13   | 712759    | 2    | WSR-Fit .31 x 1.37 x .06 SS |
| 14   | 200522MCH | 1    | 240X Scrubdeck Cover        |

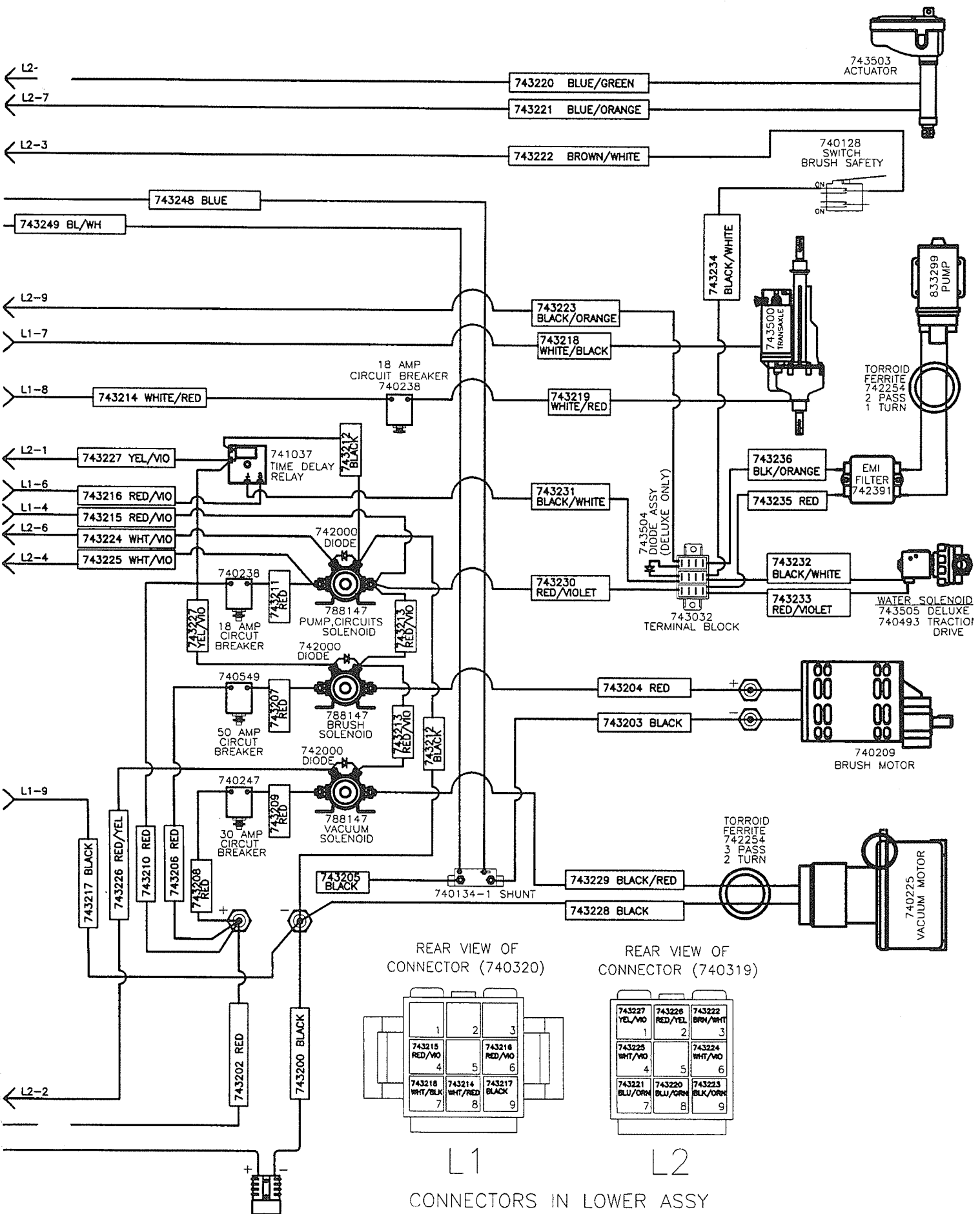
# SQUEEGEE ASSEMBLY - 200219



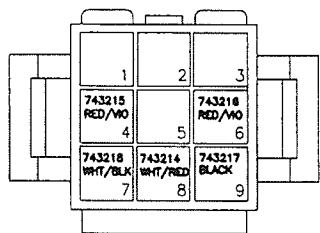
Parts List for 200219

| 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 |      |          |      |                           |



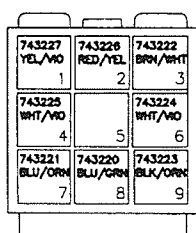


REAR VIEW OF CONNECTOR (740320)



L1

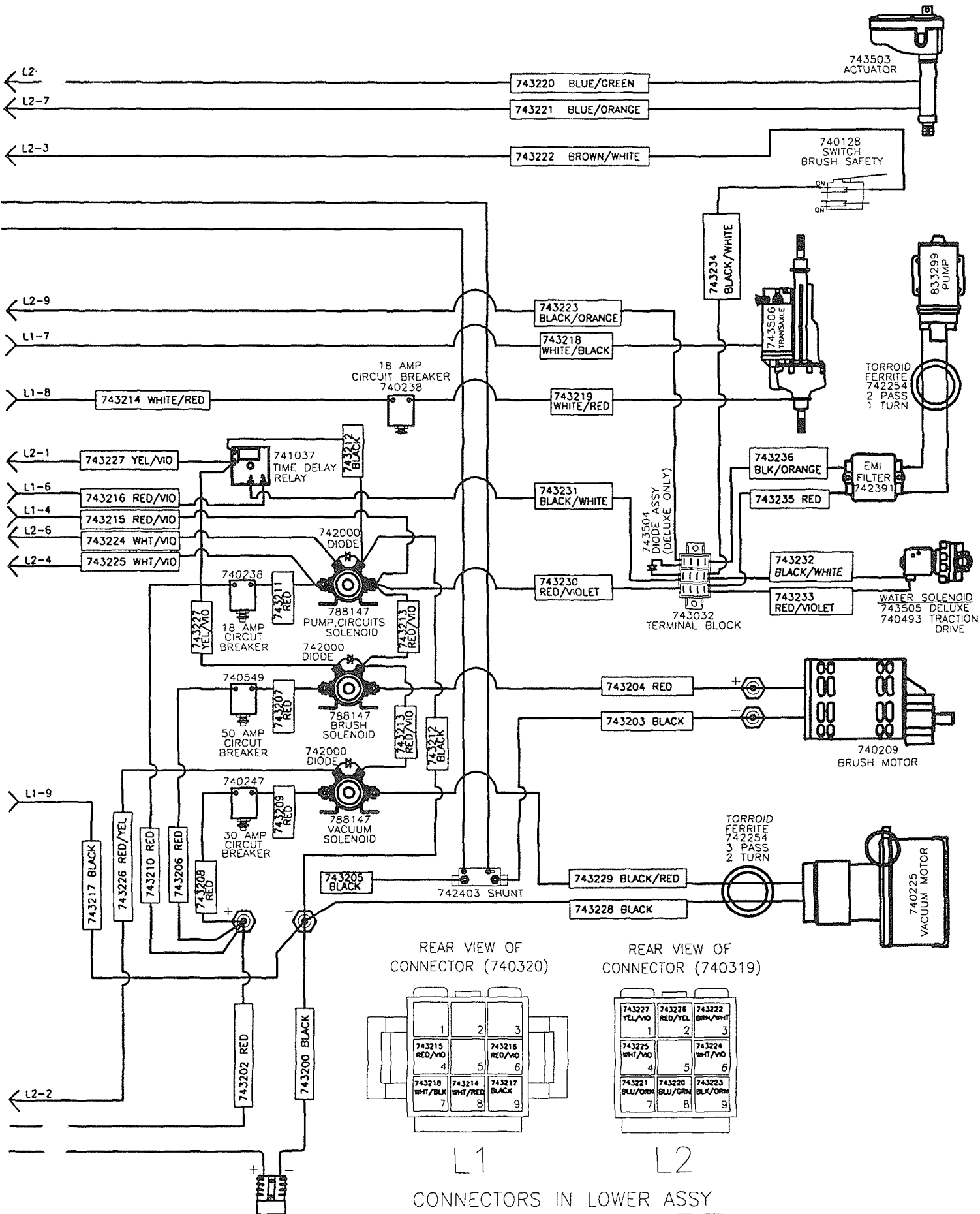
REAR VIEW OF CONNECTOR (740319)



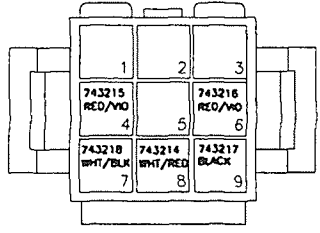
L2

CONNECTORS IN LOWER ASSY

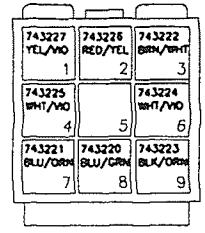




REAR VIEW OF CONNECTOR (740320)



REAR VIEW OF CONNECTOR (740319)



L1 L2

CONNECTORS IN LOWER ASSY

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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.

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